



# SITE DEVELOPMENT REQUIREMENTS



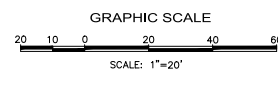
# 5.1

## EXISTING SITE PLAN

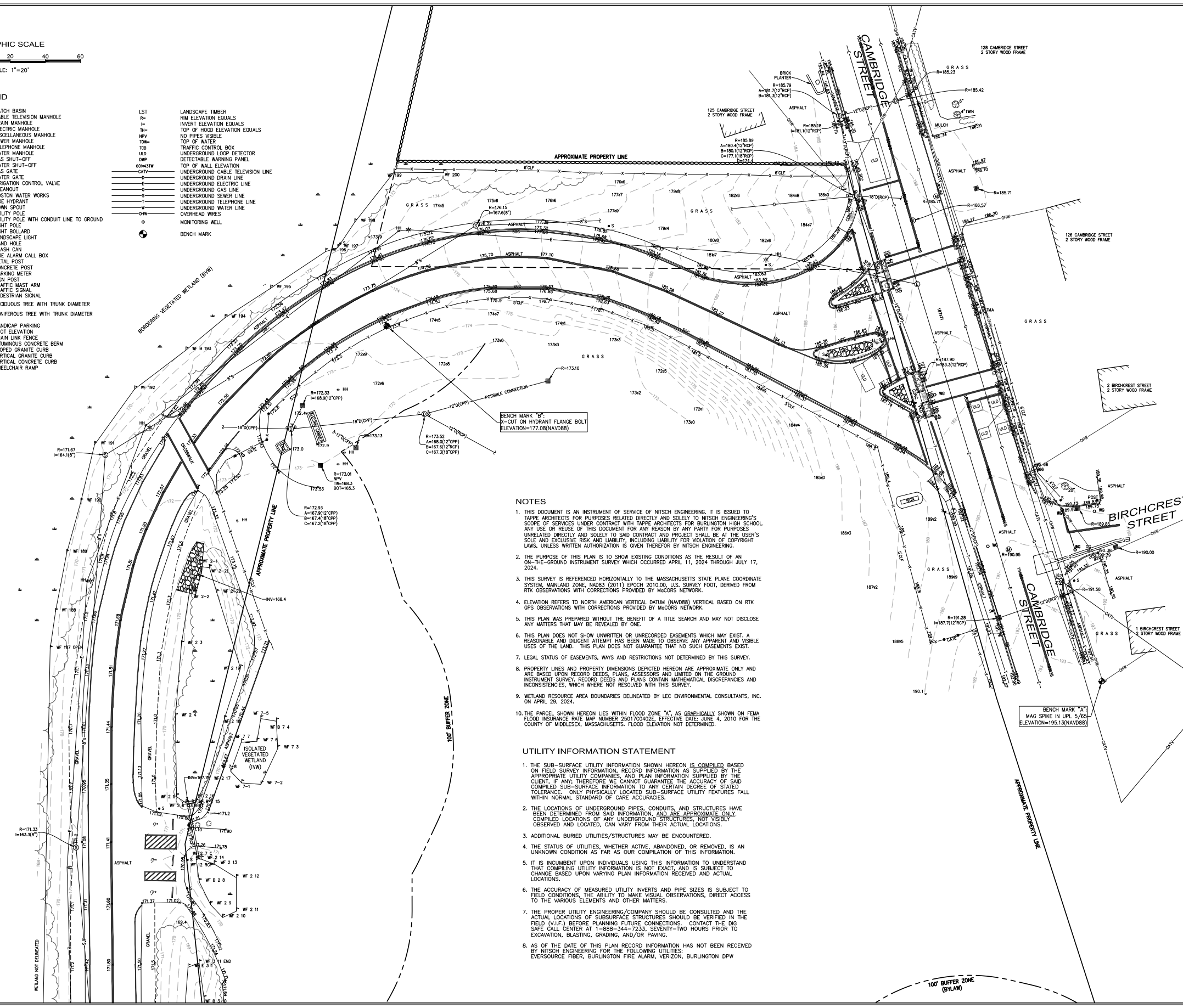
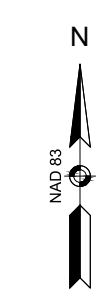




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- LEGEND**
- CATCH BASIN
  - CABLE TELEVISION MANHOLE
  - DRAIN MANHOLE
  - ELECTRIC MANHOLE
  - MISCELLANEOUS MANHOLE
  - SEWER MANHOLE
  - TELEPHONE MANHOLE
  - WATER MANHOLE
  - GAS SHUT-OFF
  - WATER SHUT-OFF
  - GAS GATE
  - WATER GATE
  - IRRIGATION CONTROL VALVE
  - CLEANOUT
  - BOSTON WATER WORKS
  - FIRE HYDRANT
  - DOWN SPOUT
  - UTILITY POLE
  - UTILITY POLE WITH CONDUIT LINE TO GROUND
  - LIGHT POLE
  - LANDSCAPE LIGHT
  - HAND HOLE
  - TRASH CAN
  - FIRE ALARM CALL BOX
  - METAL POST
  - CONCRETE POST
  - PARKING METER
  - TRAFFIC MAST ARM
  - TRAFFIC SIGNAL
  - PEDESTRIAN SIGNAL
  - DECIDUOUS TREE WITH TRUNK DIAMETER
  - CONIFEROUS TREE WITH TRUNK DIAMETER
  - HANDICAP PARKING
  - SPOT ELEVATION
  - CHAIN LINK FENCE
  - BITUMINOUS CONCRETE BERM
  - SLOPED GRANITE CURB
  - VERTICAL GRANITE CURB
  - VERTICAL CONCRETE CURB
  - WHEELCHAIR RAMP
  - LANDSCAPE TIMBER
  - RAW ELEVATION EQUALS
  - INVERT ELEVATION EQUALS
  - TOP OF HOOD ELEVATION EQUALS
  - NO PIPES VISIBLE
  - TOP OF WATER
  - TRAFFIC CONTROL BOX
  - UNDERGROUND LOOP DETECTOR
  - DETECTABLE WARNING PANEL
  - TOP OF WALL ELEVATION
  - UNDERGROUND CABLE TELEVISION LINE
  - UNDERGROUND DRAIN LINE
  - UNDERGROUND ELECTRIC LINE
  - UNDERGROUND GAS LINE
  - UNDERGROUND SEWER LINE
  - UNDERGROUND TELEPHONE LINE
  - UNDERGROUND WATER LINE
  - OVERHEAD WIRES
  - MONITORING WELL
  - BENCH MARK



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  10. THE PARCEL SHOWN HEREON LIES WITHIN FLOOD ZONE "A", AS GRAPHICALLY SHOWN ON FEMA FLOOD INSURANCE RATE MAP NUMBER 2501700402E, EFFECTIVE DATE: JUNE 4, 2010 FOR THE COUNTY OF MIDDLESEX, MASSACHUSETTS. FLOOD ELEVATION NOT DETERMINED.

