
9. CONSTRUCTION MANAGEMENT PLAN

The MMC St. John Street parking garage project is anticipated to be approximately 15 months in duration, beginning in September 2018 and reaching substantial completion in December 2019. The following is the anticipated sequence of construction for major aspects of the development:

- Site mobilization and ground improvements
- Erection of precast garage (generally constructed south to north)
- Garage Interior Fit-Out
- Stair Tower Fit-Out
- Construction of St. Johns Street improvements (utility connections, sidewalks, traffic lights, paving and markings)
- Surface Parking Improvements (including stormwater management system)
- Testing & Punchlist

The CMP for the proposed development is in alignment with the template CMP provided in the approved IDP. Please refer to the attached CMP as prepared by Consigli. MMC recognizes that the CMP is an important aspect of the site plan, and desires to work with the City to provide the best plan for the project, surrounding neighborhood and City.

9.1 Attachments

- Construction Management Plan

August 23, 2018



St. John Street Parking Garage Construction Management Plan

Prepared For: Portland Department of Planning & Urban Development Department

Project Proponent: Colliers International

Construction Manager: Consigli Construction

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Construction Principles

The purpose of this Construction Management plan is to identify, mitigate and plan for all potential impacts throughout the duration of building the St. John Street Parking Garage. Maine Medical Center and Consigli Construction will strive for a seamless, incident free project by means of typical practices used to ensure that public safety and community are at the forefront of priorities.

Throughout this CM plan we will refer to specific examples of potential construction practices, traffic control scenarios, neighboring building considerations and public safety; as well as measures in which these items will be managed throughout the project to accommodate the community as much as possible. While we will take the necessary precautions to meet City and State requirements for traffic, noise, dust, vibration, etc., this project will be disruptive to adjacent properties compared to the current condition. Along with our subcontractor team members, it is imperative that we have complete participation from all parties affiliated with the project to maintain our strict safety requirements and ensure a quality building for Maine Medical Center.

Consigli Construction has been commissioned to construct a new 8 story, 2,450 space garage on the West side of St. John St. The garage is approximately 800,000 sf that will be primarily built out of precast concrete.

Consigli has extensively planned the project's schedule, site logistics and safety protocols that will be thoroughly covered in this report with graphics and narratives. This CM plan will continually be updated to meet the needs of the project, community and the city as the project progresses. We aim to deliver a safe and quality project to MMC, their employees and the City of Portland by means of communication, teamwork and stewardship.

Construction Administration and Communication

Consigli Construction will be the Construction Manager on site throughout the duration of the project. As such, there will be a dedicated team of individuals tasked with managing quality, schedule, site logistics and safety. These personnel will manage and enforce the proposed CMP with all associated subcontractors and material vendors.

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Site Communication

With the proximity to occupied buildings, community outreach and communication will be imperative throughout construction to keep the public informed of the expected turbulences caused by the project. Site signage will be prominently displayed to show pedestrian access around the site and any updates to the proposed CMP.

Quarterly reporting and updating of the CMP will be required to update the City and community of the following activities:

- 1) Construction schedule updates
- 2) Material deliveries, including notice of any oversized loads that may impact public traffic
- 3) Requests for upcoming off-hours work including weekends and holidays
- 4) Notice of any upcoming activities that may produce strong noise, vibration or dust that could adversely affect the neighboring communities.
- 5) Requests for any street openings or public sidewalk work to be completed as part of the construction contract

Additionally, MMC will provide updates via their project website. Inquiries about construction, logistics, schedule and safety will be specifically addressed on the website along as the contact information for individuals associated with each aspect of the project. Neighborhood outreach events will be scheduled at each major phase/milestone where changes to pedestrian or vehicular traffic patterns occur.

Construction Schedule

Project Work Hours

Construction work hours will be in accordance with section 17-18.

The project site is located within zoning group B2 – Business Community but is within 500 feet of buildings used for residential purposes. As such, work hours will be limited to Monday – Friday 7:00am – 6:00pm. Should work extend into Saturdays, the use of heavy equipment will be kept within the time constraints of 8:00am – 4:00pm.

Project Schedule/Logistics

The project is anticipated to begin in September 2018 will be partially turned over to MMC in December 2019. The work to complete will include completion of the garage fit-out from grid lines 9-12 along with landscaping items to be completed during the 2020 Spring planting season. Refer to the Overall Construction Sequence on page 10. Final occupancy of the building is expected the first quarter of 2020.

Regarding scheduled work to take place within public streets and sidewalks, this work will comply with Section 25-129 – Noise, dust and debris. The installation and connections to public utilities, traffic lane reconfigurations, and sidewalk construction will require work to be executed within St. John St. and D St. This work will be scheduled and planned with the City of Portland prior to the execution. All logistical concerns will be addressed with the City prior to starting the work. This work is tentatively scheduled to occur during the late summer of 2019. Temporary barricades, ramps and signage will be required during the installation to control pedestrian/vehicle movements around the work.

Material Storage and Laydown Area

The construction of the garage will require careful planning and management of the daily occurrences within the site limits. The logistical plan that is currently outlined is intended to keep all construction staging, laydown and temporary storage within the project limits and secured by temporary fencing. With designated areas delegated to subcontractors the site will remain accessible by incoming trucks without causing a queuing affect outside of the fence. A secondary storage yard is anticipated at Portland Yacht Services to store precast material not accommodated on site. The usage of this area will help to better control and manage the truck traffic to and from the site during the day, as nighttime truck use is prohibited by Maine. Precast trailers will only transport loads between the staging yard and the job site outside of peak traffic hours as defined as 7:00am – 9:00am and 4:00pm – 6:00pm.

Material Deliveries

The construction of the parking garage will require coordination of material deliveries throughout the duration of the project. The following logistical plans show the planned lay-down areas, truck routes and safety protocols that will be in place prior to the start of construction. Refer to the Truck Routing Plan on page 11. Truck access during construction will be broken up into two separate phases requiring different logistical needs to be addressed.

