

ZONING DATA

ZONING DISTRICT: PUBLIC USE DISTRICT (PARCELS 110-42,110-43)		
REQUIREMENTS	REQUIRED/ALLOWED	PROVIDED
MINIMUM LOT AREA	40,000 SF	1,551,765±SF**
MINIMUM FRONT YARD SETBACK	50 FT.	749.7 FT.
MINIMUM SIDE YARD SETBACK	15 FT.	83.6 FT.
MINIMUM REAR YARD SETBACK	15 FT.	162.7 FT.
MAXIMUM IMPERVIOUS AREA	50%	31.0%
MAX HEIGHT	35 FT.	31 FT.
STORIES (MAX.)	3	2
NUMBER OF PARKING SPACES (1.5 PER CLASSROOM)	46.5 SPACES	108 SPACES
OPEN SPACE	35%	69%
ZONING DISTRICT: RESIDENTIAL-AGRICULTURAL DISTRICT (PARCEL 111-34)		
REQUIREMENTS	REQUIRED/ALLOWED	PROVIDED
MINIMUM LOT AREA	80,000 SF	186,053±SF**
MINIMUM FRONT YARD SETBACK	50 FT.	0.0 FT.*
MINIMUM SIDE YARD SETBACK	15 FT.	4.4 FT.*
MINIMUM REAR YARD SETBACK	15 FT.	318.6 FT.*
MAXIMUM BUILDING COVERAGE	25%	3.4%
OPEN SPACE	35%	96.6%

ZONING CHARTS FOR PERMITTING PURPOSES ONLY.

\*WALL BELOW 4' AND TRACK NOT CONSIDERED STRUCTURE.

\*\*EXISTING.

CIVIL ENGINEER:



Samiotes Consultants Inc.  
Civil Engineers + Land Surveyors

20 A Street  
Framingham, MA 01701

T 508.877.6688  
F 508.877.8349  
www.samiotes.com

ARCHITECT:

STUDIO G ARCHITECTS

THE BREWERY  
179 BOYLSTON STREET  
JAMAICA PLAIN, MA 02130  
617 524 5568  
WWW.STUDIOGARCHITECTS.COM

GENERAL CONTRACTOR:

GILBANE BUILDING COMPANY

10 CHANNEL CENTER ST, SUITE 100  
BOSTON, MA 02210  
617 476 9300

LANDSCAPE ARCHITECT:

TERRAINK

7 CENTRAL ST.  
ARLINGTON, MA 02476  
781-316-1596

LIGHT CONSULTANT:

LIGHTTHIS! INC.

P.O. BOX 380404  
CAMBRIDGE, MA 02238  
617 717 9967

TRANSPORTATION ENGINEER:

MDM TRANSPORTATION CONSULTANTS, INC.

28 LORD RD  
MARLBOROUGH, MA 01752  
508 309 0370

LOCUS



FEMA MAP



# MAJOR SITE PLAN REVIEW

## PHASE 2

# FLORENCE ROCHE ELEMENTARY SCHOOL

PLANNING BOARD NOTE

THIS SITE PLAN APPROVAL DOES NOT NECESSARILY INDICATE COMPLIANCE WITH THE GROTON ZONING BYLAW.