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**PROGRESS**

**EXISTING CONDITIONS**  
BURLINGTON HIGH SCHOOL  
123 CAMBRIDGE STREET, BURLINGTON, MA 01803

PREPARED FOR:  
**TAPE ARCHITECTS**  
6 EDGERLY PLACE, BOSTON, MA 02116

REV.	COMMENTS	DATE

PROJECT # 15792  
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SCALE: 1"=20'  
DATE: AUGUST 12, 2024  
DES./COMP: MEV  
FIELD BOOK: 835, 836  
DRAFTED BY: CJH  
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SHEET: 1  
**EX-1**  
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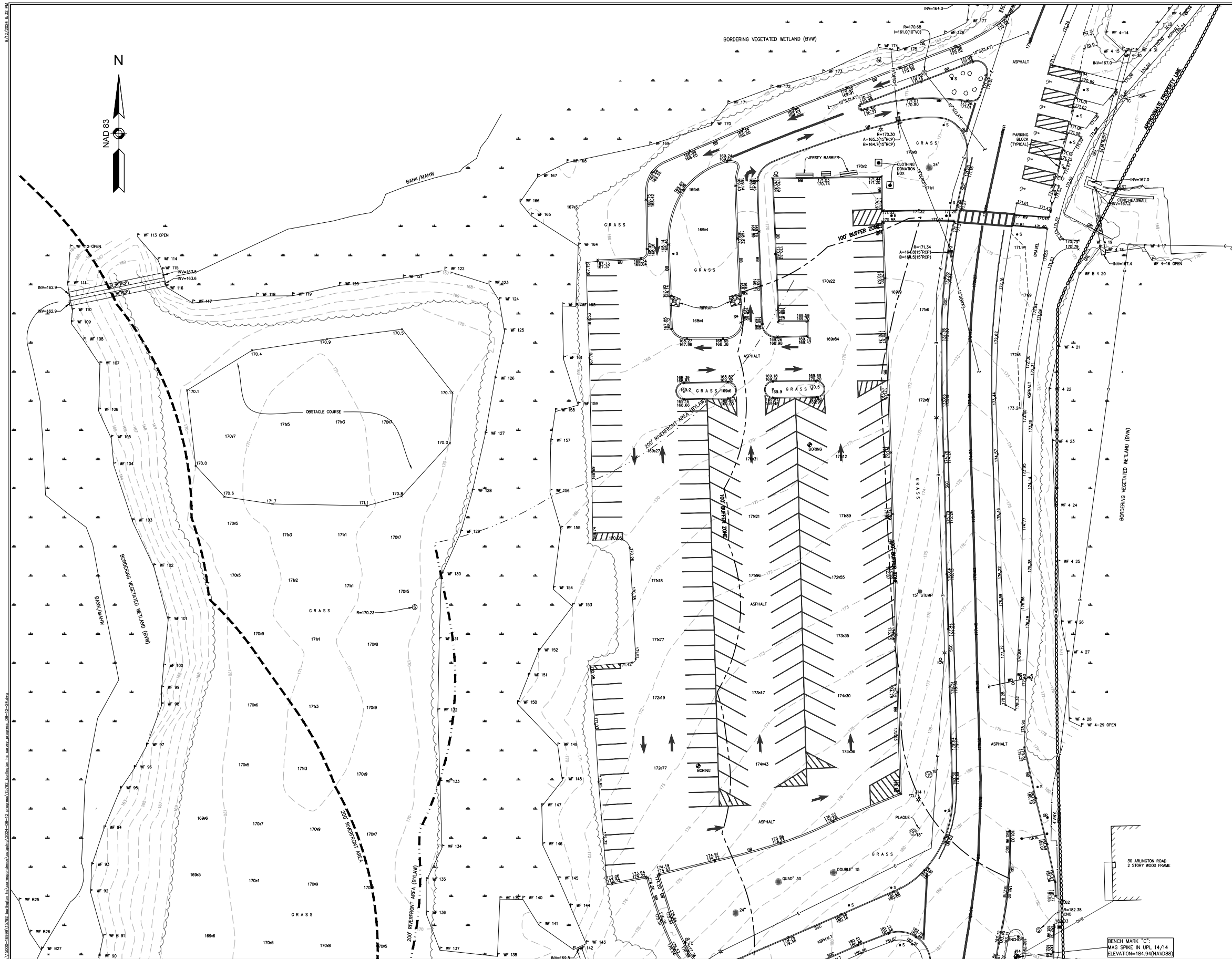
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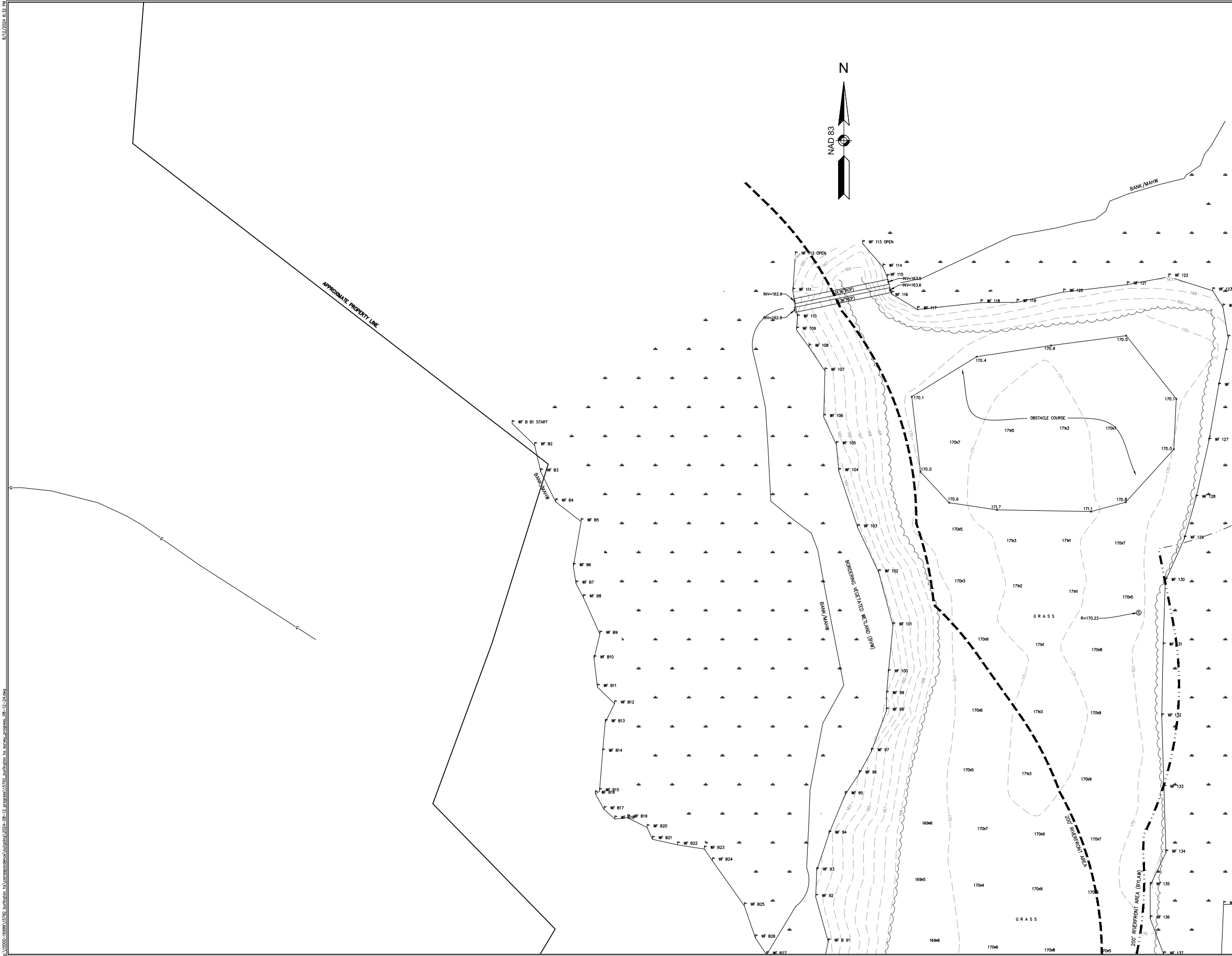
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# PROGRESS