1. During Phase 1, the primary entrance for sitework, concrete and precast deliveries will be through a paved right-of-way at the existing Eagles parking lot. Trucks will then exit the job site through the North gate accessing St. John St via the Union Plaza parking lot. A flagger will be employed to assist in navigating precast loads off St. John to the project site.
2. Phase 2 will begin once the garage has been 50% erected. The access through the Eagles lot will become blocked by the building diverting all deliveries through the North gate via the Union Station Plaza ROW.
3. Three on street parking spaces will likely need to be closed to public use for the large trucks to gain access to the project site during Phase 1 & Phase 2. However, the location of these closed parking spaces will change with the phases. Please see the logistics plans on page 12 & 13 for more information.
4. By utilizing the secondary storage, at Portland Yacht Services, are for large deliveries, we can coordinate material deliveries to the site during non-peak hours of traffic or pedestrian presence. Large deliveries will stop off at the storage yard located on Commercial St, until the appropriate time is determined to bring the material to the project site for installation.

Contractor/Public Parking

At the peak of construction activity, it is anticipated that up to 100 people will be on site working various trades associated with the building. The current constraints of the project site do not allow for parking of subcontractors within the project limits. As such, contractor parking will be delegated to off site areas. Contractors will not be allowed to park on any residential street within the St. John neighborhood. Any violators will be fined or asked to leave the project depending on the frequency of the violations. Consigli is currently exploring options to acquire off site parking for the subcontractors that would not impact the neighboring community.

The Eagles parking needs will need to be addressed and managed throughout construction. During the construction process, MMC will provide and maintain 37 parking accommodations for the members of the Eagles in addition to the existing spaces located on the South side of the building. Tenants of 222 St John St will receive temporary parking adjacent to the building and in a lot located across St. John St. MMC is committed to providing safe and proximate parking for these properties throughout the construction process.

Fire Protection for Construction Activities

The 2013 Standard for Safeguarding Construction, Alteration and Demolition Operations will be enforced on this project by utilizing best management practices to mitigate the fire risks associated with the construction of the parking garage. Consigli and its subcontractors will execute the following measures to provide a safe and secure work place:

- 1) PFD Fire Command Center: This centralized location will hold all current project information and will act as the first responders meeting point to obtain the most up to date information of construction. The following documents will be found at this location:
 - a. Hot Work Permits: To be filled out daily by any person performing work that will generate a spark or create a potential fire risk on the job site. The permits are to be completed and approved by Consigli prior to work starting.
 - b. Updated Construction Schedule
 - c. Updated Construction Logistics Plan
 - d. Pre-Incident Fire Plan

- 2) On Site Fuel Storage: Different flammable liquids will be required throughout construction. A free standing, 30-minute fire-rated enclosure will be built to safely and securely store all flammable liquids and gases. Fueling trucks will be used as needed but under no circumstances be allowed to be parked or stored on site for any extended period.

- 3) Means of Egress: The parking garage will be permanently equipped with (3) 2-way stair assemblies for means of egress. During construction it is the intent to install the stair located in the Southwest corner first to provide emergency egress throughout construction. These stairs will be identified with temporary signage throughout construction indicating the floor level and exit path direction

- 4) Good Housekeeping: Consigli Construction will provide necessary dumpsters for the removal of debris from the site. All subcontractors are responsible for the daily clean-up of their work areas to ensure that no materials or tools are left out over night that could pose a hazard to the building. Daily safety walks by the Construction Superintendent will be utilized to ensure that all working floors are equipped with an inspected fire extinguisher and clear means of egress in the event of an emergency. Trash chutes and material hoists may be utilized to safely and efficiently remove all debris from the project.

- 5) On-site Security: The project site will be secured everyday by means of a temporary, post driven construction fence and scrim. Lockable gates will be located at (2) locations for site access.

- 6) Rapid Communication: Evacuation notification will be provided by means of 2-way radios/cellular devices as well as strategically positioned air horns. Upon evacuation of the building all project personnel will report to the muster point location where the Construction Manager and all subcontractor foremen will perform accountability checks. The General Contractor field staff will then be dispatched to all project entry points and the PFD Command Center. Upon arrival of the first responders to the PFD Command Center the General Contractor will provide an accountability and incident briefing.

Public Safety

The construction of the new MMC Parking Garage will be near pedestrian right of ways and will interact with public traffic throughout the duration of the project. Material deliveries, the use of cranes, lifts and other heavy machinery all have the potential to impact typical public activity. As a member of the Portland community, Consigli will strive to limit, mitigate and avoid these potential impacts as much as possible by means of controlling noise, on site dust, vibrations and traffic. By educating and informing the neighborhoods to the construction activities taking place we will aim to build to a project that produces the minimal of impacts to the St. John Street community.

Noise

Construction activities throughout the project will create noise that leaves the project site. It is the intent of the project team to limit the exposure to the noise by following section 17-18 of the City of Portland Code of Ordinances. This project site is located within 500 feet of buildings classified as residential. As such, the project hours will be limited the 7:00am – 6:00pm, Monday – Friday. Should any weekend or holiday work be required the use of heavy machinery will not commence before 8:00am. When this work is required, no less than 2-week advanced notice will be provided to MMC and the neighboring communities.

Work related to the pile foundation will likely be the loudest activity experienced during construction. Consigli has anticipated fast-tracking this work by utilizing (2) pile driving crews to reduce the duration of the sensory burden on the neighboring community. This work will take place from November 2018 – January 2019. Recently, many local projects have utilized the pile foundation to much success around Portland. The new WEX building on Commercial St. and the Hyatt in the Old Port both utilized piles in their foundation.

