

3.1.5 Site Development Requirements

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The items described within this section identify existing conditions and programmatic or regulatory requirements to be considered in the development and evaluation of alternative site designs, and are further depicted on the existing site plans.

Structures and Fences

Fencing and netting will be provided to separate pedestrian/sports areas from vehicular areas and provide ball control where needed. Fencing will also be provided to buffer service/mechanical areas to the greatest extent possible. Fencing owned by the Town of Stoneham along the property line will be repaired or replaced as needed.

Retaining walls will be incorporated as required by the proposed building and site design to negotiate grade changes and provide accessibility.

Site Access and Circulation

Improvements to the site must provide a safe entry and exit to the site from the adjacent Franklin Street roadway and ensure adequate separation between pedestrians and vehicles. Vehicular circulation includes one shared bus and car drop-off loop on Franklin Place. The shared loop is approximately 900 feet in length and causes traffic to back up and restricts access to the parking lots.

Currently, formal pedestrian and vehicular access is provided to the site off Franklin Street onto Franklin Place. A paved asphalt walkway through the center of the landscape island is the formal pedestrian route; however, it lacks accessible curb cuts and detectable warnings. Improvements must consider access for disabled persons conforming to the Massachusetts Architectural Access Board's Rules and Regulations and the Americans with Disabilities Act. Circulation within the parking areas is limited, with slopes exceeding 5% in certain areas. Additionally, accessible parking does not meet the required quantity, and there is no accessible path to the main entrance. Throughout the site, accessible routes are incomplete or non-existent.

Parking and Paving

Refer to report by Nitsch Engineering.

Code Requirements

The preferred building solution and site design will fully meet current accessibility regulations and building code requirements. This includes compliant accessible parking, pedestrian routes, curb ramps, stairs and ramps with associated handrails as well as compliant guard railings along pedestrian routes located above walls greater than 30-inches high.

Zoning Setbacks and Limitations

Refer to report by Nitsch Engineering.

Accessibility Requirements

The site has a significant topographic change (+/-30') from a high point at the terraced tennis courts in the northeastern corner to the low point at the wetlands in the southern portion of the site. Based on the grade changes, there are several issues with accessibility which will need to be addressed.

There are no accessible walkways to the softball, baseball or soccer fields. There is an informal gravel pathway to the softball field, but it exceeds a 5% slope and suffers from erosion problems. The sidewalk to the track terminates prior to reaching the complex and pedestrians must use the asphalt drive to reach the gate, which exceeds a 5% slope. A secondary entrance is provided with a staircase, but no accessible ramp. There are two accessible parking spaces at the track complex. Spectator seating throughout the athletic complex does not include required wheelchair seating spaces, and the press box at the stadium is not accessible. There is no pedestrian walkway to the tennis courts, but there is one accessible parking space. The access aisle is undersized and there isn't sufficient maneuvering space provided at the gate.

Easements

Refer to report by Nitsch Engineering.

Wetlands and/or Flood Restrictions

Refer to report by Nitsch Engineering.

Emergency Vehicle Access

An asphalt fire lane circumnavigates the existing building. In any building reconfiguration solution, a minimum 20-foot wide emergency access route around the building will

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be required by building code. Emergency vehicle access is provided via the main site driveway from Franklin Street onto Franklin Place, and there is also emergency access from Boxwood Road -- however, this route is restrictive in width and is not paved.

Safety and Security Requirements

Safety and security at the school campus is of paramount concern. Access from Franklin Street and Boxwood Road should be maintained and improved to accommodate the largest emergency vehicles. The design of the site and landscape is an important component to providing a safe educational environment and ability for building occupants to have safe egress during emergencies.

Strategies including providing transition zones between vehicular and pedestrian areas with barriers to stop vehicles while allowing free pedestrian egress. Clear sightlines at eye level and from security cameras and adequate site lighting are also critical factors that allow time to see and respond to dangers.

Utilities and Drainage

Refer to report by Nitsch Engineering.

Athletic Fields and Outdoor Educational Spaces

The existing on site athletic facilities do not currently meet all athletic program needs, and the site redesign should incorporate as much of the athletic program on site as possible. Combining field programming on multi-sport, synthetic turf fields with sports lighting will maximize the use of the limited site area.

The existing black rubber 6-lane track and irrigated natural grass field is positioned in a sub-optimal east-west orientation. The north-facing bleachers seat approximately 2220 people. The bleachers do not have ramps or adequate handrails and are aluminum decking and bench seating on a steel structure. The wooden press box only has stair access. A CMU block building serves as storage and concession serving area adjacent to the track, and there is also a Conex trailer for additional storage. There is a memorial plaque outside the track. The field has reportedly had subsidence issues that may be an indication voids in rock fill below.

The 8 tennis courts are in a north-south orientation with 5 over 3 configuration. The courts are constructed in terraces with sloping asphalt between courts. There is not adequate fencing between courts for ball control, and higher terraced courts are not accessible. There is no spectator seating other than a few metal benches within the courts, including a small memorial plaque on one bench. In any reconfiguration, a minimum of 5 tennis courts is required, but we understand that more courts are desirable for community use.

The baseball field is oriented in a sub-optimal southeastern direction. There is no accessible route from the school to the field. There is a vertical chain link backstop and a batting cage enclosed by netting. The dugouts are constructed with CMU blocks, wood roof structure and aluminum bench seating on a sunken concrete slab. The raised aluminum spectator seating accommodates approximately 140 people but does not have an accessible ramp or wheelchair seating. There is also a small, portable storage trailer. This field reportedly has drainage and maintenance issues.

The softball fields have two different orientations: the varsity field is in the optimal northeast orientation and the JV field is in a southwest direction. Both areas have drainage and maintenance issues. The aluminum spectator seating is only provided for the varsity field. There is one main bleacher, seating approximately 140 people and two smaller 50-seat bleachers. The varsity field has CMU block dugouts with wooden roofs and aluminum bench seating on a concrete slab flush with grade, while the JV field has metal players benches in a chain link fence area with no shade covering. The varsity softball field also has a memorial monument and associated paving.

The soccer fields are in an optimal north-south orientation. The fields are in poor to fair condition, and the northern-most field suffers from subsidence. Fill to construct these fields reportedly includes road construction debris and was identified in test pits performed by Briggs Engineering and Testing in 2014. There are several portable team benches and there are two bleacher systems for the JV field, seating approximately 50 people each. There is no

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accessible walkway to the soccer fields or bleachers. The varsity field has bleacher seating for approximately 70 people and several portable players benches.

All fields listed previously have scoreboards and lighting; however, both are antiquated and not sufficient for current athletic program needs. The field events and practice field on the southeast portion of the site do not have sports lighting or scoreboards.

Outdoor education spaces include two courtyards at the building. One courtyard has lawn and a large shade tree with no accessibility in the courtyard. The other has a greenhouse and raised planting beds. There is a walkway and sunken seating area. In redeveloping the site design, convenient, comfortable and accessible outdoor learning spaces are a high priority for this school community.

