Environmental Impact Evaluation
Ice Hockey Arena Development Project

University of Connecticut, Storrs, CT

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FITZGERALD & HALLIDAY, INC.
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Acronyms and Abbreviations

amsl	Above Mean Sea Level
APA	Aquifer Protection Area
APE	Area of Potential Effect
ASTM	American Society of Testing and Materials
BMPs	Best Management Practices
BPFA	Balanced Priority Funding Area
C&D Plan	State Plan of Conservation and Development
CAAA	Clean Air Act Amendments
CAP	Climate Action Plan
CEPA	Connecticut Environmental Policy Act
CERC	Connecticut Economic Resource Center
CERCLA	Comprehensive Environmental Response Compensation Act
CGS	Connecticut General Statutes
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide equivalent
CTDOT	Connecticut Department of Transportation
CTDEEP	Connecticut Department of Energy and Environmental Protection
dBA	A-weighted decibels
DECD	Department of Economic and Community Development
DPS	UConn Division of Public Safety
EHS	Environmental Health and Safety
EIE	State of Connecticut Environmental Impact Evaluation
EPA	U.S. Environmental Protection Agency
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
GHG	Greenhouse Gases

GIS	Geographic Information System
GMP	Growth Management Principles
HVAC	Heating Ventilation and Air Conditioning
IPCC	Intergovernmental Panel on Climate Change
ITE	Institute of Transportation Engineers
LEED	Leadership in Energy and Environmental Design
Leq	Equivalent Sound Level
LGM	Locational Guide Map
LID	Low-Impact Development
LOS	Level of Service
LUST	Leaking Underground Storage Tanks
MBTU	Million British Thermal Units
MP	Master Plan
NAAQS	National Ambient Air Quality Standards
NCAA	National Collegiate Athletic Association
NDDB	Natural Diversity Database
NO_2	Nitrogen Dioxide
NPL	National Priorities List
NRC	National Research Council
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
OHMs	Oil and Hazardous Materials
OSHA	Occupational Safety and Health Administration
Pb	Lead
PFA	Priority Funding Area
$PM_{2.5}$	Particulate Matter Less than 2.5 Microns in Diameter
PM_{10}	Particulate Matter Less than 10 Microns in Diameter
POCD	Plan of Conservation and Development

RCRA	Resource Conservation and Recovery Act
RCSA	Regulations of Connecticut State Agencies
REC	Recognized Environmental Conditions
RFEI	Request for Expressions of Interest
SEMS	Superfund Enterprise Management System
SHWS	State Hazardous Waste Sites
SHPO	State Historic Preservation Office/Officer
SO_2	Sulfur Dioxide
SQ FT	Square Feet
STARS	Sustainability, Tracking Assessment and Rating System
SWPCP	Stormwater Pollution Control Plan
USACE	United States Army Corps of Engineers
UPDC	UConn University Planning, Design, and Construction
USFWS	United States Fish and Wildlife Service
USGCRP	United States Global Change Research Program
UST	Underground Storage Tank
WWPC	Willimantic Waste Paper Company

Executive Summary

The University of Connecticut (University or UConn) proposes to construct a new Ice hockey arena on an approximately 12.5-acre site located west of and adjacent to the existing Mark Edward Freitas Ice Forum on its main campus in Storrs (Mansfield), CT. The site is approximately half developed today and consists primarily of a surface parking lot (I-Lot), stormwater conveyance, some wetlands, and rolling, wooded uplands. The University anticipates construction of the new ice hockey arena to commence in Fall 2020, with a targeted opening date in Fall 2022.

The Proposed Action primarily consists of the following elements:

- Facilities and ice that would meet NCAA Division I Ice Hockey requirements, Hockey East Conference standards, and University guidelines and requirements.
- Up to 3,500 seats, with up to 50% seat-back chairs; the balance being bleachers
  Locker rooms and office space.
- Parking for up to 700 vehicles

Project Purpose: To develop an on-campus Ice Hockey Arena that fulfills UConn's agreement with Hockey East.

Project Need: UConn's Division I ice hockey program joined the Hockey East conference in 2014. Its current on-campus arena – Freitas Ice Forum – is reaching the end of its useful life and does not comply with Hockey East standards. As such, the men's ice hockey program has played most of its home games at the XL Center in Hartford since that time. UConn desires to construct a new arena on-campus to host a portion of men's games and all women's games. The new arena may also support recreational leagues and youth programs in the surrounding area.

As the sponsoring agency for this state funded project, the University of Connecticut has prepared this Environmental Impact Evaluation (EIE) to further evaluate the potential environmental impacts of the proposed new ice hockey arena development, hereafter referred to as the Proposed Action. Reasonable alternatives for the Proposed Action were considered, including a No Action Alternative, which is required to be carried forth in the CEPA process even though the No Action Alternative does not meet the project purpose and need. The No Action Alternative serves as the baseline for comparison of impacts to the Proposed Action. The selection of a preferred site and the decision process that lead to the development of a schematic design concept for the Proposed Action is summarized below:

Site Selection Process

A total of three sites were considered for the development of the UConn Ice Hockey Arena. One site, the Mansfield Apartments Site located just south of campus near the South Eagleville Road/Route 195 (Storrs Road) intersection, was put forth during the 2015 campus master planning process. Opposition from the local community, however, resulted in the University dropping that site from further consideration. The University released a Request for Expressions of Interest (RFEI) in October 2017 that included the two remaining sites under consideration, the Tech Park Parcel B Site, and the Freitas Ice Arena Site. Both sites met the following preliminary criteria:

- University-owned property
- On-campus location
- Adequate developable land area
- Reasonable access for vehicles and pedestrians
- Access to transit
- Adequate parking
- Available utilities
- Limited environmental implications

Because of incompatibility with surrounding research, science and technology land uses, the Tech Park Parcel B Site was dropped from further consideration. The Freitas Ice Arena site, with its location in the athletics district, was therefore selected as the preferred site for the Proposed Action.

Alternative Site Concepts

The University's original plan was to upgrade and expand the existing Freitas Ice Forum to the south or southwest to accommodate amenities required by Hockey East. However, the Freitas Ice Forum expansion concepts were abandoned in favor of a stand-alone arena concept for the following reasons: wetland impacts, the presence of ledge to the south of the existing Freitas facility, and the inability of the upgraded and expanded facility to efficiently accommodate a fully functional building program to meet all the requirements of Hockey East.

Design engineers and architects spent the summer of 2019 evaluating and adjusting stand-alone arena and parking site plan concepts until they developed the schematic design concept depicted in Figure ES-1.

Figure ES-1 - Preferred Alternative Conceptual Site Plan

Preferred Alternative

The schematic conceptual design shown in Figure ES-1 is the Preferred Alternative that is carried forward for assessment in this EIE. This alternative concept allows for the necessary buildable area and utility connections to construct the new UConn Ice Hockey Arena while avoiding and minimizing impacts to on-site natural resources to the greatest extent practicable. The concept accommodates adequate parking and efficient vehicle and pedestrian access, separation, and circulation elements to allow for a fully functional on-campus facility that meets the purpose and needs of the University.

Impact Assessment Summary

Potential direct impacts from the Proposed Action include filling up to approximately 4,900 square feet (SQ FT) of inland wetlands. These wetland impacts are primarily spread across three on-site wetlands. Only one wetland, a small palustrine forested depression located at the southwestern end of I-Lot, would be completely filled by the project. The remaining wetland impacts would be from fill slopes encroaching into wetland fringe areas. Alteration and filling of inland wetland areas would be subject to permitting under the Connecticut Department of Energy and Environmental Protection (CTDEEP) *Inland Wetlands and Watercourses Permit* and the conditions of the U.S. Army Corps of Engineers Connecticut General Permit. Appropriate mitigation would be identified and coordinated between the University, CTDEEP, and the USACE during the permitting process.

Other direct impacts to natural resource from the Proposed Action would include a minor loss of forested edge habitat. However, this habitat is not rare or unique to the area and includes invasive plant species. This impact would be mitigated through the development and implementation of a landscaping plan incorporating native drought-resistant plantings to compensate for the loss of habitat.

The Proposed Action would also impact traffic operations when compared to the No Action Alternative. The impact includes increased vehicle delays and queues during men's hockey games or other large capacity events held at the facility. Mitigation of these traffic impacts would include the development of an updated Special Event Traffic Management Plan that includes a traffic control plan on Separatist Road, additional manual traffic control at key intersection on South Eagleville Road (Route 275), and updated bus routing services. Coordination with the Town of Mansfield is needed to request the Connecticut Department of Transportation (CTDOT) to initiate traffic engineering studies at the state-owned study area intersections. The engineering studies would ascertain whether physical roadway improvements are needed to improve operations. Additionally, the Proposed Action will trigger the requirements for the Office of the State Administration (OSTA) certification process that is required for major traffic generators that impact the state roadway system.

There would be short-term construction period impacts from the Proposed Action related to air quality, noise, traffic and parking, and stormwater. These temporary impacts would be mitigated through adherence to standard construction best management practices as outlined in Table ES-1. The management of stormwater generated by the Proposed Action Site would be an improvement over the existing condition. Various engineered green infrastructure and Low Impact Development (LID) measures would be incorporated into the site design. These measures may include rain gardens, permeable pavement, green roofs, infiltration planters, rainwater harvesting systems and others as deemed appropriate by the engineer for the Proposed Action site. By incorporating these green infrastructure measures, an improvement in the water quality within downstream wetlands and receiving waters is anticipated.

Indirect impacts related to encroachment or alteration of adjacent properties are not anticipated as a result of the Proposed Action. The new UConn Ice Hockey Arena by itself is also not a growth-inducing project but rather a project that is needed to enhance the existing UConn Hockey program and facilities so that athletes would have training and competition facilities of a quality comparable to other NCAA Division 1 teams. By providing these modernized facilities, the University would be able to attract and retain top-tier athletes and be able to be competitive at the highest collegiate level. The benefit is that the University would continue to be recognized nationally not only for academics but for athletics as well, which together would increase the attractiveness of the University to future prospective students (both athletes and non-athletes). The induced-growth affect triggered by athletic-type projects, however, is difficult to project, let alone the potential for indirect environmental impacts attributed to that induced growth. For these reasons, indirect impacts attributed to induced growth triggered by the ice hockey arena is not anticipated to be significant.

An assessment of cumulative impacts to wetlands, habitats, and campus parking/transportation conditions has revealed that these impacts have been relatively minimal when considering the nature and extent of development that has occurred on campus over the last decade. Overall, a total of 17,915 SQ FT (0.41 acres) of wetland impact has resulted from nine projects dating back to 2014 (including the wetland impacts anticipated from the proposed UConn Ice Hockey Arena). This wetland loss has been mitigated by the University through the creation of approximately 2 acres of high-quality wetlands. With respect to habitat loss, a total of approximately 2.75 acres of impact to forested areas with varying levels of habitat value has occurred from these same nine projects. Finally, projects over the past decade at UConn have resulted in various changes to on-campus parking and transportation conditions. The University actively plans for these transportation-related project changes in order to offset impacts and ensure adequate parking and efficient traffic operations on campus and in the surrounding area.

Undoubtedly, with the NextGen CT Initiative in full swing and the ambitious development plans outlined in the UConn Master Plan, there would likely be future impacts that would impact these resources on a level and scale similar to the impacts that have occurred in the past decade. The University is very proactive with their campus planning and is a recognized leader in the state when it comes to the protection of the environment. It is reasonable to assume that designs of future projects would be developed with the intent of avoiding and minimizing impacts to natural resources such as wetlands and habitats to the greatest extent possible and where unavoidable impacts occur, they would be adequately mitigated as part of the goal to sustain the natural environmental quality of the campus setting. Similarly, the University is committed to providing a parking supply that meets the overall University demand while also ensuring safe and efficient transportation both on campus and in the surrounding areas of Mansfield.

Anticipated impacts and proposed mitigation measures to avoid, minimize, or offset potential adverse impacts attributed to the Proposed Action are summarized in Table ES-1.

Table ES-1 - Summary of Impacts and Proposed Mitigation

Resource Category	Impacts	Proposed Mitigation
Consistency with Planning	• The Proposed Action is consistent with the State Plan of Conservation and Development, Town of Mansfield Planning and Zoning, and the University Master Plan.	No mitigation is required
Geology, Topography and Soils	• There are no unique geologic or topographic features on the Proposed Action Site. • There are no prime or statewide important farmland soils on-site.	No mitigation is required
Water Resources and Floodplains	• No impact to 100-year floodplains or floodways. • Stormwater runoff from the site is anticipated to decrease due to implementation of green infrastructure and low-impact development (LID) measures. • Water quality leaving the site is anticipated to improve compared to existing conditions with the implementation of green infrastructure and LID measures.	Stormwater management system design that is compliant with the Connecticut Stormwater Quality Manual (CTDEEP, 2004). Adherence to the 2002 CTDEEP Erosion and Sedimentation Control guidelines. Incorporation of Low Impact Development (LID) and green infrastructure measures into the site design.
Wetlands	• The Proposed Action would permanently impact up to 4,900 SQ FT of inland wetlands/watercourse resources.	An appropriate wetland mitigation strategy would be coordinated between the University, CT DEEP and the USACE during the permitting phase.

Resource Category	Impacts	Proposed Mitigation
Natural Communities, Flora and Fauna	• No rare or unique habitat is found within the natural areas of the Proposed Action Site, therefore no critical habitat areas would be lost or impacted. • Minor loss of small forested block habitat including uplands and wetlands; however, these are not unique and include forested edge with invasive species.	Mitigation to include development and implementation of a landscape plan incorporating native drought-resistant plantings to compensate for loss of habitat.
Noise	• Noise from the new arena would primarily be from outdoor mechanical equipment such as compressors or cooling fans and would be of a similar sound level as that generated by the adjacent Freitas Ice Forum. No impact is anticipated.	No mitigation is required, however noise reduction can be achieved by partial enclosure or shielding of outdoor mechanical equipment.
Air Quality/Greenhouse Gases	• New emissions from stationary sources including a dedicated boiler and diesel engine emergency generators. • Increased mobile source pollutant emissions from vehicles traveling to/from the arena facility. However, a reduction in motor vehicle emission rates over the long term would occur due to improved automotive industry technology combined with the assumption that the volume of motor vehicle traffic to and from the hockey arena would essentially remain constant (due to arena capacity limitations). Therefore, levels of pollutants and precursors from mobile sources are expected to decrease in the future (both with and without the Proposed Action). • The system that would provide the ice for the new arena proposes R717 ammonia as the primary refrigerant. Arena ice systems that use ammonia as the refrigerant have a zero Global Warming Potential and a zero Ozone Depleting Potential.	New stationary sources to be included in UConn's facility wide Title V air quality permit. Emergency generators operated less than 300 hours per year according to CT DEEP permit requirements.
Solid Waste	• Solid waste generated at the new ice hockey arena would be of similar type and amounts to that generated at the existing Freitas Ice Forum. No impacts are anticipated.	No mitigation is required.
Toxic and Hazardous Materials	• There are no known hazardous materials or spill sites located on or near the Proposed Action Site that would pose environmentally hazardous or contaminating conditions. • Generation of toxic or hazardous materials would be on par with that presently associated with the existing Freitas Ice Forum. No impacts are anticipated.	Hazardous materials used during facility operations would be properly stored and managed on site. All waste streams would be managed according to pre-existing University protocols.

Resource Category	Impacts	Proposed Mitigation
Public Health and Safety	• Existing UConn Public Health and Safety Services are equipped to handle the construction, operation, and management of the new ice hockey arena, therefore no impacts to public health and safety are anticipated.	No mitigation is required.
Visual and Aesthetic Character	• The Proposed Action is consistent with the recreational land uses that characterize the West Campus District. With the completion of the Athletic District (Stadia) Development Project anticipated in Spring 2020, the new Ice Hockey Arena would be compatible with and visually complement the new athletic fields and facilities associated with that project.	No mitigation is required.
Socioeconomics	• There would be no impact to Environmental Justice Communities. • Jobs would be created, with employees needed especially on game days or days when special events are held at the arena. • Increased patronage of local establishments during events would be a benefit of the Proposed Action.	No mitigation is required.
Traffic, Parking and Circulation	• The Proposed Action would impact traffic operations at three study area intersections resulting in increased vehicle delay or queues compared to the No Action alternative.	An updated special event traffic management plan that includes a traffic control plan on Separatist Road, additional manual traffic control at key intersections on Route 275 (South Eagleville Road), and updated bus routing services, etc. Coordination with the Town of Mansfield and its local traffic authority to request CTDOT to initiate traffic engineering studies to ascertain whether physical roadway improvements are needed at state-owned study area intersections. OSTA certification process will be triggered, and a certification of operation will be required.
Utilities	• Existing utility service connections are present and of enough capacity to support the new ice hockey arena.	No mitigation is required.
Energy Use and Conservation	• Increased energy demand for the University to operate a second ice hockey arena on campus. The new arena would not be replacing the existing Freitas Ice Forum. The existing facility would still be used for recreational programs.	LEED building certification approaches would be considered. Sustainability/energy conservation measures may be incorporated in the design of the new facility.

Resource Category	Impacts	Proposed Mitigation
Cultural Resources	• There are no above ground historic resource or archaeological resources on or eligible for the National Register of Historic Places within the Proposed Action's Area of Potential Effect (APE).	No mitigation is required.
Construction Period Impacts		
Traffic, Parking, and Circulation	A portion of I-Lot would periodically be open during the early stages of project construction but would eventually become unavailable for parking until project completion.	Students and event spectators would be directed to alternate parking locations.
Air Quality	Potential construction air quality impacts from diesel exhaust, idling, and fugitive dust	Mitigation of would be addressed through best management practices including: • Reducing exposed erodible earth area to the extent possible through appropriate construction phasing. Stabilization of exposed earth with grass, pavement, or other cover as early as possible. • Application of stabilizing agent such as calcium chloride or water to the work areas and haul roads. • Covering, shielding, or stabilizing stockpiled material. • Use of covered haul trucks. • Limiting dust-producing construction activities during high wind conditions. • Rinsing construction equipment with water at a designated wash area near the entrance/exit to the construction site to minimize drag-out of sediment by construction equipment onto the adjacent roads. • Street sweeping of roads within the construction area.
Noise	Potential for continuous and/or intermittent (impulse) noise during construction.	Noise abatement measures during construction to include use of appropriate mufflers and restrictions on hours of operation. Adherence to University Contractor Environmental Health and Safety Manual and OSHA standards.
Stormwater and Water Quality	Potential for soil erosion during construction.	Preparation of a Stormwater Pollution Control Plan and deployment of Best Management Practices to avoid soil erosion during construction.
Natural Communities, Flora and Fauna	Potential to impact natural habitat during breeding, fledging and other sensitive periods for wildlife. A benefit would be the removal of invasive species at the Proposed Action site.	Observance of time of year restrictions to outside sensitive seasons for birds and bats.

Resource Category	Impacts	Proposed Mitigation
Hazardous Materials and Solid Waste	Generation of solid waste and hazardous during construction.	If contaminated soils encountered during construction, a soil management plan would be developed. Development of a site-specific Hazardous Materials Management Plan and Health and Safety Plan in accordance with OSHA guidelines. Construction waste containing solvents to be disposed of by a licensed waste hauler. Proper disposal of solid waste.
Socioeconomics	There would be a short-term economic benefit during the construction period due to creation of jobs and potential purchase of goods and services locally and regionally.	No Mitigation is required

1 Introduction

1.1 Background

The University of Connecticut (University or UConn) Huskies men's ice hockey program began in 1960 competing at the NCAA Division III level as a member of the former ECAC East conference (now the New England Hockey Conference). In the early years, the Huskies played all their home games outdoors at a partially enclosed on-campus rink. That outdoor rink was enclosed as part of the Mark Edward Freitas Ice Forum construction project. The Freitas Ice Forum officially opened on campus in November 1998. The Freitas Ice Forum was constructed by the University in preparation for the men's team's transition to the Metro Atlantic Athletic Conference (now the Atlantic Hockey Association) and competition at the NCAA Division 1 level. The UConn women's ice hockey team began NCAA competition in 2001, a few years after the Freitas Ice forum opened. Both teams played all their home games at the Freitas Ice Forum for over a decade. In 2011 the first men's game was held at the XL Center in Hartford.

The University transitioned from the Atlantic Hockey Association to the Hockey East Association (Hockey East) for the 2014-2015 season. As part of that move, UConn added 18 scholarships for the men's ice hockey team and additional scholarships to existing women's sports programs to meet Title IX gender equity requirements. The move to Hockey East also required UConn to meet Hockey East standards and requirements related to arena facilities. Because the current Freitas Ice Forum is too small and does not meet Hockey East standards and requirements to host UConn's men's hockey games, UConn has had to play almost all its home men's hockey games in the XL Center in Hartford since 2014. Hockey East requires that teams in the conference have on-campus facilities with at least 4,000 seats along with other amenities. UConn has obtained permission from Hockey East to build a smaller venue with 2,500 seats so long as the arena's design allows for potential expansion to 3,500 seats in the future.

1.2 Purpose and Need

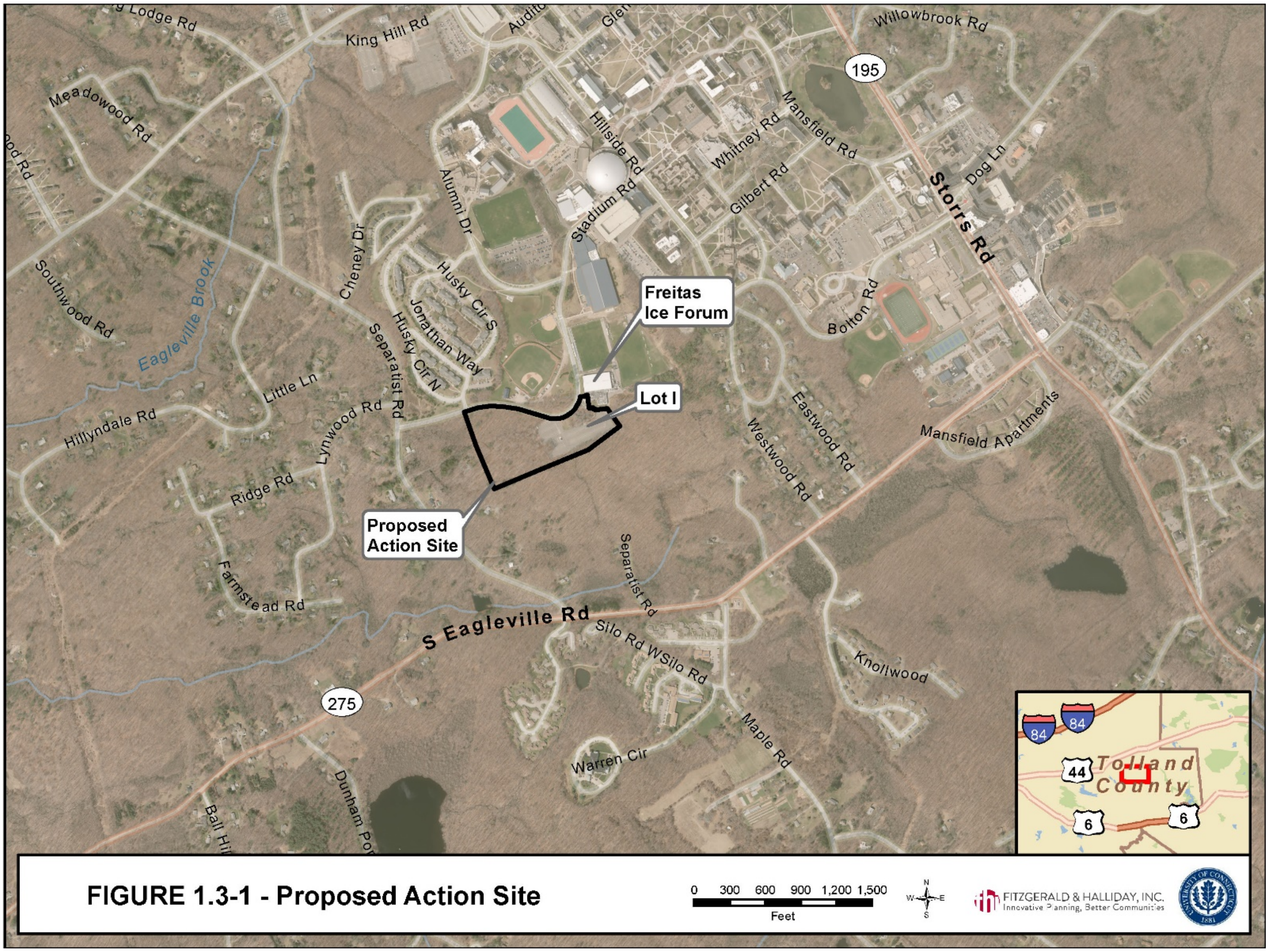
Purpose: To develop an on-campus Ice Hockey Arena that fulfills UConn's agreement with Hockey East.

Need: UConn's Division I ice hockey program joined the Hockey East conference in 2014. Its current on-campus arena – Freitas Ice Forum – is reaching the end of its useful life and does not comply with Hockey East standards. As such, the men's ice hockey program has played most of its home games at the XL Center in Hartford since that time. UConn desires to construct a new arena on-campus to host a portion of men's games and all women's games. The new arena may also support recreational leagues and youth programs in the surrounding area.

1.3 Proposed Action

The University is planning development of a new ice hockey arena and associated surface parking on approximately 12.5 acres along Jim Calhoun Way on its main campus in the Storrs section of Mansfield, Connecticut (the Proposed Action Site – Refer to Figure 1.3-1). The site is about half developed today and consists primarily of a surface parking lot (I-Lot), stormwater conveyance, some wetlands, and rolling, wooded uplands. Immediately east of and adjacent to I-Lot is the existing Mark Edward Freitas Ice Forum, a 1,650-seat ice hockey arena built in 1998 that UConn currently owns and operates.

Figure 1.3-1 - Proposed Action Site



In 2014, UConn's Division 1 Men's and Women's ice hockey teams joined the Hockey East conference. Because the current Freitas Ice Forum is too small and does not meet Hockey East standards and requirements to host UConn's men's hockey games, UConn has had to play almost all its home men's hockey games in the XL Center in Hartford since the 2014-2015 season. The Hockey East Association requires teams in the conference to have on-campus facilities with at least 4,000 seats along with other amenities, however UConn has obtained permission from Hockey East to build a venue with a seating capacity up to 3,500 seats.

The new arena would host some men's hockey games, all women's hockey games and may also support UConn's robust recreational ice hockey program. Additionally, the new arena could be utilized by the

University for other events and to support community needs. At a minimum, the new arena would have the following features:

- Facilities and ice that would meet NCAA Division I Ice Hockey requirements, Hockey East Conference standards, and University guidelines and requirements.
- Up to 3,500 seats, with up to 50% seat-back chairs; the balance being bleachers
- Locker rooms and office space.
- Parking for up to 700 vehicles

To satisfy parking requirements, construction of the Proposed Action would be phased with at least 360 spaces built initially to replace those spaces lost from Lot-I. Full build-out of the Proposed Action would include up to 700 parking spaces proximate to the new ice hockey arena. UConn will rely on its other parking facilities and shuttle operations during events at the new arena similarly to current event management for Gampel Pavilion. UConn will update its current event management plan to accommodate arena parking and event traffic flow.

Construction of the new ice hockey arena is currently planned to commence in Fall 2020, with a targeted opening date in Fall 2022. The new arena would adhere to University design guidelines and performance standards for new construction.

The University, as the sponsoring agency for this state-funded project, is preparing this Environmental Impact Evaluation (EIE) pursuant to the Connecticut Environmental Policy Act (CEPA) to further evaluate the potential environmental impacts of the proposed Ice Hockey Arena Development Project. The format and content of this EIE are based on the requirements of the Connecticut General Statutes [CGS] Sections 22a-1 through 22a-1h, inclusive, and, where applicable, CEPA regulations Sections 22a-1a-1 through 22a-1a-12, inclusive, of the Regulations of Connecticut State Agencies [RCSA]). The purpose of the CEPA process is for state agencies to determine if a Proposed Action would have a "significant effect" on the environment. This EIE includes a description of the Proposed Action; the purpose and need for the action; an evaluation of the direct and indirect effects and cumulative impacts of the Proposed Action; identification of unavoidable adverse environmental effects; evaluation of alternatives; and a description of proposed mitigation measures.

1.4 Public Participation and Agency Coordination

Public and agency coordination are integral components of the CEPA process. CEPA affords two formal opportunities for public and agency input and participation. The first is during the early public scoping process and the second is upon release of the EIE for public and agency review and comment. Additionally, in preparing an EIE, coordination with resource agencies typically occurs to understand the nature, extent, and quality of regulated resources within the project area that could potentially be impacted by the Proposed Action. Specific agency coordination for this EIE included coordination with the State Historic Preservation Office (SHPO) as a project review cover form was submitted to SHPO on December 11, 2019. SHPO provided a formal determination of effects to UConn in a letter dated February 7, 2020. The SHPO project review cover form and response letter are provided in Appendix E of this EIE.

The CEPA public scoping process begins when the sponsoring agency, in this case the University, publishes a scoping notice in the Connecticut Council of Environmental Quality's semimonthly online publication known as the *Environmental Monitor* (https://www.ct.gov/ceq). This notice triggers a 30-day public comment period whereby agencies, organizations and the public can submit comments on the project. A formal public scoping meeting may also be held during this 30-day public scoping period. The public scoping meeting may automatically be held by the project sponsor without it being formally requested. Alternatively, if a public scoping meeting is requested by 25 or more individuals or by an agency or group representing 25 or more individuals, then the sponsoring agency is required to hold the meeting. For the UConn Ice Hockey Arena Development Project, the University elected to automatically hold a public scoping meeting. That scoping meeting was held on June 11, 2019 at the Konover Auditorium in the Thomas J. Dodd Research Center on the campus of the University of Connecticut. The notice of public scoping that was published in the *Environmental Monitor* and the project presentation that was given at that scoping meeting are presented in Appendix A of this EIE.

At the June 11, 2019 public scoping meeting, no written or oral comments were received. During the 30-day scoping period, written comments were received from the Town of Mansfield and the Connecticut Department of Public Health. These comment letters are also included in Appendix A of this EIE. The comments contained in those letters were considered and addressed during preparation of this EIE. Per CEPA regulations, UConn also published a Post-Scoping Notice in the Environmental Monitor on October 22, 2019. This Post-Scoping Notice is also included in Appendix A of this EIE.

Notice of EIE availability for public/agency review and comment was posted in the *Environmental Monitor* on February 18, 2010 and has also been published in the Willimantic Chronicle. A public meeting on the EIE will be held at UConn's Konover Auditorium as advertised. An electronic copy of this EIE is also available on the UConn University Planning, Design, and Construction (UPDC) website (https://updc.uconn.edu). In addition to the Town of Mansfield (Town Clerk's Office and Public Library), this EIE was sent to the following agencies for review and comment:

- Council on Environmental Quality
- Connecticut Commission on Culture and Tourism (SHPO)
- Connecticut Office of Policy and Management
- Connecticut Department of Energy and Environmental Protection
- Connecticut Department of Public Health, and
- Connecticut Department of Transportation

2 Alternatives Analysis

CEPA requires consideration of a reasonable range of alternatives for actions that may have a potential significant impact on the environment. Two alternatives to the University's proposed Ice Hockey Arena Development project are evaluated in this EIE, a No Action Alternative (i.e., "do nothing") and the Proposed Action Alternative (i.e., the "preferred alternative"). These two alternatives are described in this chapter along with the on-campus locations and alternative concepts that were considered as part of the site selection and design development process that led to the selection of the Preferred Alternative.

2.1 No Action Alternative

Under the No Action Alternative, the UConn Men's Hockey home game schedule would continue to be held off-campus at the XL Center in Hartford. The UConn Women's Hockey team would continue to play their home game schedule at the existing Freitas Ice Forum. Both teams would continue to conduct practices and other training workouts and activities at the Freitas Ice Forum. Due to the age and condition of the Freitas Ice Forum, and the increasing popularity of the woman's program as a spectator sport, it is likely that the existing facility would eventually require future renovations as part of this alternative in order to continue to adequately support the university's hockey programs. The No Action Alternative fails to support the basic purpose and need of the project which is to develop an on-campus ice hockey arena and associated parking infrastructure that meets the requirements and standards of Hockey East, which is the premier NCAA Division 1 Hockey conference. By not adhering to Hockey East requirements and standards, which are applied across the board to all Hockey East member universities, UConn's hockey programs would be in jeopardy of forfeiting membership due to non-compliance with conference policies and standards regarding on-campus facility requirements.

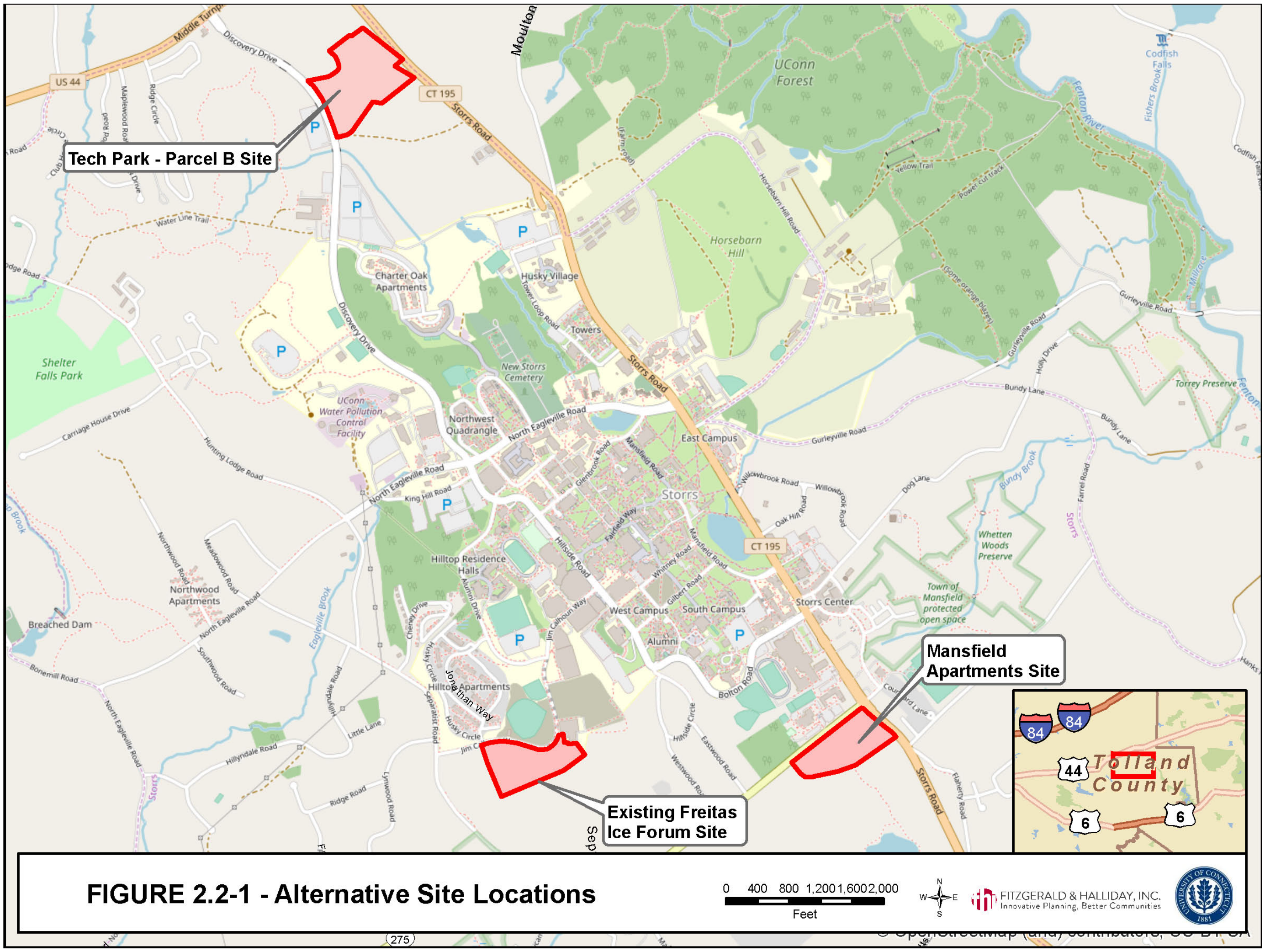
The No Action Alternative serves as the baseline for assessment of impacts under CEPA and is therefore carried throughout the EIE.

2.2 Alternative Site Locations in Campus

A total of three sites were considered for development of a new Ice Hockey Arena on the UConn Campus in Storrs, CT. The three sites that were considered by the University are shown on Figure 2.2-1. The following narrative explains the origination and details of each site, and the process that led to the selection of a preferred site.

The University of Connecticut's Master Plan (Skidmore, Owings, and Merrill, LLP, May 2015), which considers the 2015-2035 planning horizon, identifies construction of a new ice hockey arena as one of several priority projects that together would form the basis for the first ten years (2015-2025) of campus development. Two potential sites were identified in the 2015 UConn Master Plan for the arena; one located in the South Gateway District on the southwestern quadrant of the South Eagleville Road/CT Route 195 (Storrs Road) intersection where the Mansfield Apartments currently reside, and a second located within the Athletic District in west campus adjacent to the existing Mark Edward Freitas Ice Forum.

Figure 2.2-1 - Alternative Site Locations on Campus



Over the course of the master planning process, the University received many comments from the community opposing the South Gateway District location. Consequently, the South Gateway District location was dropped from further consideration by the University.

Subsequent to the release of the master plan, the University issued a Request for Expressions of Interest (RFEI) in October 2017 for the development of a new hockey arena on the Storrs, CT campus. The RFEI presented two potential sites for the arena; the one next to the existing Freitas Ice Forum within the Athletic District of west campus that was identified in the 2015 UConn Master Plan, and a second site (the Tech Park Parcel B Site), which is located along Discovery Drive in north campus. Both sites were included in the RFEI because they met several requirements of the University:

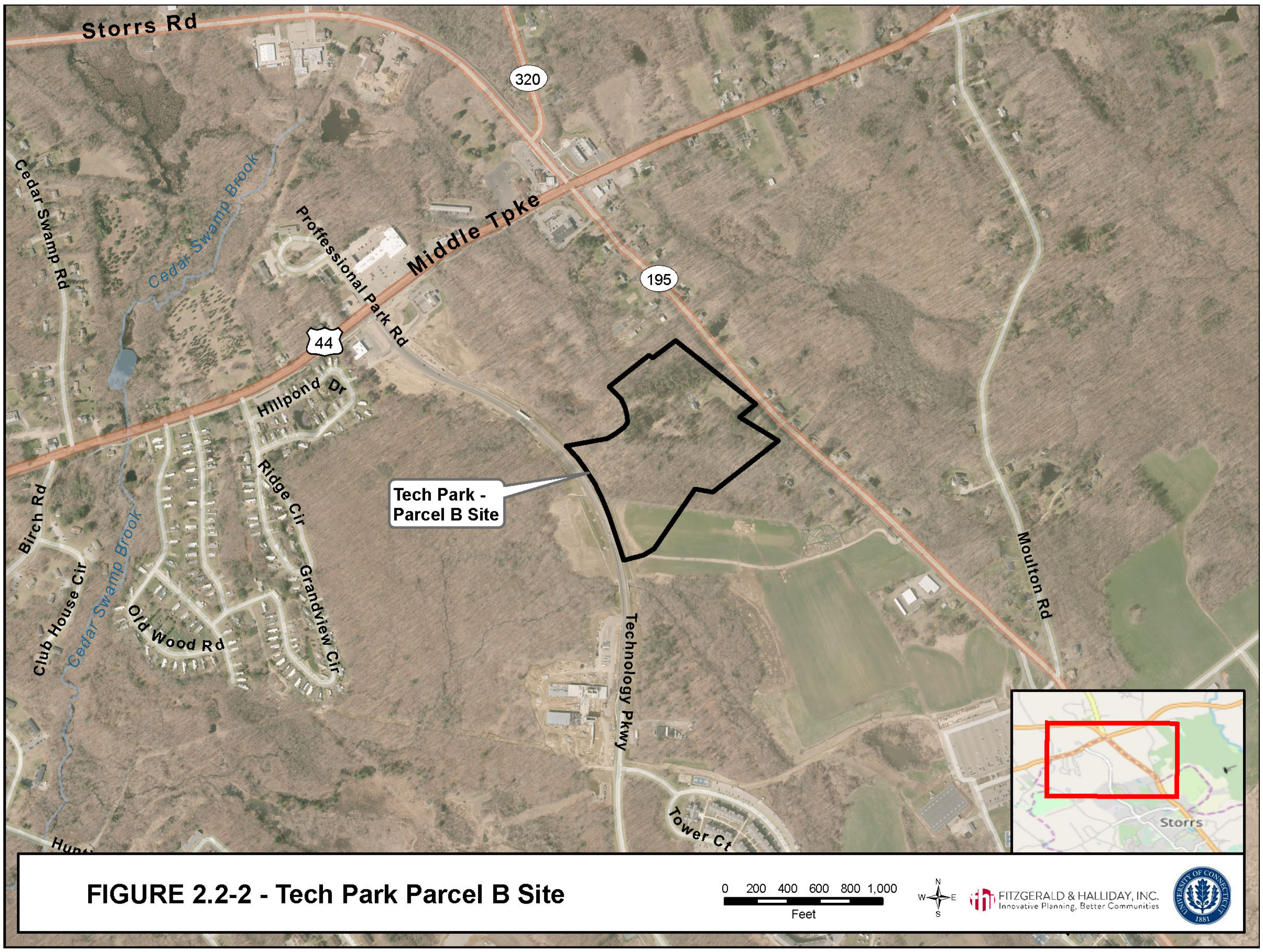
- University-owned property
- On-campus location
- Adequate developable land area
- Reasonable access for vehicles and pedestrians
- Adequate parking

- Access to transit
- Available utilities
- Limited environmental implications

2.2.1 Tech Park Parcel B Site

The Tech Park Parcel B Site is 24.87 acres in size with a developable area of 16.2 acres. The parcel has frontage to the west on Discovery Drive and to the east on CT Route 195 (Storrs Road). Specifically, the parcel is located northeast of the recently completed Innovative Partnership Building and directly east of and across Discovery Drive from surface parking J-lot. Figure 2.2-2 depicts the location of the Tech Park B Site.

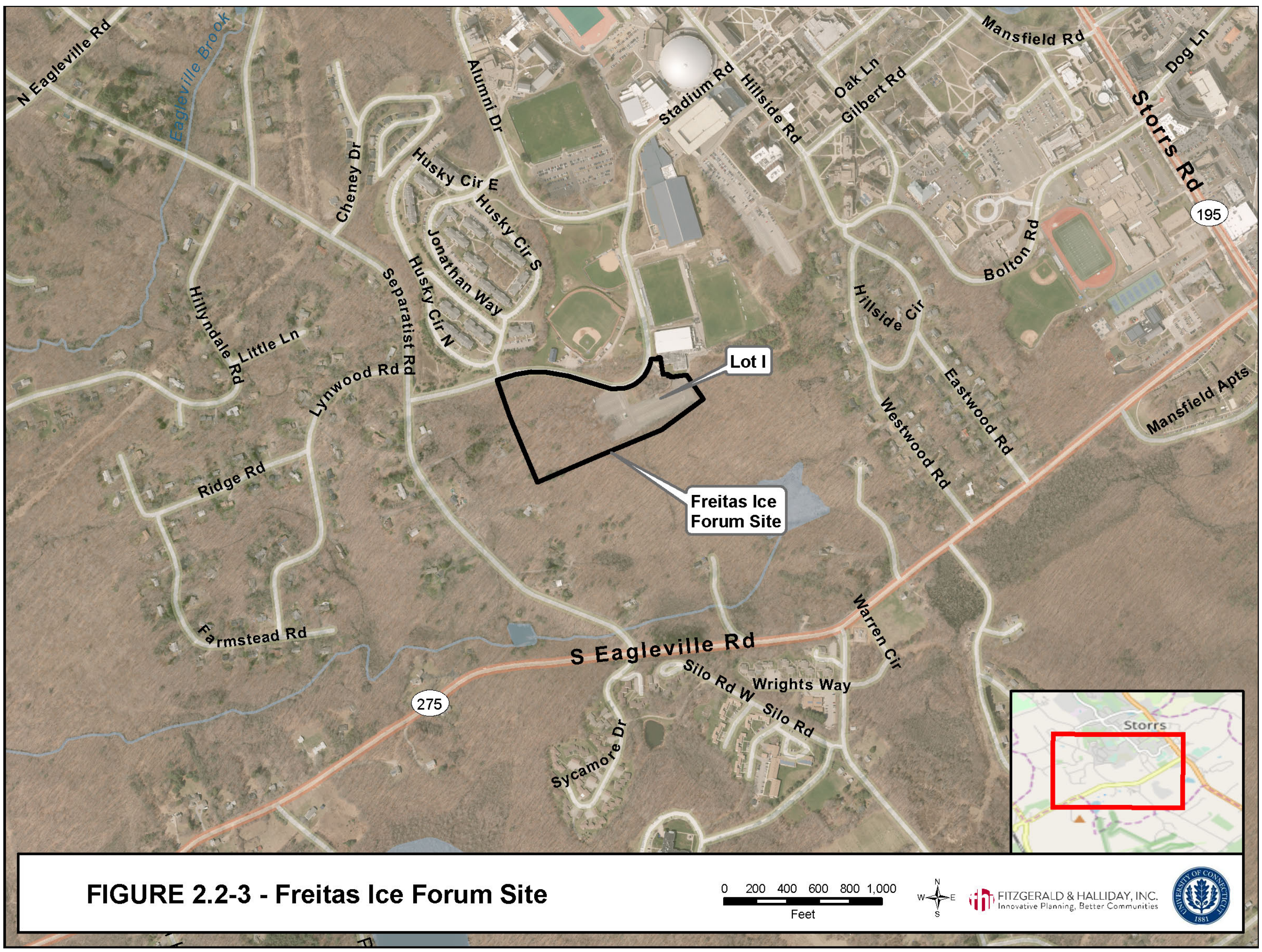
Figure 2.2-2 - Tech Park Parcel B Site



2.2.2 *Freitas Ice Forum Site*

The Freitas Ice Forum site is located directly south of Jim Calhoun Way and west of the existing Freitas Ice Forum. This 12.5-acre site is about half developed today and consists primarily of surface parking lot (I-Lot), wet weather stormwater conveyance, some wetlands, and rolling, wooded uplands. The site is located within a section of the UConn campus that is presently home to their athletic fields, which are currently being upgraded as part of a separate project called the Athletics District (Stadia) Development Project. The Stadia project involves renovation and improvement of aging athletic fields and facilities associated with soccer, baseball, and softball to meet NCAA Division 1 requirements. The project also includes, among other facilities, the construction of a +/- 52,000 SF performance center complete with locker rooms, concessions, weight training, sports medicine, restrooms, and administrative offices for the soccer, baseball, and softball programs. Figure 2.2-3 depicts the location of the Freitas Ice Forum Site.

Figure 2.2-3 - Freitas Ice Forum Site



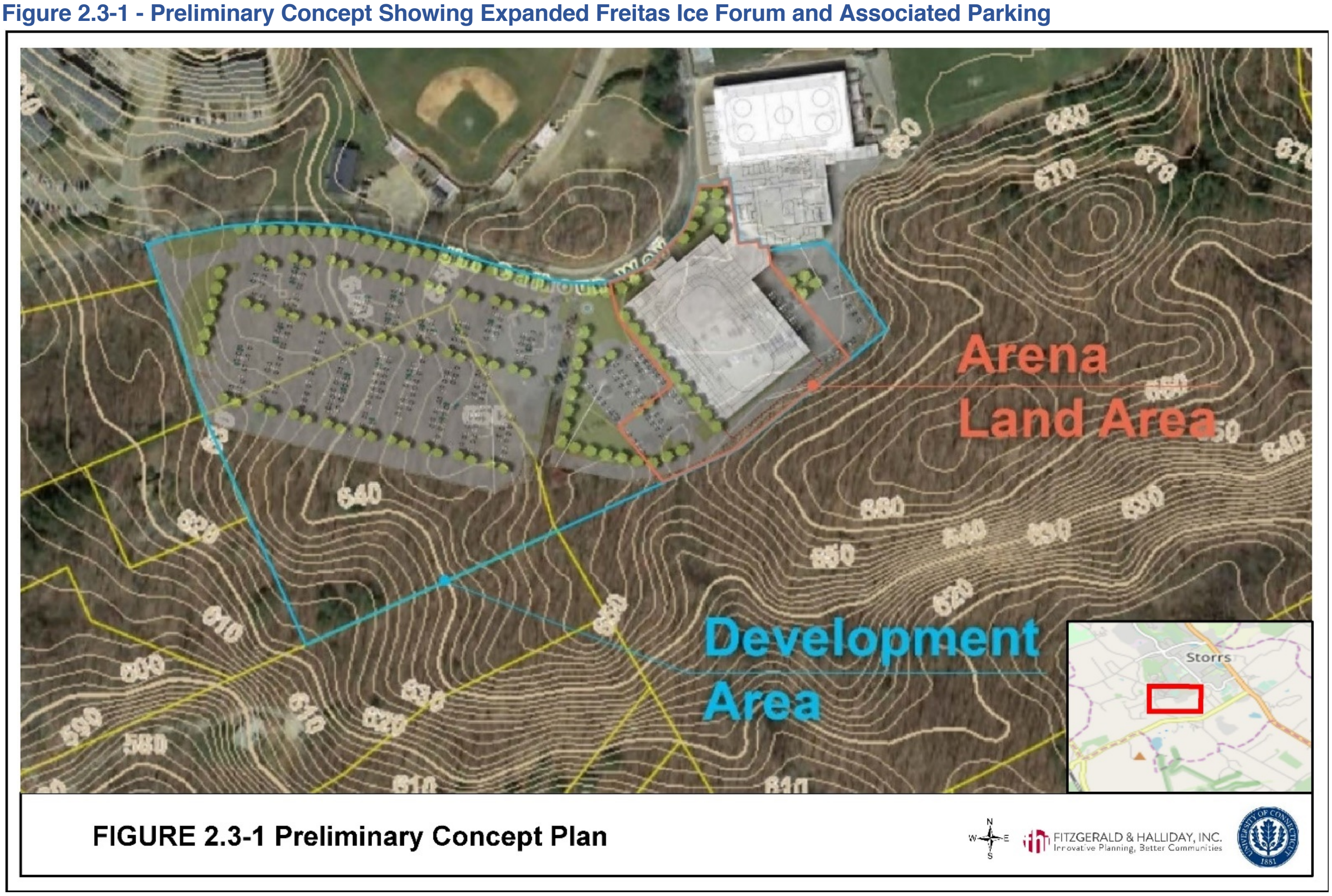
2.2.3 Site Selection

The Tech Park Parcel B site has direct frontage/access to CT Route 195 (Storrs Road) on the east and is easily accessed from US Route 44 on the north via Discovery Drive. It also has adequate developable area to accommodate a new ice hockey arena. However, the site is located within a section of campus that has been designed as a science and technology park. An ice hockey arena in this part of campus, although possible, would be incompatible with surrounding science and technology land uses. The Freitas Ice Forum site, on the other hand, is located within the Athletic District of West Campus and therefore is directly compatible with surrounding land uses. The Freitas site also has adequate developable land area, direct access from Jim Calhoun Way, and the site is already partially developed as evidenced by the presence of the I-Lot surface parking area. For the reasons listed above, the University has selected the Freitas Ice Forum site as the preferred location for development of the new UConn Ice Hockey Arena.

2.3 Alternative Site Concepts

Several alternative concepts for the UConn Ice Hockey Arena and associated parking on the site immediately west of the existing Freitas Ice Forum have been developed with increasing detail since the issuance of a RFEI by the University in October 2017. A very preliminary generic concept for the site, which considered renovating and expanding the existing Freitas Ice Forum to the southwest was initially developed and is shown in Figure 2.3-1.

Figure 2.3-1 - Preliminary Concept Showing Expanded Freitas Ice Forum and Associated Parking



In summer 2019, the University and their design consultant team abandoned Freitas Ice Forum expansion concepts in favor of concepts that considered a new stand-alone ice hockey arena immediately west of the existing facility. Environmental constraints as well as building program needs resulted in the abandonment of the Freitas Ice Forum expansion concepts. The main reasons for dismissal of expansion concepts included:

- Wetland Impacts - Freitas expansion can only take place to the south or southwest due to the configuration of the existing building and because a full re-design of the athletic fields on the north, including the J.J. Morrone Soccer Stadium, is presently under construction as part of the Athletics District Development (Stadia) Project. An existing wetland (Wetland 6) located directly southwest of the Freitas Ice Forum would be filled / impacted with a southwesterly expansion; and would trigger a need for comprehensive federal wetland permitting that could substantially affect the project development schedule. A stand-alone facility to the west could avoid this wetland impact and allow for a more environmentally friendly design and less intensive permitting requirements.
- Ledge/Rock Cuts – Expanding Freitas to the south, to avoid the wetland described above to the southwest, would result in a need for substantial rock cuts. This site work would drive up the costs of the project and was therefore deemed not feasible.
- Building Program – When comparing expansion concepts to stand-alone building concepts, it became apparent to the designers/architects that the building program would be much better accommodated in a new stand-alone building to the west. Of concern was an inability to efficiently integrate locker room and administrative office space requirements/needs in expansion concepts. This concern was completely alleviated in stand-alone building concepts.

Concepts for a stand-alone ice hockey arena and associated surface parking evolved over the course of summer 2019. The objective was to strategically locate the building footprint on the Proposed Action Site to maximize surface parking capacity and accommodate efficient vehicular and pedestrian access and circulation elements, while avoiding and minimizing impacts to the environment to the greatest extent possible. The presence of wetlands on site triggered a need to design separate surface parking areas to the east and west of the proposed arena building, to avoid and minimize impacts. Further refinements to the conceptual site plan were made by engineers to better accommodate vehicular access/egress driveways from Jim Calhoun Way to the arena and surface parking areas, and to improve the internal site vehicle and pedestrian circulation elements. These efforts led to the conceptual site plan depicted in Figure 2.4-1.

2.4 Preferred Alternative

The Preferred Alternative is described above under Section 1.3 Proposed Action and is represented by the conceptual site plan depicted in Figure 2.4-1. The conceptual site plan provides the necessary developable area for construction of the new UConn Ice Hockey Arena that can be expanded in the future to provide additional spectator seating. The site plan also accommodates the required surface parking capacity and on-site traffic circulation elements needed to ensure efficient site access/egress and facility operations while avoiding and minimizing impacts to wetlands, woodlands, and other natural resources to the greatest extent possible. Overall, the Preferred Alternative concept meets the University's stated purpose and need and is therefore carried forward for analysis in this EIE as the Proposed Action.

Figure 2.4-1 - UConn Hockey Arena Conceptual Site Plan – Preferred Alternative

FIGURE 2.4-1 Prefered Alternative Conceptual Site Plan

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3 Existing Environment and Impact Evaluation

3.1 Environmental Resources of No Significance in the Project Area

Several environmental resources are not present on or near the Proposed Action Site and therefore would not be adversely affected by the project. These resources are briefly addressed below:

- Wild and Scenic Rivers – There are no waterbodies, particularly rivers with federal Wild and Scenic designation, within the Proposed Action Site. Therefore, the Proposed Action would not impact Wild and Scenic Rivers.
- Navigable Waterways - There are no navigable waterways within the Proposed Action Site, therefore, navigable waterways would not be adversely affected by the Proposed Action.
- Coastal Resources – The Proposed Action Site is located outside of the coastal boundary, as defined in Connecticut General Statutes (CGS) Section 22a-94(b). It is also located outside of the Connecticut Coastal Management Zone. Therefore, the Proposed Action is not subject to the Connecticut Coastal Management Act (CGS Sections 22a-90 through 22a-113c) and would not negatively impact coastal resources.
- Prime and Statewide Important Farmland Soils and Active Agricultural Areas - Soils on the Proposed Action Site do not meet the criteria for designation as Prime or Statewide Important Farmland soils. There are also no active agricultural farms on or adjacent to the Proposed Action Site. Therefore, the Proposed Action would have no adverse impact to these agricultural resources.
- Federal Emergency Management Agency (FEMA) 100-year Floodplains and Floodways – There are no mapped 100-year floodplains or floodways located on or adjacent to the Proposed Action Site. The nearest FEMA mapped floodplains are located approximately 2,900 feet northwest and are associated with Eagleville Brook. Therefore, there would be no adverse impacts to 100-year floodplains or floodways from the Proposed Action.
- Aquifer Protection Areas (APA) – The Proposed Action Site is not located within a designated drinking water aquifer protection area. Therefore, the Proposed Action would not have a direct or indirect impact on a protected groundwater public drinking water supply.

3.2 Consistency with Planning

3.2.1 State Conservation and Development Policies Plan

The Proposed Action, which includes a combination of re-use of land with new development, and addresses recreational and educational needs, is consistent with Connecticut's 2013-2018 Conservation and Development Policies Plan (Connecticut Office of Policy and Management, 2013). The Proposed Action is also consistent with the Revised Draft 2018-2023 Conservation and Development Policies Plan which has yet to be adapted as final (Connecticut Office of Policy and Management, 2017) (State C&D Plan). Consistency with the State C&D Plan is required because the Proposed Action would use state funds of more than $200,000 to develop real property, which triggers a consistency determination under CGS Sec. 16a-31(a). This classifies the Proposed Action as a growth-related project, as defined in the State C&D Plan.

Review of the Locational Guide Map (LGM) in the State C&D Plan revealed that the Proposed Action Site is located within a Priority Funding Area (PFA), with the western portion of the site also located within a Balanced Priority Funding Area (BPFA). The LGM identifies priority funding areas for state agencies, which have conditions to guide development and to outline the requirements to use state funds to build projects within these areas.

The Proposed Action is consistent with the State C&D Plan as shown by its applicability/conformity with several of the principles and policies outlined in the State C&D Plan. One of the seven Smart Growth Principles defined by Public Act 09-230 is promoted by this project: Redevelopment of existing infrastructure and resources.

The Proposed Action is also in conformity with one of the six Growth Management Principles (GMP) that are the foundation of the State C&D Plan. GMP#1 is supported by the Proposed Action as described below.

- GMP#1 (Redevelop and Revitalize Regional Centers and Areas with Existing or Currently Planned Physical Infrastructure): The location of the Proposed Action is within a developed university campus area with existing public water, sewer, and transit. A portion of the project site would be redeveloped and includes reuse of an existing parking lot. The Proposed Action is also consistent with surrounding land uses, particularly athletic facilities, as this area is part of the University's Athletics District improvements. These improvements include new baseball, soccer, and softball stadiums and associated facilities located adjacent to the Proposed Action Site.

3.2.2 Local Zoning and Planning

As a state institution, the University of Connecticut is not subject to the municipal zoning regulations of the Town of Mansfield. However, the Proposed Action is consistent with future land use designations identified by the Town of Mansfield in its Plan of Conservation and Development (Mansfield POCD) (Town of Mansfield, 2015). On future land use mapping within the Mansfield POCD, the Proposed Action Site is designated for institutional use, consistent with plans to develop the new ice hockey arena. The Town's preferred design characteristics for this area, UConn's Core Campus, include "buildings with support facilities, including utilities, surface and structured parking, athletic and theater venues, recreation facilities and supporting commercial activities, including hotel, restaurant and retail." All components of the Proposed Action are consistent with the Mansfield POCD's intended use for this area, including the ice hockey arena (athletic venue and recreation facility) and proposed surface parking.

The ice hockey arena would be constructed within an already developed area in the campus core, which is consistent with the Mansfield POCD's, Goal 8.1, Strategy D, Action 1: "Encourage UConn to focus development and non-agricultural activities in the Core Campus, North Campus and Depot Campus areas."

3.2.3 University Planning

The Proposed Action is consistent with UConn's future planning, as shown in the University of Connecticut Campus Master Plan (UConn MP) (Skidmore, Owings, and Merrill, LLP, May 2015). The ice hockey arena appears in the mid-term (2020 – 2025) capital improvement plan in the UConn MP. The future ice hockey arena would be located in the West Campus District, and its use is consistent with the uses outlined in the UConn MP as "devoted chiefly to sports and recreation, serving Athletics, club, and intramural needs, as well as general student recreation. Many of UConn's athletics programs need upgrades to facilities…expand event seating capacity, offer new amenities, or provide more desirable space to attract top athletic talent to the University." Development of the proposed ice hockey arena aims to address these needs by upgrading the athletic facilities for ice hockey to meet Hockey East Association requirements, which would attract top athletes, while also providing an opportunity for recreation for all UConn students at the existing Freitas Ice Forum.

3.3 Geology, Topography and Soils

3.3.1 Existing Conditions

Topographically, contours on the Proposed Action Site depict a gradual elevation trend downward and to the west. A high point of approximately 670 feet above mean sea level (amsl) (NAVD88) can be found on a hill just offsite and to the southeast of the existing Freitas Ice Forum. Elevations at the western boundary of the Proposed Action Site are approximately 628 feet amsl. In the immediate proximity of the existing facility, the elevation is approximately 652 feet amsl and within surface parking I-Lot, the elevation is roughly 640 feet amsl.

According to the Connecticut Geological and Natural Resources Survey "Surficial Materials Map of Connecticut" (1992) and the "Bedrock Geological Map of Connecticut" (1985); the Proposed Action Site is located on till or thick till and the bedrock type is identified as Hebron Gneiss. A Geologic Engineering Report for the UConn Ice Rink, prepared by Langan CT Inc. (October 11, 2019) identifies subsurface conditions as generally consisting of asphalt or topsoil underlain by layers of historic fill, peat, sand, glacial till, weathered rock and bedrock. The topsoil on the site ranges from 3-12 inches thick. An area of ledge exists to the south of the Proposed Action Site.

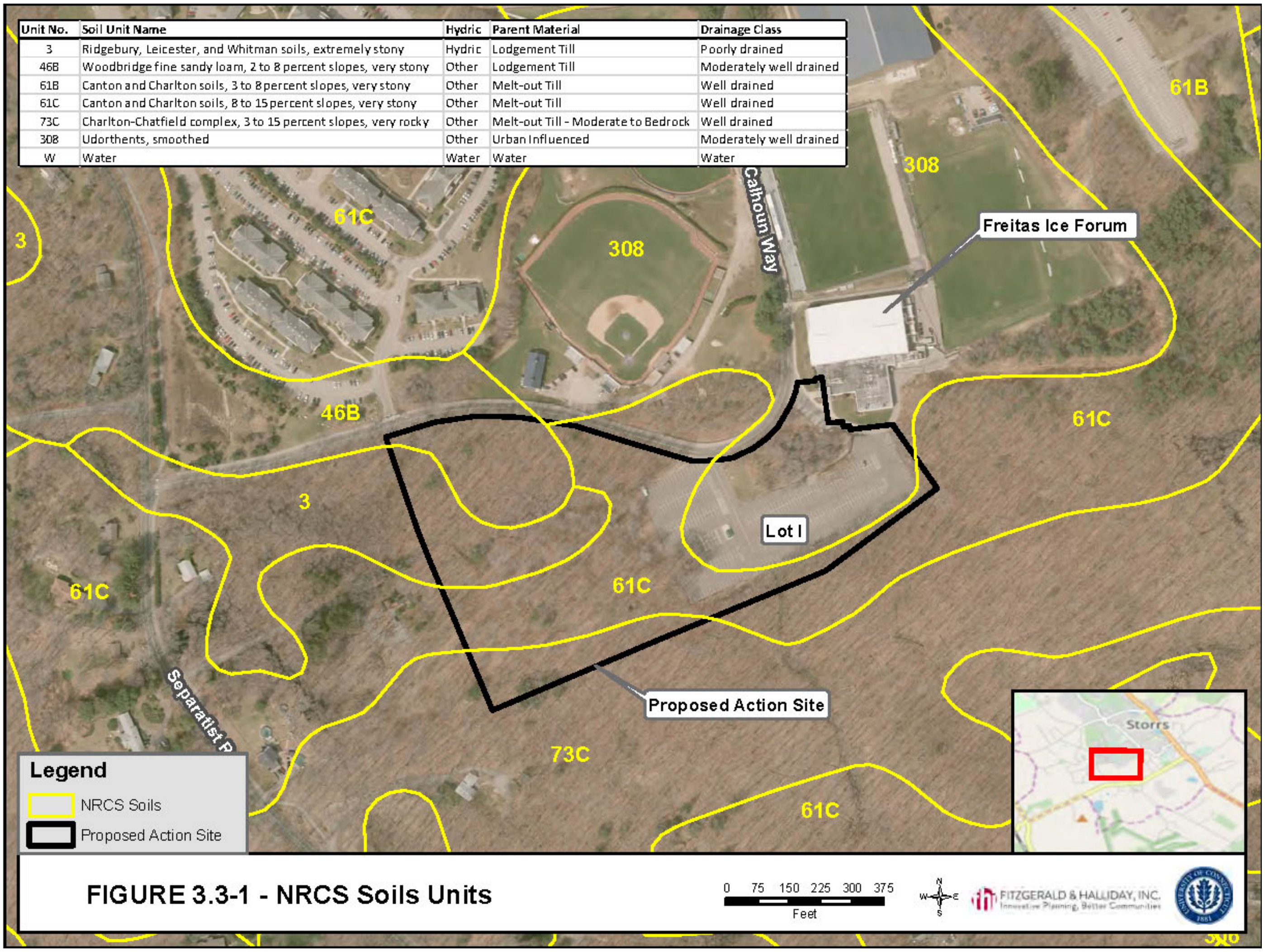
According to Natural Resource Conservation Service (NRCS) Web Soil Survey mapping (December 6, 2018), on-site soils include Canton and Charlton fine sandy loams 8-15% slopes, very stony in the areas to the south and west of surface parking I-Lot; Udorthents, smoothed in the area of the existing Freitas Ice Forum and locations offsite to the northeast; Ridgebury, Leicester and Whitman soils, 0-8% slopes, extremely stony in a limited area at the westernmost boundary of the site where wetlands exist; Woodbridge fine sandy loam, 2-8% slopes, very stony on the extreme northwestern corner of the site; and Charlton-Chatfield complex, 3-15% slopes, very rocky on the southwestern corner of the site. None of the soils on-site qualify as either prime or statewide important farmland soils. Refer to Figure 3.3-1 for the soils map of the site.

3.3.2 Impact Evaluation

3.3.2.1 No Action Alternative

Under the No Action Alternative, there would be no change to the existing geology, topography or soils on the site immediate west of the Freitas Ice Forum where surface parking I-Lot is presently located The land area north of the existing Freitas Ice Forum and north and east of Jim Calhoun Way is currently under construction as part of the Athletics District (Stadia) Development Project. Any soil disturbance during construction of that project would be managed to control soil erosion and minimize offsite sedimentation impacts.

Figure 3.3-1 - NRCS Soils on the Proposed Action Site



3.3.2.2 Proposed Action

A portion of the Proposed Action Site is already developed as evidenced by the presence of surface parking I-Lot. Construction would likely involve the removal of asphalt from I-Lot and removal of existing topsoil and other unsuitable soils and rock from adjacent areas. The unsuitable materials would be replaced by engineered fill or other fill materials suitable for construction. As of the preparation of this EIE, there are no known contaminated soils on the Proposed Action Site, so soil remediation is not anticipated to be necessary. If contaminated soils are encountered, a soil management plan would be developed for the project. Construction of the new ice hockey arena is not expected to directly or indirectly impact any important soils or significant geologic features. A site grading plan would be developed that appropriately accommodates all building and parking infrastructure and would ensure efficient site operations and functioning. A soil erosion and sedimentation control plan and stormwater management plan would also be developed and adhered to by the contractor throughout the construction phase until the site has stabilized. The measures and best management practices in those plans would minimize potential off-site impacts attributed to sediment laden construction site runoff.

3.4 Water Resources and Water Quality

3.4.1 Existing Conditions

The Proposed Action Site is located within the Willimantic regional drainage basin, the Willimantic River sub regional drainage basin, local basin number 3100-19, and falls within the Thames major drainage basin. The Proposed Action Site is not located within an Aquifer Protection Area (APA) or wellhead protection area. The groundwater within the proposed project limits is classified as “GA”. According to CT DEEP Ground Water Quality Standards (effective October 2013), the designated uses of “Class GA” ground waters are existing private and potential public or private supplies of water suitable for drinking without treatment and baseflow for hydraulically connected surface water bodies.

There are no waterbodies located within the Proposed Action Site, with the nearest being Star Pond located approximately 650 feet southeast. Eagleville Brook is located approximately 2,900 feet northwest of the Proposed Action Site. This watercourse is classified as impaired due to pollutants associated with an urban environment carried by stormwater. Eagleville Brook would not receive direct stormwater runoff inputs from the Proposed Action Site; however, a perennial watercourse on the extreme northwestern edge of the site does eventually drain to Eagleville Brook.

3.4.2 Impact Evaluation

3.4.2.1 No Action Alternative

Under the No Action Alternative, stormwater from the existing parking lot would continue to leave the site untreated from an impervious surface. Stormwater would continue to leave the site by overland flow, without infiltration, and at relatively high velocity. This stormwater contains contaminates that may pose risks to biodiversity and aquatic resources as it enters wetlands and waterways untreated. Adverse impacts to water quality, surface waterbodies, and groundwater may occur under the No Action Alternative.

3.4.2.2 Proposed Action

The Proposed Action would replace an existing paved parking lot that has little stormwater management currently in place. Management of the stormwater generated from the Proposed Action Site would be an improvement over the existing condition as various engineered green infrastructure and Low Impact Development (LID) measures would be incorporated into the project’s site design to encourage detention, infiltration, or treatment of site stormwater. These measures may include rain gardens, permeable pavements, green roofs, and infiltration planters among others as deemed appropriate by the project engineer. By incorporating these green infrastructure / LID measures, a reduction in the amount stormwater leaving the site and an improvement in the water quality within downstream wetlands and receiving waters is anticipated. Additionally, LEED building certification and approaches will be considered during the design and construction of the ice hockey arena and would include water resource conservation and protection measures among others.

Since the Proposed Action Site has no waterbodies or floodplains on-site or nearby, and additional stormwater management would be included as part of the project, there would be an overall improvement to the quality of stormwater leaving the site and therefore, no adverse impacts to water resources from the Proposed Action.

3.5 Wetlands

3.5.1 *Existing Conditions*

Wetlands on the Proposed Action Site and the surrounding vicinity were delineated by All Points Technology Corporation (APTC) as part of the Athletic District (Stadia) Development Project that is presently under construction to the north and east of Jim Calhoun Way. The delineation by APTC took place over several field visits spanning a two-year period from January 2017 through March 2019 and the results are documented in the UConn Athletic Fields Wetlands Inspection Report dated June 21, 2019 (revised). The report is included as Appendix B of this EIE. Wetland boundaries on the Proposed Action Site were also field verified by Fitzgerald & Halliday, Inc. during a site visit conducted on July 3, 2019.

Wetland delineation was conducted by Professional Soil Scientists. Wetlands and watercourses (collectively referred to as "resources") were delineated in accordance with state and federal definitions and guidelines. The identification of Connecticut-regulated resources was determined by the limit of any of the soil types designated as poorly drained, very poorly drained, alluvial, or floodplain by the National Cooperative Soils Survey, of the Natural Resource Conservation Service (NRCS) of the United States Department of Agriculture (§22a-38-15). Intermittent watercourses were determined by the presence of a defined channel and two or more of the following:

- Recent alluvium
- Hydrophytic vegetation, or
- Flowing water longer than a storm event.

NRCS soil surveys were consulted to compare observed soil types to those mapped for the Proposed Action Site. The *Field Indicators for Identifying Hydric Soils in New England Version 4* (2017) and *Field Indicators of Hydric Soils in the United States, Version 8.1* (2017) were used to identify hydric soils, which include both poorly and very poorly drained soils.

Federal wetlands were identified in accordance with the United States Army Corps of Engineers (USACE) 1987 *Wetland Delineation Manual* and the USACE 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region – Version 2.0*. Federal wetland boundaries were determined by the presence of dominant hydrophytic vegetation, presence of hydric soils, and evidence of wetland hydrology. The limits of wetlands and watercourses identified within the project limits were flagged with sequentially labeled flagging tape.

Figure 3.5-1 depicts the locations of the delineated wetlands on the Proposed Action Site and Table 3.5-1 provides details for each of the delineated wetlands.

Figure 3.5-1 - Wetlands and Watercourses on the Proposed Action Site

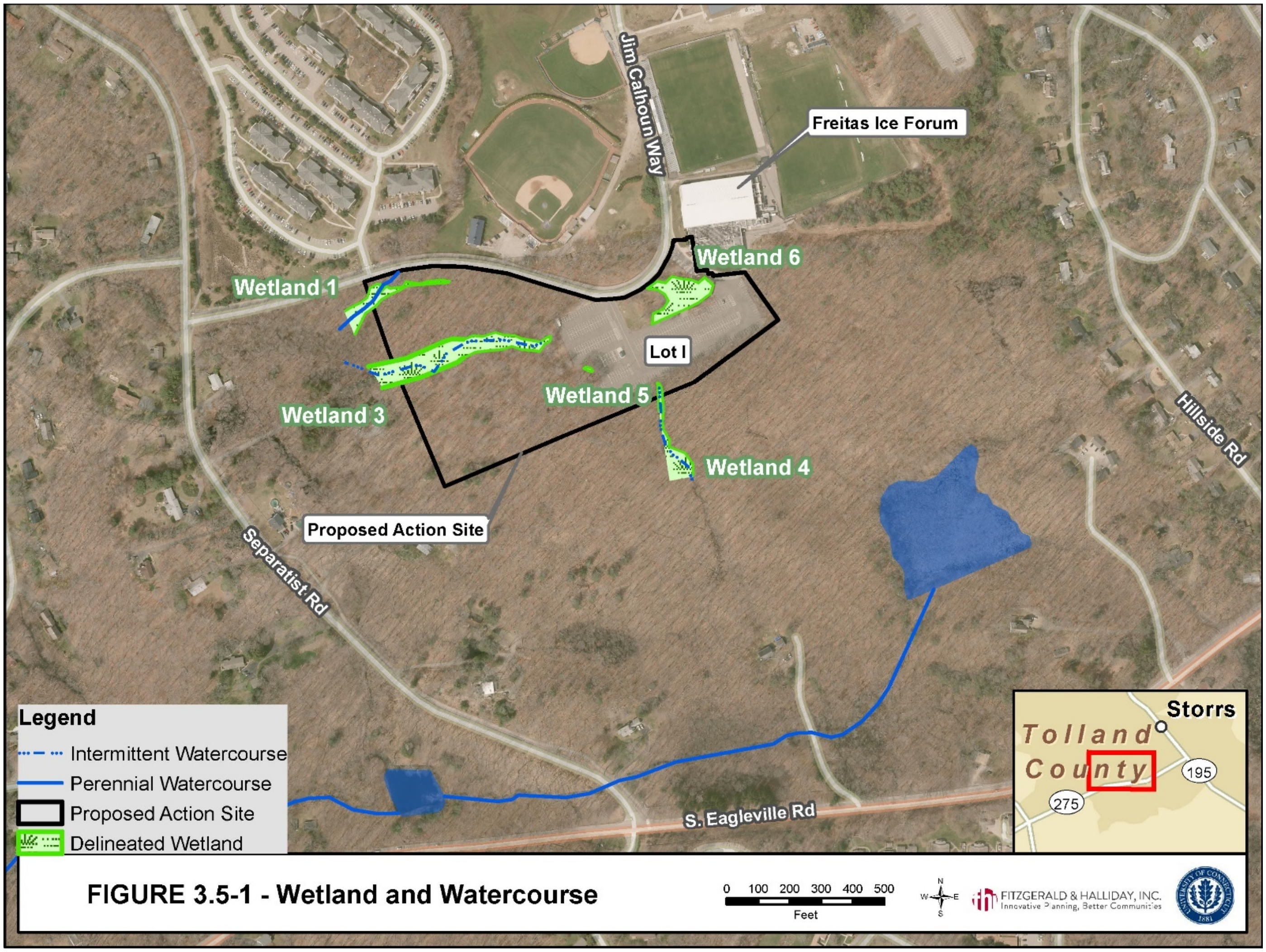


Table 3.5-1 – Wetland Delineation Results

Resource ID	Resource Type[1]	General Description	Soil Type	Vegetation and other characteristics	Predominant Hydrology	Principal Functions and Values
1	Palustrine Forested/ Perennial Watercourse	This wetland complex contains a perennial watercourse that transects a Palustrine forested wetland system. The watercourse flows under Jim Calhoun Way via culvert. The wetland slopes from northeast to southwest and joins Wetland No. 3 off-site.	Ridgebury	Red Maple, Yellow Birch, Spicebush, Winterberry, Sweet Pepperbush, Cinnamon Fern, Royal Fern, Sensitive fern, Skunk Cabbage, Poison Ivy, and Tussock Sedge.	Groundwater discharge and perennial flow of an unnamed stream; stormwater	Groundwater Discharge; Stormwater Conveyance; Wildlife Habitat

Resource ID	Resource Type[1]	General Description	Soil Type	Vegetation and other characteristics	Predominant Hydrology	Principal Functions and Values
3	Palustrine Forested	This wetland is located to the south of Wetland No.1, and eventually joins it off-site to the west. This wetland contains a small intermittent watercourse along its forested interior. This wetland is a narrow swale grading from east to west.	Ridgebury	Red Maple, Eastern Hemlock inclusions, Black Gum, Yellow Birch, Spicebush, Sweet Pepperbush, Cinnamon Fern, Royal Fern, Skunk Cabbage, Jack in the Pulpit, and Tussock Sedge. An adult Wood Frog was observed near this wetland.	Groundwater discharge – creating an intermittent stream; stormwater	Groundwater Discharge; Wildlife Habitat; Sediment Stabilization; Pollutant Retention / Transformation
4	Intermittent Watercourse	This is a human-made drainage channel which outfalls from a culvert discharging stormwater from Parking I-Lot and flows south. Channel banks of are steep in the vicinity of the parking lot with little to no fringe wetlands. The channel bottom contains a muck substrate. In addition to stormwater from the parking lot, this channel was observed to have input from groundwater baseflow along its banks. As the channel flows south, it enters a broader area of wetland soils.	Leicester	Red Maple, Black Birch, Sweet Pepperbush, and Red Oak. Green Frogs were observed utilizing ponded water areas in the channel.	Groundwater discharge; Intermittent flow likely during storm events; stormwater from parking lot	Groundwater Discharge; Pollutant Retention / Transformation; Sediment Stabilization; Stormwater Conveyance
5	Palustrine Forested	Wetland 5 is a small depression located in the southwestern end of I-Lot. I-Lot bounds the wetland on three sides, with forest only to the west of the wetland. It is an isolated depression.	Ridgebury	Yellow Birch and Black Gum.	Groundwater discharge; stormwater	Groundwater Discharge
6	Palustrine Forested	Wetland 6 is a large depression surrounded by development (parking I-Lot, Jim Calhoun Way, and skating rink access drive). It is primarily a forested wetland, however; a fringe of herbaceous wetland is located along its southern interface with I-Lot.	Leicester	Dominant species are Red Maple, Sweet Pepperbush and Skunk Cabbage. Other species observed include: Highbush Blueberry, Spicebush, Winterberry, Witch Hazel, Cinnamon Fern, Rice Cutgrass, March Fern, Common Reed, Narrow-leaved Cattail, Broad-Leaved Cattail, sedges, rushes.	Groundwater discharge; stormwater runoff	Pollutant Retention / Transformation; Sediment Stabilization

[1]Cowardin et. al., 1979

3.5.2 Impact Evaluation

3.5.2.1 No Action Alternative

There would be no impacts to wetlands or watercourses under the No Action Alternative. The wetlands and watercourses (perennial and intermittent) on the Proposed Action Site, as described above in Table 3.5-1, would continue to exist and function as they presently do.