Dust Control/Air Quality

Maintaining an environmentally conscious project site will be a major priority for the project team to ensure safety not only for the neighboring communities but also for the construction workers on site day after day. All soils and debris will be kept within the project limits following the State of Maine Department of Environmental Protection erosion control Best Management Practices:

- 1) Erosion controlled construction entrances
- 2) Tarped dump trucks leaving the site with soil/debris
- 3) On-going sidewalk and street cleaning activities
- 4) The installation of temporary, compacted roads within the job site
- 5) Using wetting agents to control dust

- 6) Covering stock piles when material is to be piled for long periods of time
- 7) Smoking will not be allowed on the job site

Vibration Monitoring

Some of the construction practices required for this project will result in ground vibration waves that may transmit to nearby buildings. Prior to any potential vibration causing activities taking place a pre-construction survey will be conducted to review and document existing conditions. The survey will encompass all properties abutting the proposed project site to include the following addresses:

- 222 St. John St (Office Bldg.)
 - 210 St. John St (Residence)
 - 212 St. John St (Residence)
 - 160 St John St (Sid Harvey's)
 - 172 St. John St (Ferguson)
 - 184 St. John St (Eagles Bldg.)
- Vibration monitoring will also be conducted adjacent the railroad immediately west of the project site limit.

Pavement removal, vibratory compaction and pile driving will be employed on this project and will be monitored by a third-party monitoring company. A pre-construction meeting will be planned with abutting property owners to discuss geological conditions, construction specifications and methods of installation that create vibration.

Traffic Control

Throughout the construction process St. John St will experience increased traffic due to construction activities. Material deliveries, contractor access and public utility integration will be encountered and mitigated through coordinated logistics plans (starting on page 11), on site safety personnel, way-finding signage and well-organized traffic control devices. MMC & Consigli will strive to inform and direct the neighborhood to the activities taking place in public areas as they progress through completion. Beginning in July 2019, construction activities within St. John St will include public utility connections, traffic control installations and sidewalk improvements. All traffic management and phasing plans affecting vehicles will be submitted to the City for approval prior to commencement of the work.

The main entrance point to the construction project will be through the East gate located within the existing Eagles parking lot. To navigate precast concrete deliveries to the project site a flagger will be stationed at St. John St. to usher the trucks into the right of way. Trucks and trailers will exit the project site through the North gate and re-enter traffic via the right of way through the Union Plaza parking lot. Due to the large turn radius of some of these trucks, it will be necessary to temporarily close parking spaces

within the tenant lot as well as spaces located on St. John St. Please reference the trucking plan, on page 10, for more information.

Proximity to Neighboring Residences and Businesses

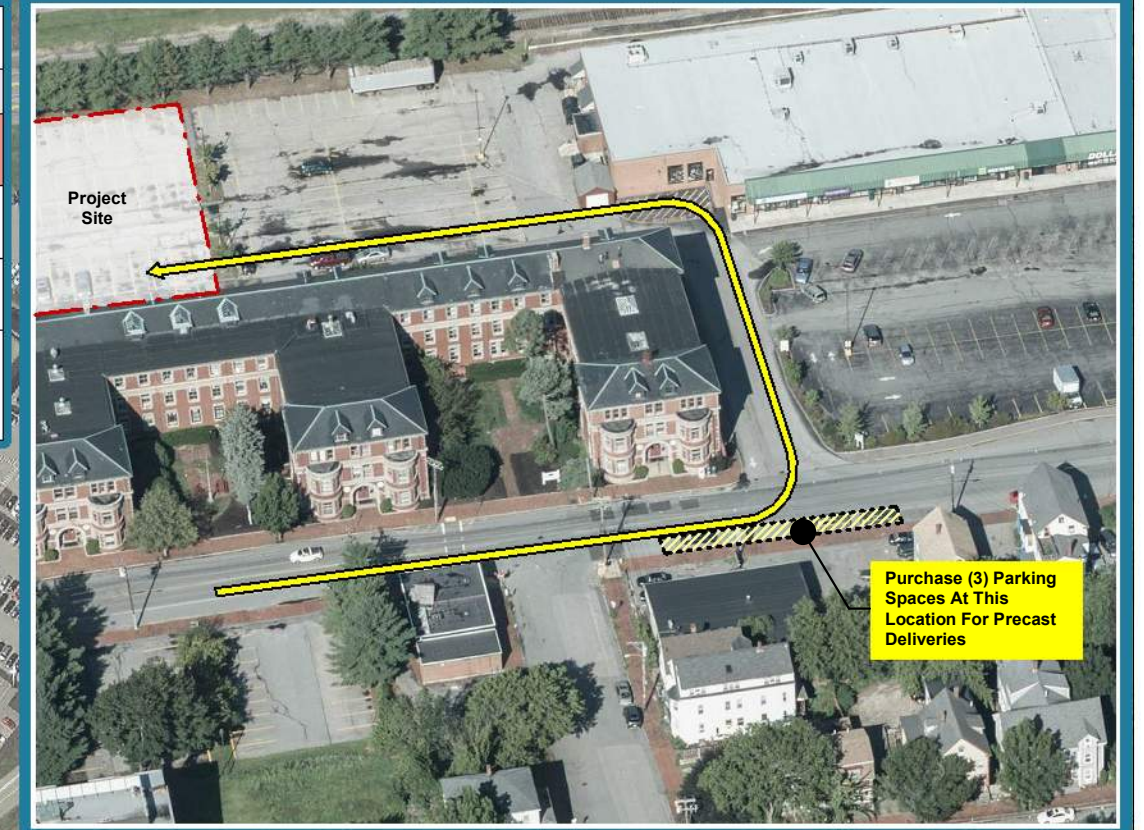
During the process of construction great attention will be required to ensure that homes and places of business are not overly impacted by construction activities or traffic. While the logistics of the CMP does not require work associated with or access through the adjacent properties, certain measures will be taken to minimize the potential for a disturbance. Erosion control, physical barriers, temporary shoring and staged material deliveries will be coordinated during construction.