Site Orientation and Other Location Considerations and Issues

The existing Stoneham High School is located at 149 Franklin Street with residential neighborhoods surrounding the site and abuts the Middlesex Fells Reservation recreational open space to the south. Business and medical-zoned properties exist on the opposite side of Franklin Street. Sensitivity to the surrounding neighborhood is a high priority for this project.

The high school site consists of two parcels totaling approximately 39.63 acres. The primary 38.88-acre parcel at 149 Franklin Street contains the high school building, vehicular circulation, parking, athletic fields and tennis courts. The secondary 0.75-acre parcel contains Franklin Place which is the main driveway access at Franklin Street.

There is significant ledge on the site, especially on the western side of the site and in the northeast corner. Historic USGS maps show the existing building is located on what used to be an exposed ledge area. There is a wetland on the southern portion of the site, which will limit expanding the developed area in that direction.

There is a formal pedestrian and vehicular entrance off Franklin Street onto Franklin Place. Informal trails exist near the soccer field, under the bleachers and through the wetland buffer to the surrounding residential neighborhoods, and at the emergency access location on

Boxwood Road.

This document is intended to serve as a general summary of our observations and information provided to us regarding the use and condition of the existing site facilities. Refer to other sections for information pertaining to existing utilities, drainage, soils, structural and traffic.

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Zoning Requirements

Per the Town of Stoneham Zoning Map, the site is located in an Education District. Dimensional requirements for a site in an Education District include:

Minimum Lot Size in Square Feet	50,000
Frontage and Lot Width in Feet	45
Percent Coverage (Portion of Lot Devoted to Structure)	35
Minimum Front Setback in Feet	20
Minimum Side Setback in Feet	13
Minimum Rear Setback in Feet	20
Maximum Height in Feet	55
Number of Parking Spaces	1 for 8 seats

Wetlands Protection Act (310 CMR 10.00) and Town of Stoneham Wetland Protection By-Law

Work on the site within 100' of any wetland resource listed under the act will require the filing of a Notice of Intent (NOI) with the Stoneham Conservation Commission. The NOI will also serve as the application for the work under the Town of Stoneham Wetland Protection By-Law. The locations of the wetlands on and adjacent to the site will more than likely require the filing of a NOI for any major renovation or reconstruction on the site.

Limiting the proposed work to within previously developed areas and managing stormwater per the Massachusetts Stormwater Management Regulations would typically meet the requirements of the Massachusetts Wetlands Protection Act. Additional requirements under the Stoneham Wetland By-Law include the provision that a continuous strip no less than twenty-five (25) feet in width, untouched and in its natural state, be left undisturbed adjacent to those areas meeting the description of a wetland.

Filing the NOI at the beginning of the Construction Document Phase typically allows enough time for the public process and accompanying peer review to

occur. If a project where to require some sort of Early Site Package or Site Preparation Package in advance of the Construction Documents, then an additional NOI may need to be filed in advance of those packages to permit that work.

National Flood Insurance Program-Flood Insurance Rate Map (FIRM)
 Sites listed by the Federal Emergency Management Agency (FEMA) as having a 0.1% chance of flooding within any given year (often referred to as the 100-year flood) are regulated by federal and state requirements so as to not increase the risk of flooding, either on the site or in adjacent watersheds.

A review of the Federal Emergency Management Agency FIRM map for the site indicates that the site is not located in an area having a greater than 0.1% chance of flooding in any given year.

Site Utilities

Storm Drainage

Storm drainage for the site will need to comply with Massachusetts Stormwater Management and Town of Stoneham standards. Massachusetts Stormwater Management standards require that the rate of stormwater flows off the site not be increased over current conditions. Town of Stoneham standard generally reference and parallel the Massachusetts Stormwater Management standards. Both set of standards also require that the quality and quantity of stormwater be addressed by treating the stormwater to remove possible contaminants and that a portion of the stormwater be directed to the groundwater. Areas that see vehicular traffic could have their stormwater quality addressed through mechanical means such as water quality inlets or by "greener" systems such as raingardens, constructed wetlands, bio-swales, etc. Runoff from roofs and landscaped areas are considered clean and treatment prior to recharge or discharge is not required.

If the proposed work increased the amount of impervious areas on the site, then the increased rate of runoff from the site would need to be addressed by detaining or

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infiltrating stormwater on-site. Detention/retention ponds, constructed wetlands, underground infiltration systems, porous pavement and rainwater recycling are all examples of some best-management practices (BMP's) used to address stormwater rate and volume.

Sanitary Sewer

Sanitary sewer construction and use shall comply with Town of Stoneham standards and requirements. The town's standards are typical for new construction in the area and include the use of 8-inch PVC for sewer mains and precast concrete manholes. Any portion of the existing sewer system that are proposed to remain in service should be cleaned and video inspected. Areas identified as structurally suspect or as allowing for excessive groundwater into the system should be repaired or replaced. Repairs could include spot repairs of broken or dis-jointed pipes, root removal and/or slip lining.

Sanitary flows from the cafeteria and kitchen will need to be routed through an exterior grease-trap prior to connection to the sanitary system. Flows from science labs and art rooms may also require pretreatment prior to connection.

Water

Water mains and services for the site shall conform to Town of Stoneham standards. Town construction requirements for water mains are typical for the area and generally consist of cement mortar-lined, ductile iron pipe with a minimum main size of 8-inches. For resiliency and water quality benefits the water main should be looped through the site and the site system should have at least two points of connection to the town system.

Natural Gas

The size and connection point of the future service will be determined by the utility provider in conjunction with the project's MEP Consultant.