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**TAPPE ARCHITECTS**  
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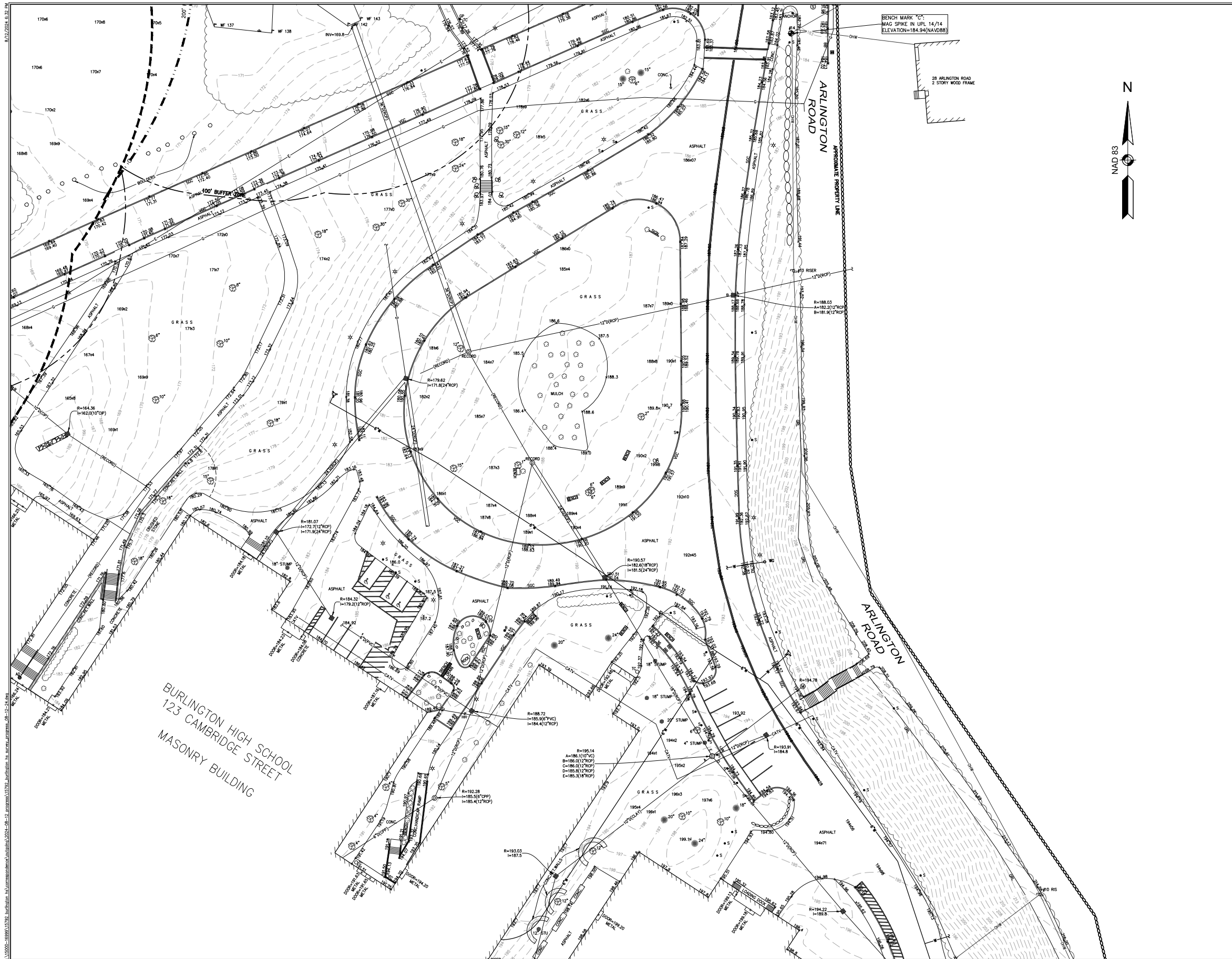
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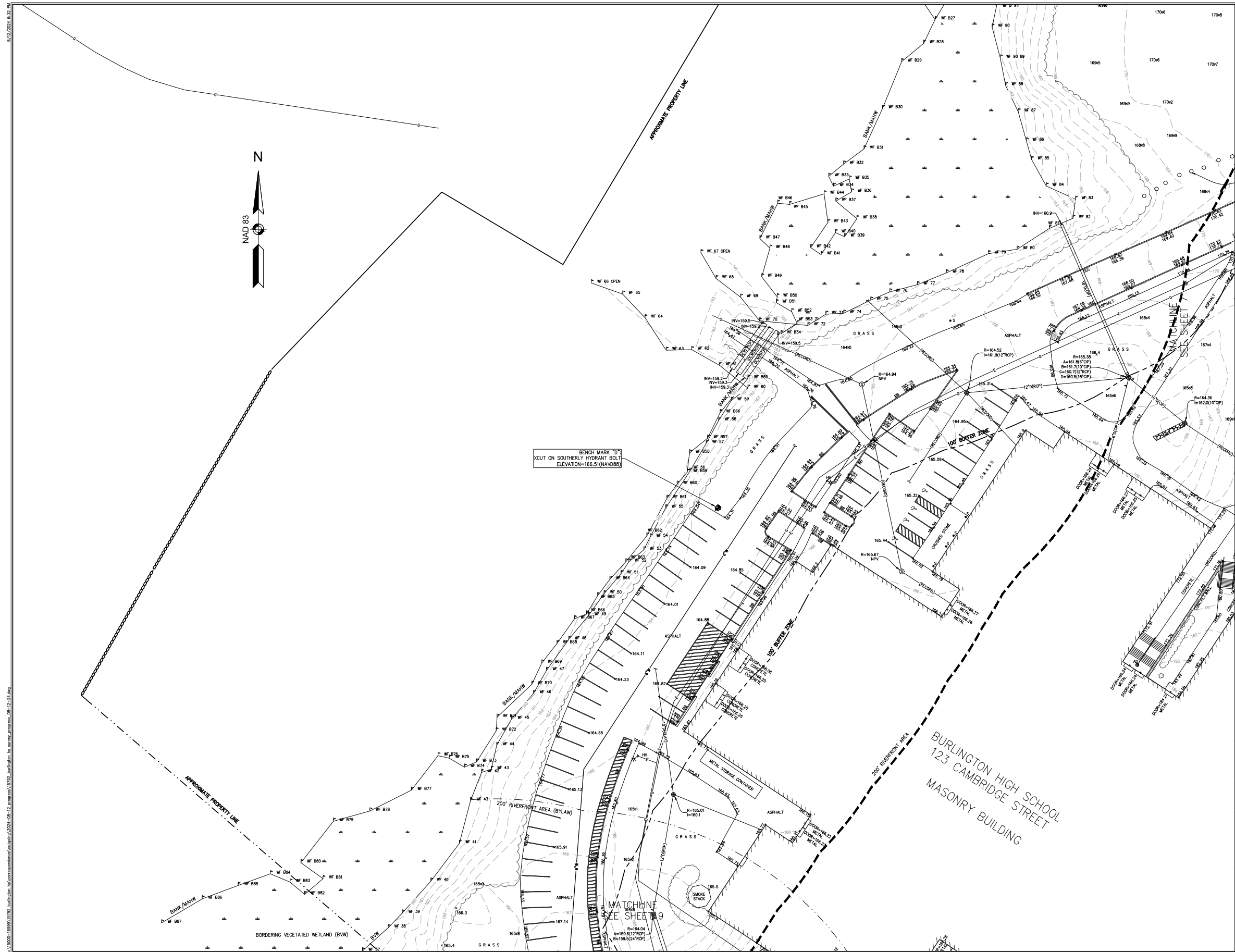
**EXISTING CONDITIONS**  
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 123 CAMBRIDGE STREET, BURLINGTON, MA 01803