Care will be given to the owners and users of 210 & 212 St. John St. The residences are the closest in proximity and will likely experience the greatest impact. Individual site meetings will be held with the owners of these properties to discuss their needs throughout construction. Consigli and MMC are committed to working through logistical challenges with the neighbors and providing adequate and reasonable measures to accommodate their requests.

Anticipated Construction Traffic Per Day

	2018				2019								2020									
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Earthwork/Ground Improvements	(9)	(20)	(25)	(25)	(25)	(25)				(5)	(7)	(7)	(10)							(5)	(5)	(5)
Structural Precast Erection							(20)	(20)	(20)	(20)	(10)	(5)										
Garage Fit-out													(15)	(15)	(13)	(10)	(6)					

Bird's Eye View

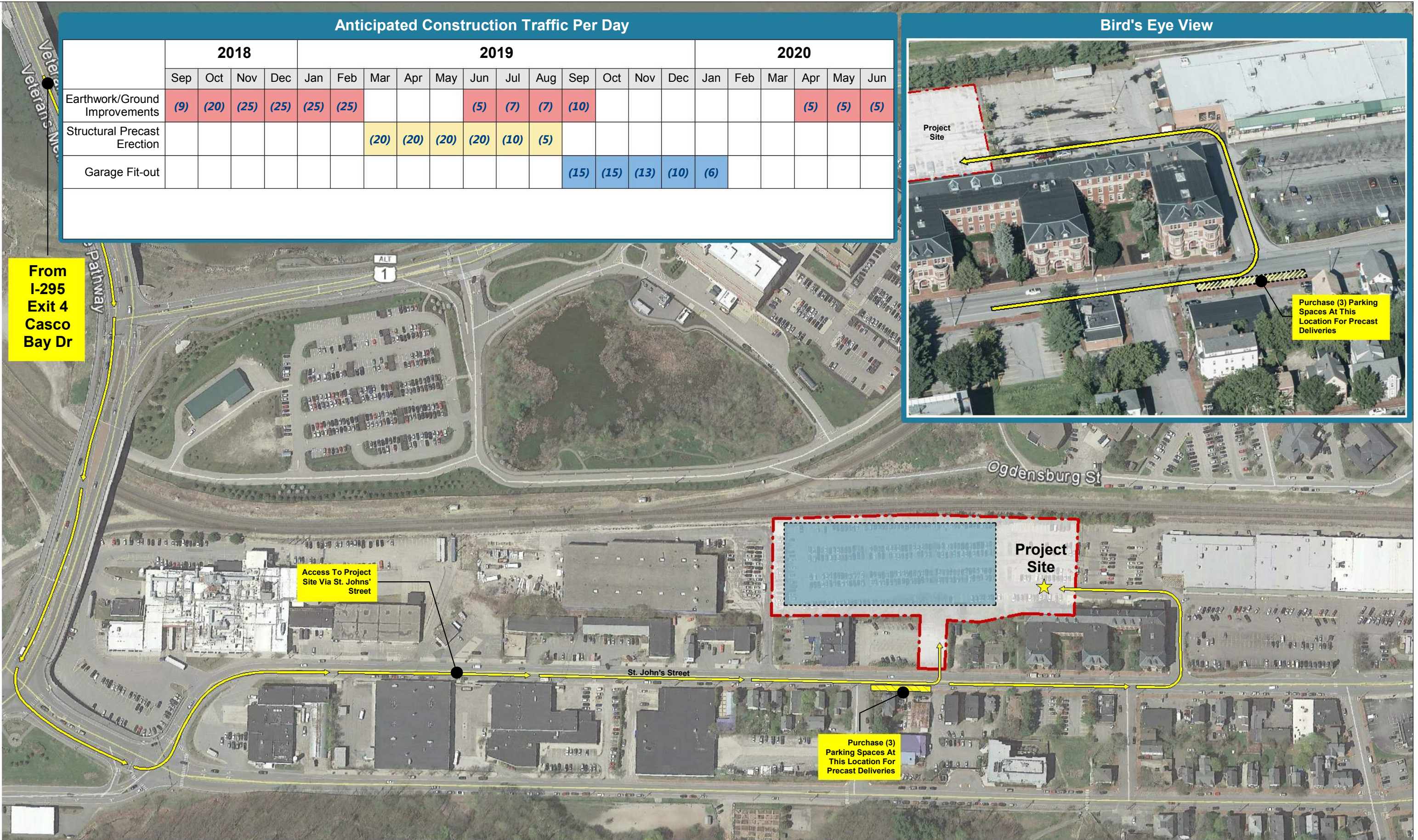


From I-295 Exit 4 Casco Bay Dr

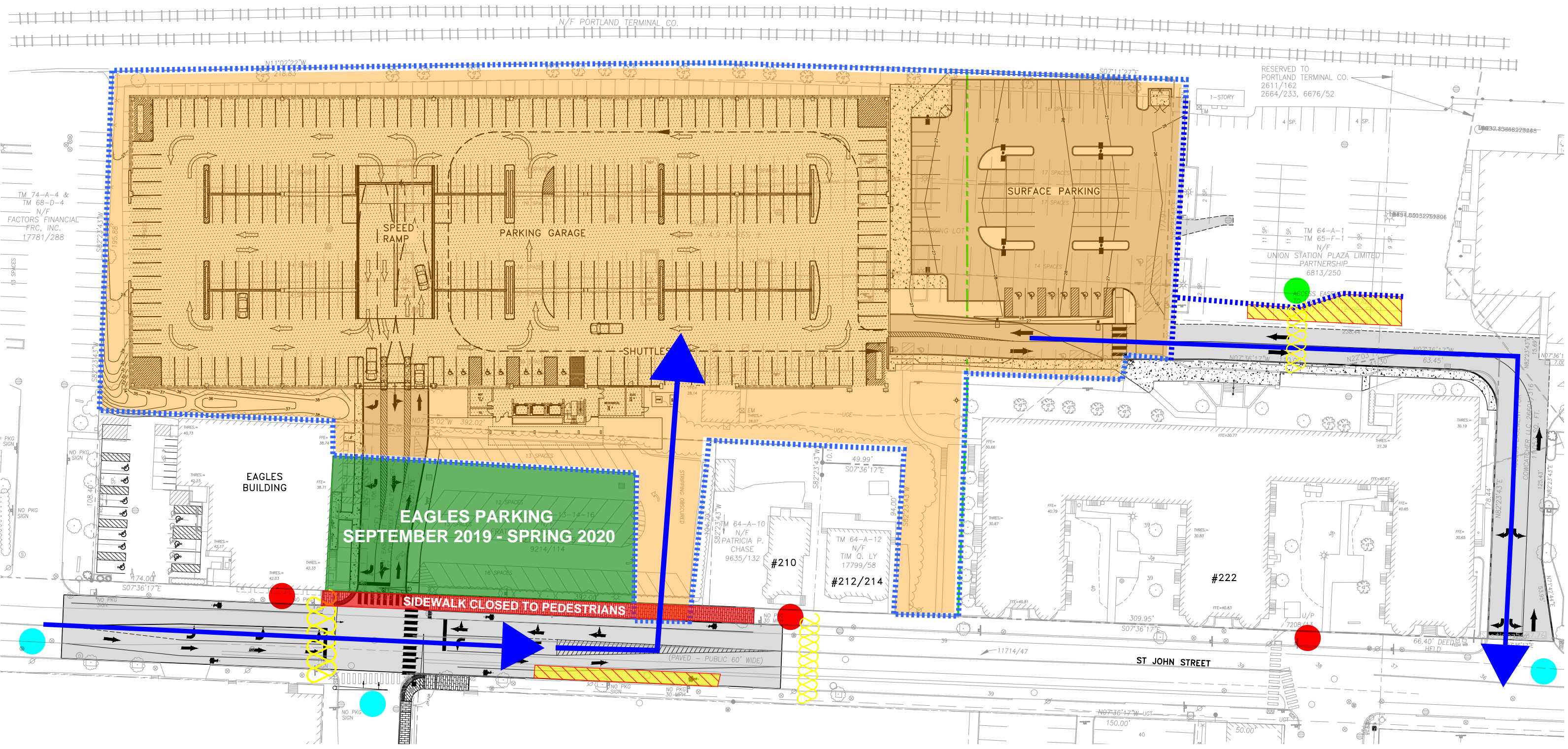
Access To Project Site Via St. Johns' Street