3.5.2.2 Proposed Action

Based on the conceptual design of the Proposed Action as developed by the Langan Engineers/JCJ Architecture project team, a total of up to approximately 4,900 square feet (SQ FT) of permanent wetland impact may result from the construction the ice hockey arena and adjacent surface parking lots. Figure 3.5-2 depicts the wetlands the Proposed Action site in relation to the proposed development concept.

Figure 3.5-2 – On-Site Wetland Locations

FIGURE 3.5-2 On-Site Wetland Locations

Table 3.5-2 - Summary of Anticipated Wetland Impacts

Wetland ID	Description of Potential Impact
1	This wetland, which is located in the northwestern corner of the Proposed Action site would be avoided.
3	The extreme eastern end of this wetland may be impacted by construction associated with the western surface parking lot and the arena access driveway.
4	The northernmost end of this linear wetland may be impacted by a fire access road the passes around the south side of the proposed arena and connects to the eastern surface parking lot.
5	The proposed arena footprint would directly impact this wetland, resulting in the complete loss of this resource.
6	The western-most tip of this wetland may be impacted by construction of access walkways located at the front of the new arena building.

Source: Langan Engineers/JCJ Architecture Conceptual Plan for the UConn Ice Hockey Arena (January 2020)

The conceptual design was developed with the intent of avoiding and minimizing direct wetland impacts to the greatest extent practicable. As originally planned, the new ice hockey arena was to be an expansion/extension of the existing Freitas Ice Forum. That expansion could have only occurred to the south and southwest due to the configuration of the existing Freitas Ice Forum building, athletic facilities to the north, Jim Calhoun Way to the northwest, and ledge to the southeast; and would have therefore resulted in the complete filling of Wetland 6. A new stand-alone ice hockey arena allows for greater siting flexibility on the Proposed Action parcel. As shown in Figure 3.5-2, the footprint of the new arena and parking areas now almost completely avoids Wetland 6 altogether. The tradeoff for avoiding Wetland 6; however, is filling and complete loss of a much smaller wetland (Wetland 5) that has similar functionality to Wetland 6 but on a much smaller scale. Additionally, the extreme northern tip of Wetland 4 would be impacted by a fire access route around the back (southern) side of the new arena building.

The configuration of the surface parking and internal site circulation elements was also developed to avoid and minimize wetland disturbance to the greatest extent practicable. West of the proposed arena building, the conceptual design depicts a new surface parking lot just north of Wetland 3. Also, east of the arena building is a second surface parking lot that is proposed south of Wetland 6. Retaining walls are proposed to keep the slope of the parking areas from encroaching into these two wetlands. Driveway access from Jim Calhoun Way to the surface parking lots and arena has also been planned to minimize wetland impacts.

Overall, the conceptual design of the new UConn Ice Hockey Arena and associated surface parking would result in up to 4,900 SQ FT of wetland impact. Permits would therefore be required from both the U.S. Army Corps of Engineers (USACE) and the CT DEEP Land and Water Resources Division for this impact. Under the USACE, a Clean Water Act – Self Verification under the Department of the Army General Permit #17 would be required and for the CT DEEP, an Inland Wetlands and Watercourses Permit would be necessary. As the project design advances into the permitting phase, mitigation for the approximately 4,900 SQ FT of potential wetland impact would be coordinated between the University, USACE and CT DEEP.

3.6 Natural Communities, Flora and Fauna

3.6.1 Existing Conditions

3.6.1.1 Vegetation Communities and Habitats

Uplands - The predominant habitats within the Proposed Action Site consist primarily of deciduous upland forest and associated edge habitat. Characteristic vegetation of the site's upland forests includes Red Oak (*Quercus rubra*), Black Oak (*Quercus velutina*), Black Birch (*Betula lenta*), and Shagbark Hickory (*Carya ovata*) in the tree layer. Eastern Hemlock (*Tsuga canadensis*) forms distinct, but limited inclusions in the southwest corner of the site. American Hornbeam (*Carpinus caroliniana*) was noted intermittently in a diffuse sub-canopy layer of the upland forest. Witch Hazel (*Hamamelis*) is a characteristic species of the shrub layer. Hay-scented Fern (*Dennstaedtia punctilobula*) is a characteristic plant of the herbaceous layer.

Wetlands and Water Resources - Refer to Section 3.5 for information regarding wetlands and watercourses on the Proposed Action Site.

3.6.1.2 Characteristic Fauna

Characteristic fauna are those species routinely expected to use a habitat area to satisfy their biological needs. Habitat suitability is determined by a variety of factors, including sources of food, cover, and optimal conditions and opportunities to reproduce. Characteristic fauna for the Proposed Action Site was ascertained via direct incidental observations, their tracks, and signs, and via observation of the habitats and habitat features encountered during site visits as well as a literature review. The information is summarized in the sections below.

Invertebrates - The large variety of flowering plants on the Proposed Action Site combine to attract numerous pollinators. Aquatic insects, both adult and larval forms, and larvae of many terrestrial flying insects favoring rich organic muck substrates and leaf litter are expected to be quite abundant within the organic soils of the palustrine forested wetland and intermittent streams. Examples include aquatic beetles, dragonflies, damselflies, midges, deer flies, and crane flies. Other invertebrates likely to occur include snails; oligocheate worms; and crustaceans.

The leaf litter and downed woody debris support a detritivore community including sowbugs, beetles, ants, centipedes, and various arachnids.

The vegetation on the Proposed Action Site and adjacent areas are noted host plants for butterflies and moths. For example, oaks are the host plant to larvae of the Juvenal's duskywing (*Erynnis juvenalis*). Cherry is host to the larvae of Eastern Tiger Swallowtail (*Papilio glaucus*). Spicebush in the wetlands is a host plant for the Spicebush Swallowtail (*Papilio troilus*). The American Lady (*Vanessa virginiensis*) can be found in association with various flowering forbs on site.

Herpetofauna - Wooded areas with fallen woody debris and litter accumulation provide cover for snakes, salamanders, and American Toads. Sandy areas with loose soils provide media amenable to burrowing or fossorial species of herpetofauna, and the various wetland habitats provide cover for frogs, aquatic snakes, and salamanders. Wood Frogs and Spring Peepers were detected during site visits.

Avifauna - Avifauna observed or expected to occur on the Proposed Action Site include a mixture of year-round resident generalist species and neotropical migrant passerines including some habitat specialists. Resident generalist species observed on site and common within areas of human-influenced landscapes include European Starling (*Sturnus vulgaris*), House Sparrow (*Passer domesticus*), House Finch (*Carpodacus mexicanus*), and American Crow (*Corvus brachyrhynchos*).

During spring months, the avian community diversity increases with the return of neotropical migrants. The nearby woodland provides food and cover for additional species typically found in edge habitat. Examples include Gray Catbird, Carolina Wren and Northern Cardinal, all noted on site.

Well-developed stands of both native and non-native shrubs also provide cover and foraging habitat for both resident and migrant flycatchers, wrens, mimic thrushes (i.e., mockingbird, and catbird), warblers, sparrows, and finches. The woodland habitat adjacent to the Proposed Action Site provides cover and foraging habitat for a variety of migrant and resident birds such as resident and migratory hawks, woodpeckers, corvids (jays, crows), chickadees, nuthatches, creepers, kinglets, wrens, vireos, warblers, tanagers, orioles, thrushes, and other avifaunal groups.

Resident passerines typically occur as mated pairs, while migrant and winter resident passerines typically occupy this habitat in mixed species flocks. The avifauna of these forested areas are composed of a high proportion of migratory species.

Mammals - The abundance of cover, both hard and soft mast producing plants, standing dead wood, rock walls and piles, diverse vegetation structure, presence of water, and abundance of insects likely attract a variety of small mammalian prey and their larger predators. The perennial watercourse that traverses the northwestern edge of the Proposed Action Site (Wetland 1) likely serves as a habitat corridor for species attracted to riparian habitats.

Various small mammals such as shrews, moles, and tree squirrels occupy the varied habitats on and adjacent to the site. Both the upland and wetland vegetated areas provide food (e.g., invertebrates, hard and soft mast) for members of these vertebrate families. Cover is also abundant in the form of shrub areas, tree or shrub cover, decaying stumps/logs, stone walls/piles, and areas of well-drained soils in which to burrow. Examples of common small mammals likely to be encountered at the site include, Short-tailed Shrew (*Blarina brevicauda*), White-footed Mouse (*Peromyscus leucopus*), Eastern Gray Squirrel (*Sciurus carolinensis*), and Red Squirrel (*Tamiasciurus hudsonicus*). Common mid-sized mammals that likely occupy the habitats on the Proposed Action Site or visit regularly include Eastern Cottontail (*Sylvilagus floridanu*s), Raccoons (*Procyon lotor*) and Striped Skunk (*Mephitis mephitis*). A dead Virginia Opossum (*Didelphis virginiana*) was observed on the site during a site visit conducted in March.

The woodland and riparian corridors are likely frequented by both resident and migratory bats, which capture their insect prey while foraging on the wing through or above these habitats. Species likely to be found on site as either resident, migrants, or both include the Little Brown Bat (*Myotis lucifugus*), Eastern Pipistrelle (*Pipistrellus subflavus*), and Big Brown Bat (*Eptesicus fuscus*). Mature trees offer a variety of greatest range of roosting options. For example, bats often seek cover behind the exfoliating bark of large trees (e.g., and especially of live Shagbark Hickory and dead White Pines) and (among the arboreal roosters) within dense foliage clusters or within tree cavities. The diversity of vegetation structure and species composition also contributes a variety of food sources for Connecticut's insectivorous bats. Wetlands and watercourses not only provide a source of water to foraging bats but also produce an abundance of insect prey.

Other mammalian predators that likely frequent the site may include the American Mink (*Neovison vison*), Long-tailed Weasel (*Mustela frenata*), Red Fox (*Vulpes vulpes*) and Coyote (*Canis latrans*).

White-tailed Deer (*Odocoileus virginianus*) are abundant in the region. The forest, forest edge, wetland borders, fields, woodland openings, and adjacent lawn areas together form suitable habitat for this species since they provide adequate cover, winter browse, summer herbaceous forage, and autumn mast. Therefore, it was not surprising that they were detected on-site via direct observation.

3.6.1.3 Rare Species

A review of CT DEEP Natural Diversity Database (NDDB) Geographic Information System (GIS) mapping (July 2019) revealed no known rare species within or proximal to the Proposed Action Site. Therefore, a formal request for additional rare species information from the NDDB was not required. The term "rare species" in this EIE refers to any of Connecticut's flora or fauna included on the CT DEEP (2015) list of endangered, threatened, and special concern species. As defined by law:

- *"Endangered Species"* (E) means any native species documented by biological research and inventory to be in danger of extirpation throughout all or a significant portion of its range within the state and to have no more than five occurrences in the state, and any species determined to be an "endangered species" pursuant to the federal Endangered Species Act.
- *"Threatened Species"* (T) means any native species documented by biological research and inventory to be likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range within the state and to have no more than nine occurrences in the state, and any species determined to be a "threatened species" pursuant to the federal Endangered Species Act, except for such species determined by the Commissioner to be endangered in accordance with Section 4 of the Act.
- *"Species of Special Concern"* (SC) means any native plant species or any native non-harvested wildlife species documented by scientific research and inventory to have a naturally restricted range or habitat in the state, to be at a low population level, to be in such high demand by man that its unregulated taking would be detrimental to the conservation of its population or has been extirpated from the state.

Since no state-listed or proposed, threatened or endangered species under the jurisdiction of CT DEEP are known to occur within or proximal to the Proposed Action Site, it is unlikely that federally-listed or proposed, threatened, or endangered species or critical habitat under the jurisdiction of United State Fish and Wildlife Service (USFWS) occur on site as well. Furthermore, no exemplary critical habitats of state or federally listed species were noted on site.

Species identified as "Greatest Conservation Need" in the State Wildlife Action Plan (CTDEEP 2015) that were noted on the Proposed Action Site include the Wood Frog which was observed in Wetland 3 during a site visit conducted on July 3, 2013.

3.6.2 Impact Evaluation

3.6.2.1 No Action Alternative

Under the No Action Alternative, there would be no change to the existing geology, topography, or soils on the site, and therefore no immediate significant change in vegetation, natural communities and biodiversity within the portion of the project area that is not already developed by surface parking I-Lot. The land area north of the existing Freitas Ice Forum and north and east of Jim Calhoun Way is currently under construction as part of the Athletic District (Stadia) Development Project so disturbances associated with that project could potentially affect biodiversity on the site in the near term. Aquatic biodiversity would continue to remain susceptible to potential impacts associated with toxic effects – both acute and chronic – of stormwater contaminants that could enter these systems as a result of the uncontrolled loss, discharge, seepage, or release of these contaminants to the ground or waterways of the site.

3.6.2.2 Proposed Action

The potential impacts to biological diversity associated with the Proposed Action are not significant. This is because the impacted natural area is a rather small forested habitat block. The overall impact area within the communities of the Proposed Action Site is limited; there are no known state or federally listed threatened, endangered, or special concern species within the site; and the biodiversity of the existing habitat types has been compromised by non-native, invasive, or potentially invasive plant and animal species. The relative state of the biodiversity (e.g., species richness, and composition) within the affected area is expected to remain relatively unchanged with or without implementation of the Proposed Action due to the continued cumulative impacts from the surrounding developing landscape and the small size of the natural area.

<u>Vegetation Communities and Habitats</u> - Potential impacts to this resource associated with the Proposed Action include the following: limited loss of interspersed vegetated upland and vegetated wetland communities, further isolation or fragmentation of the limited existing forest block and associated biotic communities, and impact to vegetation composition through disturbance. However, these impacts are not considered significant for many of the same reasons discussed above (i.e., vegetation cover types on site are not unique to the ecoregion and in some areas contain non-native, opportunistic, or invasive species).

The upland vegetation community types that may directly be impacted include open lawn area and forested edge along the border of Jim Calhoun Way and the surface parking I-Lot. Portions of the edge habitat has been colonized by one or more species of early successional herbaceous and shrubland vegetation some of which are non-native invasive species. Anticipated impacts to the natural vegetation cover and community types is minimal on both a local and regional scale, since the habitat block within the Proposed Action Site is not critical habitat to known rare species. Also, impacts are minimal because the habitat block has already been fragmented by past residential development along Separatist Road, South Eagleville Road, Westwood Road and Eastwood Road, and by institutional development associated with the University. The existing wetland areas would also be largely avoided by the proposed configuration of the new surface parking, thereby preserving most of observed wetland functions and values.

A landscape plan would be developed to establish a “green and sustainable component” to the project. The landscape plan would incorporate a variety of native, drought-resistant plantings to reinforce the site layout. Large existing trees around the perimeter of the proposed parking lots would be preserved to provide shade and reduce the heat island effect of the parking areas. Perimeter landscaped areas would also be seeded with either lawn or native grass meadows.

Aquatic Resources - Downstream receptors would be protected from impacts of human-induced alterations of ecological attributes within the watercourse system draining the site first, via the implementation of adequate engineering controls and adherence to best management practices (BMPs) during construction, and then via the implementation of green infrastructure and LID measures (for which the University of Connecticut is a renowned leader in Connecticut and the Northeast). The implementation and maintenance of erosion and sedimentation BMPs; avoidance of steep unconsolidated slopes in the design and construction process; and the revegetation/re-stabilization of temporarily disturbed land during and following construction, including the use of drought-resistant plant species, are all measures that would reduce the potential for impacts.

Green infrastructure and LID measures would be designed to manage the quantity of stormwater generated on site as well as improve the quality of stormwater leaving the site. Preventing the introduction of stormwater and its associated pollutants from directly entering the site's perennial watercourse (a stream with continuous flow year-round) associated with Wetland 1 at the northwestern corner of the Proposed Action Site would help to improve upon the surface water flows that ultimately discharge to Eagleville Brook, located approximately 2,900 feet to the northwest and downstream of the site. Eagleville Brook supports a wild population of Brook Trout, a species of Greatest Conservation Need in Connecticut. Stormwater management through the incorporation of green infrastructure and LID measures as part of the Proposed Action design may improve water quality over the existing condition, as stormwater runoff collected on Jim Calhoun Way and surface parking I-Lot currently enters the perennial watercourse associated with Wetland 1 directly via overland flow.

Efforts in the design phase would be made to maintain existing stream habitat features via avoidance during the construction phase. For instance, water depths, flow velocity, in-stream structure, substrate composition, channel sinuosity, and canopy coverage of the perennial watercourse would remain. Through use of these engineering controls and BMPs, the perennial stream's natural processes and functions would be maintained, and minimal impact to the stream's aquatic resources would occur.

Herpetofauna - The major impacts to herpetofaunal communities typical of new construction projects (e.g., the loss of foraging and breeding habitat, interruption of seasonal movements to and from breeding habitat and the adverse effects of degraded water quality) are not anticipated for the Proposed Action. No filling or draining of vernal pools would occur and no additional barriers to herpetofauna movement would be constructed. Certain individuals of terrestrial species inhabiting the areas of proposed forestland disturbance may be displaced whereas aquatic species would not be directly impacted since the wetland and watercourse resources are predominantly avoided and stormwater management measures would improve the water quality of stormwater entering the wetland and watercourse systems under current conditions.

The existing Jim Calhoun Way likely poses a barrier to lower vagility herpetofauna and would remain so after construction of the new facility. The proposed new parking lots would likely serve as barriers to forest herpetofauna species that avoid crossing large forest gaps. Furthermore, much of the land use and cover types north of the roadway (parking lot, lawn, and athletic fields) represent inhospitable or low-quality habitat for most herpetofauna. However, no major herpetofauna movements to and from the project area across Jim Calhoun Way is expected under existing conditions. Therefore, no significant impact to local and regional herpetofauna populations would be expected as a result of the arena or parking lot construction, thus mitigation is not warranted.

Avian Resources - Various avian species are susceptible to impacts associated with construction projects that alter habitat attributes such as landscape, hydrology, topography, vegetation, and cover types of natural areas. As in other animal taxa, species that require specific types of habitat or occupy narrow niches (i.e. specialists) or those that require large undisturbed habitat blocks are more susceptible to environmental disturbance than those that are more adaptable to changes or disturbance in their environment (generalists). Impact to songbirds, especially neotropical migrants, has received great attention in recent years due to habitat loss on both breeding and wintering grounds due to forest fragmentation. However, this avian group is not exceptionally represented in the avifaunal community of the Proposed Action Site or surrounding area.

Some temporary impact to individuals typically inhabiting forest edges may occur during construction, and some loss of forest edge habitat would occur. However, due to the small, anticipated area of impact to the existing forest block, the impact to the local and regional populations of forest interior species would be negligible. Since the habitat impact areas are relatively small in comparison to the existing habitat block; and no known state or federally-listed, threatened, endangered, or special concern bird species are known to breed within the existing natural areas of the Proposed Action Site, mitigation strictly for avian impact is not warranted by the proposed scale of this undertaking.

Mammalian Resources - Much of the classic impacts that mammalian resources face from proposed construction projects are related to such issues as forest fragmentation, barriers to movement, elimination of food source, and increased mortality due to roadkill. However, construction of the new ice hockey arena would have minimal impact to regional mammal populations because much of the Proposed Action replaces an existing surface parking (I-Lot) that offers no habitat to most mammal species. The Proposed Action Site does expand into a forested area to the west, but that forest land has previously been fragmented, as it is bounded on the north and west sides by roadways (Jim Calhoun Way and Separatist Road respectively), on the east by the existing surface parking (I-Lot), and to the southwest by residential property. The Proposed Action would further fragment an already existing small habitat block (less than 90 acres) that offers limited special habitat attributes required by sensitive forest interior dwelling species or other species of Greatest Conservation Need as identified in the Connecticut Wildlife Action plan. For these reasons, mitigation for impact to mammalian resources is not warranted.

Threatened, Endangered or Special Concern Species - No state or federally listed, threatened, endangered, or special concern ("rare") species are known to occur within the Proposed Action Site as breeding individuals or established populations. State-listed special concern or threatened species of birds or bats may visit some of the natural areas within the forest block adjacent to the site from time to time during migration or as post-breeding dispersals.

Since portions of the natural habitat within the Proposed Action Site are wetlands and watercourses, which are largely avoided, and since no known state or federally listed species are known to breed at the site or in the general area, mitigation specifically for threatened or endangered species is not warranted for the Proposed Action. The expected improvement to water quality of the watercourse draining the site would benefit downstream aquatic receptors both on and off site protecting any aquatic species of Greatest Conservation Need that may occur downstream. Tree removal would be limited to outside of the breeding season for birds, and outside of the maternity roosting season for bats. Incorporation of native plantings into the landscape plans would help to further mitigate the limited impacts to vegetation removal and offer alternative plant species of high or higher wildlife value than over existing conditions.

3.7 Noise

3.7.1 Existing Conditions

UConn's campus in Storrs is a vibrant place, particularly when classes are in session during fall and spring semesters. Noise sources on campus include both mobile and stationary sources. Mobile sources include automobiles, buses, trucks, and motorcycles traveling along the many roadways internal to campus. An example of stationary sources includes the sound of compressors and condensing fans associated with HVAC/refrigeration units on buildings. Other sources of noise on campus include the sounds generated by crowds at an outdoor athletic event or function, the sound of students as they engage in daily campus activities, or the occasional sound of emergency sirens or church bells. Collectively, these sources contribute to the ambient noise level of the campus.

Title 22a of the Regulations of Connecticut State Agencies (RCSA) addresses Environmental Protection, and specifically, Control of Noise is codified in RCSA Section 22a-69-1 through 22a-69-7.4 (revised June 3, 2015). The noise control regulations identify three distinct Noise Zones designated as Class A, B and C, with Class A being the most noise sensitive and Class C being the least. The defining land uses and characteristics of these zones are presented in Table 3.7-1.

Table 3.7-1 - Noise Zones – Defining Characteristics

Noise Zone	Definition	Land Uses
Class A	Primarily residential areas, places where people sleep, or areas where serenity and tranquility are essential to the intended use of the land.	Single and multi-family residential, hotels, prisons, hospitals, religious facilities, cultural facilities, forest preserves, or land intended for residential or special uses requiring such protection.
Class B	Primarily commercial areas, or areas where people converse, and such conversation is essential to the intended use of the land.	Retail, trade, personal business and legal services, educational institutions, government services, amusements, agricultural activities, and lands intended for such commercial or institutional uses.
Class C	Generally industrial where protection against damage to hearing is essential, and the necessity for conversation is limited.	Manufacturing activities, transportation facilities, warehousing, military bases, mining, and other lands intended for such use.

The Proposed Action Site, located just south of Jim Calhoun Way, is within the athletic district of West Campus, and is therefore designated as a Class B Noise Zone due to its association with an educational institution. Similarly, much of the land surrounding the site to the north and northeast is also part of the UConn Storrs campus and is therefore also a Class B Noise Zone. Residential areas south and east along South Eagleville Road, Westwood Road, Eastwood Road, and Hillside Circle, and the residential area located west of Separatist Road are not part of the UConn campus. These residential areas are therefore designated as Class A Noise Zones.

According to RCSA Section 22a-69-3.5 (Noise Zone Standards), equivalent sound levels (Leq[1]) in A-weighted decibels (dBA[2]) allowed by a Class B Noise Zone emitter, shall not exceed 55 dBA (daytime – 7AM to 10PM) or 45 dBA (nighttime – 10PM to 7AM) to an adjacent Class A Noise Zone or 62 dBA at any time to an adjacent Class B or C Noise Zone. As mentioned above, the Proposed Action Site is a Class B Noise Zone, and the nearby residential areas are Class A Noise Zones. It should be noted that any noise created by on-site recreational or sporting activities sanctioned by the state or local government is exempt from the Noise Zone Standards. Any UConn hockey game held at the new Ice Hockey Arena would qualify for this exemption. However, noise generated from the arena building when not in use, for instance, noise from outdoor compressors and cooling fans associated with the refrigeration/chiller plant, would still be required to adhere to the standards.

3.7.2 Impact Evaluation

3.7.2.1 No Action Alternative

Under the No Action Alternative, the existing Freitas Ice Forum would continue to host all UConn Women's Ice Hockey home games and an occasional men's non-conference home game. The remainder of the Men's home contests would continue to be held at the XL Center in Hartford. Therefore, no measurable change to the existing noise environment would occur with the No Action Alternative.

3.7.2.2 Proposed Action

The Proposed Action is located within the West Campus District that is home to existing UConn athletic facilities. It would be immediately adjacent to and west of the Freitas Ice Forum (a similar use), and is just south of new athletic fields (baseball, softball, soccer and throwing) that are presently under construction as part of the Athletics District (Stadia) Development Project north and east of Jim Calhoun Way. As an athletic facility owned and operated by the State of Connecticut, any noise created by on-site recreational or sporting activities held at the new arena would be exempt from the state's Noise Zone Standards. However, the new ice hockey arena would include compressors and cooling fans associated with the refrigeration/chilling plant. These noise-generating mechanical components, some of which would be exterior to the building, would be subject to the Noise Zone Standards. Because the nearest Class A (residential) Noise Zones are approximately 1,000 feet east and west of the proposed new ice hockey arena through wooded terrain, any noise generated by outdoor mechanical components related to the refrigeration/chiller plant is not expected to exceed the Class B emitter levels to adjacent Class A Noise Zones (55 dBA daytime and 45 dBA nighttime), especially if outdoor mechanical equipment (cooling fans) are shielded or partially enclosed. Therefore, no direct or indirect noise-related impacts are anticipated from the future operation of the Proposed Action. The existing noise environment is suitable for the proposed use and there is already a similar use (Freitas Ice Forum) immediately adjacent to the Proposed Action site.

[1] Leq is the equivalent continuous sound level in decibels equivalent to the total sound energy measured over a stated time period and is also known as the time-average sound level (LAT).

[2] dBA is the A-weighted decibel and is the unit typically used to describe sound levels perceptible to the human ear. It is a logarithmic unit of measure. For example, a 10-decibel increase in noise level is perceived as a doubling of loudness.

Noise impacts from the Proposed Action would be most noticeable during construction; however, construction noise is exempt from the Connecticut noise regulations per RCSA 22a-69-1. Construction-related noise is addressed in *Section 3.18, Construction Impacts*.

3.8 Air Quality and Climate

Existing air quality and potential environmental consequences associated with the No Action and Proposed Action Alternatives are addressed in this section. Both mobile and stationary sources of air pollutants are discussed. Mobile sources consist of vehicles and construction equipment, whereas stationary sources include boilers, emergency generators and other fuel-burning equipment associated with the new ice hockey arena. Due to increasing concern about global climate change, emissions of greenhouse gases associated with the Proposed Action is also evaluated.

3.8.1 Existing Conditions

Under the U.S. Clean Air Act, as amended (CAAA), the U.S. Environmental Protection Agency (EPA) established National Ambient Air Quality Standards (NAAQS) for concentrations of six “criteria” air pollutants — carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), and sulfur dioxide (SO_2). There are standards for two sizes of PM—$PM_{2.5}$ which are particles with a diameter of 2.5 microns or less and PM_{10} which are particles with a diameter of 10 microns or less. There are also two sets of standards being (1) primary standards that provide protection for the health of the public and (2) secondary standards that provide public welfare protection. The NAAQS and their averaging periods are provided in Table 3.8-1. These national standards have been adopted by Connecticut and a State Implementation Plan (SIP) has been developed to monitor attainment and maintenance of the standards.

Table 3.8-1 - National Ambient Air Quality Standards

Pollutant		Primary/ Secondary	Averaging Period	Standards	Form
CO		Primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
Pb		Primary and Secondary	Rolling 3-month average	0.15 $\mu g/m^3$	Not to be exceeded
NO_2		Primary	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Primary and Secondary	1 year	53 ppb(1)	Annual mean
O_3		Primary and Secondary	8-hour	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
PM	$PM_{2.5}$	Primary	1 year	12 $\mu g/m^3$	Annual mean, averaged over 3 years
		Secondary	1 year	15 $\mu g/m^3$	Annual mean, averaged over 3 years
		Primary and Secondary	24-hour	35 $\mu g/m^3$	98th percentile, averaged over 3 years
	PM_{10}	Primary and Secondary	24-hour	150 $\mu g/m^3$	Not to be exceeded more than once per year on average over 3 years
SO_2		Primary	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Notes: ppb = parts per billion, ppm = parts per million, and $\mu g/m^3$ = micrograms per cubic meter of air.
carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), sulfur dioxide (SO_2).
(1) The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of comparison to the 1-hour standard level.
Source: EPA, National Ambient Air Quality Standards (NAAQS) at https://www.epa.gov/criteria-air-pollutants/naaqs-table, December 2019.

Air Quality Designation Status - The EPA designates areas with respect to the level of criterial pollutants within a specific area. An area with measured pollutant concentrations that are below the NAAQS is designated as “attainment” and an area with pollutant concentrations that exceed the NAAQS is designated as “nonattainment”. After air pollutant concentrations in a nonattainment area are reduced to levels below the NAAQS, the EPA re-designates the area to be “maintenance”— a designation that is maintained for a period of 20 years. Finally, an area is designated as unclassifiable when there is a lack of enough data to determine the status of a pollutant.

The Proposed Action Site is located within Tolland County, Connecticut. Based on air quality, emissions-related data, meteorology, and geography/topography, Tolland County is currently designated either attainment or unclassified for Pb, NO_2, $PM_{2.5}$, PM_{10} and SO_2, and nonattainment for O_3. A portion of Tolland County is also designated maintenance for CO, but the Proposed Action is not located within that part of the county. There are currently two O_3 standards applicable to the Tolland County nonattainment area — one standard was promulgated by the EPA in 2008 and the other was promulgated by the agency in 2015.

Currently, Tolland County is descriptively designated as being a serious nonattainment area for the 2008 O_3 standard and a marginal nonattainment area for the 2015 O_3 standard.[3]

Air Pollutant Monitoring Data - There is one CT DEEP air quality monitoring station within Tolland County. This station (Station 09-013-1001) is in the Stafford Shenipsit State Forest approximately 13.4 miles north north-east of the Proposed Action Site. Air monitoring data has been collected at this station since 1980. The maximum fourth highest daily concentrations recorded at this station (the values which are used to compare to the NAAQS) for the years 2017, 2018, and 2019 (through the beginning of December) are provided in Table 3.8-2. As shown, over the last three years, O_3 concentrations in Tolland County have been below the 2008 NAAQS but above the 2015 NAAQS.

Table 3.8-2 - Ozone Monitoring Data – Station 09-013-1001

Annual 4th-Highest Daily Maximum 8-Hour Concentration (parts per million)		
2017	**2018**	**2019**
0.070	0.071	0.073
	3 Year Average	**0.071**
	2008 NAAQS	**0.075**
	2015 NAAQS	**0.070**
Source: EPA Air Data, Extracted December, 2019		

3.8.2 Impact Evaluation

3.8.2.1 No Action Alternative

Under the No Action Alternative, there would be no new mobile or stationary sources of air pollution emissions and therefore adverse impacts to air quality are not expected. Refer to Table 3.8-3 which reports, among other information, mobile source emissions that were modeled for 2021 for the No Action Alternative. Over the long-term, as a result of reductions in motor vehicle emission rates through improved technology, and assuming that the volume of motor vehicle traffic remains essentially the same, the level of pollutants and precursors is expected to decrease, thereby resulting in an overall improvement in air quality in the future.

3.8.2.2 Proposed Action

Emissions associated with the operation of the Proposed Action (a stationary source) would result from a dedicated boiler which would provide heating for the building and a diesel engine-generator set that would serve as an emergency power source and optional stand-by power source. The CT DEEP would require air operating permits for both which would ensure that the emissons from these souces would not harm public heath or cause significant degradation to air quality conditions in the area. The CT DEEP permits that would be required include an New Source Review for Stationary Sources of Pollution and an update to the University's existing Title V Operating Permit which would involve adding the new stationary source of air pollution.

[3] Source: EPA, Greenbook, Connecticut Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants at https://www3.epa.gov/airquality/greenbook/anayo_ct.html, December 2019.

Emissions associated with operation of the Proposed Action would also result from the engine exhaust of motor vehicles traveling to and from the site. For the purpose of deriving these project-related emissions, estimates of CO, VOC, NOx, SOx, PM_{10}, and $PM_{2.5}$ were calculated for both the No Action and Proposed Action alternatives (i.e., the difference between the total emissions for the No Action Alternative and the total emissions with the Proposed Action Alternative provides the project-related emissions). Motor vehicle traffic data, forecast for the year 2021, and roadway segment lengths were used to estimate vehicle miles traveled (VMT). These data and forecast motor vehicle speeds were used in EPA's MOVES[4] to obtain air pollutant and pollutant precursor emission rates.

Table 3.8-3 presents the operational emission inventories for the 2021 No Action and Proposed Action alternatives. As shown, with the Proposed Action, emissions of the evaluated pollutants/pollutant precursors would increase from 0.1 to 15.7 tons. Over the long-term, as a result of reductions in motor vehicle emission rates due to a turnover of the motor vehicle fleet over time and EPA standards for newly manufactured vehicles, and assuming that the volume of motor vehicle traffic remains essentially the same to and from the hockey arena, the level of pollutants and precursors in Table 3.8-3 is expected to decrease (both with and without the Proposed Action). For example, in the year 2031, the emission rate of NOx and VOC would decrease by more than 38 percent per the EPA MOVES model, which would correspondingly reduce the total estimated levels of these pollutant precursors by 38 percent.

Table 3.8-3 - Operational Emissions (tons per year)

Year	Alternative	Tons					
		CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
2021	No Action	510.5	54.4	21.4	0.2	4.4	2.1
	Proposed Action	526.2	56.1	22.1	0.2	4.5	2.2
	Difference (Project-related)	**15.7**	**1.7**	**0.7**	**0.0**	**0.1**	**0.1**

Notes: CO – carbon monoxide, NO_x – nitrogen oxides, SO_x – sulfur oxides, $PM_{10/2.5}$ – particulate matter, VOC – volatile organic compounds. Totals may reflect rounding.

Source: KB Environmental Sciences, Inc., 2019.

3.8.2.3 Climate/Greenhouse Gases

Research has shown that an increase in atmospheric Greenhouse Gas (GHG) emissions is significantly affecting the Earth's climate. The global warming trend, which has been observed since the mid-20th century, is attributed to the greenhouse gas effect, whereby carbon emissions (greenhouse gases) block heat from escaping the Earth's atmosphere. These conclusions are based upon a scientific record that includes substantial contributions from the United States Global Change Research Program (USGCRP) — a program mandated by Congress in the Global Change Research Act to "assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change.[5] In 2009, based

[4] **EPA's** Motor Vehicle Emission Simulator (**MOVES**) is a state-of-the-science emission modeling system that estimates emissions for mobile sources at the national, county, and project level for criteria air pollutants, greenhouse gases, and air toxics.
[5] Global Change Research Act of 1990, Pub. L. 101–606, Sec. 103 (November 16, 1990), http://www.globalchange.gov.

primarily on the scientific assessments of the USGCRP, as well as the National Research Council (NRC) and the Intergovernmental Panel on Climate Change (IPCC), the EPA issued a finding that it was reasonable to assume that changes in our climate caused by elevated concentrations of GHG in the atmosphere endanger the public health and public welfare of current and future generations.[6] In 2015, EPA acknowledged more recent scientific assessments that "highlight the urgency of addressing the rising concentration of carbon dioxide (CO_2) in the atmosphere".[7]

The GHG emissions associated with the construction and operation of the Proposed Action are presented in Table 3.8-4. The emissions (carbon emissions) are presented in metric tons of CO_2 equivalent (CO_2e), a standard unit for measuring carbon footprints. As there are no standards by which the emissions of GHG can be evaluated, the estimate of CO_2e is provided for disclosure purposes only.

Table 3.8-4 - CO2e Emissions with Proposed Action

Year	Construction / Operational	Metric Tons of CO_2e
2020	Construction	1,121
2021	Construction	1,540
	Operational	22,493
	Total	24,057
Source: KBE Inc., 2019. Note: Construction emissions modelled using ACEIT and MOVES2014b modeling tools.		

As proposed, the system that would provide the ice for the Arena would use, as the primary refrigerant, R717 ammonia. Based on a document prepared by the EPA that discusses the application of climate-friendly ice rink technologies, ice systems that use ammonia as the refrigerant have a zero Global Warming Potential and a zero Ozone Depleting Potential.[8]

The Air Quality Technical Memorandum that has been prepared for the Proposed Action is included in Appendix C of this EIE.

3.9 Solid Waste

3.9.1 Existing Conditions

The Proposed Action Site is currently comprised of a surface parking lot (I-Lot) and undeveloped land. No solid waste is currently generated at the Proposed Action Site.

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[6] Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66496 (December 15, 2009).
[7] EPA, Final Rule for Carbon Pollution Emission Guidelines for Existing Stationary Sources Electric Utility Generating Units, 80 Fed. Reg. 64661, 64677 (October 23, 2015).
[8] Application of Climate-Friendly Ice Rink Technologies: Brooklyn Park Community Activity Center, U.S. Environmental Protection Agency, October 2014.

3.9.2 Impact Evaluation

3.9.2.1 No Action Alternative

Under the No Action Alternative, no change would occur to existing solid waste conditions.

3.9.2.2 Proposed Action

Under the Proposed Action, construction period activities would generate solid waste from demolition of the existing parking surfaces and site preparation. In addition, ongoing solid waste generation would occur from operation of the ice hockey arena. Asphalt from the existing parking lot would be demolished and removed. This asphalt would be recycled separately from fill and native soils as parking lots typically encounter incidental releases of fuel and vehicle fluids from motor vehicles. The University's Contractor EHS Manual (Environmental Health and Safety (EHS) Requirements for Construction, Service and Maintenance Contractors, May 24, 2019) outlines UConn's policies for proper waste disposal, including collection and disposal of solid waste, materials that must be recycled, and proper treatment or disposal of hazardous and regulated waste. Solid waste that is not classified as hazardous or regulated waste (see Section 3.10) that is produced from regular operations at UConn is collected by the University's waste contractor, Willimantic Waste Paper Company (WWPC). WWPC manages the campus's solid waste disposal and single stream recycling program, which accepts glass, plastics, metal, paper, and cardboard. WWPC transports solid waste that cannot be recycled to an approved off-site waste disposal facility.

The Proposed Action would not significantly add to the overall amount or type of solid waste generated on the UConn campus. The new arena facility is expected to generate solid waste of similar type and volume to that presently generated by the existing Freitas Ice Forum currently operating on campus.

3.10 Toxic and Hazardous Materials

3.10.1 Background

The findings of this preliminary hazardous materials screening and evaluation are not intended to substitute for more detailed studies, such as an American Society for Testing and Materials (ASTM)-compliant Phase I Environmental Site Assessment (ESA) or subsurface soil and groundwater investigations. This screening is meant to identify low-, medium-, and/or high-risk properties as a guide for identifying potential contamination on and adjacent to the Proposed Project Site. Further technical and more detailed investigations may be required to determine the existence of oil and hazardous materials (OHMs) prior to utility relocations and construction of project elements. The identification of a site in this report does not conclusively confirm that the property has hazardous waste/material contamination, but rather that it has the potential to contain OHMs. There may be additional sites with contamination issues that have not been identified in this screening due to noncompliance with regulations or incomplete regulatory/historical information.

The EPA and CT DEEP regulate the handling, storage, generation, and use of OHMs. EPA and CT DEEP maintain records of known hazardous materials release sites and enforce specific guidelines for the treatment and removal of OHMs at these sites.

3.10.2 Methodology

3.10.2.1 Hazardous Materials Records Review and Assessment

A records review of various federal and state environmental listing databases was conducted for the Proposed Action Site in June 2019. Environmental Risk Information Services (ERIS) produced a database report detailing hazardous material release sites identified within the project area boundaries. The environmental databases reviewed include, but are not limited to:

- National Priority List (NPL)
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
- Superfund Enterprise Management System (SEMS)
- Resource Conservation and Recovery Act (RCRA)
- Federal Brownfields
- Emergency Response Notification System (ERNS)
- Facility Registry Service/Facility Index (FINDS)/Facility Registry System (FRS)
- State and Federal Drycleaner Facilities
- State Hazardous Waste Sites (SHWS)
- State/Tribal Solid Waste Landfills (SWF)/Landfills (LF)
- Spill Incident Tracking System (SPILLS)
- State/Tribal Leaking Underground Storage Tanks (LUST)
- State/Tribal Leaking Aboveground Storage Tanks (LAST)
- State/Tribal Underground Storage Tanks/Aboveground Storage Tanks (UST/AST); and
- State/Tribal Brownfields.

The ERIS report is included in Appendix D and described in the Existing Conditions section below.

Each release site was assigned a High-Medium-Low risk ranking relative to the possibility of encountering OHMs. The High-Medium-Low risk site designations are based upon review of the various federal and state environmental listing databases contained in the ERIS database report that identify hazardous material release sites within the study area. Based upon the release database and details of the reported release, the risk assignment was made.

A High-risk ranking was assigned to those properties with a database listing that indicates a documented release of OHMs, or past site use known to have a higher likelihood of a release. A Medium-risk ranking was assigned to properties with a database listing, but details about the release and clean-up activities was not provided in the ERIS report. A Low-risk ranking was assigned to properties that have a database listing included in the ERIS report, but there is no documented release or for a documented release, the case is closed (remediation actions have been completed and no further actions are warranted). Where properties have more than one database listing, they were assigned the highest risk rating. The property name, database listing, and hazardous material issues for each property are included in Table 3.10-1.

3.10.3 Existing Conditions

3.10.3.1 Hazardous Materials Records Review and Assessment

The review of state and federal environmental database records revealed evidence of numerous recognized environmental conditions (RECs), which are potential sources of OHMs. These RECs may require further investigation in the form of soil and/or groundwater sampling and analysis, to determine if the properties identified may impact construction and operation of the Proposed Action. For purposes of this assessment, sites located within one half mile of the Proposed Action Site have been identified and described below.

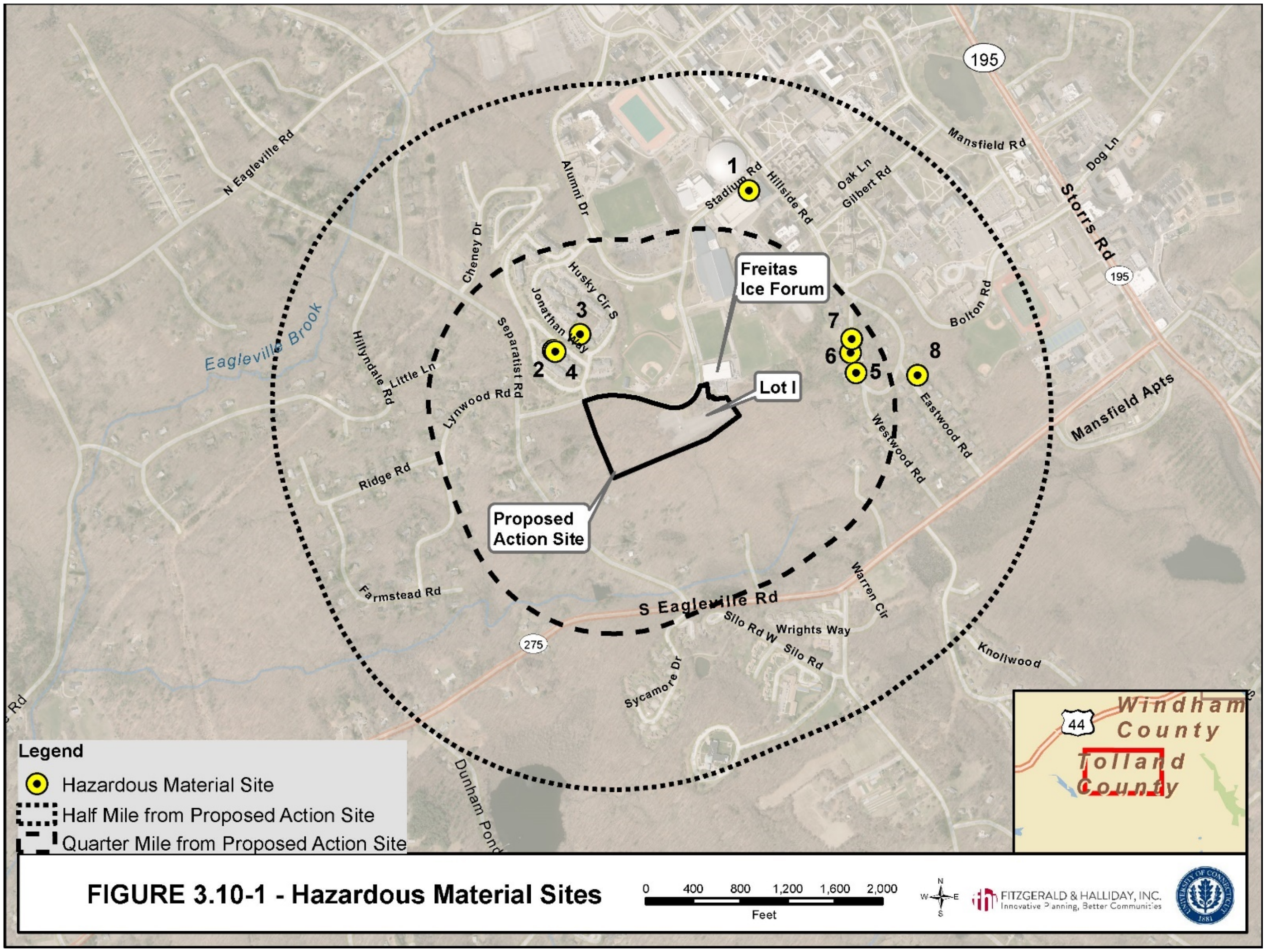
The ERIS report identified seven (7) hazardous material sites located within one half mile of the Proposed Action Site. The hazardous material sites are located to the north, northwest, and northeast of the site, with four of the seven hazardous material sites located to the northeast. There were no release sites identified within the actual Proposed Action Site. The seven release sites located within one half mile of the Proposed Action Site have been identified and explained in Table 3.10-1 and shown in Figure 3.10-1.

Table 3.10-1 - Release Sites and Risk Rankings within ½ Mile of the Proposed Action Site

Site ID	Site Name	Address	Database(s)	Description of Release(s)	Risk
1	UConn South Parking Garage	505 Jim Calhoun Way, Storrs, CT	ALT FUELS, FINDS/FRS	No documented release, Electric vehicle charging station(s)	Low
2 & 4	No Site Name	19 Husky Circle, Storrs, CT	Spills (2)	Gasoline fuel line rupture – case closed, Gasoline release from motor vehicle accident – case closed	Low
3	No Site Name	16 Jonathan Way, Mansfield, CT	Spills	Antifreeze release from motor vehicle accident – case closed	Low
5	UConn Motor Pool	9 Hillside Circle, Storrs, CT	UST	6 USTs closed and 2 USTs active	Low
6	John Manning	7 Hillside Circle, Mansfield, CT	LUST	1 fuel oil UST and 1 kerosene UST, both removed but had holes - LUST case closed	Low
7	Harold Sdrwenle	6 Hillside Circle, Mansfield, CT	LUST	2 fuel oil USTs, both removed but had a release - LUST case closed	Low
8	Cooper Property	20 Eastwood Road, Mansfield, CT	LUST	1 fuel oil UST, removed but had release - LUST case closed	Low

Source: ERIS Database June 2019 for Proposed Action Site Query

Figure 3.10-1 - ERIS Hazardous Sites



3.10.4 Impact Evaluation

Potential impacts from hazardous waste/materials were evaluated based on the type of release, materials released, and the proximity of the release to the Proposed Action Site. The details of each release site are included in the June 2019 ERIS report in Appendix D. All seven sites identified within one-half mile of the Proposed Action Site are identified as low risk sites.

3.10.4.1 No Action Alternative

Under the No Action Alternative, there would be no generation of hazardous or toxic materials or substances at the project site since no work is proposed. There would also be no soil or groundwater disturbance to any land areas under this alternative. The seven hazardous material sites identified within one-half mile of the project site are all low-risk sites, therefore hazardous material impacts from these properties are not anticipated. Based upon the review of the hazardous material database report, no toxic or hazardous materials impacts would be anticipated under the No Action Alternative.

3.10.4.2 Proposed Action Alternative

The Proposed Action Alternative includes the construction of the ice hockey arena and associated surface parking lots which would involve soil disturbance and site work at the Proposed Action Site. Construction of the facility would involve OHMs to run machinery, however best management practices (BMPs) can reduce the likelihood of OHM releases on-site. BMPs would include fueling and repairing vehicles off-site and minimizing or avoiding the storage of OHMs on-site. Since BMPs would be established, construction period impacts from OHMs are not anticipated.

Encountering hazardous materials on-site would not be anticipated since the Proposed Action Site is currently a mix of parking lot and undeveloped land and the June 2019 ERIS database report did not identify any hazardous material sites or releases at this location. The seven hazardous material sites within one half mile of the Proposed Action Site are all identified as Low-risk, therefore hazardous material impacts from these properties are not anticipated.

The operation of the ice hockey arena would involve the use, storage, and generation of hazardous materials. Hazardous materials include coolants in the refrigeration plant used to keep the ice frozen (R717 ammonia) and solvents, chemicals, and petroleum products used to power and maintain HVAC and other mechanical equipment, boilers, and generators. There would also be ice resurfacing waste generated by the Zamboni as part of the ice rink operations. BMPs would be instituted to ensure that the hazardous materials are properly utilized, stored, and managed and that wastes are also disposed of properly; therefore, these hazardous materials are not anticipated to cause adverse impacts. Since the Freitas Ice Forum is currently operating on campus, the Proposed Action does not incorporate activities, equipment, or processes that are new or unusual to the University. Thus, the Proposed Action is not anticipated to have any significant adverse impacts related to the handling of hazardous materials. All waste streams would be managed according to pre-existing university protocols. Overall, impacts from OHMs are not anticipated under the Proposed Action Alternative.

3.11 Public Health and Safety

3.11.1 Existing Conditions

3.11.1.1 Public Safety

The UConn Division of Public Safety (DPS) consists of the Police Department, Fire Department, Office of Emergency Management, Fire Marshall and Building Inspector's Office, and Environmental Health & Safety. DPS is responsible for the safety of property and people on the UConn campus. The police and fire departments are both located in the Public Safety Complex at 126 North Eagleville Road, approximately one-mile northwest of the Proposed Action Site. There are several methods to contact emergency services, including a series of blue emergency phones located throughout the campus that dial directly to the police department. Police also have a Public Safety Emergency Communications Center to field and respond to 911 calls. To distribute information to the campus community in the event of an emergency, students and staff may sign up for UconnAlert, an emergency notification system that sends emergency information via text, voicemail, and online.

The UConn Police Department is not a "campus-only" police force. UConn police have the same authority and duties as any municipal police department in Connecticut. The UConn Fire Department provides fire protection, public safety, and fire education services to the UConn campus as well as 24/7 response to all emergencies. The Mansfield Fire Department provides first responder services within Mansfield and outside of the UConn Storrs campus as well as supporting the UConn Fire Department.

3.11.1.2 Public Health

Student Health and Wellness is located on the UConn campus at 234 Glenbrook Road, approximately one-mile north of the Proposed Action Site. UConn Health Urgent Care is located on campus at 1 Royce Circle, approximately 1.3 miles northeast of the Proposed Action Site. Pharmacy, urgent care, primary care, mental health, nutrition and physical activity services, behavioral health services, women's health care, orthopedics, 24/7 emergency care, and physical therapy are all offered on campus. Natchaug Hospital is the nearest off campus hospital, located approximately 6.9 miles southeast at 189 Storrs Road in Mansfield.

3.11.1.3 Environmental Health & Safety

The Environmental Health and Safety department (EHS) at UConn identifies and manages health, safety, and environmental risks to safeguard the welfare of everyone on campus. EHS is responsible for developing, delivering, and implementing all written policies, procedures, and training materials for applicable regulatory standards to campus groups. The EHS departmental web page is maintained by EHS to provide access to health and safety technical guidance documents, policies, procedures, and compliance assistance information. UConn Environmental Programs is part of EHS. Environmental Programs ensures compliance with the environmental rules and regulations for UConn's activities and operations.

EHS provides services in five types of health and safety areas:

- Chemical Health and Safety section limits the risks of exposure to hazardous chemicals and regulated materials in research and teaching laboratories
- Biological Health and Safety Programs review, audit, and manage the use and storage of biological agents as well as safeguarding University personnel that work with animals.
- Occupational Health and Safety promotes safe work practices and compliance with worker safety regulations across numerous areas including construction, maintenance, and custodial trades; dining, farm, and animal care services; technical fields; and office/administrative arenas.
- Radiation Safety Programs oversee the safe use of radioactive materials and radiation-producing equipment used in research
- Food Safety and Public Health program is mainly focused on safe food handling, preparation, and delivery, but also includes safe practices in areas such as housing, youth camps, daycares and playgrounds, and public pools.

3.11.2 Impact Evaluation

3.11.2.1 No Action Alternative

The No Action Alternative would have no adverse impacts on public health and safety as the existing site would continue to be used as a surface parking lot (I-Lot).

3.11.2.2 Proposed Action

The Proposed Action does not incorporate processes, activities, or equipment that existing UConn safety personnel are unfamiliar with, particularly since the Freitas Ice Forum is currently in operation on campus. Existing UConn public health and safety services are equipped to handle the construction, operation, and management of the new ice hockey arena. Of the five types of health and safety areas represented by EHS, only Occupational Health and Safety may be applicable to the future ice hockey arena. Since the Proposed Action activities are already being conducted on campus at the Freitas Ice Forum, EHS also has relevant policies, programs, and training in place to ensure worker safety at the new arena. Therefore, adverse impacts to environmental health and safety are not anticipated from the Proposed Action.

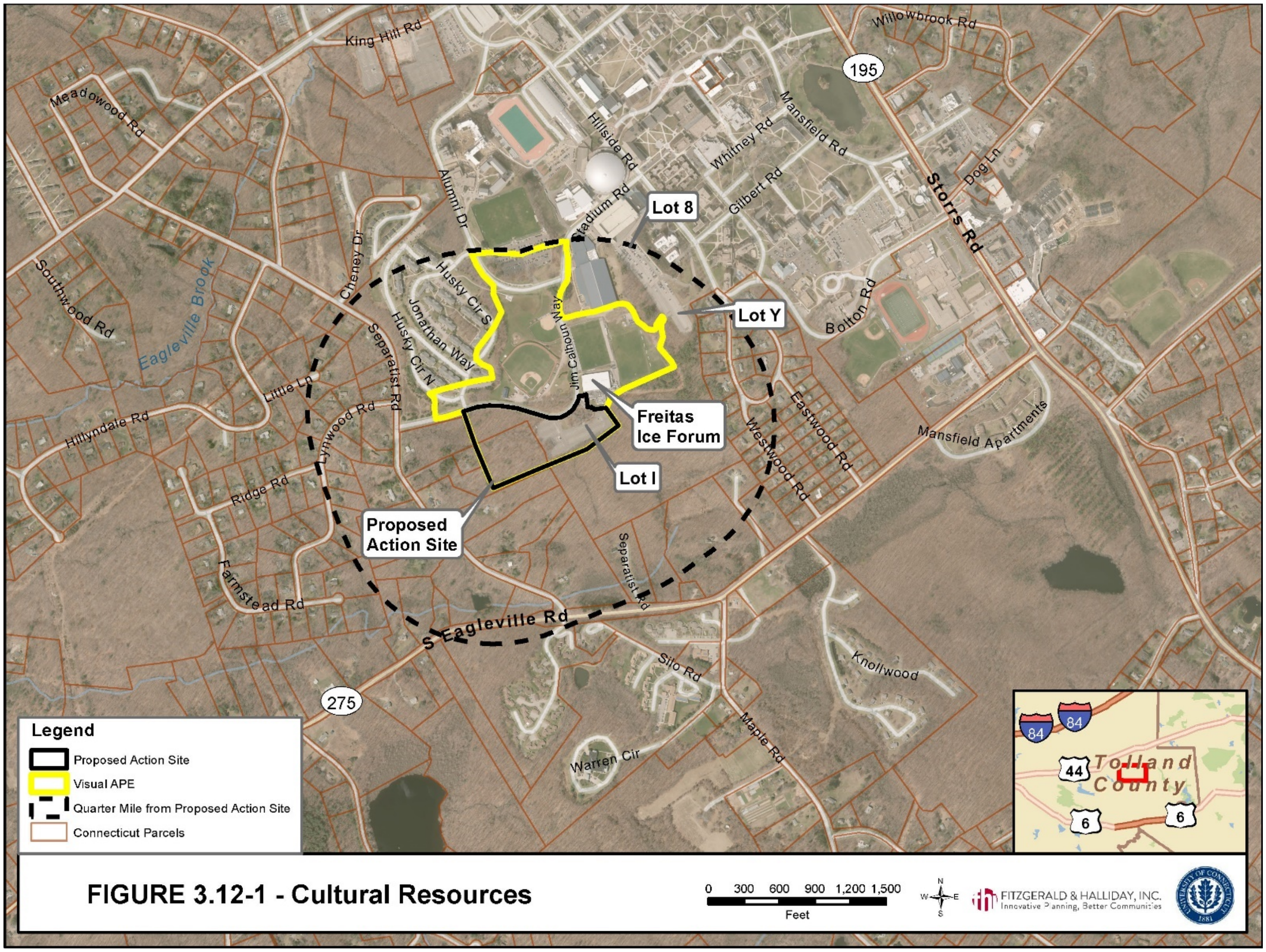
3.12 Cultural Resources

3.12.1 Existing Conditions

Due to the nature of the work associated with the project and the character of the surrounding environment, the proposed Areas of Potential Effect (APEs) for Direct and Visual Effects consist of; (1) the area of potential ground disturbance and any property that would be physically altered or destroyed by the construction of the proposed ice hockey arena and associated parking lots (APE for Direct Effects); and (2) the geographic area in which the project has the potential to introduce visual elements that diminish or alter the setting, where the setting is a character-defining feature of a cultural resource that makes it eligible for listing on the National Register of Historic Places (NRHP) or Connecticut State Register of Historic Places (APE for Visual Effects). As such, the APE for Direct Effects is limited to the area where construction and construction-related activities would take place (see Figure 1.3-1 Project Area). The APE for Visual Effects is restricted to select locations along Jim Calhoun Way, Husky Circle, Alumni Drive, Lot 8, and Y Lot due to the presence of mature trees and vegetation and extensive building stock in the surrounding area (see Figure 3.12-1). In addition to the Direct and Visual APEs, a 0.25-mile buffer area was used to screen for properties previously listed on the State or NRHP.

A review of cultural resource records maintained by the Connecticut State Historic Preservation Office (CTSHPO) did not identify any historic architectural resources previously listed on or determined eligible for the National or State Registers within the 0.25-mile buffer area (Figure 3.12-1). A 105-acre portion of the campus in the vicinity of Storrs and North Eagleville Roads to the northeast of the Proposed Action Site is listed on the NRHP as part of the University of Connecticut Historic District (NR# 88003202); however, the resource closest to the Proposed Action Site within the district is located approximately 0.4-mile away and the Proposed Action Site is not visible from any location within the district. Consultation of historical mapping, historic aerial photography, and GIS data, in combination with the site visit and evaluation of the surrounding area completed in October 2019 did not uncover any previously undocumented resources within the APEs that were determined potentially eligible for listing on the National or State Registers. No buildings 50 years or older (the standard evaluation threshold for the NRHP) were identified within the APE for Visual Effects, and expansion of the University of Connecticut Historic District was not determined to be a possibility due to the extensive changes and infill that have taken place on the portions of the campus surrounding the district. In a letter dated February 7, 2020, the CT SHPO concurred that no historic properties will be affected by the Proposed Action and that no further investigation was warranted. CTSHPO correspondence and associated response is included in Attachment E of this EIE.

Figure 3.12-1 - Visual Effects APE



A Phase 1A Archaeological Assessment Survey was also undertaken for the Proposed Action. Background research indicated a statistically low sensitivity for prehistoric archaeological resources given the high rock content of the soil and relatively great distance to the nearest mapped major water source. Moreover, there were no prehistoric artifacts recovered from shovel tests. Historic cultural resources were limited to stone wall alignments, stone pile features, and two late historic to modern concrete monument markers. There were also no historic artifacts recovered from the surface or subsurface shovel tests, and research indicated a lack of significant developments in the project area through time. As such, no further archaeological investigation was recommended. In a letter dated February 7, 2020, the CT SHPO concurred with this recommendation. CTSHPO correspondence and associated response is included in Attachment E of this EIE.

3.12.2 Impact Evaluation

3.12.2.1 No Action Alternative

Under the No Action Alternative, the new ice hockey arena would not be constructed. As such, there would be no impacts to cultural resources.

3.12.2.2 Proposed Action

The assessment of historic architectural resources did not identify properties listed on or eligible for listing on the NRHP within the APE. Moreover, the Phase 1A Archaeological Assessment indicated a low likelihood of prehistoric or historic archaeological resources within the Direct APE. As such, impacts to Cultural Resources as a result of the proposed ice hockey arena are unlikely. This conclusion was verified by the CT SHPO in a letter dated February 7, 2020 which is included in Appendix E of this EIE.

3.13 Visual and Aesthetic Character

3.13.1 Existing Conditions

The Proposed Action Site, which encompasses approximately 12.5 acres, is a partially developed (surface parking I-Lot) wooded lot located just to the south of Jim Calhoun Way and west of the existing Mark Edward Freitas Ice Forum within UConn's West Campus District. This location on the UConn Storrs campus is devoted to recreational activities as evidenced by the numerous athletic fields and facilities, including the Freitas Ice Forum, Joseph Morrone Soccer Stadium, a soccer practice field, baseball field (Christian Field), softball field (Burrill Field), and the Burton Football Complex. Also, further north and still within the West Campus District is Gampel Pavilion, the old UConn Fieldhouse, Sherman Field, and a football practice field.

A significant construction project, known as the Athletic District (Stadia) Development Project is presently underway within the West Campus District, immediately adjacent to the Proposed Action Site. The Stadia Project involves renovation and improvement of aging athletic fields and facilities associated with soccer, baseball, and softball to meet NCAA Division 1 requirements and the construction of a new hammer/javelin/discus throwing field. The project also includes, among other facilities, the construction of a +/- 52,000 SQ FT performance center complete with locker rooms, concessions, weight training, sports medicine, restrooms, and administrative offices for the soccer, baseball, and softball programs.

The following series of photographs, taken during a site visit on October 3, 2019, depict various views of and from the Proposed Action Site in order to illustrate the existing visual and aesthetic conditions in the area. It should be noted that views of/from the Proposed Action Site from/to the south cannot be obtained due to the presence of a wooded hillside that is approximately 15 to 18 feet higher in elevation.

Photograph 1: *View looking southwest at the Proposed Action Site from I-Lot.*

Photograph 2: *View looking northeast at the Freitas Ice Forum from Jim Calhoun Way. The Proposed Action Site is to the right. Note the construction fencing on the left which has been installed to shield views of the nearby Stadia District Development Project.*

Photograph 3: *View looking northwest away from the Proposed Action Site from Jim Calhoun Way. Note: Construction fencing has been installed along the north side of Jim Calhoun Way to shield views of the adjacent ongoing Stadia District Development Project.*

Photograph 4: *View looking northeast away from the western end of the Proposed Action Site from Jim Calhoun Way. Note the construction fencing shielding the adjacent Stadia District Development Project. Also note the existing Freitas Ice Forum in the rear of the photograph through the break in the construction fencing.*

Photograph 5: *View looking south at the Project Action Site from Alumni Drive. The fields in the foreground are being redeveloped as part of the Stadia District Development Project. Note the existing Freitas Ice Forum in the rear left hand corner of the photograph.*

Photograph 6: *View looking southwest at the Project Action Site from Lot-Y. Lot-Y is elevated above the surrounding area. Note the existing Freitas Ice Forum in the rear of the photograph.*

3.13.2 Impact Evaluation

3.13.2.1 No Action Alternative

Under the No Action Alternative, existing visual and aesthetic characteristics of West Campus would change once construction of the ongoing Stadia District Development Project is complete. Views from all surrounding vantage points would continue to be of recreational fields and athletic facilities – just modernized and reconfigured. The Stadia Development Project would result in a modern, unified, and cohesive Athletic District on UConn's campus. Therefore, no adverse impacts to visual or aesthetic resources would occur under the No Action Alternative. Instead, improvements to the existing viewsheds and aesthetic conditions would occur.

3.13.2.2 Proposed Action

Because the Proposed Action involves construction of a new ice hockey arena and associated surface parking adjacent to the existing Freitas Ice Forum within a district that is devoted chiefly to athletics and recreation, adverse impacts to the existing visual and aesthetic character of the area are unlikely. The new facility would be designed to complement the surrounding environment and recreational land uses. The proposed site plan embraces the idea of preserving existing wetlands as a focal point and sustainable resource while creating a safe, enjoyable pedestrian user experience.

The landscape plan that would be developed for the project would be in keeping with the University's objective to establish a green, sustainable feel to all new campus developments. This approach would lend to an overall visual and aesthetically pleasing development. Building and parking lot lighting would match the adjacent Stadia District Development Project lighting to promote a uniform campus aesthetic. Overall, the Proposed Action would not transform the visual character of the site, but instead would complement the new athletic fields and facilities presently under construction as part of the Stadia District Development Project. Together, the two projects would create a modern and lasting athletic aesthetic to the West Campus District for all to enjoy for years to come.

3.14 Socioeconomics

3.14.1 Existing Conditions

3.14.1.1 Economy

The following section briefly describes the economy, employment, and income characteristics of the geographic region where the Proposed Action is planned. The Connecticut Economic Resources Council (CERC) 2019 Town Profile for Mansfield indicates that the University of Connecticut continues to be the top employer in town, and as such, has a major beneficial impact on both local and regional job growth and economic development. Much of the planned development on the UConn campus through 2025 is driven by the $1.54 billion state-funded Next Generation Connecticut (NextGen) initiative that focuses on supporting and promoting STEM education and research enterprises. In addition to NextGen projects, the UConn Master Plan also identifies several other priority projects including the UConn Ice Hockey Arena (among others), that collectively would contribute to the growth and sustainability of the regional economy and job market well into the future. Table 3.14-1 provides Economic, Employment and Income (2019) data for the Town of Mansfield, Tolland County, and the State as a whole.

Table 3.14-1 - Economic, Employment and Income Indicators (2019)

Town/County/State	Unemployment Rate	Median Annual Income
Town of Mansfield	3.8%	$70,469
Tolland County	3.6%	$81,312
State of Connecticut	4.1%	$74,168

Source (Income) - Data USA Website- https://datausa.io. (Employment) - CERC 2019 Town Profile Mansfield, CT

3.14.1.2 Environmental Justice

The CT DEEP is the agency responsible for ensuring compliance with the Environmental Justice Policy of the state. Regulations and policy definitions can be found in CGS Section 22a-20a. An Environmental Justice Community is defined as either a U.S census block group with 30% or more of the population consisting of low-income persons who are not institutionalized and have an income below two hundred percent of the federal poverty level, or a distressed municipality. The policy states that no segment of the population should, because of its racial or economic makeup, bear a disproportionate share of the risks and consequences of environmental pollution or be denied equal access to environmental benefits.

A review of the CT Department of Economic and Community Development (DECD) website that lists 2019 distressed municipalities confirmed that the Town of Mansfield is not listed as a distressed municipality[9]. According to the US Census, the Proposed Action Site falls within Tract 881500 Block 1002 Group 1. The on-campus portion of this census block includes the land area between Jim Calhoun Way northeast to Hillside Road and primarily includes athletic fields and facilities, surface parking lots, assorted campus buildings, and one dormitory, the Brien McMahon Dorm. South of Hillside Road just beyond the campus boundary is an area of single-family residential housing defined by Hillside Circle, Eastwood Road and Westwood Road that resides within the boundaries of the census block. Much of the remaining geographic area of the census block is to the south of the Proposed Action Site and includes undeveloped land or low-density residential development. The geographic extent of the census block broadens to the south of South Eagleville Road, and extends east to Route 195 (Storrs Road), south to Birchwood Heights Road, and west to Dunham Pond Road. Residential areas within the block are associated with Birchwood Heights Road, the Knollwood Apartments, and Juniper Hill Village.

Demographic data for the census block indicates a population of 1,192 with approximately 26% minority and 37% low income. Normally, these demographics would suggest that the census block qualifies as an Environmental Justice Community per the state definition (because of the low-income population data). However, as indicated above, a portion of the population within this census block resides on-campus in college housing / dormitories (Brien McMahon Hall), and therefore are technically classified as institutionalized individuals (college students). These individuals are generally not included as an environmental justice population because of the special conditions of their residence that prohibits a determination of poverty status. As such, the Proposed Action Site is not considered to be within an Environmental Justice Community due to the presence of institutionalized individuals that skew the data.

3.14.2 Impact Evaluation

3.14.2.1 No Action Alternative

Under the No Action Alternative there would be no change to existing socioeconomic conditions and no impact to environmental justice populations. The University would continue to pursue and implement development projects consistent with NextGen initiatives as well as other campus-wide development priorities and infrastructure improvements as stipulated in the University's Master Plan so long as the economic climate nationwide and on the state level continues to be strong and funding is available. The University would continue to be the major employer in the Town of Mansfield and within the region as a whole

[9] (https://portal.ct.gov/DECD/Content/About_DECD/Research-and-Publications/02_Review_Publications/Distressed-Municipalities)

and economic indicators, such as labor statistics and median annual income levels, would continue along present trends.

3.14.2.2 Proposed Action

Construction of the Proposed Action would result in a short-term boost to the local economy as local and regional construction workers would be hired to complete this construction project. Construction materials may also need to be purchased from local and regional suppliers. Local businesses may see an uptick in economic activity during the construction period as well, as construction workers may purchase food, goods, or other services while in the project area. Once constructed, the arena itself is not envisioned to be a major employment or economic generator, except on hockey game days or special event days when ticketing, concessions, security, operations, maintenance, and administrative workers would be on-hand. Local businesses may also benefit on game days as spectators arriving on campus may stop locally to make purchases.

In terms of environmental justice, the Proposed Action would not have adverse impacts as the project is not within a distressed municipality nor within a census block that meets the characteristics of an Environmental Justice Community.

3.15 Traffic, Parking and Transportation

3.15.1 Existing Conditions

The Athletics District Development at UConn includes plans for a proposed Ice Hockey Arena. The Ice Hockey Arena is part of an approximately 40-acre area that is either currently under construction (Stadia District Development Project) or planned for development (Ice Hockey Arena). The proposed UConn Ice Hockey Arena is to be adjacent to the existing Mark Edward Freitas Ice Forum. The project site is bounded by Jim Calhoun Way to the north, the existing arena to the east, and an existing parking lot (I-Lot) to the south. The existing site is predominantly surface parking, with a small wooded area enclosed within the parking lot and forested areas to the west.

3.15.1.1 Adjacent Roadway Network

Regional transportation access to UConn's campus is provided by Route 44 and Route 195. Route 44 (Middle Turnpike) is an east-west U.S. Highway that traverses through four states in the northeastern region of the United States. It is a two-lane rural minor arterial from its intersection with I-384 until its junction with Route 31 West. Between Route 31 and the intersection with Route 195, the road is classified as a primary urban arterial. The speed limit of Route 44 in the traffic study area is 40 miles per hour (mph).

Route 195 is a north-south Connecticut state highway. It is a two-lane roadway and is classified as a principal urban/rural arterial roadway between its intersections with I-84 in Tolland and Route 6 in Willimantic. The roadway is classified as urban within the traffic study area, except for the length of road between Bassetts Bridge Road and Spring Hill Road, where it is classified as rural. The speed limit on Route 195 in the vicinity of the campus is 25-30 mph, and in the areas immediately to the north and south of the campus, the speed limit is 40 mph.

Route 195 provides direct access to two primary campus roadways, North Eagleville Road and South Eagleville Road. South Eagleville Road bounds the southern portion of the traffic study area and North Eagleville forms the northern boundary. Discovery Drive, a newly constructed roadway, also offers direct access to campus and is accessed via Route 44.

The Proposed Action Site is adjacent to Jim Calhoun Way and is accessible via Separatist Road and Hillside Road. Jim Calhoun Way is owned and managed by the Town of Mansfield and runs east-west along the border of the Proposed Action Site. Jim Calhoun Way traverses between a stop-controlled intersection with Separatist Road and a stop-controlled intersection with Hillside Road. Separatist Road is adjacent to the Proposed Action Site and traverses between South Eagleville Road and North Eagleville Road along the western border of the site. Hillside Road services the center of the UConn campus and has a posted speed limit of 25 mph.

3.15.1.2 Traffic Operations

Existing traffic operations in the area of the proposed ice hockey arena were analyzed by Fitzgerald & Halliday, Inc. in a Traffic Impact Study, September 2019. The following study area intersections were evaluated and are also depicted on Figure 3.15-1.

1. Separatist Road and North Eagleville Road
2. Hunting Lodge Road and North Eagleville Road
3. Discovery Drive and North Eagleville Road
4. Route 195 and North Eagleville Road
5. Route 195 and Mansfield Road
6. Route 195 and Bolton Road
7. Route 195 and Route 275 (South Eagleville Road)
8. Route 275 (South Eagleville Road) and Separatist Road
9. Route 275 (South Eagleville Road) and Route 32
10. Route 44 and Route 32
11. Route 44 and Huntington Lodge Road
12. Route 44 and Discovery Drive
13. Route 44 and Route 195

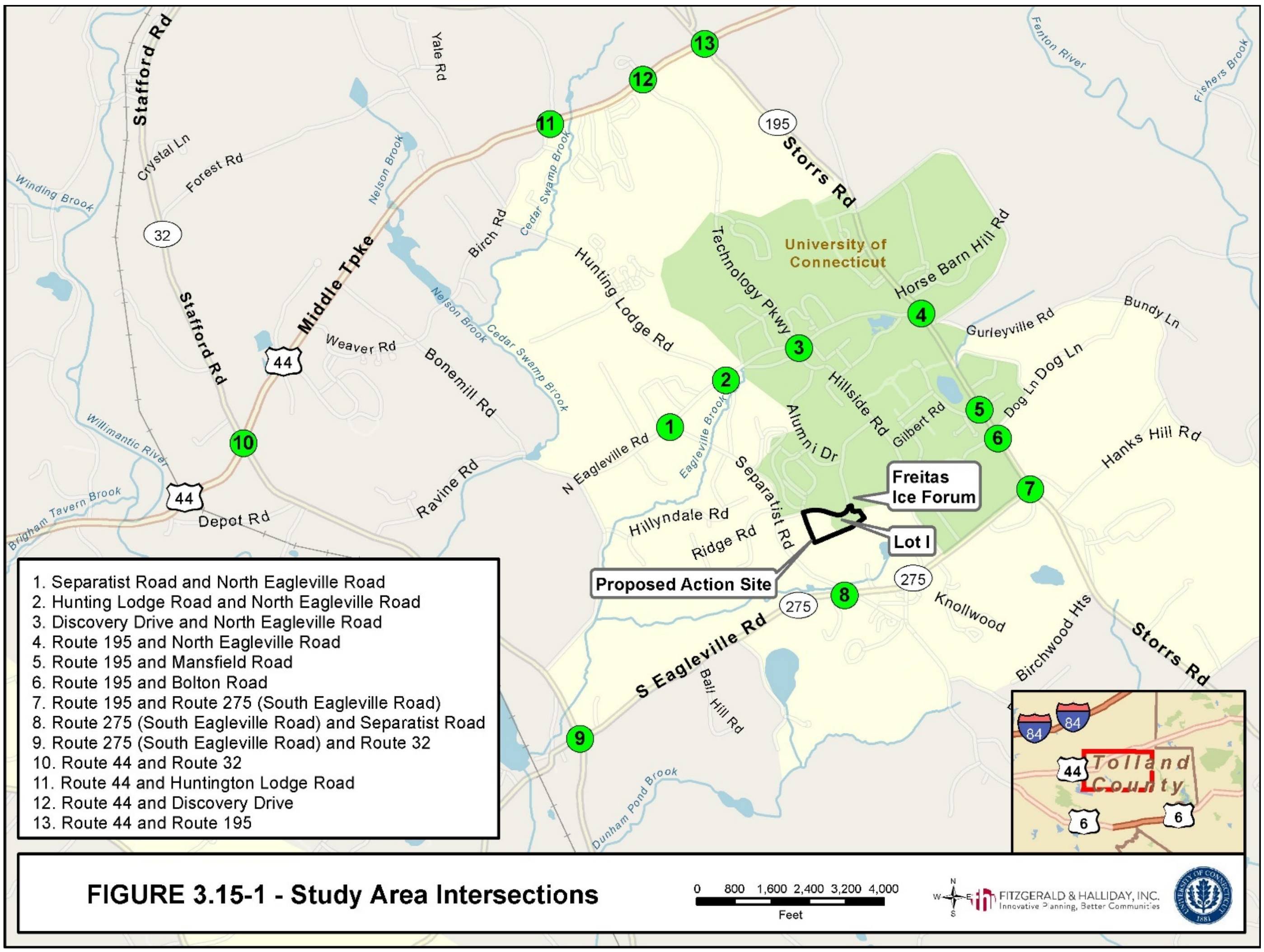
In order to determine the traffic impact of the proposed development on the adjacent transportation network, available turning movement count data was collected from previous studies and was augmented with new data collection, where needed, to establish the baseline traffic condition. The morning peak hour between 7:00 am and 9:00 am and the afternoon peak hour between 4:00 pm and 6:00 pm were analyzed. The full study with analysis results can be found in Appendix F.

3.15.1.3 Pedestrian and Bicycle Access

There are existing pedestrian and bicycle facilities in the traffic study area. In the immediate vicinity of the Proposed Action Site, Jim Calhoun Way has a continuous sidewalk along the north side, which connects Separatist Road to Hillside Road. Portions of Jim Calhoun Way have sidewalks on both sides of the roadway. Separatist Road has a multi-use path that runs alongside the northbound travel lane from South Eagleville Road to Hunting Lodge Road. Hillside Road has a continuous sidewalk along the east side which runs the entire length of the roadway and a continuous sidewalk on the west side from North Eagleville Road to Gilbert Road. Crosswalks exist at all the signalized intersections in the traffic study area.

There are marked shared lanes for bicycles on Alumni Drive and Jim Calhoun Way. There is also a multi-purpose path along Separatist Road. Bike racks are currently provided at various locations around the campus.