DRAWING LIST

DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER
COVER SHEET			
EXISTING CONDITIONS PLAN (UNDER SEPARATE COVER)	EX-1	EXISTING CAMPUS VIEWS	A001
EXISTING CONDITIONS PLAN (UNDER SEPARATE COVER)	EX-2	EXISTING CAMPUS VIEWS	A002
EXISTING CONDITIONS PLAN (UNDER SEPARATE COVER)	EX-3	EXTERIOR RENDERINGS	A003
EXISTING CONDITIONS PLAN (UNDER SEPARATE COVER)	EX-4	FIRST FLOOR PLAN - OVERALL	A101
EXISTING CONDITIONS PLAN (UNDER SEPARATE COVER)	EX-5	SECOND FLOOR PLAN - OVERALL	A102
GENERAL NOTES	C001	ROOF PLAN OVERALL	A103
CONSTRUCTION PHASE 2	C002	EXTERIOR ELEVATIONS	A200
SITE PREPARATION PLAN	C101	EXTERIOR ELEVATIONS	A201
SITE PREPARATION PLAN	C102	EXTERIOR ELEVATIONS	A202
SITE PREPARATION PLAN	C103	EXTERIOR ELEVATIONS	A203
VEHICULAR SITE LAYOUT PLAN	C201	EXTERIOR ELEVATIONS	A204
VEHICULAR SITE LAYOUT PLAN	C202	HVAC SCHEDULE	M001
VEHICULAR SITE LAYOUT PLAN	C203	HVAC SECOND FLOOR OVERALL PLAN	M102
		HVAC ROOF OVERALL PLAN	M103
CIVIL GRADING PLAN	C301		
CIVIL GRADING PLAN	C302		
CIVIL GRADING PLAN	C303		
CIVIL UTILITY PLAN	C401		
CIVIL UTILITY PLAN	C402		
CIVIL UTILITY PLAN	C403		
CIVIL DRAINAGE PLAN	C501		
CIVIL DRAINAGE PLAN	C502		
CIVIL DRAINAGE PLAN	C503		
CIVIL DETAILS	C601		
CIVIL DETAILS	C602		
CIVIL DETAILS	C603		
CIVIL DETAILS	C604		
CIVIL DETAILS	C605		
SNOW STORAGE PLAN	C606		
SEWER PROFILE	C607		
LAYOUT AND MATERIALS KEY PLAN	L101		
ENLARGEMENT - FRONT PLAZA AND PLAY	L102		
ENLARGEMENT - OUTDOOR LEARNING LAB AND STEAM PATIO	L103		
PLANTING TREES AND TURF	L301		
PLANTING FRONT PLAZA AND PLAY	L302		
PLANTING OUTDOOR LEARNING LAB AND STEAM PATIO	L303		
PLANTING CONSERVATION	L304		
DETAILS - PAVING	L401		
DETAILS - SEATWALLS, BOULDERS, CURBS AND STAIRS	L402		
DETAILS - GUARDS AND FENCES	L403		
DETAILS - SITE STRUCTURES AND FURNISHINGS	L404		
DETAILS - PLAYGROUND AND SPORT COURT	L405		
DETAILS - PLANTING	L406		
DETAILS - PLANTING	L407		
EXTERIOR LIGHTING CALCULATIONS	XLT-100		
EXTERIOR LIGHTING CALCULATIONS	XLT-101		

342 MAIN STREET  
GROTON, MASSACHUSETTS

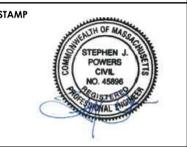
APPLICANT & OWNER:

APPLICANT: MARK HADDAD  
TOWN OF GROTON  
GROTON, MA 01450

&

OWNER: GROTON-DUNSTABLE REGIONAL  
SCHOOL DISTRICT

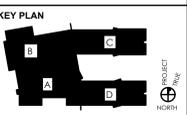
APRIL 14, 2022  
REV. MAY 26, 2022



CONSULTANT  
Samiotes Consultants Inc.  
Civil Engineers + Land Surveyors  
20 A Street  
Framingham, MA 01701  
T 508.877.6688  
F 508.877.8349  
www.samiotes.com

CLIENT  
Groton-Dunstable  
Regional School District  
& Town of Groton  
344 Main Street  
Groton, MA 01450

NOT FOR CONSTRUCTION  
DESIGN DEVELOPMENT  
PERMIT SET



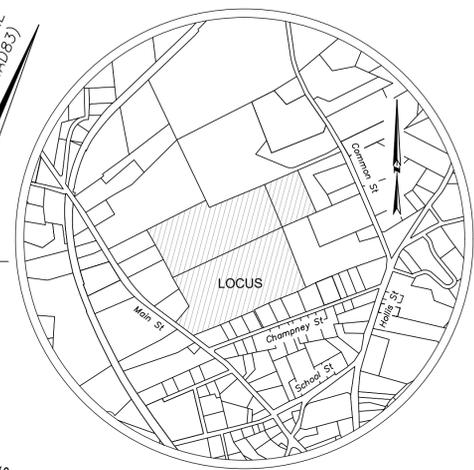
PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