PREPARED FOR:  
**TAPE ARCHITECTS**  
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REV.	COMMENTS	DATE

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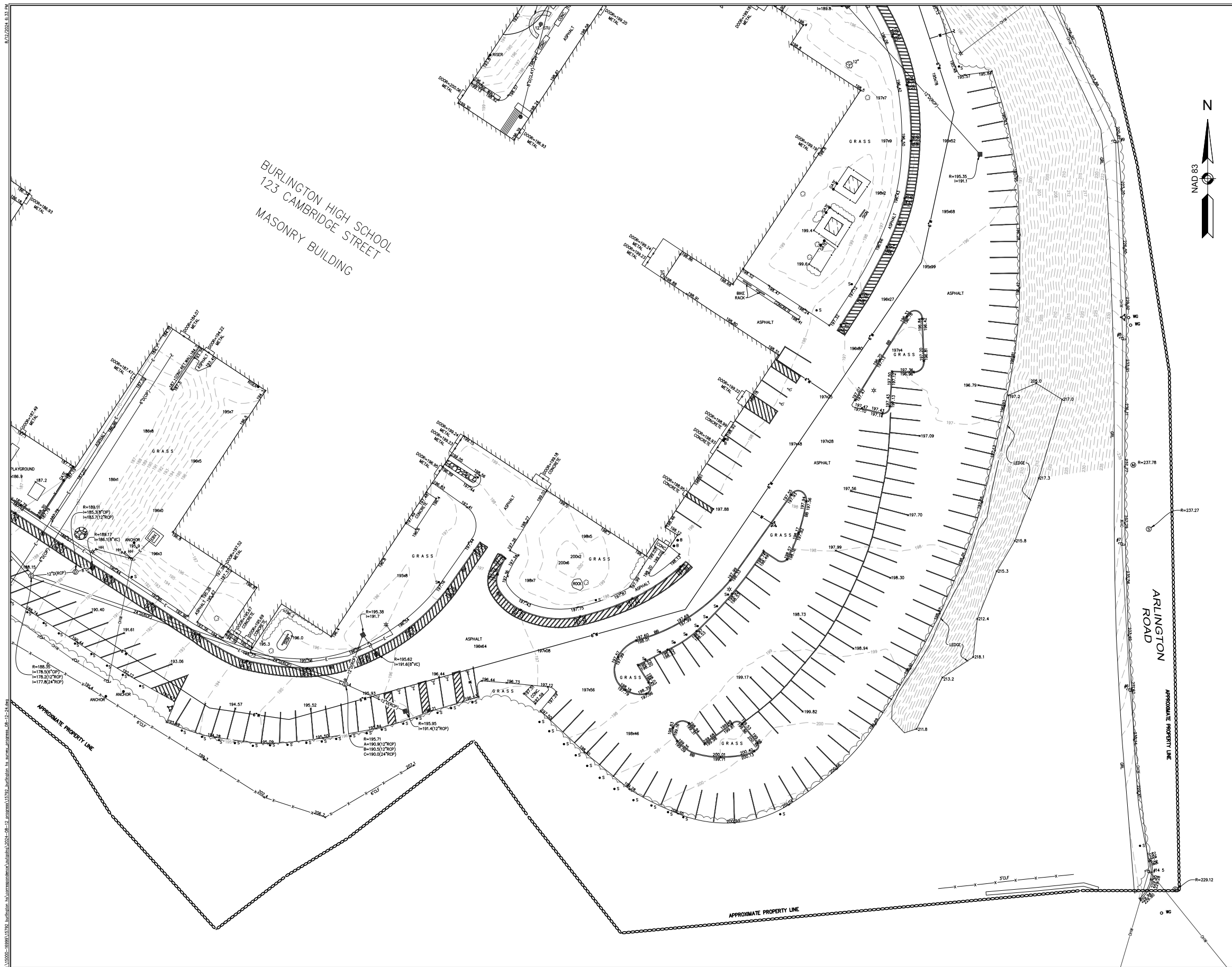
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## EX-6

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# PROGRESS

EXISTING CONDITIONS  
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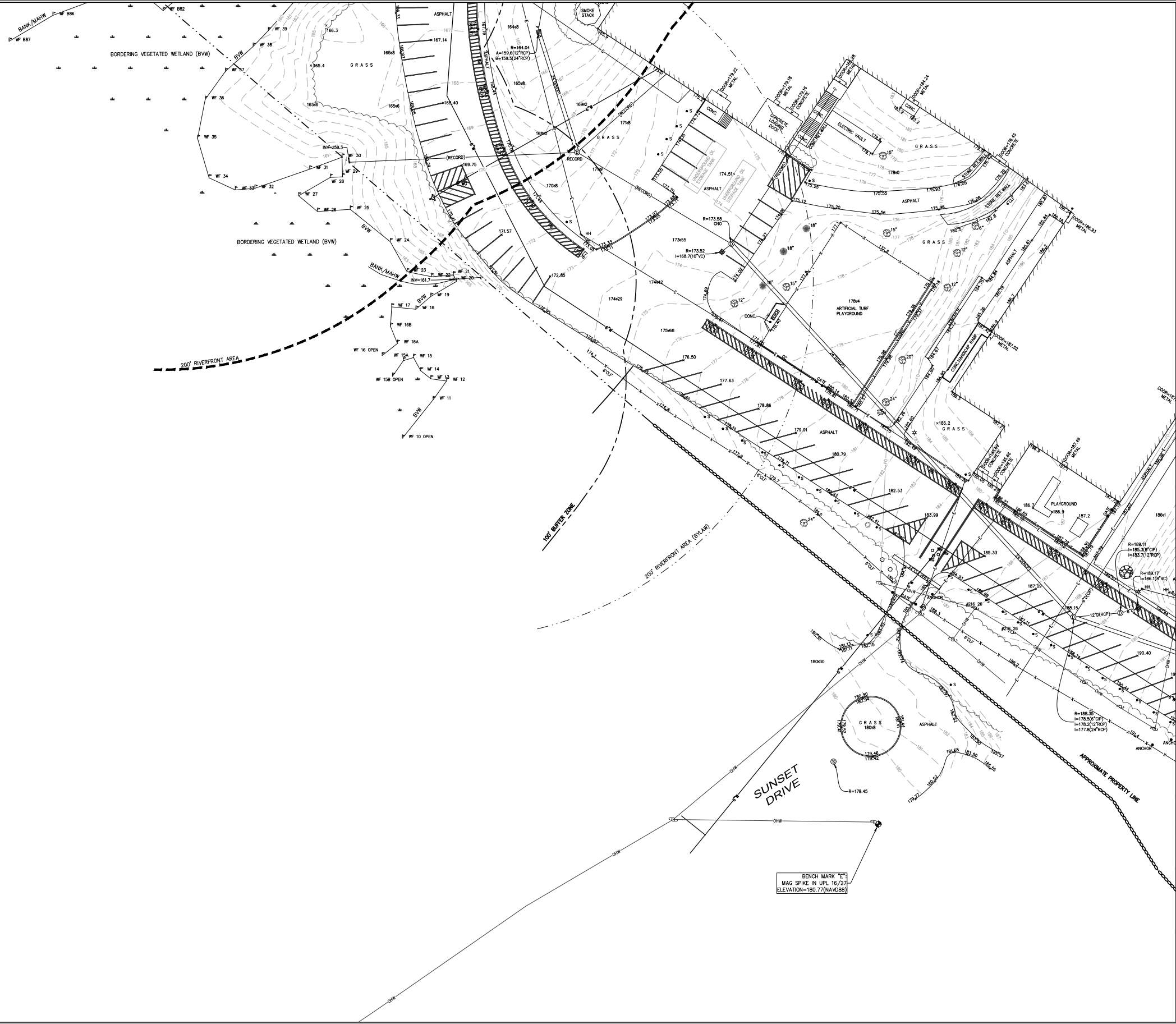
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# PROGRESS

**EXISTING CONDITIONS**  
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PREPARED FOR  
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4 EDGERLY PLACE, BOSTON, MA 02116