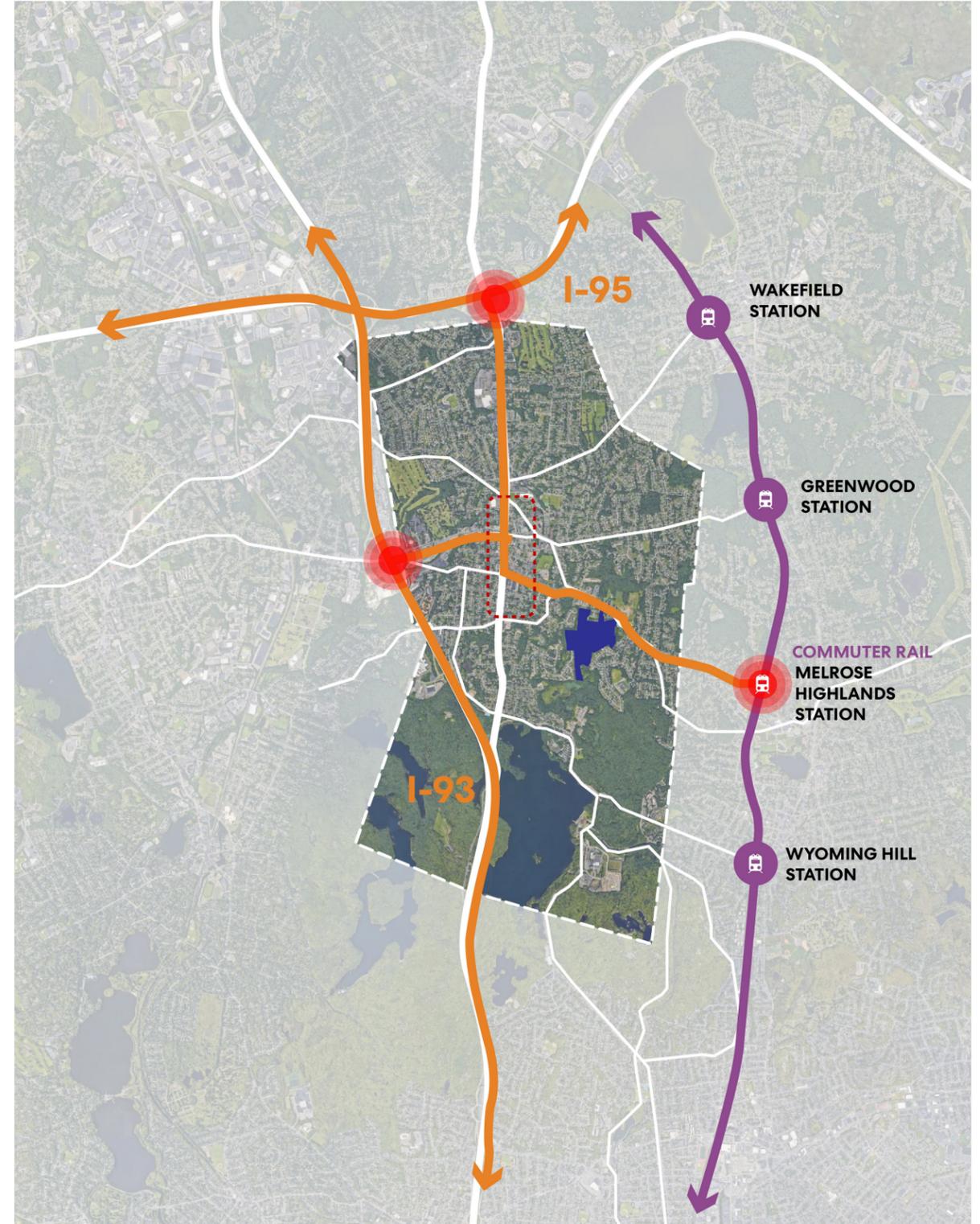
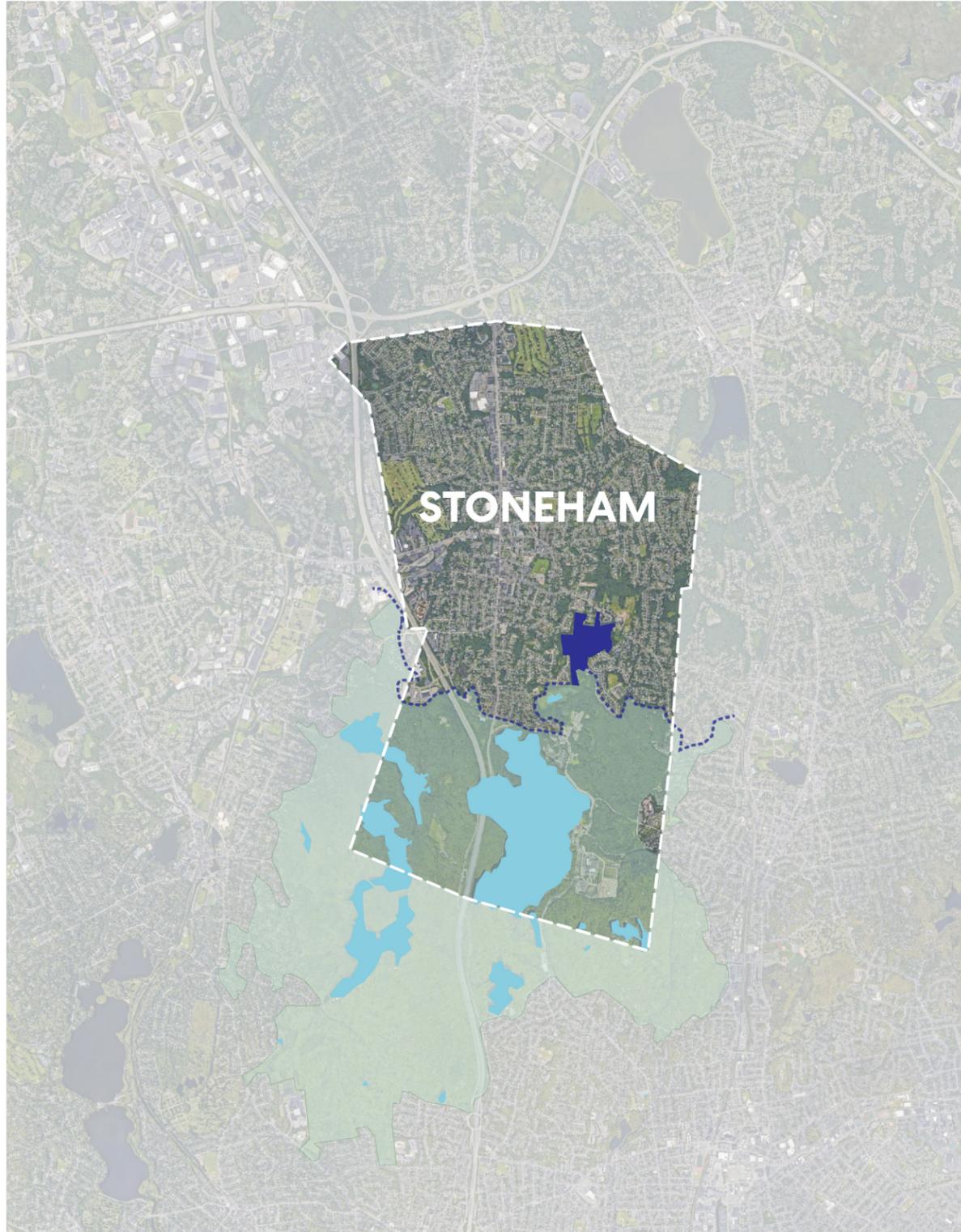
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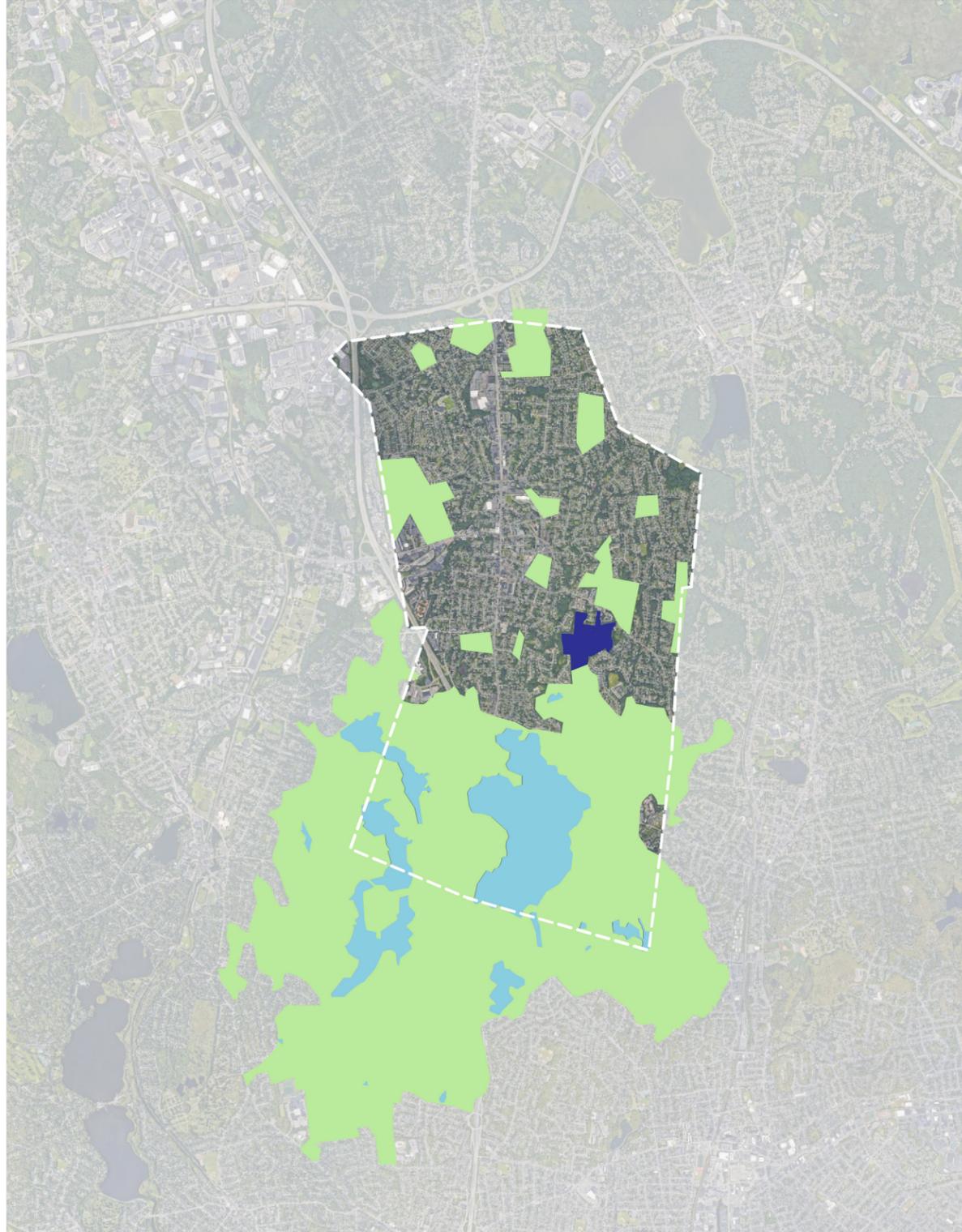