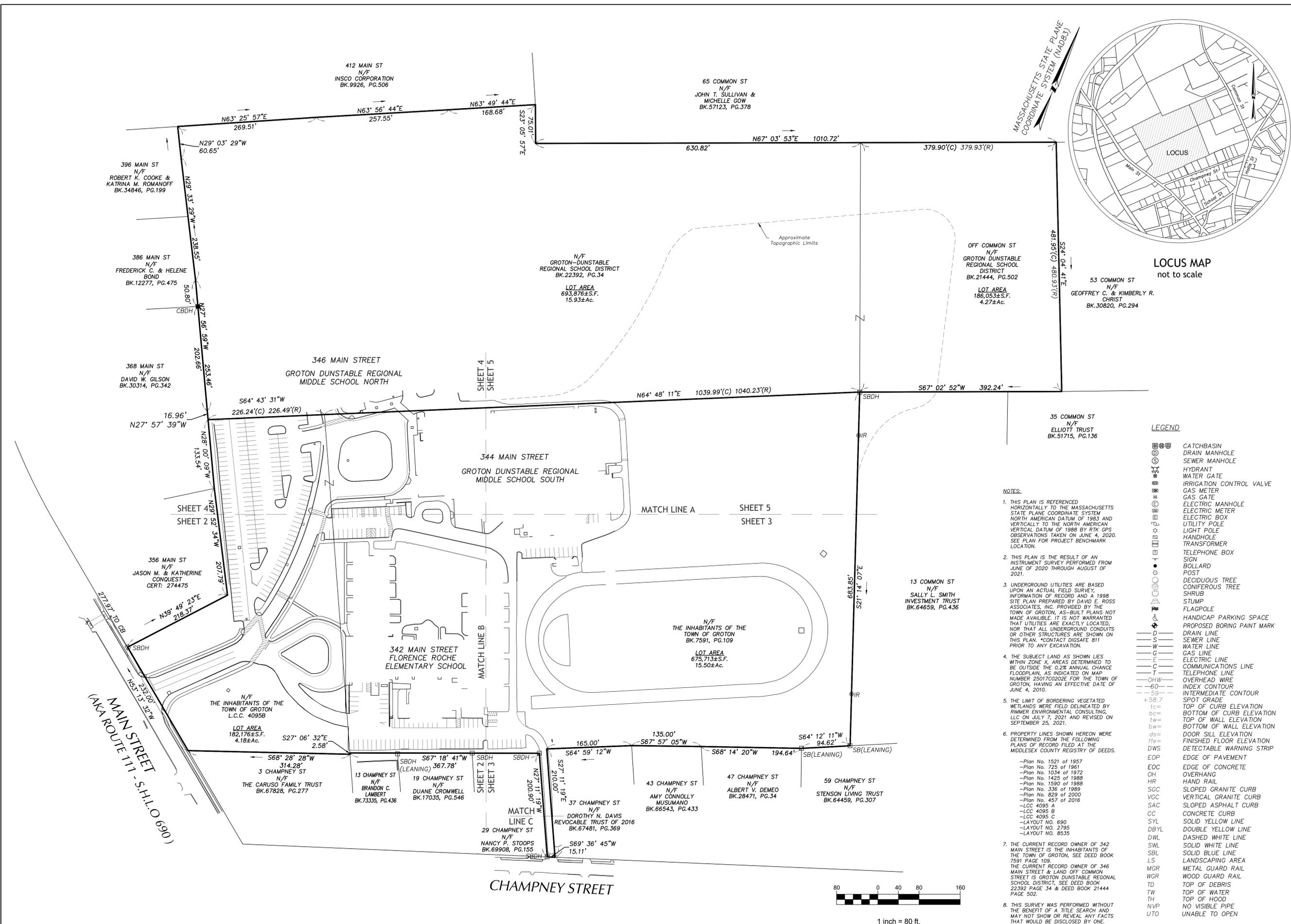
PROJECT NO 19088.00  
DRAWN BY WJP  
CHECKED BY SP  
SCALE AS SHOWN  
DATE 05/24/2022