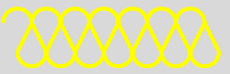







Purchase (3) Parking Spaces At This Location For Precast Deliveries

Purchase (3) Parking Spaces At This Location For Precast Deliveries



PHASE 1 LOGISTICS PLAN SEPTEMBER 2018 - SUMMER 2019

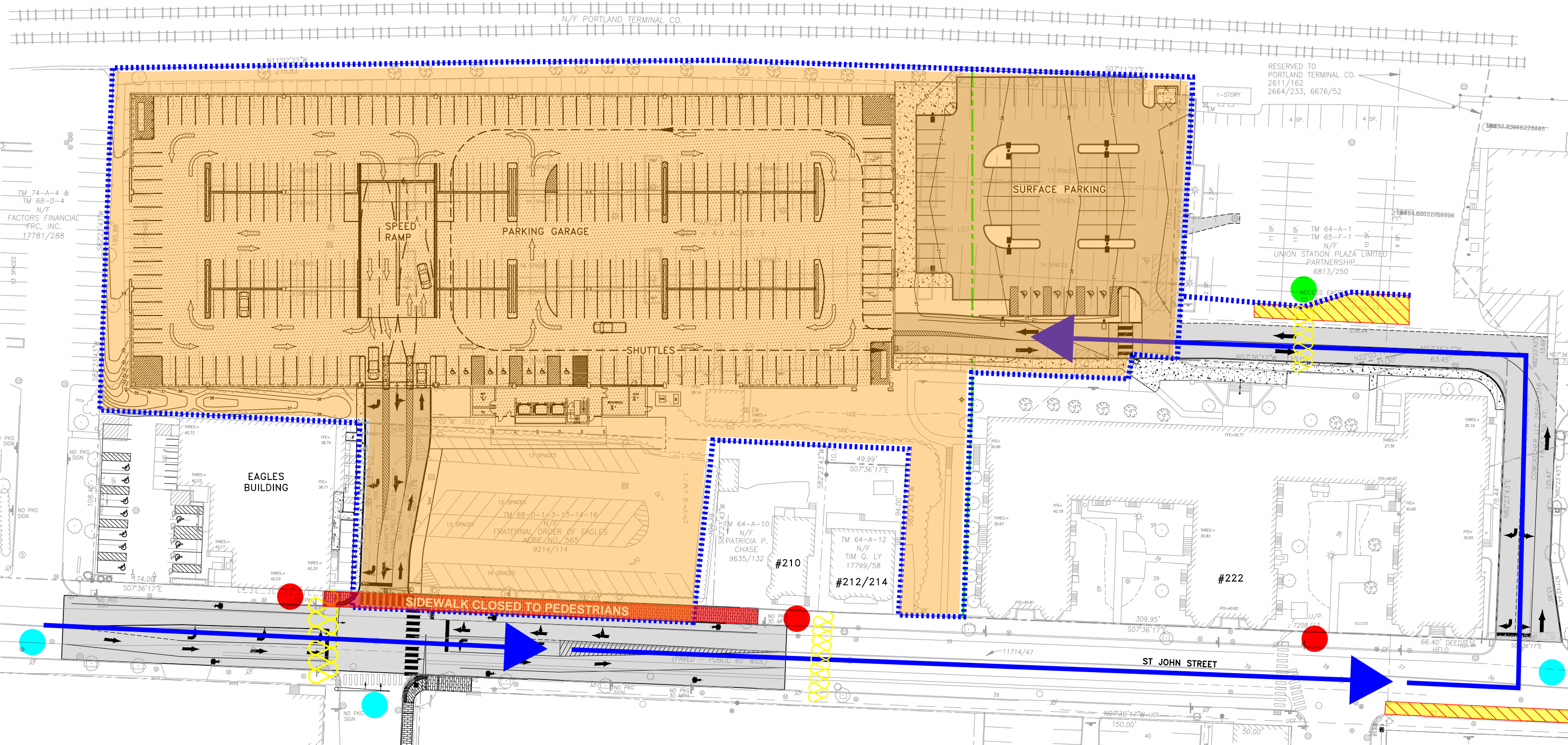


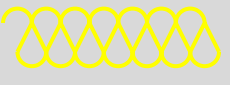