Figure 3.15-1 - Study Area Intersections



3.15.1.4 Parking

There is one surface parking lot (I-Lot) located on Jim Calhoun Way directly adjacent to the Freitas Ice Forum. Information from UConn Parking Services indicates that I-Lot currently provides approximately 350 parking spaces.

3.15.1.5 Crash Summary

Crash data on roadways in the traffic study area were obtained from the Connecticut Crash Data Repository for the most recent three-year period, 2016-2018. A total of 226 crashes occurred within the study area during this timeframe, with 45 crashes resulting in an injury of some kind. A summary of the relevant crash data is provided in Appendix F. There were no reported crashes involving fatalities.

From a review of the crash data, most collisions in the traffic study area were rear end and angle crashes. Contributing causes for these crashes include, but are not limited to, failure to grant right of way, drivers losing control of their vehicles and violating traffic commands. Forty-seven (47%) percent of the crashes involved rear end collisions, which are crashes characterized by motorists following too closely. Thirty percent (30%) of the collisions involved angle crashes, which typically occurred with motorists turning left or right out of driveways and intersections. The remaining crashes consisted of sideswipe crashes (10%), stationary/fixed objects (8%). There were two crashes involving a pedestrian or a cyclist within the traffic study area.

3.15.2 Impact Evaluation

3.15.2.1 No Action Alternative

Projected traffic volumes account for No Action (or No Build) traffic volumes which are defined as design year traffic without the proposed development. Based on traffic volume trends, existing traffic volumes were projected to the 2021 design year using a 1.0 percent per year peak hour growth factor to account for normal traffic growth in the traffic study area. Additionally, information for pending and approved projects was ascertained and considered. UConn is currently constructing improvements to the Athletic District (Stadia) Development Project in order to renovate and improve aging athletic fields and facilities consistent with NCAA Division I requirements. New stadium projects for soccer, baseball, and softball were identified as priority projects and will be opened in spring of 2020. The district is located on the UConn shuttle bus route and significant increase in the use of transit is not anticipated. Therefore, it was determined that the proposed improvements would not impact traffic or transportation; thus, having no site related traffic to be considered for this evaluation.

The No Build analysis results can be found in the Traffic Impact Study in Appendix F. Under the No Action Alternative, there would be no immediate change in parking, pedestrian, or bicycle access.

3.15.2.2 Proposed Action

3.15.2.2.1 Trip Generation

The standard method used to estimate the volume of traffic generated by a development is to use data provided by the Institute of Transportation Engineers (ITE), *Trip Generation Manual, 9th Edition*. This publication is a compilation of trip generation data for a wide variety of facilities and provides data for entering and exiting traffic, relative to the size and type of the development. A review of the manual revealed that the trip generation data for an ice-hockey rink is limited to one sample and is not reflective of anticipated operations of the proposed arena. Therefore, trip generation at the proposed hockey arena was based on anticipated operations and activity.

The proposed construction of an arena would generate students and spectators to the site. The arena is intended to be used for all women's games and for weekday evening men's games. This evaluation, using conservative assumptions, considers a full build-out of the arena at 3,500 seats for a weekday evening event. It is estimated that at future full capacity of the proposed arena, up to approximately 1,167 vehicular trips will be generated and may begin to arrive during afternoon weekday peak hours departing during the non-peak hour. The distribution of these trips would be directed to the existing parking garages, in similar fashion to other special events held on campus. The site trip generation and distribution analysis can be found in the Traffic Impact Study in Appendix F.

3.15.2.2.2 Traffic Impact

Projected traffic volumes for the Proposed Action (or Build) are defined as the No Build traffic volumes plus the estimated site generated traffic. To determine the traffic impact of the proposed arena, a comparison of the No Build to Build Condition is assessed. Results from the No Build to Build analysis, also shown in the Traffic Impact Study in Appendix F, indicate that the intersection of North Eagleville Road and Discovery Drive is directly impacted as a result of the proposed arena and will experience additional delays. Additionally, the intersections of Route 44 with Discovery Drive and Route 195 will experience queue lengths that extend beyond the available storage.

The University currently has a Special Event Management Plan that is authored by a professionally-licensed traffic engineer. The Plan defines implementation of special event traffic management measures for the Fall 2019/Winter 2020 basketball games and other special events on campus. The Plan should be reviewed and updated to address and include management measures for pre- and post-hockey games. Updated special event traffic management measures would improve the delay experienced under the Build condition at six of the nine study area intersections. Specific measures to consider include, but are not limited to:

- A pre- and post-game traffic control plan along Separatist Road
- Variable message signs on Route 32 and Route 275 (South Eagleville Road) to direct visitors to the South Garage via Bolton Road off Route 195
- Police officer deployments to manually manage traffic flow and operations for hockey events at the intersections of Route 275 (South Eagleville Road) with Route 32, Separatist Road, and Route 195
- Review and modify, as needed, bus routing plans for game day parkers at I-Lot, and
- Appropriate management measures to address overlap of concurrent special events held on-campus

The unsignalized intersection of Route 275 (South Eagleville Road) and Separatist Road/Sycamore Drive will continue to experience poor operations under both No Build and Build conditions. CTDOT recently conducted an assessment at this location and determined that signalization and other improvements are warranted. CTDOT has confirmed for the Town of Mansfield that it is beginning its planning and design activities with a targeted construction beginning in Spring 2023. Therefore, additional mitigation measures at this intersection are not warranted.

The signalized intersections of Route 32 with Route 44 and with Route 275 (South Eagleville Road) currently experience poor operations (level of service[10] [LOS] F) during the afternoon peak hour and would continue

[10] LOS - A qualitative measure used to relate the quality of motor vehicle traffic service. LOS is used to analyze roadways and intersections by categorizing traffic flow and assigning quality levels of traffic based on performance measure like vehicle speed, density, congestion, etc.

operating at LOS F under both the No Build and Build during the afternoon peak hour. At the intersection of Route 32 with Route 44, the addition of a right-turn lane on Route 44 eastbound and the addition of a left-turn lane on Route 44 westbound, combined with a signal upgrade to accommodate a protected left-turn movement would decrease delay and improve operations. At the intersection of Route 32 with Route 275 (South Eagleville Road) the addition of a right-turn lane on Route 275 (South Eagleville Road) westbound, the addition of a left-turn lane on Route 32 southbound, and a signal upgrade to accommodate a protect left-turn movement would decrease the delay and improve operations from LOS F under the future build condition to LOS C with the suggested improvements. Therefore, in coordination with the Town of Mansfield and its local traffic authority, a request to CTDOT for the initiation of traffic engineering studies at these intersections is needed to ascertain whether these physical improvements are needed.

3.15.2.2.3 Pedestrian and Bicycle Access

The existing proposed site plan (Figure 2.4-1) provides sidewalks for pedestrian paths that connect to/from the I-Lot and existing designated parking facilities on campus. The existing proposed site plan also provides a storage facility area for bikes and scooters. Therefore, mitigation is not required.

3.15.2.2.4 Parking

The University implements and manages various logistics as part of its Special Event Management Plan. Parking for on-campus events is currently directed to two parking garages and select surface lots. Parking is also available in the nearby Downtown Storrs Garage with shuttle service to campus.Parking for events at the proposed arena will be managed comparably. The existing I-Lot will be reconfigured to accommodate up to 700 parking spaces at full build-out of the proposed project. These parking spaces will also be available during the day to permit-holders, including a requisite number of accessible spaces. Capacity is sufficient for proposed event parking needs therefore no mitigation is required.

3.16 Utilities

3.16.1 Existing Conditions

The West Campus District of the University of Connecticut is currently served by all major campus utilities: electrical, sanitary sewer, gas, potable water, and stormwater drainage. A general summary of each utility is provided below in the context of the overall campus.

- Electrical – The campus obtains electrical power primarily from the University-owned Central Utility Plant which is located north of North Eagleville Road. Eversource provides a secondary source of electrical supply through the UConn substation 5 also located on North Eagleville Road. The Central Utility Plant has a permitted output capacity of 24.9 megawatts (MW). The campus demand exceeds that output, so the demand in excess of the plant's permitted output is supplied by Eversource. The University has a goal of supplying 100% of the campus electrical demand without relying on Eversource. Electrical service connections are located along Jim Calhoun Way adjacent to the Proposed Action Site.
- Sanitary Sewer – UConn owns and operates a campus-wide wastewater collection and treatment system. The water pollution control facility (WPCF) is located north of North Eagleville Road off LeDoyt Road. The WPCF has a design capacity of 3.0 million gallons per day average daily flow and

7.2 million gallons per day during peak flow conditions. Discharges fluctuate seasonally based on when students are in session. The capacity of the existing plant is adequate. Sanitary sewer system pipes/connections service the existing Freitas Ice Forum located immediately proximate to the Proposed Action Site.

- Gas – Connecticut Natural Gas (CNG) supplies the UConn campus with natural gas through the Algonquin Gas Transmission pipeline.
- Potable Water – Drinking water and water used for fire protection is supplied to the UConn campus via a system that is operated by New England Water Utility Services, a subsidiary of the Connecticut Water Company. Groundwater wells draw from stratified drift aquifers associated with the Fenton River and Willimantic River. Water is also supplied to the University by the Connecticut Water Company from a reservoir located in Vernon, CT as authorized by a CTDEEP diversion permit. Conservation of water has been an ongoing objective for the University and depending on hydrologic conditions at the Fenton River and Willimantic River wellfields (i.e., low flow/drought conditions), voluntary as well as mandatory conservation practices have been implemented. The installation of low-flow fixtures in existing and new buildings and other conservation measures have also been implemented by the University. A Reclaimed Water Facility which produces high-quality reclaimed water for non-potable uses such as heating and cooling is also now operating on-campus. This facility has reduced the amount of potable water consumption by the University for non-potable uses. Potable water system pipes and connections service the existing Freitas Ice Forum located immediately adjacent to the Proposed Action Site.
- Stormwater Drainage – Traditional stormwater collection/drainage systems consisting of catch basins, manholes and drainage pipes are located throughout the UConn campus. At the Proposed Action Site, there are catch basins and piping that collect stormwater runoff from surface parking (I-Lot) which discharge to the south and into Wetland 4.

3.16.2 Impact Evaluation

3.16.2.1 No Action Alternative

Under the No Action Alternative, all major utility services would continue to be provided by the University to the West Campus District. Potential service interruptions may occur during construction of the Athletic District (Stadia) Development Project but those would end once that project is completed in 2020. While the No Action Alternative would not result in any further demand on utilities, it would also not address any future utility needs or provide any additional utility capacity and resilience.

3.16.2.2 Proposed Action Alternative

All major utility services and connections necessary to support the Proposed Action are located within the immediate vicinity of the Proposed Action Site. The same utility services presently provided at the Freitas Ice Forum would also be required at the new ice hockey arena. Although the demand for utility service and capacity would increase with the construction and operation of the Proposed Action, the existing utility services and systems provided by the University are adequate to handle the anticipated demand attributed to the new ice hockey arena. The arena would also be designed and built to meet the sustainability and conservation goals and objectives of the University. For these reasons, impacts on utility services and demand is not anticipated with the Proposed Action.

3.17 Energy Use and Conservation

3.17.1 Existing Conditions

The University is internationally recognized as a leader of college/university campus sustainability and conservation, as evidenced by its programs and practices that promote energy efficiency and sustainability. UConn is consistently ranked in the top 10 of the Sierra Club's Cool Schools system and earned a Gold Rating with the Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment & Rating System (STARS). UConn's Storrs campus, has several initiatives currently underway:

- *The University of Connecticut Climate Action Plan: Guiding the Path Toward Carbon Neutrality* (August 2009) UConn has a goal of having a carbon neutral Storrs campus by the year 2050, and this plan serves as a blueprint to achieve those goals. The Climate Action Plan (CAP) includes a greenhouse gas (GHG) inventory, emission reduction strategies, and funding, outreach, and research approaches. The energy section of this CAP includes strategies that reduce demand, maximize efficiency, substitute green technologies for existing ones, and plan for future energy efficiency in building design and energy supply. In 2015, an *Interim Assessment of UConn's Climate Action Plan* was completed to review progress since the CAP was initiated in 2010 and be sure the University is on track to meet the 2050 GHG reduction goals.
- *2020 Vision for Campus Sustainability & Climate Leadership* (2016) Endorsed by UConn in 2016, this vision provides suggestions for reaching the goals included in the CAP. The vision includes measurable metrics and numeric goals to measure the success of the implementation of the CAP goals. The categories contained in this vision include energy & buildings, waste reduction & diversion, outreach & engagement, food & dining, water resources, purchasing, transportation, and grounds, open space, & conservation areas.
- *The University of Connecticut Sustainable Design & Construction Policy* (2016) This policy was formally adopted in 2007 and updated in 2016 to outline development on campus for projects that cost over $5 million. This policy ensures that buildings on campus will be designed, constructed, and renovated as energy efficient, sustainable, and water efficient. LEED building certification and approaches will be considered for campus building design and construction projects.
- *Preliminary Feasibility Study and Strategic Deployment Plan for Renewable and Sustainable Energy Projects* (2012) This plan outlines 12 demonstration-scale renewable and sustainable energy projects on campus for the following technologies: geothermal, fuel cells, solar thermal, biofuels, solar photovoltaic, and wind. These clean and renewable energy technologies will reduce energy use and emissions associated with the use of fossil fuels for electric generation, thermal energy, and/or transportation. This plan is also called the UConn Renewable Energy Strategic Plan.
- *The University of Connecticut Sustainability Framework Plan* (2015) This appendix to the overall UConn Campus Master Plan lays out five focus areas to achieve sustainability goals: energy, water, land, materials, and movement. The energy goals in this plan include the reduction of fossil fuel use, careful siting of future buildings, integration of renewable energy systems on the campus, sub-meter and smart-meter buildings, and shifting transportation fleet to clean fuel vehicles. The approaches outlined in this plan strive to bring UConn's campus carbon neutrality by 2050.
- *Campus Sustainable Design Guidelines* (2004) These technical guidelines outline strategies to improve energy efficiency, plan sustainable sites, safeguard water, conserve materials and

> resources, and enhance indoor environmental quality. The four main goals of the energy efficiency sections are to: reduce the total energy consumption of buildings; satisfy a portion of the electricity demand for a project with renewable energy sources; eliminate the use of ozone in buildings; and monitor and assess building system performance. The reduction of the energy consumption of buildings can be achieved by outlining strategies to reduce the building's dependence on mechanical heating and cooling, identifying systems that increase operational efficiencies, and utilizing on-site energy generation. The verification of building systems includes tracking usage and assessing the results to be sure that buildings have been sited, designed, constructed, and are operating with maximum efficiency.

The energy consumption of the proposed ice arena would be from: the construction of the facility; the refrigeration plant to make and maintain the ice; the boiler to heat the new arena building, and mechanical ventilation to control heating, humidity, and indoor air quality. Additional energy use would be from lighting, cleaning, and operations. The greatest amount of electricity consumption is associated with the refrigeration system, which can account for over 50% of electrical usage at the hockey arena.

3.17.2 Impact Evaluation

3.17.2.1 No Action Alternative

Under the No Action Alternative, there would be no new construction and the site would continue to operate as a surface parking lot, with little energy usage. Therefore, there would be no beneficial or adverse impacts to energy use or conservation under the No Action Alternative.

3.17.2.2 Proposed Action Alternative

The Proposed Action would result in increased energy consumption but will be more energy efficient when compared with the existing Freitas Ice Forum which will remain in place. In concert with the UConn Sustainable Design & Construction policy, energy efficiency measures would be incorporated into the design, construction, and operation of the new ice hockey arena. The Proposed Action would adhere to the UConn Sustainability Framework Plan with reduction of fossil fuel use, sub-meter / smart-meter buildings, and careful building siting associated with the new ice hockey arena.

The design and construction of the new ice hockey arena would adhere to LEED building requirements that would make this facility more energy efficient than the existing ice hockey building. Approaches that would lessen energy use include reducing the amount of air and heat that would escape from the building envelope, reuse of water on-site, and harnessing waste heat from the refrigeration process to heat the building and hot water. The new ice hockey arena would also recycle waste streams to maximize energy conservation and efficiency.

For information on greenhouse gas emissions from the new facility, refer to the Air Quality section of this EIE.

3.18 Construction Period Impacts

3.18.1 Impact Evaluation

3.18.1.1 No Action Alternative

There would be no construction associated with the No Action Alternative and consequently no construction period impacts.

3.18.1.2 Proposed Action Alternative

Temporary impacts during demolition of the existing surface parking area (I-Lot) and construction of the proposed new UConn Ice Hockey Arena and associated parking areas are anticipated in relation to air quality, stormwater and water quality, noise, economy, solid waste, hazardous materials, energy, and campus disruption/parking. Various best management practices (BMPs) would be incorporated into construction specifications and would be implemented during construction to avoid or minimize temporary construction period impacts to the greatest extent possible. Additionally, all contractors working on the Proposed Action Site would be required to adhere to the guidelines and requirements of UConn's Contractor EHS Manual - Health, and Safety (EHS) Requirements for Construction, Service, and Maintenance Contractors (May 24, 2019 - 7th Revision). An evaluation of the temporary construction-phase impacts and mitigation measures are described in more detail below.

3.18.1.2.1 Air Quality

Construction air quality impacts would occur due to the use of diesel-powered construction vehicles and are anticipated to be greatest in 2021 based on the proposed construction schedule provided by the University. Diesel air emissions include carbon monoxide, hydrocarbons, nitrogen oxides, sulfur oxides and particulate matter (PM10 and PM2.5). Emissions during construction of the Proposed Action were modeled and are reported in Table 3.18-1. These construction emissions are significantly less than the total emissions from other industrial and transportation sources in the region, and therefore, are expected to be insignificant with respect to compliance with the NAAQS. However, potentially localized air quality impacts could occur as a result of diesel exhausts from the construction equipment in the vicinity of the Proposed Action Site. For additional information on the derivation of these construction emissions, refer to the Air Quality Technical Memorandum included in Appendix C of this EIE.

Table 3.18-1 - Construction Emissions

Year	Tons					
	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
2020	5.0	6.7	2.4	<0.1	0.3	0.1
2021	6.9	10.0	3.0	<0.1	0.5	0.2

Notes: CO – carbon monoxide, NO_x – nitrogen oxides, SO_x – sulfur oxides, $PM_{10/2.5}$ – particulate matter, VOC – volatile organic compounds. Totals may reflect rounding.
Source: KB Environmental Sciences, Inc., 2019.

Fugitive dust emissions could occur during demolition of the existing surface parking area (I-Lot); from clearing, grubbing, blasting, ground excavation or other site preparation activities; during material handling and storage; during movement of equipment on-site; or during transport of material to and from the site. Fugitive dust is most likely to occur during periods of intense activity and would be accentuated by windy and/or dry weather conditions.

Mitigation of potential construction air quality impacts from diesel exhausts would be addressed through the proper operation and maintenance of construction equipment, and prohibition of excessive idling of engines. Section 22a-174-18(b)(3)(c) of the Regulations of Connecticut State Agencies limits the idling of mobile sources to three minutes.

Potential air quality impacts from fugitive dust would be addressed through the following mitigation measures:

- Reducing exposed erodible earth area to the extent possible through appropriate construction phasing. Stabilization of exposed earth with grass, pavement, or other cover as early as possible.
- Application of stabilizing agent such as calcium chloride or water to the work areas and haul roads.
- Covering, shielding, or stabilizing stockpiled material.
- Use of covered haul trucks.
- Limiting dust-producing construction activities during high wind conditions.
- Rinsing construction equipment with water at a designated wash area near the entrance/exit to the construction site to minimize drag-out of sediment by construction equipment onto the adjacent roads.
- Street sweeping of roads within the construction area.

3.18.1.2.2 Stormwater and Water Quality

Storm events during construction have the potential to erode areas of exposed soils which could potentially result in offsite impacts to adjacent lands and downstream wetland and receiving waters. Because more than one acre would be disturbed during construction of the Proposed Action, a general permit for stormwater discharge during construction will be required from the CT DEEP. This general permit would establish water quality and quantity design goals for the Proposed Action Site.

To mitigate potential surface water quality degradation during construction, a stormwater pollution control plan (SWPCP) would be specifically designed and implemented for this construction project in accordance with the 2002 Connecticut Guidelines for Erosion and Sedimentation Control (CT DEEP, 2002). The measures taken would prevent and minimize sedimentation, siltation, and/or pollution of adjacent properties and surface water bodies. Measures would include, among others, the proper placement of geotextile silt fencing, haybales, or other controls adjacent to site disturbance limits, along stream banks, upslope of wetlands, or around existing catch basins to keep all sediments and pollutants on site and out of surface waters, wetlands and drainages. These erosion and sedimentation controls would be maintained throughout the period of active construction until all exposed soils have become stabilized. In addition to erosion and sedimentation controls, construction site stormwater management facilities, such as sedimentation basins, dewatering, and filtration systems, would be appropriately designed in conformance with the Connecticut Stormwater Quality Manual (CT DEEP, 2004).

3.18.1.2.3 Noise

During the construction period, continuous as well as intermittent (or impulse) noise would be experienced in the immediate vicinity of the Proposed Acton Site, which may be perceived by some students and nearby residents to be intrusive, annoying, and discomforting. This noise would be generated by construction equipment including pneumatic tools which emit strong penetrating percussive sounds, and by the daily movement of dump trucks, loaders, backhoes, and other heavy equipment to, from, and on the construction site.

Table 3-18.2 provides typical noise emission levels in A-weighted decibels (dBA) 50 feet from construction equipment that is anticipated to be utilized to construct the Proposed Action. For comparison, ambient noise levels in suburban environments like the UConn campus range from approximately 50 to 60 dBA.

Table 3.18-2 - Noise Emission Levels from Construction Equipment

Construction Equipment Likely to be Used to Construct the Proposed Action	Noise Level (dBA) 50 feet from Source
Air compressor	80
Backhoe	80
Dozer	85
Generator	82
Jackhammer	88
Loader	80
Pneumatic Tool	85
Rock Drill	95
Dump Truck	84

Source: *Federal Transit Administration Noise and Vibration Impact Assessment Manual*, September 2018

In general, noise levels are reduced by 6 dBA for each doubling of distance from a noise source. Thus, a dump truck with a noise level of 84 dBA at 50 feet for instance, would have a noise level of 78 dBA at 100 feet, 72 dBA at 200 feet, 66 dBA at 400 feet, 60 dBA at 800 feet, and so forth. Buildings and other barriers located between a noise source and a receiver further reduce the intensity of construction noise. For comparison, the Proposed Action Site is located approximately 850 feet east of two residences located along Separatist Road on the west. These are the closest noise sensitive receptors to the Proposed Action Site. Thus, as an example, a dump truck operating on-site would have a noise level of approximately 60 dBA at outdoor locations adjacent to these homes.

While construction noise is exempt under Section 22a-69-1.8(g) of the RCSA, construction documents would require the contractor to limit the duration and intensity of noise generated by construction. To mitigate the potential impacts during construction, noise abatement measures would be included in construction specifications. Such measures include appropriate mufflers on all construction vehicles and restrictions on hours of operation.

Contractors working at the University are required to comply with Occupational Safety and Health Administration's (OSHA's) Noise Standard, 29 CFR 1910.95 and to the noise requirements identified in the University's Contractor Environmental Health and Safety Manual. Per the latter, the University requires that contractors limit on-site work hours from 7:00 AM (or 8:00 AM in the vicinity of a dormitory) to 4:30 PM, Monday through Friday. Thus, there would be no nighttime noise related to construction of the Proposed Action. Also, two days advanced notice is required to be given by the contractor to the University when disruptive/noisy construction operations are planned. Commencement of those activities cannot take placed until written permission is granted to the contractor by the University.

3.18.1.2.4 Economy

As discussed in Section 3.14 of this EIE, there would be some economic benefit due to construction of the Proposed Action, albeit minimal. One effect would be the production of jobs in on- and off-site construction, and trade, transportation, manufacturing, and services in support of construction. The earnings from these jobs will in turn generate personal expenditures by project-related workers that will stimulate the local and regional economy. Expenditures will also encompass materials used in construction. Overall there will be a beneficial construction period effect on the economy.

3.18.1.2.5 Solid Waste and Hazardous Materials

As discussed in Section 3.9 of this EIE, solid waste would be generated from construction. Pallets, wood scraps, wallboard, siding and roofing scraps, packaging, dry latex paint residue, foam padding, insulation, are some examples of the types of solid waste that might be generated during construction. This waste would be disposed of as municipal solid waste as described in Section 3.9. Any construction waste materials containing solvents (e.g., paint thinner, varnishes) would be managed as hazardous waste and disposed of by a licensed waste hauler.

Potential incidental exposure of construction workers to hazardous materials during the construction process would be addressed prior to commencement of construction, with the development of a site-specific hazardous materials management plan. A Health & Safety Plan for construction workers would also be developed in accordance with OSHA guidelines. It is anticipated that no hazardous materials other than diesel fuel for construction equipment would be stored on site during construction. All fuel storage tanks used during construction would be equipped with secondary containment systems.

3.18.1.2.6 Energy Use and Conservation

Construction of the Proposed Action would result in an increased local demand for fossil fuels (mainly diesel fuel) to operate construction machinery and trucks and an increased demand for electricity.

3.18.1.2.7 Campus Disruption/Parking

During the period it would take to construct the Proposed Action, there would be sights and sounds of construction activity, such as the movement of construction equipment along local roadways within West Campus, that could be perceived as disruptive to students, athletes, nearby residents, and spectators who utilize this portion of the UConn campus. However, construction activity is presently occurring in the area related to the Athletic District (Stadia) Development Project, to which the students have acclimated. The athletic fields and facilities that are under construction as part of the Stadia Development Project would, however, be completed by the time construction commences on the UConn Ice Hockey Arena. Therefore, construction of the UConn Ice Hockey Arena, sequenced to begin in Fall 2020 after the completion of Stadia, also within the West Campus District, should not be perceived as being disruptive to student life. Thus, parking within I-Lot would not be available to students or athletic event spectators while the Proposed Action is under construction. Significant traffic related disruptions along Jim Calhoun Way, Separatist Road, Alumni Drive are not anticipated during construction of the Proposed Action.

The University would have to notify students that parking within I-Lot would not be available during the Proposed Action construction period. In the interim, students would be directed to other surface or structured parking lots located on campus. Similarly, spectators arriving on campus for baseball, softball, soccer or track and field events that would be held on the new Stadia Development Project fields would also be directed to appropriated parking areas.

4 Summary of Impacts

4.1 Unavoidable Adverse Impacts

A detailed assessment of the Proposed Action to determine whether the action would have beneficial or substantial adverse environmental effects on natural, social, and cultural resources is provided in Chapter 3 of this EIE. This chapter summarizes the results of that impact assessment to identify only the unavoidable adverse impacts attributed to the Proposed Action.

Due to the presence of wetlands on the Proposed Action Site, development of a new ice hockey arena and associated surface parking would have an unavoidable adverse impact to inland wetland resources. Designers have evaluated numerous conceptual layouts for the facility and parking and have arrived at a concept that avoids and minimizes impacts to wetlands to the greatest extent practicable. However, some wetland impact would still occur from the Project. The conceptual design depicted in Figure 2.4-1 would impact approximately 4,900 SQ FT of inland wetlands. Given that the anticipated wetland impacts are below 5,000 SQ FT, the project would qualify for Self-Verification (SV) under the Department of the Army General Permit #17, and therefore mitigation of wetland impacts may not be required. As the project advances into the permitting stage, design modifications and best management practices may help further reduce wetland impacts. The University would coordinate with the USACE and CT DEEP during the permitting phase to determine the need for wetland mitigation.

The only other unavoidable adverse environmental impacts associated with the Proposed Action would be those incurred during the project construction period. These temporary construction-related impacts are described in Section 3.18 and primarily include impacts to air quality, noise, stormwater and water quality, and campus disruption/parking. Through construction best management practices, outreach and communication with the campus community and Town of Mansfield, and proper site planning these impacts could be effectively minimized but would not be eliminated.

4.2 Irreversible and Irretrievable Commitments of Resources

Irreversible and irretrievable commitments of resources associated with the Proposed Action consist of resources that remain committed to the project through its lifespan (i.e., irreversible commitment) or those that are consumed or permanently impacted during project construction and operation as a result of the Proposed Action (i.e., irretrievable commitment).

The Proposed Action involves a commitment of a range of natural, physical, human, and fiscal resources. Land used in construction is considered an irreversible commitment during the period that the land is used. However, if a greater need arises for use of the land or if the University determines at some point in the future that the Ice Hockey Arena is no longer needed for some reason, then the land could eventually be converted to another use. However, there is no reason to believe such a conversion would ever be necessary or desirable. It is important to note that a portion of the land/site is already developed as a parking lot (I-Lot). Existing parking would be reconfigured and expanded under the Proposed Action so the present use of a portion of the land for parking would continue.

Fossil fuels, labor, and materials such as steel and concrete would be used to construct the Proposed Action. Additionally, labor and natural resources are used in the making of construction materials. These materials are generally not retrievable. However, aside from fossil fuels, they are not considered to be in short supply and their use would not have an adverse effect upon continued availability of these resources. Any construction would require a one-time use of fiscal resources, which are not retrievable.

Once constructed, operation of the new Ice Hockey Arena would require the irretrievable commitment of energy to heat and cool the facility, and to illuminate the facility and associated parking areas. Therefore, overall energy use on campus would increase with the Proposed Action. Operation and maintenance of the facility would also require an expenditure of human labor and fiscal resources for the lifespan of the facility.

4.3 Indirect and Cumulative Impacts

Indirect impacts are effects from a Proposed Action that are either removed in distance or time from the action itself. Cumulative impacts are the total incremental effects on a resource, ecosystem, or human community due to past, present, and reasonably foreseeable future activities undertaken by the sponsoring agency (in this case, the University). Cumulative impacts are only considered for those resources that are directly or indirectly impacted by the Proposed Action. In assessing what may happen in the future, reasonably foreseeable activities are actions estimated to be probable, based on observed trends and known programmed future projects, rather than simply possible, based on speculation. The UConn Master Plan is therefore used as the guide for assessment of cumulative impacts from reasonably foreseeable future actions.

Assessment of cumulative impacts from past actions requires consideration of a reasonable timeframe. The University is amid the $1.5 billion NextGen Connecticut Development Initiative that was signed into law by Governor Malloy in January 2013. The NextGen Initiative proposes to greatly expand educational opportunities, research, and innovation in the science, technology, engineering, and math (STEM) disciplines at UConn over the next decade. The goal of this initiative is to leverage the strength and resources of the University to help create jobs and invigorate the State's economy. An objective of this effort is to increase in the University's enrollment, expand the University's faculty, and develop new and existing facilities to accommodate enhanced STEM research and teaching. While the UConn Ice Hockey Arena is not a STEM project, the Purpose and Need for the Proposed Action, which is to develop a facility that fulfills the University's agreement with Hockey East to attract students and faculty, and provide a resource for the wider community, is consistent with and complementary to these goals and objectives.

It is therefore logical and appropriate to use 2014 (the year that NextGen projects started to advance) as the starting point for the assessment of cumulative impacts for this EIE. The geographic area for the assessment of indirect and cumulative impacts is the University of Connecticut campus.

4.3.1 Indirect Impacts

Indirect impacts are either growth inducing effects or are the result of encroachment into or alteration of a resource that could potentially lead to long-term degradation of the affected resource. The Proposed Action would potentially impact approximately 4,900 SQ FT of on-site wetland resources and would also permanently convert some forest edge habitat around the perimeter of surface parking (I-Lot), however no indirect impacts are anticipated from these direct encroaching ecological impacts. Remaining intact wetland areas on-site after construction of the Proposed Action would continue to provide the same function and values that are presently provided by the existing wetlands. The forest edge habit that would be lost would be replaced by new edge habitat created by the new ice hockey arena development. The small unfragmented forest block that would remain after construction of the Proposed Action would be similar in size and function as the habitat block that presently exists at the Proposed Action Site today.

The design of the Proposed Action would include a variety of green infrastructure and LID measures to manage the quantity and quality of stormwater generated at the site and would therefore be an improvement over the existing stormwater management system at I-Lot. Thus, the future condition with the Proposed Action would improve quality and reduce the quantity of stormwater runoff leaving the Proposed Action Site. For this reason, indirect impacts to downstream wetlands, receiving waters, and adjacent lands from runoff leaving the site is not anticipated.

The UConn Ice Hockey Arena is included in UConn's Master Plan as a priority project. It is part of the University's overall objective to improve the athletic fields and facilities located in the West Campus District. The Athletic District (Stadia) Development Project, which has been defined elsewhere in this EIE, is presently under construction immediately north of the Proposed Action Site and is slated for completion in 2020. The Ice Hockey Arena would be constructed between the years of 2020 and 2022. Neither of these athletic-based projects alone would be considered the type of development project that would induce growth on campus. They are projects needed to enhance existing athletic programs and facilities so that athletes would have appropriate training and competition facilities of a quality comparable to other NCAA Division 1 teams. By providing these modernized facilities, the University would be able to attract and retain top-tier athletes and be able to be competitive at the highest collegiate level. The benefit is that the University would continue to be recognized nationally not only for academics but for athletics as well, which together would increase the attractiveness of the University to future prospective students (both athletes and non-athletes). The induced-growth affect triggered by these athletic-type projects, however, is difficult to project, let alone the potential for indirect environmental impacts attributed to that induced growth. For these reasons, indirect impacts attributed to induced growth triggered by the Ice Hockey Arena is not anticipated.

4.3.2 Cumulative Impacts

As mentioned above, the assessment of cumulative impacts only considers those resources that are directly or indirectly impacted by the Proposed Action. The geographic area for cumulative impact assessment is the campus and the timeframe considered is from 2014 (the year that NextGen Connecticut projects began to advance) through 2035, the planning horizon year for the most recent UConn Master Plan.

Based on the assessment in Chapter 3 of this EIE, the Proposed Action would result in direct and indirect impacts to wetlands, traffic/parking conditions, and minor impacts to forested edge habitat associated with a small unfragmented forest block.

Projects that have been undertaken on the UConn campus since 2014 are included in Table 4.3-1. The date of the environmental documentation associated with each project is included as well as a summary of the impacts to wetlands, habitat, and traffic/parking conditions (the resources that are the focus of this cumulative impact assessment) for each project.

Table 4.3-1 - Development Project on the UConn Campus Since 2013 and Related Resource Impacts

Project Name	Date of Environmental Documentation	Summary of Impacts to Wetlands, Habitat, and Traffic/Parking Conditions
Main Accumulation Area	February 2014	• No wetland impacts • Loss of 0.75 acre of fragmented upland forest habitat • No parking or transportation impacts
Innovative Partnership Building – North Campus	February 2014	• 9,580 SQ FT of wetland impact • Some disturbance within the 750-foot critical habitat buffer associated with a vernal pool but the project meets specified vernal pool habitat management and conservation objectives. • No parking or transportation impacts
STEM Residence Hall	April 2014	• 935 SQ FT of wetland impact • No habitat impacts • Additional demand for on-campus student parking
South Campus Development	January 2016	• No wetland impacts • No habitat impacts • Minimal new vehicle trips with no adverse impact on traffic operations in and around the UConn campus • Loss of an estimated 81 existing parking spaces in the South Campus area • Potential spill-over parking impacts on adjacent Town parking lots and streets
Student Recreation Center	April 2016	• No wetland impacts • No habitat impacts • No parking or transportation impacts
Athletic District (Stadia) Development	March 2018	• No wetland impacts • Loss of one acre of forest cover with minimal habitat value due to the relocation of the baseball field and pedestrian connection to surface parking (Y-Lot) • No parking or transportation impacts
Main Campus Parking Replacements	June 2018	• No wetland impacts • No habitat impacts • Parking benefits and no transportation impacts
Northwest Science Quad	December 2018	• 2,500 SQ FT of wetland impact • Vegetation clearing including the removal of invasive plants • No expected increase in site-generated traffic volumes • Shift of parking from campus core to periphery for approximately 705 vehicles • No disruption of existing intersections • Minimal new vehicle trips • Improved pedestrian and bicycle access within campus core
UConn Ice Hockey Arena	December 2019	• Approximately 4,900 SQ FT of wetland impact • Minor impacts to forested edge habitat associated with a small unfragmented forest block. • Impacted traffic operations at five study area intersections resulting in increased vehicle delay and queues compared to the No Action Alternative.

*Note: To mitigate for impacts to these relatively low-quality wetlands from these projects, the University has created greater than 2 acres of high-quality wetlands.

As can be seen from the Table 4.3-1, resource impacts to wetlands, habitats, and campus parking/transportation conditions from UConn development projects since 2014 have been relatively minimal when considering the nature and extent of development that has occurred on campus. Overall, a total of 17,915 SQ FT (0.41 acres) of wetland impact from nine projects (including the impacts anticipated from the UConn Ice Hockey Arena); a total of greater than 2.75 acres of impact to unfragmented forest blocks, or forest edge habitat with varying levels of habitat value; and various changes to parking and transportation conditions that have been planned for and addressed by the University to offset impact and ensure adequate parking and efficient traffic operations on campus and in the surrounding area.

Undoubtedly, with the NextGen Initiative in full swing and the ambitious development plans outlined in the UConn Master Plan, there will likely be future impacts to these resources on a level and scale similar to those that have occurred by the past projects listed in Table 4.3-1. The University is very proactive with their campus planning and is a recognized leader in the state when it comes to the protection of the environment. It is reasonable to assume that designs of future projects would be developed with the intent of avoiding and minimizing impacts to natural resources such as wetlands and habitats to the greatest extent possible and where unavoidable impacts occur, they would be adequately mitigated as part of the goal to sustain the natural environmental quality of the campus setting. Similarly, the University is committed to providing a parking supply that meets the overall University demand while also ensuring safe and efficient transportation both on campus and in the surrounding areas of Mansfield.

4.4 Summary of Impacts and Mitigation Measures

A summary of impacts attributed to the Proposed Action and mitigation measures are presented below in Table 4.4-1.

Table 4.4-1 - Summary of Impacts and Proposed Mitigation

Resource Category	Impacts	Proposed Mitigation
Consistency with Planning	• The Proposed Action is consistent with the State Plan of Conservation and Development, Town of Mansfield Planning and Zoning, and the University Master Plan.	No mitigation is required
Geology, Topography and Soils	• There are no unique geologic or topographic features on the Proposed Action Site. • There are no prime or statewide important farmland soils on-site.	No mitigation is required
Water Resources and Floodplains	• No impact to 100-year floodplains or floodways. • Stormwater runoff from the site is anticipated to decrease due to implementation of green infrastructure and low-impact development (LID) measures. • Water quality leaving the site is anticipated to improve compared to existing conditions with the implementation of green infrastructure and LID measures.	Stormwater management system design that is compliant with the Connecticut Stormwater Quality Manual (CTDEEP, 2004). Adherence to the 2002 CTDEEP Erosion and Sedimentation Control guidelines. Incorporation of Low Impact Development (LID) and green infrastructure measures into the site design.

Resource Category	Impacts	Proposed Mitigation
Wetlands	• The Proposed Action would permanently impact up to 4,900 square feet (SQ FT) of inland wetland/watercourse resources.	An appropriate wetland mitigation strategy would be coordinated between the University, CT DEEP and the USACE during the permitting phase.
Natural Communities, Flora and Fauna	• No rare or unique habitat is found within the natural areas of the Proposed Action Site, therefore no critical habitat areas would be lost or impacted. • Minor loss of small forested block habitat including uplands and wetlands; however, these are not unique and include forested edge with invasive species.	Mitigation to include development and implementation of a landscape plan incorporating native drought-resistant plantings to compensate for loss of habitat.
Noise	• Noise from the new arena would primarily be from outdoor mechanical equipment such as compressors or cooling fans and would be of a similar sound level as that generated by the adjacent Freitas Ice Forum. No impact is anticipated.	No mitigation is required, however noise reduction can be achieved by partial enclosure or shielding of outdoor mechanical equipment.
Air Quality/Greenhouse Gases	• New emissions from stationary sources including a dedicated boiler and diesel engine emergency generators. • Increased mobile source pollutant emissions from vehicles traveling to/from the arena facility. However, a reduction in motor vehicle emission rates over the long term would occur due to improved automotive industry technology combined with the assumption that the volume of motor vehicle traffic to and from the hockey arena would essentially remain constant (due to arena capacity limitations). Therefore, levels of pollutants and precursors from mobile sources are expected to decrease in the future (both with and without the Proposed Action). • The system that would provide the ice for the new arena proposes R717 as the primary refrigerant. Arena ice systems that use ammonia as the refrigerant have a zero Global Warming Potential and a zero Ozone Depleting Potential.	New stationary sources to be included in UConn's facility wide Title V air quality permit. Emergency generators operated less than 300 hours per year according to CT DEEP permit requirements.
Solid Waste	• Solid waste generated at the new ice hockey arena would be of similar type and amounts to that generated at the existing Freitas Ice Forum. No impacts are anticipated.	No mitigation is required.

Resource Category	Impacts	Proposed Mitigation
Toxic and Hazardous Materials	• There are no known hazardous materials or spill sites located on or near the Proposed Action Site that would pose environmentally hazardous or contaminating conditions. • Generation of toxic or hazardous materials would be on par with that presently associated with the existing Freitas Ice Forum. No impacts are anticipated.	Hazardous materials used during facility operations would be properly stored and managed on site. All waste streams would be managed according to pre-existing University protocols.
Public Health and Safety	• Existing UConn Public Health and Safety Services are equipped to handle the construction, operation, and management of the new ice hockey arena, therefore no impacts to public health and safety are anticipated.	No mitigation is required.
Visual and Aesthetic Character	• The Proposed Action is consistent with the recreational land uses that characterize the West Campus District. With the completion of the Athletic District (Stadia) Development Project anticipated in Spring 2020, the new Ice Hockey Arena would be compatible with and visually complement the new athletic fields and facilities associated with that project.	No mitigation is required.
Socioeconomics	• There would be no impact to Environmental Justice Communities. • Jobs would be created, with employees needed especially on game days or days when special events are held at the arena. • Increased patronage of local establishments during events would be a benefit of the Proposed Action.	No mitigation is required.
Traffic, Parking and Circulation	• The Proposed Action would impact traffic operations at three study area intersections resulting in increased vehicle delay or queues compared to the No Action alternative.	An updated special event traffic management plan that includes a traffic control plan on Separatist Road, additional manual traffic control at key intersections on Route 275 (South Eagleville Road), and updated bus routing services, etc. Coordination with the Town of Mansfield and the local traffic authority to request CTDOT to initiate traffic engineering studies to ascertain whether physical roadway improvements are needed at state-owned study area intersections. OSTA certification process will be triggered, and a certification of operation will be required.
Utilities	• Existing utility service connections are present and of enough capacity to support the new ice hockey arena.	No mitigation is required.

Resource Category	Impacts	Proposed Mitigation
Energy Use and Conservation	• Increased energy demand for the University to operate a second ice hockey arena on campus. The new arena would not be replacing the existing Freitas Ice Forum. The existing facility would still be used for recreational programs.	LEED building certification approaches would be considered. Sustainability/energy conservation measures may be incorporated in the design of the new facility.
Cultural Resources	• There are no above ground historic resource or archaeological resources on or eligible for the National Register of Historic Places within the Proposed Action's Area of Potential Effect (APE).	No mitigation is required.
Construction Period Impacts		
Traffic, Parking, and Circulation	A portion of I-Lot would periodically be open during the early stages of project construction but would eventually become unavailable for parking until project completion.	Students and event spectators would be directed to alternate parking locations.
Air Quality	Potential construction air quality impacts from diesel exhaust, idling, and fugitive dust	Mitigation of would be addressed through best management practices including: • Reducing exposed erodible earth area to the extent possible through appropriate construction phasing. Stabilization of exposed earth with grass, pavement, or other cover as early as possible. • Application of stabilizing agent such as calcium chloride or water to the work areas and haul roads. • Covering, shielding, or stabilizing stockpiled material. • Use of covered haul trucks. • Limiting dust-producing construction activities during high wind conditions. • Rinsing construction equipment with water at a designated wash area near the entrance/exit to the construction site to minimize drag-out of sediment by construction equipment onto the adjacent roads. • Street sweeping of roads within the construction area.
Noise	Potential for continuous and/or intermittent (impulse) noise during construction.	Noise abatement measures during construction to include use of appropriate mufflers and restrictions on hours of operation. Adherence to University Contractor Environmental Health and Safety Manual and OSHA standards.

Resource Category	Impacts	Proposed Mitigation
Stormwater and Water Quality	Potential for soil erosion during construction.	Preparation of a Stormwater Pollution Control Plan and deployment of Best Management Practices to avoid soil erosion during construction.
Natural Communities, Flora and Fauna	Potential to impact natural habitat during breeding, fledging and other sensitive periods for wildlife. A benefit would be the removal of invasive species at the Proposed Action site.	Observance of time of year restrictions to outside sensitive seasons for birds and bats.
Hazardous Materials and Solid Waste	Generation of solid waste and hazardous during construction.	If contaminated soils encountered during construction, a soil management plan would be developed. Development of a site-specific Hazardous Materials Management Plan and Health and Safety Plan in accordance with OSHA guidelines. Construction waste containing solvents to be disposed of by a licensed waste hauler. Proper disposal of solid waste.
Socioeconomics	There would be a short-term economic benefit during the construction period due to creation of jobs and potential purchase of goods and services locally and regionally.	No Mitigation is required

5 Costs and Benefits

The primary costs of the Proposed Action arise from the monetary outlay and energy consumption required for constructing and operating the new ice hockey arena and associated surface parking areas. Project costs change as the design advances to completion. An estimate of operational costs cannot accurately be provided at this time, but is anticipated to be comparable to operational costs associated with the Freitas Ice Forum, minus the potential energy costs savings that would be inherent in the sustainable design of the new ice hockey arena.

Costs associated with environmental impacts are minimal as the Proposed Action is very compatible with its surroundings. It would be located on a site that is immediately adjacent to the older (c. 1998) Freitas Ice Forum which is already partially developed by a surface parking lot. The Proposed Action would also be located within the West Campus District that is dedicated to University athletic pursuits, so the facility is compatible with surrounding land uses. The only notable environmental impact from the Proposed Action would be the potential filling/loss of up to approximately 4,900 square feet of inland wetland resources.

The new arena would be an updated and/or improved use rather than a new use as the University's NCAA Division I hockey programs would transition from the existing Freitas Ice Forum to the new ice hockey arena once it is built and operational. The new arena would enable more energy efficient operations within a state-of-the-art facility. Because the existing Freitas Ice Forum is not being replaced; and would remain operational primarily for recreational hockey programs and other uses, the costs and energy consumption associated with operating and maintaining that facility would still be realized by the University. Thus, the University would incur costs associated with operating and maintaining two on-campus ice hockey facilities.

Although the monetary outlay for the Proposed Action is sizeable, without the project, UConn would not be able to satisfy their commitment to provide required on-campus hockey arena facilities per the standards of the Hockey East Association, the premier NCAA Division 1 hockey conference. By not meeting this commitment, the University would be in jeopardy of losing their Hockey East membership which would affect the future of the University's hockey programs. Constructing a new arena facility to Hockey East standards and requirements would help solidify UConn as a top-tier NCAA Division 1 Hockey school and would enable the University to attract and retain top hockey talent. This would allow the program to grow and prosper both economically and in national recognition.

Considering the immediate need and potential long-term benefits of the Proposed Action weighed against the project's construction costs and relatively minor adverse environmental impact, the Proposed Action appears to be an advantageous activity that justifies expenditures.

6 Potential Certificates, Permits, and Approvals

Certificates, permits, and approvals that are anticipated to be required for the construction of the Proposed Action are listed in Table 6.1-1. Upon conclusion of the CEPA process and depending on final design, additional certificates, permits, and approvals may be identified and required for this Ice Hockey Arena Development project. Some approvals may be needed for operation of the facility once it is constructed.

Table 6-1 - List of Potential Certifications, Permits and Approvals

Certificate, Permit or Approval	Regulatory Agency	Regulated Resource and/or Need	Comments
Clean Water Act – Self Verification under the Department of the Army General Permit #17	U.S Army Corps of Engineers	Wetlands	Since overall wetland impacts are less than 5,000 SF, Self-Verification applies.
Inland Wetlands and Watercourses Permit	CT DEEP Land and Water Resources Division	Wetlands	Inland wetland impacts from construction of the Hockey Arena Building and associated parking lots.
Administrative Decision Review	Office of the State Traffic Commission (OSTA)	Traffic and Parking	The project will require a Major Traffic Generator Certificate. Pursuant to Sections 14-311 and 14-311c of the Connecticut General Statutes (CGS), the proposed project will trigger the need for mitigation or traffic safety measures on the state highway system.
General Permit for Discharge of Stormwater and Dewatering Wastewater Associated with Construction Activities	CT DEEP Bureau of Materials Management and Compliance Assurance	Stormwater	The total site disturbance exceeds one acre, therefore registration is required.
General Permit for Miscellaneous Discharges of Sewer Compatible (MISC) Wastewater	CT DEEP Bureau of Materials Management and Compliance Assurance	Wastewater	Required for non-contact cooling water Discharges
New Source Review for Stationary Sources of Air Pollution	CTDEEP Bureau of Air Management Engineering and Enforcement Division	Air Quality	Required due to inclusion of two new boilers and emergency generators in the new arena building
Title V Operating Permit	CTDEEP Bureau of Air Management Engineering and Enforcement Division	Air Quality	New stationary sources would be added to the University's existing Title V permit

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Appendix A – Scoping Materials

Environmental Monitor Archives

May 21, 2019

No Post-Scoping Notice has been submitted for publication in this edition.

No Environmental Impact Evaluation has been submitted for publication in this edition.

No State Land Transfer has been submitted for publication in his edition

The next edition of the Environmental Monitor will be published on June 4, 2019.

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Notices in the Environmental Monitor are written and formatted by the sponsoring agencies and are published unedited. Questions about the content of any notice should be directed to the sponsoring agency.

Inquiries and requests to view or copy documents, pursuant to the Freedom of Information Act, must be submitted to the sponsoring state agency.

Special Notices

These are notices of State actions with potential environmental importance that are required to be posted by special legislation or are posted at the request of State agencies.

The Following Special Notice has been submitted for publication in this edition.

1. Notice of Availability Long Island Sound Blue Plan

The Commissioner of the Department of Energy and Environmental Protection ("DEEP") hereby gives notice that a draft of the Long Island Sound Blue Plan, together with the Long Island Sound Resource and Use Inventory and other supporting documents, are available for public review and comment.

The Blue Plan is a marine spatial planning process for Long Island Sound that was authorized by Section 25-157t of the Connecticut General Statutes (Connecticut Public Act 15-66). The intent of the Blue Plan is to plan and account for both the existing human uses of the Sound and the habitats and natural resources needed for marine life to thrive in the Sound. Doing so will help ensure that: (a) the existing human uses and the habitats and natural resources and features of the Sound are protected and (b) any new and existing uses of the Sound will be compatible with each other and with the Sound's habitats and natural resources.

The Blue Plan will not create new regulations; rather it will provide greater clarity and guidance for how decisions will be made under specified existing regulatory programs. The Blue Plan's policies will provide the basis for existing permit programs identified by statute to achieve clearer and more certain protection of the economic, cultural, and ecological values of Long Island Sound, including existing traditional human uses and ecologically significant areas. As such, the Blue Plan will serve as a guide to show what the applicable state and local permit decision-making processes will consider and be based upon. This will provide new and better insight for stakeholders and applicants up-front.

The draft Blue Plan, together with the complete Long Island Sound Resource and Use Inventory and additional supporting and background information is available at http://www.ct.gov/deep/lisblueplan and in hard copy upon request to the address below.

INFORMATION REQUESTS/PUBLIC COMMENT
The success of the Blue Plan depends on the involvement of the general public and all stakeholders to make sure the Plan reflects the knowledge, perspectives, and needs of everyone whose lives are touched by Long Island Sound. Interested parties are invited to review and comment on the draft Blue Plan and any other Blue Plan-related topics. Please submit written comments to LIS Blue Plan, Bureau of Water Protection and Land Reuse, Connecticut Department of Energy and Environmental Protection, 79 Elm Street, Hartford, Connecticut 06106-5127 or by email to DEEP.BluePlanLIS@ct.gov on or before **June 21, 2019**.

Questions may be directed to David Blatt at (860) 424-3610 or to DEEP.BluePlanLIS@ct.gov.
/s/Brian P. Thompson, Director
Land & Water Resources Division
Bureau of Water Protection & Land Reuse

The Connecticut Department of Energy and Environmental Protection is an Affirmative Action and Equal Opportunity Employer that is committed to complying with the Americans with Disabilities Act. To request an accommodation contact us at (860) 418-5910 or deep.accommodations@ct.gov

Scoping Notices

"Scoping" is for projects in the earliest stages of planning. At the scoping stage, detailed information on a project's design, alternatives, and environmental impacts does not yet exist. Sponsoring agencies are asking for comments from other agencies and from the public as to the scope of alternatives and environmental impacts that should be considered for further study. Send your comments to the contact person listed for the project by the date indicated.

The Following Scoping Notices have been submitted for review and comment.

1. Notice of Scoping for I-95 Interchange 74 Improvements at Route 161 and Replacement of Bridge No. 00250

Municipality where proposed project might be located: East Lyme

Project Description: The purpose of this project is to address vehicular safety on I-95 at Interchange 74 and address traffic operational concerns between Interchanges 74 and 75 in East Lyme. In addition, this project will address traffic operational concerns and improve safety for all roadway users (motorists, pedestrians, and bicyclists) on Route 161 in the vicinity of the exit 74 interchange ramps. It is also proposed to replace the I-95 bridge (No. 00250) over Route 161 due to its poor condition and to accommodate the widening on Route 161.

Current deficiencies include substandard geometry on the I-95 freeway, substandard geometric features on Interchange 74 access ramps, poor conditions and features of Bridge No. 00250 (I-95 over Route 161) and a lack of auxiliary turn lanes/shoulders on Route 161.

The proposed improvements on I-95 include full reconstruction and widening to accommodate the revised ramp configurations, auxiliary lanes between exits 74 & 75 in each direction and the full replacement of the bridge over Route 161. As a result of the I-95 widening, the bridge over Pattagansett River will be extended and retaining walls will be constructed. At various locations within the project limits, the proposed improvements on I-95 will accommodate a future project to add a third lane.

The proposed southbound ramps will be realigned to terminate on a new frontage road to form a signalized "T" type intersection. This new frontage road will form a signalized "T" type intersection with a three-lane approach to Route 161 consisting of one left-turn lane and two right-turn lanes. Route 161 northbound at this new intersection will have a four-lane approach consisting of two exclusive left-turn lanes and two through lanes. The southbound Route 161 approach to this intersection will consist of two through lanes and exclusive turn lanes.

The terminus of the northbound I-95 exit 74 ramp will be relocated southerly to form a new signalized intersection with Route 161 and the Burger King Driveway. Vehicles on southbound Route 161 will be accessing I-95 northbound on a new entrance "loop" ramp approximately 500 feet south of its current location. The entrance ramp to I-95 northbound for vehicles on northbound Route 161 will be realigned slightly at its present location.

To address safety and traffic operations on Route 161, improvements include full reconstruction and widening to provide turn lanes, wider shoulders, and sidewalk connectivity within the project limits.

The right-of-way impacts associated with the proposed improvements include total and partial property acquisitions, permanent easements, and temporary easements during construction. The existing non-access lines will be revised to accommodate the new proposed ramps.

Project Map: Click here to view a map of the project area.

Project Plans: Click here to view Preliminary Design Plans

Concept Design Report: A Concept Design Report was completed in 2017, and can be viewed by clicking here.

Written comments from the public are welcomed and will be accepted until the close of business on: Friday **June 7, 2019**

There will be a Public Scoping Meeting for this project at:

DATE: Thursday **May 23, 2019**

TIME: 6:30 P.M. Open Forum followed by a Formal Presentation at 7:00 P.M.

PLACE: East Lyme Middle School (Auditorium), 31 Society Road, Niantic, CT 06357

NOTES: The meeting facility is ADA accessible. Language assistance may be requested by contacting the Department's Language Assistance Call Line at (860) 594-2243 at least five business days prior to the meeting. Persons with hearing and/or speech disabilities may dial 711 for Telecommunications Relay Services (TRS). Language assistance is provided at no cost to the public and efforts will be made to respond to timely requests for assistance.

Plans will be available at the Town Hall, Department of Planning & Zoning, and on the Town's website by May 9, 2019.

Written comments should be sent to:

Name: Ms. Susan M. Libatique, P.E., Transportation Principal Engineer
Agency: Connecticut Department of Transportation, P.O. Box 317546
Address: 2800 Berlin Turnpike, Newington, CT 06131-7546

E-Mail: Susan.Libatique@ct.gov

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: Mr. Ahsan K. Saghir, Transportation Engineer
Agency: Connecticut Department of Transportation, Bureau of Engineering & Construction
Address: 2800 Berlin Turnpike, Newington, CT 06131
Phone: (860) 594-2076

E-Mail: Ahsan.Saghir@ct.gov

Inquiries and requests to view and or copy documents, pursuant to the Freedom of Information Act, must be submitted to the sponsoring State Agency:

Name: Ms. Alice M. Sexton, Principal Attorney

Agency: Connecticut Department of Transportation, Office of Legal Services

Address: 2800 Berlin Turnpike, Newington, CT 06131

Phone: (860) 594-3045

E-Mail: Alice.Sexton@ct.gov

2. Notice of Scoping for Emergency Interconnection between Norwich Public Utilities, Ledyard WPCA and the Town of Preston

Municipalities where proposed project might be located: Ledyard and Preston

Address of Possible Project Location: Poquetanuck Cove Bridge Crossing, Ledyard and Preston

Project Description: The City of Groton (City) is receiving financial assistance from the Drinking Water State Revolving Fund (DWSRF) program for the Groton Utilities (GU) Water Treatment Plant (WTP) Upgrade project. The proposed emergency interconnection between Norwich Public Utilities (NPU) and Ledyard WPCA is associated with WTP Upgrade project as it will enable GU to wheel water through the Ledyard WPCA distribution main to provide water supply to the NPU distribution system serving certain service areas of the Town of Preston, if needed in an emergency. This emergency interconnection project is essential to provide NPU with the ability to provide continuous water service to their customers in the Town of Preston in the event of an emergency. Although this emergency interconnection project is not receiving funding from the DWSRF program, it is being scoped due to its association with state grant funding that the City received for the GU WTP project.

The project comprises installation of new 16-inch diameter ductile iron water pipes totaling approximately 1224 lineal feet and associated appurtenances along Poquetanuck Cove Bridge between Ledyard and Preston in CT. The water mains have been minimally sized to meet the demands for domestic water use for the intended service areas and fire protection per the Town's Fire Marshal requirement.

Project Map: Click here to view a map of the project area.

Written comments from the public are welcomed and will be accepted until the close of business on: June 21, 2019.

Any person can ask the sponsoring agency to hold a Public Scoping Meeting by sending such a request to the address below. If a meeting is requested by 25 or more individuals, or by an association that represents 25 or more members, the sponsoring agency shall schedule a Public Scoping Meeting. Such requests must be made by May 31, 2019.

Written comments and/or requests for a Public Scoping Meeting should be sent to

Name:	Mr. Eric McPhee
Agency:	Department of Public Health Drinking Water Section
Address:	410 Capitol Avenue, MS #12DWS PO Box 340308 Hartford, CT 06134-0308
Fax:	860-509-7359
E-Mail:	**DPH.SourceProtection@ct.gov**

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name:	Patricia Bisacky
Agency:	Department of Public Health Drinking Water Section
Address:	410 Capitol Avenue, MS #12DWS PO Box 340308 Hartford, CT 06134-0308
Phone:	860-509-7333
Fax:	860-509-7359
E-Mail:	**Patricia.Bisacky@ct.gov**

Inquiries and requests to view and or copy documents, pursuant to the Freedom of Information Act, must be submitted to the sponsoring State Agency:

Name:	Mr. Av Harris
Agency:	Department of Public Health
Address:	410 Capitol Avenue, MS #13CMN Hartford, CT 06134-0308
E-Mail:	**DPH.communications@ct.gov**
Phone:	860-509-7286

3. Notice of Scoping for University of Connecticut Ice Hockey Arena Development

Municipality where proposed project might be located: Mansfield

Address of Possible Project Location: 16-acres south of Jim Calhoun Way and southwest of the Mark Edward Freitas Ice Forum located at 509 Jim Calhoun Way on the University of Connecticut Storrs Campus.

Project Description: The University of Connecticut (UConn) is planning development of a new ice hockey arena and surface parking on approximately 16 acres along Jim Calhoun Way on its main campus in Storrs. The site is about half developed today and consists primarily of a parking lot (Lot I), an isolated wetland, wet weather stormwater conveyance, and rolling, wooded uplands. Immediately east of and adjacent to Lot I is the existing Mark Edward Freitas Ice Forum, a 1,650-seat ice hockey arena built in 1998 that UConn currently owns and operates.

In 2014, UConn's Division 1 Men's and Women's ice hockey teams joined the Hockey East conference. Because the current Freitas Ice Forum is too small and does not meet Hockey East standards and requirements to host UConn's men's hockey games, UConn has had to play almost all its home men's hockey games in the XL Center in Hartford for the last four years. The Hockey East Association requires teams in the conference to have facilities with at least 4,000 seats along with other amenities. UConn has obtained permission from Hockey East to build a smaller venue with 2,500 seats so long as the arena's design allows for potential expansion to 3,500 seats in the future.

The new arena will host some men's hockey games, all women's hockey games and will also support UConn's robust recreational ice hockey program. Additionally, the new arena could by utilized by the University or to support community needs. At a minimum, the new arena will have the following features:

- Up to 3,500 seats, with at least 25% of the seats being seat-back chairs; the balance can be bleachers.
- Arena facilities and ice that will meet all NCAA Division I Ice Hockey requirements, all Hockey East Conference standards, and all University guidelines and requirements.
- A permanent locker room for both the UConn men's and women's ice hockey team, a Division 1 ice hockey team visitor's locker room, two (2) other mid-sized locker rooms, and a small official's locker room.
- Five (5) offices dedicated for UConn's use.
- A scoreboard with video replay capability.
- Parking for up to 700 vehicles.

To satisfy parking requirements, the existing surface lot will approximately double in size. The new capacity of Lot I, however, will not accommodate sellout events at the arena. During those events, UConn will rely on its other parking facilities and shuttle operations.

UConn is currently negotiating an agreement with a private developer who will design, construct, own and operate the new arena on UConn's property. As currently contemplated, UConn will be in charge of maintaining the arena, while the developer would operate and manage it. The targeted opening of the new arena is during the fall semester of 2021 and it will adhere to University design guidelines and performance standards for new construction.

Project Maps: Click here to view a map of the project area. Click here to view a preliminary concept plan of the proposed project.

Written comments from the public are welcomed and will be accepted until the close of business on: 5pm, Friday, **June 21, 2019**

There will be a Public Scoping Meeting for this project at:

DATE: Tuesday, **June 11, 2019**

TIME: 6:30 pm (Doors will be open at 6:00 pm)

PLACE: Konover Auditorium in the Thomas J. Dodd Research Center, 405 Babbidge Road, Storrs, CT

NOTES: Public parking in the South Garage, 2366 Jim Calhoun Way, Storrs, CT, adjacent to the UConn Bookstore on Hillside Road.

To watch the scoping meeting live online, please visit http://www.kaltura.com/tiny/uyrei.

Written comments and/or requests for a Public Scoping Meeting should be sent to:

Name: John Robitaille, Sr. Project Manager
Agency: UConn | University Planning, Design and Construction
Address: 31 LeDoyt Road, Unit 3038, Storrs, CT 06269-3038
Fax: (860) 486-3117
E-Mail: john.robitaille@uconn.edu

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: John Robitaille, Sr. Project Manager
Agency: UConn | University Planning, Design and Construction
Address: 31 LeDoyt Road, Unit 3038, Storrs, CT 06269-3038
Phone: (860) 486-5930
Fax: (860) 486-3117
E-Mail: john.robitaille@uconn.edu

Inquiries and requests to view and or copy documents, pursuant to the Freedom of Information Act, must be submitted to the sponsoring State Agency:

Name: Public Records Administration
Agency: c/o University Communications
Address: 34 North Eagleville Road, U-3144
E-Mail: https://publicrecords.uconn.edu/make-a-request/
Phone: (860) 486-5337

The agency expects to release an Environmental Impact Evaluation for this project, for public review and comment, date TBD.

Post-Scoping Notices: Environmental Impact Evaluation Not Required

This category is required by the October 2010 revision of the Generic Environmental Classification Document for State Agencies. A notice is published here if the sponsoring agency, after publication of a scoping notice and consideration of comments received, has determined that an Environmental Impact Evaluation (EIE) does not need to be prepared for the proposed project.

No Post-Scoping Notice has been submitted for publication in this edition.

EIE Notices

After Scoping, an agency that wishes to undertake an action that could significantly affect the environment must produce, for public review and comment, a detailed written evaluation of the expected environmental impacts. This is called an Environmental Impact Evaluation (EIE).

No EIE Notice has been submitted for publication in this edition.

State Land Transfer Notices

Connecticut General Statutes Section 4b-47 requires public notice of most proposed sales and transfers of state-owned lands. The public has an opportunity to comment on any such proposed transfer. Each notice includes an address where comments should be sent. Read more about the process.

No State Land Transfer Notice has been submitted for notice in this edition.

The Adobe Reader is necessary to view and print Adobe Acrobat documents, including some of the maps and illustrations that are linked to this publication. If you have an outdated version of Adobe Reader, it might cause pictures to display incompletely. To download up-to-date versions of the free software, click on the Get Acrobat button, below. This link will also provide information and instructions for downloading and installing the reader.

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TOWN OF MANSFIELD

Paul M. Shapiro, Mayor

AUDREY P. BECK BUILDING
FOUR SOUTH EAGLEVILLE ROAD
MANSFIELD, CT 06268-2599
(860) 429-3330
Fax: (860) 429-6863

June 25, 2019

Mr. John Robitaille
Senior Project Manager
University Planning, Design and Construction
31 LeDoyt Road, U-3038
Storrs, Connecticut 06269-3028

Via Email: john.robitaille@uconn.edu

Subject: Hockey Arena Scoping

Dear Mr. Robitaille:

The Mansfield Town Council and Planning and Zoning Commission (PZC) offer the following comments and recommendations with regard to the proposed Hockey Arena for consideration during the preparation of the Environmental Impact Evaluation (EIE) for the project.

- *Wetlands.* Based on the information provided in the scoping materials, it appears that the preferred site will involve significant direct wetland impacts. We strongly encourage the University to seek ways to reduce these direct impacts as well as provide substantial mitigation of any resulting impacts. To assist in these efforts, we recommend that the University consult with the Town's Environmental Planner and Conservation Commission during the preparation of the Environmental Impact Evaluation with regard to potential mitigation measures.

- *Stormwater.* Given the preferred site's location within the Eagleville Brook watershed, the significant expansion of surface parking and the impacts that expansion will have on overall impervious cover and water quality within the brook are of significant concern. We strongly encourage considering ways to reduce the impervious footprint of the development, including but not limited to the use of Low-Impact Development and Green Infrastructure practices to improve stormwater quality and reduce impacts to the Eagleville Brook watershed.

- *Off-Campus Traffic and Parking Impacts.* We respectfully request that the intersection of Stafford Road and South Eagleville Road (Routes 32 and 275) be added to the list of primary intersections to be evaluated as part of the traffic analysis. As we have previously identified in comments submitted with regard to the athletic district improvements, the intersection of Separatist Road and South Eagleville Road (Route 275) is of particular concern and we appreciate its inclusion in the proposed traffic analysis.

Furthermore, we understand that the University plans on updating special event and game day transportation and parking plans with the introduction of this new facility. Consistent with the recommendations of the Eastern Gateways Study, we request that the University work with the Town to develop comprehensive transportation and parking management associated with special events and game days. This is particularly important given the proximity of the preferred site to residential neighborhoods and the fact that off-campus local roads provide the most convenient access to I-Lot.

If you have any questions regarding these comments, please contact Linda Painter, Director of Planning and Development.

Sincerely,

Paul M. Shapiro
Mayor

Vera Stearns-Ward
Secretary, Mansfield PZC

Cc: Town Council
Planning and Zoning Commission
Conservation Commission

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

Renée D. Coleman-Mitchell, MPH
Commissioner

Ned Lamont
Governor

Susan Bysiewicz
Lt. Governor

Drinking Water Section

June 19, 2019

Mr. John Robitaille
Sr. Project Manager
University of Connecticut
University Planning, Design and Construction
31 LeDoyt Road, Unit 3038
Storrs, CT 06269-3038

RE: Notice of Scoping for University of Connecticut Ice Hockey Arena

Dear Mr. Robitaille:

The Drinking Water Section of the Department of Public Health has reviewed the above-mentioned project for potential impacts to any sources of public drinking water supply. This project does not appear to be in a public water supply source water area; therefore, the Drinking Water Section has no comments at this time.

Sincerely,

Patricia Bisacky

Patricia Bisacky
Environmental Analyst 3
Drinking Water Section

Phone: (860) 509-7333• Fax: (860) 509-7359
Telecommunications Relay Service 7-1-1
410 Capitol Avenue, MS# 12DWS, P.O. Box 340308
Hartford, Connecticut 06134-0308
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Environmental Monitor Archives

October 22, 2019

NOTE: New Regulations for the Connecticut Environmental Policy Act (CEPA) were approved in September 2019. The Regulations provide for more categories of notice about the status of proposed State actions, than in the past. The new categories are included in this edition.

Scoping Notice

1) Notice of Scoping for the Berlin TOD Boulevard Project, Berlin.

Scoping Notice - Post-Scoping Notice (Need More Time)

No Notice for additional time has been submitted for publication in this edition.

Post-Scoping Notices

1) Post-Scoping Notice for I-95 Interchange 74 Improvements at Route 161, East Lyme.

2) **NEW!** Post-Scoping Notice for University of Connecticut Ice Hockey Arena Development, Mansfield.

Environmental Impact Evaluation

No EIE Notice has been submitted for publication in this edition.

Agency Record of Decision

No Record of Decision has been submitted for publication in this edition.

OPM Determination of Adequacy

No Determination of Adequacy has been submitted for publication in this edition.

State Land Transfer

1) Former University of Connecticut Torrington Campus .

The next edition of the Environmental Monitor will be published on November 5, 2019.

Subscribe to e-alerts to receive an e-mail when the Environmental Monitor is published.

Notices in the Environmental Monitor are written and formatted by the sponsoring agencies and are published unedited. Questions about the content of any notice should be directed to the sponsoring agency.

Inquiries and requests to view or copy documents, pursuant to the Freedom of Information Act, must be submitted to the sponsoring state agency.

Scoping Notice

"Scoping" is for projects in the earliest stages of planning. At the scoping stage, detailed information on a project's design, alternatives, and environmental impacts does not yet exist. Sponsoring agencies are asking for comments from other agencies and from the public as to the scope of alternatives and environmental impacts that should be considered for further study. Send your comments to the contact person listed for the project by the date indicated. Read More

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The following Scoping Notice has been submitted for publication in this edition.

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1) Notice of Scoping for the Berlin TOD Boulevard Project

Municipality where proposed project might be located: Berlin

Address of Possible Project Location: 889 and 903 Farmington Avenue, Berlin

Project Description: The Department of Economic and Community Development (CT DECD) will be administering a grant to the Town of Berlin for the development of a boulevard from Farmington Avenue to the Berlin Train Station. The boulevard will be constructed on parts of the Town owned sites at 889 and 903 Farmington Avenue and will connect to the Berlin Train Station site through property owned by the State of Connecticut. The boulevard was originally funded by a Small Town Economic Assistance Program (STEAP) Grant in 2014 and was intended to provide a second means of access and egress Train Station and to the Berlin Steel site to the north of the Train Station. The Connecticut Department of Transportation significantly expanded parking at the Train Station to accommodate the increased demand expected to be generated by the CTrail Hartford commuter rail line. The Berlin Station is now accessed only via the private Depot Road that is shared with Berlin Steel and the boulevard will provide a second means to access both the Train Station and Berlin Steel properties.

The Town recently entered into an agreement with Newport Realty Group (Newport) to sell four properties at 861, 889, 903 and 913 Farmington Avenue (less the portion of 889 and 903 Farmington Avenue reserved for the boulevard). Newport will be developing these parcels into a transit-oriented development (TOD) that includes development of 19,000 square feet of commercial space and 76 market rate apartment units. Newport also plans to retain and renovate the existing building at 861 Farmington Avenue. The proposed boulevard will now also serve the privately-funded TOD project in addition to providing access to the Train Station and the Berlin Steel site. The scope and the cost of the boulevard project has expanded since 2014 when the STEAP grant was awarded, to accommodate the proposed private TOD-development. It may be noted that the Berlin Steel site that can be accessed via the boulevard is also being targeted by the Town for a potential future TOD project.

The boulevard right-of-way will be 68 feet in width. The pavement width will be designed to accommodate two travel lanes plus diagonal parking. The boulevard will also include sidewalks and streetscape amenities. Underground utilities will be constructed including sanitary sewer, water, storm drainage, natural gas and electric. The boulevard construction may be phased to accommodate the phased construction of the TOD development. The Town will be in charge of the maintenance of the boulevard except for the sidewalks. Newport will take up the responsibility of sidewalk maintenance once the boulevard is built-out as part of the Purchase and Sales agreement with the Town of Berlin.

Apart from the STEAP grant, the boulevard project could be funded from other state and local programs/funding sources.

Project Maps: Click here to view a map of the project area. Click here to view a site plan of the proposed project.

Written comments from the public are welcomed and will be accepted until the close of business on: Thursday, November 7, 2019

Any person can ask the sponsoring agency to hold a Public Scoping Meeting by sending such a request to the address below. If a meeting is requested by 25 or more individuals, or by an association that represents 25 or more members, the sponsoring agency shall schedule a Public Scoping Meeting. Such requests must be made by Friday, October 18, 2019.

Written comments and/or requests for a Public Scoping Meeting should be sent to:

Name:	Mark Burno, Project Manager (Technical)
Agency:	CT Dept. of Economic and Community Development
Address:	450 Columbus Boulevard, Suite 5 Hartford CT 06103
E-Mail:	mark.burno@ct.gov

If you have questions about the scoping for this project, contact:

Name:	Binu Chandy, Deputy Director
Agency:	CT Dept. of Economic and Community Development
Address:	450 Columbus Boulevard, Suite 5 Hartford CT 06103
Phone:	860.500.2454
E-Mail:	binu.chandy@ct.gov

What Happens Next: The agency will make a determination whether to proceed with preparation of an Environmental Impact Evaluation or a Post-Scoping Notice within six months. The decision will appear in the *Environmental Monitor*.

Scoping Notice - Post-Scoping Notice (Need More Time)

If an agency is unable to publish a Post-Scoping Notice within six months after the comment period for scoping, the agency will publish an update with an action status and an estimate as to when a Post-Scoping Notice will be published. Such an update will be published by the agency at six-month intervals until the Post-Scoping Notice is published. Read More

No notice for additional time has been submitted for publication in this edition.

Post-Scoping Notices

A Post-Scoping Notice is the determination by a sponsoring agency, after publication of a Scoping Notice and consideration of comments received, whether an Environmental Impact Evaluation (EIE) needs to be prepared for a proposed State action. Read More

The following Post-Scoping Notices have been submitted for publication in this edition.

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1) Post-Scoping Notice for I-95 Interchange 74 Improvements at Route 161

Project Title: I-95 Interchange 74 Improvements at Route 161 and Replacement of Bridge No. 00250

Municipality where project will be located: East Lyme

CEPA Determination: On May 7, 2019 the Connecticut Department of Transportation (CTDOT) published a Notice of Scoping to solicit public comments for this project in the *Environmental Monitor*. In addition to comments received from the general public, CTDOT received comments from the Connecticut Department of Energy and Environmental Protection, and the Connecticut Department of Public Health. The CTDOT has taken all comments into consideration and has concluded that **the project does not require the preparation of Environmental Impact Evaluation under CEPA**.

The agency's conclusion is documented in a Memo of Findings and Determination and Environmental Assessment Checklist.

If you have questions about the project, you can contact the agency at:

Name: Kevin Fleming, Transportation Planner II

Agency: Connecticut Department of Transportation, Office of Environmental Planning

Address: 2800 Berlin Turnpike, Newington, CT 06131

Phone: (860) 594-2924

E-Mail: Kevin.Fleming@ct.gov

What happens next: The Connecticut Department of Transportation expects the project to go forward. This is expected to be the final notice of the project to be published in the *Environmental Monitor*.

2. Post-Scoping Notice for University of Connecticut Ice Hockey Arena Development

Municipality where it would be located: Mansfield, CT

CEPA Determination: Beginning on May 21, 2019, the University of Connecticut published the first of three Notices of Scoping (https://www.ct.gov/ceq/cwp/view.asp?a=987&Q=608858) to solicit public comments for this proposed action in the *Environmental Monitor*.

A public scoping meeting was held on June 11, 2019.

Comments were received during the public comment period and at the Public Scoping Meeting, with responses as follows:

- A letter was received from Patricia Bisacky of the CT Department of Public Health Drinking Water Sections stating that "the project does not appear to be in a public water supply source water area; therefore, the Drinking Water Section has no comments at this time". RESPONSE: Noted.
- A letter was received from Town of Mansfield Mayor Paul M. Shapiro with the following comments:
  Wetlands – It appears that the preferred site will involve significant direct wetland impacts. The town strongly encourages the University to seek ways to reduce these direct impacts as well as provide substantial mitigation of any resulting impacts. Suggestion is for the University to consult with the town's Environmental Planner and Conservation Commission during the preparation of the EIE with regard to potential mitigation measures. RESPONSE: The University will seek ways to reduce direct wetland impacts and mitigate as necessary.
  Stormwater – The Town is concerned with the location of the project within the Eagleville Brook watershed and the expansion of surface parking (increased impervious surfaces) and impacts to the watershed and water quality of the brook because of this expanded parking. Town encourages ways to reduce the impervious footprint of the development through Low Impact Development and Green Infrastructure practices. RESPONSE: The University shares the Town's concern about the watershed and the design team will explore ways to mitigate impacts accordingly.
  Off Campus Parking and Traffic Impacts – The Town would like to see the addition of the Stafford Road/South Eagleville Road intersection be added to the list of primary intersections to be evaluated in the Traffic Study. The Town emphasized as they did in their comments on the Athletic District (Stadia) Project that the intersection of Separatist Road/South Eagleville Road is of particular concern and that they want it assessed in the Traffic Study. The Town also requests that the University coordinate with them on the event management parking and transportation plans due to the proximity of residences to the facility and because off-campus roads offer the most convenient access to Lot I. RESPONSE: The University will conduct additional traffic counts and include the additional intersection in its traffic impact study. The University will also continue to coordinate with the Town and State Police on its event management plan as it relates to any off-campus impacts.