SHEET TITLE  
**COVER SHEET**

APPLICANT	MARK HADDAD	SHEET NO	<b>C000</b>
ADDRESS	342 MAIN STREET		
TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS	MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34		



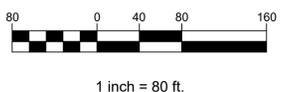
LOCUS MAP  
not to scale



LEGEND

- CATCHBASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- HYDRANT
- WATER GATE
- IRRIGATION CONTROL VALVE
- GAS METER
- GAS GATE
- ELECTRIC MANHOLE
- ELECTRIC METER
- ELECTRIC BOX
- UTILITY POLE
- LIGHT POLE
- HANDHOLE
- TRANSFORMER
- TELEPHONE BOX
- SIGN
- BOLLARD
- POST
- DECIDUOUS TREE
- CONIFEROUS TREE
- SHRUB
- STUMP
- FLAGPOLE
- HANDICAP PARKING SPACE
- PROPOSED BORING PAINT MARK
- DRAIN LINE
- SEWER LINE
- WATER LINE
- GAS LINE
- ELECTRIC LINE
- COMMUNICATIONS LINE
- TELEPHONE LINE
- OVERHEAD WIRE
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- SPOT GRADE
- TOP OF CURB ELEVATION
- BOTTOM OF CURB ELEVATION
- TOP OF WALL ELEVATION
- BOTTOM OF WALL ELEVATION
- DOOR SILL ELEVATION
- FINISHED FLOOR ELEVATION
- DETECTABLE WARNING STRIP
- EDGE OF PAVEMENT
- EDGE OF CONCRETE
- OVERHANG
- HAND RAIL
- SLOPED GRANITE CURB
- VERTICAL GRANITE CURB
- SLOPED ASPHALT CURB
- CONCRETE CURB
- SOLID YELLOW LINE
- DOUBLE YELLOW LINE
- DASHED WHITE LINE
- SOLID WHITE LINE
- SOLID BLUE LINE
- LANDSCAPING AREA
- METAL GUARD RAIL
- WOOD GUARD RAIL
- TOP OF DEBRIS
- TOP OF WATER
- TOP OF HOOD
- NO VISIBLE PIPE
- UNABLE TO OPEN

- NOTES:
- THIS PLAN IS REFERENCED HORIZONTALLY TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 AND VERTICALLY TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 BY RTK GPS OBSERVATIONS TAKEN ON JUNE 4, 2020. SEE PLAN FOR PROJECT BENCHMARK LOCATION.
  - THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY PERFORMED FROM JUNE OF 2020 THROUGH AUGUST OF 2021.
  - UNDERGROUND UTILITIES ARE BASED UPON AN ACTUAL FIELD SURVEY. INFORMATION OF RECORD AND A 1998 SITE PLAN PREPARED BY DAVID E. ROSS ASSOCIATES, INC. PROVIDED BY THE TOWN OF GROTON, AS-BUILT PLANS NOT MADE AVAILABLE. IT IS NOT WARRANTED THAT UTILITIES ARE EXACTLY LOCATED. NOR THAT ALL UNDERGROUND CONDUITS OR OTHER STRUCTURES ARE SHOWN ON THIS PLAN. \*CONTACT DISSAFE 811 PRIOR TO ANY EXCAVATION.
  - THE SUBJECT LAND AS SHOWN LIES WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS INDICATED ON MAP NUMBER 250170002E FOR THE TOWN OF GROTON, HAVING AN EFFECTIVE DATE OF JUNE 4, 2010.
  - THE LIMIT OF BORDERING VEGETATED WETLANDS WERE FIELD DELINEATED BY RIMMER ENVIRONMENTAL CONSULTING, LLC ON JULY 7, 2021 AND REVISED ON SEPTEMBER 25, 2021.
  - PROPERTY LINES SHOWN HEREON WERE DETERMINED FROM THE FOLLOWING PLANS OF RECORD FILED AT THE MIDDLESEX COUNTY REGISTRY OF DEEDS.
    - Plan No. 1521 of 1957
    - Plan No. 725 of 1961
    - Plan No. 1034 of 1972
    - Plan No. 1425 of 1988
    - Plan No. 1590 of 1988
    - Plan No. 336 of 1989
    - Plan No. 829 of 2000
    - Plan No. 457 of 2016
    - LCC 4095 A
    - LCC 4095 B
    - LCC 4095 C
    - LAYOUT NO. 690
    - LAYOUT NO. 2795
    - LAYOUT NO. 8535
  - THE CURRENT RECORD OWNER OF 342 MAIN STREET IS THE INHABITANTS OF THE TOWN OF GROTON, SEE DEED BOOK 7591 PAGE 109.
  - THE CURRENT RECORD OWNER OF 346 MAIN STREET & LAND OFF COMMON STREET IS GROTON DUNSTABLE REGIONAL SCHOOL DISTRICT, SEE DEED BOOK 22392 PAGE 34 & DEED BOOK 21444 PAGE 502.
  - THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE SEARCH AND MAY NOT SHOW OR REVEAL ANY FACTS THAT WOULD BE DISCLOSED BY ONE.