REV.	COMMENTS	DATE

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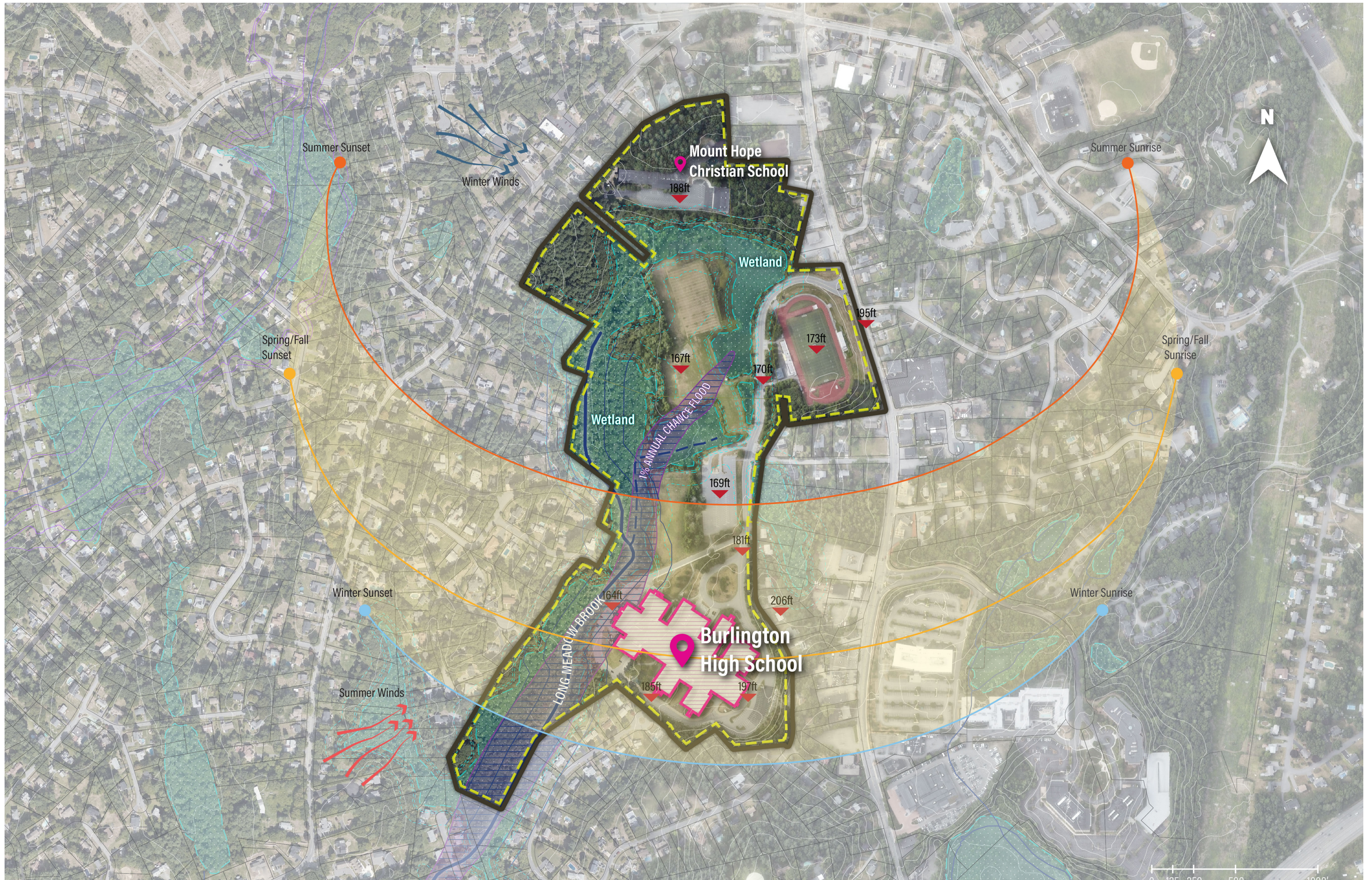
OF 8 REV.

# 5.2

## SITE ANALYSIS PLAN











# 5.3

## SITE ANALYSIS







LANDSCAPE  
EXISTING CONDITIONS REPORT  
MAY 28, 2024



**WARNER LARSON**  
LANDSCAPE ARCHITECTS

May 28, 2024

**Burlington High School, Burlington, MA**  
Landscape Existing Conditions Report & Site Development Requirements

**Evaluation of Existing Conditions**

**Property Description**

Parcel ID: 35-85-0  
Parcel Size: 42.04 acre (10.8 acres developable)  
Zoning District: One-family dwelling  
Address: 123 Cambridge Street, Burlington, MA

**Site Configuration**

The existing 42 acres Burlington High School site is located close to Burlington Town Commons which is 0.7 mile away which makes it within walking distance. The high school is bordered by residential properties to the east, south, west and northwest. A separate private school is being leased on the north side of the school campus. The mostly two-story existing school building is located on the southern half of the site. The northern half of the site contains the sports fields. The west of the site contains wooded areas with wetlands and a brook stream.

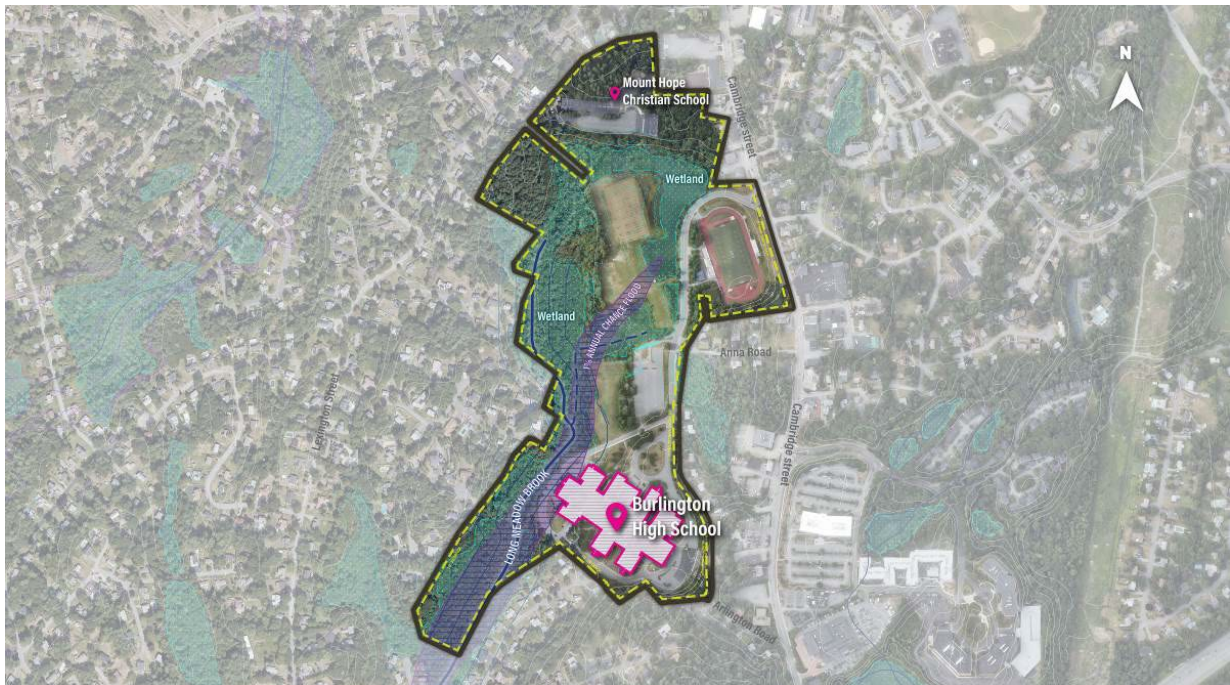


### Physical Conditions Summary

The existing site has lot of topographical elevation changes with the south east corner being the highest and the grade sloping downwards east to west. The main entrance is off Cambridge Street for both buses and cars and the driveway goes past sports fields before reaching the main parking area and the drop-off. There is an driveway loop all around the school that serves emergency access and 2 secondary parking lots. The driveway slopes upwards as you approach the school.

There are pedestrian connection paths on both west, south and east side of the school through the residential neighborhoods.

The wetlands border the west and northwest part of the campus as shown in the illustrative graphic below.



### 3.1.5 Site Development Requirements

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

Currently a bollard and landscape island serve as a barrier to the main entrance plazas. The fencing exists by the stadium field and the rest of the fields do not have any fencing. There are some fieldstones retaining walls holding steep slope grades at other entrances as shown below.



### Site Access and Circulation

The main vehicular circulation is from one entrance off Cambridge Street as shown below which also as a sidewalk on one providing pedestrian access.



Other pedestrian access is provided to the site from surrounding neighborhoods via narrow asphalt pathways from Valley Circle, Sunset Drive and Anna Road as shown below.



The service areas and the loading dock is accessed from the back driveway loop as shown below.



## Parking

There are about “TBD” parking spaces at the existing high school.

The Town’s Zoning By-Laws require public educational institutions for grade 8 and above to provide 4 parking spaces for each classroom and additionally for the floor area within the building not occupied by classroom space. There is also provision for places of assembly which require one space per 3 fixed seats.