	TEMPORARY CROSSWALK		PARKING SPACES PROCURED FOR CONSTRUCTION		CONSTRUCTION VEHICLE TRAFFIC
	CROSSWALK SIGNAGE AND TRUCK CROSSING SENSOR		SIDEWALKS CLOSED DURING CONSTRUCTION		
	SIDEWALK CLOSURE SIGNAGE		PROJECT SITE		
	CONSTRUCTION TRAFFIC AHEAD SIGNAGE				



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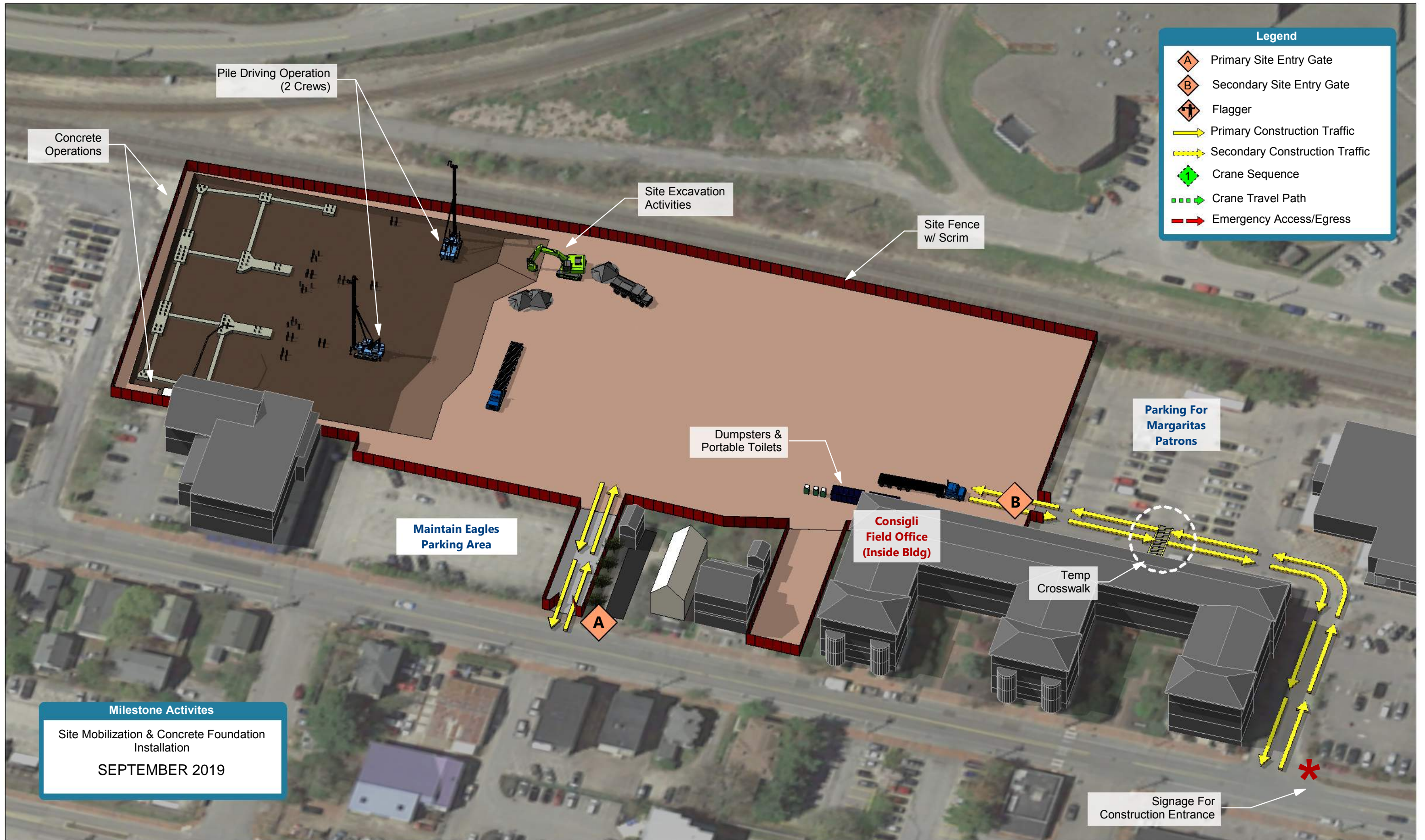
PHASE 2 LOGISTICS PLAN SUMMER 2019 - DECEMBER 2019