FLORENCE ROCHE  
ELEMENTARY SCHOOL  
342 MAIN STREET GROTON, MA

SEAL



D.F.  
DANIEL F. FLEMING - P.L.S. No. 55476  
REGISTERED PROFESSIONAL  
LAND SURVEYOR FOR  
SAMIOLES CONSULTANTS, INC.

REVISION	
1	9/27/2021 REVISED WETLAND FLAG LOCATIONS

EXISTING CONDITIONS  
PLAN OF LAND

JOB # 19088.00	EX-1
DATE: 9/10/2021	SHEET 1 OF 5
SCALE: 1"=80'	
DRAWN BY: JJD	
APPROVED BY: SG	
FILE: 19088 ECP WS.DWG	

FLORENCE ROCHE  
ELEMENTARY SCHOOL  
342 MAIN STREET GROTON, MA

SEAL



D.F. Fleming  
DANIEL F. FLEMING - P.L.S. No. 55476  
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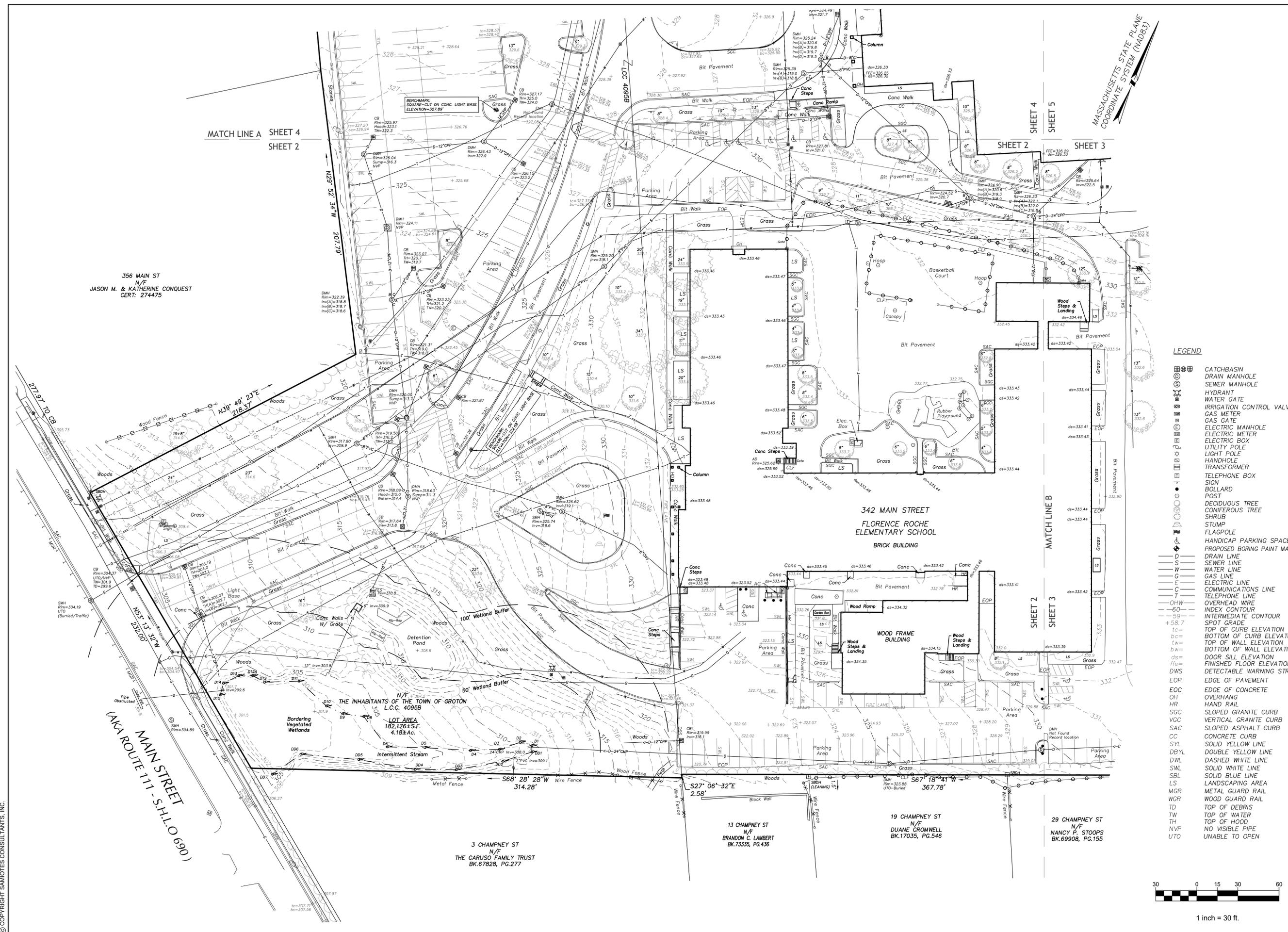
REVISION