Zoning requires 9’ x 18’ parking spaces with 24’ wide aisles. The existing parking space and aisle dimensions vary, but in general are less than required by zoning. The 20’ depth is larger than many communities and will require substantially more pavement to accommodate the same amount of parking. It may be advisable to consider seeking a variance for more typical 18’ deep parking spaces, which we have found acceptable in other communities with similar regulations when a 2-foot overhang is provided at the curb line.

One loading bay is required per 40,000 SF of gross floor area for institutional use. Loading bays are required to be 12’x 65’.

### Paving and Curbing

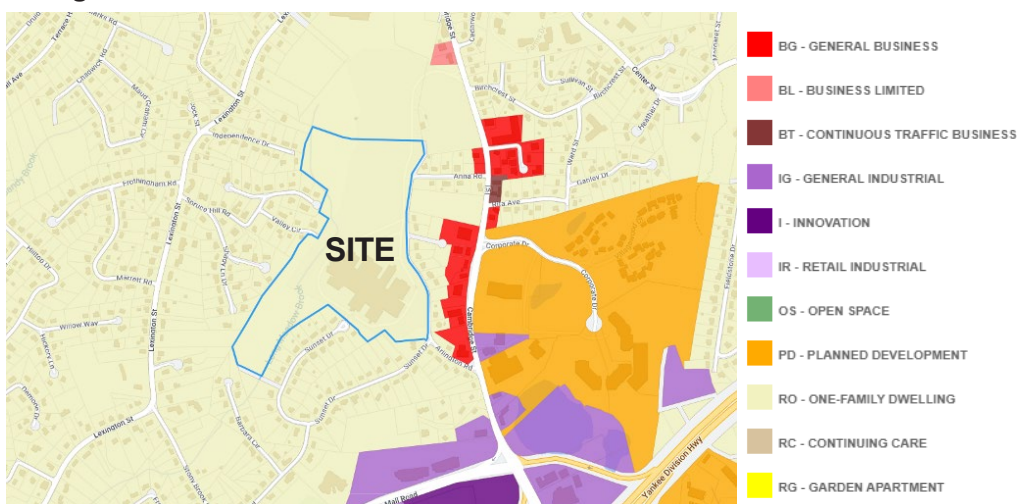
The roadways and the sidewalks are all asphalt with asphalt berms. Asphalt paving of vehicular driveways and parking is typical. Walkway paving is primarily asphalt with some concrete and unit pavers at the main entrance. The existing driveway is in poor condition with asphalt patching as shown below.



### 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



The site is located in the One-family dwelling zoning district with the following dimensional requirements:



TABLE OF DIMENSIONAL AND DENSITY REGULATIONS

Minimum Lot Area (ft.)	20,000 SF
Minimum Lot Width (ft.)	20'
<u>Minimum Yard Size</u>	
Front (ft.)	25'
Side (ft.)	15'
Rear (ft.)	15'
Maximum Bldg Height (ft.)	30'
Maximum Stories (no.)	2.5

Adjacent properties to the east, west and south are zoned residential B and attention should be paid to any specific buffer or screening requirements.

In addition to the Mass DEP 25' wetland setback, the Town Conservation Commission identifies a 50' no-build wetland setback which restricts most new development. Any work within the 100' wetland jurisdictional buffer will require permitting with the Burlington Conservation Commission. Refer to the separate permitting narrative by Nitsch Engineering.

**Article VII Additional Landscaping Requirements**

The Zoning By-Law should be referenced for more detailed requirements. Several applicable landscape standards are summarized below:

- Screening or landscape buffer for residential properties.
- Visual relief and shade in parking lots
- Landscape plan to scale shall be provided to planning board for approval.

**Accessibility**

The site has lot of topographical changes with many areas not meeting accessibility from entrance doors to courtyard uses as shown below. There are accessible walkways and ramps at the main entrance and to the fields.



### **Emergency Vehicle Access**

Emergency access is provided to the building from the main driveway but also other gated access points that can be used by emergency vehicles as shown below.

### **Safety and Security Requirements**

Pedestrian access should be maintained and improved with accessible stable pathways. The design of the site and landscape is an important component to providing a safe educational environment and ability for building occupants to egress safely during emergencies.

Strategies include 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.

### **Athletic Facilities**

The existing track and field stadium was recently renovated and is in good condition as shown below. It has all the necessary infrastructure from fencing, scoreboard, sports lighting, bleachers and concession.



In addition, there is a football practice field with shotput and javelin. These fields were observed to have drainage issues. There is also an adventure course as shown below.



### Outdoor Educational Spaces

There is an aviary on site used for educational purposes. There are a couple of courtyard spaces with picnic tables and benches.



**Pre-K Program**

There is a Pre-K program on site with 2 separate playground spaces with synthetic and rubber safety surfacing and play structures that appear to be in good condition as shown below.



**Landscape Character** A wooded conservation area and wetland exists west of the school and some to the southeast corner which provide a natural setting within the woods. The rest of the site campus is primarily lawn with very few shade trees. There is some minimal ornamental landscaping by the front. There is a rock outcrop by the lower parking lot that has boulders painted by students.



Zoning Narrative and Landscape Existing Conditions Report  
Burlington High School  
Burlington, Massachusetts

May 28, 2024  
Page 11 of 11



End of Report

# 5.4

## SITE INFRASTRUCTURE & PERMITTING ANALYSIS









CIVIL  
EXISTING CONDITIONS REPORT  
MAY 28, 2024

**Burlington High School**  
**Burlington, Massachusetts**  
**Nitsch Project #15792**

**Existing Site Utility Infrastructure Narrative**

May 28, 2024

**Project Description:**

The Town of Burlington is evaluating a new High School (either constructing a new building and/or completing an addition/renovation to the existing High School building located on the existing site). Nitsch Engineering has reviewed existing site documentation, MassGIS information, Town of Burlington regulations, and performed a site visit to observe the existing school site. This narrative outlines the existing utility infrastructure that serves the school site and highlights any concerns or issues that will need to be considered if the site is redeveloped.



Figure 1 – Burlington High School

**Water Systems:**

The existing school’s water service size and location needs to be confirmed with a survey, but some information can be assumed using record plans from the Town and from the site walk. Per these record plans, there appears to be a water line which runs from the west side of the school building, around the south, and then up the east side, where a branch connection appears to connect into Arlington Road. This water line feeds a 4-inch building service at the east side of the school, a 6-inch building service on the south side of the school, as well as several hydrants around the site. Four (4) hydrants were located on the record plans.

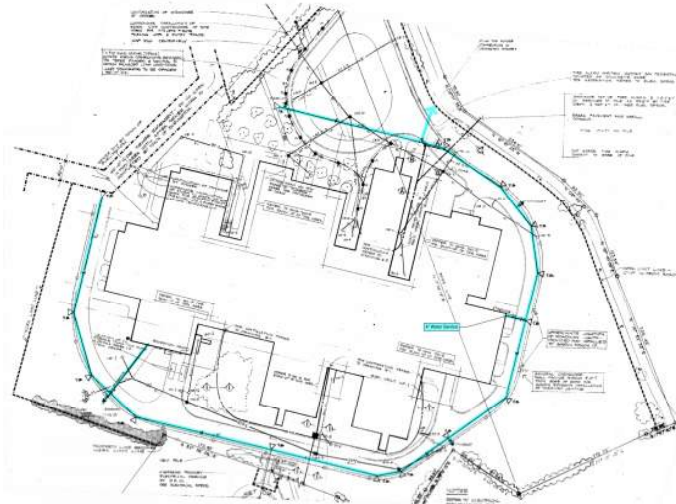


Figure 2 – 1971 Plans, Water Highlighted

During the site walkthrough, water structures were observed which provide additional insight and/or confirmation for locating the water line prior to a survey being conducted. There are a total of eight hydrants observed around the existing school building site, with an additional hydrant at the entrance to the site at the intersection with Cambridge Street. Existing and proposed hydrants will be reviewed for compliance with the Burlington Fire Chief during the design process. A hydrant flow test will need to be performed to confirm pressures and flow volume at the school site.