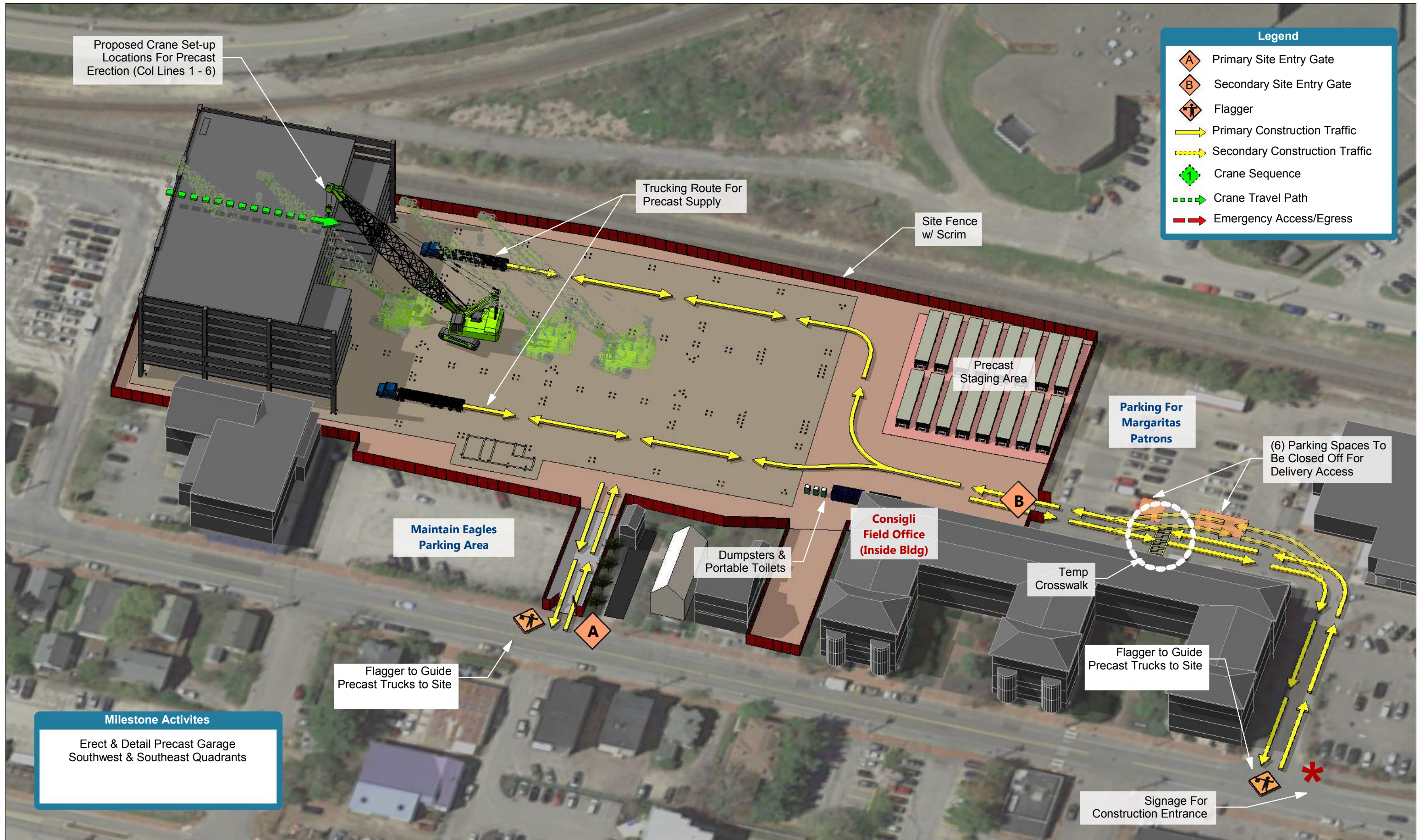


	TEMPORARY CROSSWALK		PARKING SPACES PROCURED FOR CONSTRUCTION		CONSTRUCTION VEHICLE TRAFFIC
	CROSSWALK SIGNAGE AND TRUCK CROSSING SENSOR		SIDEWALKS CLOSED DURING CONSTRUCTION		
	SIDEWALK CLOSURE SIGNAGE		PROJECT SITE		
	CONSTRUCTION TRAFFIC AHEAD SIGNAGE				



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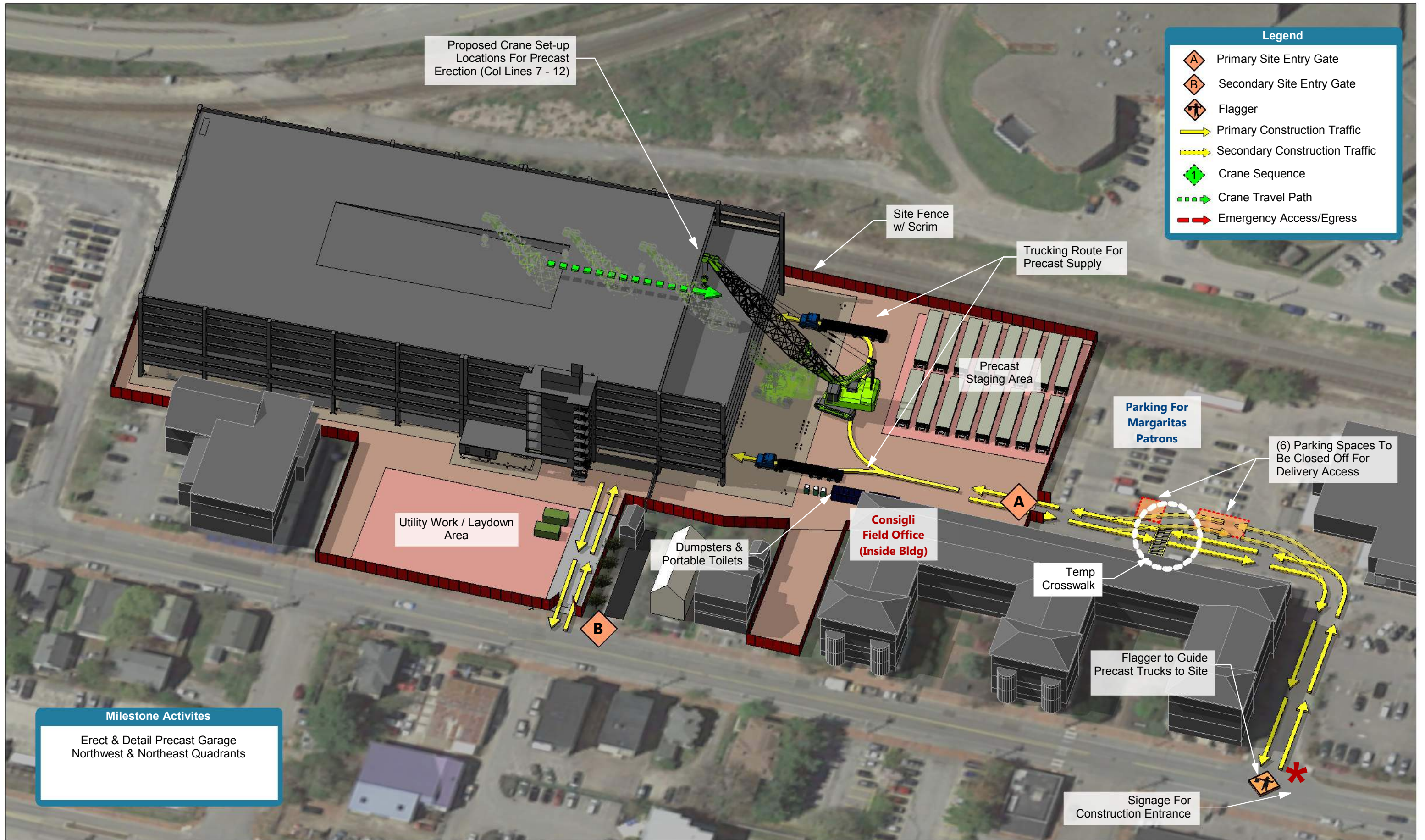