NO.	DATE	DESCRIPTION
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EXISTING CONDITIONS  
PLAN OF LAND

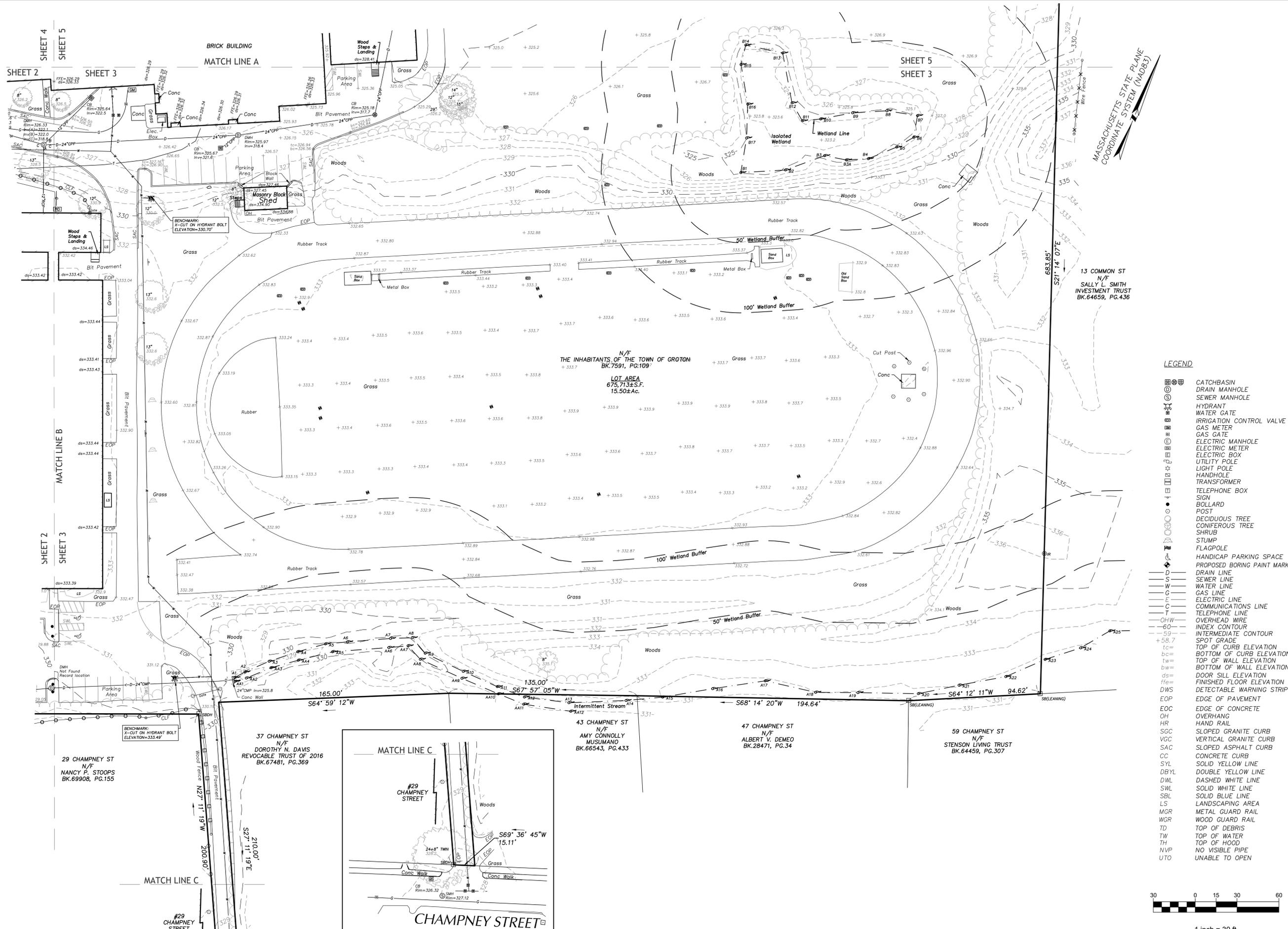
JOB # 19088.00  
DATE: 9/10/2021  
SCALE: 1"=30'  
DRAWN BY: AJD  
APPROVED BY: SG  
FILE: 19088 ECP WS.DWG