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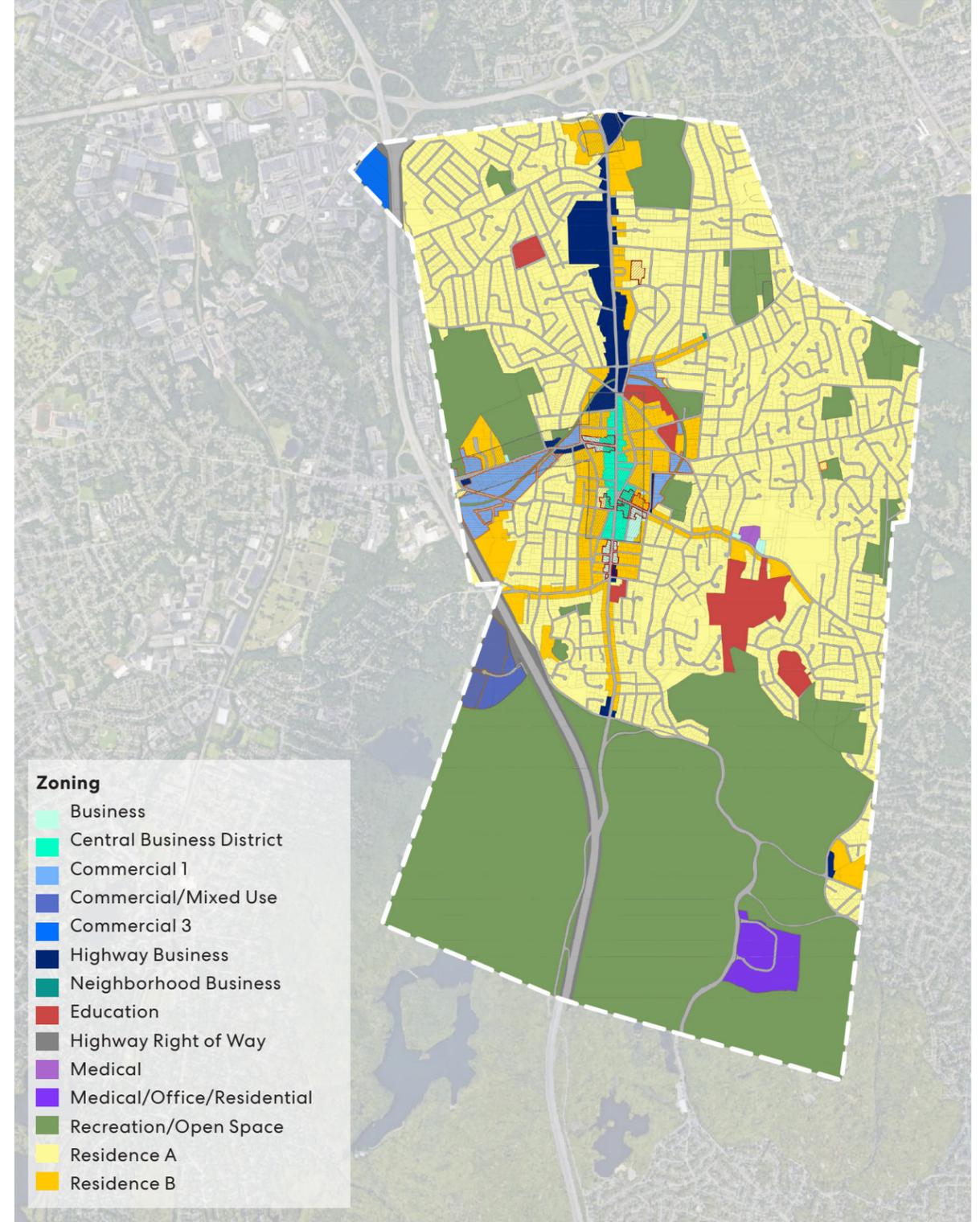
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GREEN SPACE