Figure 3: Hydrant near Field



Figure 4: Hydrant on Access Drive



Figure 5: Hydrant Northeast of Building



Figure 6: Hydrant South of Building



Figure 7: Hydrant Southwest of Building



Figure 8: Hydrant West of Building



Figure 9: Hydrant Southeast of the Building



Figure 10: Hydrant at Turnaround

New construction at this site may require upgrades to the existing water service to ensure the reliability of the proposed project's water supply needs. Water to the existing Burlington school building should be maintained during any construction activities.

It is not known at this time if there is an existing irrigation system servicing the school site or the athletic fields. Irrigation was not shown on the record plans or visible during Nitsch's site visit. If there are irrigation lines for the athletic fields, they should be protected and maintained as part of any redevelopment of the school site.

**Sanitary Sewer:**

The school's sanitary sewer system will need to be confirmed from a survey, but the record plans indicate a sewer service exiting the site on the west side of the building, where it continues northwest towards Valley Circle.

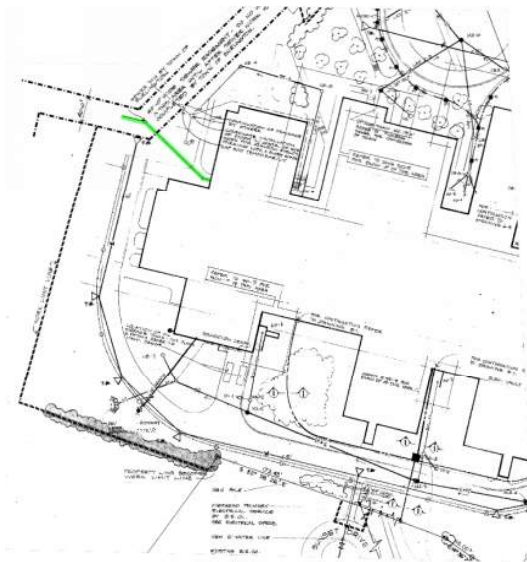


Figure 11 – 1971 Plans, Sewer Highlighted

Two sewer manholes were observed on the site, southwest of the school building and along the west side of the building near the pathway to Valley Circle. The second sewer manhole indicates that there may have been changes or additions to the sewer as designed in the 1971 plans; however the locations seem to confirm that sewer leaving the site likely connects into infrastructure in Valley Circle. There is no evidence of an external grease trap, but a final survey would confirm this as well as the other assumptions based on the town records mentioned above.



Figures 12 and 13 - Sewer Manholes on the Southwest and West Side of the Building

**Site Drainage:**

In general, the existing site topography drains towards the west, to the wetland and Long Meadow Brook. The site drainage appears to be a combination of closed drainage and sheet flow. Record drawings indicate 3 separate drainage systems with outfalls around the existing school building. This record plan, however, does not include the parking to the southeast of the school building, or the driveway leading to the school, both of which had visible drainage infrastructure during the site walk.

The first of the outfalls identified by the record plans are a headwall discharge at the southwest of the site which picks up drainage from the south side of the building and the foundation drain for the building. The second outfall point is west of the building, where the plan indicates that drainage piping continues northwest, presumably to Valley Circle. This picks up some catch basins along the west side of the building as well as a roof drainage connection. Lastly, the third location is assumed to be a piped discharge to the wetland. The record plans indicate drainage picked up by the catch basins in the front of the site continuing northwest, under the grass field, in that direction.

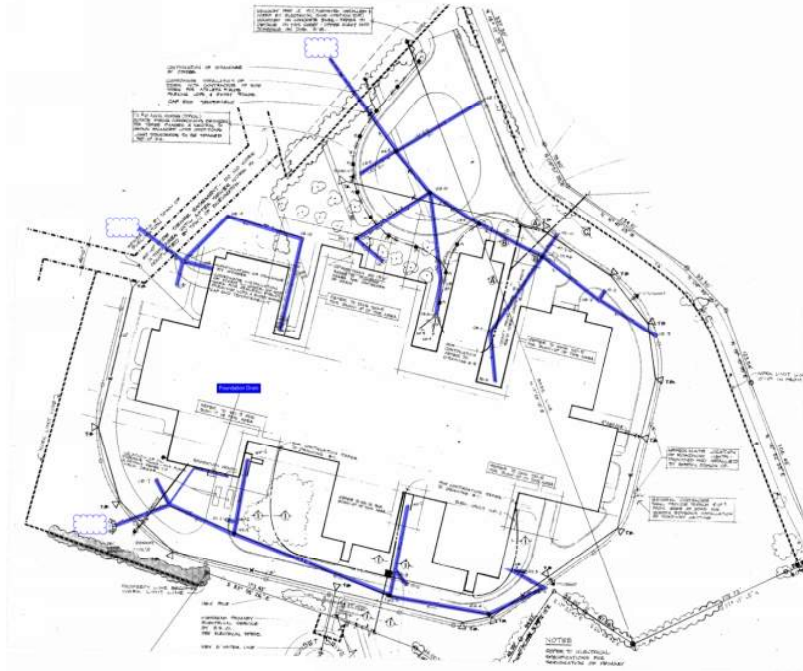


Figure 14 – 1971 Utility Plan, Drainage

Several areas of ponding concern were brought up by the school facilities during the site walk. It is unclear currently whether the ponding is from surface drainage or from groundwater; however, the amount of visible ledge suggests the latter. Further geotechnical investigations will need to occur to understand the full extent of site constraints for stormwater.



Figure 15 – West Site Ponding



Figure 16 – Ponding at SW



Figure 17 – Ponding at Parking Lot to South



Figure 18 – Ponding at Northern Parking Lot

The parking lot closest to the school had significant ledge outcrop, and a trickling stream of water was coming from the hill into the drainage system. Pavement patching and location of water suggested that groundwater might be pushing out of the pavement.



Figure 19 – Ledge Outcrop



Figure 20 – Ponding at South Parking Lot





Figure 21 – Ponding at South Parking Lot

The parking lot to the north of the school drains mostly by sheet flow. A visible swale was present along the wetland side of the lot. Additionally, there were two stone areas at one of the parking islands which are potentially drywells.



Figure 22 and 23 – Swale



Figure 24 – Stone Drywell or Inlet

The current stormwater management system does not appear to provide peak rate mitigation, infiltration or sufficient water quality treatment.

Redevelopment of the school site will require upgrading the existing stormwater management and installing new stormwater management infrastructure to ensure compliance with current MassDEP standards and MS4 requirements. This will require reductions in both stormwater discharge rates for the 2-year, 10-year, 25-year, and 100-year 24-hour rainfall events and water quality treatment mitigation prior to discharge of stormwater to the surrounding wetlands.

Required stormwater mitigation can be achieved by directing runoff to grassed swales, porous pavement, and biofiltration BMPs. A retention/detention element will be required as part of the proposed stormwater design. Due to the lack of closed drainage system in some portions of the site, some mitigation will need to happen with surface basins and/or porous surfaces. Water quality will also need to be addressed as part of the stormwater design.

**Gas/Oil:**

The record plans indicate underground oil tanks at the southwest corner of the building. It is not clear whether these tanks still exist or are record. Additionally, national grid markings on the sidewalk and pavement were observed during the site walk.



Figure 20, 21, 22 – Gas Line Dig Safe Markings in Courtyard and Parking Lot

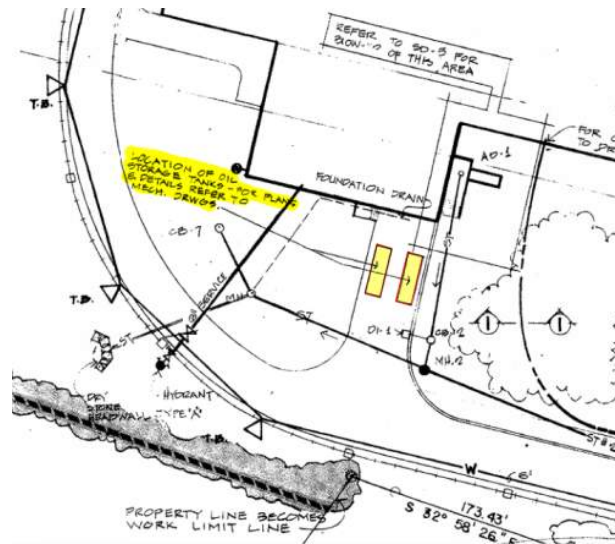


Figure 23 – 1971 Utility Plan, Underground Oil Tanks

Refer to the Mechanical/Electrical/Plumbing engineer’s narrative for more information.