EX-2  
SHEET 2 OF 5



- LEGEND
- CATCHBASIN
  - DRAIN MANHOLE
  - SEWER MANHOLE
  - HYDRANT
  - WATER GATE
  - IRRIGATION CONTROL VALVE
  - GAS METER
  - GAS GATE
  - ELECTRIC MANHOLE
  - ELECTRIC METER
  - ELECTRIC BOX
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  - TRANSFORMER
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  - EOP
  - EOC
  - OVERHANG
  - HAND RAIL
  - SGC
  - VGC
  - SAC
  - CC
  - SYL
  - DBYL
  - DWL
  - SWL
  - SBL
  - LS
  - MGR
  - WGR
  - TD
  - TW
  - TH
  - NVP
  - UTO





MASSACHUSETTS STATE PLANE  
COORDINATE SYSTEM (NAD83)

13 COMMON ST  
N/F  
SALLY L. SMITH  
INVESTMENT TRUST  
BK.64659, PG.436

N/F  
THE INHABITANTS OF THE TOWN OF GROTON  
BK.7591, PG.109  
LOT AREA  
675,713±S.F.  
15.50±Ac.

LEGEND

- CATCHBASIN
DRAIN MANHOLE
SEWER MANHOLE
HYDRANT
WATER GATE
IRRIGATION CONTROL VALVE
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EOC EDGE OF CONCRETE
OH OVERHANG
HR HAND RAIL
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VGC VERTICAL GRANITE CURB
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UTO UNABLE TO OPEN

FLORENCE ROCHE  
ELEMENTARY SCHOOL  
342 MAIN STREET GROTON, MA



Daniel F. Fleming - P.L.S. No. 55476  
REGISTERED PROFESSIONAL  
LAND SURVEYOR FOR  
SAMIOLES CONSULTANTS, INC.

REVISION table with columns for revision number, date, and description.

EXISTING CONDITIONS  
PLAN OF LAND



1 inch = 30 ft.