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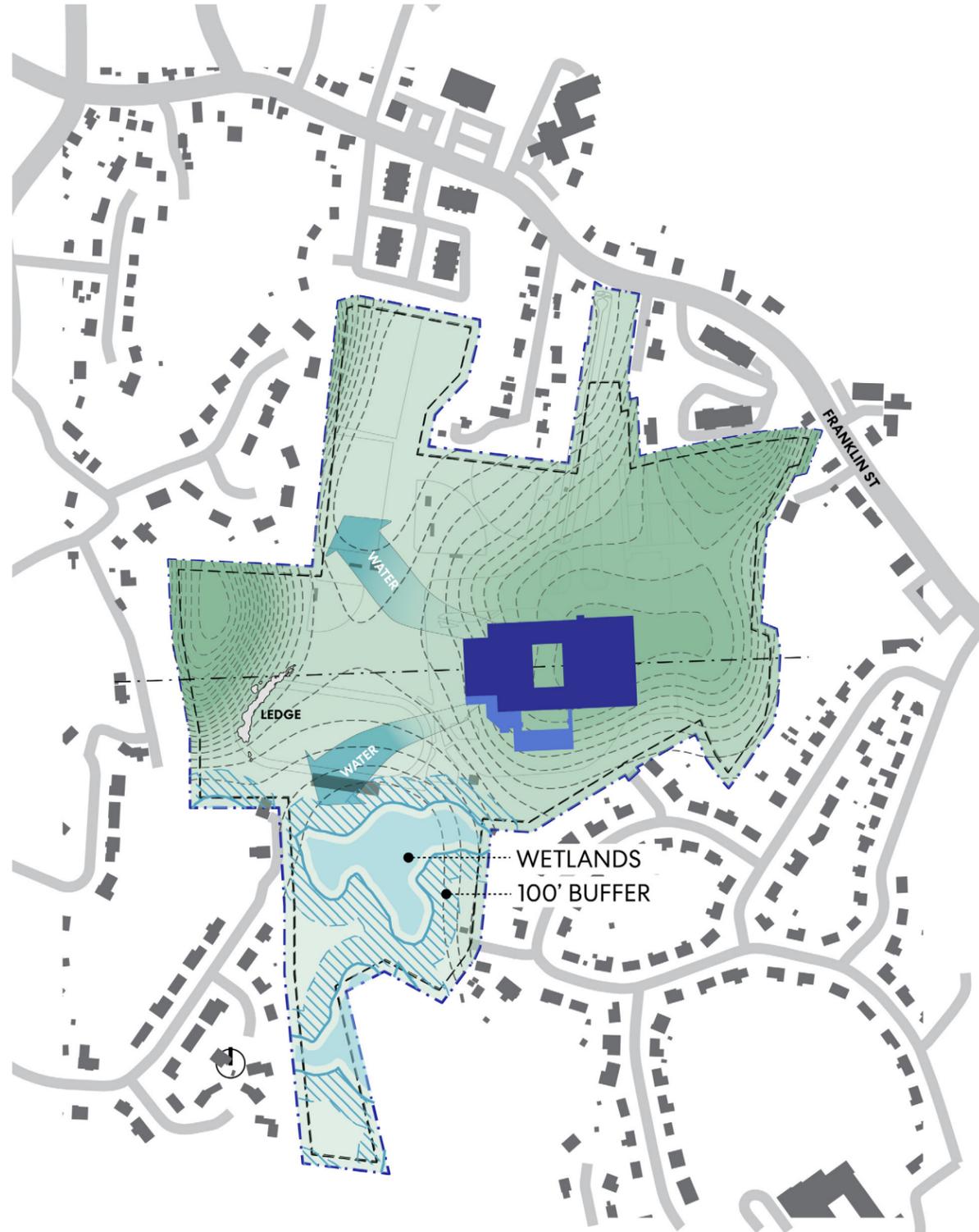