After consideration of the comments received, **the University of Connecticut has determined to proceed with the preparation of an Environmental Impact Evaluation (EIE).**
Agency contact :

Name:	John Robitaille, Sr Project Manager
Agency:	UConn | University Planning, Design & Construction
Address:	31 Ledoyt Road, Unit 3038, Storrs, CT 06269-3038
Phone:	(860) 486-5930
Fax:	(860) 486-3117
E-Mail:	john.robitaille@uconn.edu

Inquiries and requests to view and or copy documents, pursuant to the Freedom of Information Act, must be submitted to the sponsoring State Agency.

What Happens Next: The University of Connecticut is preparing an EIE and it will be published in a future edition of the *Environmental Monitor*.

EIE Notice

After Scoping, an agency that wishes to undertake an action that could significantly affect the environment must produce, for public review and comment, a detailed written evaluation of the expected environmental impacts. This is called an Environmental Impact Evaluation (EIE). Read More

No EIE Notice has been submitted for publication in this edition.

Agency Record of Decision

After an Environmental Impact Evaluation (EIE) is developed, an agency will prepare a concise public record of decision, which takes into consideration the agency's findings in the EIE, and any comments received on that evaluation. Read More

No Record of Decision has been submitted for publication in this edition.

OPM's Determination of Adequacy

After an EIE is developed. the Office of Policy and Management (OPM) will determine if the Environmental Impact Evaluation (EIE) is adequate. If not, OPM will specify the areas of inadequacy with reference to CEPA or the CEPA regulations and specify the corrective action required. Read More

No Determination of Adequacy has been submitted for publication in this edition.

State Land Transfer Notice

Connecticut General Statutes Section 4b-47 requires public notice of most proposed sales and transfers of state-owned lands. The public has an opportunity to comment on any such proposed transfer. Each notice includes an address where comments should be sent. Read more about the process.

The following State Land Transfer Notice has been submitted for publication in this edition.

1) Notice of Proposed Land Transfer, Torrington

Complete Address of Property: 843-855 and 852 University Drive, Torrington, CT

Commonly used name of property or other identifying information: Former University of Connecticut Torrington Campus (the "Campus Property")

Number of acres to be transferred: 95.25 acres total. 843-855 and 852 University Drive consist of 91 acres and 4.25 acres, respectively.

Click to view map of property location

Description of Property

Below is some general information about the property. It should not be considered a complete description of the property and should not be relied upon for making decisions. If only a portion of a property is proposed for transfer, the description pertains only to the portion being transferred.

Brief Description of Historical and Current Uses: Before 1965, the Campus Property was undeveloped. It was acquired by the University of Connecticut ("UConn") in the 1960s for the purpose of establishing a branch campus in Torrington. The Campus Property now consists of approximately 95 acres of land. There are two buildings on the Campus Property: the campus's former classroom building (the

"Classroom Building") and an agricultural center that hosts UConn's Extension program (the "Extension Center").

The Classroom Building was built and opened for use in 1965 and was used by UConn to host academic programs and other campus activities until the campus closed in the Spring 2016. The Extension Center was built and opened for use in 2001 and continues to be used by UConn as an agricultural center in furtherance of UConn's support of agricultural activities in Litchfield County. UConn will continue to use the Extension Center for such purposes following the transfer of the Campus Property.

The Classroom Building and the Extension Center are located on 91 acres of land at the 843-855 University Drive location. A parking lot and a cell tower are also located at this location. The remainder of this location consists of approximately 85 acres of unimproved wooded land (the "Unimproved Land").

The 852 University Drive location is across the street from the main portion of the former campus. This location consists of 4.25 acres of land that includes at least a portion of the underground septic system that services the Classroom Building and the Extension Center.

The property to be transferred contains the following:
Structures: ☑ **Buildings in use** ☑ **Buildings not in use** ☐ **No Structures**
Other Features: ☑ **Wooded land** ☑ **Nonagricultural fields** ☐ **Active agriculture**
☑ **Paved areas** ☑ **Ponds, streams, other water, wetlands**
Water Supply: ☑ **Public water supply** ☑ **On-site well** ☐ **Unknown**
Waste Disposal: ☐ **Served by sewers** ☑ **On-site septic system** ☐ **Unknown**

Click to view aerial view of property
Click to view photographs of property

The property is in the following municipal zone(s):
☑**Residential** ☐**Industrial** ☐ **Commercial** ☐ **Institutional**
☑ **Other:** Special Exceptions granted for Educational, Cultural, Religious, Child Care, Philanthropic, Social & Fraternal Uses (Use Category 2.00) and Other Outdoor Activities (Use Category 6.99)
☐**Not zoned** ☐ **Not known**

Special features of the property, if known: The Campus Property includes the Classroom Building and the Extension Center, as well as a parking lot and a cell tower. The Classroom Building and the Extension Center are approximately 29,446 and 7,776 square feet, respectively.

Value of property, if known:
☐If checked, value is not known.

Links to other available information: Additional information about the Campus Property can be found at the University's website. The link is: https://evpacfo.uconn.edu/wp-content/uploads/sites/2318/2018/05/Torrington_Campus_-RFEI.pdf .

Type of Sale or Transfer:
☑**Sale or transfer of property in fee**
☐**Sale or transfer of partial interest in the property (such as an easement). Description of interest:**

Proposed recipient, if known: UConn has entered into two Purchase and Sale Agreements with Five Points relating to the sale of the Campus Property. Five Points has the right to assign its right to purchase the Unimproved Land to the City of Torrington. UConn understands that the City of Torrington intends to acquire the Unimproved Land from Five Points and, upon such acquisition by the City, grant Five Points the right to use the Unimproved Land. Neither UConn nor the State of Connecticut will be a party to those transactions.

Proposed use by property recipient, if known: UConn's sale of the Campus Property to Five Points is conditioned on Five Points granting UConn the right to continue to use the Extension Center and certain other portions of the Campus Property for the continuation of UConn programs, such as the continued operation of the Extension Center as an agricultural center in furtherance of UConn's support of agricultural activities in Litchfield County and the operation of a wind tower for certain research activities.

The remainder of the Campus Property will be used by Five Points to establish an art and education campus, which is expected to include some or all of the following contemplated uses:

- Art gallery;
- Art classes for children, teenagers, adults, families and senior citizens;
- Artist workshop spaces (such as printmaking, darkroom, painting and drawing space);
- Launchpad Expansion program, including skills and employment training for young art professionals;
- Sensory Garden located in courtyard of Building 1;
- Hosting lectures;
- Educational, cultural, philanthropic and social events, such as job fairs, art fairs, ceremonies and receptions, which may be located indoors or outdoors;
- Accessory store for the provision of supplies, books, and other related goods to employees, students, and visitors of both UConn and Five Points;
- Accessory office use and café use for employees, students, and visitors of both UConn and Five Points.

In addition to the above, Five Points also desires, in the future, to render the remaining 85± undeveloped acres of 855 University Drive accessible to its employees, students, and visitors, in a manner that both respects and enhances the natural beauty of that acreage. Currently the Unimproved Land has no recreational features and is not widely accessible to the public. Contemplated future uses include an art park, sensory sculpture gardens, environmental installations, landscape designs, and walking trails. It is contemplated that these future uses will be available to the public. These enhancements and increased public access is planned to occur regardless of whether the Unimproved Land is acquired directly by Five Points or is acquired by the City of Torrington.

The agency is proposing to transfer the property with the following restrictions on future uses: UConn is reserving the right to continue to occupy and use the Extension Center building from Five Points and certain portions of the Campus Property for ongoing research activities pursuant to a lease agreement that will be entered into between UConn and Five Points at or prior the sale's closing. The reservation of rights relating to UConn's continued use of the Extension Center is also subject to certain orders entered into on

September 16, 2019 by the Connecticut Superior Court (Shaban, J.). Except for these reserved uses of the Extension Center and Campus Property by UConn, UConn is not proposing any other restrictions on future uses of the Campus Property.

☐ **If checked, the state is not currently proposing restrictions on future uses.**

Reason the State of Connecticut is proposing to transfer this property: UConn has closed its Torrington branch campus operations and ceases to have any use for the Campus Property, except with respect to the Extension Center. By transferring the Campus Property, UConn will reduce the expenses it incurs to continue to maintain and operate the Campus Property, including the Classroom Building. The transfer of the Campus Property also provides an opportunity for the Classroom Building to be reutilized in a manner that benefits the City of Torrington and the surrounding community.

Comments from the public are welcome and will be accepted until the close of business on November 7, 2019.

Comments may include (but are not limited to) information you might have about significant natural resources or recreation resources on the property, as well as your recommendations for means to preserve such resources.

Written comments* should be sent to:

Name: Paul Hinsch
Agency: Office of Policy and Management
Address: 450 Capitol Avenue MS#52 ASP
Hartford, CT 06106-1379
E-Mail: Paul.hinsch@ct.gov

***E-Mail submissions are preferred. (Comments from state agencies must be on agency letterhead and signed by agency head. Scanned copies are preferred.)**

What Happens Next?

To find out if this proposed transfer is the subject of further notices, check future editions of the Environmental Monitor. Sign up for e-alerts to receive a reminder e-mail on Environmental Monitor publication dates.

The Adobe Reader is necessary to view and print Adobe Acrobat documents, including some of the maps and illustrations that are linked to this publication. If you have an outdated version of Adobe Reader, it might cause pictures to display incompletely. To download up-to-date versions of the free software, click on the Get Acrobat button, below. This link will also provide information and instructions for downloading and installing the reader.

Get Acrobat Reader Download the free Acrobat Reader! Access. Adobe is a tool that allows blind and visually impaired users to read any documents in Adobe PDF format. For more information, read the product overview at Adobe.com.

Appendix B – Wetland Delineation Report

ALL-POINTS TECHNOLOGY CORPORATION

WETLAND INSPECTION

March 22, 2017 **APT Project No.: CT361240/CT361500**

Revised June 2, 2017

Revised September 19, 2017

Revised March 29, 2018

Revised June 21, 2019

Prepared For: Langan Engineering and Environmental Services
Long Wharf Maritime Center
555 Long Wharf Drive
New Haven, CT 06511

Site Address: UConn Athletic Fields
Jim Calhoun Way, Storrs, Connecticut

Date(s) of Investigation: 1/30/2017, 5/16/17, 6/12/17, 3/28/18 & 3/18/19

Field Conditions: **Weather:** variable conditions
Soil Moisture: dry to moist

Wetland/Watercourse Delineation Methodology*:

☒Connecticut Inland Wetlands and Watercourses
☐Connecticut Tidal Wetlands
☒U.S. Army Corps of Engineers

Municipal Upland Review Area:

Wetlands: 150 feet
Watercourses: 150 feet

The wetlands inspection was performed by†:

Matthew Gustafson, Registered Soil Scientist

Dean Gustafson, Professional Soil Scientist

Enclosures: Wetland Delineation Field Forms & Wetland Inspection Map

This report is provided as a brief summary of findings from APT's wetland investigation of the referenced Study Area. If applicable, APT is available to provide a more comprehensive wetland impact analysis upon receipt of site plans depicting the proposed development activities and surveyed location of identified wetland and watercourse resources.

* *Wetlands and watercourses were delineated in accordance with applicable local, state and federal statutes, regulations and guidance.*

† *All established wetlands boundary lines are subject to change until officially adopted by local, state, or federal regulatory agencies.*

Attachments

- Wetland Delineation Field Forms
- Wetland Inspection Map

Wetland Delineation Field Form

Wetland I.D.:	Wetland 1	
Flag #'s:	WF 1-01 to 1-40 and 1-01A to 1-01 L (connecting to north side Wetland 3)	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☐
Comments:		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☒	Wet Meadow ☐
Comments: fill embankment along north wetland boundary associated with Jim Calhoun Way		

WATERCOURSE TYPE:

Perennial ☒	Intermittent ☐	Tidal ☐
Watercourse Name: Unnamed		
Comments: tributary to Eagleville Brook		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Red Maple (Acer rubrum)	Spicebush (Lindera benzoin)
Winterberry (Ilex verticillata)	Highbush Blueberry (Vaccinium corymbosum)
Yellow Birch (Betula alleghaniensis)	Skunk Cabbage (Symplocarpus foetidus)
Cinnamon Fern (Osmunda cinnamomea)	Ironwood (Carpinus caroliniana)

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the “Study Area”); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 1 is located in the southeastern portion of the Study Area adjacent to the southern side of Jim Calhoun Way. This relatively narrow forested wetland is associated with an unnamed perennial watercourse that starts from a 24-inch reinforced corrugated pipe outfall and flows west beyond the Study Area. This culvert conveys flows from Wetlands 8 and 9, runoff from Jim Calhoun Way and Alumni Drive and drainage from athletic fields located west of Jim Calhoun Way. This wetland drains to a broader hillside seep system that connects to Wetland 3.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 2	
Flag #'s:	WF 2-01 to 2-13 (closed loop)	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☐
Comments: Wetland 2 is a small disturbed isolated wetland pocket cut off from Wetland 1 by Jim Calhoun Way.		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☐	Tidal ☐
Watercourse Name: None		
Comments: None		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Red Maple (Acer rubrum)	Spicebush (Lindera benzoin)
Winterberry (Ilex verticillata)	Sweet Pepperbush (Clethera alnifolia)
Highbush Blueberry (Vaccinium corymbosum)	Skunk Cabbage (Symplocarpus foetidus)
Cinnamon Fern (Osmunda cinnamomea)	

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the "Study Area"); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 2 is located in the southwestern portion of the Study Area along the north side of Jim Calhoun Way. This wetland appears to have been a historic extension of Wetland 1 but was isolated when Jim Calhoun Way was constructed. A culvert conveys surface flow from Wetland 2 under Jim Calhoun Way to Wetland 2.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 3	
Flag #'s:	WF 3-01 to 3-30 (extending previous delineation with 3-21 to 3-30)	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☐
Comments: None		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☒	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☒	Tidal ☐
Watercourse Name: Unnamed		
Comments: converges with Wetland 1 stream to form tributary to Eagleville Brook		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Red Maple (Acer rubrum)	Spicebush (Lindera benzoin)
Winterberry (Ilex verticillata)	Sweet Pepperbush (Clethera alnifolia)
Highbush Blueberry (Vaccinium corymbosum)	Skunk Cabbage (Symplocarpus foetidus)
Cinnamon Fern (Osmunda cinnamomea)	

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the “Study Area”); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 3 is located in the southern portion of the Study Area just west of parking lot I. This relatively narrow forested wetland drains to the west and is associated with an interior intermittent watercourse. This watercourse drains west into a broader hillside seep system that connects to Wetland 1.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 4	
Flag #'s:	WF 4-01A to 4-01M (extended previous delineation from WF 4-01) to WF 4-01 to 4-20 (extending previous delineation with WF 4-16 to 4-20)	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☒	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☐	Seasonally Saturated - perched ☐
Comments: None		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☒	Wet Meadow ☐
Comments: no bordering wetlands; upland forest canopy over dug drainage ditch		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☒	Tidal ☐
Watercourse Name: Unnamed		
Comments: 15-inch reinforced concrete pipe discharges runoff from parking lot into dug drainage ditch		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

No bordering vegetated wetlands	

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the “Study Area”); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 4 is located in the southern portion of the Study Area, immediately south of parking lot I. This dug drainage ditch conveys runoff from the parking lot to the south via an intermittent watercourse feature. This feature generally consists of very well incised banks with no bordering wetlands and generally no meandering. Bank width ranges from 3 to 5 feet in most areas and a sandy bottom.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 5	
Flag #'s:	WF 5-01 to 5-06 (closed loop)	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☒	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☐
Comments: None		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☐	Tidal ☐
Watercourse Name: None		
Comments: None		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Yellow Birch (Betula alleghaniensis)	Black Gum (Nyssa sylvatica)

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the "Study Area"); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 5 is located in the southern portion of the Study Area along the west side of parking lot I. The parking lot bounds the wetland to the north, south and east. This wetland appears to have been a historic extension of either Wetlands 3 or Wetland 6 (or possibly both) but was isolated when parking lot I was constructed.
)

Wetland Delineation Field Form

Wetland I.D.:	Wetland 6	
Flag #'s:	WF 6-01 to 6-22 (closed loop)	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☒	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☐
Comments: None		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☒	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☐	Tidal ☐
Watercourse Name: None		
Comments: None		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Red Maple (Acer rubrum)	Black Gum (Nyssa sylvatica)
Common Reed* (Phragmites australis)	Narrow-Leaf Cattail (Typha augustifolia)
Sweet Pepperbush (Clethera alnifolia)	Highbush Blueberry (Vaccinium corymbosum)
Skunk Cabbage (Symplocarpus foetidus)	Winterberry (Ilex verticillata)

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the "Study Area"); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 6 is located in the southern portion of the Study Area along the south side of Jim Calhoun Way and surrounded on the south, east and west by parking lot I. This wetland appears to have been a historic extension of Wetland 3 but was isolated when parking lot I was constructed.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 7	
Flag #'s:	WF 7-01 to 7-11 (closed loop)	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☒	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☐	Seasonally Saturated - perched ☐
Comments: None		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☐
Open Water ☐	Disturbed ☒	Wet Meadow ☒
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☐	Tidal ☐
Watercourse Name: None		
Comments: None		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Soft Rush (Juncus effuses)	Blue Flag Iris (Iris versicolor)
Autumn Olive* (Elaeagnus umbellate)	Multiflora Rose* (Rosa multiflora)
Carex (Spp.)	Dogbane?

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the “Study Area”); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 7 is a man-made stormwater biofiltration basin that treats runoff from behind football practice building and soccer practice field. A drainage ditch to the north feeds this drainage basin. This drainage ditch conveys flows from the hillside to the east. The drainage ditch is generally broad and shallow with no discernable surficial flow path. The stormwater basin is a stormwater feature constructed in uplands and is therefore likely exempt from jurisdiction by the Army Corps of Engineers under the Federal Clean Water Act regulations. The stormwater basin is dominated by wetland vegetation (hydrophytes) and contains soil characteristics indicative of a poorly drained conditions and therefore would be regulated under the Connecticut Inland Wetlands and Watercourses Act.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 8	
Flag #'s:	WF 8-01 to 8-15 AND WF 8-16 To 8-24 (Closed Loop)	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☐
Comments: Wetland 8 drains from 24-inch corrugated plastic pipe under road crossing and drains south.		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☒	Tidal ☐
Watercourse Name: Unnamed		
Comments: None		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Red Maple (Acer rubrum)	Sweet Pepperbush (Clethera alnifolia)
Spicebush (Lindera benzoin)	Winterberry (Ilex verticillata)
Multiflora Rose* (Rosa multiflora)	Skunk Cabbage (Symplocarpus foetidus)
Japanese Barberry* (Berberis thunbergii)	

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the “Study Area”); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 8 is located in the northwest corner of the Study Area. This forested hillside seep wetland drains to the south via an interior intermittent watercourse. A culvert conveys flows under a pedestrian trail to the Hilltop Apartment Complex; some ponding at this culvert was noted due to a blockage in the pipe. The intermittent stream daylights for a short section (Wetland 9) on the south side of the pedestrian trail before entering into another culvert that conveys flows under the athletic fields west of Jim Calhoun Way before ultimately discharging into Wetland 1.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 9	
Flag #'s:	WF 9-01 to 9-09 (closed loop)	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☐	Seasonally Saturated - perched ☐
Comments: None		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☒	Tidal ☐
Watercourse Name: Unnamed		
Comments: None		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Red Maple (Acer rubrum)	Japanese Barberry* (Berberis thunbergii)

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the “Study Area”); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 9 is located in the northwest corner of the Study Area just east of the Hilltop Apartment Complex. This forested hillside seep wetland was formed by an artificial excavation that has intercepted the season high groundwater table. It overflows to the east and drains into a culvert that conveys flows along with Wetland 8 under the athletic fields west of Jim Calhoun Way before ultimately discharging into Wetland 1.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 10	
Flag #'s:	10-01 to 10-17	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☒	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☐	Seasonally Saturated - perched ☐
Comments: Wetland 10 is seasonally flooded with 6 to 8 inches of water. Vernal pool within wetland interior drains out via intermittent watercourse/seep (narrow).		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☒	Tidal ☐
Watercourse Name: Unnamed		
Comments: None		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☒ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type : 'Cryptic'	
Comments: Vernal pool survey confirmed breeding of wood frog and spotted salamander within inundated areas.	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Skunk Cabbage (Symplocarpus foetidus)	Highbush Blueberry (Vaccinium corymbosum)
Red Maple (Acer rubrum)	Japanese Barberry* (Berberis thunbergii)
Sweet Pepperbush (Clethera alnifolia)	Yellow Birch (Betula alleghaniensis)
Tussock Sedge (Carex stricta)	Sphagnum moss (Sphagnum spp.)

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the “Study Area”); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 10 is a forested wetland with confirmed vernal pool habitat imbedded within the interior of the wetland system, located near the southeast corner of the Study Area. The interior vernal pool was identified using a visual survey that confirmed spotted salamander and wood frog breading. The supporting vernal pool terrestrial habitat conservation zones (100’ Vernal Pool Envelope and 100’-750’ Critical Terrestrial Habitat) encroach into the Study Area. An intermittent stream drains south from the edge of the inundated areas eventually draining into the east side of Wetland 11.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 11	
Flag #'s:	11-01 to 11-10 and approximate wetland boundary field identified	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☐
Comments: Wetland 11 is a hillside seep system draining into large emergent marsh.		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☐	Tidal ☐
Watercourse Name: None		
Comments: None		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☒ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type : 'Cryptic'	
Comments: Cryptic style habitat with areas of apparent (semi)permanent inundation (submerged aquatics identified). Spotted salamander egg masses identified within isolated pools (6 to 8 inches of water – 25+ egg masses). Unidentified tadpoles and adult northern water snakes also observed.	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Buttonbush (Cephalanthus occidentalis)	Sweet Pepperbush (Clethera alnifolia)
Sphagnum moss (Sphagnum spp.)	Highbush Blueberry (Vaccinium corymbosum)
Tussock Sedge (Carex stricta)	Red Maple (Acer rubrum)

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the “Study Area”); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 11 is located beyond the southern extents of the Study Area. This wetland is a diverse habitat with high structural components including semi-permanent pools, peripheral temporarily flooded pockets, large emergent expanses, and transitional scrub/shrub and forested edges. This wetland receives hydrology via a broad seep to the east (identified as Wetland 10). Wetland 11 generally drains south.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 12	
Flag #'s:	WF 12-01 to 12-13	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☒
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☐
Comments: Wetland 12 is a small isolated open water pond with edge seep areas. Several stormwater outfalls drain into Wetland 12. Seep areas experience seasonal saturation while the open water pond experiences permanent flooding from compacted subsoil and restricted outfall drainage.		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☒	Disturbed ☒	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☐	Tidal ☐
Watercourse Name: None		
Comments: None		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Red Maple (Acer rubrum)	Yellow Birch (Betula alleghaniensis)
American Elm (Ulmus americana)	Highbush Blueberry (Vaccinium corymbosum)
Highbush Blueberry (Vaccinium corymbosum)	Japanese Barberry* (Berberis thunbergii)
Skunk Cabbage (Symplocarpus foetidus)	Spicebush (Lindera benzoin)

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the “Study Area”); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 12 consists of a complex of a hillside seep, open water pond, and stormwater outfall (from parking lot, building roof down spouts, stormwater runoff, etc.). Wetland 12 is entirely forested with a large earthen berm to the north. This resource drains to the north via subsurface flows and outfalls via seepage on the opposite side of the earthen berm as a hillside seep system (outside of Study Area). Banks/edges to this resource are generally altered through fill/cuts and impacted by scattered refuse/debris.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 13	
Flag #'s:	WF 13-01 to 13-17	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☐	Seasonally Saturated - perched ☒
Comments: Wetland 13 is a drainage ditch with an intercepting cut slope at edge of building that drains south into Wetland 7.		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☒	Scrub-shrub ☐	Forested ☐
Open Water ☐	Disturbed ☒	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☐	Tidal ☐
Watercourse Name: None		
Comments: None		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Broad-Leaf Cattail (Typha latifolia)	Soft Rush (Juncus effuses)
Sensitive Fern (Onoclea sensibilis)	Multiflora Rose* (Rosa multiflora)
Reed Canarygrass* (Phalaris arundinacea)	Golden Rod (Solidago sp.)
Smooth Bedstraw (Galium mollugo)	

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the “Study Area”); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 13 is located in the northeastern portion of the Study Area adjacent to the east side of the UCONN Football training center building. This relatively narrow drainage swale feature intercepts seasonal high groundwater and conveys surface stormwater to the south into Wetland 7.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 14	
Flag #’s:	WF 14-01 to 14-21 (loop)	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☒	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☐	Seasonally Saturated - perched ☐
Comments: Wetland 14 is a constructed stormwater wetland that flows east to west into a drop structure in the southwest corner of the basin.		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☒	Scrub-shrub ☒	Forested ☐
Open Water ☐	Disturbed ☒	Wet Meadow ☐
Comments: Man-made stormwater wetland basin.		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☐	Tidal ☐
Watercourse Name: None		
Comments: None		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Silky Dogwood (Cornus amomum)	Purple Loosestrife* (Lythrum salicaria)
Tussock Sedge (Carex stricta)	Bebb Willow (Salix bebbiana)
Highbush Blueberry (Vaccinium corymbosum)	Common Reed* (Phragmites australis)
Narrow-Leaf Cattail (Typha augustifolia)	Soft Rush (Juncus effuses)
Black Willow (Salix nigra)	

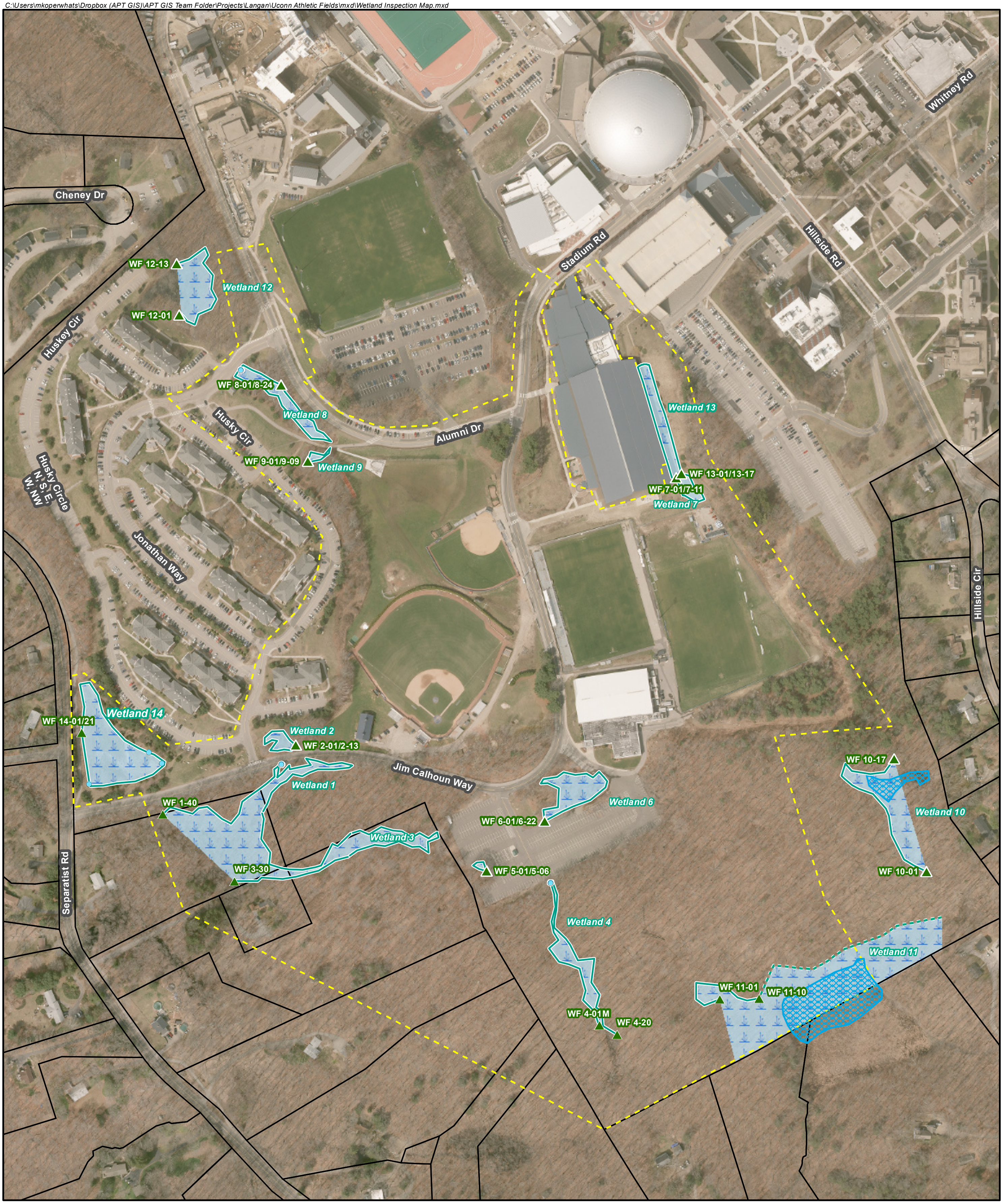
* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

A total of 14 wetlands were identified and delineated in proximity to the existing University of Connecticut Athletic Fields on Jim Calhoun Way, including areas surrounding the proposed new hockey arena (the “Study Area”); excepting Wetland 11 which only a portion of the wetland boundary was delineated (most of the field located approximate wetland limits are identified) since it is located outside of the Study Area.

Wetland 14 is located in the southwestern portion of the Study Area adjacent to the northeast intersection of Jim Calhoun Way and Separatist Road. This constructed stormwater wetland basin treats stormwater runoff from Jim Calhoun Way and the UCONN Hilltop Apartment Complex. The stormwater basin has been planted with various wetland plants, primarily herbaceous emergent vegetation, to treat the stormwater quality. The delineated edge is characterized by relatively steep graded side slopes.

C:\Users\mkoperwhats\Dropbox (APT GIS)\APT GIS Team Folder\Projects\Langan\Uconn Athletic Fields\mxd\Wetland Inspection Map.mxd



Legend

Approximate Parcel Boundary (CT DEEP GIS)
Approximate Study Area
Culvert
Wetland Flag
Approximate Wetland Boundary
Delineated Wetland Boundary
Wetland Area
Vernal Pool

N
W E
S

400 200 0 400 Feet

Wetland Inspection Map

University of Connecticut
Athletic Fields
Jim Callhoun Way
Mansfield (Storrs), CT

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

ALL-POINTS
TECHNOLOGY CORPORATION

Map Notes:
Base Map Source: 2016 CT Aerial Imagery (CTECO)
Map Scale: 1 inch = 400 feet
Map Date: March 2019

Appendix C – Air Quality Technical Memorandum

UNIVERSITY OF CONNECTICUT ICE HOCKEY ARENA DEVELOPMENT PROJECT
AIR QUALITY

Prepared for:
Fitzgerald & Halliday, Inc.

Prepared by:
KB Environmental Sciences, Inc.

December 2019

Table of Contents

List of Tables

1. Introduction

The University of Connecticut (UConn) is proposing a new Ice Hockey Arena (the "Proposed Action") to be located at the Storrs Campus by the existing Mark Edward Freitas Ice Forum. Construction of the Proposed Action would begin in the Summer of the year 2020 and be completed in the year 2021.

This document provides an air quality/climate analysis for the Proposed Action for a documented Environmental Impact Evaluation (EIE) that is being prepared to meet the requirements of the Connecticut Environmental Policy Act (CEPA).

2. Regulations and Existing Conditions

An air quality impact analysis for a proposed state of Connecticut funded project must adhere to the reporting and disclosure requirements of CEPA. Conformance with CEPA is accomplished by disclosing the emissions associated with the Proposed Action, for both construction activities and operational conditions, and both with a project (i.e., the Proposed Action) and without a project (i.e., No Action Alternative).

National Ambient Air Quality Standards (NAAQS)

There are NAAQS for six "criteria" air pollutants—carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), and sulfur dioxide (SO_2). There are standards for two sizes of PM—$PM_{2.5}$ which are particles with a diameter of 2.5 microns or less and PM_{10} which are particles with a diameter of 10 microns or less. There are also two sets of standards being (i) primary standards that provide protection for the health of the public and (ii) secondary standards that provide public welfare protection. The NAAQS and their averaging periods are provided in **Table 1**.

Table 1 – National Ambient Air Quality Standards

Pollutant		Primary/ Secondary	Averaging Period	Standards	Form
CO		Primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
Pb		Primary and Secondary	Rolling 3-month average	0.15 $\mu g/m^3$	Not to be exceeded
NO_2		Primary	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Primary and Secondary	1 year	53 ppb(1)	Annual mean
O_3		Primary and Secondary	8-hour	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
PM	$PM_{2.5}$	Primary	1 year	12 $\mu g/m^3$	Annual mean, averaged over 3 years
		Secondary	1 year	15 $\mu g/m^3$	Annual mean, averaged over 3 years
		Primary and Secondary	24-hour	35 $\mu g/m^3$	98th percentile, averaged over 3 years
	PM_{10}	Primary and Secondary	24-hour	150 $\mu g/m^3$	Not to be exceeded more than once per year on average over 3 years

Table 1 – National Ambient Air Quality Standards

Pollutant	Primary/ Secondary	Averaging Period	Standards	Form
SO_2	Primary	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Notes: ppb = parts per billion, ppm = parts per million, and µg/m^3 = micrograms per cubic meter of air.
carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), sulfur dioxide (SO_2).
(1) The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of comparison to the 1-hour standard level.
Source: U.S. Environmental Protection Agency, National Ambient Air Quality Standards (NAAQS) at https://www.epa.gov/criteria-air-pollutants/naaqs-table, December 2019.

Air Quality Designation Status

The U.S. Environmental Protection Agency (EPA) designates areas with respect to the level of pollutants within the area. An area with measured pollutant concentrations that are below the NAAQS is designated as "attainment" and an area with pollutant concentrations that exceed the NAAQS is designated as "nonattainment". After air pollutant concentrations in a nonattainment area are reduced to levels below the NAAQS, the EPA re-designates the area to be "maintenance"—a designated that is maintained for a period of 20 years. Finally, an area is designated as unclassifiable when there is a lack of sufficient data to determine the status of a pollutant.

The Proposed Action is located within Tolland County. Based on air quality data, emissions-related data, meteorology, and geography/topography, Tolland County is currently designated either attainment or unclassified for Pb, NO_2, $PM_{2.5}$, PM_{10} and SO_2, and nonattainment for O_3. A portion of Tolland County is also designated maintenance for CO, but the Proposed Action is not located within the area. There are currently two O_3 standards applicable to the nonattainment area—one standard was promulgated by the EPA in 2008 and the other was promulgated by the agency in 2015. Currently, the area is descriptively designated as being a serious nonattainment area for the 2008 O_3 standard and a marginal nonattainment area for the 2015 O_3 standard.[1]

Air Pollutant Monitoring Data

There is one monitoring station within Tolland County. This station (Station 09-013-1001), is located in the Stafford Shenipsit State Forest approximately 13.4 miles north north-east of the Storrs Campus. Air monitoring data has been collected at this station since 1980. The maximum fourth highest daily concentrations (the values which are used to compare to the NAAQS) for the years 2017, 2018, and 2019 (through the beginning of December) are provided in **Table 2**. As shown, over the last three years O_3 concentrations in Tolland County have been below the 2008 NAAQS but above the 2015 NAAQS.

[1] Source: EPA, Greenbook, Connecticut Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants at https://www3.epa.gov/airquality/greenbook/anayo_ct.html, December 2019.

Table 2 – Ozone Monitoring Data		
Annual 4th-Highest Daily Maximum 8-Hour Concentration (parts per million)		
2017	**2018**	**2019**
0.070	0.071	0.073
	3 Year Average	**0.071**
	2008 NAAQS	**0.075**
	2015 NAAQS	**0.070**
Source: EPA Air Data, Extracted December, 2019		

3. Connecticut Environmental Policy Act (CEPA) Evaluation

This section presents and discusses the analysis that was performed to evaluate the potential air quality impacts associated with the Proposed Action at UConn. For the purpose of the analysis, both the short-term emissions that would occur during construction of the project and the emissions that would occur as a result of motor vehicles traveling to/from the facility were derived.

Construction Emissions

In general, air emissions associated with construction activities are temporary and variable depending on the project location, duration and level of activity. These emissions occur predominantly in engine exhaust from the operation of construction equipment and vehicles at the site (e.g., scrapers, dozers, delivery trucks, etc.) and from transporting construction workers to and from the site. Additionally, fugitive dust emissions result from site preparation, land clearing, material handling, equipment movement on unpaved areas; and from evaporative emissions that occur during the application of asphalt paving.

Construction equipment is comprised of both on-road vehicles (i.e., on-road-licensed) and non-road equipment (i.e., off-road). The former category of vehicles are used for the transport and delivery of supplies, material and equipment to and from a site and includes construction worker vehicles. The latter category of equipment is operated on-site for activities such as soil/material handling, site clearing and grubbing.

For the analysis of the Proposed Action, the Airport Construction Emissions Inventory Tool (ACEIT)[2] was used to estimate construction activities and equipment/vehicle activity data (e.g., equipment mixes/operating times). Although the Proposed Action is not at, or related to an airport, use of the tool provides construction activity levels and equipment/vehicle activity data that has been well vetted by those charged with preparing this type of activity data for the construction elements that would be necessary to implement the Proposed Action (**Table 3**). However, because the default emission factors used by ACEIT are outdated and do not reflect the emission rates from the EPA's Motor Vehicle Emission Simulator (i.e., MOVES)[3] model, the emissions data from ACEIT were not used. Instead, the emission factors were developed using the most recent version of MOVES (Version 2014b). Fugitive dust emissions were calculated using factors within EPA's Compilation of Air Pollutant Emission Factors (AP-42)[4]. Finally, evaporative emissions associated with asphalt paving were derived using methodologies published by the EPA. [5]

[2] TRB, ACRP Report 102, Guidance for Estimating Airport Construction Emissions, http://www.trb.org/ACRP/Blurbs/170234.aspx.
[3] EPA's MOVES2014a is the latest version of MOVES, which includes the NONROAD model. Additional information on MOVES2014a is available at https://www.epa.gov/moves/moves2014a-latest-version-motor-vehicle-emission-simulator-moves.
[4] EPA, Emissions Factors & AP-42, Compilation of Air Pollutant Emission Factors, http://www.epa.gov/ttn/chief/ap42/index.html#toc.
[5] EPA, Emission Inventory Improvement Program, Asphalt Paving, Chapter 17, Volume III, April 2001.

Table 3 – Construction Schedule and Activities	
Timeframe	**Construction Elements**
2020-2021	- Remove Existing Pavement - Reconstruct Area in Asphalt Pavement - Parking Lot (3) - Arena Structure Construction
Source: Fitzgerald & Halliday, Inc., December 2019.	

Estimates of CO, VOC, NO_x, sulfur oxides (SO_x), and $PM_{10/2.5}$ that would be emitted during construction of the proposed improvements are provided in **Table 4**. As shown, it is anticipated that emissions associated with this phase of the project will be the greatest in 2021.

Table 4 – Construction Emissions						
Year	**Tons**					
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
2020	5.0	6.7	2.4	<0.1	0.3	0.1
2021	6.9	10.0	3.0	<0.1	0.5	0.2
Notes: CO – carbon monoxide, NO_x – nitrogen oxides, SO_x – sulfur oxides, $PM_{10/2.5}$ – particulate matter, VOC – volatile organic compounds. Totals may reflect rounding. Source: KB Environmental Sciences, Inc., 2019.						

<u>Operational Emissions</u>
Emissions associated with the operation of the Proposed Action would result from a boiler plant which will provide heating for the building and a diesel engine-generator set that will serve as an emergency power source and optional stand-by power source. The State of Connecticut Department of Energy and Environmental Protection will require air operating permits for both which would ensure that the emisisons from these souces would not harm public heath or cause significant degradation to air quality conditions in the area.

Emissions associated with operation of the Proposed Action would also resultfrom the engine exhaust of motor vehicles traveling to and from the site. For the purpose of deriving these project-related emissions, estimates of CO, VOC, NOx, SOx, PM_{10}, and $PM_{2.5}$ were calculated for both the No Action and Proposed Action alternatives (i.e., the difference between the total emissions for the No-Action alternative and the total emissions with the Proposed Action alternative provides the project-related emisisons) . Motor vehicle traffic data, forecast for the year 2021, and roadway segment lengths were used to estimate vehicle miles traveled (VMT). These data and forecast motor vehicle speeds were used in EPA's MOVES to obtain air pollutant and pollutant precursor emission rates.

Table 5 presents the operational emission inventories for the 2021 No Action and Proposed Action alternatives. As shown, with the Proposed Action, emissions of the evaluated pollutants/pollutant precursors would increase from 0.1 to 15.7 tons. Over the long-term, as a result of reductions in motor vehicle emission rates and assuming that the volume of motor vehicle traffic remains essentially the same to and from the hockey arena, the level of pollutants and precursors in Table 5 is expected to decrease (both with and without the Proposed Action). For example, in the year 2031, the emission rate of NOx and VOC would decrease by more than 38 percent which would correspondingly reduce the total estimated levels of these pollutant precursors by 38 percent.

Table 5 – Operational Emissions (tons per year)

Year	Alternative	Tons					
		CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
2021	No Action	510.5	54.4	21.4	0.2	4.4	2.1
	Proposed Action	526.2	56.1	22.1	0.2	4.5	2.2
	Difference (Project-related)	**15.7**	**1.7**	**0.7**	**0.0**	**0.1**	**0.1**

Notes: CO – carbon monoxide, NO_x – nitrogen oxides, SO_x – sulfur oxides, $PM_{10/2.5}$ – particulate matter, VOC – volatile organic compounds. Totals may reflect rounding.

Source: KB Environmental Sciences, Inc., 2019.

4. Climate

Research has shown that an increase in atmospheric Greenhouse Gas (GHG) emissions is significantly affecting the Earth's climate. These conclusions are based upon a scientific record that includes substantial contributions from the United States Global Change Research Program (USGCRP)—a program mandated by Congress in the Global Change Research Act to "assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change.[6] In 2009, based primarily on the scientific assessments of the USGCRP, as well as the National Research Council (NRC) and the Intergovernmental Panel on Climate Change (IPCC), the EPA issued a finding that it was reasonable to assume that changes in our climate caused by elevated concentrations of GHG in the atmosphere endanger the public health and public welfare of current and future generations.[7] In 2015, EPA acknowledged more recent scientific assessments that "highlight the urgency of addressing the rising concentration of carbon dioxide (CO_2) in the atmosphere".[8]

The GHG emissions associated with the construction and operation of the Proposed Action are presented in **Table 6**. The emissions are presented in metric tons of CO_2 equivalent (CO_2e), a standard unit for measuring carbon footprints. As there are no standards by which the emissions of GHG can be evaluated, the estimate of CO_2e is provided for disclosure purposes only. The system that would provide the ice for the Arena would use, as the primary refrigerant, R717 ammonia. Based on a document prepared by the EPA that discusses the application of climate-friendly ice rink technologies, ice systems that use ammonia as the refrigerant have a zero Global Warming Potential and a zero Ozone Depleting Potential.[9]

[6] Global Change Research Act of 1990, Pub. L. 101–606, Sec. 103 (November 16, 1990), http://www.globalchange.gov.

[7] Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66496 (December 15, 2009).

[8] EPA, Final Rule for Carbon Pollution Emission Guidelines for Existing Stationary Sources Electric Utility Generating Units, 80 Fed. Reg. 64661, 64677 (October 23, 2015).

[9] Application of Climate-Friendly Ice Rink Technologies: Brooklyn Park Community Activity Center, U.S. Environmental Protection Agency, October 2014.

Table 6 – CO_2e Emissions with Proposed Action

Year	Construction / Operational	Metric Tons of CO_2e
2020	Construction	1,121
2021	Construction	1,540
	Operational	22,493
	Total	24,057

Source: KBE Inc., 2019. Note: Construction emissions modelled using ACEIT and MOVES2014b modeling tools.

Appendix D – Environmental Risk Information Services (ERIS) Database Search Report

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

DATABASE REPORT

Project Property:	*P1485 - UConn Ice Hockey Arena* *P1485 - UConn Ice Hockey Arena* *Mansfield CT*
Project No:	
Report Type:	*Database Report*
Order No:	*20190912185*
Requested by:	*FHI Fitzgerald & Halliday Inc*
Date Completed:	*September 16, 2019*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

Executive Summary

Property Information:

Project Property:		*P1485 - UConn Ice Hockey Arena* *P1485 - UConn Ice Hockey Arena Mansfield CT*
Project No:		
Coordinates:		
	Latitude:	*41.799171*
	Longitude:	*-72.256774*
	UTM Northing:	*4,631,116.79*
	UTM Easting:	*727,910.24*
	UTM Zone:	*UTM Zone 18T*
Elevation:		*639 FT*

Order Information:

Order No:	*20190912185*
Date Requested:	*September 12, 2019*
Requested by:	*FHI Fitzgerald & Halliday Inc*
Report Type:	*Database Report*

Historicals/Products:

ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	.5	0	0	0	0	-	0
SEMS	Y	.5	0	0	0	0	-	0
ODI	Y	.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	.5	0	0	0	0	-	0
CERCLIS	Y	.5	0	0	0	0	-	0
IODI	Y	.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	.5	0	0	0	0	-	0
RCRA LQG	Y	.25	0	0	0	-	-	0
RCRA SQG	Y	.25	0	0	0	-	-	0
RCRA CESQG	Y	.25	0	0	0	-	-	0
RCRA NON GEN	Y	.25	0	0	0	-	-	0
FED ENG	Y	.5	0	0	0	0	-	0
FED INST	Y	.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	.5	0	0	0	0	-	0
FEMA UST	Y	.25	0	0	0	-	-	0
REFN	Y	.25	0	0	0	-	-	0
BULK TERMINAL	Y	.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
State								
SHWS	Y	1	0	0	0	0	0	0
DELISTED SHWS	Y	1	0	0	0	0	0	0
SWF/LF	Y	.5	0	0	0	0	-	0
LUST	Y	.5	0	0	2	1	-	3
DELISTED LST	Y	.5	0	0	0	0	-	0
UST	Y	.25	0	0	1	-	-	1
DELISTED TANKS	Y	.25	0	0	0	-	-	0
AUL	Y	.5	0	0	0	0	-	0
AST	Y	.25	0	0	0	-	-	0
VCP	Y	.5	0	0	0	0	-	0
BROWNFIELDS	Y	.5	0	0	0	0	-	0
CBRA BRWN	Y	.5	0	0	0	0	-	0
BROWNFIELDS	Y	.5	0	0	0	0	-	0
Tribal								
ILST	Y	.5	0	0	0	0	-	0
IUST	Y	.25	0	0	0	-	-	0
INDIAN VCP	Y	.5	0	0	0	0	-	0
DELISTED ILST	Y	.5	0	0	0	0	-	0
DELISTED IUST	Y	.25	0	0	0	-	-	0
County	*No County standard environmental record sources available for this State.*							

Additional Environmental Records

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Federal								
PFAS NPL	Y	.5	0	0	0	0	-	0
FINDS/FRS	Y	PO	0	1	-	-	-	1
TRIS	Y	PO	0	-	-	-	-	0
PFAS TRI	Y	.5	0	0	0	0	-	0
HMIRS	Y	.125	0	0	-	-	-	0
NCDL	Y	.125	0	0	-	-	-	0
TSCA	Y	.125	0	0	-	-	-	0
HIST TSCA	Y	.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	.25	0	0	0	-	-	0
DELISTED FED DRY	Y	.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
FUDS	Y	1	0	0	0	0	0	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	.25	0	0	0	-	-	0
ALT FUELS	Y	.25	0	1	0	-	-	1
SSTS	Y	.25	0	0	0	-	-	0
PCB	Y	.5	0	0	0	0	-	0
State								
LIENS	Y	PO	0	-	-	-	-	0
CT PROPERTY	Y	PO	0	-	-	-	-	0
DRYC REM	Y	.25	0	0	0	-	-	0
SPILLS	Y	.125	0	3	-	-	-	3
CT MANIFEST	Y	.125	0	0	-	-	-	0
CT MAN TSDF	Y	.5	0	0	0	0	-	0
CT HAZ HANDLERS	Y	.25	0	0	0	-	-	0
HZ NOTIFICATION	Y	.5	0	0	0	0	-	0
SDAD	Y	.25	0	0	0	-	-	0

Tribal ***No Tribal additional environmental record sources available for this State.***

County ***No County additional environmental record sources available for this State.***

Total:		0	5	3	1	0	9

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	ALT FUELS	University of Connecticut - South Parking Garage	505 Jim Calhoun Way Storrs CT 06269	NW	0.00 / 1.60	-5	16
1	FINDS/FRS	505 JIM CALHOUN WAY	505 JIM CALHOUN WAY STORRS CT 06268-1728	NW	0.00 / 1.60	-5	16
2	SPILLS		19 Husky Circle, Storrs Mansfield Uconn MANSFIELD CT ***Case No | Status:*** 200900682 | CLOSED	WNW	0.08 / 426.07	-30	17
3	SPILLS		16 Jonathan Way, Storrs MANSFIELD CT ***Case No | Status:*** 201705044 | CLOSED	NW	0.12 / 611.05	22	18
4	SPILLS		19 husky circle Mansfield CT ***Case No | Status:*** 201201245 | CLOSED	NNW	0.12 / 613.58	26	20
5	UST	UCONN MOTOR POOL	9 HILLSIDE CIR STORRS MANSFIELD CT 06268 ***Tank No | Tank Status | Date Last Used:*** D5R1 | Currently In Use | , R1 | Permanently Closed | 09/01/1995, U3 | Permanently Closed | 09/01/1995, O6 | Permanently Closed | 12/01/1995, D5 | Permanently Closed | 09/01/1995, R2 | Permanently Closed | 09/01/1995, AR1 | Currently In Use | , U4A | Permanently Closed | 09/01/1995	ENE	0.20 / 1,074.28	35	21
6	LUST	JOHN MANNING	7 HILLSIDE CIRCLE Mansfield CT 06250 ***LUST Case ID | LUST Status:*** 36885 | LUST COMPLETED	ENE	0.21 / 1,094.62	37	25
7	LUST	HAROLD SDRWENLE	6 HILLSIDE CIRCLE Mansfield CT 06250 ***LUST Case ID | LUST Status:*** 29692 | LUST COMPLETED	ENE	0.22 / 1,156.87	36	27
8	LUST	COOPER PROPERTY	20 EASTWOOD RD. Mansfield CT 06250 ***LUST Case ID | LUST Status:*** 29371 | LUST COMPLETED	E	0.38 / 1,999.52	-12	28

Executive Summary: Summary by Data Source

Standard

State

LUST - Leaking Underground Storage Tanks

A search of the LUST database, dated Aug 15, 2019 has found that there are 3 LUST site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
JOHN MANNING	7 HILLSIDE CIRCLE Mansfield CT 06250	ENE	0.21 / 1,094.62	6
	LUST Case ID | LUST Status: *36885 | LUST COMPLETED*			
HAROLD SDRWENLE	6 HILLSIDE CIRCLE Mansfield CT 06250	ENE	0.22 / 1,156.87	7
	LUST Case ID | LUST Status: *29692 | LUST COMPLETED*			

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
COOPER PROPERTY	20 EASTWOOD RD. Mansfield CT 06250	E	0.38 / 1,999.52	8
	LUST Case ID | LUST Status: *29371 | LUST COMPLETED*			

UST - Underground Storage Tank Facilities

A search of the UST database, dated Jul 22, 2019 has found that there are 1 UST site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
UCONN MOTOR POOL	9 HILLSIDE CIR STORRS MANSFIELD CT 06268	ENE	0.20 / 1,074.28	5
	Tank No | Tank Status | Date Last Used: *D5R1 | Currently In Use | , R1 | Permanently Closed | 09/01/1995, U3 | Permanently Closed | 09/01/1995, O6 | Permanently Closed | 12/01/1995, D5 | Permanently Closed | 09/01/1995, R2 | Permanently Closed | 09/01/1995, AR1 | Currently In Use | , U4A | Permanently Closed | 09/01/1995*			

Non Standard

Federal

FINDS/FRS - Facility Registry Service/Facility Index

A search of the FINDS/FRS database, dated Apr 23, 2019 has found that there are 1 FINDS/FRS site(s) within approximately 0.02 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
505 JIM CALHOUN WAY	505 JIM CALHOUN WAY STORRS CT 06268-1728	NW	0.00 / 1.60	1

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key

ALT FUELS - Alternative Fueling Stations

A search of the ALT FUELS database, dated Jun 26, 2019 has found that there are 1 ALT FUELS site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
University of Connecticut - South Parking Garage	505 Jim Calhoun Way Storrs CT 06269	NW	0.00 / 1.60	1

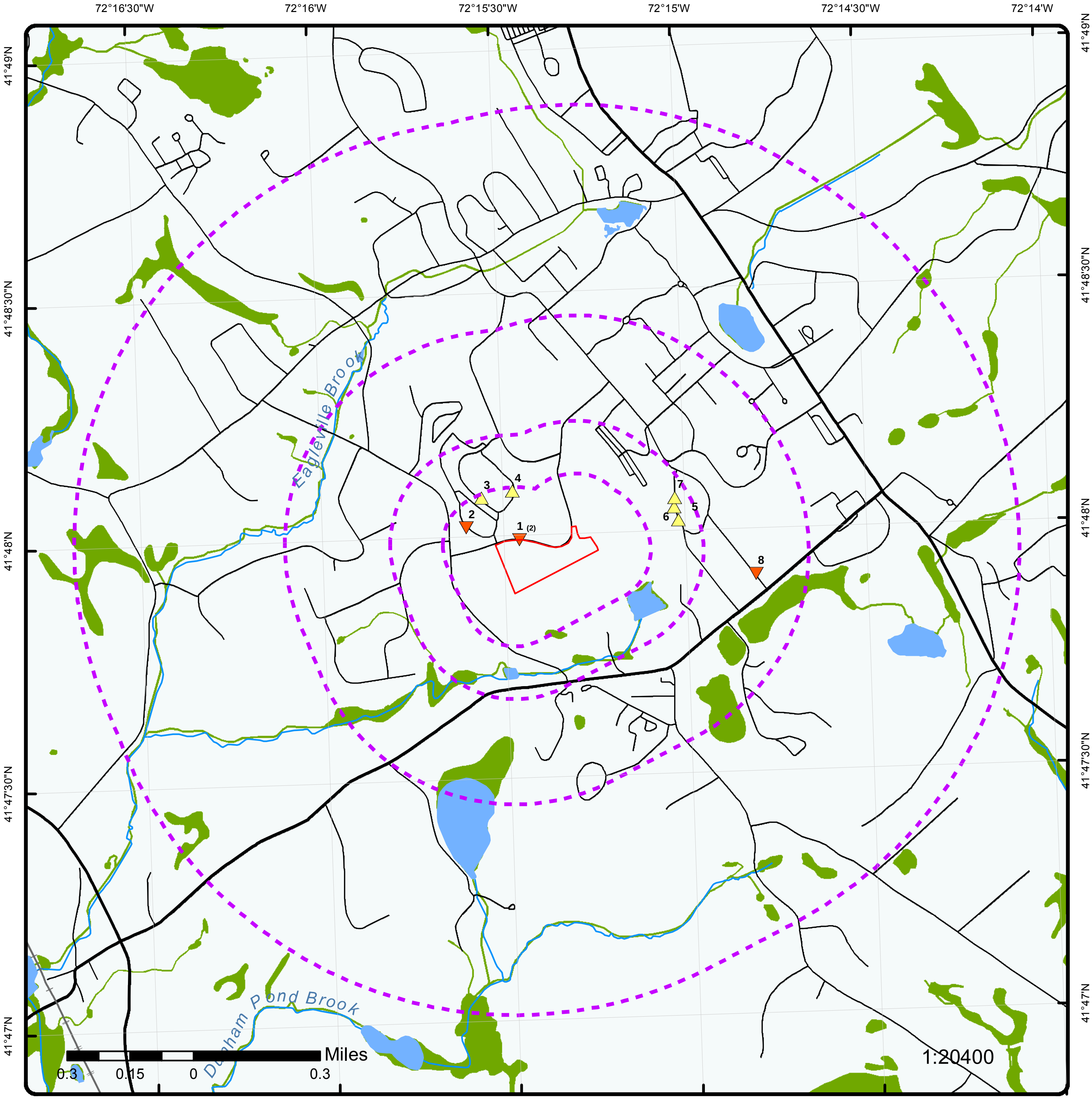
State

SPILLS - Spill Incident Tracking System (SITS)

A search of the SPILLS database, dated Aug 15, 2019 has found that there are 3 SPILLS site(s) within approximately 0.12 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	16 Jonathan Way, Storrs MANSFIELD CT ***Case No | Status***: *201705044 | CLOSED*	NW	0.12 / 611.05	3
	19 husky circle Mansfield CT ***Case No | Status***: *201201245 | CLOSED*	NNW	0.12 / 613.58	4

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
	19 Husky Circle, Storrs Mansfield Uconn MANSFIELD CT ***Case No | Status***: *200900682 | CLOSED*	WNW	0.08 / 426.07	2



Map : 1 Mile Radius

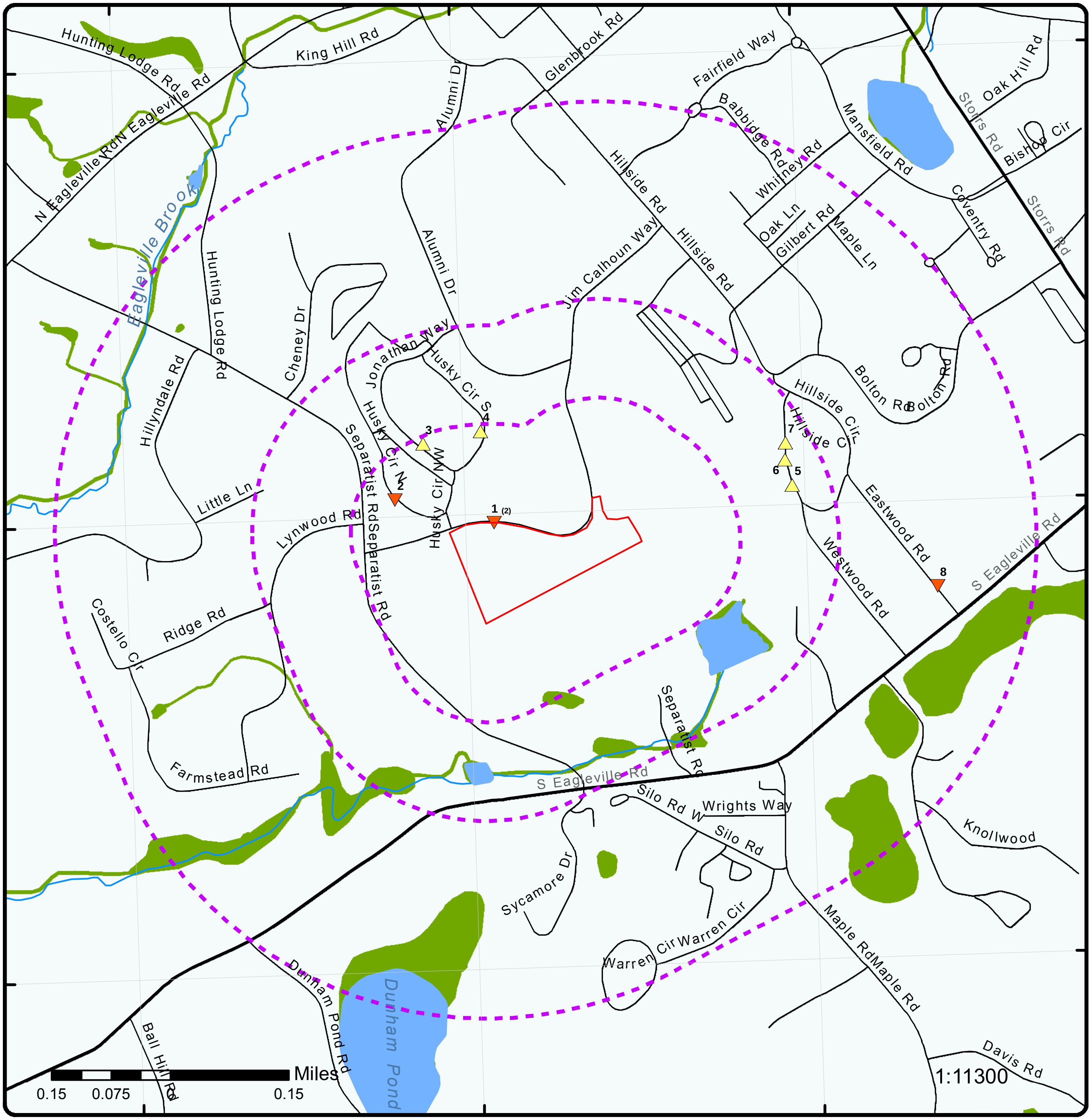
Order No: 20190912185

Address: P1485 - UConn Ice Hockey Arena, Mansfield, CT

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

- Project Property
- **Buffer Outline**
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- County Boundary
- Rails
- Major Highways
- Major Highways Ramps
- Major Roads
- Major Roads Ramps
- Secondary Roads
- Secondary Roads Ramps
- Local Roads and Ramps
- State Boundary
- National Priority List Sites
- National Wetland
- Indian Reserve Land
- Historic Fill
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- State Brownfield Sites
- State Brownfield Areas
- State Superfund Areas:Dept. of Defense
- State Superfund Areas:NPL
- WQARF Areas
- Federal Lands: Dept. of Defense (owned/administered areas)

Source: © 2016 ESRI



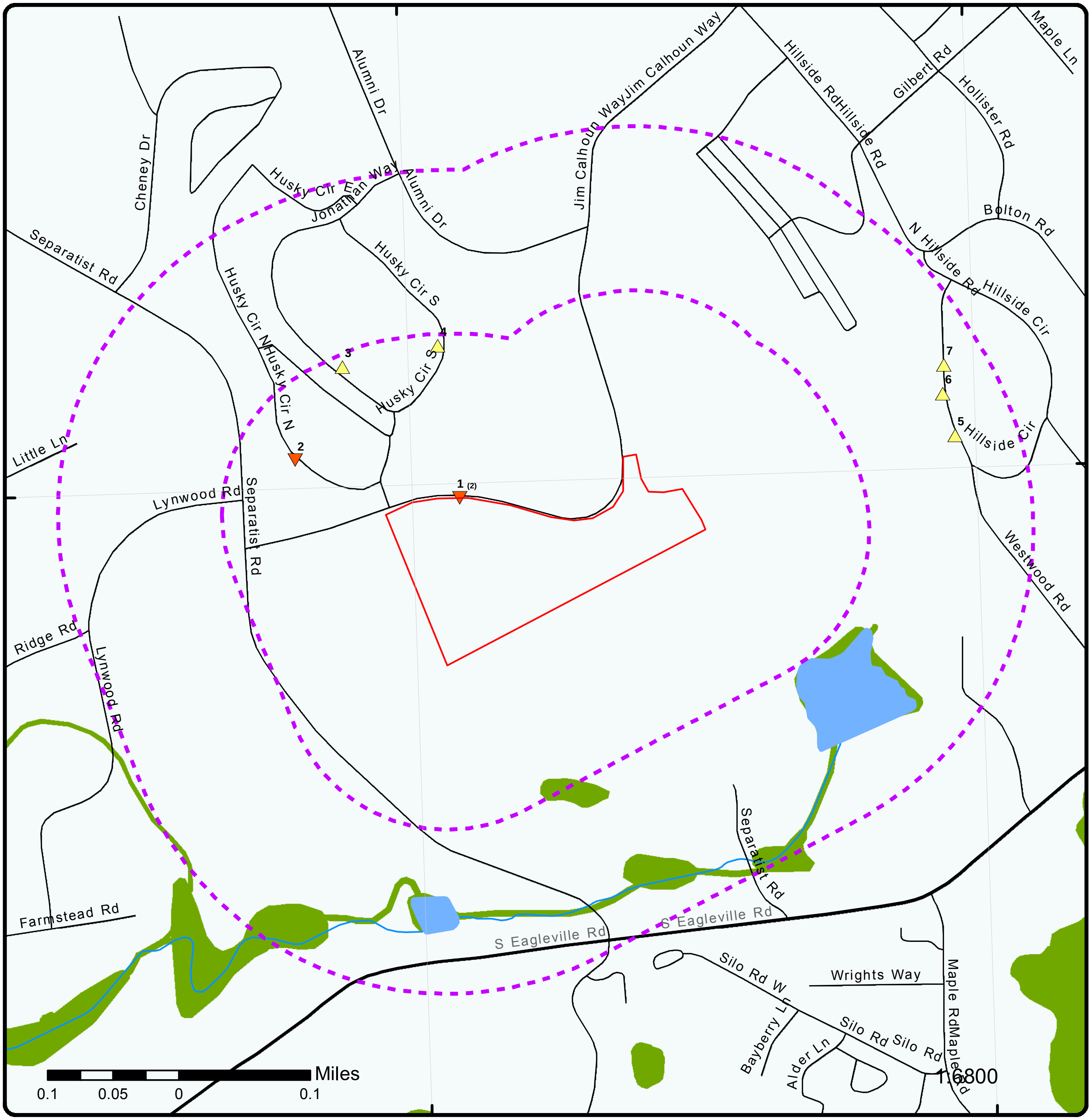
Map : 0.5 Mile Radius

Order No: 20190912185

Address: P1485 - UConn Ice Hockey Arena, Mansfield, CT

Project Property	Rails	State Boundary	FWS Special Designation Areas
Buffer Outline	Major Highways	National Priority List Sites	State Brownfield Sites
Eris Sites with Higher Elevation	Major Highways Ramps	National Wetland	State Brownfield Areas
Eris Sites with Same Elevation	Major Roads	Indian Reserve Land	State Superfund Areas:Dept. of Defense
Eris Sites with Lower Elevation	Major Roads Ramps	Historic Fill	State Superfund Areas:NPL
Eris Sites with Unknown Elevation	Secondary Roads	100 Year Flood Zone	WQARF Areas
County Boundary	Secondary Roads Ramps	500 Year Flood Zone	Federal Lands: Dept. of Defense (owned/administered areas)
	Local Roads and Ramps		

Source: © 2016 ESRI



Map : 0.25 Mile Radius

Order No: 20190912185

Address: P1485 - UConn Ice Hockey Arena, Mansfield, CT

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

	Project Property		Rails		State Boundary		FWS Special Designation Areas
	Buffer Outline		Major Highways		National Priority List Sites		State Brownfield Sites
	Eris Sites with Higher Elevation		Major Highways Ramps		National Wetland		State Brownfield Areas
	Eris Sites with Same Elevation		Major Roads		Indian Reserve Land		State Superfund Areas:Dept. of Defense
	Eris Sites with Lower Elevation		Major Roads Ramps		Historic Fill		State Superfund Areas:NPL
	Eris Sites with Unknown Elevation		Secondary Roads		100 Year Flood Zone		WQARF Areas
	County Boundary		Secondary Roads Ramps		500 Year Flood Zone		Federal Lands: Dept. of Defense (owned/administered areas)
			Local Roads and Ramps				

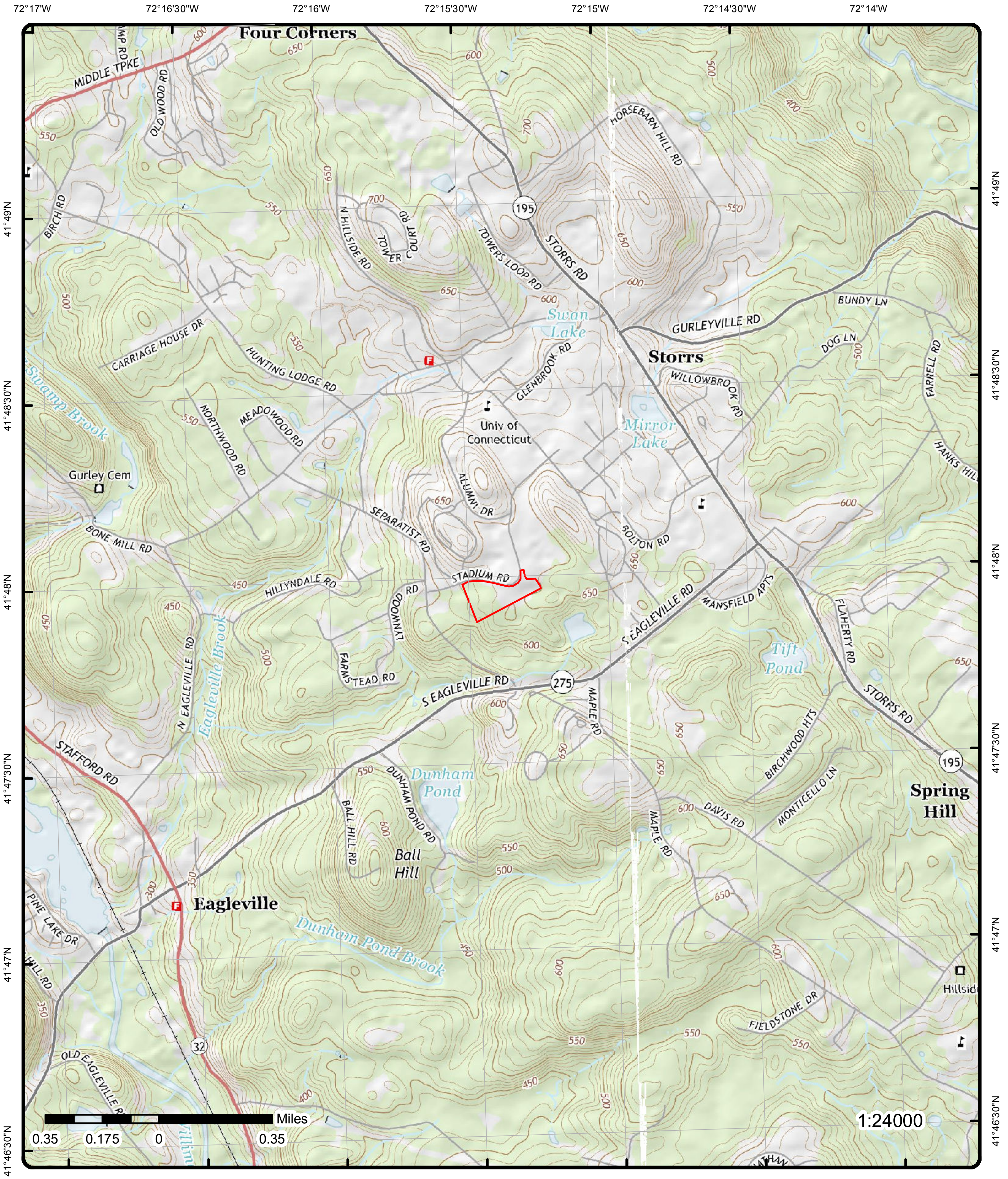
Source: © 2016 ESRI

Aerial (2016)

Order No: 20190912185

Address: P1485 - UConn Ice Hockey Arena, Mansfield, CT

Source: ESRI World Imagery



Topographic Map (2015)

Order No: 20190912185

Address: P1485 - UConn Ice Hockey Arena, Mansfield, CT

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Quadrangle(s): Spring Hill,CT; Coventry,CT;

Source: USGS Topographic Map

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 2	NW	0.00 / 1.60	633.83 / -5	University of Connecticut - South Parking Garage 505 Jim Calhoun Way Storrs CT 06269	ALT FUELS

ID:	65819	**CNG Dispenser No:**	
Federal Agency ID:		**CNG Fill Type Code:**	
Federal Agency:		**CNG Site Renew Src:**	
Fed Agency Name:		**CNG PSI:**	
Status:	Open: The station is open.	**CNG Storage Cap:**	
Facility Type:	COLLEGE_CAMPUS	**CNG Tot Compr Cap:**	
Fuel Type Code:	ELEC: Electric	**CNG Vehicle Class:**	
Owner Type Desc:	State government owned	**LPG Nozzle Types:**	
Expected Date:		**LNG Site Renew Src:**	
Dt Last Confirmed:	2018-05-03	**LNG Vehicle Class:**	
Open Date:	2015-02-12	**Hydrogen is Retail:**	
Updated at:	2019-06-13 20:26:00 UTC	**Hydrogen Pressures:**	
BD Blends:		**Hydrogen Standards:**	
NG PSI:		**Station Phone:**	860-486-3056
NG Fill Type Code:		**Latitude:**	41.805152
NG Fill Type Desc:		**Longitude:**	-72.253601

NG Vehicle Class:	
NG Vehicle Class Desc:	
E85 Blender Pump:	
E85 Blender Pump Desc:	
E85 Other Ethanol Blends:	
EV Pricing:	Free
EV Pricing French:	
LPG Primary:	
LPG Primary Desc:	
Intersection Directions:	
Geocode Status Desc:	The location is from a real GPS readout at the station.
Hydrogen Status Link:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	2 of 2	NW	0.00 / 1.60	633.83 / -5	505 JIM CALHOUN WAY 505 JIM CALHOUN WAY STORRS CT 06268-1728	FINDS/FRS

Registry ID:	110060377015
FIPS Code:	09013
HUC Code:	
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	15-SEP-2014 07:46:08
Update Date:	
Interest Types:	STATE MASTER
SIC Codes:	
SIC Code Descriptions:	
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No.:	

Census Block Code:
EPA Region Code: 01
County Name: TOLLAND
US/Mexico Border Ind:
Latitude: 41.802239
Longitude: -72.255899
Reference Point:
Coord Collection Method:
Accuracy Value:
Datum: NAD83
Source:
Facility Detail Rprt URL: http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110060377015
Program Acronyms:

SIMS:1570772

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	1 of 1	WNW	0.08 / 426.07	609.02 / -30	19 Husky Circle, Storrs Mansfield Uconn MANSFIELD CT	SPILLS

Case No: 200900682
Status: CLOSED
Year: 2/11/2009
Received by: 205
Assigned to: 0
Date Reported: 2/11/2009
Time Reported: 2/11/2009 10:59:46 AM
Date Release: 2/11/2009
Time Release:
State Release: CT
Reported by: dispatch
Area 1: 860
Phone 1: 4864925
Area 2:
Phone 2:
Area 3:
Discharger: unknown
Discharger Phone:
Rep Street:
Rep Town:
Rep State: CT
Rep Zip:
SR Inspector Name: Cox, Michael
AT Inspector Name: **NO RESPONSE
Representing: UCONN Dispatch
Release Substance: GASOLINE
Emergency Measures:
Comments:

Responsibility:
Sign 1: ~
Sign 2:
Sign 3:
Sign 4:
Sign 5:
Sign 6:
Sign 7:
Quan Gallons: 1
Quan Yards: 0
Quan Feet: 0
Quan Drums: 0
Quan Lbs: 0
Quantity Record: 0
Quantity Water: 0
Historic: No
Ongoing: No
Water Body Affect: No
Water Body: n/a
Terminated: YES
Cost Recovery: No
Time Stamp: 2/11/2009 5:12:47 PM
User Stamp: cguzman
SSMA Time Stamp: 0000000000080AB1

Action

Action ID: 20
Action: Other
Year: 2/11/2009
Other: speedy-dry

Agency

Agency ID: 8
Agency: DEP Dispatch
Year: 2/11/2009
Other:
Dep Bureau:

Dep Division:

Agency ID: 14
Agency: LOCAL FIRE DEPARTMENT
Year: 2/11/2009
Other:
Dep Bureau:
Dep Division:

Cause

Cause ID: 2
Cause: Transfer Line Failure
Year: 2/11/2009
Other:

Cause ID: 26
Cause: Other
Year: 2/11/2009
Other: fuel line rupture

Class

Class ID: 4
Class: Transportation
Year: 2/11/2009
Other:

Class ID: 6
Class: Private
Year: 2/11/2009
Other:

Media

Media ID: 4
Media: Ground Surface
Year: 2/11/2009
Other:

Release

Release ID: 1
Release Type: petroleum
Year: 2/11/2009
Release Other:

Waterbody

Waterbody ID: 9
Water Body: Other
Year: 2/11/2009
Other: none

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	1 of 1	NW	0.12 / 611.05	660.12 / 22	16 Jonathan Way, Storrs MANSFIELD CT	SPILLS

Case No: 201705044
Status: CLOSED
Year: 9/30/2017
Received by: 203

Responsibility:
Sign 1: <
Sign 2:
Sign 3:

Assigned to:	0	***Sign 4:***	
Date Reported:	9/30/2017	***Sign 5:***	
Time Reported:	9/30/2017 6:18:32 PM	***Sign 6:***	
Date Release:	9/30/2017	***Sign 7:***	
Time Release:	6:18:00 PM	***Quan Gallons:***	3
State Release:	CT	***Quan Yards:***	0
Reported by:	Collins	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4864801	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:		***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	None
Rep Town:		***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	10/2/2017 6:01:06 PM
SR Inspector Name:	SUSAN CAMPBELL	***User Stamp:***	Guzmanca
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	00000000000D09C8

Representing: UCONN Fire
Release Substance: ANTIFREEZE
Emergency Measures: Contents of (1) radiator, Speedi-dri
Comments:

Action

Action ID: 8
Action: Sanded
Year: 9/30/2017
Other:

Agency

Agency ID: 8
Agency: DEP Dispatch
Year: 9/30/2017
Other:
Dep Bureau:
Dep Division:

Agency ID: 14
Agency: LOCAL FIRE DEPARTMENT
Year: 9/30/2017
Other:
Dep Bureau:
Dep Division:

Agency ID: 4
Agency: Local Police
Year: 9/30/2017
Other:
Dep Bureau:
Dep Division:

Cause

Cause ID: 23
Cause: MV Accident
Year: 9/30/2017
Other:

Class

Class ID: 6
Class: Private
Year: 9/30/2017
Other:

Media

Media ID: 4
Media: Ground Surface
Year: 9/30/2017
Other:

Release

Release ID: 2
Release Type: chemical
Year: 9/30/2017
Release Other:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	1 of 1	NNW	0.12 / 613.58	664.26 / 26	19 husky circle Mansfield CT	SPILLS

Case No:	201201245	**Responsibility:**	
Status:	CLOSED	**Sign 1:**	
Year:	3/15/2012	**Sign 2:**	
Received by:	208	**Sign 3:**	
Assigned to:	0	**Sign 4:**	
Date Reported:	3/15/2012	**Sign 5:**	
Time Reported:	3/15/2012 12:03:11 PM	**Sign 6:**	
Date Release:	3/15/2012	**Sign 7:**	
Time Release:		**Quan Gallons:**	1
State Release:	CT	**Quan Yards:**	0
Reported by:	fd	**Quan Feet:**	0
Area 1:	860	**Quan Drums:**	0
Phone 1:	4864925	**Quan Lbs:**	0
Area 2:		**Quantity Record:**	0
Phone 2:		**Quantity Water:**	0
Area 3:		**Historic:**	No
Discharger:		**Ongoing:**	No
Discharger Phone:		**Water Body Affect:**	No
Rep Street:		**Water Body:**	
Rep Town:		**Terminated:**	YES
Rep State:	CT	**Cost Recovery:**	No
Rep Zip:		**Time Stamp:**	3/15/2012 4:05:03 PM
SR Inspector Name:	Monarca, Vincent	**User Stamp:**	GuzmanCa
AT Inspector Name:	**NO RESPONSE	**SSMA Time Stamp:**	0000000000088D10