**Other Utilities:**

Site electrical appears to come from overhead wires along the west side of the building. Various site lighting was observed throughout the site and may need updates depending on the proposed site plans. Additionally at the west side of the building, there were several trailers and what appears to be a smokestack tower off the side of the building.



Figure 24, 25, 26 – Site Lighting, Overhead Wires and Electric Manhole

Refer to the Mechanical/Electrical/Plumbing engineer’s narrative for more information.

**Burlington High School**  
**Burlington, Massachusetts**  
 Nitsch Project #15792

**Permitting Narrative**  
 August 23, 2024

**Project Description:**

The Town of Burlington is proposing to construct a new High School building and/or complete an addition/renovation to the existing School building located on the existing Burlington High School site. Nitsch Engineering has reviewed existing site documentation, Mass GIS information, and performed a site visit to observe the existing school site. This narrative outlines the anticipated environmental permitting and other approvals that will likely be needed to redevelop the project site.

**Floodplain:**

Based on the FEMA Flood Insurance Rate Maps for Burlington (Community Panel No. 25017C0402E and 25017C0289E), the Site is located within the special flood hazard area, Zone A without base flood elevation.

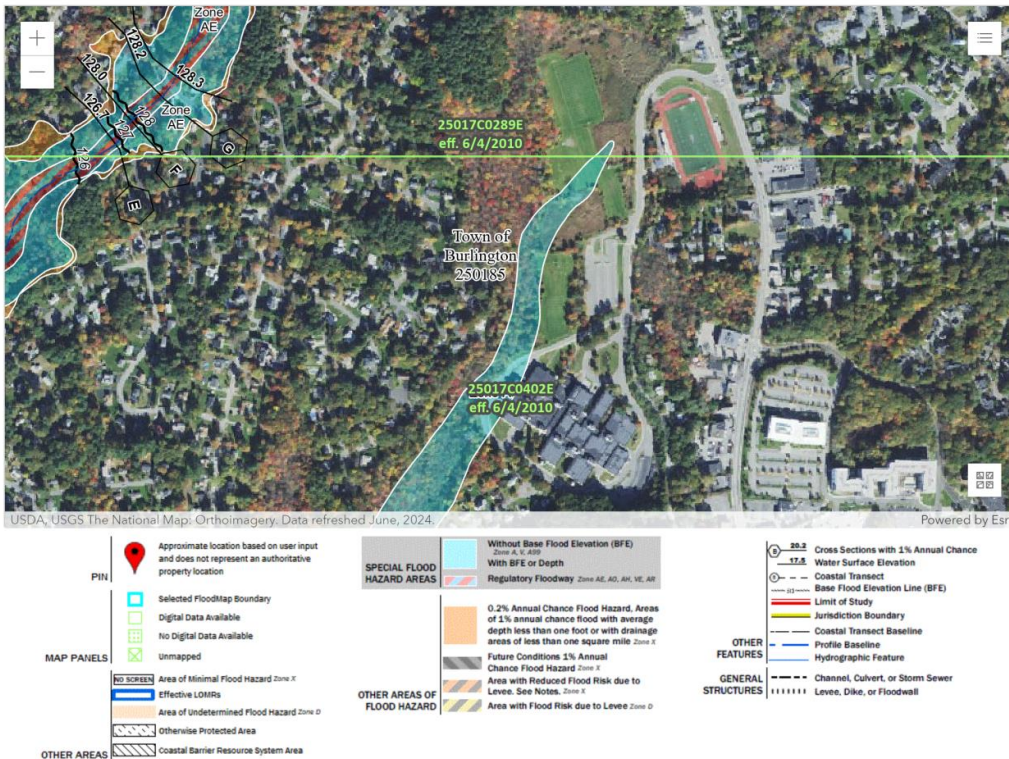


Figure 1 - FEMA Flood Insurance Map

Any work within the Flood Zones will require permitting through the Burlington Conservation Commission.

**Wetlands Protection Act (310 CMR 10.00) and Town of Burlington Wetland Bylaw:**

The Wetlands Protection Act ensures the protection of Massachusetts' inland and coastal wetlands, tidelands, great ponds, rivers, and floodplains. It regulates activities in coastal and wetlands areas and contributes to the protection of ground and surface water quality, the prevention of flooding and storm damage, and the protection of wildlife and aquatic habitat. The Town of Burlington also has a Wetland Bylaw and Wetland Bylaw Regulations.

According to MassGIS datalayers available on MassMapper, there are several jurisdictional wetland systems associated with the site in addition to the floodplain. These include a shallow marsh meadow wetland system at the northeast of the property (shown in cyan), four (4) wooded swamp deciduous wetland systems shown in green, and three (3) shrub swamp wetland systems shown in blue. No vernal pools are located within proximity to the site. On-site investigations by a wetland scientist will need to occur to verify and confirm these wetland boundaries as well as identify any additional wetland systems on-site.

Any work within the Buffer Zone (100-foot offset) to the wetland systems will require permitting under the Wetlands Protection Act and Town of Burlington Wetland Bylaw, and an Order of Conditions will be required.



Figure 2 – MassGIS Wetlands Map

There is also Long Meadow Brook which runs through the west side of the site and across along the north side of the northern parking lot. The Burlington Conservation Commission recognizes the function and values associated with both perennial and intermittent streams and regulates both regardless of perennial or intermittent status. The jurisdictional area associated with the Brook is a 200-foot Riverfront Area. The Brook also has an established TMDL for fecal coliform and E Coli.



Figure 3 – MassMapper TMDL Waterbodies (left) and Site on Appendix A of Burlington Wetland Regulations depicting Regulatory Streams (right)

As a part of these permitting requirements, the stormwater design for the Project will need to be in accordance with the MassDEP Stormwater Standards. The Project will need to maintain or reduce peak runoff rates in the proposed condition from the existing condition, provide groundwater recharge, and provide water quality treatment. The project may have to also meet the Phosphorus and TSS removal requirements associated with the Municipal Separate Storm Sewer System (MS4) requirements.

**Environmental Protection Agency (NPDES program):**

Construction activities that disturb more than one acre are regulated under the United States Environmental Protection Agency (EPA) National Pollution Discharge Elimination System (NPDES) Program. In Massachusetts, the USEPA issues NPDES permits to operators and owners of regulated construction sites. Regulated projects are required to develop and implement stormwater pollution plans (SWPPP) to obtain permit coverage.

**Massachusetts Environmental Protection Act (MEPA):**

Development/Redevelopment of this site is not anticipated to trigger any MEPA thresholds and will likely not require an ENF or EIR to be filed with MEPA.

**Site Plan Review (Town of Burlington):**

The applicability of the site plan review will be determined once a preferred option is identified.

The Town of Burlington Bylaws also indicates the requirement of an Erosion and Sedimentation Control Permit for any projects where land disturbing activities of 20,000 square feet or greater or 500 cubic yards of greater of earth volume is proposed. The applicability of this permit will be determined once a preferred option is identified.

Table 1 – Permitting Schedule

<b>Permit</b>	<b>Permitting Authority</b>	<b>Anticipated Filing Date</b>	<b>Anticipated Approval Date</b>
Order of Conditions	Town of Burlington Conservation Commission	At Completion of Design Development Phase	During Construction Documents Phase
Erosion and Sedimentation Control Permit (IF REQUIRED)	Town of Burlington Conservation Commission	At Completion of Design Development Phase	During Construction Documents Phase
Site Plan Review (IF REQUIRED)	Town of Burlington Planning Board	At Completion of Development Phase	During Construction Documents Phase
NPDES Notice of Intent	NPDES/EPA	2 weeks prior to Construction	Start of Construction