Legend	
	Primary Site Entry Gate
	Secondary Site Entry Gate
	Flagger
	Primary Construction Traffic
	Secondary Construction Traffic
	Crane Sequence
	Crane Travel Path
	Emergency Access/Egress

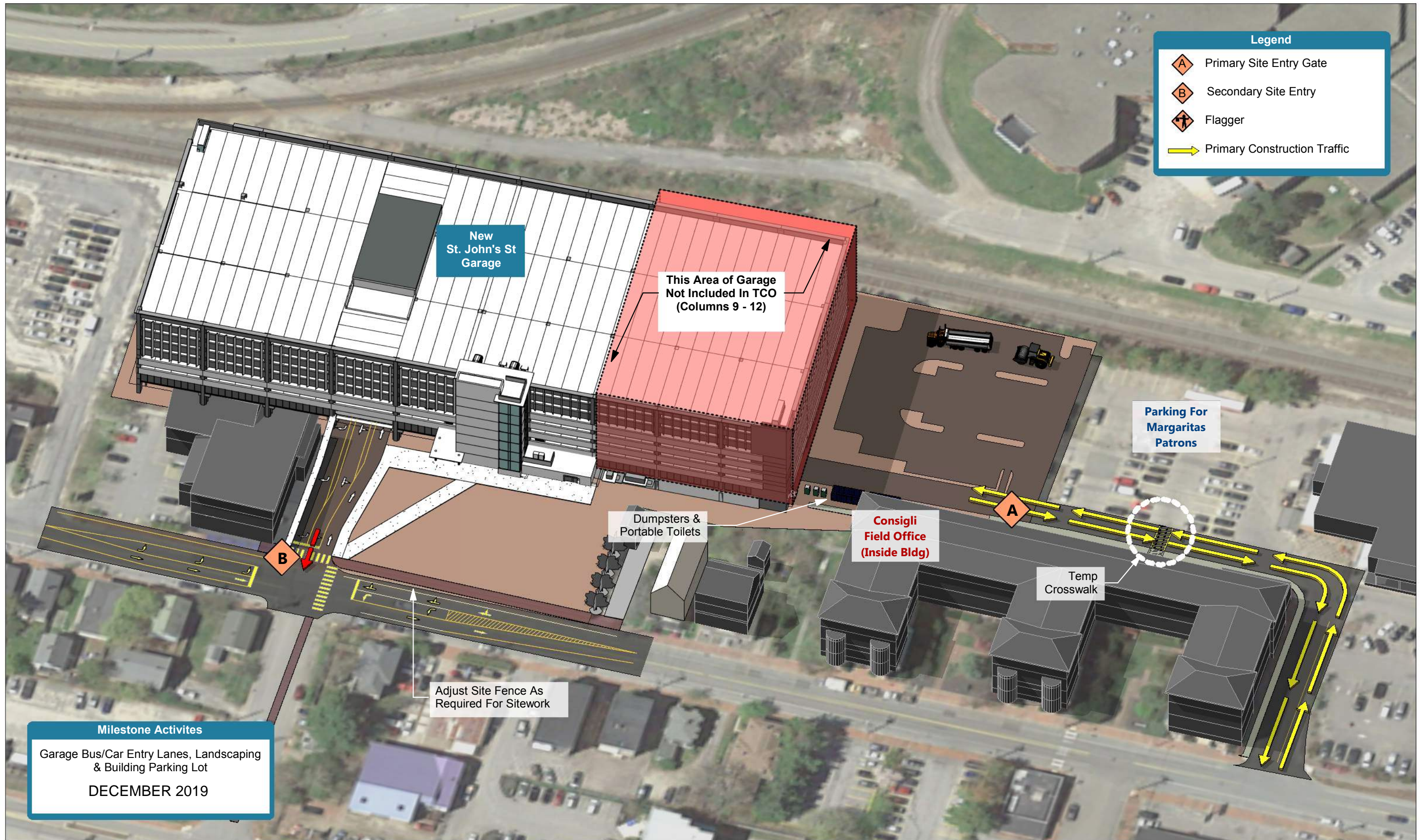
Milestone Activities

Erect & Detail Precast Garage Southwest & Southeast Quadrants

St. John Street Garage Site Logistics Plan - Precast Erection (Column Lines 1-6)







Milestone Activities

Garage Bus/Car Entry Lanes, Landscaping
& Building Parking Lot
DECEMBER 2019

**St. John Street Garage
Site Logistics Plan - Temporary Certificate of Occupancy**