Representing: fd
Release Substance: GASOLINE
Emergency Measures: sanded
Comments:

Action

Action ID: 8
Action: Sanded
Year: 3/15/2012
Other:

Agency

Agency ID: 8
Agency: DEP Dispatch

Year: 3/15/2012
Other:
Dep Bureau:
Dep Division:

Agency ID: 14
Agency: LOCAL FIRE DEPARTMENT
Year: 3/15/2012
Other:
Dep Bureau:
Dep Division:

Cause

Cause ID: 23
Cause: MV Accident
Year: 3/15/2012
Other:

Class

Class ID: 6
Class: Private
Year: 3/15/2012
Other:

Media

Media ID: 4
Media: Ground Surface
Year: 3/15/2012
Other:

Release

Release ID: 1
Release Type: petroleum
Year: 3/15/2012
Release Other:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	***1 of 1***	***ENE***	***0.20 / 1,074.28***	***673.23 / 35***	***UCONN MOTOR POOL 9 HILLSIDE CIR STORRS MANSFIELD CT 06268***	***UST***

Site ID: 78-6005
Site Latitude: 41.812012
Site Longitude: -72.261609
Site Coll Method: Address Matching
Site Ref Point Type: Approximate Location

Tank Information

Tank No: D5R1
Tank Status: Currently In Use
Spill Protection: Spill Bucket
Piping Details: Containment Sumps @ Dispensers,Containment Sumps @ Tanks,Double Walled,Metallic fittings isolated from soil and water
Date Last Used:
Tank Closure Type:
Installation Date: 12/01/1995
Capacity (gals): 10000
Subst Curr Stored: Diesel
Compartment:
Tank Latitude: 41.812012
Tank Longitude: -72.261609
Tank Coll Meth: Address Matching
Tank Ref Point Type: Approximate Location
Tank Details: Double Walled
Construction Type Tank: Fiberglass Reinforced Plastic

Construction Type Piping: Rigid Fiberglass Reinforced Plastic
Overfill Protection: Audible Alarm,Flapper Device

Tank Information

Tank No: R1
Tank Status: Permanently Closed
Date Last Used: 09/01/1995
Tank Closure Type: Tank was Removed From Ground
Installation Date: 01/01/1968
Capacity (gals): 5000
Subst Curr Stored: Gasoline
Tank Details:
Construction Type Tank: Asphalt Coated or Bare Steel
Construction Type Piping: Bare Steel
Overfill Protection:

Spill Protection:
Piping Details:
Compartment: a
Tank Latitude: 41.812012
Tank Longitude: -72.261609
Tank Coll Meth: Address Matching
Tank Ref Point Type: Approximate Location

Tank Information

Tank No: U3
Tank Status: Permanently Closed
Date Last Used: 09/01/1995
Tank Closure Type: Tank was Removed From Ground
Installation Date: 01/01/1968
Capacity (gals): 1500
Subst Curr Stored: Gasoline
Tank Details:
Construction Type Tank: Asphalt Coated or Bare Steel
Construction Type Piping: Bare Steel
Overfill Protection:

Spill Protection:
Piping Details:
Compartment: a
Tank Latitude: 41.812012
Tank Longitude: -72.261609
Tank Coll Meth: Address Matching
Tank Ref Point Type: Approximate Location

Tank Information

Tank No: O6
Tank Status: Permanently Closed
Date Last Used: 12/01/1995
Tank Closure Type: Tank was Removed From Ground
Installation Date: 01/01/1983
Capacity (gals): 500
Subst Curr Stored: Gasoline
Tank Details:
Construction Type Tank: Asphalt Coated or Bare Steel
Construction Type Piping: Bare Steel
Overfill Protection:

Spill Protection:
Piping Details:
Compartment: a
Tank Latitude: 41.812012
Tank Longitude: -72.261609
Tank Coll Meth: Address Matching
Tank Ref Point Type: Approximate Location

Tank Information

Tank No: D5
Tank Status: Permanently Closed
Date Last Used: 09/01/1995
Tank Closure Type: Tank was Removed From Ground
Installation Date: 01/01/1968
Capacity (gals): 2000
Subst Curr Stored: Gasoline
Tank Details:
Construction Type Tank: Asphalt Coated or Bare Steel
Construction Type Piping: Bare Steel
Overfill Protection:

Spill Protection:
Piping Details:
Compartment: a
Tank Latitude: 41.812012
Tank Longitude: -72.261609
Tank Coll Meth: Address Matching
Tank Ref Point Type: Approximate Location

Tank Information

Tank No: R2
Tank Status: Permanently Closed

Spill Protection:
Piping Details:

Date Last Used:	09/01/1995	***Compartment:***	a
Tank Closure Type:	Tank was Removed From Ground	***Tank Latitude:***	41.812012
Installation Date:	01/01/1968	***Tank Longitude:***	-72.261609
Capacity (gals):	5000	***Tank Coll Meth:***	Address Matching
Subst Curr Stored:	Gasoline	***Tank Ref Point Type:***	Approximate Location
Tank Details:			
Construction Type Tank:	Asphalt Coated or Bare Steel		
Construction Type Piping:	Bare Steel		
Overfill Protection:			

Tank Information

Tank No:	AR1	***Spill Protection:***	Spill Bucket
Tank Status:	Currently In Use	***Piping Details:***	Containment Sumps @ Tanks,Double Walled,Metallic fittings isolated from soil and water
Date Last Used:		***Compartment:***	
Tank Closure Type:		***Tank Latitude:***	41.812012
Installation Date:	12/01/1995	***Tank Longitude:***	-72.261609
Capacity (gals):	10000	***Tank Coll Meth:***	Address Matching
Subst Curr Stored:	Gasoline	***Tank Ref Point Type:***	Approximate Location
Tank Details:	Double Walled		
Construction Type Tank:	Fiberglass Reinforced Plastic		
Construction Type Piping:	Rigid Fiberglass Reinforced Plastic		
Overfill Protection:	Audible Alarm,Flapper Device		

Tank Information

Tank No:	U4A	***Spill Protection:***	
Tank Status:	Permanently Closed	***Piping Details:***	
Date Last Used:	09/01/1995	***Compartment:***	a
Tank Closure Type:	Tank was Removed From Ground	***Tank Latitude:***	41.812012
Installation Date:	01/01/1979	***Tank Longitude:***	-72.261609
Capacity (gals):	5000	***Tank Coll Meth:***	Address Matching
Subst Curr Stored:	Gasoline	***Tank Ref Point Type:***	Approximate Location
Tank Details:			
Construction Type Tank:	Asphalt Coated or Bare Steel		
Construction Type Piping:	Bare Steel		
Overfill Protection:			

Contact Details

Client Affiliation:	Primary Contact	***Client State:***	CT
Client Phone No:	(860) 486-9295	***Client Zip:***	06269
Client Phone Ext:		***Client Zip4:***	3252
Contact:	PAUL FERRI	***Site Zip Ext:***	2409
Client City:	STORRS		
Client Last Name:	UNIVERSITY OF CONNECTICUT		
Client First Name:			
Client Address Line 1:	25 LEDOYT RD		
Client Address Line 2:	BOX U-3252		

Contact Details

Client Affiliation:	Owner	***Client State:***	CT
Client Phone No:	(860) 486-9295	***Client Zip:***	06269
Client Phone Ext:		***Client Zip4:***	3252
Contact:	PAUL FERRI	***Site Zip Ext:***	2409
Client City:	STORRS		
Client Last Name:	UNIVERSITY OF CONNECTICUT		
Client First Name:			
Client Address Line 1:	25 LEDOYT RD		
Client Address Line 2:	BOX U-3252		

Contact Details

Client Affiliation:	Property Owner	***Client State:***	CT
Client Phone No:	(860) 486-9295	***Client Zip:***	06269
Client Phone Ext:		***Client Zip4:***	3252
Contact:	PAUL FERRI	***Site Zip Ext:***	2409
Client City:	STORRS		
Client Last Name:	UNIVERSITY OF CONNECTICUT		
Client First Name:			
Client Address Line 1:	25 LEDOYT RD		
Client Address Line 2:	BOX U-3252		

Contact Details

Client Affiliation:	Off Site Records	***Client State:***	CT
Client Phone No:	(860) 486-8745	***Client Zip:***	06269
Client Phone Ext:		***Client Zip4:***	3252
Contact:	KATIE MILARDO	***Site Zip Ext:***	2409
Client City:	STORRS		
Client Last Name:	UNIVERSITY OF CONNECTICUT		
Client First Name:			
Client Address Line 1:	25 LEDOYT RD		
Client Address Line 2:	BOX U-3252		

Contact Details

Client Affiliation:	Class B Operator	***Client State:***	CT
Client Phone No:	(860) 486-8745	***Client Zip:***	06269
Client Phone Ext:		***Client Zip4:***	
Contact:	.	***Site Zip Ext:***	2409
Client City:	Storrs		
Client Last Name:	Milardo		
Client First Name:	Katie		
Client Address Line 1:	25 Ledoyt Rd		
Client Address Line 2:			

Contact Details

Client Affiliation:	Class A Operator	***Client State:***	CT
Client Phone No:	(860) 486-8745	***Client Zip:***	06269
Client Phone Ext:		***Client Zip4:***	
Contact:	.	***Site Zip Ext:***	2409
Client City:	Storrs		
Client Last Name:	Milardo		
Client First Name:	Katie		
Client Address Line 1:	25 Ledoyt Rd		
Client Address Line 2:			

Contact Details

Client Affiliation:	Billing Contact	***Client State:***	CT
Client Phone No:	(860) 486-8745	***Client Zip:***	06269
Client Phone Ext:		***Client Zip4:***	3252
Contact:	KATIE MILARDO	***Site Zip Ext:***	2409
Client City:	STORRS		
Client Last Name:	UNIVERSITY OF CONNECTICUT		
Client First Name:			
Client Address Line 1:	25 LEDOYT RD		
Client Address Line 2:	BOX U-3252		

Contact Details

Client Affiliation:	Registrant	***Client State:***	CT

Client Phone No:	(860) 486-9295	**Client Zip:**	06269
Client Phone Ext:		**Client Zip4:**	3252
Contact:	PAUL FERRI	**Site Zip Ext:**	2409
Client City:	STORRS		
Client Last Name:	UNIVERSITY OF CONNECTICUT		
Client First Name:			
Client Address Line 1:	25 LEDOYT RD		
Client Address Line 2:	BOX U-3252		

Contact Details

Client Affiliation:	Operator	**Client State:**	CT
Client Phone No:	(860) 486-9295	**Client Zip:**	06269
Client Phone Ext:		**Client Zip4:**	3252
Contact:	PAUL FERRI	**Site Zip Ext:**	2409
Client City:	STORRS		
Client Last Name:	UNIVERSITY OF CONNECTICUT		
Client First Name:			
Client Address Line 1:	25 LEDOYT RD		
Client Address Line 2:	BOX U-3252		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
6	1 of 1	ENE	0.21 / 1,094.62	675.98 / 37	JOHN MANNING 7 HILLSIDE CIRCLE Mansfield CT 06250	LUST

LUST Case ID:	36885	**Monthly RPT ID:**	0
LUST Status Code:	4	**UST E Facility ID:**	
LUST Status:	LUST COMPLETED	**Contact Info:**	
Incident Date:	9/2/1999	**Entry Date:**	
LUST ID:	8859	**Emergency:**	No
UST Event ID:	9040	**Private HF:**	Yes
UST Site ID:		**Commercial HF:**	No
CR Spill Case ID:		**Comm HF LE 2100:**	No
SITS Case ID:	9905907	**Comm HF GR 2100:**	No
OLD SITS Case ID:		**Comm HF Unknown:**	No
Case Log ID:		**Responsible Party:**	No
UST E Owner ID:		**RP Name 1:**	
No Release:	No	**RP Name 2:**	
No LUST Site:	No	**RP Address1:**	
Motor Fuel:	No	**RP Address2:**	
Diesel:	No	**RP Town:**	
Gasoline:	No	**RP State:**	
Other:	Yes	**RP Town No:**	0
Other Release:	kerosene	**RP ZIP No:**	
Leak:	No	**RP Phone:**	
Tank:	No	**RP Phone 2:**	
Piping:	No	**RP Fax:**	
Overfill:	No	**RP Email:**	
Removal:	No	**LUST Owner ID:**	
CR Candidate:	No	**Investigator ID:**	35
OCSRD Complete:	Yes	**Referral Source:**	
Processing Status:		**Date Referred:**	
Enviro Impact:		**Location Data:**	
Effected Popula:		**Area Extent:**	
Population Setting:		**Event Description:**	
GW Direction:		**Dt Work Performed:**	
GW Gradient:		**ALT Water Supply:**	No
Follow up Flag:	No	**Annual Precip:**	
Follow Up Date:		**Relocation:**	No
Follow Up:			
Site Name 2:			

Running Comments: m, FUEL OIL & KEROSENE, PRIVATE, A 550 FUEL OIL & A 275 KEROSENE TANK, EACH WAS AN UST WITH 2 HOLES 935 WILL CALL SHIRE BACK TODAY

Case Release

Substance:	Kerosene	***Unit:***	Gallons
Quantity:	275	***Comments:***	275
Source:	Other		

Substance:	Heating Oil	***Unit:***	Gallons
Quantity:	550	***Comments:***	550
Source:	Residential Heating Oil		

Tank Info

EPA Reportable:	No	***Potable Well Sample:***	No
Closure Date:		***Sample Mws:***	No
Closure Req Rpt:	No	***GW Gauging:***	No
Dep Closure Letter:	No	***Soil Venting:***	No
Active:	No	***NOV Action:***	None
Hydro Basin:		***NOV Issued:***	
Drastic:		***NOV Due:***	
GW Classification:		***NOV Received:***	
Smpl Gauging Freq:		***NOV Closed:***	
GW Flow Direction:		***NOV Disc Date:***	
GW Depth:		***NOV Issued Date:***	
Areas of Concern:		***NOV Cmpliance Schd:***	
Free Product Inches:		***NOV Admin Order:***	
Fund Date:		***NOV Referred to Ag:***	
Fund Planned:	$0.00	***Stop All NOV Actions:***	No
Fund Obligated:	$0.00	***Release Invest Rpt:***	No
Fund Outlayed:	$0.00	***Dep App Letter1:***	No
Fund Judgment:	$0.00	***Correct Action Plan:***	No
Fund Recovered:	$0.00	***Dep App Letter2:***	No
Fund Comments:		***Rem Sys Install:***	No
Cellar Borings:	No	***Rem Sys Install Date:***	
Install Micro Wells:	No	***Rem Sys Monit Rpt:***	No
GW Sample:	No	***Qrtly GWtr Mon Rpt:***	No
Soil Sample:	No	***Referred to:***	
Soil Gas:	No	***No Wells:***	
Site Inspect:	No	***LPH Wells:***	
Soil Excavate:	No	***User Stamp:***	
Geo Probe:	No	***Date Stamp:***	
Survey:	No	***Off Site Source:***	No
Geosetting:			
GW Comments:			
NOV Comments:			
Location Description:			

Work Performed:

Release Info:

Correspondence:

Case Action

Action:	Removed Tank	***Start Date:***	9/2/1999
Medium:		***End Date:***	
Quantity:		***Dep Action:***	No
Unit:		***Action Date:***	9/2/1999

Contact Info

Site Contact1:		***Site Contact2:***	
Contact1 Address1:		***Contact2 Address1:***	
Contact1 Address2:		***Contact2 Address2:***	
Contact1 Town No:	0	***Contact2 Town No:***	0
Contact1 Town:		***Contact2 Town:***	
Contact1 State:		***Contact2 State:***	

Contact1 Zip:		**Contact2 Zip:**	
Contact1 Phone:		**Contact2 Phone:**	
Contact1 Fax:		**Contact2 Fax:**	
Contact1 Type:		**Contact2 Type:**	
Contact1 Email:		**Contact2 Email:**	
DEP Contact1:		**DEP Contact2:**	

7	1 of 1	ENE	0.22 / 1,156.87	674.68 / 36	HAROLD SDRWENLE 6 HILLSIDE CIRCLE Mansfield CT 06250	LUST

LUST Case ID:	29692	**Monthly RPT ID:**	0
LUST Status Code:	4	**UST E Facility ID:**	
LUST Status:	LUST COMPLETED	**Contact Info:**	
Incident Date:	5/9/1996	**Entry Date:**	
LUST ID:	1583	**Emergency:**	No
UST Event ID:	1582	**Private HF:**	Yes
UST Site ID:		**Commercial HF:**	Yes
CR Spill Case ID:		**Comm HF LE 2100:**	Yes
SITS Case ID:		**Comm HF GR 2100:**	No
OLD SITS Case ID:		**Comm HF Unknown:**	No
Case Log ID:		**Responsible Party:**	No
UST E Owner ID:		**RP Name 1:**	
No Release:	No	**RP Name 2:**	
No LUST Site:	No	**RP Address1:**	
Motor Fuel:	No	**RP Address2:**	
Diesel:	No	**RP Town:**	
Gasoline:	No	**RP State:**	
Other:	No	**RP Town No:**	0
Other Release:		**RP ZIP No:**	
Leak:	No	**RP Phone:**	
Tank:	No	**RP Phone 2:**	
Piping:	No	**RP Fax:**	
Overfill:	No	**RP Email:**	
Removal:	No	**LUST Owner ID:**	
CR Candidate:	No	**Investigator ID:**	20
OCSRD Complete:	No	**Referral Source:**	
Processing Status:		**Date Referred:**	
Enviro Impact:		**Location Data:**	
Effected Popula:		**Area Extent:**	
Population Setting:		**Event Description:**	
GW Direction:		**Dt Work Performed:**	
GW Gradient:		**ALT Water Supply:**	No
Follow up Flag:	No	**Annual Precip:**	
Follow Up Date:		**Relocation:**	No
Follow Up:			
Site Name 2:			
Running Comments:			

Case Release

Substance:	Heating Oil	**Unit:**	Gallons
Quantity:	1000	**Comments:**	Tank Release; Uncontrolled release from UST; UST removed; Type/Gal: 1000/STEEL; Substance: HF2;
Source:	Comm. Heating Oil <2100		
Substance:	Heating Oil	**Unit:**	Gallons
Quantity:	550	**Comments:**	Tank Release; Uncontrolled release from UST; UST removed; Type/Gal: 550/STEEL; Substance: HF2;
Source:	Residential Heating Oil		

Tank Info

EPA Reportable:	No	**Potable Well Sample:**	No

Closure Date:		**Sample Mws:**	No
Closure Req Rpt:	No	**GW Gauging:**	No
Dep Closure Letter:	No	**Soil Venting:**	No
Active:	No	**NOV Action:**	None
Hydro Basin:		**NOV Issued:**	
Drastic:		**NOV Due:**	
GW Classification:		**NOV Received:**	
Smpl Gauging Freq:		**NOV Closed:**	
GW Flow Direction:		**NOV Disc Date:**	
GW Depth:		**NOV Issued Date:**	
Areas of Concern:		**NOV Cmpliance Schd:**	
Free Product Inches:		**NOV Admin Order:**	
Fund Date:		**NOV Referred to Ag:**	
Fund Planned:	$0.00	**Stop All NOV Actions:**	No
Fund Obligated:	$0.00	**Release Invest Rpt:**	No
Fund Outlayed:	$0.00	**Dep App Letter1:**	No
Fund Judgment:	$0.00	**Correct Action Plan:**	No
Fund Recovered:	$0.00	**Dep App Letter2:**	No
Fund Comments:		**Rem Sys Install:**	No
Cellar Borings:	No	**Rem Sys Install Date:**	
Install Micro Wells:	No	**Rem Sys Monit Rpt:**	No
GW Sample:	No	**Qrtly GWtr Mon Rpt:**	No
Soil Sample:	No	**Referred to:**	
Soil Gas:	No	**No Wells:**	
Site Inspect:	No	**LPH Wells:**	
Soil Excavate:	No	**User Stamp:**	
Geo Probe:	No	**Date Stamp:**	
Survey:	No	**Off Site Source:**	No
Geosetting:			
GW Comments:			
NOV Comments:			
Location Description:			

Work Performed:

Release Info:

Correspondence:

Case Action

Action:	Excavation & Hauling	**Start Date:**	
Medium:		**End Date:**	
Quantity:		**Dep Action:**	No
Unit:		**Action Date:**	

Contact Info

Site Contact1:		**Site Contact2:**	
Contact1 Address1:		**Contact2 Address1:**	
Contact1 Address2:		**Contact2 Address2:**	
Contact1 Town No:	0	**Contact2 Town No:**	0
Contact1 Town:		**Contact2 Town:**	
Contact1 State:		**Contact2 State:**	
Contact1 Zip:		**Contact2 Zip:**	
Contact1 Phone:		**Contact2 Phone:**	
Contact1 Fax:		**Contact2 Fax:**	
Contact1 Type:		**Contact2 Type:**	
Contact1 Email:		**Contact2 Email:**	
DEP Contact1:		**DEP Contact2:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	1 of 1	E	0.38 / 1,999.52	626.73 / -12	COOPER PROPERTY 20 EASTWOOD RD. Mansfield CT 06250	LUST

LUST Case ID:	29371	***Monthly RPT ID:***	0
LUST Status Code:	4	***UST E Facility ID:***	
LUST Status:	LUST COMPLETED	***Contact Info:***	
Incident Date:	12/2/1993	***Entry Date:***	
LUST ID:	1262	***Emergency:***	No
UST Event ID:	1261	***Private HF:***	Yes
UST Site ID:		***Commercial HF:***	No
CR Spill Case ID:		***Comm HF LE 2100:***	No
SITS Case ID:		***Comm HF GR 2100:***	No
OLD SITS Case ID:		***Comm HF Unknown:***	No
Case Log ID:		***Responsible Party:***	No
UST E Owner ID:		***RP Name 1:***	
No Release:	No	***RP Name 2:***	
No LUST Site:	No	***RP Address1:***	
Motor Fuel:	No	***RP Address2:***	
Diesel:	No	***RP Town:***	
Gasoline:	No	***RP State:***	
Other:	No	***RP Town No:***	0
Other Release:		***RP ZIP No:***	
Leak:	No	***RP Phone:***	
Tank:	No	***RP Phone 2:***	
Piping:	No	***RP Fax:***	
Overfill:	No	***RP Email:***	
Removal:	No	***LUST Owner ID:***	
CR Candidate:	No	***Investigator ID:***	20
OCSRD Complete:	No	***Referral Source:***	
Processing Status:		***Date Referred:***	
Enviro Impact:		***Location Data:***	
Effected Popula:		***Area Extent:***	
Population Setting:		***Event Description:***	
GW Direction:		***Dt Work Performed:***	
GW Gradient:		***ALT Water Supply:***	No
Follow up Flag:	No	***Annual Precip:***	
Follow Up Date:		***Relocation:***	No
Follow Up:			
Site Name 2:			
Running Comments:			

Case Release

Substance:	Heating Oil	***Unit:***	Gallons
Quantity:	550	***Comments:***	Tank Release; Uncontrolled release from UST; UST removed; Type/Gal: 550/STEEL; Substance: HF2;
Source:	Residential Heating Oil		

Tank Info

EPA Reportable:	No	***Potable Well Sample:***	No
Closure Date:		***Sample Mws:***	No
Closure Req Rpt:	No	***GW Gauging:***	No
Dep Closure Letter:	No	***Soil Venting:***	No
Active:	No	***NOV Action:***	None
Hydro Basin:		***NOV Issued:***	
Drastic:		***NOV Due:***	
GW Classification:		***NOV Received:***	
Smpl Gauging Freq:		***NOV Closed:***	
GW Flow Direction:		***NOV Disc Date:***	
GW Depth:		***NOV Issued Date:***	
Areas of Concern:		***NOV Cmpliance Schd:***	
Free Product Inches:		***NOV Admin Order:***	
Fund Date:		***NOV Referred to Ag:***	
Fund Planned:	$0.00	***Stop All NOV Actions:***	No
Fund Obligated:	$0.00	***Release Invest Rpt:***	No
Fund Outlayed:	$0.00	***Dep App Letter1:***	No
Fund Judgment:	$0.00	***Correct Action Plan:***	No
Fund Recovered:	$0.00	***Dep App Letter2:***	No

Fund Comments:		**Rem Sys Install:**	No
Cellar Borings:	No	**Rem Sys Install Date:**	
Install Micro Wells:	No	**Rem Sys Monit Rpt:**	No
GW Sample:	No	**Qrtly GWtr Mon Rpt:**	No
Soil Sample:	No	**Referred to:**	
Soil Gas:	No	**No Wells:**	
Site Inspect:	No	**LPH Wells:**	
Soil Excavate:	No	**User Stamp:**	
Geo Probe:	No	**Date Stamp:**	
Survey:	No	**Off Site Source:**	No
Geosetting:			
GW Comments:			
NOV Comments:			
Location Description:			

Work Performed:

Release Info:

Correspondence:

Case Action

Action:	Excavation & Hauling	**Start Date:**	
Medium:		**End Date:**	
Quantity:		**Dep Action:**	No
Unit:		**Action Date:**	

Contact Info

Site Contact1:		**Site Contact2:**	
Contact1 Address1:		**Contact2 Address1:**	
Contact1 Address2:		**Contact2 Address2:**	
Contact1 Town No:	0	**Contact2 Town No:**	0
Contact1 Town:		**Contact2 Town:**	
Contact1 State:		**Contact2 State:**	
Contact1 Zip:		**Contact2 Zip:**	
Contact1 Phone:		**Contact2 Phone:**	
Contact1 Fax:		**Contact2 Fax:**	
Contact1 Type:		**Contact2 Type:**	
Contact1 Email:		**Contact2 Email:**	
DEP Contact1:		**DEP Contact2:**	

Unplottable Summary

Total: 23 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
LUST	NORTHWEST SCHOOL	HUNTING LODGE RD. ***LUST Case ID | LUST Status:*** 28411 | INVESTIGATION	Mansfield CT	06250	809413472
LUST	UCONN MOTOR POOL	9 North Eagleville Road (9 Hillside Circle) ***LUST Case ID | LUST Status:*** 28855 | LUST COMPLETED	Mansfield CT	062682409	809412661
SDAD	FORMER LANDING STRIP	OFF BROWN'S RIDGE ROAD	TOLLAND CT		866675282
SDAD	UCONN FOUNDATION OFFICE BUILDING	ALUMNI ROAD	MANSFIELD CT	06268	866677833
SPILLS		rt 44 and 195- husky mobil ***Case No | Status:*** 9901771 | closed	MANSFIELD CT		809274435
SPILLS		conner stadium and hillside rd ***Case No | Status:*** 200300165 | Closed	MANSFIELD CT		809332636
SPILLS		hill side and stadium ***Case No | Status:*** 200906067 | CLOSED	MANSFIELD CT		809364886
SPILLS		hillside @ stadium rd ***Case No | Status:*** 200904990 | CLOSED	MANSFIELD CT		809360993
SPILLS		HILLSIDE ROAD & STADIUM ROAD ***Case No | Status:*** 200900026 | CLOSED	MANSFIELD CT		809354121
SPILLS		STORRS-MANSFIELD UCONN Campus I-LOT on Stadium Road ***Case No | Status:*** 201103262 | CLOSED	MANSFIELD CT		809365754
SPILLS		STORRS UCONN CAMPUS, 507 STADIUM RD (SOUTH PARKING GARAGE)	MANSFIELD CT		809384719

	Case No | Status: 200507525 | CLOSED		
SPILLS	stadium rd/ separatist rd ***Case No | Status:*** 200105398 | Closed	MANSFIELD CT	809284141
SPILLS	Stadium Rd. and Separtist Rd. stream running under these roads ***Case No | Status:*** 200801780 | CLOSED	MANSFIELD CT	809355549
SPILLS	STADIUM RD. ***Case No | Status:*** 200306195 | Closed	MANSFIELD CT	809310463
SPILLS	stadium road ***Case No | Status:*** 200500522 | Closed	MANSFIELD CT	809307508
SPILLS	STADIUM ROAD ***Case No | Status:*** 200305974 | Closed	MANSFIELD CT	809297370
SPILLS	stadium road ***Case No | Status:*** 9705201 | Closed	MANSFIELD CT	809252195
SPILLS	stadium road ***Case No | Status:*** 9705202 | Closed	MANSFIELD CT	809252196
SPILLS	stadium rd ***Case No | Status:*** 200402719 | Closed	MANSFIELD CT	809299582
SPILLS	STORRS-MANSFIELD UCONN Hillside and Stadium road ***Case No | Status:*** 200906001 | CLOSED	MANSFIELD CT	809358264
SPILLS	int hillside road and stadium road ***Case No | Status:*** 200905328 | CLOSED	MANSFIELD CT	809351495
SPILLS	HUSKY DR/HILLTOP APTS STORRS-MANSFIELD ***Case No | Status:*** 200504485 | Closed	MANSFIELD CT	809388234
SPILLS	hillside rd and stadium rd ***Case No | Status:*** 200307425 | Closed	MANSFIELD CT	809302170

Unplottable Report

Site: ***NORTHWEST SCHOOL***
HUNTING LODGE RD. Mansfield CT 06250

LUST

LUST Case ID:	28411	***Monthly RPT ID:***	0
LUST Status Code:	2	***UST E Facility ID:***	1163
LUST Status:	INVESTIGATION	***Contact Info:***	
Incident Date:	10/17/1988	***Entry Date:***	
LUST ID:	385	***Emergency:***	No
UST Event ID:	384	***Private HF:***	No
UST Site ID:		***Commercial HF:***	Yes
CR Spill Case ID:		***Comm HF LE 2100:***	No
SITS Case ID:		***Comm HF GR 2100:***	No
OLD SITS Case ID:		***Comm HF Unknown:***	No
Case Log ID:		***Responsible Party:***	No
UST E Owner ID:	7046	***RP Name 1:***	
No Release:	No	***RP Name 2:***	
No LUST Site:	No	***RP Address1:***	
Motor Fuel:	No	***RP Address2:***	
Diesel:	No	***RP Town:***	
Gasoline:	No	***RP State:***	
Other:	No	***RP Town No:***	0
Other Release:		***RP ZIP No:***	
Leak:	No	***RP Phone:***	
Tank:	No	***RP Phone 2:***	
Piping:	No	***RP Fax:***	
Overfill:	No	***RP Email:***	
Removal:	No	***LUST Owner ID:***	
CR Candidate:	No	***Investigator ID:***	14
OCSRD Complete:	No	***Referral Source:***	
Processing Status:		***Date Referred:***	
Enviro Impact:		***Location Data:***	
Effected Popula:		***Area Extent:***	
Population Setting:		***Event Description:***	
GW Direction:		***Dt Work Performed:***	
GW Gradient:		***ALT Water Supply:***	No
Follow up Flag:	No	***Annual Precip:***	
Follow Up Date:		***Relocation:***	No
Follow Up:			
Site Name 2:			
Running Comments:			

Tank Info

EPA Reportable:	No	***Potable Well Sample:***	No
Closure Date:		***Sample Mws:***	No
Closure Req Rpt:	No	***GW Gauging:***	No
Dep Closure Letter:	No	***Soil Venting:***	No
Active:	No	***NOV Action:***	None
Hydro Basin:		***NOV Issued:***	
Drastic:		***NOV Due:***	
GW Classification:		***NOV Received:***	
Smpl Gauging Freq:		***NOV Closed:***	
GW Flow Direction:		***NOV Disc Date:***	
GW Depth:		***NOV Issued Date:***	
Areas of Concern:		***NOV Cmpliance Schd:***	
Free Product Inches:		***NOV Admin Order:***	
Fund Date:		***NOV Referred to Ag:***	
Fund Planned:	$0.00	***Stop All NOV Actions:***	No
Fund Obligated:	$0.00	***Release Invest Rpt:***	No
Fund Outlayed:	$0.00	***Dep App Letter1:***	No

Fund Judgment:	$0.00	***Correct Action Plan:***	No
Fund Recovered:	$0.00	***Dep App Letter2:***	No
Fund Comments:		***Rem Sys Install:***	No
Cellar Borings:	No	***Rem Sys Install Date:***	
Install Micro Wells:	No	***Rem Sys Monit Rpt:***	No
GW Sample:	No	***Qrtly GWtr Mon Rpt:***	No
Soil Sample:	No	***Referred to:***	
Soil Gas:	No	***No Wells:***	
Site Inspect:	No	***LPH Wells:***	
Soil Excavate:	No	***User Stamp:***	Waste Remediation
Geo Probe:	No	***Date Stamp:***	8/20/2004
Survey:	No	***Off Site Source:***	No
Geosetting:			
GW Comments:			
NOV Comments:			
Location Description:			

Work Performed:

Release Info:

Correspondence:

<u>Case Action</u>

Action:	Excavation & Hauling	***Start Date:***	
Medium:		***End Date:***	
Quantity:		***Dep Action:***	No
Unit:		***Action Date:***	

<u>Contact Info</u>

Site Contact1:		***Site Contact2:***	
Contact1 Address1:		***Contact2 Address1:***	
Contact1 Address2:		***Contact2 Address2:***	
Contact1 Town No:	0	***Contact2 Town No:***	0
Contact1 Town:		***Contact2 Town:***	
Contact1 State:		***Contact2 State:***	
Contact1 Zip:		***Contact2 Zip:***	
Contact1 Phone:		***Contact2 Phone:***	
Contact1 Fax:		***Contact2 Fax:***	
Contact1 Type:		***Contact2 Type:***	
Contact1 Email:		***Contact2 Email:***	
DEP Contact1:		***DEP Contact2:***	

<u>Site:</u> ***UCONN MOTOR POOL***
9 North Eagleville Road (9 Hillside Circle) Mansfield CT 062682409 LUST

LUST Case ID:	28855	***Monthly RPT ID:***	0
LUST Status Code:	4	***UST E Facility ID:***	6005
LUST Status:	LUST COMPLETED	***Contact Info:***	
Incident Date:	2/20/1987	***Entry Date:***	
LUST ID:	710	***Emergency:***	No
UST Event ID:	709	***Private HF:***	No
UST Site ID:	564	***Commercial HF:***	No
CR Spill Case ID:		***Comm HF LE 2100:***	No
SITS Case ID:		***Comm HF GR 2100:***	No
OLD SITS Case ID:	198700199	***Comm HF Unknown:***	No
Case Log ID:	268	***Responsible Party:***	No
UST E Owner ID:	7426	***RP Name 1:***	University of Connecticut
No Release:	No	***RP Name 2:***	
No LUST Site:	No	***RP Address1:***	31 Ledoyt Road
Motor Fuel:	Yes	***RP Address2:***	
Diesel:	No	***RP Town:***	Storrs
Gasoline:	Yes	***RP State:***	CT
Other:	Yes	***RP Town No:***	78
Other Release:	Waste Oil	***RP ZIP No:***	062693055
Leak:	No	***RP Phone:***	8604899305

Tank:	Yes	***RP Phone 2:***	
Piping:	No	***RP Fax:***	8604865477
Overfill:	No	***RP Email:***	
Removal:	Yes	***LUST Owner ID:***	
CR Candidate:	No	***Investigator ID:***	20
OCSRD Complete:	No	***Referral Source:***	
Processing Status:		***Date Referred:***	
Enviro Impact:		***Location Data:***	
Effected Popula:		***Area Extent:***	
Population Setting:		***Event Description:***	
GW Direction:		***Dt Work Performed:***	
GW Gradient:		***ALT Water Supply:***	No
Follow up Flag:	No	***Annual Precip:***	
Follow Up Date:		***Relocation:***	No
Follow Up:	The ongoing monitoring of groundwater and plume migration of this site is conducted by the Dep. Of Geology and Geophysics of the University of Connecticut under the supervision of Dr. Gary Robbins.		
Site Name 2:			

Running Comments: Spills Files, Cleanup Fund Files, UST Enforcement Files, and LUST Files

<u>Case Release</u>

Substance:	Gasoline	***Unit:***	
Quantity:	0	***Comments:***	
Source:	Leaking suction line		

<u>Tank Info</u>

EPA Reportable:	Yes	***Potable Well Sample:***	No
Closure Date:		***Sample Mws:***	No
Closure Req Rpt:	No	***GW Gauging:***	No
Dep Closure Letter:	No	***Soil Venting:***	No
Active:	No	***NOV Action:***	None
Hydro Basin:		***NOV Issued:***	
Drastic:		***NOV Due:***	
GW Classification:	GAA	***NOV Received:***	
Smpl Gauging Freq:		***NOV Closed:***	
GW Flow Direction:		***NOV Disc Date:***	
GW Depth:	2.05 to 9 ftbg	***NOV Issued Date:***	
Areas of Concern:		***NOV Cmpliance Schd:***	
Free Product Inches:	0	***NOV Admin Order:***	
Fund Date:		***NOV Referred to Ag:***	
Fund Planned:	$0.00	***Stop All NOV Actions:***	No
Fund Obligated:	$0.00	***Release Invest Rpt:***	No
Fund Outlayed:	$0.00	***Dep App Letter1:***	No
Fund Judgment:	$0.00	***Correct Action Plan:***	No
Fund Recovered:	$0.00	***Dep App Letter2:***	No
Fund Comments:		***Rem Sys Install:***	No
Cellar Borings:	No	***Rem Sys Install Date:***	
Install Micro Wells:	No	***Rem Sys Monit Rpt:***	No
GW Sample:	No	***Qrtly GWtr Mon Rpt:***	No
Soil Sample:	No	***Referred to:***	
Soil Gas:	No	***No Wells:***	11
Site Inspect:	No	***LPH Wells:***	0
Soil Excavate:	No	***User Stamp:***	Allison Forrest/ForrestA
Geo Probe:	No	***Date Stamp:***	5/1/2012
Survey:	No	***Off Site Source:***	No
Geosetting:			
GW Comments:			
NOV Comments:			
Location Description:			

Work Performed:

Release Info:

historic LUST site, MTBE in GW, delineate extent & degree

Correspondence:

Action: Monitoring Report Issued:9/28/1998 Received:9/30/1999
3rd post-remediation monitoring well report (sampled 2 bedrock wells on-site.)
Action: Monitoring Report Issued:4/1/1999 Received:4/6/1999
4th post-remediation monitoring report

Case Action

Action:	TANKS EMPTIED	***Start Date:***	2/20/1987
Medium:	Not Listed	***End Date:***	
Quantity:		***Dep Action:***	No
Unit:		***Action Date:***	2/20/1987

Contact Info

Site Contact1:		***Site Contact2:***	Herbert Woike (Fuss and O'Neill)
Contact1 Address1:		***Contact2 Address1:***	146 Hartford Road
Contact1 Address2:		***Contact2 Address2:***	
Contact1 Town No:	0	***Contact2 Town No:***	77
Contact1 Town:		***Contact2 Town:***	Manchester
Contact1 State:		***Contact2 State:***	CT
Contact1 Zip:		***Contact2 Zip:***	06040
Contact1 Phone:		***Contact2 Phone:***	8605335128
Contact1 Fax:		***Contact2 Fax:***	8605335133
Contact1 Type:		***Contact2 Type:***	
Contact1 Email:		***Contact2 Email:***	
DEP Contact1:		***DEP Contact2:***	

Correspondence

Date Issued:	9/28/1998	***User Stamp:***	
Date Due:		***Date Stamp:***	
Date Received:	9/30/1999		
Action:	Ground Water Monitoring Report		
Comments:			

Report not found in File Room during May 1, 2012 search
3rd post-remediation monitoring well report (sampled 2 bedrock wells on-site.)

Date Issued:	4/1/1999	***User Stamp:***	
Date Due:		***Date Stamp:***	
Date Received:	4/6/1999		
Action:	Ground Water Monitoring Report		
Comments:			

Fourth Post-Remedial Monitoring Report of University of Connecticut Motor Pool, Storrs (G. Robbins) Uconn: 24 mulit-level probes were sampled at their various depth and GW was analyzed for VOCs. MTBE was detected above the GWPC in 32 different levels within 15 probes ranging from 73 ug/L to 538 ug/L. All other VOCs were below the GWPC and all COCs were below the Res VC. 11 MWs were sampled and analyzed for VOCs. 4 MWs had MTBE ranging from 131 ug/L to 464 ug/L above the GWPC, but below the Res VC. All other COCs were below the GWPC and Res VC.

Date Issued:	2/20/1987	***User Stamp:***	Allison Forrest/AForrest
Date Due:		***Date Stamp:***	7/12/2011
Date Received:	2/20/1987		
Action:	Spill Report		
Comments:			

Spill Report 87-199 states that 2x5k and 1x5k gasoline tanks were tested and suction lines leaked. Tanks were pumped out and removed from the service station. A 550 WO tank will also be removed.

Date Issued:	2/27/1997	***User Stamp:***	Allison Forrest/AForrest
Date Due:		***Date Stamp:***	7/12/2011
Date Received:	2/27/1997		
Action:	UST Facility Notification		
Comments:			

A UST Removal and Closure plan prepared by Stone & Webster Engineering Corp. of New York, on 2/27/97 has been submitted to Scott Deshefy of CTDEP. A copy of this plan is attached to the UST notification form.

Date Issued: 6/5/1996
Date Due:
Date Received: 6/5/1996
Action: Tank Closure Assessment Report
Comments:
User Stamp: Allison Forrest/AForrest
Date Stamp: 7/12/2011

Connecticut Department of Public Works Statewide Undeground Storage Tank Program, CONN DPW Project No. BI-2B-760 A37, Tank Removal Report (J. James and H. Woike) Fuss & O'Neill: One piece of correspondence from OCSRD files received on 6/5/96 from Fuss and O'Neill of Manchester, CT is a UST and soil removal report. Fuss and O'Neill Consider site to be CLOSED. Removed USTs were 3x5k and 1x1.5k gasoline, 1x2k DF and 1x500 gal. WO tanks. Three gasoline tanks and one DF tank were installed in 1968, one gasoline tank installed in 1979 and the WO tank installed in 1983. Tank removal took place in August of 1995.

Date Issued: 5/31/1996
Date Due:
Date Received: 6/5/1996
Action: Interdepartmental Correspondence
Comments:
User Stamp: Allison Forrest/ForrestA
Date Stamp: 5/1/2012

Re: Statewide Underground Tank Program (J. Cassidy) State of Connecticut Dept of Public Works: A review of the UST report shows alll COCs below the prescribed actions levels for all tanks.

Date Issued: 8/28/1989
Date Due:
Date Received: 8/28/1989
Action: Interdepartmental Correspondence
Comments:
User Stamp: ForrestA/forrestlaiuppaa
Date Stamp: 5/5/2017

Correspondence (F. Bartolomeo) DEP: On August 24, 1989, the LUST Trust Program took samples from the MWs. MW-6 had PID reading from 1500 ppm to over 2000 ppm.

Date Issued: 7/18/1995
Date Due:
Date Received: 7/20/1995
Action: Remedial Action Plan (RAP)
Comments:
User Stamp: ForrestA/forrestlaiuppaa
Date Stamp: 1/31/2017

Re: Statewide Underground Tank Removal/Replacement, UCONN Motor Pool (J. Cassidy) State of Connecticut Dept of Public Works: RAP from Fuss & O'Neill

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Site: ***FORMER LANDING STRIP***
OFF BROWN'S RIDGE ROAD TOLLAND CT

SDAD

State ID:	717	***Updated:***	03/13/1995
Rem ID:		***Duplicate:***	No
Remed Master ID:	1227	***Date Created:***	
PTP ID:		***Postal District:***	
WPC Number:		***Latitude:***	
EPA ID:		***Latitude Deg:***	
GW Class:	GAA	***Latitude Min:***	
SW Class:	AA	***Latitude Sec:***	
Disposal1:		***Lat DMS:***	
Disposal2:	TO GROUND	***Longitude:***	
Disposal3:		***Longitude Deg:***	
Sample:	No	***Longitude Min:***	
Other DEP:		***Longidue Sec:***	
Updated by:	GAURA, S.	***Long DMS:***	
Up Program:	D&A	***Loc Method:***	

Waste1: Chlorinated Volatile Organic Compounds
Waste2: Non Chlorinated Volatile Organic Compounds
Waste3:
Comments: RECEIVED SOMETIME IN 1987. PERD STAFF COLLECTED SOIL AND SURFACE WATER SAMPLES 12/14/95 AND 1/4/95 (3/95)

Site: ***UCONN FOUNDATION OFFICE BUILDING***
ALUMNI ROAD MANSFIELD CT 06268

SDAD

State ID:	3733	***Updated:***	12/08/1999
Rem ID:		***Duplicate:***	No
Remed Master ID:	4135	***Date Created:***	
PTP ID:	0	***Postal District:***	
WPC Number:		***Latitude:***	
EPA ID:		***Latitude Deg:***	
GW Class:	GA	***Latitude Min:***	
SW Class:	A	***Latitude Sec:***	
Disposal1:		***Lat DMS:***	
Disposal2:		***Longitude:***	
Disposal3:		***Longitude Deg:***	
Sample:	No	***Longitude Min:***	
Other DEP:		***Longidue Sec:***	
Updated by:	BOBOWICZ, H. A.	***Long DMS:***	
Up Program:	D&A	***Loc Method:***	
Waste1:			
Waste2:			
Waste3:			

Comments: FORM III AND ECAF SUBMITTED. (12/99) ALUMNI ROAD PARCEL 23A

Site:
rt 44 and 195- husky mobil MANSFIELD CT

SPILLS

Case No:	9901771	***Responsibility:***	YES
Status:	closed	***Sign 1:***	<
Year:	3/20/1999	***Sign 2:***	
Received by:	209	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	3/20/1999	***Sign 5:***	
Time Reported:	7:48:00 PM	***Sign 6:***	
Date Release:	3/20/1999	***Sign 7:***	
Time Release:	7:30:00 PM	***Quan Gallons:***	2
State Release:	CT	***Quan Yards:***	0
Reported by:	chris	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	8752543	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:		***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	unknown
Rep Town:		***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	5/25/1999 10:48:16 AM
SR Inspector Name:	RODE, MATT	***User Stamp:***	
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	000000000006BAD4

Representing: tolland f.d.
Release Substance: GASOLINE
Emergency Measures:
Comments:

Action

Action ID: 3
Action: Contained
Year: 3/20/1999
Other:

Action ID: 2
Action: Removed
Year: 3/20/1999
Other:

Agency

Agency ID: 14
Agency: LOCAL FIRE DEPARTMENT
Year: 3/20/1999
Other:
Dep Bureau:
Dep Division:

Agency ID: 8
Agency: DEP Dispatch
Year: 3/20/1999
Other:
Dep Bureau:
Dep Division:

Agency ID: 13
Agency: Other
Year: 3/20/1999
Other: haz mat 903
Dep Bureau:
Dep Division:

Cause

Cause ID: 9
Cause: OVERFILL
Year: 3/20/1999
Other:

Class

Class ID: 8
Class: Commercial
Year: 3/20/1999
Other:

Media

Media ID: 4
Media: Ground Surface
Year: 3/20/1999
Other:

Media ID: 6
Media: Other
Year: 3/20/1999
Other: storm drain

Release

Release ID: 1
Release Type: petroleum
Year: 3/20/1999
Release Other:

Waterbody

Waterbody ID: 6
Water Body: Catch Basin
Year: 3/20/1999
Other:

Site:

Case No:	200300165	***Responsibility:***	
Status:	Closed	***Sign 1:***	
Year:	1/11/2003	***Sign 2:***	
Received by:	204	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	1/11/2003	***Sign 5:***	
Time Reported:	1/11/2003 12:28:15 PM	***Sign 6:***	
Date Release:	1/11/2003	***Sign 7:***	
Time Release:		***Quan Gallons:***	2
State Release:	CT	***Quan Yards:***	0
Reported by:	will kitchen	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4864925	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:		***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	
Rep Town:		***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	1/11/2003 12:30:16 PM
SR Inspector Name:	therrien,adam	***User Stamp:***	
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	00000000000747D6
Representing:	FD		
Release Substance:	ANTIFREEZE		
Emergency Measures:			
Comments:			

Action

Action ID: 8
Action: Sanded
Year: 1/11/2003
Other:

Action ID: 11
Action: Cleaned
Year: 1/11/2003
Other:

Agency

Agency ID: 14
Agency: LOCAL FIRE DEPARTMENT
Year: 1/11/2003
Other:
Dep Bureau:
Dep Division:

Agency ID: 8
Agency: DEP Dispatch
Year: 1/11/2003
Other:
Dep Bureau:
Dep Division:

Cause

Cause ID: 10
Cause: Container Failure
Year: 1/11/2003
Other:

Class

Class ID: 6
Class: Private
Year: 1/11/2003
Other:

Media

Media ID: 4
Media: Ground Surface
Year: 1/11/2003
Other:

Release

Release ID: 2
Release Type: chemical
Year: 1/11/2003
Release Other:

Site:
hill side and stadium MANSFIELD CT SPILLS

Case No:	200906067	***Responsibility:***	
Status:	CLOSED	***Sign 1:***	
Year:	10/24/2009	***Sign 2:***	
Received by:	210	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	10/24/2009	***Sign 5:***	
Time Reported:	10/24/2009 4:43:36 PM	***Sign 6:***	
Date Release:	10/24/2009	***Sign 7:***	
Time Release:	4:34:00 PM	***Quan Gallons:***	1
State Release:	CT	***Quan Yards:***	0
Reported by:	disp 316	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4864925	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:		***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	
Rep Town:		***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	10/27/2009 10:55:08 AM
SR Inspector Name:	McCarthy, Kevin	***User Stamp:***	CGuzman
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	0000000000081F1E

Representing: uconn fire
Release Substance: MOTOR OIL
Emergency Measures: sanded
Comments:

Action

Action ID: 8
Action: Sanded
Year: 10/24/2009
Other:

Agency

Agency ID: 14
Agency: LOCAL FIRE DEPARTMENT
Year: 10/24/2009
Other:
Dep Bureau:
Dep Division:

Cause

Cause ID:	9
Cause:	OVERFILL
Year:	10/24/2009
Other:	

Class

Class ID:	6
Class:	Private
Year:	10/24/2009
Other:	

Media

Media ID:	4
Media:	Ground Surface
Year:	10/24/2009
Other:	

Release

Release ID:	1
Release Type:	petroleum
Year:	10/24/2009
Release Other:	

Site:

hillside @ stadium rd MANSFIELD CT SPILLS

Case No:	200904990	***Responsibility:***	
Status:	CLOSED	***Sign 1:***	<
Year:	9/2/2009	***Sign 2:***	
Received by:	204	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	9/2/2009	***Sign 5:***	
Time Reported:	9/2/2009 11:18:48 AM	***Sign 6:***	
Date Release:	9/2/2009	***Sign 7:***	
Time Release:		***Quan Gallons:***	1
State Release:	CT	***Quan Yards:***	0
Reported by:	cahpman	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4864925	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:		***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	
Rep Town:		***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	9/3/2009 11:09:01 AM
SR Inspector Name:	therrien,adam	***User Stamp:***	CGuzman
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	0000000000081AFB

Representing:	uconn
Release Substance:	ANTIFREEZE
Emergency Measures:	
Comments:	

Action

Action ID:	8
Action:	Sanded
Year:	9/2/2009
Other:	

Agency

Agency ID: 14
Agency: LOCAL FIRE DEPARTMENT
Year: 9/2/2009
Other:
Dep Bureau:
Dep Division:

Agency ID: 8
Agency: DEP Dispatch
Year: 9/2/2009
Other:
Dep Bureau:
Dep Division:

Cause

Cause ID: 23
Cause: MV Accident
Year: 9/2/2009
Other:

Class

Class ID: 6
Class: Private
Year: 9/2/2009
Other:

Class ID: 4
Class: Transportation
Year: 9/2/2009
Other:

Media

Media ID: 4
Media: Ground Surface
Year: 9/2/2009
Other:

Release

Release ID: 2
Release Type: chemical
Year: 9/2/2009
Release Other:

Site:
HILLSIDE ROAD & STADIUM ROAD MANSFIELD CT SPILLS

Case No:	200900026	***Responsibility:***	
Status:	CLOSED	***Sign 1:***	<
Year:	1/3/2009	***Sign 2:***	
Received by:	203	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	1/3/2009	***Sign 5:***	
Time Reported:	6:24:00 PM	***Sign 6:***	
Date Release:	1/3/2009	***Sign 7:***	
Time Release:		***Quan Gallons:***	4
State Release:	CT	***Quan Yards:***	0
Reported by:	DISPATCHER FARLEY	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4864925	***Quan Lbs:***	0

Area 2:
Phone 2:
Area 3:
Discharger:
Discharger Phone:
Rep Street:
Rep Town:
Rep State: CT
Rep Zip:
SR Inspector Name: SUSAN CAMBELL
AT Inspector Name: **NO RESPONSE
Representing: UCONN FD
Release Substance: MOTOR VEHICLE FLUIDS
Emergency Measures:
Comments:

Quantity Record: 0
Quantity Water: 0
Historic: No
Ongoing: No
Water Body Affect: No
Water Body: NONE
Terminated: YES
Cost Recovery: No
Time Stamp: 1/5/2009 5:53:45 PM
User Stamp: cguzman
SSMA Time Stamp: 0000000000080825

Action

Action ID: 8
Action: Sanded
Year: 1/3/2009
Other:

Action ID: 20
Action: Other
Year: 1/3/2009
Other: speedy-dry

Agency

Agency ID: 8
Agency: DEP Dispatch
Year: 1/3/2009
Other:
Dep Bureau:
Dep Division:

Cause

Cause ID: 23
Cause: MV Accident
Year: 1/3/2009
Other:

Class

Class ID: 6
Class: Private
Year: 1/3/2009
Other:

Media

Media ID: 4
Media: Ground Surface
Year: 1/3/2009
Other:

Release

Release ID: 2
Release Type: chemical
Year: 1/3/2009
Release Other:

Release ID: 1

Release Type:	petroleum
Year:	1/3/2009
Release Other:	

Site:

STORRS-MANSFIELD UCONN Campus I-LOT on Stadium Road MANSFIELD CT SPILLS

Case No:	201103262	***Responsibility:***	YES
Status:	CLOSED	***Sign 1:***	~
Year:	6/14/2011	***Sign 2:***	
Received by:	205	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	6/14/2011	***Sign 5:***	
Time Reported:	6/14/2011 8:05:40 AM	***Sign 6:***	
Date Release:	6/14/2011	***Sign 7:***	
Time Release:		***Quan Gallons:***	2
State Release:	CT	***Quan Yards:***	0
Reported by:	dispatch	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4863135	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:	unk	***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	n/a
Rep Town:		***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	6/14/2011 2:28:43 PM
SR Inspector Name:	Cox, Michael	***User Stamp:***	cguzman
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	0000000000084ED3

Representing:	Uconn FD
Release Substance:	ANTIFREEZE
Emergency Measures:	
Comments:	

Action

Action ID:	3
Action:	Contained
Year:	6/14/2011
Other:	
Action ID:	11
Action:	Cleaned
Year:	6/14/2011
Other:	

Agency

Agency ID:	8
Agency:	DEP Dispatch
Year:	6/14/2011
Other:	
Dep Bureau:	
Dep Division:	
Agency ID:	14
Agency:	LOCAL FIRE DEPARTMENT
Year:	6/14/2011
Other:	
Dep Bureau:	
Dep Division:	

Cause

Cause ID:	23
Cause:	MV Accident

Year: 6/14/2011
Other:

Class

Class ID: 6
Class: Private
Year: 6/14/2011
Other:

Class ID: 4
Class: Transportation
Year: 6/14/2011
Other:

Media

Media ID: 4
Media: Ground Surface
Year: 6/14/2011
Other:

Release

Release ID: 2
Release Type: chemical
Year: 6/14/2011
Release Other:

Waterbody

Waterbody ID: 9
Water Body: Other
Year: 6/14/2011
Other: none

Site:
STORRS UCONN CAMPUS, 507 STADIUM RD (SOUTH PARKING GARAGE) MANSFIELD CT SPILLS

Case No:	200507525	**Responsibility:**	
Status:	CLOSED	**Sign 1:**	<
Year:	11/3/2005	**Sign 2:**	
Received by:	926	**Sign 3:**	
Assigned to:	0	**Sign 4:**	
Date Reported:	11/3/2005	**Sign 5:**	
Time Reported:	11/3/2005 10:36:21 AM	**Sign 6:**	
Date Release:	11/3/2005	**Sign 7:**	
Time Release:		**Quan Gallons:**	1
State Release:	CT	**Quan Yards:**	0
Reported by:	ALEX	**Quan Feet:**	0
Area 1:	860	**Quan Drums:**	0
Phone 1:	4864925	**Quan Lbs:**	0
Area 2:		**Quantity Record:**	0
Phone 2:		**Quantity Water:**	0
Area 3:		**Historic:**	No
Discharger:	UNK	**Ongoing:**	No
Discharger Phone:		**Water Body Affect:**	No
Rep Street:		**Water Body:**	NONE
Rep Town:		**Terminated:**	YES
Rep State:	CT	**Cost Recovery:**	No
Rep Zip:		**Time Stamp:**	11/3/2005 10:38:03 AM
SR Inspector Name:	CATUCCIO, DEBBIE	**User Stamp:**	dcatucci
AT Inspector Name:	**NO RESPONSE	**SSMA Time Stamp:**	000000000007A57E

Representing: UCONN FIRE DEPT
Release Substance: TRANSMISSION OIL
Emergency Measures: VEHICLE LEAKED 1 QRT FLUID ON FLOOR IN GARAGE. SPEEDY DRY APPLIED. VEHICLE REMOVED. NO DRAINS

Comments:

Action

Action ID:	11
Action:	Cleaned
Year:	11/3/2005
Other:	

Action ID:	3
Action:	Contained
Year:	11/3/2005
Other:	

Class

Class ID:	6
Class:	Private
Year:	11/3/2005
Other:	

Media

Media ID:	5
Media:	Inside Building
Year:	11/3/2005
Other:	

Release

Release ID:	1
Release Type:	petroleum
Year:	11/3/2005
Release Other:	

Site:

stadium rd/ separatist rd MANSFIELD CT SPILLS

Case No:	200105398	***Responsibility:***	YES
Status:	Closed	***Sign 1:***	
Year:	7/19/2001	***Sign 2:***	
Received by:	209	***Sign 3:***	
Assigned to:	937	***Sign 4:***	
Date Reported:	7/19/2001	***Sign 5:***	
Time Reported:	7/19/2001 6:36:59 PM	***Sign 6:***	
Date Release:	7/19/2001	***Sign 7:***	
Time Release:		***Quan Gallons:***	0
State Release:	CT	***Quan Yards:***	0
Reported by:	dick dziadus	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4296289	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:	CAPSTONE BUILDING CORP.	***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:	3415 INDEPENDENCE DR.	***Water Body:***	detention pond
Rep Town:	BIRMINGHAM	***Terminated:***	YES
Rep State:	AL	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	7/27/2001 1:51:35 PM
SR Inspector Name:	RODE, MATT	***User Stamp:***	
AT Inspector Name:	CHANDLER, JEFF	***SSMA Time Stamp:***	0000000000070FC3

Representing:	Self
Release Substance:	DIESEL FUEL
Emergency Measures:	large oil sheen and odor in a detention pond at uconn.
Comments:	

Action

Action ID:	20
Action:	Other
Year:	7/19/2001
Other:	unknown

Agency

Agency ID:	13
Agency:	Other
Year:	7/19/2001
Other:	haz mat 921
Dep Bureau:	
Dep Division:	

Agency ID:	8
Agency:	DEP Dispatch
Year:	7/19/2001
Other:	
Dep Bureau:	
Dep Division:	

Cause

Cause ID:	26
Cause:	Other
Year:	7/19/2001
Other:	unknown

Class

Class ID:	11
Class:	Other
Year:	7/19/2001
Other:	unknown

Media

Media ID:	2
Media:	Surface Water
Year:	7/19/2001
Other:	

Release

Release ID:	1
Release Type:	petroleum
Year:	7/19/2001
Release Other:	

Waterbody

Waterbody ID:	7
Water Body:	Pond
Year:	7/19/2001
Other:	

Site:

Stadium Rd. and Separtist Rd. stream running under these roads MANSFIELD CT SPILLS

Case No:	200801780	***Responsibility:***	NO
Status:	CLOSED	***Sign 1:***	
Year:	3/25/2008	***Sign 2:***	

Received by:	211	***Sign 3:***	
Assigned to:	935	***Sign 4:***	
Date Reported:	3/25/2008	***Sign 5:***	
Time Reported:	3/25/2008 7:17:25 PM	***Sign 6:***	
Date Release:	3/25/2008	***Sign 7:***	
Time Release:		***Quan Gallons:***	10
State Release:	CT	***Quan Yards:***	0
Reported by:	Steve Knauf	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4299636	***Quan Lbs:***	0
Area 2:	860	***Quantity Record:***	0
Phone 2:	9824401	***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:	UNKNOWN	***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	UNKNOWN
Rep Town:		***Terminated:***	NO
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	8/28/2008 3:11:10 PM
SR Inspector Name:	JOHNSTON, ALEXANDER	***User Stamp:***	mgranill
AT Inspector Name:	Torres, Neil	***SSMA Time Stamp:***	000000000007EFDE

Representing: Self
Release Substance: MILKY WHITE SUBSTANCE
Emergency Measures: MILKY WHITE SUBSTANCE IN STREAM.
Comments:

<u>Action</u>

Action ID: 20
Action: Other
Year: 3/25/2008
Other: INVESTIGATED

Action ID: 21
Action: Investigated
Year: 3/25/2008
Other:

<u>Agency</u>

Agency ID: 8
Agency: DEP Dispatch
Year: 3/25/2008
Other:
Dep Bureau:
Dep Division:

Agency ID: 13
Agency: Other
Year: 3/25/2008
Other: 912 contacted
Dep Bureau:
Dep Division:

<u>Cause</u>

Cause ID: 26
Cause: Other
Year: 3/25/2008
Other: UNKNOWN

<u>Class</u>

Class ID: 11
Class: Other
Year: 3/25/2008
Other: UNKNOWN

Media

Media ID:	3
Media:	Ground Water
Year:	3/25/2008
Other:	

Release

Release ID:	8
Release Type:	other
Year:	3/25/2008
Release Other:	UNKNOWN

Waterbody

Waterbody ID:	3
Water Body:	Stream/Brook
Year:	3/25/2008
Other:	

Site:

STADIUM RD. MANSFIELD CT SPILLS

Case No:	200306195	***Responsibility:***	
Status:	Closed	***Sign 1:***	<
Year:	8/22/2003	***Sign 2:***	
Received by:	915	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	8/22/2003	***Sign 5:***	
Time Reported:	8/22/2003 11:32:43 AM	***Sign 6:***	
Date Release:	8/22/2003	***Sign 7:***	
Time Release:	11:12:00 AM	***Quan Gallons:***	5
State Release:	CT	***Quan Yards:***	0
Reported by:	DISP. CHAPMAN	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4684925	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:	860	***Historic:***	No
Discharger:	PRIVATE VEHICLE	***Ongoing:***	No
Discharger Phone:	0000000	***Water Body Affect:***	No
Rep Street:		***Water Body:***	NA
Rep Town:		***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	8/22/2003 11:37:24 AM
SR Inspector Name:	Capuano, Mike	***User Stamp:***	
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	0000000000075BD1
Representing:	FIRE DEPT.		
Release Substance:	MOTOR OILS		
Emergency Measures:	CONTAINED , SANDED.		
Comments:			

Action

Action ID:	8
Action:	Sanded
Year:	8/22/2003
Other:	

Action ID:	3
Action:	Contained
Year:	8/22/2003
Other:	

Cause

Cause ID: 23
Cause: MV Accident
Year: 8/22/2003
Other:

Class

Class ID: 4
Class: Transportation
Year: 8/22/2003
Other:

Media

Media ID: 4
Media: Ground Surface
Year: 8/22/2003
Other:

Release

Release ID: 1
Release Type: petroleum
Year: 8/22/2003
Release Other:

Waterbody

Waterbody ID: 9
Water Body: Other
Year: 8/22/2003
Other: NA

Site:
stadium road MANSFIELD CT SPILLS

Case No: 200500522
Status: Closed
Year: 1/25/2005
Received by: 202
Assigned to: 0
Date Reported: 1/25/2005
Time Reported: 1/25/2005 6:30:19 PM
Date Release: 1/25/2005
Time Release:
State Release: CT
Reported by: 309
Area 1: 860
Phone 1: 4864925
Area 2:
Phone 2:
Area 3:
Discharger:
Discharger Phone:
Rep Street:
Rep Town:
Rep State: CT
Rep Zip:
SR Inspector Name: Mazzoccolli,Christina
AT Inspector Name: **NO RESPONSE
Representing: uconn fd
Release Substance: DIESEL FUEL
Emergency Measures: Speedy Dry
Comments:

Responsibility:
Sign 1:
Sign 2:
Sign 3:
Sign 4:
Sign 5:
Sign 6:
Sign 7:
Quan Gallons: 3
Quan Yards: 0
Quan Feet: 0
Quan Drums: 0
Quan Lbs: 0
Quantity Record: 0
Quantity Water: 0
Historic: No
Ongoing: No
Water Body Affect: No
Water Body: none
Terminated: YES
Cost Recovery: No
Time Stamp: 1/26/2005 9:17:00 AM
User Stamp:
SSMA Time Stamp: 0000000000078B14

Action

Action ID:	8
Action:	Sanded
Year:	1/25/2005
Other:	

Agency

Agency ID:	8
Agency:	DEP Dispatch
Year:	1/25/2005
Other:	
Dep Bureau:	
Dep Division:	

Agency ID:	14
Agency:	LOCAL FIRE DEPARTMENT
Year:	1/25/2005
Other:	
Dep Bureau:	
Dep Division:	

Cause

Cause ID:	26
Cause:	Other
Year:	1/25/2005
Other:	ruptured fuel line

Class

Class ID:	4
Class:	Transportation
Year:	1/25/2005
Other:	

Media

Media ID:	4
Media:	Ground Surface
Year:	1/25/2005
Other:	

Release

Release ID:	1
Release Type:	petroleum
Year:	1/25/2005
Release Other:	

Waterbody

Waterbody ID:	9
Water Body:	Other
Year:	1/25/2005
Other:	none

Site:

STADIUM ROAD MANSFIELD CT SPILLS

Case No:	200305974	***Responsibility:***	YES
Status:	Closed	***Sign 1:***	
Year:	8/13/2003	***Sign 2:***	
Received by:	934	***Sign 3:***	

Assigned to:	0	***Sign 4:***	
Date Reported:	8/13/2003	***Sign 5:***	
Time Reported:	8/13/2003 10:46:18 AM	***Sign 6:***	
Date Release:	8/13/2003	***Sign 7:***	
Time Release:		***Quan Gallons:***	2
State Release:	CT	***Quan Yards:***	0
Reported by:	UCONN FD	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4864925	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	2
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:	E&S TRUCKING	***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	N/A
Rep Town:	CANTERBURY	***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:	06331	***Time Stamp:***	8/13/2003 10:56:18 AM
SR Inspector Name:	Williamson, Matt	***User Stamp:***	
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	0000000000075AF7

Representing: Self
Release Substance: HYDRAULIC OIL
Emergency Measures: SANDED
Comments:

<u>Action</u>

Action ID: 8
Action: Sanded
Year: 8/13/2003
Other:

<u>Agency</u>

Agency ID: 8
Agency: DEP Dispatch
Year: 8/13/2003
Other:
Dep Bureau:
Dep Division:

<u>Cause</u>

Cause ID: 1
Cause: Hose Failure
Year: 8/13/2003
Other:

<u>Class</u>

Class ID: 8
Class: Commercial
Year: 8/13/2003
Other:

<u>Media</u>

Media ID: 4
Media: Ground Surface
Year: 8/13/2003
Other:

<u>Release</u>

Release ID: 1
Release Type: petroleum

Year: 8/13/2003
Release Other:

Waterbody

Waterbody ID: 9
Water Body: Other
Year: 8/13/2003
Other: N/A

Site:
stadium road MANSFIELD CT SPILLS

Case No:	9705201	***Responsibility:***	
Status:	Closed	***Sign 1:***	<
Year:	9/16/1997	***Sign 2:***	
Received by:	200	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	9/15/1997	***Sign 5:***	
Time Reported:	9/16/1997 3:07:17 AM	***Sign 6:***	
Date Release:	9/15/1997	***Sign 7:***	
Time Release:	1:44:00 AM	***Quan Gallons:***	0
State Release:	CT	***Quan Yards:***	0
Reported by:	dan burnham	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4864925	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:		***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	
Rep Town:		***Terminated:***	
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	9/16/1997 7:59:32 AM
SR Inspector Name:	Rowley, Butch	***User Stamp:***	
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	00000000000688F0

Representing: uconn fire dept
Release Substance: MOTOR OIL
Emergency Measures:
Comments:

Media

Media ID: 4
Media: Ground Surface
Year: 9/16/1997
Other:

Release

Release ID: 1
Release Type: petroleum
Year: 9/16/1997
Release Other:

Site:
stadium road MANSFIELD CT SPILLS

Case No:	9705202	***Responsibility:***	
Status:	Closed	***Sign 1:***	
Year:	9/16/1997	***Sign 2:***	
Received by:	200	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	9/16/1997	***Sign 5:***	
Time Reported:	9/16/1997 3:08:58 AM	***Sign 6:***	
Date Release:	9/16/1997	***Sign 7:***	

Time Release:		***Quan Gallons:***	1
State Release:	CT	***Quan Yards:***	0
Reported by:	dan burnham	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4864925	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:		***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	none
Rep Town:		***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	9/16/1997 7:59:57 AM
SR Inspector Name:	Rowley, Butch	***User Stamp:***	
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	00000000000688F1

Representing: ucon fire dept
Release Substance: MOTOR OIL
Emergency Measures: sanded
Comments:

Action

Action ID: 8
Action: Sanded
Year: 9/16/1997
Other:

Agency

Agency ID: 8
Agency: DEP Dispatch
Year: 9/16/1997
Other:
Dep Bureau:
Dep Division:

Cause

Cause ID: 23
Cause: MV Accident
Year: 9/16/1997
Other:

Media

Media ID: 4
Media: Ground Surface
Year: 9/16/1997
Other:

Site:
stadium rd MANSFIELD CT SPILLS

Case No:	200402719	***Responsibility:***	YES
Status:	Closed	***Sign 1:***	
Year:	4/30/2004	***Sign 2:***	
Received by:	925	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	4/30/2004	***Sign 5:***	
Time Reported:	4/30/2004 3:13:47 PM	***Sign 6:***	
Date Release:	4/30/2004	***Sign 7:***	
Time Release:		***Quan Gallons:***	1
State Release:	CT	***Quan Yards:***	0
Reported by:	disp	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4864925	***Quan Lbs:***	0

Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:	hose broke	***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	na
Rep Town:		***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	5/3/2004 8:09:04 AM
SR Inspector Name:	LIANO, MARK	***User Stamp:***	
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	00000000000771C0
Representing:	fire department		
Release Substance:	ANTIFREEZE		
Emergency Measures:	sanded		
Comments:			

Action

Action ID: 8
Action: Sanded
Year: 4/30/2004
Other:

Agency

Agency ID: 9
Agency: DEP
Year: 4/30/2004
Other:
Dep Bureau: BUREAU OF WASTE MANAGEMENT
Dep Division: OIL AND CHEMICAL SPILL RESPONSE

Cause

Cause ID: 1
Cause: Hose Failure
Year: 4/30/2004
Other:

Class

Class ID: 6
Class: Private
Year: 4/30/2004
Other:

Media

Media ID: 4
Media: Ground Surface
Year: 4/30/2004
Other:

Release

Release ID: 2
Release Type: chemical
Year: 4/30/2004
Release Other:

Waterbody

Waterbody ID: 9
Water Body: Other
Year: 4/30/2004

Other: na

Site:

STORRS-MANSFIELD UCONN Hillside and Stadium road MANSFIELD CT SPILLS

Case No:	200906001	***Responsibility:***	
Status:	CLOSED	***Sign 1:***	
Year:	10/21/2009	***Sign 2:***	
Received by:	205	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	10/21/2009	***Sign 5:***	
Time Reported:	10/21/2009 1:25:19 PM	***Sign 6:***	
Date Release:	10/21/2009	***Sign 7:***	
Time Release:		***Quan Gallons:***	0
State Release:	CT	***Quan Yards:***	0
Reported by:	dispatch	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4864925	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:	UNKNOWN	***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	n/a
Rep Town:		***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	10/22/2009 11:16:14 AM
SR Inspector Name:	Cox, Michael	***User Stamp:***	CGuzman
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	0000000000081EDC

Representing: UCON FD
Release Substance: ANTIFREEZE
Emergency Measures: contents of radiator
Comments:

Action

Action ID: 20
Action: Other
Year: 10/21/2009
Other: speedi dry

Agency

Agency ID: 14
Agency: LOCAL FIRE DEPARTMENT
Year: 10/21/2009
Other:
Dep Bureau:
Dep Division:

Agency ID: 8
Agency: DEP Dispatch
Year: 10/21/2009
Other:
Dep Bureau:
Dep Division:

Cause

Cause ID: 23
Cause: MV Accident
Year: 10/21/2009
Other:

Class

Class ID: 4

Class: Transportation
Year: 10/21/2009
Other:

Class ID: 6
Class: Private
Year: 10/21/2009
Other:

Media

Media ID: 6
Media: Other
Year: 10/21/2009
Other: roadway

Release

Release ID: 2
Release Type: chemical
Year: 10/21/2009
Release Other:

Waterbody

Waterbody ID: 9
Water Body: Other
Year: 10/21/2009
Other: none

Site:
int hillside road and stadium road MANSFIELD CT

SPILLS

Case No:	200905328
Status:	CLOSED
Year:	9/20/2009
Received by:	201
Assigned to:	0
Date Reported:	9/20/2009
Time Reported:	9/20/2009 6:15:29 PM
Date Release:	9/20/2009
Time Release:	
State Release:	CT
Reported by:	dispatcher farley
Area 1:	860
Phone 1:	4864801
Area 2:	
Phone 2:	
Area 3:	
Discharger:	
Discharger Phone:	
Rep Street:	
Rep Town:	
Rep State:	CT
Rep Zip:	
SR Inspector Name:	Burkey, Rachael
AT Inspector Name:	**NO RESPONSE
Representing:	uconn pd
Release Substance:	ANTIFREEZE
Emergency Measures:	
Comments:	

Responsibility:	
Sign 1:	<
Sign 2:	
Sign 3:	
Sign 4:	
Sign 5:	
Sign 6:	
Sign 7:	
Quan Gallons:	1
Quan Yards:	0
Quan Feet:	0
Quan Drums:	0
Quan Lbs:	0
Quantity Record:	0
Quantity Water:	0
Historic:	No
Ongoing:	No
Water Body Affect:	No
Water Body:	
Terminated:	NO
Cost Recovery:	No
Time Stamp:	9/20/2009 6:17:40 PM
User Stamp:	RBurkey
SSMA Time Stamp:	0000000000081C49

Action

Action ID: 8
Action: Sanded
Year: 9/20/2009

Other:

Agency

Agency ID:	4
Agency:	Local Police
Year:	9/20/2009
Other:	
Dep Bureau:	
Dep Division:	

Agency ID:	8
Agency:	DEP Dispatch
Year:	9/20/2009
Other:	
Dep Bureau:	
Dep Division:	

Cause

Cause ID:	26
Cause:	Other
Year:	9/20/2009
Other:	motor vehicle overheated

Class

Class ID:	4
Class:	Transportation
Year:	9/20/2009
Other:	

Media

Media ID:	4
Media:	Ground Surface
Year:	9/20/2009
Other:	

Release

Release ID:	2
Release Type:	chemical
Year:	9/20/2009
Release Other:	

Site:

HUSKY DR/HILLTOP APTS STORRS-MANSFIELD MANSFIELD CT SPILLS

Case No:	200504485	***Responsibility:***	YES
Status:	Closed	***Sign 1:***	~
Year:	7/12/2005	***Sign 2:***	
Received by:	935	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	7/12/2005	***Sign 5:***	
Time Reported:	7/12/2005 12:45:28 PM	***Sign 6:***	
Date Release:	7/12/2005	***Sign 7:***	
Time Release:		***Quan Gallons:***	5
State Release:	CT	***Quan Yards:***	0
Reported by:	ALEX	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4864925	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:	UCONN CONST. SUBCONTRACTOR	***Ongoing:***	No

Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	
Rep Town:		***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	7/12/2005 12:49:17 PM
SR Inspector Name:	Torres, Neil	***User Stamp:***	
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	00000000000799F4

Representing: UCONN FD
Release Substance: DIESEL FUEL
Emergency Measures: GENERATOR LEAKED, SUB HIRED EARTH TECH TO CLEANUP
Comments:

Action

Action ID: 3
Action: Contained
Year: 7/12/2005
Other:

Action ID: 4
Action: Contracted
Year: 7/12/2005
Other:

Agency

Agency ID: 14
Agency: LOCAL FIRE DEPARTMENT
Year: 7/12/2005
Other:
Dep Bureau:
Dep Division:

Cause

Cause ID: 10
Cause: Container Failure
Year: 7/12/2005
Other:

Class

Class ID: 6
Class: Private
Year: 7/12/2005
Other:

Media

Media ID: 4
Media: Ground Surface
Year: 7/12/2005
Other:

Release

Release ID: 1
Release Type: petroleum
Year: 7/12/2005
Release Other:

Waterbody

Waterbody ID: 9
Water Body: Other

Year: 7/12/2005
Other: NONE

Site:
hillside rd and stadium rd MANSFIELD CT SPILLS

Case No:	200307425	***Responsibility:***	
Status:	Closed	***Sign 1:***	<
Year:	10/11/2003	***Sign 2:***	
Received by:	208	***Sign 3:***	
Assigned to:	0	***Sign 4:***	
Date Reported:	10/11/2003	***Sign 5:***	
Time Reported:	10/11/2003 2:29:47 PM	***Sign 6:***	
Date Release:	10/11/2003	***Sign 7:***	
Time Release:		***Quan Gallons:***	2
State Release:	CT	***Quan Yards:***	0
Reported by:	fd	***Quan Feet:***	0
Area 1:	860	***Quan Drums:***	0
Phone 1:	4864925	***Quan Lbs:***	0
Area 2:		***Quantity Record:***	0
Phone 2:		***Quantity Water:***	0
Area 3:		***Historic:***	No
Discharger:		***Ongoing:***	No
Discharger Phone:		***Water Body Affect:***	No
Rep Street:		***Water Body:***	
Rep Town:		***Terminated:***	YES
Rep State:	CT	***Cost Recovery:***	No
Rep Zip:		***Time Stamp:***	10/11/2003 2:30:08 PM
SR Inspector Name:	Monarca, Vincent	***User Stamp:***	
AT Inspector Name:	**NO RESPONSE	***SSMA Time Stamp:***	0000000000076086

Representing: fd
Release Substance: GASOLINE
Emergency Measures: sanded
Comments:

Action

Action ID: 8
Action: Sanded
Year: 10/11/2003
Other:

Agency

Agency ID: 14
Agency: LOCAL FIRE DEPARTMENT
Year: 10/11/2003
Other:
Dep Bureau:
Dep Division:

Agency ID: 8
Agency: DEP Dispatch
Year: 10/11/2003
Other:
Dep Bureau:
Dep Division:

Cause

Cause ID: 23
Cause: MV Accident
Year: 10/11/2003
Other:

Class

Class ID:	6
Class:	Private
Year:	10/11/2003
Other:	

Media

Media ID:	4
Media:	Ground Surface
Year:	10/11/2003
Other:	

Release

Release ID:	1
Release Type:	petroleum
Year:	10/11/2003
Release Other:	

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

National Priorities List (Superfund)-NPL: EPA's (United States Environmental Protection Agency) list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action.
Government Publication Date: Jun 11, 2019

National Priority List - Proposed: PROPOSED NPL

Includes sites proposed (by the EPA, the state, or concerned citizens) for addition to the NPL due to contamination by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.
Government Publication Date: Jun 11, 2019

Deleted NPL: DELETED NPL

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.
Government Publication Date: Jun 11, 2019

SEMS List 8R Active Site Inventory: SEMS

The Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted.
Government Publication Date: Jun 11, 2019

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).
Government Publication Date: Jun 1985

SEMS List 8R Archive Sites: SEMS ARCHIVE

The Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.
Government Publication Date: Jun 11, 2019

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Jun 3, 2019

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Government Publication Date: Jun 3, 2019

RCRA Generator List: RCRA LQG

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Jun 3, 2019

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Jun 3, 2019

RCRA Conditionally Exempt and Very Small Quantity Generators List: RCRA CESQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Conditionally Exempt and Very Small Quantity Generators (VSQG and CESQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG and CESQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Jun 3, 2019

RCRA Non-Generators: RCRA NON GEN

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Jun 3, 2019

Federal Engineering Controls-ECs: FED ENG

Engineering controls (ECs) encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Sep 20, 2018

Federal Institutional Controls- ICs: FED INST

Institutional controls are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's (United States Environmental Protection Agency) expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Government Publication Date: Sep 20, 2018

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Mar 21, 2019

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 11, 2019

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Petroleum Refineries: REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Jul 17, 2018

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Jan 18, 2019

LIEN on Property: SEMS LIEN

The EPA Superfund Enterprise Management System (SEMS) provides LIEN information on properties under the EPA Superfund Program.