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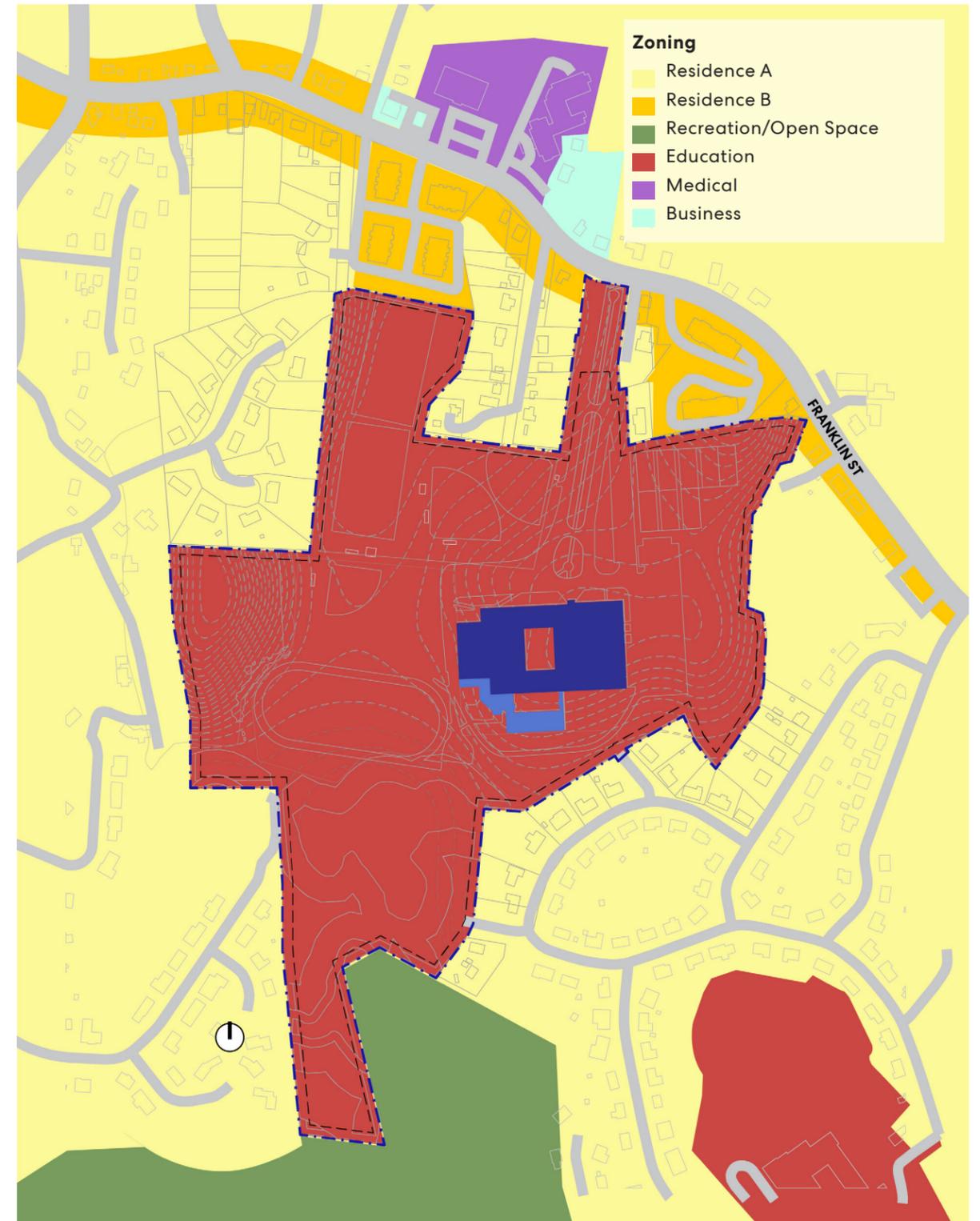
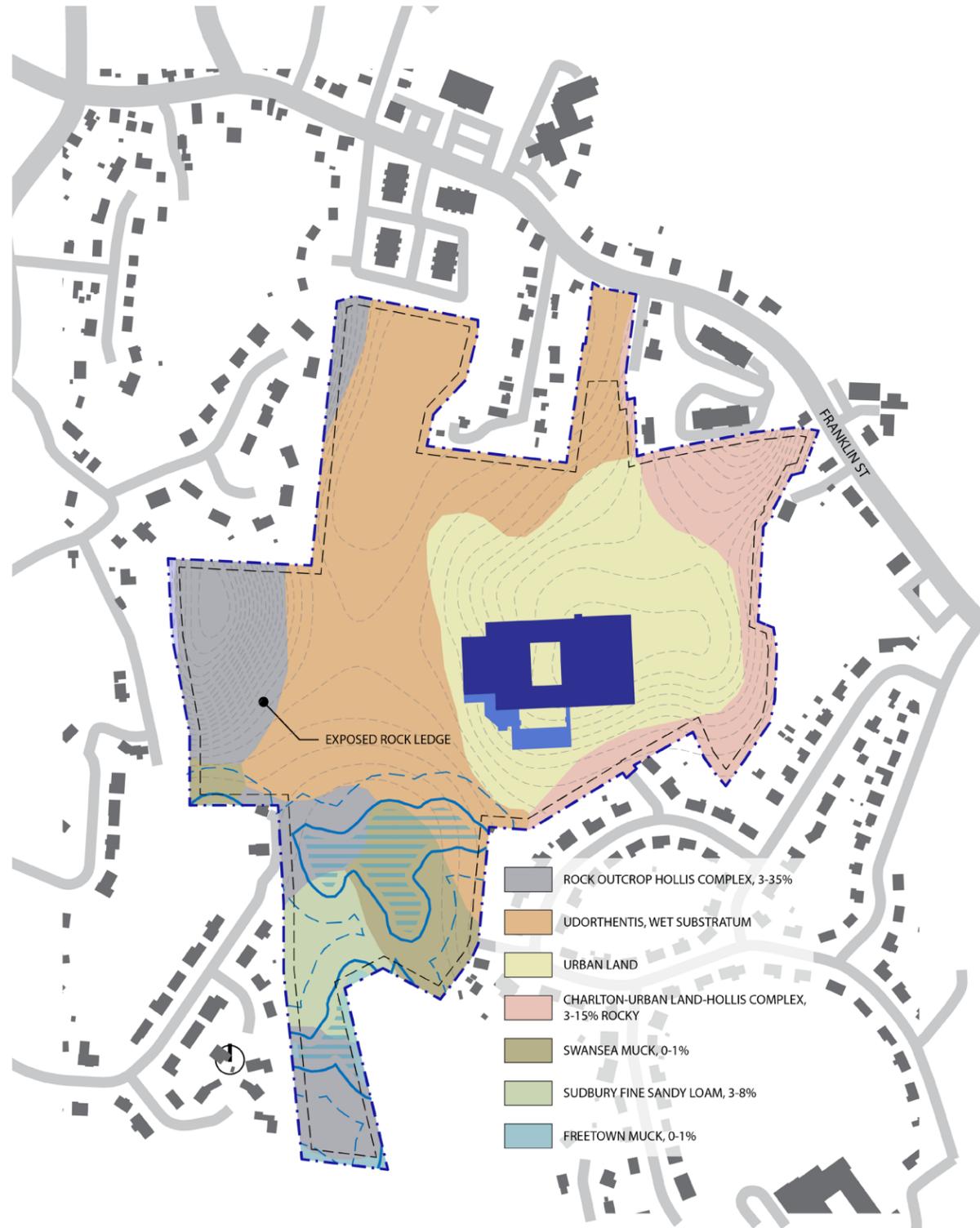


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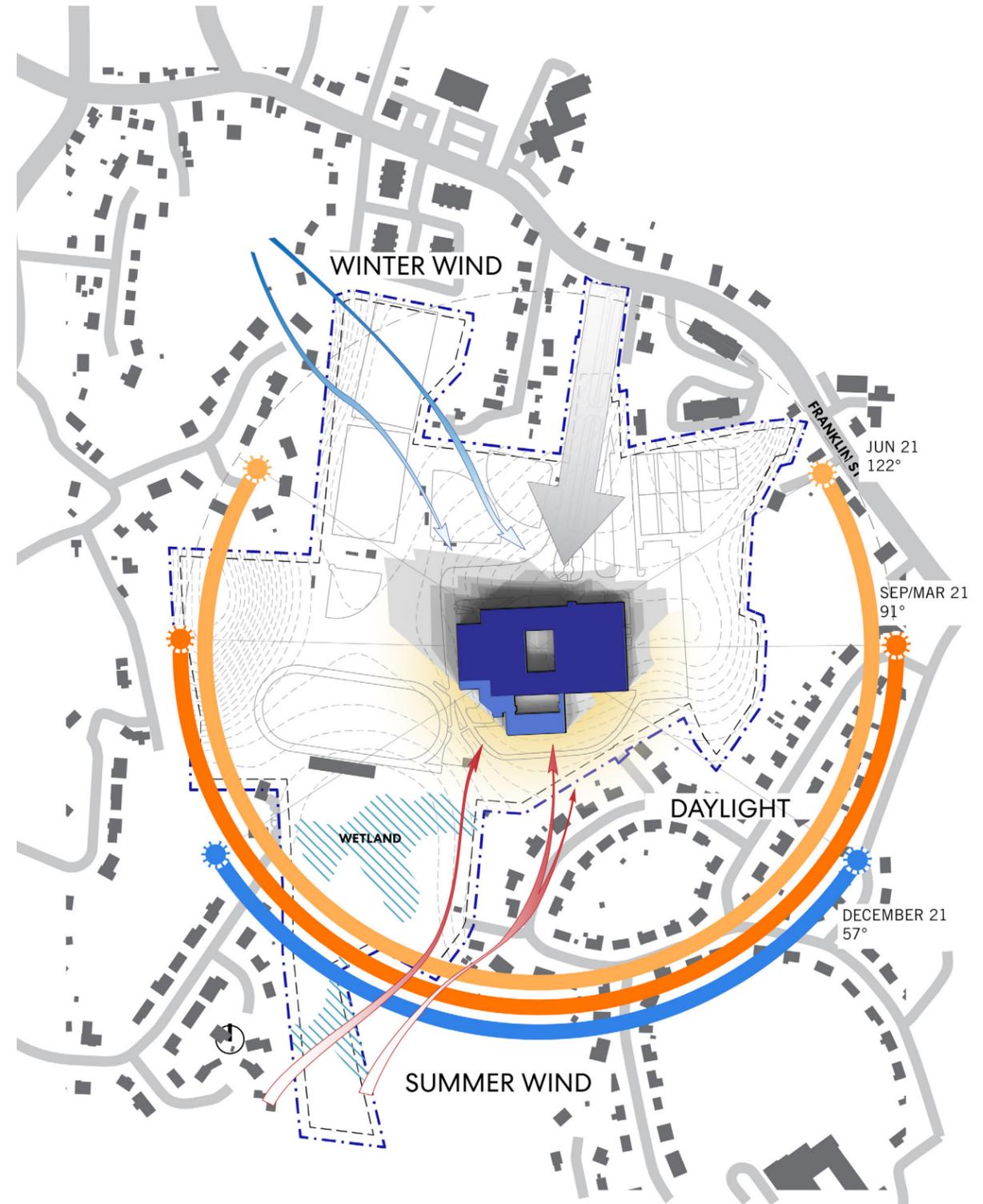
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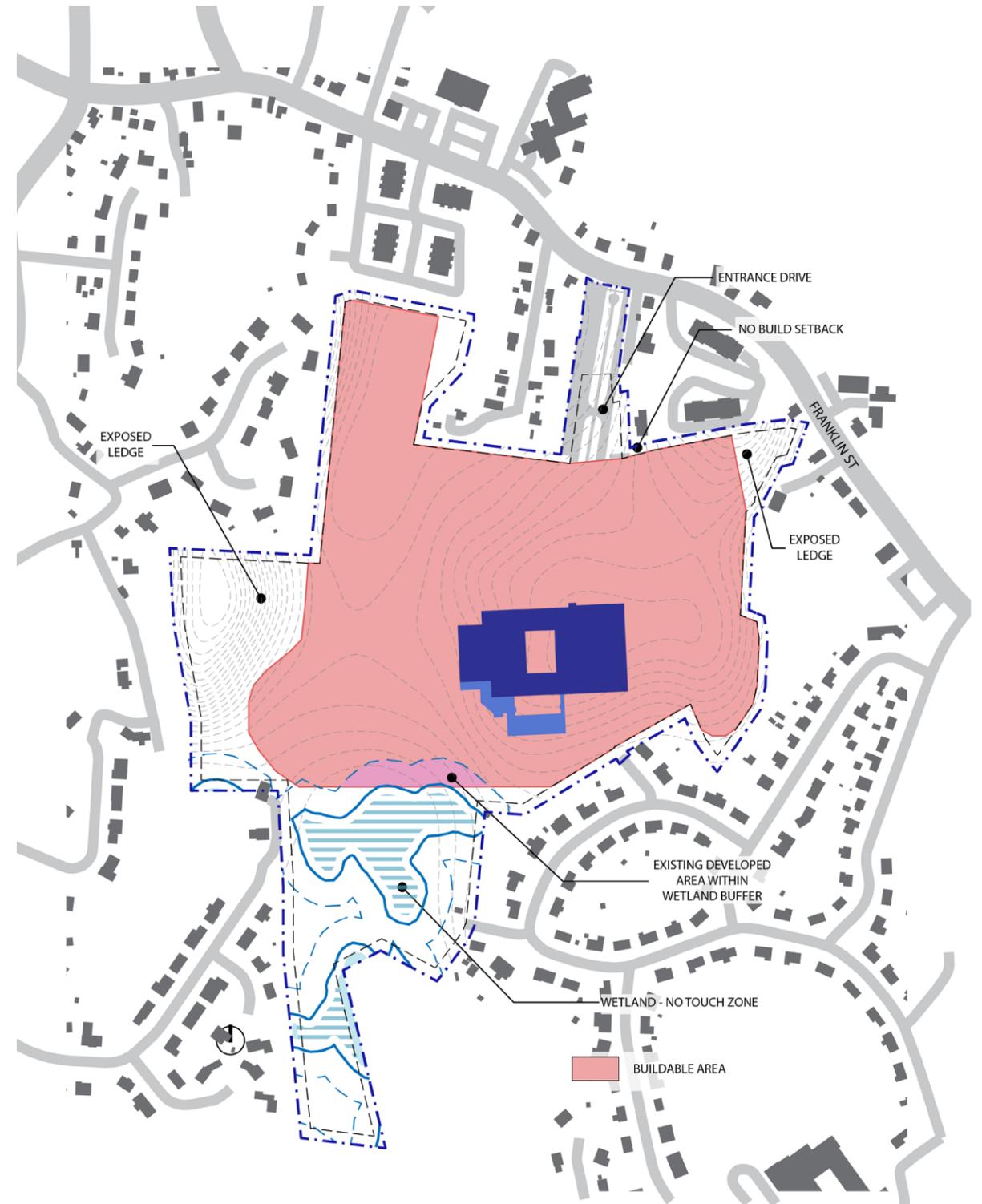