Government Publication Date: Jun 11, 2019

Superfund Decision Documents: SUPERFUND ROD

This database contains a listing of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD), along with other associated memos and files. This information is maintained and made available by the US EPA (Environmental Protection Agency).

Government Publication Date: Jun 11, 2019

State

Inventory of Hazardous Waste Disposal Sites: SHWS

State Hazardous Waste Sites list made available by the Department of Energy and Environmental Protection (DEEP). These are sites which may pose a threat to the environment or public health and are listed on the Inventory of Hazardous Waste Disposal Sites, pursuant to section 22a-133c of the Connecticut General Statutes (CGS). This database is state equivalent CERCLIS.

Government Publication Date: Mar 5, 2019

Delisted Hazardous Waste Sites List: DELISTED SHWS

List of sites removed from the State Hazardous Waste Sites list made available by the Department of Energy and Environmental Protection (DEEP).

Government Publication Date: Mar 5, 2019

Active and Inactive Landfills: SWF/LF

List of Active and Closed Landfills, this list made available by The Connecticut Department of Energy and Environmental Protection.

Government Publication Date: Aug 6, 2019

Leaking Underground Storage Tanks: LUST

The Connecticut Department of Energy and Environmental Protection (DEEP) Leaking Underground Storage Tank Database. This database is a list of leaking underground storage tanks reported to the DEEP. It includes information gathered by DEEP personnel during the initial report of the release and site visit. It does not track the status of a site over the long term.

Government Publication Date: Aug 15, 2019

Delisted Leaking Storage Tanks: DELISTED LST

This database contains a list of leaking storage tank sites that were removed from the Connecticut Department of Energy and Environmental Protection (DEEP) Leaking Underground Storage Tank Database.

Government Publication Date: Aug 15, 2019

Underground Storage Tank Facilities: UST

List of Underground Storage Tanks registered with the Department of Energy and Environmental Protection.

Government Publication Date: Jul 22, 2019

Delisted Storage Tanks: DELISTED TANKS

This database contains a list of storage tanks that were removed from the database provided by Connecticut Department of Energy and Environmental Protection (DEEP).

Government Publication Date: Jul 22, 2019

Environmental Land Use Restriction (ELUR): AUL

An Environmental Land Use Restriction (ELUR) is an easement granted to the Commissioner of the Department of Energy and Environmental Protection (DEEP) by the property owner that is recorded on the municipal land records. The purpose of an ELUR is to minimize the risk of human exposure to pollutants and hazards to the environment by preventing specific uses or activities at a property or a portion of a property. An ELUR is a tool which permits the remedial goals for a property to be dependent on the exposure risk associated with its use.

Government Publication Date: Jul 10, 2019

Marine Terminals: AST

List of facilities licensed under the Department of Energy & Environmental Protection (DEEP) Marine Terminals licensing program. Sections 22a-449(b) and (c) of the Connecticut General Statutes (CGS) require that all owners or operators of terminals which receive petroleum or hazardous chemical liquid products from waterborne vessels or dispense such products to vessels apply for a license.

Government Publication Date: Jun 30, 2018

Voluntary Remediation Sites: VCP

Sites involved in the Department of Energy and Environmental Protection (DEEP) Voluntary Remediation Program. There are two voluntary remediation programs in Connecticut under Connecticut General Statutes (CGS) sections 22a-133x and 22a-133y. Both programs are an elective process for property owners who wish to expedite the remediation of polluted property, thus enabling them the advantage of a remediated site should they ever decide to sell the property.

Government Publication Date: Jul 10, 2019

DEEP Brownfields Inventory: BROWNFIELDS

Inventory of brownfields sites maintained by the Department of Energy and Environmental Protection (DEEP). A brownfield is defined by Connecticut General Statutes §32-9kk(a)(1) as "any abandoned or underutilized site where redevelopment, reuse or expansion has not occurred due to the presence or potential presence of pollution in the buildings, soil or groundwater that requires investigation or remediation before or in conjunction with the restoration, redevelopment, reuse and expansion of the property."

Government Publication Date: Aug 03, 2017

CBRA Brownfields: CBRA BRWN

The Connecticut Brownfields Redevelopment Authority (CBRA) is a wholly owned subsidiary of the Connecticut Development Authority and provides Direct and Indirect Financial Assistance for Brownfields Remediation in the form of Direct Loans, Loan Guarantees made in concert with qualifying financial Institutions, Tax Increment Financing (TIF) for brownfields redevelopment and information technology projects, Issue Bonds.

Government Publication Date: Mar 2013

DECD Brownfields portfolio: BROWNFIELDS

This is a list of financial assistance agreements for brownfield projects from January 2005 made available by the Department of Economic and Community Development of Connecticut.

Government Publication Date: Jul 11, 2019

Tribal

Leaking Underground Storage Tanks (LUSTs) on Indian Lands: ILST

Leaking USTs on Tribal/Indian Lands in Region 1, which includes Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont.

Government Publication Date: Oct 14, 2017

Underground Storage Tanks (USTs) on Indian Lands: IUST

USTs on Tribal/Indian Lands in Region 1, which includes Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont.

Government Publication Date: Oct 14, 2017

Voluntary Cleanup Priority Listing on Indian Lands: INDIAN VCP

Voluntary Cleanups of Priority Sites located on Indian Land in Region 1, which includes Connecticut.

Government Publication Date: Mar 8, 2011

Delisted Tribal Leaking Storage Tanks: DELISTED ILST

Leaking Underground Storage Tank facilities which have been removed from the Regional Tribal LUST lists made available by the EPA.

Government Publication Date: Oct 14, 2017

Delisted Tribal Underground Storage Tanks: DELISTED IUST

Underground Storage Tank facilities which have been removed from the Regional Tribal UST lists made available by the EPA.

Government Publication Date: Oct 14, 2017

County

No County standard environmental record sources available for this State.

Additional Environmental Record Sources

Federal

PFOA/PFOS Contaminated Sites: PFAS NPL

List of sites where PFOA or PFOS contaminants have been found in drinking water or soil. Made available by the Federal Environmental Protection Agency (EPA).

Government Publication Date: Nov 15, 2018

Facility Registry Service/Facility Index: FINDS/FRS

The US Environmental Protection Agency (EPA)'s Facility Registry System (FRS) is a centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, data collected from EPA's Central Data Exchange registrations and data management personnel.

Government Publication Date: Apr 23, 2019

Toxics Release Inventory (TRI) Program: TRIS

The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Dec 31, 2017

Perfluorinated Alkyl Substances (PFAS) Releases: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a Per- or polyfluorinated alkyl substance (PFAS) included in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances. The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Dec 31, 2017

Hazardous Materials Information Reporting System: HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Jan 8, 2019

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department") provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Jul 18, 2018

Toxic Substances Control Act: TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).
Government Publication Date: Jun 30, 2017

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.
Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.
Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.
Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the cleanup process, the Environmental Protection Agency (EPA) conducts a search to find the potentially responsible parties (PRPs). EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site.
Government Publication Date: Jun 11, 2019

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.
Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) is a system that provides information for the Federal Enforcement and Compliance (FE&C) and the National Pollutant Discharge Elimination System (NPDES) programs. The FE&C component supports the Environmental Protection Agency's (EPA) Civil Enforcement and Compliance program activities. These activities include Compliance Assistance, Compliance Monitoring and Enforcement. The NPDES program supports tracking of NPDES permits, limits, discharge monitoring data and other program reports.
Government Publication Date: Nov 18, 2016

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from the Integrated Compliance Information System (ICIS). The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.
Government Publication Date: May 29, 2018

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).
Government Publication Date: May 29, 2018

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DoD) is responsible for an environmental restoration. This list is published by the U.S. Army Corps of Engineers.

Government Publication Date: Oct 23, 2018

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: Nov 1, 2018

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) contains mine identification numbers issued by the Department of Labor Mine Safety and Health Administration (MSHA) for mines active or opened since 1971. Note that addresses may or may not correspond with the physical location of the mine itself.

Government Publication Date: May 3, 2019

Alternative Fueling Stations: ALT FUELS

List of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE). The National Renewable Energy Laboratory (NREL) obtains information about new stations from trade media, Clean Cities coordinators, a Submit New Station form on the Station Locator website, and through collaborating with infrastructure equipment and fuel providers, original equipment manufacturers (OEMs), and industry groups.

Government Publication Date: Jun 26, 2019

Registered Pesticide Establishments: SSTS

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: Sep 1, 2018

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Mar 20, 2019

State

Environmental Property Liens Recorded: LIENS

The Department of Energy and Environmental Protection (DEEP) Bureau of Financial & Support Services maintains the Environmental Property Liens Recorded Database. The Connecticut General Statutes (CGS) allow the State of Connecticut to claim a lien for any amount paid by the Commissioner of the DEEP to contain and remove or mitigate the effects of a spill on real property.

Government Publication Date: Jan 11, 2019

Property Transfer Sites: CT PROPERTY

The Property Transfer Program, administered by the Remediation Division of the Bureau of Water Protection and Land Reuse, requires the disclosure of environmental conditions when certain real properties and/or businesses ("establishments") are transferred.

Government Publication Date: Jul 10, 2019

Dry Cleaning Establishment Remediation Fund: DRYC REM

List of sites in the Dry Cleaning Establishment Remediation Fund Portfolio made available by the Office of Brownfield Remediation and Development. This program provides grants to eligible dry cleaning business owners/operators or property owners for the clean-up, containment, or mitigation of pollution resulting from releases of tetrachloroethylene, Stoddard solvent, or other chemicals used for dry cleaning. The grants may also be used for measures undertaken to prevent such pollution and for providing potable drinking water when necessary.

Government Publication Date: Aug 27, 2019

Spill Incident Tracking System (SITS): SPILLS

List of incident sites recorded in the Spill Incident Tracking System (SITS), maintained by the Connecticut Department of Energy and Environmental Protection (DEEP) Emergency Response Unit. Chapter 446k Section 22a-450 of the Connecticut General Statues requires that all incidents of discharge, spillage, uncontrolled loss, seepage or filtration of oil or petroleum or chemical liquids or solid, liquid or gaseous products or hazardous wastes be reported to the DEEP. Note, this database does not include incidents prior to 1996.

Government Publication Date: Aug 15, 2019

Hazardous Waste Manifest Data: CT MANIFEST

All shipments of hazardous waste within, into, or from Connecticut require the use of a federal hazardous waste manifest form. The manifest form contains information about: the facility where the waste was generated; the waste generated and its transportation; and the treatment, storage, and disposal facility (TSDF) accepting the shipment. This is a list of waste manifests and associated waste generating facilities; the data is gathered and maintained by the Connecticut Department of Energy and Environmental Protection (DEEP) Hazardous Waste Management program.
Note: As of September 29, 2015, generators are no longer required to submit a photocopy of their completed manifest to DEEP.

Government Publication Date: Dec 1, 2014

Hazardous Waste Manifest Data - Treatment, Storage, and Disposal Facilities: CT MAN TSDF

All shipments of hazardous waste within, into, or from Connecticut require the use of a federal hazardous waste manifest form. The manifest form contains information about: the facility where the waste was generated; the waste generated and its transportation; and the treatment, storage, and disposal facility (TSDF) accepting the shipment. This is a list of TSDF locations in the state of Connecticut who have been recorded within the manifest data (CT MANIFEST) as a receiver of waste.

Government Publication Date: Dec 1, 2014

Hazardous Waste Handlers: CT HAZ HANDLERS

As a part of Hazardous Waste Manifest database, the Connecticut Department of Energy and Environmental Protection (DEEP) Hazardous Waste Management program keeps a listing of Hazardous Waste Handlers and their status as a generator, transporter, or treatment, storage, and disposal facility (TSDF). This is a list of generator and TSDF facilities which do not have associated records in the Hazardous Waste Manifest Data.

Government Publication Date: Dec 1, 2014

Hazard Notifications: HZ NOTIFICATION

Property owners are required to submit information on certain types of environmental conditions to the Department of Energy & Environmental Protection (DEEP) when such conditions are encountered during an environmental site investigation or remediation of a parcel. DEEP refers to the reporting of these conditions as "reporting of significant environmental hazards" or "hazard notifications".

Government Publication Date: Jul 10, 2019

Site Discovery and Assessment Database: SDAD

The Site Discovery and Assessment Database list sites in question where hazardous waste may have been disposed. These sites were reported to the Enforcement and Remediation Division of the Department of Energy & Environmental Protection (DEEP). This is a historical listing, and is no longer updated by the DEEP.

Government Publication Date: Sep 11, 2009

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

Appendix E – SHPO Correspondence

Department of Economic and Community Development
State Historic Preservation Office
450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | 860.500.2300 | cultureandtourism.org

PROJECT REVIEW COVER FORM

This is: ☒ a new submittal ☐ supplemental information ☐ other Date Submitted: 12/11/19

PROJECT INFORMATION

Project Name: University of Connecticut (UConn) Ice Hockey Arena

Project Proponent: University of Connecticut
The individual or group sponsoring, organizing, or proposing the project.

Project Street Address: approximately 1,500' east of intersection of Jim Calhoun Way and Separatist Road
Include street number, street name, and or Route Number. If no street address exists give closest intersection.

City or Town: Mansfield County: Tolland County
Please use the municipality name and **not** the village or hamlet.

PROJECT DESCRIPTION

Describe the overall project in detail. As applicable, provide any information regarding past land use, project area size, renovation plans, demolitions, and/or new construction. Note if this will included in a separate attachment:
See Attachment A

List all state and federal agencies involved in the project and indicate the funding, permit, license or approval program pertaining to the proposed project:

Agency Type	Agency Name	Program Name
☒ State ☐ Federal	University of Connecticut	funding
☐ State ☒ Federal	US Army Corps of Engineers	wetland permit
☒ State ☐ Federal	DEEP	wetland permit
☐ State ☐ Federal		

If there is no state or federal agency involvement, please state the reason for your review request:

FOR SHPO USE ONLY

Based on the information submitted to our office for the above named property and project, it is the opinion of the Connecticut State Historic Preservation Office that <u>no historic properties will be affected</u> by the proposed activities.*

Mary Dunne/Catherine Labadia Date
Deputy State Historic Preservation Officer

*All other determinations of effect will result in a formal letter from this office

Connecticut still revolutionary | Department of Economic and Community Development | State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | 860.500.2300 | cultureandtourism.org

PROJECT REVIEW COVER FORM

CULTURAL RESOURCES IDENTIFICATION

Background research for previously identified historic properties within a project area may be undertaken at the SHPO's office. To schedule an appointment, please contact Catherine Labadia, 860-500-2329 or Catherine.labadia@ct.gov. Some applicants may find it advantageous to hire a qualified historic preservation professional to complete the identification and evaluation of historic properties.

Are there any historic properties listed on the State or National Register of Historic Places within the project area?

☐ Yes ■ No ☐ Do Not Know **If yes**, please identify: ______

Architecture

Are there any buildings, structures, or objects within the project area (houses, bridges, barns, walls, etc.)?

■ Yes (attach clearly labelled photographs of each resource and applicable property cards from the municipality assessor)

☐ No (proceed to next section)

Are any of the buildings, structures or objects greater than 50 years old? ☐ Yes ■ No ☐ Do Not Know

If the project involves rehabilitation, demolition, or alterations to existing buildings older than 50 years, provide a work plan (If window replacements are proposed, provide representative photographs of existing windows).

Archeology

Does the proposed project involve ground disturbing activities?

■ Yes (provide below or attach a description of current and prior land use and disturbances. Attach an excerpt of the soil survey map for the project area. These can be created for free at: https://websoilsurvey.nrcs.usda.gov

see Attached Phase 1A Archaeological Reconnaissance Survey

☐ No

CHECKLIST (Did you attach the following information?) Map, photos and soil survey map in attached reports

Required for all Projects	Required for Projects with architectural resources
■ Completed Form	☐ Work plans for rehabilitation or renovation
■ Map clearly labelled depicting project area	☐ Assessor's Property Card
■ Photographs of current site conditions	Required for Projects with ground disturbing activities
■ Site or project plans for new construction	■ Soil survey map
Suggested Attachments, as needed	
■ Supporting documents needed to explain project	■ Supporting documents identifying historic properties
■ Historic maps or aerials (available at http://magic.lib.uconn.edu or https://www.historicaerials.com/)	

PROJECT CONTACT

Name: Stephanie Dyer-Carroll Firm/Agency: FHI

Address: 416 Asylum Street

City: Hartford State: CT Zip: 06103

Phone: 860-256-4922 Email: sdyer-carroll@fhiplan.com

Federal and state laws exist to ensure that agencies, or their designated applicants, consider the impacts of their projects on historic resources. At a minimum, submission of this completed form with its attachments constitutes a request for review by the Connecticut SHPO. The responsibility for preparing documentation, including the identification of historic properties and the assessment of potential effects resulting from the project, rests with the federal or state agency, or its designated applicant. The role of SHPO is to review, comment, and consult. SHPO's ability to complete a timely project review largely depends on the quality of the materials submitted. Please mail the completed form with all attachments to the attention of Environmental Review at the address above. Electronic submissions are not accepted at this time.

UConn Hockey Arena
Project Description
Attachment A
Project Review Cover Form
December 10, 2019

The University of Connecticut (University or UConn) is planning development of a new ice hockey arena and surface parking on approximately 12.5 acres along Jim Calhoun Way on its main campus in the Storrs section of Mansfield, Connecticut (the Project Area). The site is about half developed today and consists primarily of a surface parking lot (Lot I), wet weather stormwater conveyance, some wetlands, and rolling, wooded uplands. Immediately east of and adjacent to Lot I is the existing Mark Edward Freitas Ice Forum, a 1,650-seat ice hockey arena built in 1998 that UConn currently owns and operates.

In 2014, UConn's Division 1 Men's and Women's ice hockey teams joined the Hockey East conference. Because the current Freitas Ice Forum is too small and does not meet Hockey East standards and requirements to host UConn's men's hockey games, UConn has had to play almost all its home men's hockey games in the XL Center in Hartford since the 2014-2015 season. The Hockey East Association requires teams in the conference to have on-campus facilities with at least 4,000 seats along with other amenities, however UConn has obtained permission from Hockey East to build a venue with a seating capacity between 2,500 seats and 3,500 seats.

The new arena would host some men's hockey games, all women's hockey games and would also support UConn's robust recreational ice hockey program. Additionally, the new arena could be utilized by the University or to support community needs. At a minimum, the new arena would have the following features:

- Up to 3,500 seats, with at least 50% of the seats being seat-back chairs; the balance being bleachers
- Arena facilities and ice that would meet all NCAA Division I Ice Hockey requirements, all Hockey East Conference standards, and all University guidelines and requirements.
- A permanent locker room for both the UConn men's and women's ice hockey team, a Division 1 ice hockey team visitor's locker room, two (2) other mid-sized locker rooms, and a small official's locker room.
- Five (5) offices dedicated for UConn's use.
- A scoreboard with video replay capability.
- Parking for up to 700 vehicles.

To satisfy parking requirements, the existing surface parking lot (Lot I) would approximately double in size. The new capacity of Lot I, however, would not accommodate sellout events at the arena. During those events, UConn would rely on its other parking facilities and shuttle operations. The University would update its current event management plan to accommodate arena parking as needed.

A private developer has been retained by UConn to design, construct, own and operate the new ice hockey arena on UConn's property. As currently planned, UConn would be responsible for maintaining the arena while the developer would operate and manage the facility. UConn is also reserving the right to construct and own the arena. Construction is currently planned to commence in either 2020 or 2021, with a target opening date no later than Fall 2022. The new arena would adhere to University design guidelines and performance standards for new construction.

UConn Hockey Arena
Project Description
Attachment A
Project Review Cover Form
December 10, 2019

The University, as the sponsoring agency for this project, is preparing this Environmental Impact Evaluation (EIE) pursuant to the Connecticut Environmental Policy Act (CEPA) to further evaluate the potential environmental impacts of the proposed Ice Hockey Arena Development Project.

UCONN HOCKEY ARENA

STORRS, CONNECTICUT

JCJARCHITECTURE

2019-1022

February 7, 2020

Ms. Stephanie Dyer-Carroll
Fitzgerald & Halliday, Inc.
416 Asylum Street
Hartford, CT 06103

Subject: Proposed University of Connecticut Ice Hockey Arena
John Calhoun Way
Mansfield, CT
ENV-20-0409

Dear Ms. Dyer-Carroll:

The State Historic Preservation Office (SHPO) has reviewed the archaeological survey report prepared by Archaeological Consulting Services (AHS), dated September 2019, and the cultural resource survey prepared by Fitzgerald & Haliday, Inc. (Fitzgerald & Haliday), dated October 23, 2019, respectively. The proposed activities require permitting from both the Connecticut Department of Energy and Environmental Protection and the US Army Corps of Engineers and therefore, are subject to review by this office pursuant to the Connecticut Environmental Policy Act (CEPA) and Section 106 of the National Historic Preservation Act, as amended. The proposed activities include construction of a new Ice Hockey Area, within an approx. 12.5 acres area located on the south side of Jim Calhoun Way, which meets NCAA Division I Ice Hockey Requirements, including up to 3,500 seats for spectators, six locker rooms, five offices, and parking for up to 700 vehicles.

One previously identified archaeological site is located within 0.5 miles of the project area; however, it will not be impacted by the undertaking. One property listed on the National Register of Historic Places, the University of Connecticut Historic District-Connecticut Agricultural School (NR# 88003202), is located within 0.5 miles of the project area; however, it will not be impacted by the undertaking.

The archaeological survey consisted of subsurface testing of areas that would be subject to ground disturbing impacts as part of the proposed undertaking. A total of 33 shovel tests were excavated successfully throughout the proposed work area. Of the 33 shovel tests, none yielded cultural material from either historic or prehistoric periods. Low stone piles and walls of gneissic field stone were observed, associated with agricultural field clearance, as well as two late-historic concrete markers, likely related to university surveying. None of these features appear eligible for listing on either the State or National Register.

Similarly, the cultural resource review conducted by Fitzgerald & Haliday included literature and file review, review of historic maps, and pedestrian survey. The survey did not identify any above ground resources within a 0.25 mile radius of the Project Area, and did not recommend any as being potentially eligible for listing on either the State or National Register.

As a result of the information submitted, SHPO concurs with the findings of the report that additional archeological investigations of the project area are not warranted and that <u>no historic properties will be affected</u> by the proposed activities. However, please be advised that if construction plans change to include previously uninvestigated/undisturbed areas, SHPO should be contacted for additional consultation. Additionally, this office request that two bound copies of the Phase I Archaeological Survey be submitted to this office for archiving and public access.

This office appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act and Section 106 of the National Historic Preservation Act. For additional information, please contact Marena Wisniewski, Environmental Reviewer, at (860) 500-2357 or marena.wisniewski@ct.gov.

Sincerely,

Catherine Labadia
Deputy State Historic Preservation Officer

Appendix F – Traffic Impact Study

TRAFFIC IMPACT REPORT

Environmental Impact Evaluation

Ice Hockey Arena Development Project

University of Connecticut, Storrs, CT

Prepared by:

FITZGERALD & HALLIDAY, INC.
Innovative Planning, Better Communities

February 13, 2020

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1 INTRODUCTION

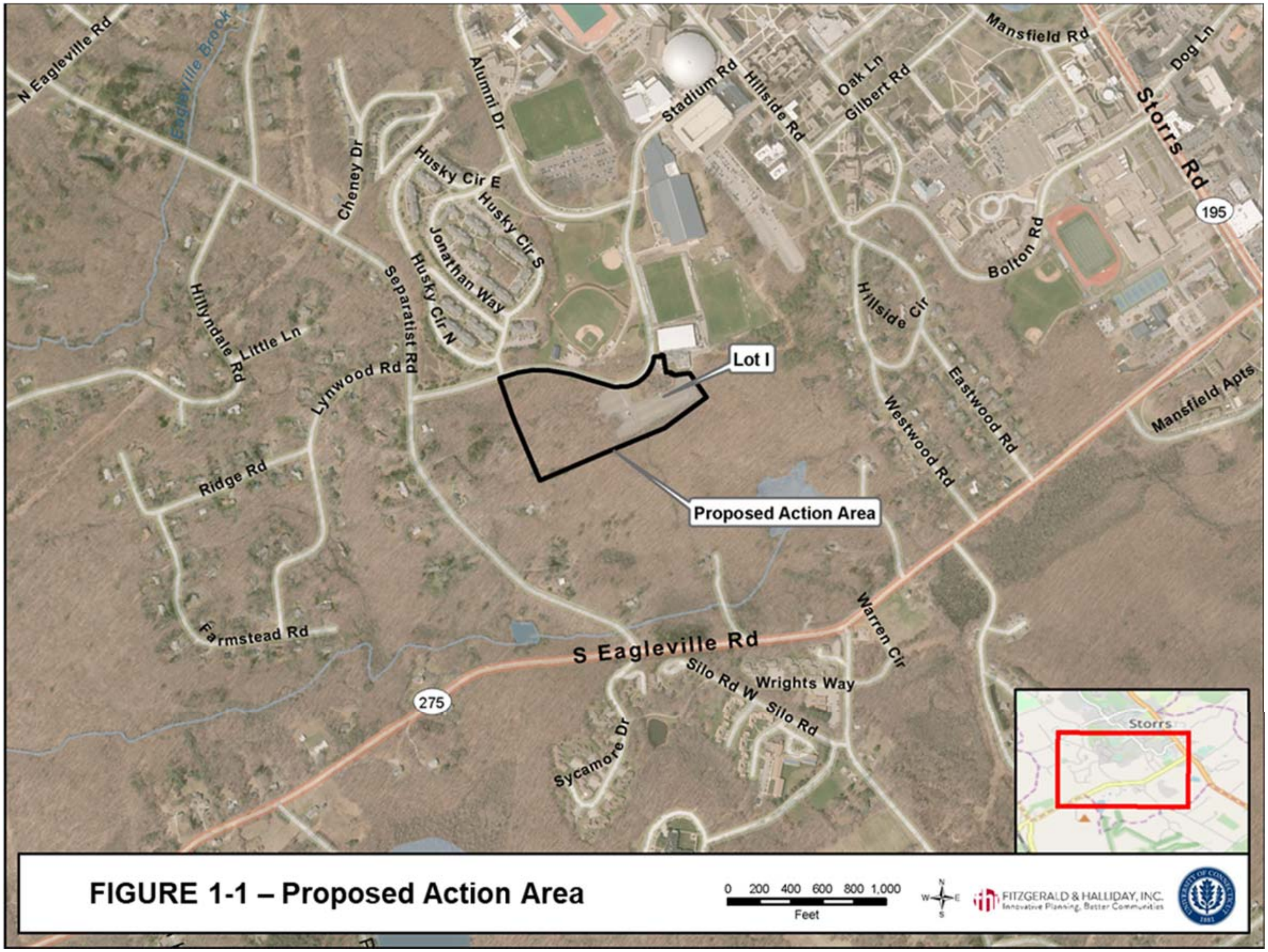
The University of Connecticut's (UConn) Division I ice hockey program joined the Hockey East conference in 2014. Its current on-campus arena, Freitas Ice Forum, is reaching the end of its useful life and does not comply with Hockey East standards. As such, the men's ice hockey program has played the majority of its home games at the XL Center in Hartford since that time. UConn is proposing to construct a new arena on-campus to host a portion of men's games and all women's games. The new arena may also support recreational leagues and youth programs in the surrounding area.

This report describes existing traffic conditions and the potential traffic impacts for the proposed ice hockey arena. This report includes the methodology in detail, including assumptions used, mathematical models applied, data generated on traffic volumes, trip generation and distribution analysis, impact analysis results and recommendations.

1.1 Project Description

The University is planning the development of a new ice hockey arena and associated surface parking on approximately 12.5 acres along Jim Calhoun Way on its main campus in the Storrs section of Mansfield, Connecticut (the Proposed Action Area – Refer to **Figure 1-1**). Approximately half the site is developed today and consists primarily of a surface parking lot (Lot I), wet weather stormwater conveyance, some wetlands, and rolling, wooded uplands. Immediately east of, and adjacent to, Lot I is the existing Mark Edward Freitas Ice Forum, a 1,650-seat ice hockey arena built in 1998 that UConn currently owns and operates.

Figure 1-1: Project Site Development Location



1.2 Transportation Network

Regional transportation access to UConn's campus is provided by Route 44 and Route 195. Route 44 (Middle Turnpike) is an east-west U.S. Highway that traverses through four states in the northeastern region of the United States. It is a two-lane rural minor arterial from its intersection with I-384 until its junction with Route 31 West. Between Route 31 and the intersection with Route 195, the road is classified as a primary urban arterial. The speed limit of Route 44 in the study areas is 40 miles per hour (mph).

Route 195 is a north-south Connecticut state highway. It is a two-lane roadway and is classified as a principal urban/rural arterial roadway between its intersections with I-84 in Tolland and Route 6 in Willimantic. The roadway is classified as an urban arterial within the study area, with the exception of the length of road between Bassetts Bridge Road and Spring Hill Road, where it is classified as rural. The speed limit on Route 195 in the vicinity of the campus is 25-30 mph, and in the areas immediately to the north and south of the campus, the speed limit is 40 mph.

Route 195 provides direct access to two primary campus roadways, North Eagleville Road and South Eagleville Road. South Eagleville Road bounds the southern portion of the study area and North Eagleville forms the northern boundary. Discovery Drive, a newly constructed roadway, also offers direct access to campus and is accessed via Route 44.

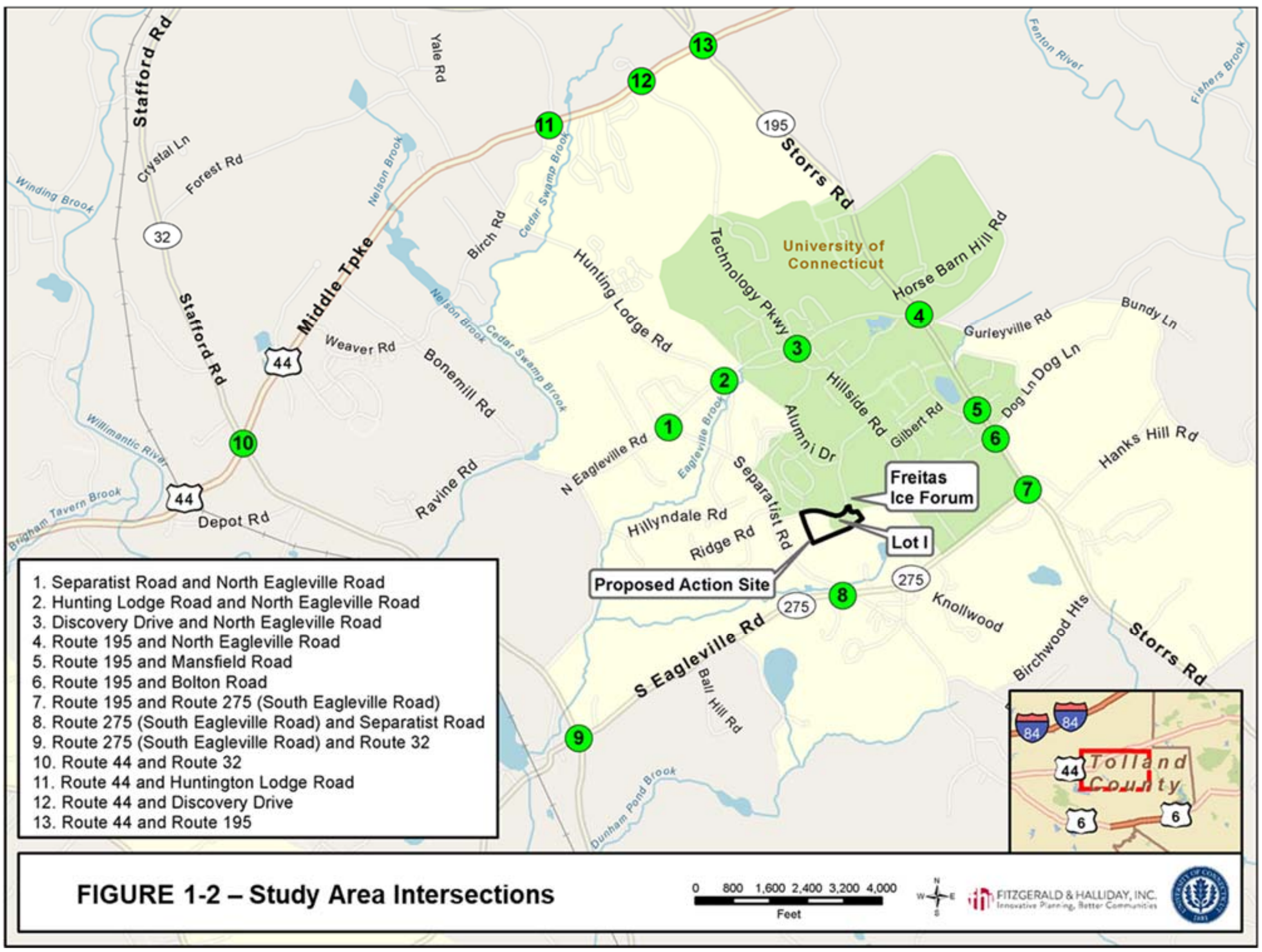
The proposed arena is adjacent to Jim Calhoun Way and is accessible via Separatist Road and Hillside Road. Jim Calhoun Way is owned and managed by the Town of Mansfield and runs east-west along the border of the proposed site. Jim Calhoun Way traverses between a stop-controlled intersection with Separatist Road and a stop-controlled intersection with Hillside Road. Separatist Road is adjacent to the project site and traverses between South Eagleville Road and North Eagleville Road along the western border of the site. Hillside Road services the center of the UConn campus and has a posted speed limit of 25 mph.

The study area for this traffic impact study includes thirteen (13) existing intersections, as shown in **Figure 1-2**. These intersections, listed below, were identified for analysis in cooperation with UConn.

1. Separatist Road and North Eagleville Road
2. Hunting Lodge Road and North Eagleville Road
3. Discovery Drive and North Eagleville Road
4. Route 195 and North Eagleville Road
5. Route 195 and Mansfield Road

6. Route 195 and Bolton Road
7. Route 195 and Route 275 (South Eagleville Road)
8. Route 275 (South Eagleville Road) and Separatist Road
9. Route 275 (South Eagleville Road) and Route 32
10. Route 44 and Route 32
11. Route 44 and Hunting Lodge Road
12. Route 44 and Discovery Drive
13. Route 44 and Route 195

Figure 1-2: Study Area Intersections



2 STUDY METHODOLOGY

The traffic analysis methodology consists of data collection, development of the traffic model, and assessment of performance measures.

2.1 Data Collection

The greatest potential for traffic impact on the roadway network by the proposed arena will occur during the weekday morning (AM) and afternoon (PM) peak hours, the periods when commuter and/or campus related trips are at their highest levels. In order to determine the traffic impact of the proposed development on the adjacent transportation network, available turning movement count data and traffic models were collected from previous studies and was augmented with new data collection where needed, to establish the baseline traffic condition. The morning peak hour between 7:00 am and 9:00 am and the afternoon peak hour between 4:00 pm and 6:00 pm were analyzed.

2.2 Traffic Analysis Tools

The operational analysis for the study area intersections was completed using Synchro 10.0, a computer-based intersection operations model that replicates procedures from the *Highway Capacity Manual* (HCM) (Transportation Research Board, 2000 and 2010). The program was used to assess both the current and future operation of intersections in the study area.

The network was developed using aerial mapping, roadway geometric, traffic, and signal operational information as described in *Section 2.1 Data Collection*. The transportation network in the model consists of the 13 study area intersections.

2.3 Performance Measures

The key performance measures for the evaluation are intersection level of service (LOS) and queues.

LOS is a qualitative measure of how effectively an intersection processes traffic. In general terms, LOS is a function of vehicle delay through an intersection. Six levels of service are defined with letter designations from A to F, with LOS A representing the best operating conditions and LOS F representing the worst.

Standard traffic engineering practice allows for a LOS C, stable traffic flow, as the minimum desirable level for peak hour traffic in rural and suburban areas. LOS D and LOS E are often considered acceptable for urban areas. For this analysis, intersections that operate or would operate in the forecast year below a LOS D (LOS E and F) have been identified as below standard.

Level of service is determined differently for signalized and unsignalized (stop sign controlled) intersections. This is due primarily to driver expectations and behavior. For signalized intersections, LOS is a measure of driver discomfort and frustration, and lost travel time for all movements through an intersection. For unsignalized intersections, delay is measured only for vehicles waiting to cross or turn from streets that have a stop sign onto a road where traffic moves freely. **Table 2-1** summarizes the LOS criteria.

Table 2-1: Level of Service Criteria

Level of Service (LOS)	Signalized Intersection Control Delay (seconds/vehicle)	Unsignalized Intersection Control Delay (seconds/vehicle)
A	0-10	0-10
B	>10-20	> 10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

Source: 2000 Highway Capacity Manual (Special Report 209)

The 95th percentile queue is the probable furthest distance from the stop bar to the back of the last vehicle waiting at an intersection. The 95th percentile queue is the length of the line of cars that arrive at an intersection when the signal is red combined with vehicles that did not clear the intersection during the previous green light. Comparing the length of this line of vehicles to lane lengths available at each intersection provides a measure of how well an intersection is functioning.

3 TRAFFIC VOLUMES

3.1 Existing Traffic Volumes

To establish existing traffic volumes for the proposed arena, the year 2018 was established as the base year. Existing traffic volumes for the weekday morning (AM), and weekday afternoon (PM) for the study area intersections are shown in the **Appendix.**

3.2 Future No Build Traffic Volumes

Projected traffic volumes account for No Action (or No Build) traffic volumes which are defined as design year traffic without the proposed development. Based on traffic volume trends, existing traffic volumes were projected to the 2021 design year using a 1.0 percent per year peak hour growth factor to account for normal traffic growth in the study area. Additionally, information for pending and approved projects was ascertained and considered.

UConn is currently constructing improvements to the Athletic District in order to renovate and improve aging facilities consistent with National Collegiate Athletic Association (NCAA) Division I requirements. New stadium projects for soccer, baseball, and softball, were identified as priority projects and will be opened in spring of 2020. The district is located on the UConn shuttle bus route and significant increase in the use of transit is not anticipated. Therefore, it was determined that the proposed improvements will not impact traffic or transportation; thus, having no site related traffic to be considered for this evaluation. Future No Build traffic volumes are shown in the **Appendix**.

3.3 Future Build Traffic Volumes

3.3.1 SITE GENERATED TRAFFIC

The standard method used to estimate the volume of traffic to be generated by a development is to use data provided by the Institute of Transportation Engineers (ITE), *Trip Generation Manual, 9th Edition*. This publication is a compilation of trip generation data for a wide variety of facilities and provides data for entering and exiting traffic, relative to the size and type of the development. A review of the manual revealed that the trip generation data for an ice-hockey rink is limited to one sample and is not reflected of anticipated operations of the proposed arena. Therefore, trip generation at the proposed hockey arena was based on anticipated operations and activity.

Vehicular activity to the site will result from students and spectators. The arena is intended to be used for all women's games and for weekday evening men's game. For conservative purposes, this evaluation considers a full build-out of the arena at 3,500 seats for a weekday evening event. In coordination with UConn's athletic division and available information, the trip generation characteristics and assumptions utilized for this evaluation are summarized below:

- Anticipates a full build-out of the arena in the future with 3,500 attendees
- Approximately 25% of attendees will be students, faculty, and staff who are already on-campus and walking to the facility
- Approximately 75% of attendees will drive to the event from off-campus. Those attendees will arrive to campus in automobiles at an assumed occupancy rate of 2.25 persons per vehicle.
- Athletic events will be held during weekday evening hours and on weekends.

Therefore, it is estimated that at future full capacity of the proposed arena, up to approximately 1,167 vehicular trips will be generated and may begin to arrive during afternoon weekday peak hours departing during the non-peak hour.

3.3.2 TRIP DISTRIBUTION

An arrival/departure trip distribution pattern was developed for potential traffic based upon an origin-destination (O-D) survey that was conducted for the Eastern Gateways Strategy and Implementation Plan, CRCOG, 2019. Data was collected on two weekday game nights when UConn was hosting men's basketball games between January 20, 2015 and February 19, 2015. Men's basketball games attract thousands of visitors to the University who may not otherwise visit. There haven't been any significant changes that altered travel patterns to campus since that survey; therefore, the origin of trips destined for UConn were applied to this evaluation and analysis. A special event management plan is implemented for each basketball game and vehicles are directed to existing parking garages, in similar fashion to other well-attended events on-campus such as Commencement. The distribution percentages based upon entrance/exit to the study area are shown in **Table 3-1**.

Table 3-1: Trip Distribution

Origin Route Location	Distribution (%)
Route 44 Eastbound (east of I-684)	16%
Route 44 Westbound (east of Route 195)	20%
Route 195 Southbound (south of I-84)	34%
Route 195 Northbound (north of Route 6)	19%
Route 32 Northbound (north of Route 6)	11%

3.3.3 TRIP ASSIGNMENT

Total site generated traffic volumes, as shown in the **Appendix,** were added to the future 2021 No-Build traffic volumes to yield the future 2021 Build traffic volumes, shown in the **Appendix**.

4 OPERATIONAL ANALYSIS RESULTS

4.1 Crash Analysis

Crash data on roadways in the study area were obtained from the Connecticut Crash Data Repository for the most recent three-year period, 2016-2018. A total of 226 crashes occurred within the study area during this timeframe, with 45 crashes resulting in an injury of some kind. A summary of the relevant crash data is provided in the Appendix. There were no reported crashes involving fatalities.

From a review of the crash data, the majority of collisions in the study area were rear end and angle crashes. Contributing causes for these crashes include, but are not limited to, failure to grant right of way, drivers losing control of their vehicles and violating traffic commands. Forty-seven (47%) percent of the crashes involved rear end collisions, which are crashes characterized by motorists following too closely. Thirty percent (30%) of the collisions involved angle crashes, which typically occurred with motorists turning left or right out of driveways and intersections. The remaining crashes consisted of sideswipe crashes (10%), stationary/fixed objects (8%). There were two crashes involving a pedestrian or a cyclist within the study area. Based on this accident data, there does not appear to be a pattern of correctable accident occurrence in the study area.

4.2 Capacity Analysis

In general, an intersection having a poor level-of-service (LOS) under Existing Conditions will continue to function poorly – and may deteriorate further from additional demand – if no improvements are made. Six of the thirteen study area intersections already operate with critical movements at a poor LOS (LOS E or LOS F). Under the Build Condition, eight of the thirteen study area intersections will operate with critical movements at a poor LOS (LOS E or LOS F) under the Build Condition, two more compared to the No Build Condition.

To determine the traffic impact of the proposed arena, a comparison of the No Build to Build Condition is assessed. Site generated trips for weekday events may begin arriving during the afternoon peak hour and will depart during the non-peak hour; therefore, potential traffic impacts are anticipated to occur during the weekday afternoon (PM) peak hour. Morning peak hour operations will not be impacted due to the proposed arena.

Results from the No Build to Build condition comparison indicate that one intersection is directly impacted as a result of the proposed arena. This intersection is described below:

- **North Eagleville Road and Discovery Drive:** The southbound through-right movement on Discovery Drive will operate at LOS C under the future No Build condition and will operate at LOS F under the Build condition. The overall intersection will operate at LOS C under the No Build condition and will operate at LOS F under the Build condition.

Results also indicate that there are three study area intersections that will operate with a poor overall intersection level of service (LOS E or LOS F) under the No Build condition and continue to operate poorly (LOS E or LOS F) under the Build condition. These intersections are described below:

- **Route 275 (South Eagleville Road) and Route 32**: The northbound shared left-through-right movement on Route 32 will operate at LOS D under the No Build condition and LOS E under the Build condition. The southbound shared left-through-right lane on Route 32 will operate at LOS F under the No Build and Build condition. The overall intersection LOS operates poorly (LOS E) under the No Build and will continue to operate poorly (LOS F) under the Build condition.

- **Route 44 and Route 32:** The eastbound shared left-through-right movement on Route 44 will operate at LOS E under the No Build condition and LOS F under the Build condition. Route 44 in the eastbound and westbound direction will operate at LOS F during the No Build and continue under the Build condition. The overall intersection LOS operates poorly (LOS F) under the No Build and will continue to operate poorly (LOS F) under the Build condition (LOS F).

- **Route 275 (South Eagleville Road) and Separatist Road:** The northbound shared left-through-right movement on Separatist Road will operate at LOS C during the No Build condition and will operate at LOS E during the Build condition. The overall intersection LOS operates poorly under the No Build (LOS E) and will continue to operate poorly (LOS F) under the Build condition.

The capacity analysis results and Synchro reports are provided in the **Appendix**.

4.3 Queue Analysis

A queue analysis (stacking of cars in each lane) was conducted using the Synchro software. Reports from the Synchro queue analysis present the 95th percentile of queue for each lane group. The 95th percentile queue represents the maximum back of queue (number of vehicles that are queued based on arrival patterns of vehicles and vehicles that do not clear the intersection during a given green phase) with 95th percentile traffic volumes. The average length for a single queued vehicle is assumed to be 25 feet. Storage lengths were measured from field measurements and aerial mapping. The results of the queue analysis for the weekday AM and PM peak hours are provided in the **Appendix**.

It is anticipated that queues will increase under the Build condition compared to the No Build condition. However, the rural nature of the roadway network provides long storage lanes on the major roadways. To determine the queue impact of the proposed arena, a comparison of the No Build to Build condition is assessed. Results from the No Build to Build condition comparison indicate that two intersections, as listed below, are directly impacted as a result of the proposed arena and will experience queue lengths that extend beyond the available storage.

- **Route 44 and Discovery Drive**: Westbound left-turn lane on Route 44
- **Route 44 and Route 195**: Westbound left-turn lane

4.4 Parking

The University implements and manages various logistics as part of its Special Event Management Plan. Parking for on-campus events is currently directed to two parking garages and select surface lots. Parking is also available in the nearby Downtown Storrs Garage with shuttle service to campus.

Parking for events at the proposed arena will be managed comparably. The existing I-Lot will be reconfigured to accommodate up to 700 parking spaces at full build-out of the proposed project. These parking spaces will also be available during the day to permit-holders, including a requisite number of accessible spaces. Capacity is sufficient for proposed event parking needs therefore no mitigation is required.

4.5 Recommendations

The University currently has a Special Event Management Plan that is authored by a professionally-licensed traffic engineer. The Plan defines implementation of special event traffic management measures for the Fall 2019/Winter 2020 basketball games and other special events on campus. The Plan should be reviewed and updated to address and include management measures for pre- and post-hockey games. Updated special event traffic management measures would improve the delay experienced under the Build condition at six of the nine study area intersections. Specific measures to consider include, but are not limited to:

- A pre- and post-game traffic control plan along Separatist Road
- Variable message signs on Route 32 and Route 275 (South Eagleville Road) to direct visitors to the South Garage via Bolton Road off Route 195

- Police officer deployments to manually manage traffic flow and operations for hockey events at the intersections of Route 275 (South Eagleville Road) with Route 32, Separatist Road, and Route 195
- Review and modify, as needed, bus routing plans for game day parkers at the I-Lot
- Appropriate management measures to address overlap of concurrent special events held on-campus

In coordination with the Town of Mansfield and its local traffic authority, a request to CTDOT for the initiation of traffic engineering studies to provide improved operations at several study area intersections is recommended. These intersections currently operate poorly and will continue to do so under the Build Condition. The intersections and potential improvements are provided below.

- **Route 32 with Route 44:** The addition of a right-turn lane on Route 44 eastbound and the addition of a left-turn lane on Route 44 westbound, combined with a signal upgrade to accommodate a protected left-turn movement would decrease delay and improve operations.
- **Route 32 with Route 275 (South Eagleville Road):** The addition of a right-turn lane on Route 275 (South Eagleville Road) westbound, the addition of a left-turn lane on Route 32 southbound, and a signal upgrade to accommodate a protect left-turn movement would decrease the delay and improve operations from LOS F under the future build condition to LOS C with the suggested improvements.

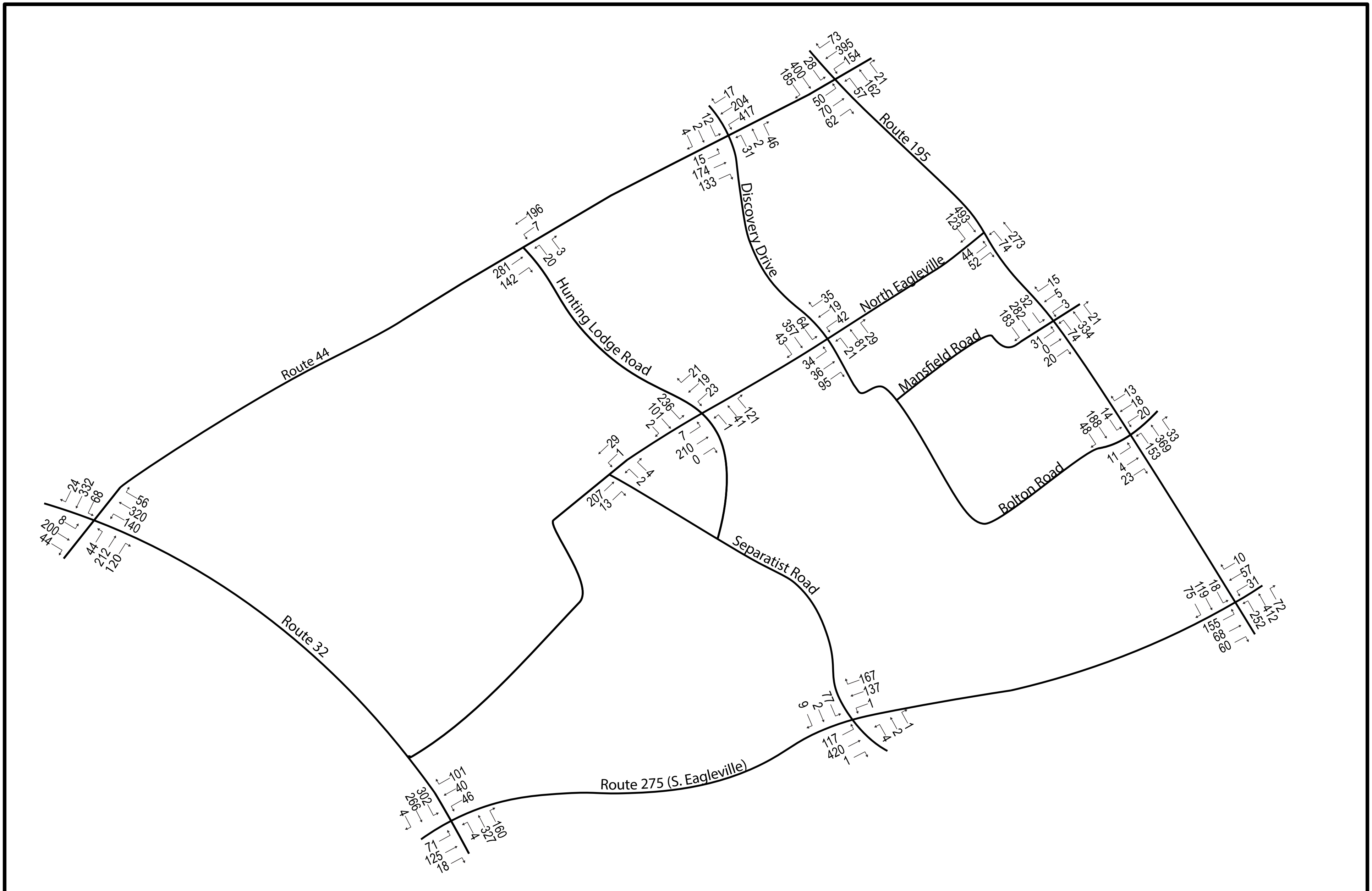
The unsignalized intersection of Route 275 (South Eagleville Road) and Separatist Road/Sycamore Drive will continue to experience poor operations under both No Build and Build conditions. CTDOT recently conducted an assessment at this location and determined that signalization and other improvements are warranted. CTDOT has confirmed for the Town of Mansfield that it is beginning its planning and design activities with a targeted construction beginning in Spring 2023. Therefore, additional mitigation measures at this intersection are not warranted.

5 SUMMARY

The traffic operations analysis presented in this report evaluated the 2018 Existing, 2021 No-Build and Build conditions. Key observations from this analysis include:

- Results from the Existing condition analysis indicate that six of the thirteen study area intersections operate with critical movements at LOS E or LOS F during the weekday AM and/or PM peak hour. The remaining study area intersections operate at an acceptable LOS (LOS D or better).
- Results from the No-Build analysis indicate that the same intersections identified under the Existing conditions analysis will continue to have critical movements that operate at LOS E or LOS F.
- It is estimated that at future full capacity of the proposed arena, up to approximately 1,167 vehicular trips will be generated and may begin to arrive during afternoon weekday peak hours departing during the non-peak hour.
- Under the future Build condition with the proposed project, one of the thirteen intersections will directly be impacted as a result of the proposed arena. The overall intersection level of service at North Eagleville Road and Discovery Drive will operate at LOS C under the No Build condition and will operate at LOS F under the Build condition.
- The existing I-Lot will be reconfigured to accommodate up to 700 parking spaces at full build-out of the proposed project. These parking spaces will also be available during the day to permit-holders, including a requisite number of accessible spaces. Capacity is sufficient for proposed event parking needs therefore no mitigation is required.
- Recommendations to improve operations during the Build condition include, but are not limited to, the following:
    - An updated special event traffic management that includes a traffic control plan on Separatist Road, additional manual traffic control at key intersections on Route 275 (South Eagleville Road), and updated bus routing services, etc.
    - In coordination with the Town of Mansfield and its local traffic authority, a request to CTDOT for the initiation of traffic engineering studies at the intersections of Route 32 with Route 275 (South Eagleville Road) and Route 32 with Route 44.

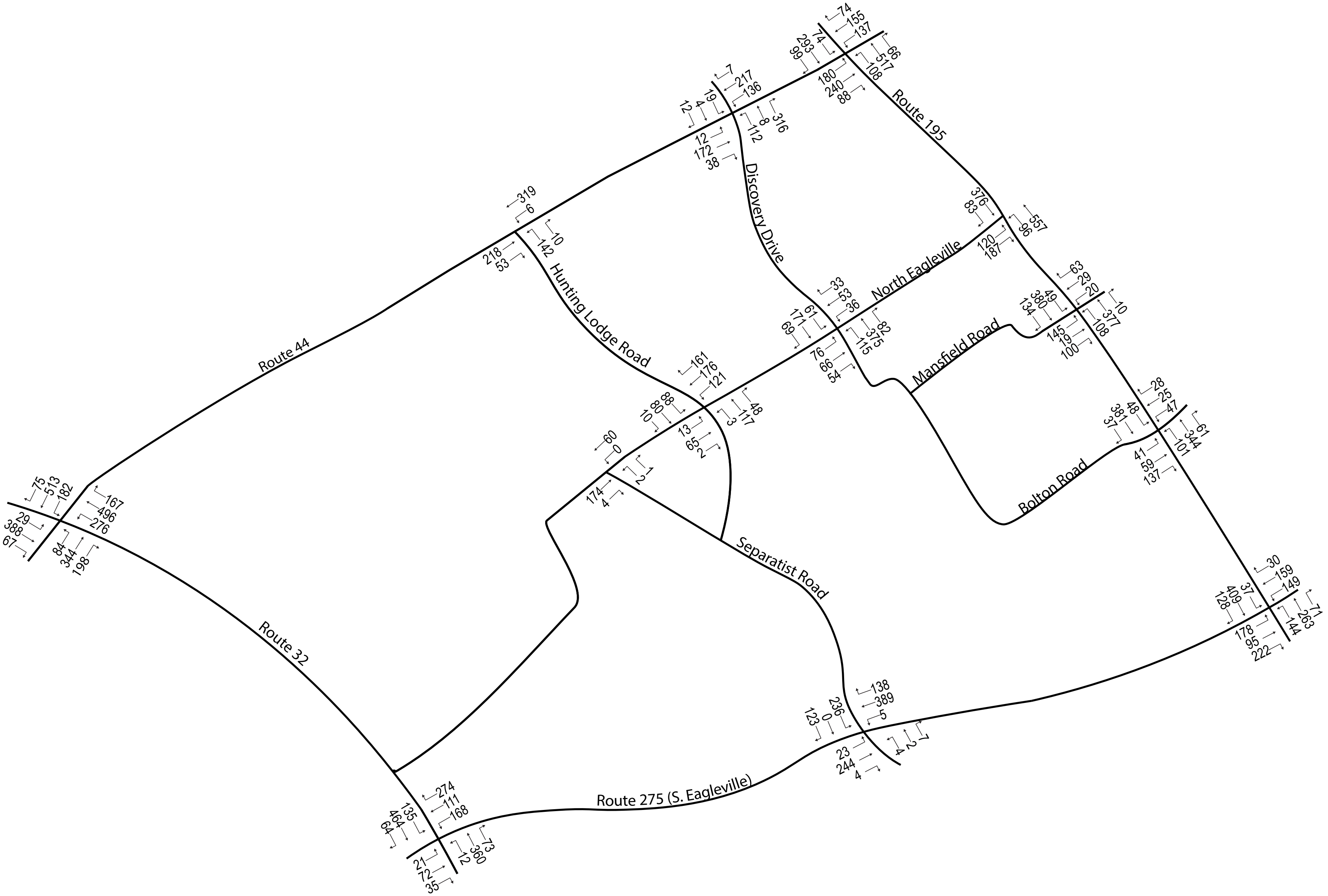
Appendix A – Traffic Volume Flow Diagrams



University of Connecticut
Ice Hockey Arena Development Project
Existing Conditions 2018
AM Peak Hour Traffic Volumes

North

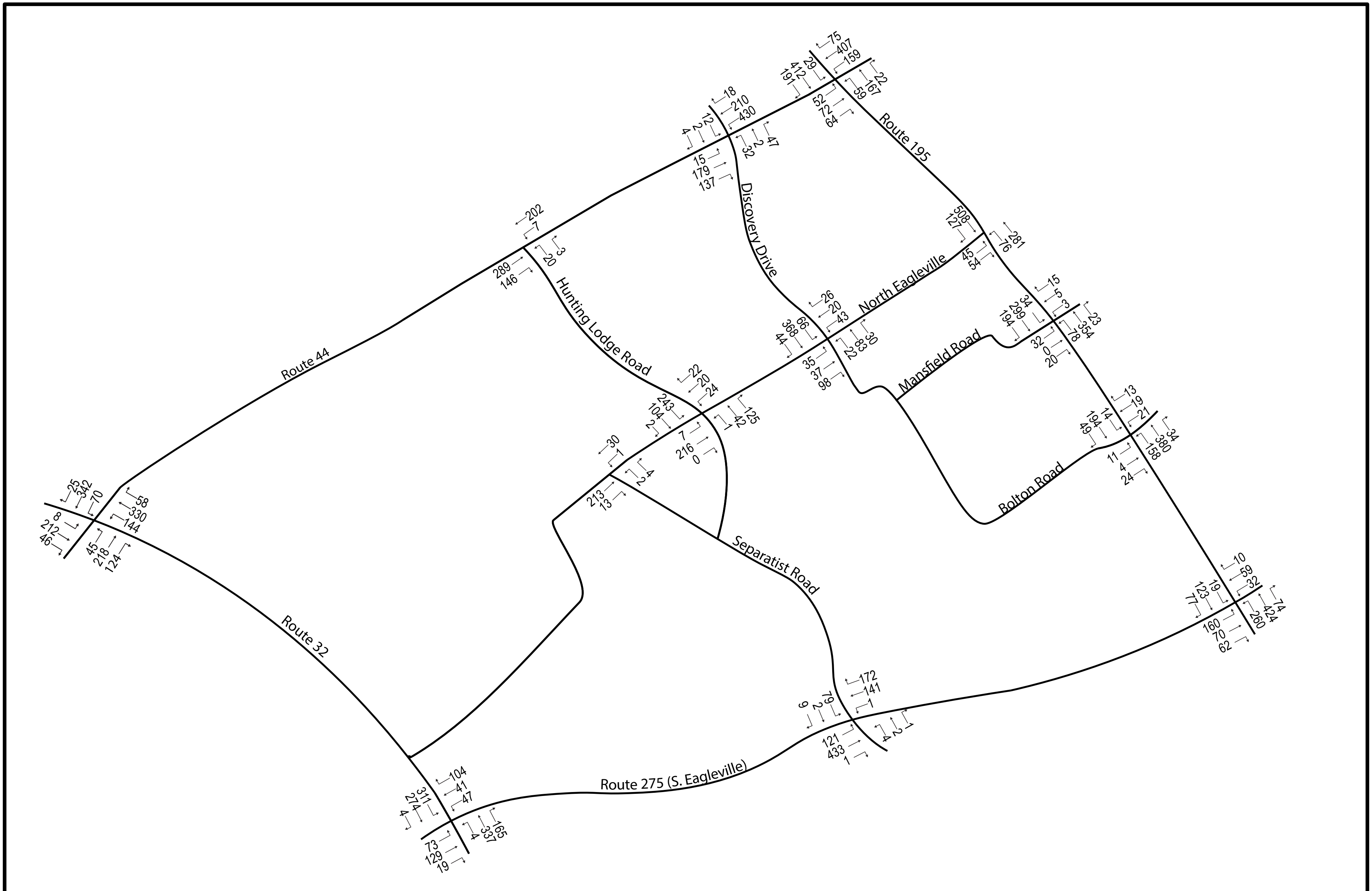
NOT TO SCALE



University of Connecticut
Ice Hockey Arena Development Project
Existing Conditions 2018
PM Peak Hour Traffic Volumes

North

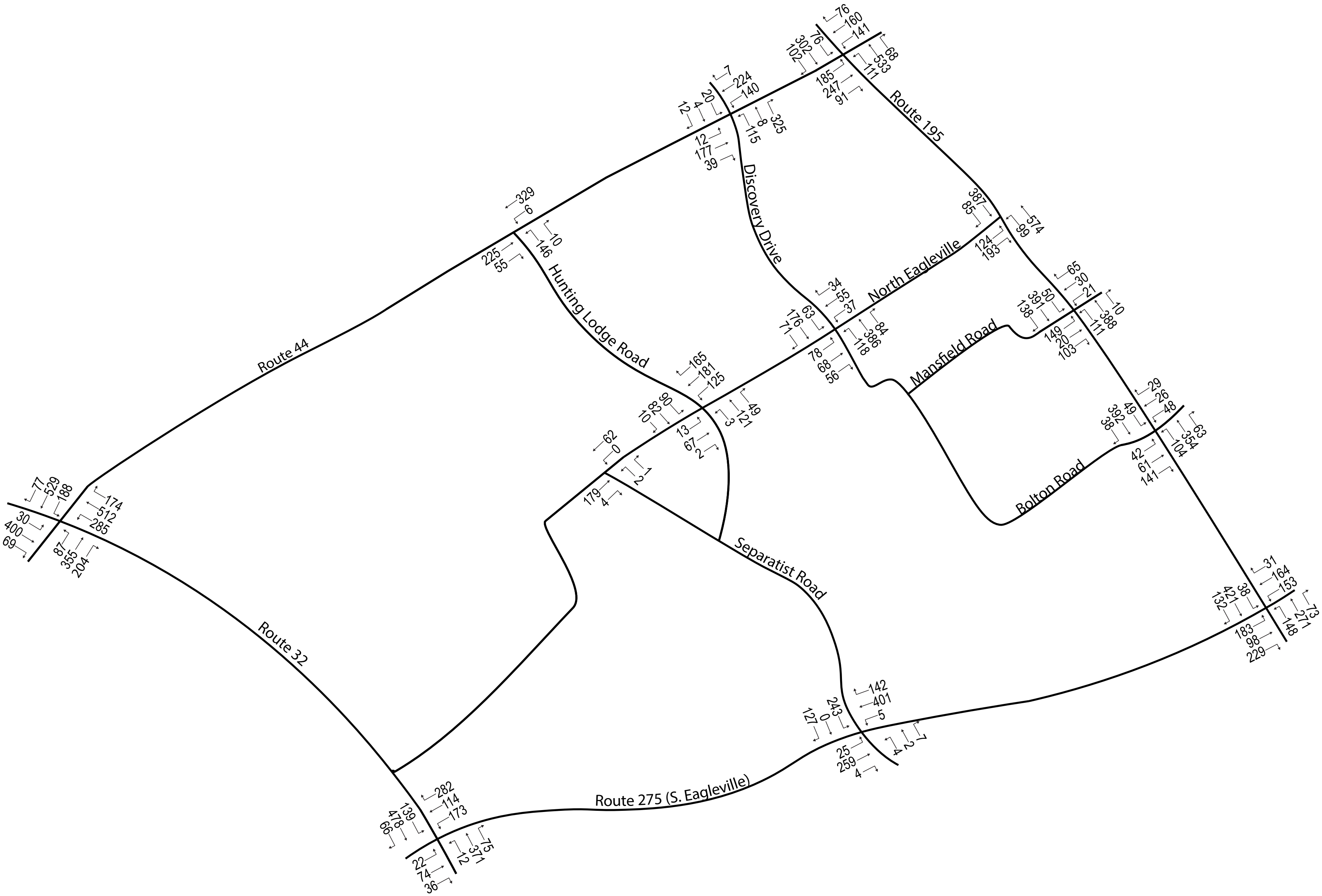
NOT TO SCALE



University of Connecticut
Ice Hockey Arena Development Project
No Build Condition 2021
AM Peak Hour Traffic Volumes

North

NOT TO SCALE



University of Connecticut
Ice Hockey Arena Development Project
No Build Condition 2021
PM Peak Hour Traffic Volumes

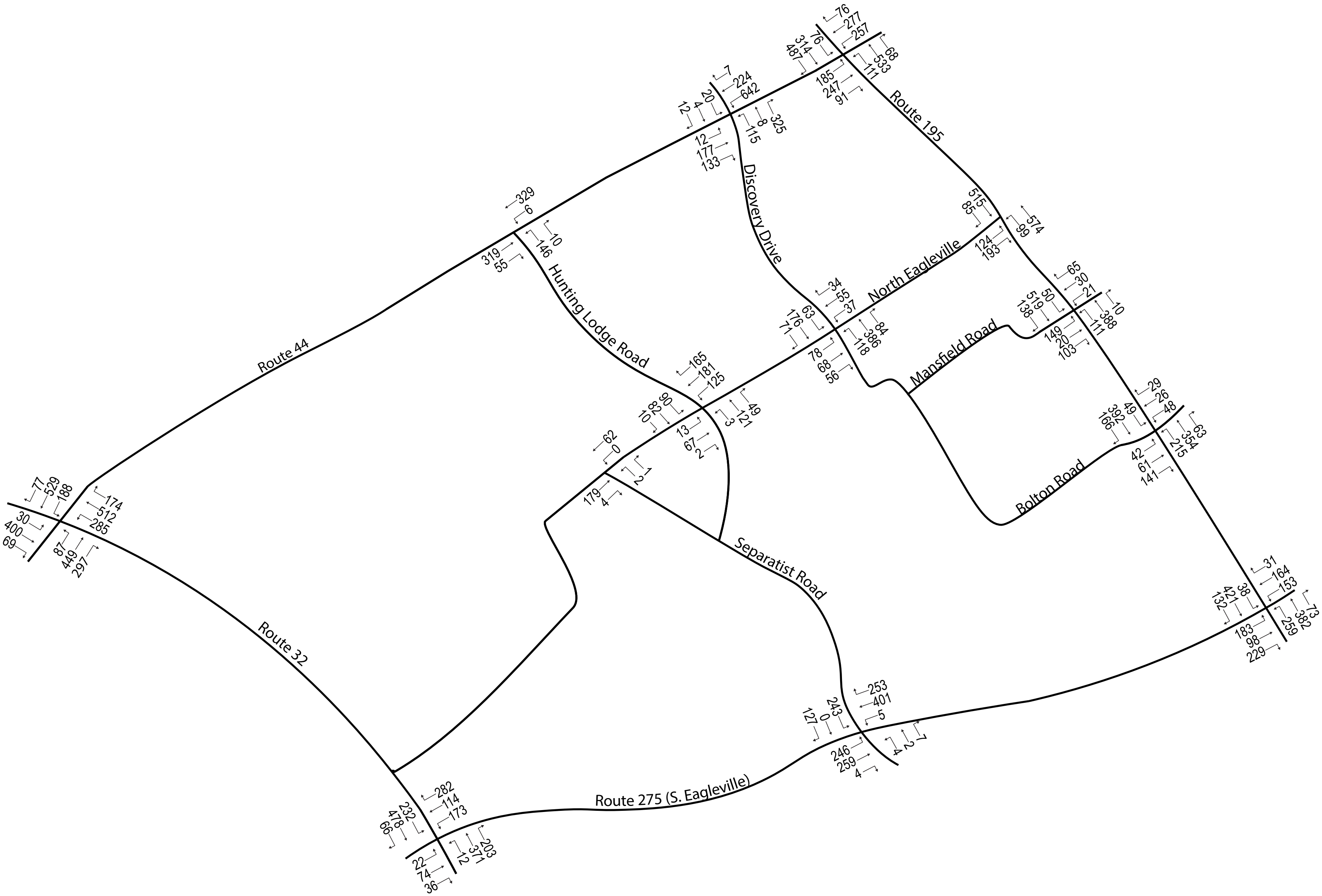
North

NOT TO SCALE

University of Connecticut
Ice Hockey Arena Development Project
Build Condition 2021
Site Generated Trip - PM Peak Hour Traffic Volumes

North

NOT TO SCALE



University of Connecticut
Ice Hockey Arena Development Project
Build Condition 2021
PM Peak Hour Traffic Volumes

North

NOT TO SCALE

Appendix B – Crash Summary

University of Connecticut
Ice Hockey Arena Development Project
Crash Data Summary (1/1/2016 - 6/27/2019)

Criteria	Route 44 and Route 32	Route 275 and Route 32	Route 44 and Route 195	Route 195 and Route 275	Route 275 and Separatist Road	Route 195 and Bolton Road	Route 44 and Discovery Drive	Discovery Drive and North Eagleville Road	Route 44 and Hunting Lodge Road	Route 195 and Mansfield Road	Hunting Lodge Road and North Eagleville Road	Route 195 and North Eagleville Road	Separatist Road and North Eagleville Road
CRASH TYPE													
Angle	5	10	19	9	8	5	5	4	1			1	
Front to front					1							1	
Front to rear	8	8	28	17	1	8	4	9	1	8	2	14	
Not Applicable	6		3	2	2	1	2	1	1		0		
Other			2	1		2							
Rear to rear												1	
Sideswipe, opposite direction		2	2				1		1		1		
Sideswipe, same direction			3	1		5		2		3		1	
Pedestrian/Cyclist				1							1		
Unknown						1							
Total	**19**	**20**	**57**	**31**	**12**	**22**	**12**	**16**	**4**	**11**	**4**	**18**	**0**
SEVERITY													
Possible)	8	4	14	7	1		2	1	2	1	1	4	
Fatal Injuries													
Property Damage Only	11	16	43	24	11	22	10	15	2	10	3	14	
YEAR													
2016	3	6	18	8	1	4	5	3	2	5	2	6	0
2017	6	8	17	11	4	10	4	3		3	1	7	0
2018	7	5	19	9	5	5	2	9	2	2	1	4	0
2019	3	1	3	3	2	3	1	1		1		1	0
Total	**19**	**20**	**57**	**31**	**12**	**22**	**12**	**16**	**4**	**11**	**4**	**18**	**0**

Appendix C – LOS and Queue Summary Tables

University of Connecticut
Ice Hockey Arena Development Project
Level of Service Summary

			Existing Condition (2018)				No Build Condition (2021)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Approach	Movement	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
Signalized Intersections										
North Eagleville Road and Discovery Drive*										
	Eastbound	Left	27.4	C	32.8	C	27.0	C	33.0	C
	Eastbound	Thru	26.7	C	30.1	C	26.4	C	30.2	C
	Eastbound	Right	2.3	A	0.6	A	2.5	A	0.6	A
	Westbound	Left	19.8	B	19.9	B	19.5	B	20.0	B
	Westbound	Thru-right	10.6	B	13.8	B	11.7	B	13.8	B
	Northbound	Left	18.6	B	17.9	B	19.0	B	17.7	B
	Northbound	Thru-right	23.6	C	43.6	D	24.5	C	45.7	D
	Southbound	Left	18.8	B	18.9	B	19.4	B	19.1	B
	Southbound	Thru-right	33.0	C	29.9	C	33.7	C	29.8	C
	Southbound	Right	n/a	n/a	n/a	n/a	0.2	A	0.5	A
	Overall		**24.4**	**C**	**30.8**	**C**	**23.4**	**C**	**29.9**	**C**
Route 195 and North Eagleville Road										
	Eastbound	Left	8.1	A	9.7	A	8.1	A	9.8	A
	Eastbound	Right	3.3	A	2.8	A	3.3	A	2.8	A
	Westbound	Thru	17.8	B	12.7	B	18.8	B	13.0	B
	Westbound	Right	2.9	A	3.0	A	2.9	A	3.0	A
	Northbound	Left	12.5	B	11.2	B	13.2	B	11.5	B
	Northbound	Thru	7.9	A	20.8	C	8.5	A	22.3	C
	Overall		**12.1**	**B**	**13.6**	**B**	**12.7**	**B**	**14.4**	**B**
Route 195 and Mansfield Road										
	Eastbound	Left-thru	35.4	D	63.4	E	35.3	D	65.6	E
	Eastbound	Right	0.5	A	5.3	A	0.5	A	5.6	A
	Westbound	Left-thru-right	20.0	B	17.9	B	19.9	B	18.2	B
	Southbound	Left	6.3	A	10.7	B	6.3	A	10.7	B
	Southbound	Thru	9.6	A	17.6	B	9.7	A	18.1	B
	Southbound	Right	4.8	A	5.3	A	4.7	A	5.3	A
	Northbound	Left	8.6	A	11.7	B	8.7	A	12.0	B
	Northbound	Thru-right	15.3	B	22.3	C	16.0	B	22.8	C
	Overall		**11.4**	**B**	**21.5**	**C**	**11.6**	**B**	**22.0**	**C**

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			Existing Condition (2018)				No Build Condition (2021)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Approach	Movement	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
Route 195 and Bolton Road										
	Eastbound	Left	36.6	D	37.4	D	36.7	D	37.0	D
	Eastbound	Thru-right	18.4	B	28.7	C	18.4	B	29.4	C
	Westbound	Left	38.4	D	60.3	E	38.6	D	61.7	E
	Westbound	Thru-right	27.2	C	21.2	C	27.5	C	20.8	C
	Northbound	Left	9.3	A	12.1	B	9.7	A	12.4	B
	Northbound	Left-right	9.2	A	16.2	B	9.7	A	16.7	B
	Southbound	Left	10.1	B	11.9	B	10.2	B	12.1	B
	Southbound	Thru-right	9.9	A	19.2	B	10.5	B	19.8	B
	Overall		**11.3**	**B**	**21.0**	**C**	**11.8**	**B**	**21.5**	**C**
Route 195 and Route 275 (South Eagleville Road)										
	Eastbound	Left	36.5	D	27.3	C	37.0	D	27.6	C
	Eastbound	Thru-right	34.0	C	39.4	D	34.3	C	38.7	D
	Westbound	Left	32.1	C	30.1	C	32.2	C	30.2	C
	Westbound	Thru-right	43.6	D	38.3	D	43.8	D	37.9	D
	Northbound	Left	17.7	B	26.9	C	18.1	B	29.0	C
	Northbound	Thru-right	23.6	C	33.4	C	24.2	C	34.8	C
	Southbound	Left	15.5	B	20.6	C	15.5	B	20.8	C
	Southbound	Thru	14.0	B	34.4	C	14.1	B	35.8	D
	Overall		**24.7**	**C**	**33.6**	**C**	**25.1**	**C**	**34.3**	**C**
Route 275 (South Eagleville Road) and Route 32										
	Eastbound	Left-thru-right	30.6	C	13.0	B	31.0	C	13.1	B
	Westbound	Left-thru-right	15.9	B	42.8	D	16.1	B	44.4	D
	Northbound	Left-thru-right	16.4	B	34.5	C	17.1	B	37.1	D
	Southbound	Left-thru-right	57.4	E	107.0	F	75.5	E	141.9	F
	Overall		**34.4**	**C**	**62.4**	**E**	**41.8**	**D**	**76.5**	**E**

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			Existing Condition (2018)				No Build Condition (2021)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Approach	Movement	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
Route 44 and Route 32										
	Eastbound	Left-thru-right	16.8	B	62.0	E	17.6	B	76.5	E
	Westbound	Left-thru-right	21.5	C	269.5	F	23.2	C	299.7	F
	Northbound	Left-thru-right	26.3	C	639.3	F	28.1	C	693.1	F
	Southbound	Left-thru-right	13.1	B	30.1	C	13.5	B	31.7	C
	Overall		**20.6**	**C**	**305.4**	**F**	**21.9**	**C**	**335.4**	**F**
Route 44 and Discovery Drive										
	Eastbound	Left	5.9	A	12.1	B	5.9	A	12.2	B
	Eastbound	Thru	11.9	B	22.8	C	11.9	B	23.1	C
	Eastbound	Right	4.2	A	0.3	A	4.2	A	0.3	A
	Westbound	Left	10.1	B	12.4	B	10.5	B	12.6	B
	Westbound	Thru-right	7.4	A	15.9	B	7.4	A	16.1	B
	Northbound	Left-thru	18.6	B	27.7	C	18.6	B	27.9	C
	Northbound	Right	1.7	A	4.2	A	1.8	A	4.2	A
	Southbound	Left-thru-right	16.0	B	21.0	C	16.1	B	21.2	C
	Overall		**9.0**	**A**	**14.0**	**B**	**9.2**	**A**	**14.1**	**B**
Route 44 and Route 195										
	Eastbound	Left	24.1	C	32.5	C	23.4	C	31.8	C
	Eastbound	Thru-right	25.8	C	56.6	E	25.3	C	54.7	D
	Westbound	Left	23.5	C	33.7	C	22.6	C	33.0	C
	Westbound	Thru-right	38.8	D	47.3	D	37.6	D	46.3	D
	Northbound	Left	26.0	C	20.9	C	27.9	C	21.6	C
	Northbound	Thru-right	28.1	C	31.2	C	29.4	C	32.4	C
	Southbound	Left	69.1	E	78.1	E	69.6	E	78.8	E
	Southbound	Thru-right	34.0	C	27.6	C	36.4	D	28.7	C
	Overall		**33.1**	**C**	**37.9**	**D**	**33.7**	**C**	**38.0**	**D**

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			Existing Condition (2018)				No Build Condition (2021)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Approach	Movement	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
Stop Sign Controlled Intersections										
North Eagleville Road and Separatist Road										
	Eastbound	Thru-right	0.0	A	0.0	A	0.0	A	0.0	A
	Westbound	Left-thru	0.2	A	0.0	A	0.2	A	0.0	A
	Northbound	Left-right	9.7	A	9.7	A	9.8	A	9.8	A
North Eagleville Road and Hunting Lodge Road										
	Eastbound	Left-thru-right	11.9	B	9.9	A	12.2	B	10.0	B
	Westbound	Left-thru	9.1	A	14.5	B	9.2	A	12.8	B
	Westbound	Right	7.7	A	8.5	B	7.8	B	8.6	B
	Northbound	Left-thru-right	9.6	A	10.8	B	9.7	A	11.0	B
	Southbound	Left-thru-right	14.1	B	11.4	B	14.6	B	11.6	B
South Eagleville Road and Separatist Road										
	Eastbound	Left-thru-right	2.7	A	1.0	A	2.8	A	1.0	A
	Westbound	Left-thru-right	0.0	A	0.1	A	0.0	A	0.1	A
	Northbound	Left-thru-right	21.1	C	15.8	C	22.0	C	16.6	C
	Southbound	Left-thru-right	30.6	D	136.8	F	33.3	D	174.1	F
Route 44 and Hunting Lodge Road										
	Eastbound	Thru-right	0.0	A	0.0	A	0.0	A	0.0	A
	Westbound	Left-thru	0.4	A	0.2	A	0.4	A	0.2	A
	Northbound	Left-right	13.1	B	17.4	C	13.3	B	18.2	C

* The southbound through-right lane will become a through lane under the future No Build condition.