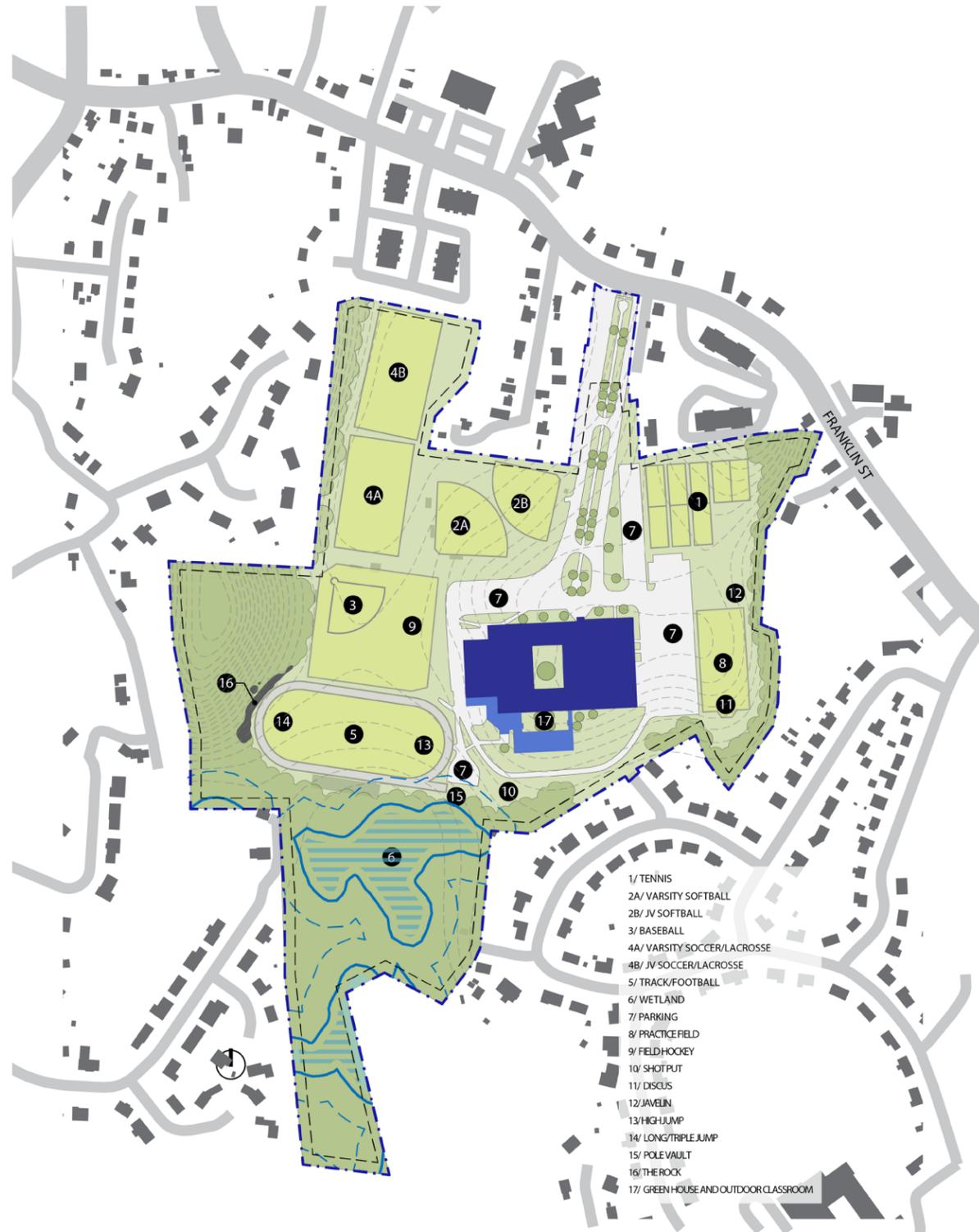
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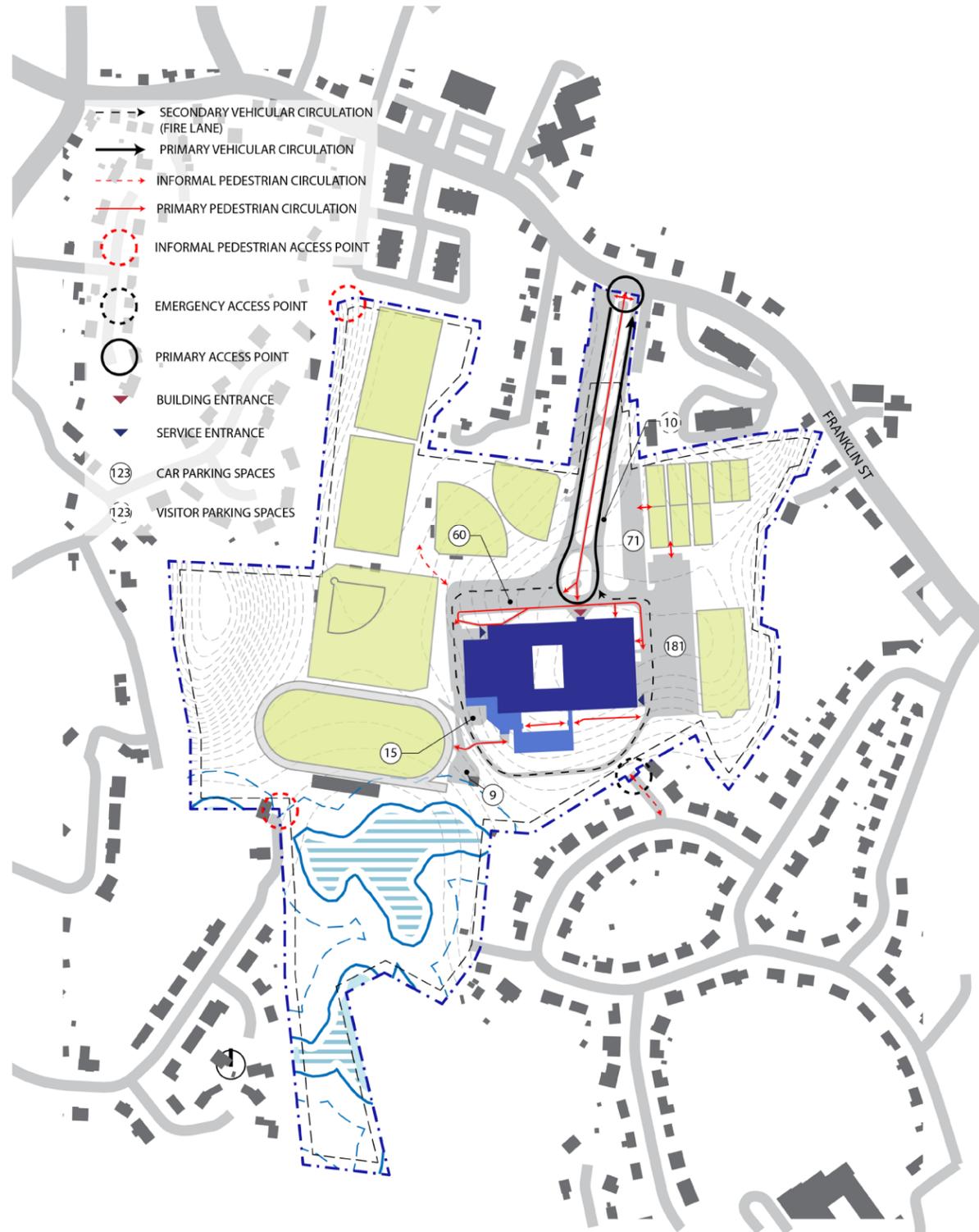
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