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			No Build Condition (2021)				Build Condition (2021)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Approach	Movement	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
Signalized Intersections										
North Eagleville Road and Discovery Drive*										
	Eastbound	Left	27.0	C	33.0	C	27.0	C	33.0	C
	Eastbound	Thru	26.4	C	30.2	C	26.4	C	30.2	C
	Eastbound	Right	2.5	A	0.6	A	2.5	A	0.6	A
	Westbound	Left	19.5	B	20.0	B	19.5	B	20.0	B
	Westbound	Thru-right	11.7	B	13.8	B	11.7	B	13.8	B
	Northbound	Left	19.0	B	17.7	B	19.0	B	22.4	C
	Northbound	Thru-right	24.5	C	45.7	D	24.5	C	45.2	D
	Southbound	Left	19.4	B	19.1	B	19.4	B	19.1	B
	Southbound	Thru-right	33.7	C	29.8	C	33.7	C	268.2	F
	Southbound	Right	0.2	A	0.5	A	0.2	A	0.5	A
	Overall		**23.4**	**C**	**29.9**	**C**	**23.4**	**C**	**131.1**	**F**
Route 195 and North Eagleville Road										
	Eastbound	Left	8.1	A	9.8	A	8.1	A	9.8	A
	Eastbound	Right	3.3	A	2.8	A	3.3	A	3.7	A
	Westbound	Thru	18.8	B	13.0	B	18.8	B	19.4	B
	Westbound	Right	2.9	A	3.0	A	2.9	A	3.0	A
	Northbound	Left	13.2	B	11.5	B	13.2	B	20.1	C
	Northbound	Thru	8.5	A	22.3	C	8.5	A	21.9	C
	Overall		**12.7**	**B**	**14.4**	**B**	**12.7**	**B**	**16.8**	**B**
Route 195 and Mansfield Road										
	Eastbound	Left-thru	35.3	D	65.6	E	35.3	D	76.6	E
	Eastbound	Right	0.5	A	5.6	A	0.5	A	5.8	A
	Westbound	Left-thru-right	19.9	B	18.2	B	19.9	B	18.7	B
	Southbound	Left	6.3	A	10.7	B	6.3	A	10.0	B
	Southbound	Thru	9.7	A	18.1	B	9.7	A	21.5	C
	Southbound	Right	4.7	A	5.3	A	4.7	A	5.3	A
	Northbound	Left	8.7	A	12.0	B	8.7	A	12.8	B
	Northbound	Thru-right	16.0	B	22.8	C	16.0	B	22.4	C
	Overall		**11.6**	**B**	**22.0**	**C**	**11.6**	**B**	**24.0**	**C**

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			No Build Condition (2021)				Build Condition (2021)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Approach	Movement	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
Route 195 and Bolton Road										
	Eastbound	Left	36.7	D	37.0	D	36.7	D	37.0	D
	Eastbound	Thru-right	18.4	B	29.4	C	18.4	B	29.4	C
	Westbound	Left	38.6	D	61.7	E	38.6	D	61.7	E
	Westbound	Thru-right	27.5	C	20.8	C	27.5	C	20.8	C
	Northbound	Left	9.7	A	12.4	B	9.7	A	24.3	C
	Northbound	Left-right	9.7	A	16.7	B	9.7	A	16.7	B
	Southbound	Left	10.2	B	12.1	B	10.2	B	12.3	B
	Southbound	Thru-right	10.5	B	19.8	B	10.5	B	34.4	C
	Overall		**11.8**	**B**	**21.5**	**C**	**11.8**	**B**	**27.5**	**C**
Route 195 and Route 275 (South Eagleville Road)										
	Eastbound	Left	37.0	D	27.6	C	37.0	D	32.3	C
	Eastbound	Thru-right	34.3	C	38.7	D	34.3	C	42.7	D
	Westbound	Left	32.2	C	30.2	C	32.2	C	36.0	D
	Westbound	Thru-right	43.8	D	37.9	D	43.8	D	42.3	D
	Northbound	Left	18.1	B	29.0	C	18.1	B	50.8	D
	Northbound	Thru-right	24.2	C	34.8	C	24.2	C	38.3	D
	Southbound	Left	15.5	B	20.8	C	15.5	B	19.8	B
	Southbound	Thru	14.1	B	35.8	D	14.1	B	33.1	C
	Overall		**25.1**	**C**	**34.3**	**C**	**25.1**	**C**	**38.5**	**D**
Route 275 (South Eagleville Road) and Route 32										
	Eastbound	Left-thru-right	31.0	C	13.1	B	31.0	C	13.1	B
	Westbound	Left-thru-right	16.1	B	44.4	D	16.1	B	44.4	D
	Northbound	Left-thru-right	17.1	B	37.1	D	17.1	B	77.0	E
	Southbound	Left-thru-right	75.5	E	141.9	F	75.5	E	457.2	F
	Overall		**41.8**	**D**	**76.5**	**E**	**41.8**	**D**	**207.0**	**F**

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			No Build Condition (2021)				Build Condition (2021)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Approach	Movement	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
Route 44 and Route 32										
	Eastbound	Left-thru-right	17.6	B	76.5	E	17.6	B	171.6	F
	Westbound	Left-thru-right	23.2	C	299.7	F	23.2	C	417.7	F
	Northbound	Left-thru-right	28.1	C	693.1	F	28.1	C	693.1	F
	Southbound	Left-thru-right	13.5	B	31.7	C	13.5	B	31.7	C
	Overall		**21.9**	**C**	**335.4**	**F**	**21.9**	**C**	**375.6**	**F**
Route 44 and Discovery Drive										
	Eastbound	Left	5.9	A	12.2	B	5.9	A	12.2	B
	Eastbound	Thru	11.9	B	23.1	C	11.9	B	23.2	C
	Eastbound	Right	4.2	A	0.3	A	4.2	A	6.1	A
	Westbound	Left	10.5	B	12.6	B	10.5	B	70.8	E
	Westbound	Thru-right	7.4	A	16.1	B	7.4	A	16.1	B
	Northbound	Left-thru	18.6	B	27.9	C	18.6	B	28.0	C
	Northbound	Right	1.8	A	4.2	A	1.8	A	4.2	A
	Southbound	Left-thru-right	16.1	B	21.2	C	16.1	B	21.2	C
	Overall		**9.2**	**A**	**14.1**	**B**	**9.2**	**A**	**35.6**	**D**
Route 44 and Route 195										
	Eastbound	Left	23.4	C	31.8	C	23.4	C	28.6	C
	Eastbound	Thru-right	25.3	C	54.7	D	25.3	C	54.7	D
	Westbound	Left	22.6	C	33.0	C	22.6	C	34.3	C
	Westbound	Thru-right	37.6	D	46.3	D	37.6	D	44.9	D
	Northbound	Left	27.9	C	21.6	C	27.9	C	38.6	D
	Northbound	Thru-right	29.4	C	32.4	C	29.4	C	38.9	D
	Southbound	Left	69.6	E	78.8	E	69.6	E	78.8	E
	Southbound	Thru-right	36.4	D	28.7	C	36.4	D	30.7	C
	Overall		**33.7**	**C**	**38.0**	**D**	**33.7**	**C**	**39.2**	**D**

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			No Build Condition (2021)				Build Condition (2021)			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Approach	Movement	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
Stop Sign Controlled Intersections										
North Eagleville Road and Separatist Road										
	Eastbound	Thru-right	0.0	A	0.0	A	0.0	A	0.0	A
	Westbound	Left-thru	0.2	A	0.0	A	0.2	A	0.0	A
	Northbound	Left-right	9.8	A	9.8	A	9.8	A	9.8	A
North Eagleville Road and Hunting Lodge Road										
	Eastbound	Left-thru-right	12.2	B	10.0	B	12.2	B	10.0	B
	Westbound	Left-thru	9.2	A	12.8	B	9.2	A	15.1	B
	Westbound	Right	7.8	B	8.6	B	7.8	B	8.6	A
	Northbound	Left-thru-right	9.7	A	11.0	B	9.7	A	11.0	B
	Southbound	Left-thru-right	14.6	B	11.6	B	14.6	B	11.6	B
South Eagleville Road and Separatist Road										
	Eastbound	Left-thru-right	2.8	A	1.0	A	2.8	A	7.2	A
	Westbound	Left-thru-right	0.0	A	0.1	A	0.0	A	0.1	A
	Northbound	Left-thru-right	22.0	C	16.6	C	22.0	C	37.2	E
	Southbound	Left-thru-right	33.3	D	174.1	F	33.3	D	-	F
Route 44 and Hunting Lodge Road										
	Eastbound	Thru-right	0.0	A	0.0	A	0.0	A	0.0	A
	Westbound	Left-thru	0.4	A	0.2	A	0.4	A	0.2	A
	Northbound	Left-right	13.3	B	18.2	C	13.3	B	21.6	C

* The southbound through-right lane will become a through lane under the future No Build condition.

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Queue Summary

	Approach	Movement	Available Storage Length (ft)	Existing Condition (2018)		No Build Condition (2021)		Build Condition (2021)	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
				95% Back of Queue (ft)	95% Back of Queue (ft)	95% Back of Queue (ft)	95% Back of Queue (ft)	95% Back of Queue (ft)	95% Back of Queue (ft)
Signalized Intersections									
North Eagleville Road and Discovery Drive*									
	Eastbound	Left	50	42	82	43	84	43	84
	Eastbound	Thru	700	43	70	44	72	44	72
	Eastbound	Right	160	14	0	17	0	17	0
	Westbound	Left	415	40	35	41	36	41	36
	Westbound	Thru-right	> 1000	34	54	32	56	32	56
	Northbound	Left	100	24	83	24	84	24	84
	Northbound	Thru-right	> 1000	92	#534	95	#554	95	#554
	Southbound	Left	215	52	49	54	50	54	50
	Southbound	Thru-right	> 1000	#412	#254	#367	163	#367	#982
	Southbound	Right	300	n/a	n/a	0	0	0	0
Route 195 and North Eagleville Road									
	Eastbound	Left	115	20	44	20	46	20	46
	Eastbound	Right	400	14	25	14	26	14	32
	Southbound	Thru	> 1000	#218	126	#228	130	#228	#232
	Southbound	Right	150	21	17	21	17	21	17
	Northbound	Left	250	30	m48	37	m49	37	m49
	Northbound	Thru	> 1000	57	m#248	93	m#265	93	m#255
Route 195 and Mansfield Road							`		
	Eastbound	Left-thru	> 1000	25	#197	42	#206	42	#207
	Eastbound	Right	315	0	28	0	30	0	30
	Westbound	Left-thru-right	500	25	70	24	73	24	73
	Southbound	Left	155	m14	m33	m15	m33	m15	m26
	Southbound	Thru-right	> 1000	m126	34	m130	#338	m130	#505
	Northbound	Left	180	42	65	47	68	47	68
	Northbound	Thru-right	575	251	#359	#295	#375	#295	#375
Route 195 and Bolton Road									
	Eastbound	Left	300	22	50	22	51	22	51
	Eastbound	Thru-right	> 1000	27	110	27	114	27	114
	Westbound	Left	100	33	59	34	61	34	61
	Westbound	Thru-right	175	37	44	38	45	38	45
	Northbound	Left	200	78	65	81	67	81	#206
	Northbound	Thru-right	1275	208	#270	217	#307	217	#307
	Southbound	Left	400	12	36	12	37	12	37
	Southbound	Thru-right	575	113	#336	119	#353	119	#530
Route 195 and Route 275 (South Eagleville Road)									
	Eastbound	Left	280	#192	187	#201	196	#201	217
	Eastbound	Thru-right	> 1000	153	#390	157	#422	157	#470
	Westbound	Left	100	51	#164	52	#174	52	#178
	Westbound	Thru-right	475	104	235	106	245	106	268
	Northbound	Left	450	196	131	204	135	204	#305
	Northbound	Thru-right	>1000	481	357	504	368	504	516
	Southbound	Left	170	22	42	23	43	23	42
	Southbound	Thru	1275	62	262	64	271	64	266
Route 275 (South Eagleville Road) and Route 32									
	Eastbound	Left-thru-right	> 1000	144	73	148	75	148	75
	Westbound	Left-thru-right	> 1000	89	#475	92	#499	92	#499
	Northbound	Left-thru-right	> 1000	276	#407	292	#427	292	#616
	Southbound	Left-thru-right	> 1000	#446	#719	#528	#757	#528	#981

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Queue Summary

				Existing Condition (2018)		No Build Condition (2021)		Build Condition (2021)	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
	Approach	Movement	Available Storage Length (ft)	95% Back of Queue (ft)	95% Back of Queue (ft)	95% Back of Queue (ft)	95% Back of Queue (ft)	95% Back of Queue (ft)	95% Back of Queue (ft)
Route 44 and Route 32									
	Eastbound	Left-thru-right	> 1000	184	#539	193	#569	193	#774
	Westbound	Left-thru-right	> 1000	235	#786	248	#820	248	#861
	Northbound	Left-thru-right	> 1000	#431	#1046	#455	#1088	#455	#1088
	Southbound	Left-thru-right	> 1000	140	#370	148	#389	148	#389
Route 44 and Discovery Drive									
	Eastbound	Left	225	11	13	11	13	11	13
	Eastbound	Thru	> 1000	104	129	108	132	108	132
	Eastbound	Right	225	35	0	36	0	36	41
	Westbound	Left	350	#248	76	#265	79	#265	#650
	Westbound	Thru-right	> 1000	125	161	130	166	130	166
	Northbound	Left-thru	> 1000	34	101	36	103	36	103
	Northbound	Right	200	8	50	8	50	8	50
	Southbound	Left-thru-right	200	20	35	20	36	20	36
Route 44 and Route 195									
	Eastbound	Left	315	61	180	64	185	64	185
	Eastbound	Thru-right	> 1000	141	#504	147	#523	147	#523
	Westbound	Left	220	157	140	162	143	162	#321
	Westbound	Thru-right	> 1000	#701	290	#734	#307	#734	#557
	Northbound	Left	240	68	114	69	118	69	121
	Northbound	Thru-right	> 1000	100	370	103	#387	103	#387
	Southbound	Left	200	56	116	59	120	59	120
	Southbound	Thru-right	> 1000	306	210	320	217	320	#419
Stop Sign Controlled Intersections									
North Eagleville Road and Separatist Road									
	Eastbound	Thru-right	> 1000	0	0	0	0	0	0
	Westbound	Left-thru	> 1000	1	0	0	0	0	0
	Northbound	Left-right	> 1000	1	3	1	0	1	0
North Eagleville Road and Hunting Lodge Road									
	Eastbound	Left-thru-right	> 1000	0	0	0	0	0	0
	Westbound	Left-thru	> 1000	0	0	0	0	0	55
	Westbound	Right	200	0	0	0	0	0	0
	Northbound	Left-thru-right	> 1000	0	0	0	0	0	0
	Southbound	Left-thru-right	> 1000	0	0	0	0	0	0
South Eagleville Road and Separatist Road									
	Eastbound	Left-thru-right	> 1000	9	2	9	2	9	#386
	Westbound	Left-thru-right	> 1000	0	0	0	0	0	225
	Northbound	Left-thru-right	> 1000	2	3	2	3	2	13
	Southbound	Left-thru-right	> 1000	47	402	52	463	52	#293
Route 44 and Hunting Lodge Road									
	Eastbound	Thru-right	> 1000	0	0	0	0	0	0
	Westbound	Left-thru	> 1000	1	0	1	0	1	0
	Northbound	Left-right	> 1000	4	41	4	45	4	55

#: 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

* The southbound through-right lane will become a through lane under the future No Build condition.

Appendix D – Synchro Reports

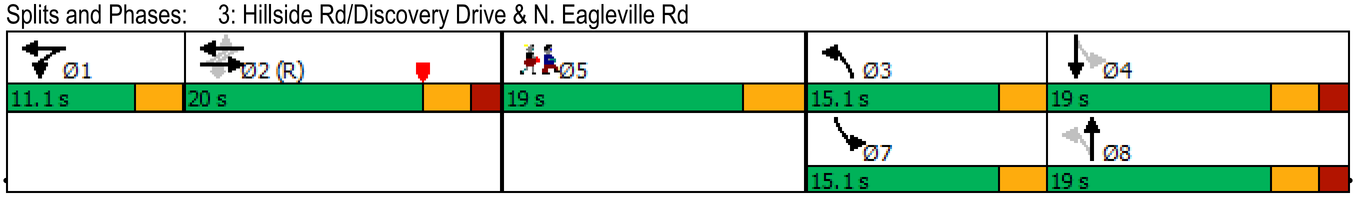
(Existing, No Build, and Build Conditions)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	36	95	42	19	35	21	81	29	64	357	43
Future Volume (vph)	34	36	95	42	19	35	21	81	29	64	357	43
Satd. Flow (prot)	1770	1863	1583	1770	1682	0	1770	1788	0	1770	1833	0
Flt Permitted	0.719			0.732			0.306			0.589		
Satd. Flow (perm)	1339	1863	1583	1364	1682	0	570	1788	0	1097	1833	0
Satd. Flow (RTOR)			158		38			19			6	
Lane Group Flow (vph)	37	39	103	46	59	0	23	120	0	70	435	0
Turn Type	Perm	NA	Perm	D.P+P	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		2		1	1 2		3	8		7	4	
Permitted Phases	2		2	2			8			4		
Total Split (s)	20.0	20.0	20.0	11.1			15.1	19.0		15.1	19.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0			4.0	4.0		4.0	4.0	
Act Effct Green (s)	24.0	24.0	24.0	28.1	31.3		28.8	25.0		32.9	29.8	
Actuated g/C Ratio	0.29	0.29	0.29	0.33	0.37		0.34	0.30		0.39	0.35	
v/c Ratio	0.10	0.07	0.18	0.10	0.09		0.09	0.22		0.15	0.67	
Control Delay	27.4	26.7	2.3	19.8	10.6		18.6	23.6		18.8	33.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	27.4	26.7	2.3	19.8	10.6		18.6	23.6		18.8	33.0	
LOS	C	C	A	B	B		B	C		B	C	
Approach Delay		12.8			14.6			22.8			31.1	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	16	17	0	17	8		8	43		24	188	
Queue Length 95th (ft)	42	43	14	40	34		24	92		52	#412	
Internal Link Dist (ft)		1113			1084			131			750	
Turn Bay Length (ft)	50		160	415						215		
Base Capacity (vph)	381	531	564	515	617		383	543		525	652	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.10	0.07	0.18	0.09	0.10		0.06	0.22		0.13	0.67	

Intersection Summary

Cycle Length: 84.2
Actuated Cycle Length: 84.2
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 24.4 Intersection LOS: C
Intersection Capacity Utilization 48.1% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Hillside Rd/Discovery Drive & N. Eagleville Rd



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	19.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

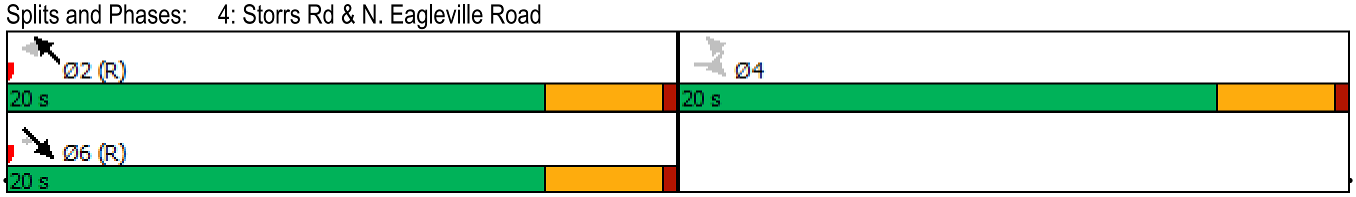
Intersection Summary

Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	44	52	493	123	74	273
Future Volume (vph)	44	52	493	123	74	273
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.705				0.285	
Satd. Flow (perm)	1313	1583	1863	1583	531	1863
Satd. Flow (RTOR)		57		134		
Lane Group Flow (vph)	48	57	536	134	80	297
Turn Type	Perm	Perm	NA	Perm	Perm	NA
Protected Phases			6			2
Permitted Phases	4	4		6	2	
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Act Effct Green (s)	16.0	16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.09	0.09	0.72	0.19	0.38	0.40
Control Delay	8.1	3.3	17.8	2.9	11.7	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.1	3.3	17.8	2.9	11.7	8.3
LOS	A	A	B	A	B	A
Approach Delay	5.5		14.8			9.1
Approach LOS	A		B			A
Queue Length 50th (ft)	6	0	94	0	10	40
Queue Length 95th (ft)	20	14	#218	21	32	88
Internal Link Dist (ft)	1265		6999			2609
Turn Bay Length (ft)	115			150		
Base Capacity (vph)	525	667	745	713	212	745
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.09	0.72	0.19	0.38	0.40

Intersection Summary

Cycle Length: 40
Actuated Cycle Length: 40
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 12.1 Intersection LOS: B
Intersection Capacity Utilization 43.4% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Storrs Rd & N. Eagleville Road

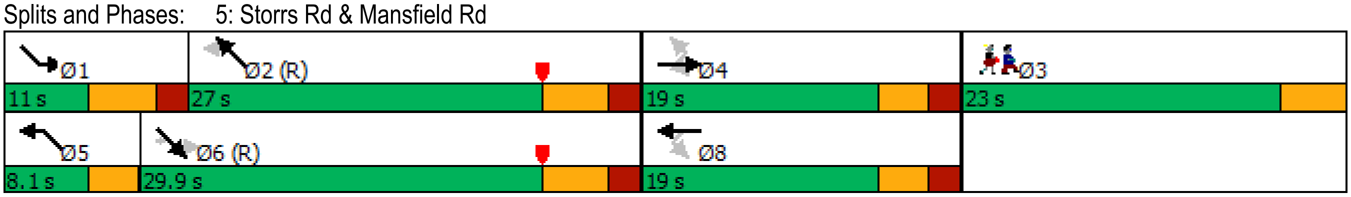


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	31	0	20	3	5	15	32	282	183	74	334	21
Future Volume (vph)	31	0	20	3	5	15	32	282	183	74	334	21
Satd. Flow (prot)	0	1770	1583	0	1685	0	1770	1863	1583	1770	1846	0
Flt Permitted		0.742			0.953		0.452			0.545		
Satd. Flow (perm)	0	1382	1583	0	1615	0	842	1863	1583	1015	1846	0
Satd. Flow (RTOR)			138		16				199		4	
Lane Group Flow (vph)	0	34	22	0	24	0	35	307	199	80	386	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8	8		6		6	2		
Total Split (s)	19.0	19.0	19.0	19.0	19.0		11.0	29.9	29.9	8.1	27.0	
Total Lost Time (s)		4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	
Act Effct Green (s)		9.0	9.0		9.0		57.1	51.2	51.2	55.1	52.6	
Actuated g/C Ratio		0.11	0.11		0.11		0.71	0.64	0.64	0.69	0.66	
v/c Ratio		0.22	0.07		0.12		0.05	0.26	0.18	0.11	0.32	
Control Delay		35.4	0.5		20.0		6.3	9.6	4.8	8.6	15.3	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		35.4	0.5		20.0		6.3	9.6	4.8	8.6	15.3	
LOS		D	A		B		A	A	A	A	B	
Approach Delay		21.7			20.0			7.6			14.2	
Approach LOS		C			B			A			B	
Queue Length 50th (ft)		16	0		4		1	6	0	6	74	
Queue Length 95th (ft)		41	0		24		m14	m126	m44	44	263	
Internal Link Dist (ft)		95			149			2609			562	
Turn Bay Length (ft)			315				155		190	180		
Base Capacity (vph)		259	408		315		696	1191	1084	755	1214	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.13	0.05		0.08		0.05	0.26	0.18	0.11	0.32	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.32
Intersection Signal Delay: 11.4 Intersection LOS: B
Intersection Capacity Utilization 41.4% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Storrs Rd & Mansfield Rd



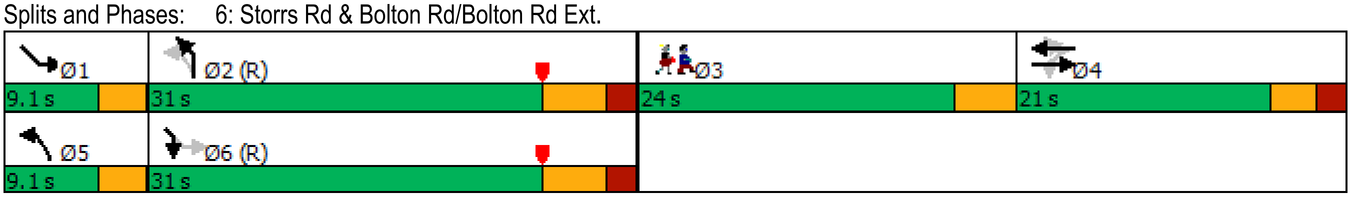
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations												
Traffic Volume (vph)	11	4	23	20	18	13	153	369	33	14	188	48
Future Volume (vph)	11	4	23	20	18	13	153	369	33	14	188	48
Satd. Flow (prot)	1770	1622	0	1770	1747	0	1770	1759	0	1770	1583	0
Flt Permitted	0.755			0.755			0.515	0.956		0.506		
Satd. Flow (perm)	1406	1622	0	1406	1747	0	959	1759	0	943	1583	0
Satd. Flow (RTOR)		25			14			117			117	
Lane Group Flow (vph)	12	29	0	22	34	0	166	437	0	15	256	0
Turn Type	Perm	NA		Perm	NA		pm+pt	Prot		pm+pt	Prot	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Total Split (s)	21.0	21.0		21.0	21.0		9.1	31.0		9.1	31.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Act Effct Green (s)	8.1	8.1		8.1	8.1		59.4	59.3		52.9	48.8	
Actuated g/C Ratio	0.10	0.10		0.10	0.10		0.70	0.70		0.62	0.57	
v/c Ratio	0.09	0.16		0.16	0.19		0.23	0.35		0.02	0.27	
Control Delay	36.6	18.4		38.4	27.2		9.3	9.2		10.1	9.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	36.6	18.4		38.4	27.2		9.3	9.2		10.1	9.9	
LOS	D	B		D	C		A	A		B	A	
Approach Delay		23.8			31.6			9.2		9.9		
Approach LOS		C			C			A		A		
Queue Length 50th (ft)	6	2		11	10		43	94		4	47	
Queue Length 95th (ft)	22	27		33	37		78	208		12	113	
Internal Link Dist (ft)		480			19			665		562		
Turn Bay Length (ft)							110	110				
Base Capacity (vph)	280	344		280	360		735	1262		646	957	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.04	0.08		0.08	0.09		0.23	0.35		0.02	0.27	

Intersection Summary	
Cycle Length: 85.1	
Actuated Cycle Length: 85.1	
Offset: 1 (1%), Referenced to phase 2:NBL and 6:SEL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 44.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Storrs Rd & Bolton Rd/Bolton Rd Ext.



Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	24.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

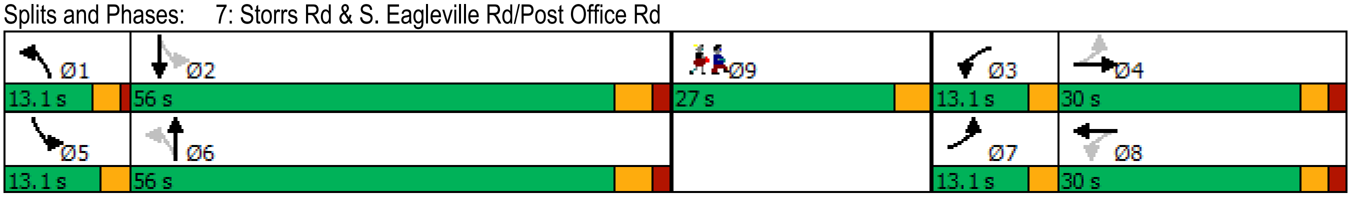
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	68	60	31	57	10	252	412	72	18	119	75
Future Volume (vph)	155	68	60	31	57	10	252	412	72	18	119	75
Satd. Flow (prot)	1770	1732	0	1770	1820	0	1770	1822	0	1770	3334	0
Flt Permitted	0.442			0.668			0.542			0.359		
Satd. Flow (perm)	823	1732	0	1244	1820	0	1010	1822	0	669	3334	0
Satd. Flow (RTOR)		28						7			82	
Lane Group Flow (vph)	168	139	0	34	73	0	274	526	0	20	211	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Total Split (s)	13.1	30.0		13.1	30.0		13.1	56.0		13.1	56.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Act Effct Green (s)	21.1	16.5		13.6	11.1		41.1	38.7		32.4	27.2	
Actuated g/C Ratio	0.27	0.21		0.17	0.14		0.52	0.49		0.41	0.34	
v/c Ratio	0.50	0.36		0.14	0.29		0.45	0.59		0.06	0.18	
Control Delay	36.5	34.0		32.1	43.6		17.7	23.6		15.5	14.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	36.5	34.0		32.1	43.6		17.7	23.6		15.5	14.0	
LOS	D	C		C	D		B	C		B	B	
Approach Delay		35.3			40.0			21.6			14.1	
Approach LOS		D			D			C			B	
Queue Length 50th (ft)	41	33		8	24		52	118		3	17	
Queue Length 95th (ft)	#192	153		51	104		196	481		22	62	
Internal Link Dist (ft)		703			270			43			584	
Turn Bay Length (ft)	280			100						170		
Base Capacity (vph)	352	691		368	708		626	1339		470	2468	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.48	0.20		0.09	0.10		0.44	0.39		0.04	0.09	

Intersection Summary

Cycle Length: 139.2
Actuated Cycle Length: 79.3
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 24.7 Intersection LOS: C
Intersection Capacity Utilization 58.0% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Storrs Rd & S. Eagleville Rd/Post Office Rd



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	27.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

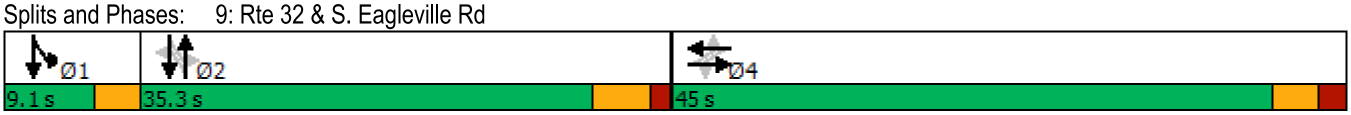
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	125	18	46	40	101	4	327	160	302	266	4
Future Volume (vph)	71	125	18	46	40	101	4	327	160	302	266	4
Satd. Flow (prot)	0	1811	0	0	1706	0	0	1781	0	0	1812	0
Flt Permitted		0.802			0.864			0.996			0.506	
Satd. Flow (perm)	0	1476	0	0	1492	0	0	1774	0	0	942	0
Satd. Flow (RTOR)		7			88							
Lane Group Flow (vph)	0	233	0	0	203	0	0	533	0	0	621	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2			2		
Total Split (s)	45.0	45.0		45.0	45.0		35.3	35.3		9.1		
Total Lost Time (s)		4.0			4.0			4.0				
Act Effct Green (s)		15.0			15.0			31.4			36.5	
Actuated g/C Ratio		0.24			0.24			0.49			0.57	
v/c Ratio		0.66			0.48			0.61			1.02	
Control Delay		30.6			15.9			16.4			57.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		30.6			15.9			16.4			57.4	
LOS		C			B			B			E	
Approach Delay		30.6			15.9			16.4			57.4	
Approach LOS		C			B			B			E	
Queue Length 50th (ft)		79			37			138			~116	
Queue Length 95th (ft)		144			89			276			#446	
Internal Link Dist (ft)		1311			3995			2565			1594	
Turn Bay Length (ft)												
Base Capacity (vph)		957			996			876			611	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.24			0.20			0.61			1.02	

Intersection Summary

Cycle Length: 89.4
Actuated Cycle Length: 63.6
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 34.4 Intersection LOS: C
Intersection Capacity Utilization 85.6% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Rte 32 & S. Eagleville Rd

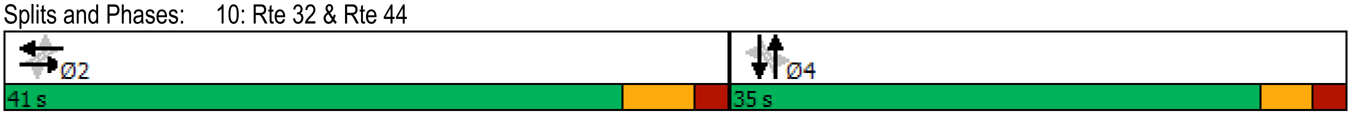


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	212	120	68	332	24	140	320	56	8	200	44
Future Volume (vph)	44	212	120	68	332	24	140	320	56	8	200	44
Satd. Flow (prot)	0	1772	0	0	1833	0	0	1811	0	0	1814	0
Flt Permitted		0.918			0.880			0.836			0.982	
Satd. Flow (perm)	0	1636	0	0	1626	0	0	1534	0	0	1785	0
Satd. Flow (RTOR)		43			6			10			17	
Lane Group Flow (vph)	0	408	0	0	461	0	0	561	0	0	274	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	41.0	41.0		41.0	41.0		35.0	35.0		35.0	35.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Act Effct Green (s)		26.1			26.1			29.7			29.7	
Actuated g/C Ratio		0.41			0.41			0.46			0.46	
v/c Ratio		0.59			0.69			0.78			0.33	
Control Delay		16.8			21.5			26.3			13.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		16.8			21.5			26.3			13.1	
LOS		B			C			C			B	
Approach Delay		16.8			21.5			26.3			13.1	
Approach LOS		B			C			C			B	
Queue Length 50th (ft)		109			146			170			59	
Queue Length 95th (ft)		184			235			#431			140	
Internal Link Dist (ft)		1622			1841			1721			1895	
Turn Bay Length (ft)												
Base Capacity (vph)		987			966			766			894	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.41			0.48			0.73			0.31	

Intersection Summary

Cycle Length: 76
Actuated Cycle Length: 64
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 20.6 Intersection LOS: C
Intersection Capacity Utilization 85.2% ICU Level of Service E
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Rte 32 & Rte 44

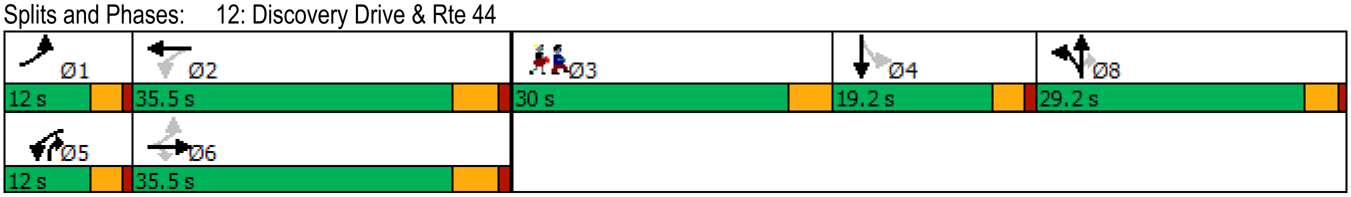


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	174	133	417	204	17	31	2	46	12	2	4
Future Volume (vph)	15	174	133	417	204	17	31	2	46	12	2	4
Satd. Flow (prot)	1770	1863	1583	1770	1842	0	0	1779	1583	0	1751	0
Flt Permitted	0.610			0.532				0.955				
Satd. Flow (perm)	1136	1863	1583	991	1842	0	0	1779	1583	0	1811	0
Satd. Flow (RTOR)			145		3				93		4	
Lane Group Flow (vph)	16	189	145	453	240	0	0	36	50	0	19	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Perm	NA	
Protected Phases	1	6		5	2		8	8	5		4	
Permitted Phases	6		6	2					8	4		
Total Split (s)	12.0	35.5	35.5	12.0	35.5		29.2	29.2	12.0	19.2	19.2	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Act Effct Green (s)	23.9	17.8	17.8	30.3	32.2			8.9	12.5		9.2	
Actuated g/C Ratio	0.59	0.44	0.44	0.74	0.79			0.22	0.31		0.23	
v/c Ratio	0.02	0.23	0.19	0.50	0.16			0.09	0.09		0.05	
Control Delay	5.9	11.9	4.2	10.1	7.4			18.6	1.7		16.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	5.9	11.9	4.2	10.1	7.4			18.6	1.7		16.0	
LOS	A	B	A	B	A			B	A		B	
Approach Delay		8.4			9.2			8.7			16.0	
Approach LOS		A			A			A			B	
Queue Length 50th (ft)	1	15	0	0	0			5	0		2	
Queue Length 95th (ft)	11	104	35	#248	125			34	8		20	
Internal Link Dist (ft)		1395			2126			2889			636	
Turn Bay Length (ft)	225		225	350					200			
Base Capacity (vph)	865	1536	1330	898	1519			1173	548		723	
Starvation Cap Reductn	0	0	0	0	0			0	0		0	
Spillback Cap Reductn	0	0	0	0	0			0	0		0	
Storage Cap Reductn	0	0	0	0	0			0	0		0	
Reduced v/c Ratio	0.02	0.12	0.11	0.50	0.16			0.03	0.09		0.03	

Intersection Summary

Cycle Length: 125.9
Actuated Cycle Length: 40.8
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 9.0 | Intersection LOS: A
Intersection Capacity Utilization 53.3% | ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Discovery Drive & Rte 44



Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

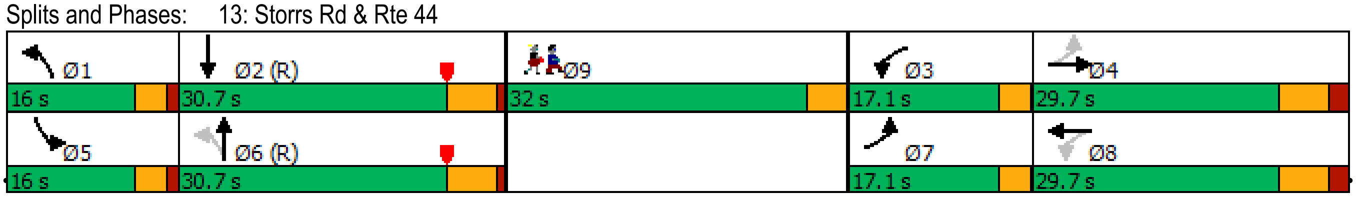
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	70	62	154	395	73	57	162	21	28	400	185
Future Volume (vph)	50	70	62	154	395	73	57	162	21	28	400	185
Satd. Flow (prot)	1770	1732	0	1770	1820	0	1770	3479	0	1770	3373	0
Flt Permitted	0.243			0.581			0.212			0.950		
Satd. Flow (perm)	453	1732	0	1082	1820	0	395	3479	0	1770	3373	0
Satd. Flow (RTOR)		32			7			10			55	
Lane Group Flow (vph)	54	143	0	167	508	0	62	199	0	30	636	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Prot	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6					
Total Split (s)	17.1	29.7		17.1	29.7		16.0	30.7		16.0	30.7	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Act Effct Green (s)	53.7	47.4		59.2	51.4		49.1	44.3		5.9	41.7	
Actuated g/C Ratio	0.43	0.38		0.47	0.41		0.39	0.35		0.05	0.33	
v/c Ratio	0.21	0.21		0.30	0.68		0.27	0.16		0.36	0.55	
Control Delay	24.1	25.8		23.5	38.8		26.0	28.1		69.1	34.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.1	25.8		23.5	38.8		26.0	28.1		69.1	34.0	
LOS	C	C		C	D		C	C		E	C	
Approach Delay		25.3			35.0			27.6			35.6	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	23	60		77	340		27	52		24	186	
Queue Length 95th (ft)	61	141		157	#701		68	100		56	306	
Internal Link Dist (ft)		2126			2054			6999			100	
Turn Bay Length (ft)	315			220			240			200		
Base Capacity (vph)	351	673		590	750		291	1233		169	1157	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.15	0.21		0.28	0.68		0.21	0.16		0.18	0.55	

Intersection Summary

Cycle Length: 125.5
Actuated Cycle Length: 125.5
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 33.1 Intersection LOS: C
Intersection Capacity Utilization 62.2% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: Storrs Rd & Rte 44



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	32.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	207	13	1	29	2	4
Future Volume (Veh/h)	207	13	1	29	2	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	225	14	1	32	2	4
Pedestrians	2			2	2	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			241		270	236
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			241		270	236
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1323		716	800

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	239	33	6
Volume Left	0	1	2
Volume Right	14	0	4
cSH	1700	1323	770
Volume to Capacity	0.14	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.2	9.7
Lane LOS		A	A
Approach Delay (s)	0.0	0.2	9.7
Approach LOS			A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	22.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	7	210	0	23	19	21	1	41	121	236	101	2
Future Volume (vph)	7	210	0	23	19	21	1	41	121	236	101	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	228	0	25	21	23	1	45	132	257	110	2

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	236	46	23	178	369
Volume Left (vph)	8	25	0	1	257
Volume Right (vph)	0	0	23	132	2
Hadj (s)	0.04	0.31	-0.67	-0.41	0.17
Departure Headway (s)	5.6	6.7	5.7	5.0	5.2
Degree Utilization, x	0.37	0.09	0.04	0.24	0.54
Capacity (veh/h)	592	478	552	669	659
Control Delay (s)	11.9	9.1	7.7	9.6	14.1
Approach Delay (s)	11.9	8.6		9.6	14.1
Approach LOS	B	A		A	B

Intersection Summary			
Delay	12.1		
Level of Service	B		
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	420	1	1	137	167	4	2	1	77	2	9
Future Volume (Veh/h)	117	420	1	1	137	167	4	2	1	77	2	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	127	457	1	1	149	182	4	2	1	84	2	10
Pedestrians					1			1				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	331			459			966	1046	460	956	955	240
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	331			459			966	1046	460	956	955	240
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			100			98	99	100	61	99	99
cM capacity (veh/h)	1228			1101			211	205	601	216	231	799

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	585	332	7	96
Volume Left	127	1	4	84
Volume Right	1	182	1	10
cSH	1228	1101	230	234
Volume to Capacity	0.10	0.00	0.03	0.41
Queue Length 95th (ft)	9	0	2	47
Control Delay (s)	2.7	0.0	21.1	30.6
Lane LOS	A	A	C	D
Approach Delay (s)	2.7	0.0	21.1	30.6
Approach LOS			C	D

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	281	142	7	196	20	3
Future Volume (Veh/h)	281	142	7	196	20	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	305	154	8	213	22	3
Pedestrians	2			2	2	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			461		615	386
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			461		615	386
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	100
cM capacity (veh/h)			1098		450	660

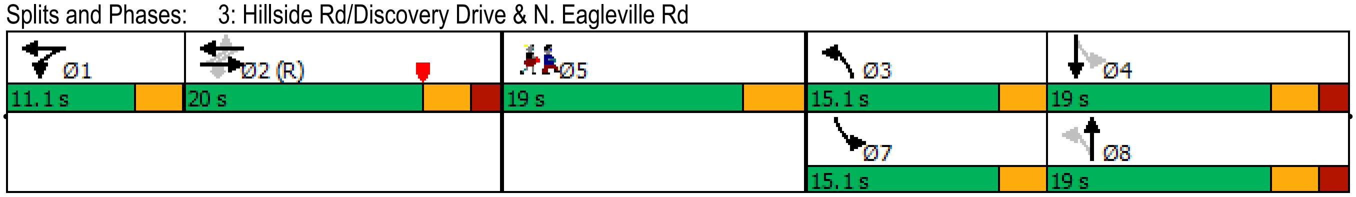
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	459	221	25
Volume Left	0	8	22
Volume Right	154	0	3
cSH	1700	1098	468
Volume to Capacity	0.27	0.01	0.05
Queue Length 95th (ft)	0	1	4
Control Delay (s)	0.0	0.4	13.1
Lane LOS		A	B
Approach Delay (s)	0.0	0.4	13.1
Approach LOS			B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	66	54	36	53	33	115	375	82	61	171	69
Future Volume (vph)	76	66	54	36	53	33	115	375	82	61	171	69
Satd. Flow (prot)	1770	1863	1583	1770	1757	0	1770	1812	0	1770	1783	0
Flt Permitted	0.696			0.710			0.466			0.215		
Satd. Flow (perm)	1296	1863	1583	1323	1757	0	868	1812	0	400	1783	0
Satd. Flow (RTOR)			158		36			11			21	
Lane Group Flow (vph)	83	72	59	39	94	0	125	497	0	66	261	0
Turn Type	Perm	NA	Perm	D.P+P	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		2		1	1 2		3	8		7	4	
Permitted Phases	2		2	2			8			4		
Total Split (s)	20.0	20.0	20.0	11.1			15.1	19.0		15.1	19.0	
Total Lost Time (s)	5.0	5.0	5.0	3.1			3.1	5.0		3.1	5.0	
Act Effct Green (s)	18.5	18.5	18.5	25.5	28.0		37.6	28.3		34.6	26.8	
Actuated g/C Ratio	0.22	0.22	0.22	0.30	0.33		0.45	0.34		0.41	0.32	
v/c Ratio	0.29	0.18	0.13	0.09	0.15		0.26	0.81		0.24	0.45	
Control Delay	32.8	30.1	0.6	19.9	13.8		17.9	43.6		18.9	29.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.8	30.1	0.6	19.9	13.8		17.9	43.6		18.9	29.9	
LOS	C	C	A	B	B		B	D		B	C	
Approach Delay		23.0			15.6			38.4			27.7	
Approach LOS		C			B			D			C	
Queue Length 50th (ft)	38	32	0	14	21		44	~316		23	118	
Queue Length 95th (ft)	82	70	0	35	54		83	#534		49	#254	
Internal Link Dist (ft)		1113			1084			131			750	
Turn Bay Length (ft)	50		160	415						215		
Base Capacity (vph)	284	408	470	462	595		526	615		374	581	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.29	0.18	0.13	0.08	0.16		0.24	0.81		0.18	0.45	

Intersection Summary
Cycle Length: 84.2
Actuated Cycle Length: 84.2
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 30.8 Intersection LOS: C
Intersection Capacity Utilization 53.1% ICU Level of Service A
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Hillside Rd/Discovery Drive & N. Eagleville Rd



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	19.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

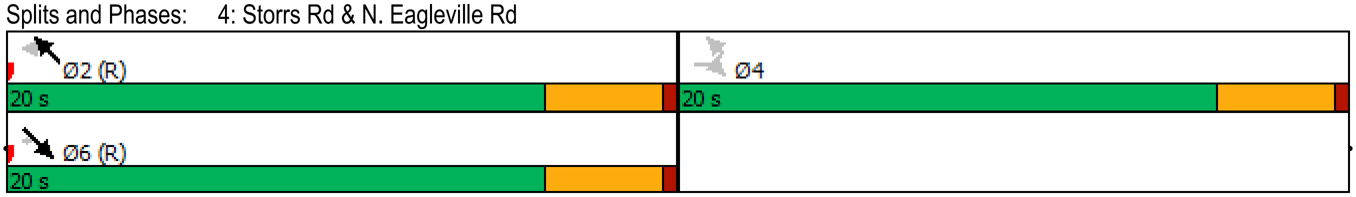
Intersection Summary

Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	120	187	376	83	96	557
Future Volume (vph)	120	187	376	83	96	557
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.690				0.422	
Satd. Flow (perm)	1285	1583	1863	1583	786	1863
Satd. Flow (RTOR)		203		90		
Lane Group Flow (vph)	130	203	409	90	104	605
Turn Type	Perm	Perm	NA	Perm	Perm	NA
Protected Phases			6			2
Permitted Phases	4	4		6	2	
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Act Effct Green (s)	16.0	16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.25	0.27	0.55	0.13	0.33	0.81
Control Delay	9.7	2.8	12.7	3.0	11.2	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.7	2.8	12.7	3.0	11.2	20.8
LOS	A	A	B	A	B	C
Approach Delay	5.5		10.9			19.4
Approach LOS	A		B			B
Queue Length 50th (ft)	18	0	66	0	27	189
Queue Length 95th (ft)	44	25	126	17	m48	m#248
Internal Link Dist (ft)	1265		6999			2609
Turn Bay Length (ft)						
Base Capacity (vph)	514	755	745	687	314	745
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.27	0.55	0.13	0.33	0.81

Intersection Summary

Cycle Length: 40
Actuated Cycle Length: 40
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 13.6 Intersection LOS: B
Intersection Capacity Utilization 42.6% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Storrs Rd & N. Eagleville Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	145	19	100	20	29	63	49	380	134	108	377	10
Future Volume (vph)	145	19	100	20	29	63	49	380	134	108	377	10
Satd. Flow (prot)	0	1785	1583	0	1708	0	1770	1863	1583	1770	1855	0
Flt Permitted		0.658			0.917		0.377			0.432		
Satd. Flow (perm)	0	1226	1583	0	1580	0	702	1863	1583	805	1855	0
Satd. Flow (RTOR)			138		68				146		2	
Lane Group Flow (vph)	0	179	109	0	122	0	53	413	146	117	421	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8	8		6		6	2		
Total Split (s)	19.0	19.0	19.0	19.0	19.0		11.0	29.9	29.9	8.1	27.0	
Total Lost Time (s)		5.0	5.0		5.0		6.0	6.0	6.0	3.1	6.0	
Act Effct Green (s)		14.2	14.2		14.2		42.9	38.4	38.4	45.1	38.8	
Actuated g/C Ratio		0.18	0.18		0.18		0.54	0.48	0.48	0.56	0.48	
v/c Ratio		0.82	0.28		0.36		0.12	0.46	0.17	0.22	0.47	
Control Delay		63.4	5.3		17.9		10.7	17.6	5.3	11.7	22.3	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		63.4	5.3		17.9		10.7	17.6	5.3	11.7	22.3	
LOS		E	A		B		B	B	A	B	C	
Approach Delay		41.4			17.9			14.1			20.0	
Approach LOS		D			B			B			C	
Queue Length 50th (ft)		85	0		23		3	114	16	15	123	
Queue Length 95th (ft)		#197	28		70		m33	#323	34	65	#359	
Internal Link Dist (ft)		95			149			2609			562	
Turn Bay Length (ft)			315				155		190	180		
Base Capacity (vph)		224	402		345		450	894	836	524	900	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.80	0.27		0.35		0.12	0.46	0.17	0.22	0.47	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 21.5 Intersection LOS: C

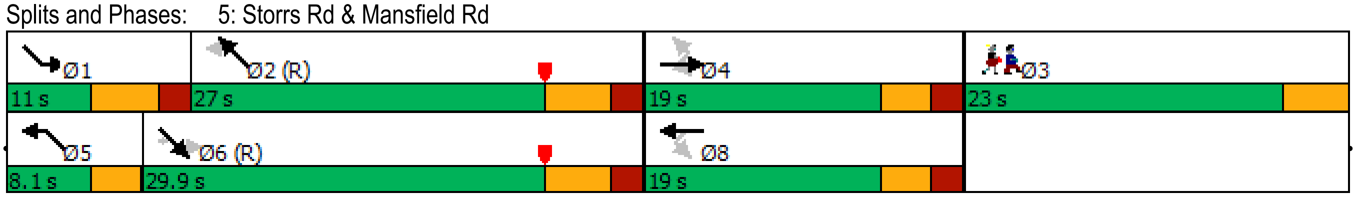
Intersection Capacity Utilization 54.5% ICU Level of Service A

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Storrs Rd & Mansfield Rd



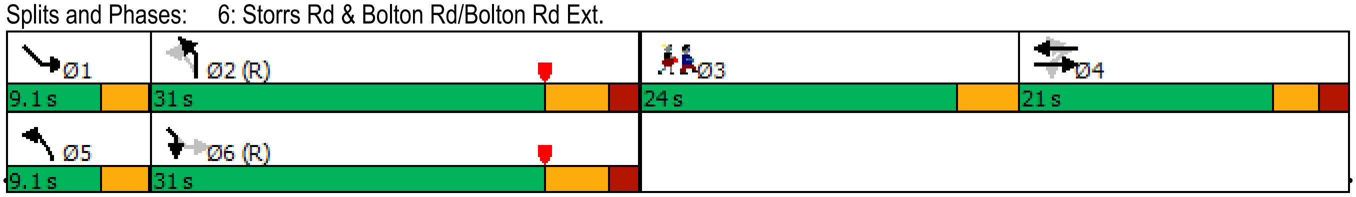
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations												
Traffic Volume (vph)	41	59	137	47	25	28	101	344	61	48	381	37
Future Volume (vph)	41	59	137	47	25	28	101	344	61	48	381	37
Satd. Flow (prot)	1770	1667	0	1770	1716	0	1770	1745	0	1770	1583	0
Flt Permitted	0.720			0.400			0.371	0.959		0.425		
Satd. Flow (perm)	1341	1667	0	745	1716	0	691	1745	0	792	1583	0
Satd. Flow (RTOR)		121			30			117			117	
Lane Group Flow (vph)	45	213	0	51	57	0	110	440	0	52	454	0
Turn Type	Perm	NA		Perm	NA		pm+pt	Prot		pm+pt	Prot	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Total Split (s)	21.0	21.0		21.0	21.0		9.1	31.0		9.1	31.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		3.1	6.0		3.1	6.0	
Act Effct Green (s)	10.0	10.0		10.0	10.0		51.3	44.4		49.4	42.2	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.60	0.52		0.58	0.50	
v/c Ratio	0.28	0.70		0.59	0.25		0.22	0.46		0.10	0.54	
Control Delay	37.4	28.7		60.3	21.2		12.1	16.2		11.9	19.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.4	28.7		60.3	21.2		12.1	16.2		11.9	19.2	
LOS	D	C		E	C		B	B		B	B	
Approach Delay		30.2			39.6			15.3		18.4		
Approach LOS		C			D			B		B		
Queue Length 50th (ft)	23	47		27	13		29	132		13	149	
Queue Length 95th (ft)	50	110		59	44		65	#270		36	#336	
Internal Link Dist (ft)		480			19			665		562		
Turn Bay Length (ft)							110	110				
Base Capacity (vph)	252	411		140	346		498	966		534	843	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.18	0.52		0.36	0.16		0.22	0.46		0.10	0.54	

Intersection Summary
Cycle Length: 85.1
Actuated Cycle Length: 85.1
Offset: 1 (1%), Referenced to phase 2:NBL and 6:SEL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 21.0 Intersection LOS: C
Intersection Capacity Utilization 61.0% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Storrs Rd & Bolton Rd/Bolton Rd Ext.



Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	24.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

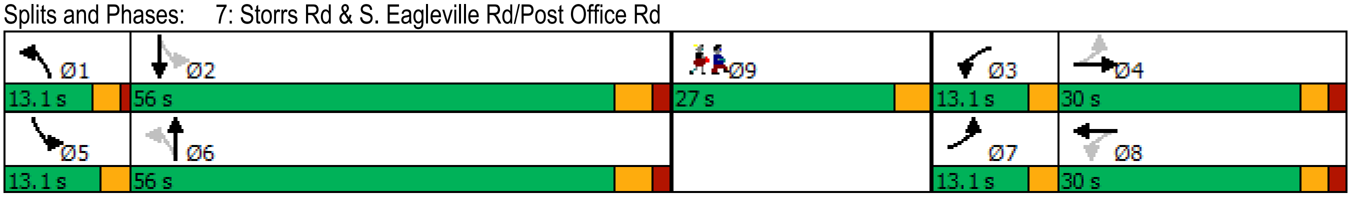
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	95	222	149	159	30	144	263	71	37	409	128
Future Volume (vph)	178	95	222	149	159	30	144	263	71	37	409	128
Satd. Flow (prot)	1770	1667	0	1770	1818	0	1770	1803	0	1770	3412	0
Flt Permitted	0.514			0.253			0.247			0.453		
Satd. Flow (perm)	957	1667	0	471	1818	0	460	1803	0	844	3412	0
Satd. Flow (RTOR)		74						11			33	
Lane Group Flow (vph)	193	344	0	162	206	0	157	363	0	40	584	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Total Split (s)	13.1	30.0		13.1	30.0		13.1	56.0		13.1	56.0	
Total Lost Time (s)	3.1	5.0		3.1	5.0		4.0	6.0		3.1	6.0	
Act Effct Green (s)	34.1	22.3		34.3	22.4		37.4	30.6		32.1	22.9	
Actuated g/C Ratio	0.37	0.25		0.38	0.25		0.41	0.34		0.35	0.25	
v/c Ratio	0.43	0.74		0.51	0.46		0.51	0.59		0.11	0.66	
Control Delay	27.3	39.4		30.1	38.3		26.9	33.4		20.6	34.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	27.3	39.4		30.1	38.3		26.9	33.4		20.6	34.4	
LOS	C	D		C	D		C	C		C	C	
Approach Delay		35.0			34.7			31.4			33.5	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	52	114		43	80		45	147		11	126	
Queue Length 95th (ft)	187	#390		#164	235		131	357		42	262	
Internal Link Dist (ft)		697			277			61			567	
Turn Bay Length (ft)	280			100						170		
Base Capacity (vph)	465	546		336	539		330	1074		451	2038	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.42	0.63		0.48	0.38		0.48	0.34		0.09	0.29	

Intersection Summary

Cycle Length: 139.2
Actuated Cycle Length: 91
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 33.6 Intersection LOS: C
Intersection Capacity Utilization 66.1% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Storrs Rd & S. Eagleville Rd/Post Office Rd



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	27.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

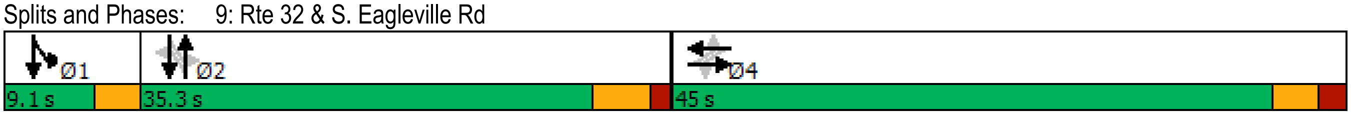
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	72	35	168	111	274	12	360	73	135	464	64
Future Volume (vph)	21	72	35	168	111	274	12	360	73	135	464	64
Satd. Flow (prot)	0	1779	0	0	1712	0	0	1820	0	0	1820	0
Flt Permitted		0.893			0.856			0.976			0.706	
Satd. Flow (perm)	0	1602	0	0	1488	0	0	1778	0	0	1298	0
Satd. Flow (RTOR)		27			71							
Lane Group Flow (vph)	0	139	0	0	602	0	0	483	0	0	721	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2			2		
Total Split (s)	45.0	45.0		45.0	45.0		35.3	35.3		9.1		
Total Lost Time (s)		5.0			5.0			5.3				
Act Effct Green (s)		34.4			34.4			30.2			38.5	
Actuated g/C Ratio		0.41			0.41			0.36			0.46	
v/c Ratio		0.21			0.93			0.76			1.14	
Control Delay		13.0			42.8			34.5			107.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.0			42.8			34.5			107.0	
LOS		B			D			C			F	
Approach Delay		13.0			42.8			34.5			107.0	
Approach LOS		B			D			C			F	
Queue Length 50th (ft)		36			264			241			~450	
Queue Length 95th (ft)		73			#475			#407			#719	
Internal Link Dist (ft)		1311			3995			2565			1594	
Turn Bay Length (ft)												
Base Capacity (vph)		781			749			638			631	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.18			0.80			0.76			1.14	

Intersection Summary

Cycle Length: 89.4
Actuated Cycle Length: 84.1
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.14
Intersection Signal Delay: 62.4 Intersection LOS: E
Intersection Capacity Utilization 110.3% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Rte 32 & S. Eagleville Rd



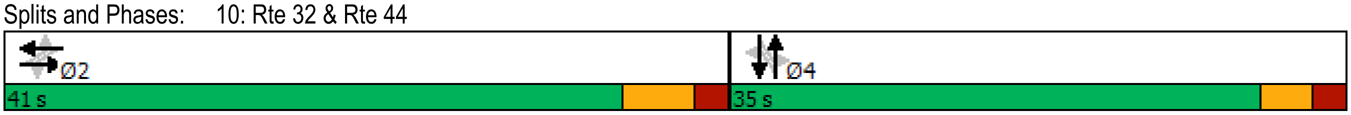
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	344	198	182	513	75	276	496	167	29	388	67
Future Volume (vph)	84	344	198	182	513	75	276	496	167	29	388	67
Satd. Flow (prot)	0	1770	0	0	1816	0	0	1793	0	0	1822	0
Flt Permitted		0.786			0.642			0.588			0.919	
Satd. Flow (perm)	0	1401	0	0	1180	0	0	1069	0	0	1679	0
Satd. Flow (RTOR)		41			10			17			13	
Lane Group Flow (vph)	0	680	0	0	838	0	0	1021	0	0	527	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	41.0	41.0		41.0	41.0		35.0	35.0		35.0	35.0	
Total Lost Time (s)		6.0			6.0			5.0			5.0	
Act Effct Green (s)		35.0			35.0			30.0			30.0	
Actuated g/C Ratio		0.46			0.46			0.39			0.39	
v/c Ratio		1.02			1.53			2.36			0.79	
Control Delay		62.0			269.5			639.3			30.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		62.0			269.5			639.3			30.1	
LOS		E			F			F			C	
Approach Delay		62.0			269.5			639.3			30.1	
Approach LOS		E			F			F			C	
Queue Length 50th (ft)		~312			~569			~816			208	
Queue Length 95th (ft)		#539			#786			#1046			#370	
Internal Link Dist (ft)		1622			1841			1721			1895	
Turn Bay Length (ft)												
Base Capacity (vph)		667			548			432			670	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.02			1.53			2.36			0.79	

Intersection Summary	
Cycle Length: 76	
Actuated Cycle Length: 76	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.36	
Intersection Signal Delay: 305.4	Intersection LOS: F
Intersection Capacity Utilization 160.4%	ICU Level of Service H
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Rte 32 & Rte 44

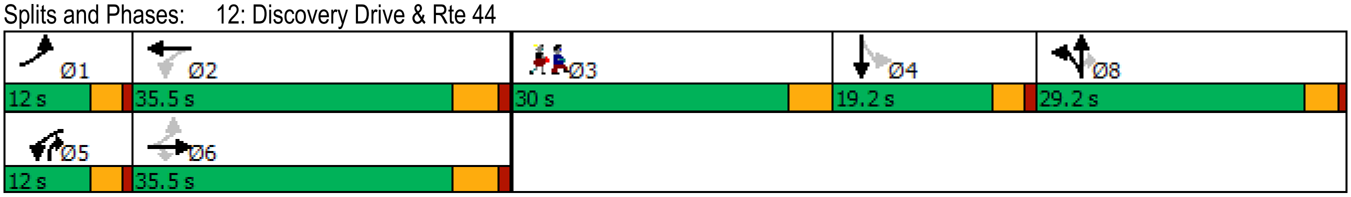


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	172	38	136	217	7	112	8	316	19	4	12
Future Volume (vph)	12	172	38	136	217	7	112	8	316	19	4	12
Satd. Flow (prot)	1770	1863	1583	1770	1853	0	0	1781	1583	0	1729	0
Flt Permitted	0.607			0.537				0.956			0.444	
Satd. Flow (perm)	1131	1863	1583	1000	1853	0	0	1781	1583	0	789	0
Satd. Flow (RTOR)			116		1				343		13	
Lane Group Flow (vph)	13	187	41	148	244	0	0	131	343	0	38	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Perm	NA	
Protected Phases	1	6		5	2		8	8	5		4	
Permitted Phases	6		6	2					8	4		
Total Split (s)	12.0	35.5	35.5	12.0	35.5		29.2	29.2	12.0	19.2	19.2	
Total Lost Time (s)	4.0	5.5	5.5	4.0	5.5			4.2	4.0		4.2	
Act Effct Green (s)	25.2	17.1	17.1	31.2	30.3			11.1	19.7		12.3	
Actuated g/C Ratio	0.45	0.30	0.30	0.55	0.54			0.20	0.35		0.22	
v/c Ratio	0.02	0.33	0.07	0.22	0.25			0.37	0.44		0.21	
Control Delay	12.1	22.8	0.3	12.4	15.9			27.7	4.2		21.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	12.1	22.8	0.3	12.4	15.9			27.7	4.2		21.0	
LOS	B	C	A	B	B			C	A		C	
Approach Delay		18.4			14.5			10.7			21.0	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)	3	62	0	33	60			47	0		8	
Queue Length 95th (ft)	13	129	0	76	161			101	50		35	
Internal Link Dist (ft)		1395			2126			2889			636	
Turn Bay Length (ft)	225		225	350					200			
Base Capacity (vph)	655	1098	980	673	1092			874	787		241	
Starvation Cap Reductn	0	0	0	0	0			0	0		0	
Spillback Cap Reductn	0	0	0	0	0			0	0		0	
Storage Cap Reductn	0	0	0	0	0			0	0		0	
Reduced v/c Ratio	0.02	0.17	0.04	0.22	0.22			0.15	0.44		0.16	

Intersection Summary

Cycle Length: 125.9
Actuated Cycle Length: 56.4
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay: 14.0 Intersection LOS: B
Intersection Capacity Utilization 50.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 12: Discovery Drive & Rte 44



Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

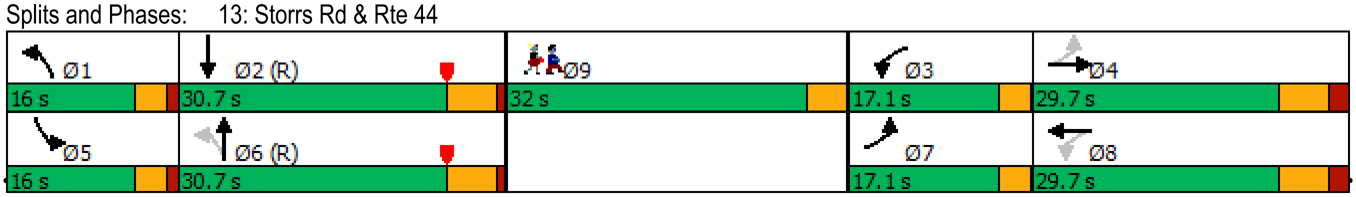
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	240	88	137	155	74	108	517	66	74	293	99
Future Volume (vph)	180	240	88	137	155	74	108	517	66	74	293	99
Satd. Flow (prot)	1770	1788	0	1770	1773	0	1770	3479	0	1770	3405	0
Flt Permitted	0.392			0.274			0.439			0.950		
Satd. Flow (perm)	730	1788	0	510	1773	0	818	3479	0	1770	3405	0
Satd. Flow (RTOR)		13			17			10			33	
Lane Group Flow (vph)	196	357	0	149	248	0	117	634	0	80	426	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Prot	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6					
Total Split (s)	17.1	29.7		17.1	29.7		16.0	30.7		16.0	30.7	
Total Lost Time (s)	3.1	6.7		3.1	6.7		4.0	5.7		4.0	5.7	
Act Effct Green (s)	47.3	31.1		43.1	28.9		59.9	50.8		9.0	49.6	
Actuated g/C Ratio	0.38	0.25		0.34	0.23		0.48	0.40		0.07	0.40	
v/c Ratio	0.52	0.79		0.53	0.59		0.26	0.45		0.63	0.31	
Control Delay	32.5	56.6		33.7	47.3		20.9	31.2		78.1	27.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.5	56.6		33.7	47.3		20.9	31.2		78.1	27.6	
LOS	C	E		C	D		C	C		E	C	
Approach Delay		48.1			42.2			29.6			35.6	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	106	258		78	166		45	184		64	106	
Queue Length 95th (ft)	180	#504		140	#290		114	#370		116	210	
Internal Link Dist (ft)		2126			2054			6999			100	
Turn Bay Length (ft)	315			220			240			200		
Base Capacity (vph)	395	452		327	421		495	1415		169	1364	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.50	0.79		0.46	0.59		0.24	0.45		0.47	0.31	

Intersection Summary

Cycle Length: 125.5
Actuated Cycle Length: 125.5
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 37.9 Intersection LOS: D
Intersection Capacity Utilization 63.1% ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: Storrs Rd & Rte 44



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	32.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	174	4	0	60	2	1
Future Volume (Veh/h)	174	4	0	60	2	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	189	4	0	65	2	1
Pedestrians	2			2	2	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			195		260	195
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			195		260	195
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1376		726	844

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	193	65	3
Volume Left	0	0	2
Volume Right	4	0	1
cSH	1700	1376	762
Volume to Capacity	0.11	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	9.7
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	20.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	13	65	2	121	176	161	3	117	48	88	80	10
Future Volume (vph)	13	65	2	121	176	161	3	117	48	88	80	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	71	2	132	191	175	3	127	52	96	87	11

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	87	323	175	182	194
Volume Left (vph)	14	132	0	3	96
Volume Right (vph)	2	0	175	52	11
Hadj (s)	0.05	0.24	-0.67	-0.13	0.10
Departure Headway (s)	5.9	6.0	5.1	5.6	5.8
Degree Utilization, x	0.14	0.54	0.25	0.28	0.31
Capacity (veh/h)	550	581	684	586	576
Control Delay (s)	9.9	14.5	8.5	10.8	11.4
Approach Delay (s)	9.9	12.4		10.8	11.4
Approach LOS	A	B		B	B

Intersection Summary			
Delay	11.6		
Level of Service	B		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	244	4	5	389	138	4	2	7	236	0	123
Future Volume (Veh/h)	23	244	4	5	389	138	4	2	7	236	0	123
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	265	4	5	423	150	4	2	8	257	0	134
Pedestrians					1			1				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	573			270			960	901	269	835	828	498
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	573			270			960	901	269	835	828	498
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			98	99	99	7	100	77
cM capacity (veh/h)	1000			1292			177	270	768	276	297	572

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	294	578	14	391
Volume Left	25	5	4	257
Volume Right	4	150	8	134
cSH	1000	1292	346	335
Volume to Capacity	0.03	0.00	0.04	1.17
Queue Length 95th (ft)	2	0	3	402
Control Delay (s)	1.0	0.1	15.8	136.8
Lane LOS	A	A	C	F
Approach Delay (s)	1.0	0.1	15.8	136.8
Approach LOS			C	F

Intersection Summary			
Average Delay	42.3		
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	218	53	6	319	142	10
Future Volume (Veh/h)	218	53	6	319	142	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	237	58	7	347	154	11
Pedestrians	2			2	2	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			297		631	270
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			297		631	270
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		65	99
cM capacity (veh/h)			1262		441	766

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	295	354	165
Volume Left	0	7	154
Volume Right	58	0	11
cSH	1700	1262	454
Volume to Capacity	0.17	0.01	0.36
Queue Length 95th (ft)	0	0	41
Control Delay (s)	0.0	0.2	17.4
Lane LOS		A	C
Approach Delay (s)	0.0	0.2	17.4
Approach LOS			C

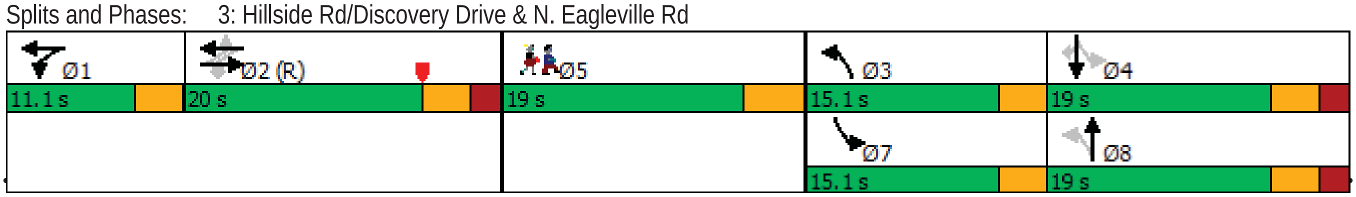
Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	37	98	43	20	26	22	83	30	66	368	44
Future Volume (vph)	35	37	98	43	20	26	22	83	30	66	368	44
Satd. Flow (prot)	1770	1863	1583	1770	1706	0	1770	1788	0	1770	1863	1583
Flt Permitted	0.724			0.731			0.317			0.570		
Satd. Flow (perm)	1349	1863	1583	1362	1706	0	590	1788	0	1062	1863	1583
Satd. Flow (RTOR)			158		28			19				158
Lane Group Flow (vph)	38	40	107	47	50	0	24	123	0	72	400	48
Turn Type	Perm	NA	Perm	D.P+P	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		2		1	1 2		3	8		7	4	
Permitted Phases	2		2	2			8			4		4
Total Split (s)	20.0	20.0	20.0	11.1			15.1	19.0		15.1	19.0	19.0
Total Lost Time (s)	4.0	4.0	4.0	4.0			4.0	4.0		4.0	4.0	5.0
Act Effct Green (s)	26.4	26.4	26.4	30.5	33.7		26.3	22.5		30.5	27.3	26.3
Actuated g/C Ratio	0.31	0.31	0.31	0.36	0.40		0.31	0.27		0.36	0.32	0.31
v/c Ratio	0.09	0.07	0.18	0.09	0.07		0.10	0.25		0.17	0.66	0.08
Control Delay	27.0	26.4	2.5	19.5	11.7		19.0	24.5		19.4	33.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	27.0	26.4	2.5	19.5	11.7		19.0	24.5		19.4	33.7	0.2
LOS	C	C	A	B	B		B	C		B	C	A
Approach Delay		12.7			15.5			23.6			28.6	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	16	17	0	17	8		8	45		26	173	0
Queue Length 95th (ft)	43	44	17	41	32		24	95		54	#367	0
Internal Link Dist (ft)		1113			1084			131			750	
Turn Bay Length (ft)	50		160	415						215		800
Base Capacity (vph)	423	584	605	553	668		371	490		485	604	603
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.09	0.07	0.18	0.08	0.07		0.06	0.25		0.15	0.66	0.08

Intersection Summary

Cycle Length: 84.2
Actuated Cycle Length: 84.2
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 23.4 Intersection LOS: C
Intersection Capacity Utilization 46.0% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Hillside Rd/Discovery Drive & N. Eagleville Rd



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	19.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

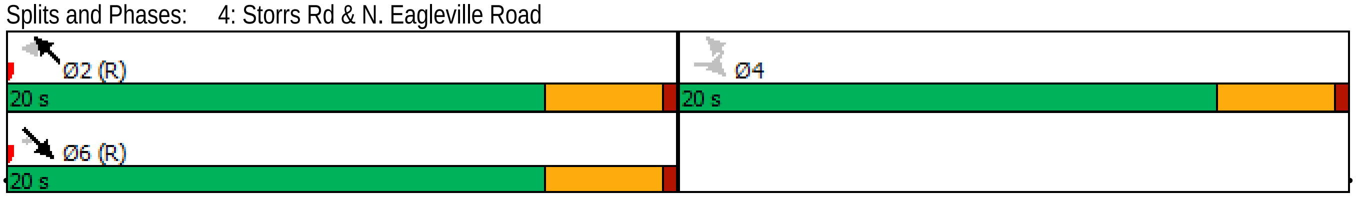
Intersection Summary

Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	45	54	508	127	76	281
Future Volume (vph)	45	54	508	127	76	281
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.703				0.268	
Satd. Flow (perm)	1310	1583	1863	1583	499	1863
Satd. Flow (RTOR)		59		138		
Lane Group Flow (vph)	49	59	552	138	83	305
Turn Type	Perm	Perm	NA	Perm	Perm	NA
Protected Phases			6			2
Permitted Phases	4	4		6	2	
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Act Effct Green (s)	16.0	16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.09	0.09	0.74	0.19	0.42	0.41
Control Delay	8.1	3.3	18.8	2.9	13.2	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.1	3.3	18.8	2.9	13.2	8.5
LOS	A	A	B	A	B	A
Approach Delay	5.5		15.7			9.5
Approach LOS	A		B			A
Queue Length 50th (ft)	6	0	98	0	11	41
Queue Length 95th (ft)	20	14	#228	21	37	93
Internal Link Dist (ft)	1265		6999			2609
Turn Bay Length (ft)	115			150		
Base Capacity (vph)	524	668	745	716	199	745
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.09	0.74	0.19	0.42	0.41

Intersection Summary

Cycle Length: 40
Actuated Cycle Length: 40
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 12.7 — Intersection LOS: B
Intersection Capacity Utilization 44.3% — ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Storrs Rd & N. Eagleville Road

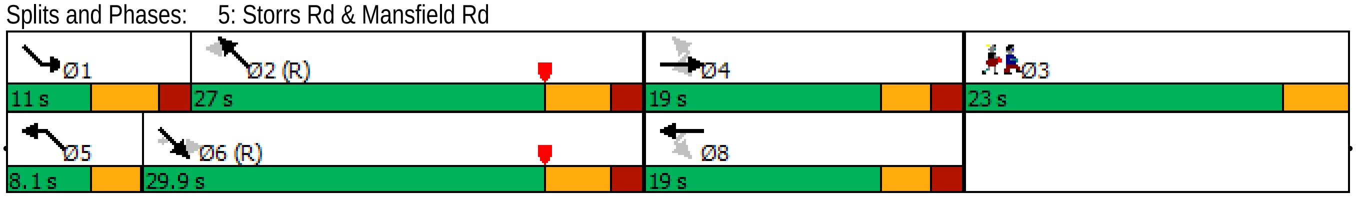


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	32	0	20	3	5	15	34	299	194	78	354	23
Future Volume (vph)	32	0	20	3	5	15	34	299	194	78	354	23
Satd. Flow (prot)	0	1770	1583	0	1685	0	1770	1863	1583	1770	1846	0
Flt Permitted		0.742			0.954		0.431			0.530		
Satd. Flow (perm)	0	1382	1583	0	1617	0	803	1863	1583	987	1846	0
Satd. Flow (RTOR)			138		16				211		4	
Lane Group Flow (vph)	0	35	22	0	24	0	37	325	211	85	410	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8	8		6		6	2		
Total Split (s)	19.0	19.0	19.0	19.0	19.0		11.0	29.9	29.9	8.1	27.0	
Total Lost Time (s)		4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	
Act Effct Green (s)		9.1	9.1		9.1		57.1	51.1	51.1	55.0	52.5	
Actuated g/C Ratio		0.11	0.11		0.11		0.71	0.64	0.64	0.69	0.66	
v/c Ratio		0.22	0.07		0.12		0.06	0.27	0.19	0.12	0.34	
Control Delay		35.3	0.5		19.9		6.3	9.7	4.7	8.7	16.0	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		35.3	0.5		19.9		6.3	9.7	4.7	8.7	16.0	
LOS		D	A		B		A	A	A	A	B	
Approach Delay		21.9			19.9			7.6			14.7	
Approach LOS		C			B			A			B	
Queue Length 50th (ft)		16	0		4		1	5	0	6	80	
Queue Length 95th (ft)		42	0		24		m15	m130	m44	47	#295	
Internal Link Dist (ft)		95			149			2609			562	
Turn Bay Length (ft)			315				155		190	180		
Base Capacity (vph)		259	408		316		672	1190	1087	736	1212	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.14	0.05		0.08		0.06	0.27	0.19	0.12	0.34	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.34
Intersection Signal Delay: 11.6 Intersection LOS: B
Intersection Capacity Utilization 42.6% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Storrs Rd & Mansfield Rd



Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

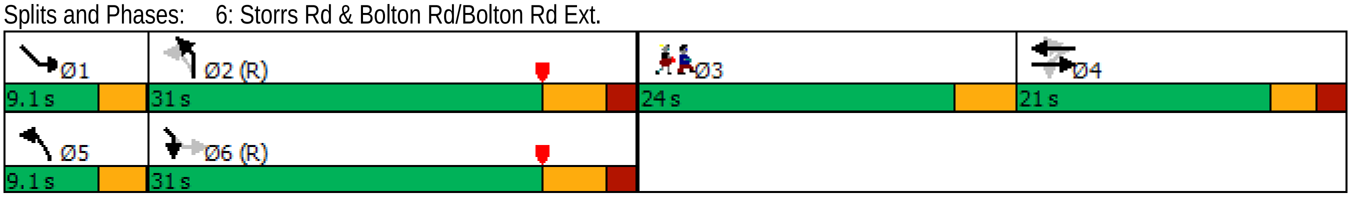
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations												
Traffic Volume (vph)	11	4	24	21	19	13	158	380	34	14	194	49
Future Volume (vph)	11	4	24	21	19	13	158	380	34	14	194	49
Satd. Flow (prot)	1770	1621	0	1770	1751	0	1770	1759	0	1770	1583	0
Flt Permitted	0.734			0.738			0.501	0.956		0.490		
Satd. Flow (perm)	1367	1621	0	1375	1751	0	933	1759	0	913	1583	0
Satd. Flow (RTOR)		26			14			117			117	
Lane Group Flow (vph)	12	30	0	23	35	0	172	450	0	15	264	0
Turn Type	Perm	NA		Perm	NA		pm+pt	Prot		pm+pt	Prot	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Total Split (s)	21.0	21.0		21.0	21.0		9.1	31.0		9.1	31.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Act Effct Green (s)	8.2	8.2		8.2	8.2		56.9	56.1		50.4	46.3	
Actuated g/C Ratio	0.10	0.10		0.10	0.10		0.67	0.66		0.59	0.54	
v/c Ratio	0.09	0.17		0.17	0.19		0.25	0.38		0.03	0.29	
Control Delay	36.7	18.4		38.6	27.5		9.7	9.7		10.2	10.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	36.7	18.4		38.6	27.5		9.7	9.7		10.2	10.5	
LOS	D	B		D	C		A	A		B	B	
Approach Delay		23.7			31.9			9.7		10.5		
Approach LOS		C			C			A		B		
Queue Length 50th (ft)	6	2		12	11		45	99		4	51	
Queue Length 95th (ft)	22	27		34	38		81	217		12	119	
Internal Link Dist (ft)		480			19			665		562		
Turn Bay Length (ft)							110	110				
Base Capacity (vph)	273	344		274	360		694	1200		602	913	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.04	0.09		0.08	0.10		0.25	0.38		0.02	0.29	

Intersection Summary

Cycle Length: 85.1
Actuated Cycle Length: 85.1
Offset: 1 (1%), Referenced to phase 2:NBL and 6:SEL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.38
Intersection Signal Delay: 11.8 Intersection LOS: B
Intersection Capacity Utilization 45.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Storrs Rd & Bolton Rd/Bolton Rd Ext.



Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	24.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	70	62	32	59	10	260	424	74	19	123	77
Future Volume (vph)	160	70	62	32	59	10	260	424	74	19	123	77
Satd. Flow (prot)	1770	1732	0	1770	1822	0	1770	1822	0	1770	3334	0
Flt Permitted	0.446			0.666			0.539			0.340		
Satd. Flow (perm)	831	1732	0	1241	1822	0	1004	1822	0	633	3334	0
Satd. Flow (RTOR)		28						7			84	
Lane Group Flow (vph)	174	143	0	35	75	0	283	541	0	21	218	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Total Split (s)	13.1	30.0		13.1	30.0		13.1	56.0		13.1	56.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Act Effct Green (s)	21.4	16.8		13.8	11.3		41.5	39.1		32.8	27.5	
Actuated g/C Ratio	0.27	0.21		0.17	0.14		0.52	0.49		0.41	0.34	
v/c Ratio	0.51	0.37		0.14	0.29		0.46	0.61		0.06	0.18	
Control Delay	37.0	34.3		32.2	43.8		18.1	24.2		15.5	14.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.0	34.3		32.2	43.8		18.1	24.2		15.5	14.1	
LOS	D	C		C	D		B	C		B	B	
Approach Delay		35.8			40.2			22.1			14.2	
Approach LOS		D			D			C			B	
Queue Length 50th (ft)	43	34		8	25		55	123		4	18	
Queue Length 95th (ft)	#201	157		52	106		204	504		23	64	
Internal Link Dist (ft)		703			270			43			584	
Turn Bay Length (ft)	280			100						170		
Base Capacity (vph)	353	686		368	703		624	1330		457	2453	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.49	0.21		0.10	0.11		0.45	0.41		0.05	0.09	

Intersection Summary

Cycle Length: 139.2

Actuated Cycle Length: 80.1

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.61

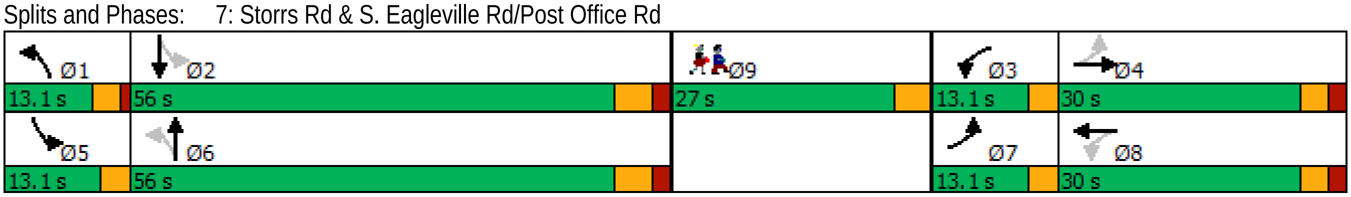
Intersection Signal Delay: 25.1	Intersection LOS: C

Intersection Capacity Utilization 59.0%	ICU Level of Service B

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Storrs Rd & S. Eagleville Rd/Post Office Rd



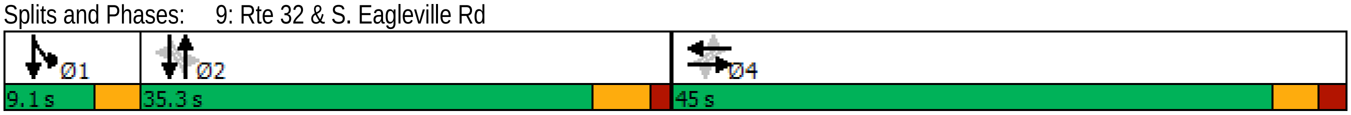
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	27.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	129	19	47	41	104	4	337	165	311	274	4
Future Volume (vph)	73	129	19	47	41	104	4	337	165	311	274	4
Satd. Flow (prot)	0	1811	0	0	1706	0	0	1781	0	0	1812	0
Flt Permitted		0.798			0.862			0.996			0.494	
Satd. Flow (perm)	0	1469	0	0	1488	0	0	1774	0	0	919	0
Satd. Flow (RTOR)		7			88							
Lane Group Flow (vph)	0	240	0	0	209	0	0	549	0	0	640	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2			2		
Total Split (s)	45.0	45.0		45.0	45.0		35.3	35.3		9.1		
Total Lost Time (s)		4.0			4.0			4.0				
Act Effct Green (s)		15.4			15.4			31.4			36.6	
Actuated g/C Ratio		0.24			0.24			0.49			0.57	
v/c Ratio		0.67			0.49			0.63			1.07	
Control Delay		31.0			16.1			17.1			75.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		31.0			16.1			17.1			75.5	
LOS		C			B			B			E	
Approach Delay		31.0			16.1			17.1			75.5	
Approach LOS		C			B			B			E	
Queue Length 50th (ft)		82			39			146			~141	
Queue Length 95th (ft)		148			92			292			#528	
Internal Link Dist (ft)		1311			3995			2565			1594	
Turn Bay Length (ft)												
Base Capacity (vph)		948			989			871			596	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.25			0.21			0.63			1.07	

Intersection Summary	
Cycle Length: 89.4	
Actuated Cycle Length: 64	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 41.8	Intersection LOS: D
Intersection Capacity Utilization 87.9%	ICU Level of Service E
Analysis Period (min) 15	
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 9: Rte 32 & S. Eagleville Rd

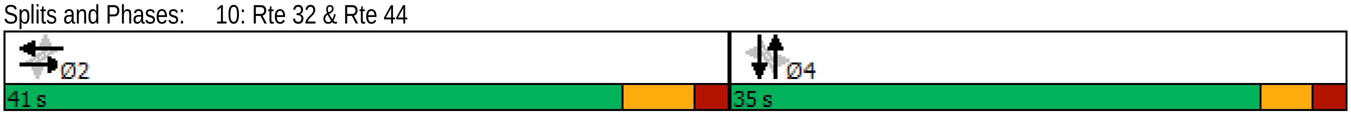


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	218	124	70	342	25	144	330	58	8	212	46
Future Volume (vph)	45	218	124	70	342	25	144	330	58	8	212	46
Satd. Flow (prot)	0	1772	0	0	1833	0	0	1811	0	0	1816	0
Flt Permitted		0.913			0.870			0.826			0.983	
Satd. Flow (perm)	0	1628	0	0	1608	0	0	1516	0	0	1789	0
Satd. Flow (RTOR)		44			6			10			17	
Lane Group Flow (vph)	0	421	0	0	475	0	0	579	0	0	289	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	41.0	41.0		41.0	41.0		35.0	35.0		35.0	35.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Act Effct Green (s)		26.8			26.8			31.4			31.4	
Actuated g/C Ratio		0.40			0.40			0.47			0.47	
v/c Ratio		0.62			0.73			0.80			0.34	
Control Delay		17.6			23.2			28.1			13.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		17.6			23.2			28.1			13.5	
LOS		B			C			C			B	
Approach Delay		17.6			23.2			28.1			13.5	
Approach LOS		B			C			C			B	
Queue Length 50th (ft)		114			152			185			65	
Queue Length 95th (ft)		193			248			#455			148	
Internal Link Dist (ft)		1622			1841			1721			1895	
Turn Bay Length (ft)												
Base Capacity (vph)		940			912			723			856	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.45			0.52			0.80			0.34	

Intersection Summary

Cycle Length: 76
Actuated Cycle Length: 66.3
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 21.9 Intersection LOS: C
Intersection Capacity Utilization 87.9% ICU Level of Service E
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Rte 32 & Rte 44



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	179	137	430	210	18	32	2	47	12	2	4
Future Volume (vph)	15	179	137	430	210	18	32	2	47	12	2	4
Satd. Flow (prot)	1770	1863	1583	1770	1840	0	0	1779	1583	0	1751	0
Flt Permitted	0.605			0.529				0.955				
Satd. Flow (perm)	1127	1863	1583	985	1840	0	0	1779	1583	0	1811	0
Satd. Flow (RTOR)			149		3				93		4	
Lane Group Flow (vph)	16	195	149	467	248	0	0	37	51	0	19	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Perm	NA	
Protected Phases	1	6		5	2		8	8	5		4	
Permitted Phases	6		6	2					8	4		
Total Split (s)	12.0	35.5	35.5	12.0	35.5		29.2	29.2	12.0	19.2	19.2	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Act Effct Green (s)	23.9	17.8	17.8	30.4	32.3			8.9	12.5		9.2	
Actuated g/C Ratio	0.58	0.44	0.44	0.74	0.79			0.22	0.31		0.22	
v/c Ratio	0.02	0.24	0.19	0.52	0.17			0.10	0.09		0.05	
Control Delay	5.9	11.9	4.2	10.5	7.4			18.6	1.8		16.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	5.9	11.9	4.2	10.5	7.4			18.6	1.8		16.1	
LOS	A	B	A	B	A			B	A		B	
Approach Delay		8.4			9.4			8.9			16.1	
Approach LOS		A			A			A			B	
Queue Length 50th (ft)	1	15	0	0	0			5	0		2	
Queue Length 95th (ft)	11	108	36	#265	130			36	8		20	
Internal Link Dist (ft)		1395			2126			2889			636	
Turn Bay Length (ft)	225		225	350					200			
Base Capacity (vph)	861	1534	1329	895	1515			1172	548		722	
Starvation Cap Reductn	0	0	0	0	0			0	0		0	
Spillback Cap Reductn	0	0	0	0	0			0	0		0	
Storage Cap Reductn	0	0	0	0	0			0	0		0	
Reduced v/c Ratio	0.02	0.13	0.11	0.52	0.16			0.03	0.09		0.03	

Intersection Summary

Cycle Length: 125.9

Actuated Cycle Length: 40.9

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.52

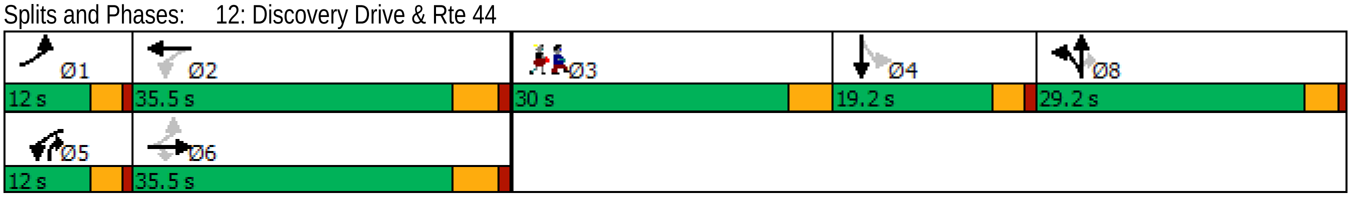
Intersection Signal Delay: 9.2 Intersection LOS: A

Intersection Capacity Utilization 54.0% ICU Level of Service A

Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Discovery Drive & Rte 44



Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

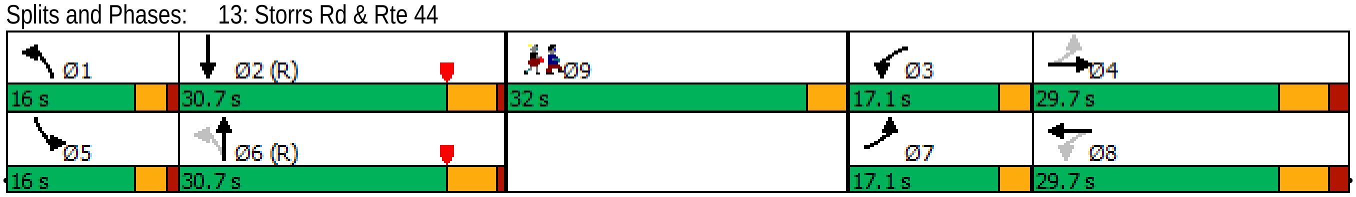
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	72	64	159	407	75	59	167	22	29	412	191
Future Volume (vph)	52	72	64	159	407	75	59	167	22	29	412	191
Satd. Flow (prot)	1770	1730	0	1770	1820	0	1770	3479	0	1770	3369	0
Flt Permitted	0.247			0.583			0.177			0.950		
Satd. Flow (perm)	460	1730	0	1086	1820	0	330	3479	0	1770	3369	0
Satd. Flow (RTOR)		32			7			10			55	
Lane Group Flow (vph)	57	148	0	173	524	0	64	206	0	32	656	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Prot	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6					
Total Split (s)	17.1	29.7		17.1	29.7		16.0	30.7		16.0	30.7	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Act Effct Green (s)	56.2	49.8		61.5	53.7		46.6	41.8		6.1	39.2	
Actuated g/C Ratio	0.45	0.40		0.49	0.43		0.37	0.33		0.05	0.31	
v/c Ratio	0.21	0.21		0.30	0.67		0.32	0.18		0.38	0.60	
Control Delay	23.4	25.3		22.6	37.6		27.9	29.4		69.6	36.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	23.4	25.3		22.6	37.6		27.9	29.4		69.6	36.4	
LOS	C	C		C	D		C	C		E	D	
Approach Delay		24.8			33.9			29.0			38.0	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	24	62		78	348		29	55		26	199	
Queue Length 95th (ft)	64	147		162	#734		69	103		59	320	
Internal Link Dist (ft)		2126			2054			6999			100	
Turn Bay Length (ft)	315			220			240			200		
Base Capacity (vph)	362	705		613	782		264	1164		169	1090	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.16	0.21		0.28	0.67		0.24	0.18		0.19	0.60	

Intersection Summary

Cycle Length: 125.5
Actuated Cycle Length: 125.5
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 33.7 — Intersection LOS: C
Intersection Capacity Utilization 63.5% — ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: Storrs Rd & Rte 44



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	32.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	213	13	1	30	2	4
Future Volume (Veh/h)	213	13	1	30	2	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	232	14	1	33	2	4
Pedestrians	2			2	2	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			248		278	243
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			248		278	243
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1316		709	793

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	246	34	6
Volume Left	0	1	2
Volume Right	14	0	4
cSH	1700	1316	763
Volume to Capacity	0.14	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.2	9.8
Lane LOS		A	A
Approach Delay (s)	0.0	0.2	9.8
Approach LOS			A

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	22.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	7	216	0	24	20	22	1	42	125	243	104	2
Future Volume (vph)	7	216	0	24	20	22	1	42	125	243	104	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	235	0	26	22	24	1	46	136	264	113	2

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	243	48	24	183	379
Volume Left (vph)	8	26	0	1	264
Volume Right (vph)	0	0	24	136	2
Hadj (s)	0.04	0.30	-0.67	-0.41	0.17
Departure Headway (s)	5.7	6.7	5.7	5.0	5.3
Degree Utilization, x	0.38	0.09	0.04	0.26	0.56
Capacity (veh/h)	586	471	543	660	653
Control Delay (s)	12.2	9.2	7.8	9.7	14.6
Approach Delay (s)	12.2	8.7		9.7	14.6
Approach LOS	B	A		A	B

Intersection Summary			
Delay	12.5		
Level of Service	B		
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	433	1	1	141	172	4	2	1	79	2	9
Future Volume (Veh/h)	121	433	1	1	141	172	4	2	1	79	2	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	132	471	1	1	153	187	4	2	1	86	2	10
Pedestrians					1			1				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	340			473			996	1078	474	987	986	246
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	340			473			996	1078	474	987	986	246
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	89			100			98	99	100	58	99	99
cM capacity (veh/h)	1219			1088			200	195	590	205	221	792

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	604	341	7	98
Volume Left	132	1	4	86
Volume Right	1	187	1	10
cSH	1219	1088	219	222
Volume to Capacity	0.11	0.00	0.03	0.44
Queue Length 95th (ft)	9	0	2	52
Control Delay (s)	2.8	0.0	22.0	33.3
Lane LOS	A	A	C	D
Approach Delay (s)	2.8	0.0	22.0	33.3
Approach LOS			C	D

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	289	146	7	202	20	3
Future Volume (Veh/h)	289	146	7	202	20	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	314	159	8	220	22	3
Pedestrians	2			2	2	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			475		634	398
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			475		634	398
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	100
cM capacity (veh/h)			1085		439	650

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	473	228	25
Volume Left	0	8	22
Volume Right	159	0	3
cSH	1700	1085	457
Volume to Capacity	0.28	0.01	0.05
Queue Length 95th (ft)	0	1	4
Control Delay (s)	0.0	0.4	13.3
Lane LOS		A	B
Approach Delay (s)	0.0	0.4	13.3
Approach LOS			B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	68	56	37	55	34	118	386	84	63	176	71
Future Volume (vph)	78	68	56	37	55	34	118	386	84	63	176	71
Satd. Flow (prot)	1770	1863	1583	1770	1757	0	1770	1812	0	1770	1863	1583
Flt Permitted	0.694			0.709			0.534			0.204		
Satd. Flow (perm)	1293	1863	1583	1321	1757	0	995	1812	0	380	1863	1583
Satd. Flow (RTOR)			158		37			11				158
Lane Group Flow (vph)	85	74	61	40	97	0	128	511	0	68	191	77
Turn Type	Perm	NA	Perm	D.P+P	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		2		1	1 2		3	8		7	4	
Permitted Phases	2		2	2			8			4		4
Total Split (s)	20.0	20.0	20.0	11.1			15.1	19.0		15.1	19.0	19.0
Total Lost Time (s)	5.0	5.0	5.0	3.1			3.1	5.0		3.1	5.0	5.0
Act Effct Green (s)	18.4	18.4	18.4	25.5	28.0		37.6	28.2		34.0	25.0	25.0
Actuated g/C Ratio	0.22	0.22	0.22	0.30	0.33		0.45	0.33		0.40	0.30	0.30
v/c Ratio	0.30	0.18	0.13	0.09	0.16		0.25	0.83		0.25	0.35	0.13
Control Delay	33.0	30.2	0.6	20.0	13.8		17.7	45.7		19.1	29.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	33.0	30.2	0.6	20.0	13.8		17.7	45.7		19.1	29.8	0.5
LOS	C	C	A	B	B		B	D		B	C	A
Approach Delay		23.1			15.6			40.1			20.9	
Approach LOS		C			B			D			C	
Queue Length 50th (ft)	39	33	0	14	22		45	~335		23	90	0
Queue Length 95th (ft)	84	72	0	36	56		84	#554		50	163	0
Internal Link Dist (ft)		1113			1084			131			750	
Turn Bay Length (ft)	50		160	415						215		800
Base Capacity (vph)	282	407	469	461	595		565	613		368	553	581
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.30	0.18	0.13	0.09	0.16		0.23	0.83		0.18	0.35	0.13

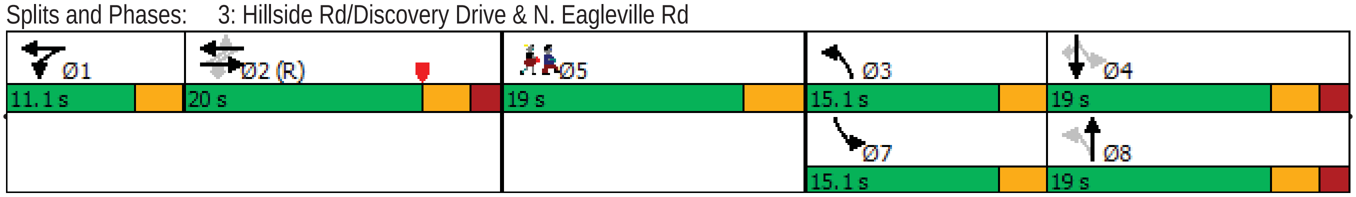
Intersection Summary

Cycle Length: 84.2
Actuated Cycle Length: 84.2
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 29.9 Intersection LOS: C
Intersection Capacity Utilization 53.8% ICU Level of Service A
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Hillside Rd/Discovery Drive & N. Eagleville Rd



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	19.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	124	193	387	85	99	574
Future Volume (vph)	124	193	387	85	99	574
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.687				0.409	
Satd. Flow (perm)	1280	1583	1863	1583	762	1863
Satd. Flow (RTOR)		210		92		
Lane Group Flow (vph)	135	210	421	92	108	624
Turn Type	Perm	Perm	NA	Perm	Perm	NA
Protected Phases			6			2
Permitted Phases	4	4		6	2	
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Act Effct Green (s)	16.0	16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.26	0.28	0.57	0.13	0.36	0.84
Control Delay	9.8	2.8	13.0	3.0	11.5	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.8	2.8	13.0	3.0	11.5	22.3
LOS	A	A	B	A	B	C
Approach Delay	5.5		11.2			20.7
Approach LOS	A		B			C
Queue Length 50th (ft)	19	0	68	0	28	193
Queue Length 95th (ft)	46	26	130	17	m49	m#265
Internal Link Dist (ft)	1265		6999			2609
Turn Bay Length (ft)						
Base Capacity (vph)	512	759	745	688	304	745
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.28	0.57	0.13	0.36	0.84

Intersection Summary

Cycle Length: 40

Actuated Cycle Length: 40

Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green

Control Type: Pretimed

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 14.4 Intersection LOS: B

Intersection Capacity Utilization 43.7% ICU Level of Service A

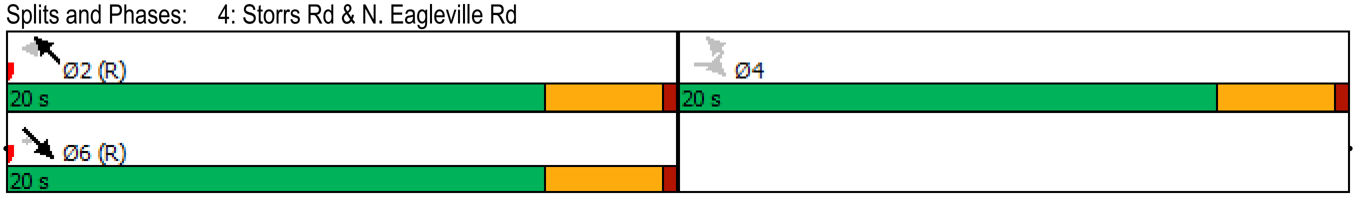
Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Storrs Rd & N. Eagleville Rd

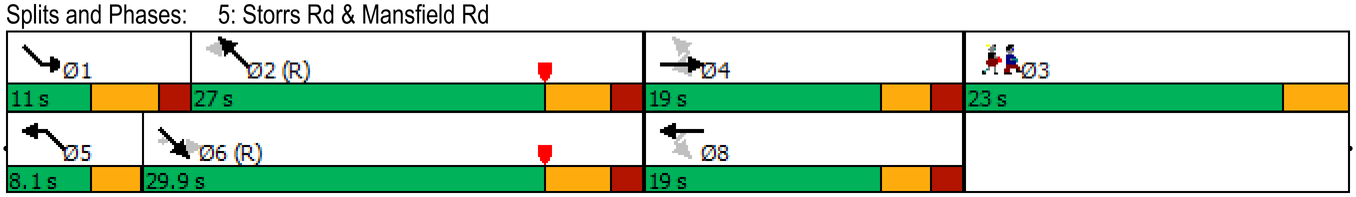


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	149	20	103	21	30	65	50	391	138	111	388	10
Future Volume (vph)	149	20	103	21	30	65	50	391	138	111	388	10
Satd. Flow (prot)	0	1785	1583	0	1708	0	1770	1863	1583	1770	1855	0
Flt Permitted		0.648			0.916		0.365			0.414		
Satd. Flow (perm)	0	1207	1583	0	1578	0	680	1863	1583	771	1855	0
Satd. Flow (RTOR)			138		69				150		2	
Lane Group Flow (vph)	0	184	112	0	127	0	54	425	150	121	433	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8	8		6		6	2		
Total Split (s)	19.0	19.0	19.0	19.0	19.0		11.0	29.9	29.9	8.1	27.0	
Total Lost Time (s)		5.0	5.0		5.0		6.0	6.0	6.0	3.1	6.0	
Act Effct Green (s)		14.5	14.5		14.5		42.5	38.1	38.1	44.8	38.5	
Actuated g/C Ratio		0.18	0.18		0.18		0.53	0.48	0.48	0.56	0.48	
v/c Ratio		0.84	0.28		0.37		0.12	0.48	0.18	0.24	0.49	
Control Delay		65.6	5.6		18.2		10.7	18.1	5.3	12.0	22.8	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		65.6	5.6		18.2		10.7	18.1	5.3	12.0	22.8	
LOS		E	A		B		B	B	A	B	C	
Approach Delay		42.9			18.2			14.4			20.5	
Approach LOS		D			B			B			C	
Queue Length 50th (ft)		90	0		25		2	117	17	15	123	
Queue Length 95th (ft)		#206	30		73		m33	#338	34	68	#375	
Internal Link Dist (ft)		95			149			2609			562	
Turn Bay Length (ft)			315				155		190	180		
Base Capacity (vph)		223	404		348		436	886	831	505	892	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.83	0.28		0.36		0.12	0.48	0.18	0.24	0.49	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 22.0 | Intersection LOS: C
Intersection Capacity Utilization 55.3% | ICU Level of Service B
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Storrs Rd & Mansfield Rd



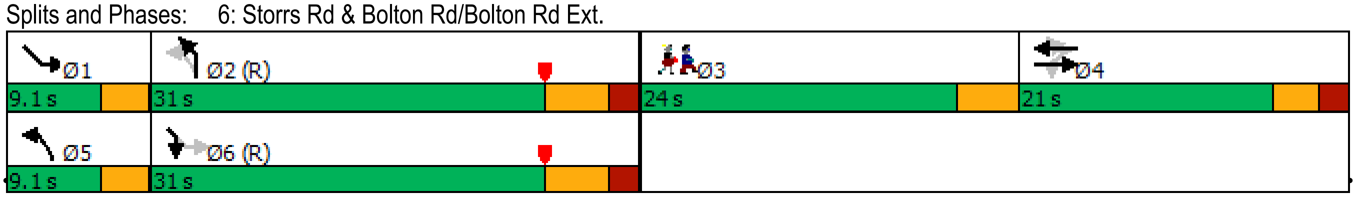
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations												
Traffic Volume (vph)	42	61	141	48	26	29	104	354	63	49	392	38
Future Volume (vph)	42	61	141	48	26	29	104	354	63	49	392	38
Satd. Flow (prot)	1770	1667	0	1770	1714	0	1770	1745	0	1770	1583	0
Flt Permitted	0.718			0.388			0.356	0.959		0.413		
Satd. Flow (perm)	1337	1667	0	723	1714	0	663	1745	0	769	1583	0
Satd. Flow (RTOR)		121			32			117			117	
Lane Group Flow (vph)	46	219	0	52	60	0	113	453	0	53	467	0
Turn Type	Perm	NA		Perm	NA		pm+pt	Prot		pm+pt	Prot	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Total Split (s)	21.0	21.0		21.0	21.0		9.1	31.0		9.1	31.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		3.1	6.0		3.1	6.0	
Act Effct Green (s)	10.3	10.3		10.3	10.3		51.1	44.3		49.2	42.0	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.60	0.52		0.58	0.49	
v/c Ratio	0.29	0.71		0.60	0.26		0.24	0.47		0.10	0.56	
Control Delay	37.0	29.4		61.7	20.8		12.4	16.7		12.1	19.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.0	29.4		61.7	20.8		12.4	16.7		12.1	19.8	
LOS	D	C		E	C		B	B		B	B	
Approach Delay		30.7			39.8			15.9		19.0		
Approach LOS		C			D			B		B		
Queue Length 50th (ft)	23	51		27	14		30	140		13	158	
Queue Length 95th (ft)	51	114		61	45		67	#307		37	#353	
Internal Link Dist (ft)		480			19			665		562		
Turn Bay Length (ft)							110	110				
Base Capacity (vph)	251	411		135	348		481	963		519	840	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.18	0.53		0.39	0.17		0.23	0.47		0.10	0.56	

Intersection Summary	
Cycle Length: 85.1	
Actuated Cycle Length: 85.1	
Offset: 1 (1%), Referenced to phase 2:NBL and 6:SEL, Start of Yellow	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 62.0%	ICU Level of Service B
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 6: Storrs Rd & Bolton Rd/Bolton Rd Ext.



Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	24.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

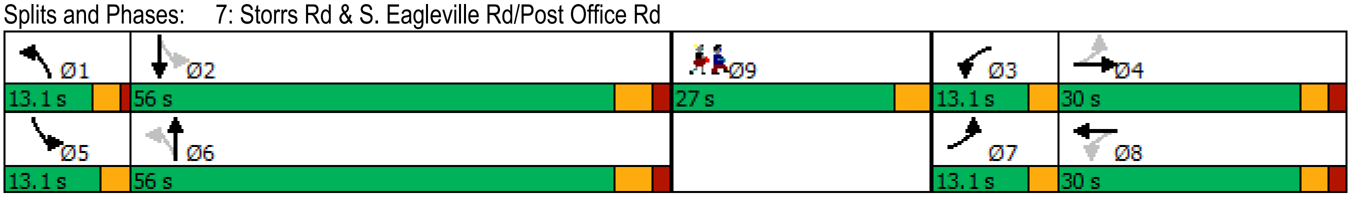
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	98	229	153	164	31	148	271	73	38	421	132
Future Volume (vph)	183	98	229	153	164	31	148	271	73	38	421	132
Satd. Flow (prot)	1770	1667	0	1770	1818	0	1770	1803	0	1770	3412	0
Flt Permitted	0.518			0.257			0.228			0.420		
Satd. Flow (perm)	965	1667	0	479	1818	0	425	1803	0	782	3412	0
Satd. Flow (RTOR)		73						11			33	
Lane Group Flow (vph)	199	356	0	166	212	0	161	374	0	41	601	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Total Split (s)	13.1	30.0		13.1	30.0		13.1	56.0		13.1	56.0	
Total Lost Time (s)	3.1	5.0		3.1	5.0		4.0	6.0		3.1	6.0	
Act Effct Green (s)	36.5	24.7		37.2	25.1		37.8	30.9		32.5	23.4	
Actuated g/C Ratio	0.39	0.26		0.40	0.27		0.40	0.33		0.35	0.25	
v/c Ratio	0.44	0.73		0.51	0.44		0.56	0.62		0.12	0.69	
Control Delay	27.6	38.7		30.2	37.9		29.0	34.8		20.8	35.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	27.6	38.7		30.2	37.9		29.0	34.8		20.8	35.8	
LOS	C	D		C	D		C	C		C	D	
Approach Delay		34.7			34.5			33.0			34.9	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	55	122		45	84		49	159		11	136	
Queue Length 95th (ft)	196	#422		#174	245		135	368		43	271	
Internal Link Dist (ft)		697			277			61			567	
Turn Bay Length (ft)	280			100						170		
Base Capacity (vph)	473	523		337	513		309	1023		419	1942	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.42	0.68		0.49	0.41		0.52	0.37		0.10	0.31	

Intersection Summary

Cycle Length: 139.2
Actuated Cycle Length: 94.1
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 34.3 | Intersection LOS: C
Intersection Capacity Utilization 67.6% | ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Storrs Rd & S. Eagleville Rd/Post Office Rd



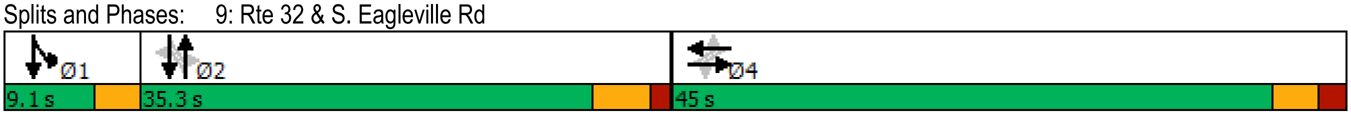
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	27.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	74	36	173	114	282	12	371	75	139	478	66
Future Volume (vph)	22	74	36	173	114	282	12	371	75	139	478	66
Satd. Flow (prot)	0	1779	0	0	1712	0	0	1820	0	0	1820	0
Flt Permitted		0.887			0.854			0.976			0.682	
Satd. Flow (perm)	0	1591	0	0	1484	0	0	1778	0	0	1254	0
Satd. Flow (RTOR)		27			72							
Lane Group Flow (vph)	0	143	0	0	619	0	0	498	0	0	743	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2			2		
Total Split (s)	45.0	45.0		45.0	45.0		35.3	35.3		9.1		
Total Lost Time (s)		5.0			5.0			5.3				
Act Effct Green (s)		35.6			35.6			30.1			38.4	
Actuated g/C Ratio		0.42			0.42			0.35			0.45	
v/c Ratio		0.21			0.94			0.79			1.23	
Control Delay		13.1			44.4			37.1			141.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.1			44.4			37.1			141.9	
LOS		B			D			D			F	
Approach Delay		13.1			44.4			37.1			141.9	
Approach LOS		B			D			D			F	
Queue Length 50th (ft)		38			278			257			~541	
Queue Length 95th (ft)		75			#499			#427			#757	
Internal Link Dist (ft)		1311			3995			2565			1594	
Turn Bay Length (ft)												
Base Capacity (vph)		764			737			628			604	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.19			0.84			0.79			1.23	

Intersection Summary	
Cycle Length: 89.4	
Actuated Cycle Length: 85.2	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.23	
Intersection Signal Delay: 76.5	Intersection LOS: E
Intersection Capacity Utilization 113.0%	ICU Level of Service H
Analysis Period (min) 15	
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 9: Rte 32 & S. Eagleville Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	355	204	188	529	77	285	512	174	30	400	69
Future Volume (vph)	87	355	204	188	529	77	285	512	174	30	400	69
Satd. Flow (prot)	0	1770	0	0	1816	0	0	1793	0	0	1822	0
Flt Permitted		0.776			0.633			0.578			0.918	
Satd. Flow (perm)	0	1383	0	0	1164	0	0	1051	0	0	1678	0
Satd. Flow (RTOR)		41			9			17			13	
Lane Group Flow (vph)	0	703	0	0	863	0	0	1056	0	0	543	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	41.0	41.0		41.0	41.0		35.0	35.0		35.0	35.0	
Total Lost Time (s)		6.0			6.0			5.0			5.0	
Act Effct Green (s)		35.0			35.0			30.0			30.0	
Actuated g/C Ratio		0.46			0.46			0.39			0.39	
v/c Ratio		1.07			1.60			2.48			0.81	
Control Delay		76.5			299.7			693.1			31.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		76.5			299.7			693.1			31.7	
LOS		E			F			F			C	
Approach Delay		76.5			299.7			693.1			31.7	
Approach LOS		E			F			F			C	
Queue Length 50th (ft)		~363			~599			~856			217	
Queue Length 95th (ft)		#569			#818			#1088			#389	
Internal Link Dist (ft)		1622			1841			1721			1895	
Turn Bay Length (ft)												
Base Capacity (vph)		659			540			425			670	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.07			1.60			2.48			0.81	

Intersection Summary

Cycle Length: 76

Actuated Cycle Length: 76

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 2.48

Intersection Signal Delay: 335.4 — Intersection LOS: F

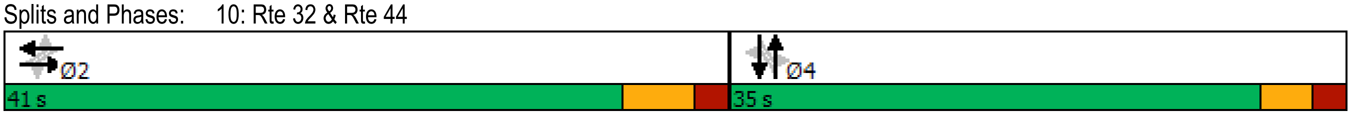
Intersection Capacity Utilization 165.1% — ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Rte 32 & Rte 44

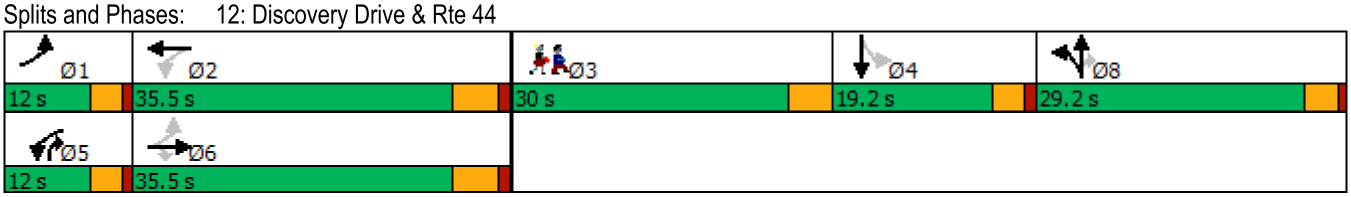


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	177	39	140	224	7	115	8	325	20	4	12
Future Volume (vph)	12	177	39	140	224	7	115	8	325	20	4	12
Satd. Flow (prot)	1770	1863	1583	1770	1853	0	0	1779	1583	0	1731	0
Flt Permitted	0.603			0.535				0.955			0.434	
Satd. Flow (perm)	1123	1863	1583	997	1853	0	0	1779	1583	0	772	0
Satd. Flow (RTOR)			116		1				353		13	
Lane Group Flow (vph)	13	192	42	152	251	0	0	134	353	0	39	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Perm	NA	
Protected Phases	1	6		5	2		8	8	5		4	
Permitted Phases	6		6	2					8	4		
Total Split (s)	12.0	35.5	35.5	12.0	35.5		29.2	29.2	12.0	19.2	19.2	
Total Lost Time (s)	4.0	5.5	5.5	4.0	5.5			4.2	4.0		4.2	
Act Effct Green (s)	25.3	17.2	17.2	31.3	30.5			11.3	19.9		12.9	
Actuated g/C Ratio	0.44	0.30	0.30	0.55	0.54			0.20	0.35		0.23	
v/c Ratio	0.02	0.34	0.07	0.23	0.25			0.38	0.45		0.21	
Control Delay	12.2	23.1	0.3	12.6	16.1			27.9	4.2		21.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	12.2	23.1	0.3	12.6	16.1			27.9	4.2		21.2	
LOS	B	C	A	B	B			C	A		C	
Approach Delay		18.7			14.8			10.8			21.2	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)	3	65	0	35	64			49	0		8	
Queue Length 95th (ft)	13	132	0	79	166			103	50		36	
Internal Link Dist (ft)		1395			2126			2889			636	
Turn Bay Length (ft)	225		225	350					200			
Base Capacity (vph)	649	1090	974	669	1084			867	793		235	
Starvation Cap Reductn	0	0	0	0	0			0	0		0	
Spillback Cap Reductn	0	0	0	0	0			0	0		0	
Storage Cap Reductn	0	0	0	0	0			0	0		0	
Reduced v/c Ratio	0.02	0.18	0.04	0.23	0.23			0.15	0.45		0.17	

Intersection Summary

Cycle Length: 125.9
Actuated Cycle Length: 56.9
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.45
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 50.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 12: Discovery Drive & Rte 44



Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

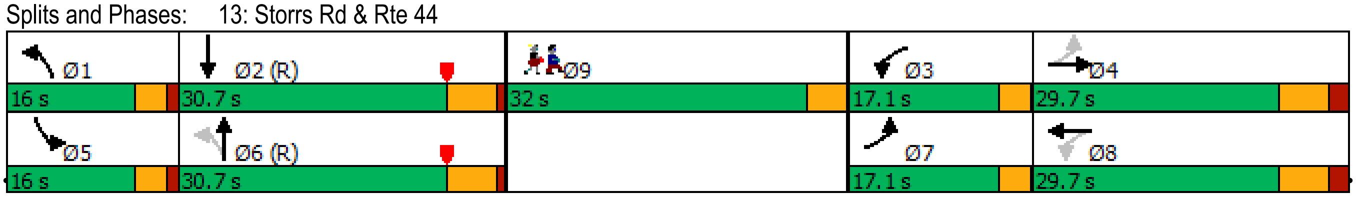
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	247	91	141	160	76	111	533	68	76	302	102
Future Volume (vph)	185	247	91	141	160	76	111	533	68	76	302	102
Satd. Flow (prot)	1770	1788	0	1770	1773	0	1770	3479	0	1770	3405	0
Flt Permitted	0.393			0.275			0.424			0.950		
Satd. Flow (perm)	732	1788	0	512	1773	0	790	3479	0	1770	3405	0
Satd. Flow (RTOR)		13			17			10			33	
Lane Group Flow (vph)	201	367	0	153	257	0	121	653	0	83	439	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Prot	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6					
Total Split (s)	17.1	29.7		17.1	29.7		16.0	30.7		16.0	30.7	
Total Lost Time (s)	3.1	6.7		3.1	6.7		4.0	5.7		4.0	5.7	
Act Effct Green (s)	48.8	32.5		44.6	30.4		58.4	49.2		9.1	47.9	
Actuated g/C Ratio	0.39	0.26		0.36	0.24		0.47	0.39		0.07	0.38	
v/c Ratio	0.52	0.78		0.53	0.58		0.28	0.48		0.65	0.33	
Control Delay	31.8	54.7		33.0	46.3		21.6	32.4		78.8	28.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	31.8	54.7		33.0	46.3		21.6	32.4		78.8	28.7	
LOS	C	D		C	D		C	C		E	C	
Approach Delay		46.6			41.3			30.7			36.6	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	107	264		79	172		47	195		67	112	
Queue Length 95th (ft)	185	#523		143	#307		118	#387		120	217	
Internal Link Dist (ft)		2126			2054			6999			100	
Turn Bay Length (ft)	315			220			240			200		
Base Capacity (vph)	405	472		334	441		474	1370		169	1320	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.50	0.78		0.46	0.58		0.26	0.48		0.49	0.33	

Intersection Summary

Cycle Length: 125.5
Actuated Cycle Length: 125.5
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 38.0 Intersection LOS: D
Intersection Capacity Utilization 64.5% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: Storrs Rd & Rte 44



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	32.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	179	4	0	62	2	1
Future Volume (Veh/h)	179	4	0	62	2	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	195	4	0	67	2	1
Pedestrians	2			2	2	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			201		268	201
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			201		268	201
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1369		719	837

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	199	67	3
Volume Left	0	0	2
Volume Right	4	0	1
cSH	1700	1369	754
Volume to Capacity	0.12	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	9.8
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	20.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	13	67	2	125	181	165	3	121	49	90	82	10
Future Volume (vph)	13	67	2	125	181	165	3	121	49	90	82	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	73	2	136	197	179	3	132	53	98	89	11

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	89	333	179	188	198
Volume Left (vph)	14	136	0	3	98
Volume Right (vph)	2	0	179	53	11
Hadj (s)	0.05	0.24	-0.67	-0.13	0.10
Departure Headway (s)	6.0	6.0	5.1	5.7	5.9
Degree Utilization, x	0.15	0.56	0.25	0.30	0.32
Capacity (veh/h)	540	578	678	580	570
Control Delay (s)	10.0	15.1	8.6	11.0	11.6
Approach Delay (s)	10.0	12.8		11.0	11.6
Approach LOS	B	B		B	B

Intersection Summary			
Delay	12.0		
Level of Service	B		
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	259	4	5	401	142	4	2	7	243	0	127
Future Volume (Veh/h)	25	259	4	5	401	142	4	2	7	243	0	127
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	282	4	5	436	154	4	2	8	264	0	138
Pedestrians					1			1				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	590			287			1000	939	286	871	864	513
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	590			287			1000	939	286	871	864	513
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			98	99	99	0	100	75
cM capacity (veh/h)	985			1274			163	256	752	260	283	561

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	313	595	14	402
Volume Left	27	5	4	264
Volume Right	4	154	8	138
cSH	985	1274	326	319
Volume to Capacity	0.03	0.00	0.04	1.26
Queue Length 95th (ft)	2	0	3	463
Control Delay (s)	1.0	0.1	16.6	174.1
Lane LOS	A	A	C	F
Approach Delay (s)	1.0	0.1	16.6	174.1
Approach LOS			C	F

Intersection Summary			
Average Delay	53.3		
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	225	55	6	329	146	10
Future Volume (Veh/h)	225	55	6	329	146	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	245	60	7	358	159	11
Pedestrians	2			2	2	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			307		651	279
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			307		651	279
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		63	99
cM capacity (veh/h)			1252		429	757

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	305	365	170
Volume Left	0	7	159
Volume Right	60	0	11
cSH	1700	1252	442
Volume to Capacity	0.18	0.01	0.38
Queue Length 95th (ft)	0	0	45
Control Delay (s)	0.0	0.2	18.2
Lane LOS		A	C
Approach Delay (s)	0.0	0.2	18.2
Approach LOS			C

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

UConn Hockey Arena | Build Condition (2021)

3: Hillside Rd/Discovery Drive & N. Eagleville Rd | Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	68	56	37	55	34	118	386	84	63	772	71
Future Volume (vph)	78	68	56	37	55	34	118	386	84	63	772	71
Satd. Flow (prot)	1770	1863	1583	1770	1757	0	1770	1812	0	1770	1863	1583
Flt Permitted	0.694			0.709			0.141			0.207		
Satd. Flow (perm)	1293	1863	1583	1321	1757	0	263	1812	0	386	1863	1583
Satd. Flow (RTOR)			158		37			11				158
Lane Group Flow (vph)	85	74	61	40	97	0	128	511	0	68	839	77
Turn Type	Perm	NA	Perm	D.P+P	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		2		1	1 2		3	8		7	4	
Permitted Phases	2		2	2			8			4		4
Total Split (s)	20.0	20.0	20.0	11.1			15.1	19.0		15.1	19.0	19.0
Total Lost Time (s)	5.0	5.0	5.0	3.1			3.1	5.0		3.1	5.0	5.0
Act Effct Green (s)	18.4	18.4	18.4	25.5	28.0		37.7	28.3		33.8	25.0	25.0
Actuated g/C Ratio	0.22	0.22	0.22	0.30	0.33		0.45	0.34		0.40	0.30	0.30
v/c Ratio	0.30	0.18	0.13	0.09	0.16		0.47	0.83		0.25	1.52	0.13
Control Delay	33.0	30.2	0.6	20.0	13.8		22.4	45.2		19.1	268.2	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	33.0	30.2	0.6	20.0	13.8		22.4	45.2		19.1	268.2	0.5
LOS	C	C	A	B	B		C	D		B	F	A
Approach Delay		23.1			15.6			40.6			230.0	
Approach LOS		C			B			D			F	
Queue Length 50th (ft)	39	33	0	14	22		45	~333		23	~723	0
Queue Length 95th (ft)	84	72	0	36	56		84	#554		50	#982	0
Internal Link Dist (ft)		1113			1084			131			750	
Turn Bay Length (ft)	50		160	415						215		800
Base Capacity (vph)	282	407	469	461	595		334	617		370	553	581
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.30	0.18	0.13	0.09	0.16		0.38	0.83		0.18	1.52	0.13

Intersection Summary

Cycle Length: 84.2

Actuated Cycle Length: 84.2

Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.52

Intersection Signal Delay: 131.1 | Intersection LOS: F

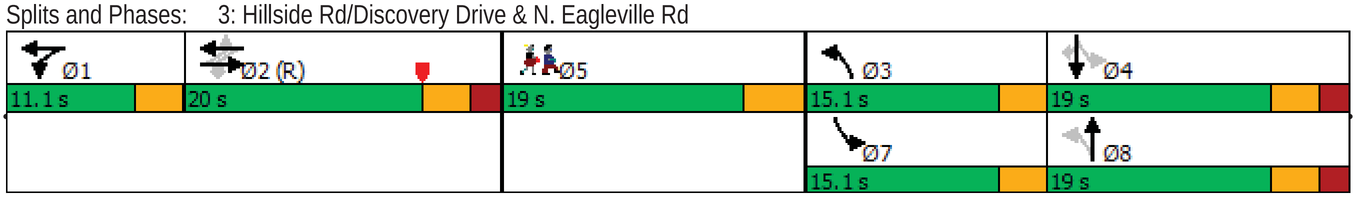
Intersection Capacity Utilization 71.3% | ICU Level of Service C

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Hillside Rd/Discovery Drive & N. Eagleville Rd



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Total Split (s)	19.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

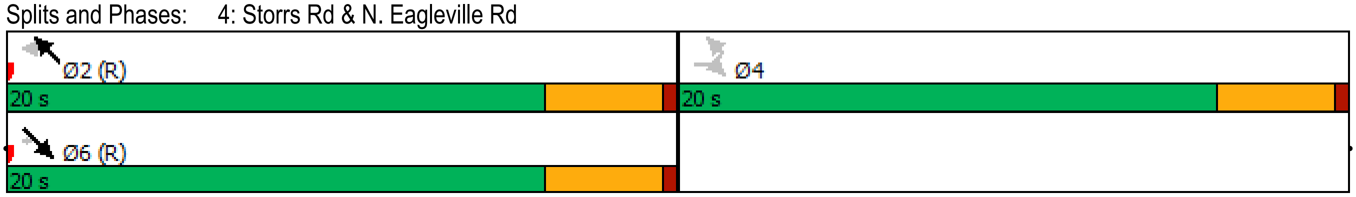
Intersection Summary

Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	124	193	515	85	99	574
Future Volume (vph)	124	193	515	85	99	574
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.687				0.260	
Satd. Flow (perm)	1280	1583	1863	1583	484	1863
Satd. Flow (RTOR)		174		92		
Lane Group Flow (vph)	135	210	560	92	108	624
Turn Type	Perm	Perm	NA	Perm	Perm	NA
Protected Phases			6			2
Permitted Phases	4	4		6	2	
Total Split (s)	20.0	20.0	20.0	20.0	20.0	20.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Act Effct Green (s)	16.0	16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	0.26	0.28	0.75	0.13	0.56	0.84
Control Delay	9.8	3.7	19.4	3.0	20.1	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.8	3.7	19.4	3.0	20.1	21.9
LOS	A	A	B	A	C	C
Approach Delay	6.1		17.1			21.6
Approach LOS	A		B			C
Queue Length 50th (ft)	19	5	101	0	30	192
Queue Length 95th (ft)	46	32	#232	17	m49	m#255
Internal Link Dist (ft)	1265		6999			2609
Turn Bay Length (ft)						
Base Capacity (vph)	512	737	745	688	193	745
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.28	0.75	0.13	0.56	0.84

Intersection Summary

Cycle Length: 40
Actuated Cycle Length: 40
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SET, Start of Green
Control Type: Pretimed
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 16.8 Intersection LOS: B
Intersection Capacity Utilization 49.5% ICU Level of Service A
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Storrs Rd & N. Eagleville Rd

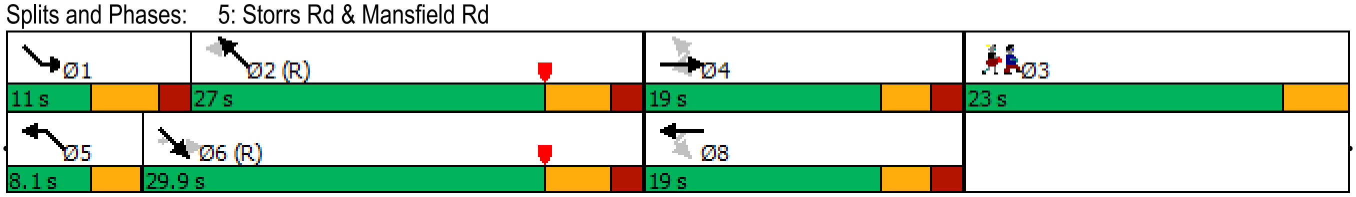


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	149	20	103	21	30	65	50	519	138	111	388	10
Future Volume (vph)	149	20	103	21	30	65	50	519	138	111	388	10
Satd. Flow (prot)	0	1785	1583	0	1708	0	1770	1863	1583	1770	1855	0
Flt Permitted		0.643			0.914		0.371			0.286		
Satd. Flow (perm)	0	1198	1583	0	1575	0	691	1863	1583	533	1855	0
Satd. Flow (RTOR)			138		69				147		2	
Lane Group Flow (vph)	0	184	112	0	127	0	54	564	150	121	433	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4		4	8	8		6		6	2		
Total Split (s)	19.0	19.0	19.0	19.0	19.0		11.0	29.9	29.9	8.1	27.0	
Total Lost Time (s)		5.0	5.0		5.0		6.0	6.0	6.0	3.1	6.0	
Act Effct Green (s)		13.7	13.7		13.7		43.3	38.9	38.9	45.6	39.2	
Actuated g/C Ratio		0.17	0.17		0.17		0.54	0.49	0.49	0.57	0.49	
v/c Ratio		0.90	0.29		0.39		0.12	0.62	0.18	0.31	0.48	
Control Delay		76.6	5.8		18.7		10.0	21.5	5.3	12.8	22.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		76.6	5.8		18.7		10.0	21.5	5.3	12.8	22.4	
LOS		E	A		B		B	C	A	B	C	
Approach Delay		49.8			18.7			17.6			20.4	
Approach LOS		D			B			B			C	
Queue Length 50th (ft)		91	0		25		2	163	9	15	122	
Queue Length 95th (ft)		#207	30		73		m26	#505	m23	68	#375	
Internal Link Dist (ft)		95			149			2609			562	
Turn Bay Length (ft)			315				155		190	180		
Base Capacity (vph)		209	390		332		448	905	845	394	910	
Starvation Cap Reductn		0	0		0		0	0	0	0	0	
Spillback Cap Reductn		0	0		0		0	0	0	0	0	
Storage Cap Reductn		0	0		0		0	0	0	0	0	
Reduced v/c Ratio		0.88	0.29		0.38		0.12	0.62	0.18	0.31	0.48	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 24.0 Intersection LOS: C
Intersection Capacity Utilization 61.9% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Storrs Rd & Mansfield Rd



Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	23.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations												
Traffic Volume (vph)	42	61	141	48	26	29	215	354	63	49	392	166
Future Volume (vph)	42	61	141	48	26	29	215	354	63	49	392	166
Satd. Flow (prot)	1770	1667	0	1770	1714	0	1770	1745	0	1770	1583	0
Flt Permitted	0.718			0.388			0.166	0.959		0.481		
Satd. Flow (perm)	1337	1667	0	723	1714	0	309	1745	0	896	1583	0
Satd. Flow (RTOR)		121			32			117			117	
Lane Group Flow (vph)	46	219	0	52	60	0	234	453	0	53	606	0
Turn Type	Perm	NA		Perm	NA		pm+pt	Prot		pm+pt	Prot	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Total Split (s)	21.0	21.0		21.0	21.0		9.1	31.0		9.1	31.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		3.1	6.0		3.1	6.0	
Act Effct Green (s)	10.3	10.3		10.3	10.3		51.7	44.3		43.9	35.7	
Actuated g/C Ratio	0.12	0.12		0.12	0.12		0.61	0.52		0.52	0.42	
v/c Ratio	0.29	0.71		0.60	0.26		0.63	0.47		0.10	0.83	
Control Delay	37.0	29.4		61.7	20.8		24.3	16.7		12.3	34.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.0	29.4		61.7	20.8		24.3	16.7		12.3	34.4	
LOS	D	C		E	C		C	B		B	C	
Approach Delay		30.7			39.8			19.3		32.6		
Approach LOS		C			D			B		C		
Queue Length 50th (ft)	23	51		27	14		66	140		13	~327	
Queue Length 95th (ft)	51	114		61	45		#219	#307		37	#530	
Internal Link Dist (ft)		480			19			665		562		
Turn Bay Length (ft)							110	110				
Base Capacity (vph)	251	411		135	348		370	963		531	732	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.18	0.53		0.39	0.17		0.63	0.47		0.10	0.83	

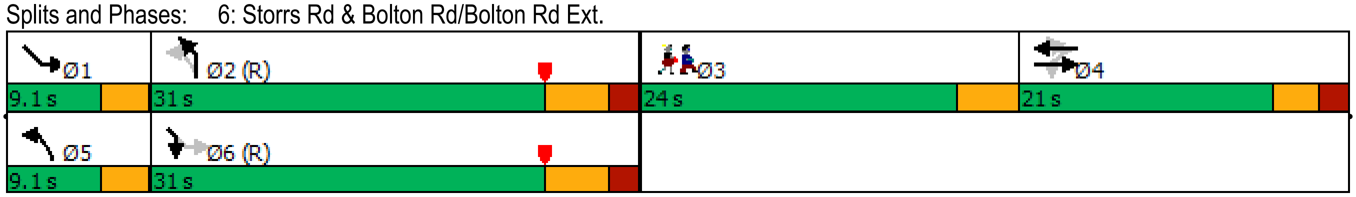
Intersection Summary

Cycle Length: 85.1
Actuated Cycle Length: 85.1
Offset: 1 (1%), Referenced to phase 2:NBL and 6:SEL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 27.5 Intersection LOS: C
Intersection Capacity Utilization 65.6% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Storrs Rd & Bolton Rd/Bolton Rd Ext.



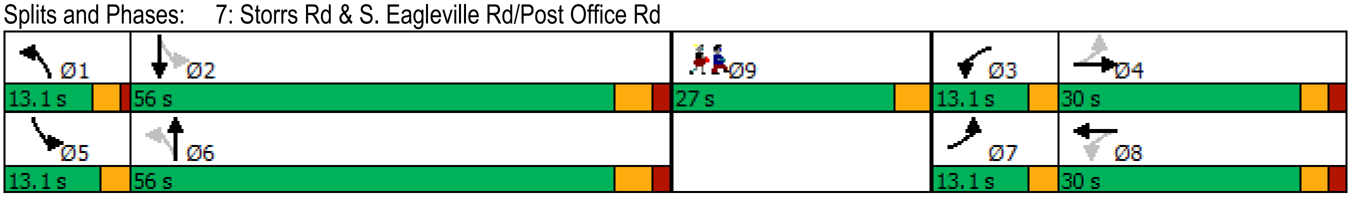
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	24.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	98	229	153	164	31	259	382	73	38	421	132
Future Volume (vph)	183	98	229	153	164	31	259	382	73	38	421	132
Satd. Flow (prot)	1770	1667	0	1770	1818	0	1770	1818	0	1770	3412	0
Flt Permitted	0.498			0.235			0.249			0.281		
Satd. Flow (perm)	928	1667	0	438	1818	0	464	1818	0	523	3412	0
Satd. Flow (RTOR)		73						8			33	
Lane Group Flow (vph)	199	356	0	166	212	0	282	494	0	41	601	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Total Split (s)	13.1	30.0		13.1	30.0		13.1	56.0		13.1	56.0	
Total Lost Time (s)	3.1	5.0		3.1	5.0		4.0	6.0		3.1	6.0	
Act Effct Green (s)	37.6	25.5		38.1	25.8		43.6	36.7		37.3	27.9	
Actuated g/C Ratio	0.37	0.25		0.38	0.26		0.43	0.36		0.37	0.28	
v/c Ratio	0.46	0.75		0.55	0.46		0.87	0.74		0.15	0.62	
Control Delay	32.3	42.7		36.0	42.3		50.8	38.3		19.8	33.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.3	42.7		36.0	42.3		50.8	38.3		19.8	33.1	
LOS	C	D		D	D		D	D		B	C	
Approach Delay		39.0			39.5			42.8			32.2	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	63	134		51	92		96	239		12	140	
Queue Length 95th (ft)	217	#470		#178	268		#329	516		42	266	
Internal Link Dist (ft)		697			277			61			567	
Turn Bay Length (ft)	280			100						170		
Base Capacity (vph)	440	496		308	482		326	969		348	1827	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.45	0.72		0.54	0.44		0.87	0.51		0.12	0.33	

Intersection Summary

Cycle Length: 139.2
Actuated Cycle Length: 101
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 38.5 Intersection LOS: D
Intersection Capacity Utilization 73.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Storrs Rd & S. Eagleville Rd/Post Office Rd



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	27.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

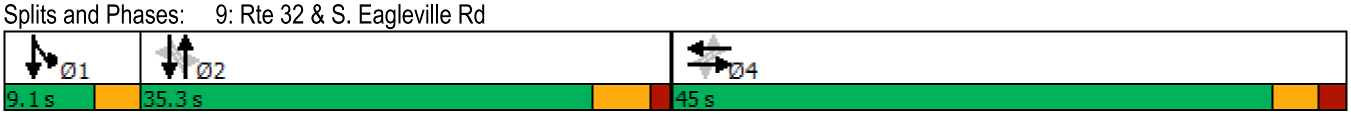
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	74	36	173	114	282	12	371	203	232	478	66
Future Volume (vph)	22	74	36	173	114	282	12	371	203	232	478	66
Satd. Flow (prot)	0	1779	0	0	1712	0	0	1773	0	0	1813	0
Flt Permitted		0.887			0.854			0.978			0.435	
Satd. Flow (perm)	0	1591	0	0	1484	0	0	1736	0	0	801	0
Satd. Flow (RTOR)		27			72							
Lane Group Flow (vph)	0	143	0	0	619	0	0	637	0	0	844	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	1 2	
Permitted Phases	4			4			2			2		
Total Split (s)	45.0	45.0		45.0	45.0		35.3	35.3		9.1		
Total Lost Time (s)		5.0			5.0			5.3				
Act Effct Green (s)		35.6			35.6			30.1			38.4	
Actuated g/C Ratio		0.42			0.42			0.35			0.45	
v/c Ratio		0.21			0.94			1.04			1.95	
Control Delay		13.1			44.4			77.0			457.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.1			44.4			77.0			457.2	
LOS		B			D			E			F	
Approach Delay		13.1			44.4			77.0			457.2	
Approach LOS		B			D			E			F	
Queue Length 50th (ft)		38			278			~410			~758	
Queue Length 95th (ft)		75			#499			#616			#981	
Internal Link Dist (ft)		1311			3995			2565			1594	
Turn Bay Length (ft)												
Base Capacity (vph)		764			737			614			432	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.19			0.84			1.04			1.95	

Intersection Summary

Cycle Length: 89.4
Actuated Cycle Length: 85.2
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.95
Intersection Signal Delay: 207.0 Intersection LOS: F
Intersection Capacity Utilization 126.0% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Rte 32 & S. Eagleville Rd

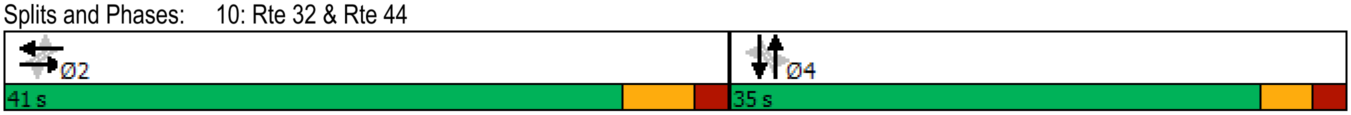


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	449	297	188	529	77	285	512	174	30	400	69
Future Volume (vph)	87	449	297	188	529	77	285	512	174	30	400	69
Satd. Flow (prot)	0	1764	0	0	1816	0	0	1793	0	0	1822	0
Flt Permitted		0.816			0.541			0.578			0.918	
Satd. Flow (perm)	0	1447	0	0	995	0	0	1051	0	0	1678	0
Satd. Flow (RTOR)		49			9			17			13	
Lane Group Flow (vph)	0	906	0	0	863	0	0	1056	0	0	543	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Total Split (s)	41.0	41.0		41.0	41.0		35.0	35.0		35.0	35.0	
Total Lost Time (s)		6.0			6.0			5.0			5.0	
Act Effct Green (s)		35.0			35.0			30.0			30.0	
Actuated g/C Ratio		0.46			0.46			0.39			0.39	
v/c Ratio		1.31			1.86			2.48			0.81	
Control Delay		171.6			417.7			693.1			31.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		171.6			417.7			693.1			31.7	
LOS		F			F			F			C	
Approach Delay		171.6			417.7			693.1			31.7	
Approach LOS		F			F			F			C	
Queue Length 50th (ft)		~552			~640			~856			217	
Queue Length 95th (ft)		#774			#859			#1088			#389	
Internal Link Dist (ft)		1622			1841			1721			1895	
Turn Bay Length (ft)												
Base Capacity (vph)		692			463			425			670	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.31			1.86			2.48			0.81	

Intersection Summary

Cycle Length: 76
Actuated Cycle Length: 76
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.48
Intersection Signal Delay: 375.6 Intersection LOS: F
Intersection Capacity Utilization 173.2% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Rte 32 & Rte 44

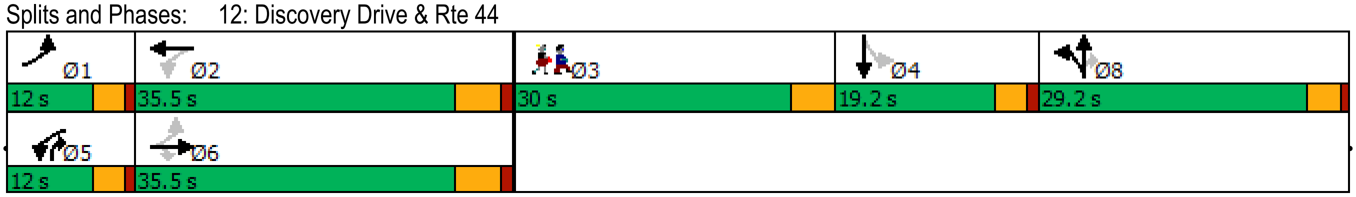


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	177	133	642	224	7	115	8	325	20	4	12
Future Volume (vph)	12	177	133	642	224	7	115	8	325	20	4	12
Satd. Flow (prot)	1770	1863	1583	1770	1853	0	0	1779	1583	0	1731	0
Flt Permitted	0.603			0.535				0.955			0.434	
Satd. Flow (perm)	1123	1863	1583	997	1853	0	0	1779	1583	0	772	0
Satd. Flow (RTOR)			145		1				353		13	
Lane Group Flow (vph)	13	192	145	698	251	0	0	134	353	0	39	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pm+ov	Perm	NA	
Protected Phases	1	6		5	2		8	8	5		4	
Permitted Phases	6		6	2					8	4		
Total Split (s)	12.0	35.5	35.5	12.0	35.5		29.2	29.2	12.0	19.2	19.2	
Total Lost Time (s)	4.0	5.5	5.5	4.0	5.5			4.2	4.0		4.2	
Act Effct Green (s)	25.1	17.1	17.1	31.6	30.6			11.2	20.4		12.8	
Actuated g/C Ratio	0.44	0.30	0.30	0.55	0.53			0.20	0.36		0.22	
v/c Ratio	0.02	0.35	0.25	1.04	0.25			0.38	0.45		0.21	
Control Delay	12.2	23.2	6.1	70.8	16.1			28.0	4.2		21.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	12.2	23.2	6.1	70.8	16.1			28.0	4.2		21.2	
LOS	B	C	A	E	B			C	A		C	
Approach Delay		15.7			56.3			10.7			21.2	
Approach LOS		B			E			B			C	
Queue Length 50th (ft)	3	65	0	~366	64			49	0		8	
Queue Length 95th (ft)	13	132	41	#650	166			103	50		36	
Internal Link Dist (ft)		1395			2126			2889			636	
Turn Bay Length (ft)	225		225	350					200			
Base Capacity (vph)	640	1074	974	669	1069			855	790		232	
Starvation Cap Reductn	0	0	0	0	0			0	0		0	
Spillback Cap Reductn	0	0	0	0	0			0	0		0	
Storage Cap Reductn	0	0	0	0	0			0	0		0	
Reduced v/c Ratio	0.02	0.18	0.15	1.04	0.23			0.16	0.45		0.17	

Intersection Summary

Cycle Length: 125.9
Actuated Cycle Length: 57.2
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 35.6 Intersection LOS: D
Intersection Capacity Utilization 70.0% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Discovery Drive & Rte 44



Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Total Split (s)	30.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

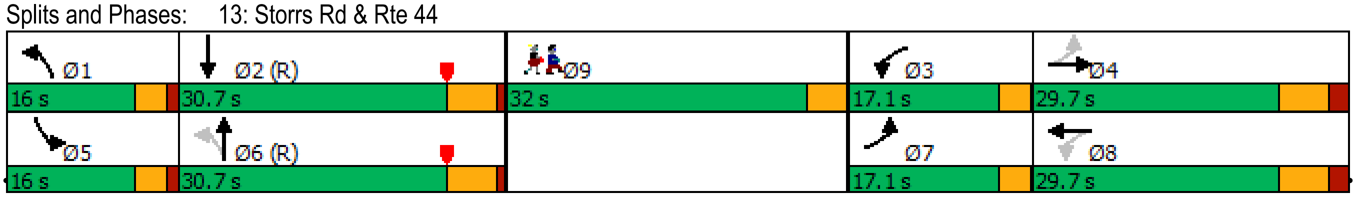
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	247	91	257	277	76	111	533	68	76	314	487
Future Volume (vph)	185	247	91	257	277	76	111	533	68	76	314	487
Satd. Flow (prot)	1770	1788	0	1770	1803	0	1770	3479	0	1770	3217	0
Flt Permitted	0.378			0.234			0.110			0.950		
Satd. Flow (perm)	704	1788	0	436	1803	0	205	3479	0	1770	3217	0
Satd. Flow (RTOR)		13			10			10			279	
Lane Group Flow (vph)	201	367	0	279	384	0	121	653	0	83	870	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Prot	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6					
Total Split (s)	17.1	29.7		17.1	29.7		16.0	30.7		16.0	30.7	
Total Lost Time (s)	3.1	6.7		3.1	6.7		4.0	5.7		4.0	5.7	
Act Effct Green (s)	48.4	32.5		57.9	39.5		50.0	40.4		9.1	38.6	
Actuated g/C Ratio	0.39	0.26		0.46	0.31		0.40	0.32		0.07	0.31	
v/c Ratio	0.53	0.78		0.69	0.67		0.62	0.58		0.65	0.74	
Control Delay	28.5	54.7		34.3	44.9		38.6	38.9		78.8	30.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	28.5	54.7		34.3	44.9		38.6	38.9		78.8	30.7	
LOS	C	D		C	D		D	D		E	C	
Approach Delay		45.4			40.4			38.9			34.9	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	93	264		136	259		56	222		67	217	
Queue Length 95th (ft)	185	#523		#321	#557		121	#387		120	#419	
Internal Link Dist (ft)		2126			2054			6999			100	
Turn Bay Length (ft)	315			220			240			200		
Base Capacity (vph)	402	472		407	574		233	1127		169	1183	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.50	0.78		0.69	0.67		0.52	0.58		0.49	0.74	

Intersection Summary

Cycle Length: 125.5
Actuated Cycle Length: 125.5
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 39.2 Intersection LOS: D
Intersection Capacity Utilization 80.3% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 13: Storrs Rd & Rte 44



Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	32.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	179	4	0	62	2	1
Future Volume (Veh/h)	179	4	0	62	2	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	195	4	0	67	2	1
Pedestrians	2			2	2	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			201		268	201
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			201		268	201
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1369		719	837

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	199	67	3
Volume Left	0	0	2
Volume Right	4	0	1
cSH	1700	1369	754
Volume to Capacity	0.12	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	9.8
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	20.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	13	67	2	125	181	165	3	121	49	90	82	10
Future Volume (vph)	13	67	2	125	181	165	3	121	49	90	82	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	73	2	136	197	179	3	132	53	98	89	11

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	89	333	179	188	198
Volume Left (vph)	14	136	0	3	98
Volume Right (vph)	2	0	179	53	11
Hadj (s)	0.05	0.24	-0.67	-0.13	0.10
Departure Headway (s)	6.0	6.0	5.1	5.7	5.9
Degree Utilization, x	0.15	0.56	0.25	0.30	0.32
Capacity (veh/h)	540	578	678	580	570
Control Delay (s)	10.0	15.1	8.6	11.0	11.6
Approach Delay (s)	10.0	12.8		11.0	11.6
Approach LOS	B	B		B	B

Intersection Summary			
Delay	12.0		
Level of Service	B		
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	259	4	5	401	253	4	2	7	243	0	127
Future Volume (Veh/h)	246	259	4	5	401	253	4	2	7	243	0	127
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	267	282	4	5	436	275	4	2	8	264	0	138
Pedestrians					1			1				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	711			287			1540	1540	286	1412	1404	574
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	711			287			1540	1540	286	1412	1404	574
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	70			100			92	98	99	0	100	73
cM capacity (veh/h)	888			1274			53	80	752	86	97	519

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	553	716	14	402
Volume Left	267	5	4	264
Volume Right	4	275	8	138
cSH	888	1274	126	120
Volume to Capacity	0.30	0.00	0.11	3.34
Queue Length 95th (ft)	32	0	9	Err
Control Delay (s)	7.2	0.1	37.2	Err
Lane LOS	A	A	E	F
Approach Delay (s)	7.2	0.1	37.2	Err
Approach LOS			E	F

Intersection Summary			
Average Delay	2388.2		
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	319	55	6	329	146	10
Future Volume (Veh/h)	319	55	6	329	146	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	347	60	7	358	159	11
Pedestrians	2			2	2	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			409		753	381
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			409		753	381
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		57	98
cM capacity (veh/h)			1148		374	664

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	407	365	170
Volume Left	0	7	159
Volume Right	60	0	11
cSH	1700	1148	385
Volume to Capacity	0.24	0.01	0.44
Queue Length 95th (ft)	0	0	55
Control Delay (s)	0.0	0.2	21.6
Lane LOS		A	C
Approach Delay (s)	0.0	0.2	21.6
Approach LOS			C

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		