FLORENCE ROCHE  
ELEMENTARY SCHOOL  
342 MAIN STREET GROTON, MA

SEAL



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REVISION

NO.	DATE	DESCRIPTION
1	9/10/2021	REVISED WETLAND FLAG LOCATIONS

EXISTING CONDITIONS  
PLAN OF LAND

JOB # 19088.00

DATE: 9/10/2021

SCALE: 1"=30'

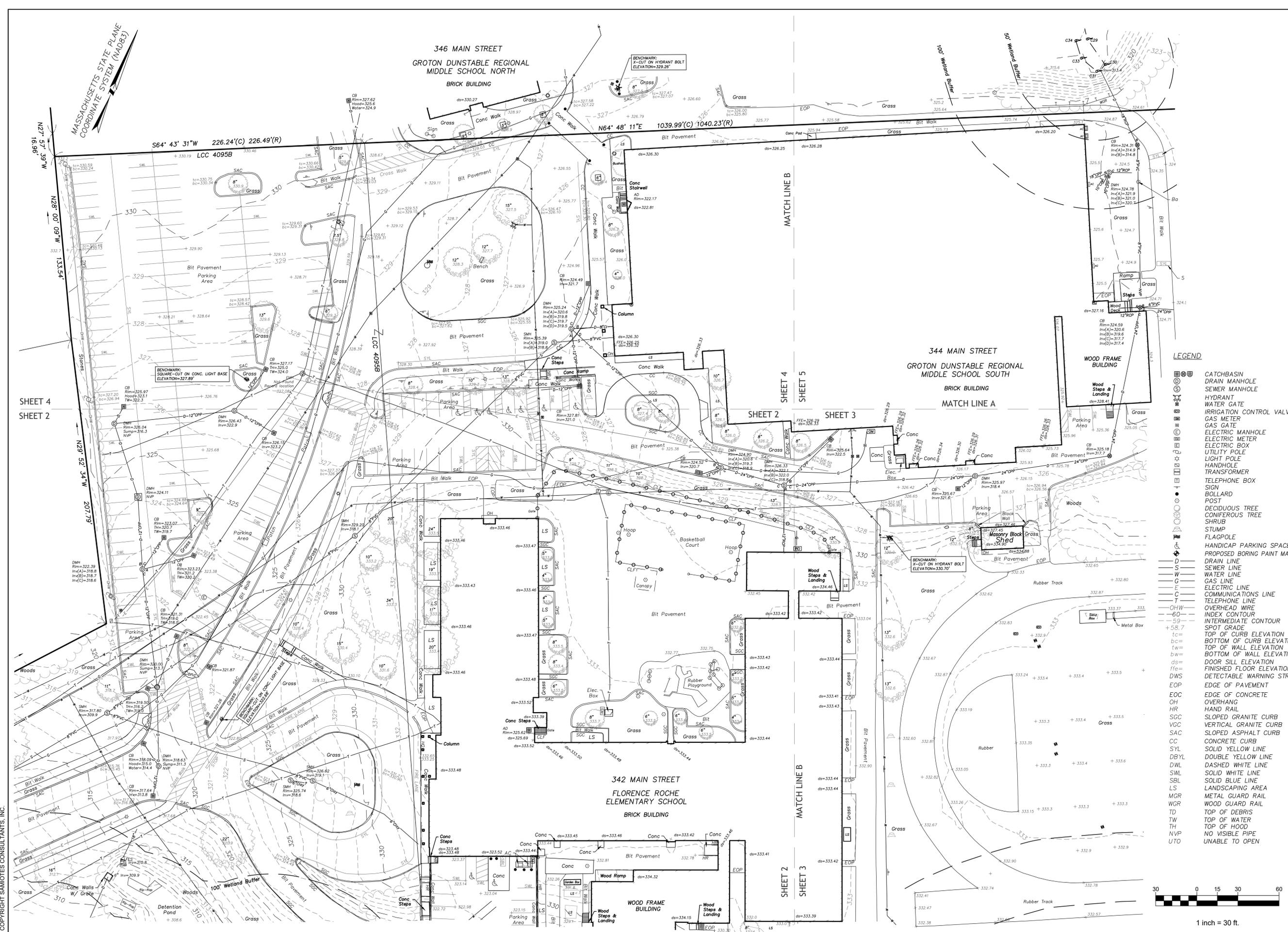
DRAWN BY: AJD

APPROVED BY: SG

FILE: 19088 ECP WS.DWG

EX-4

SHEET 4 OF 5



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LEGEND

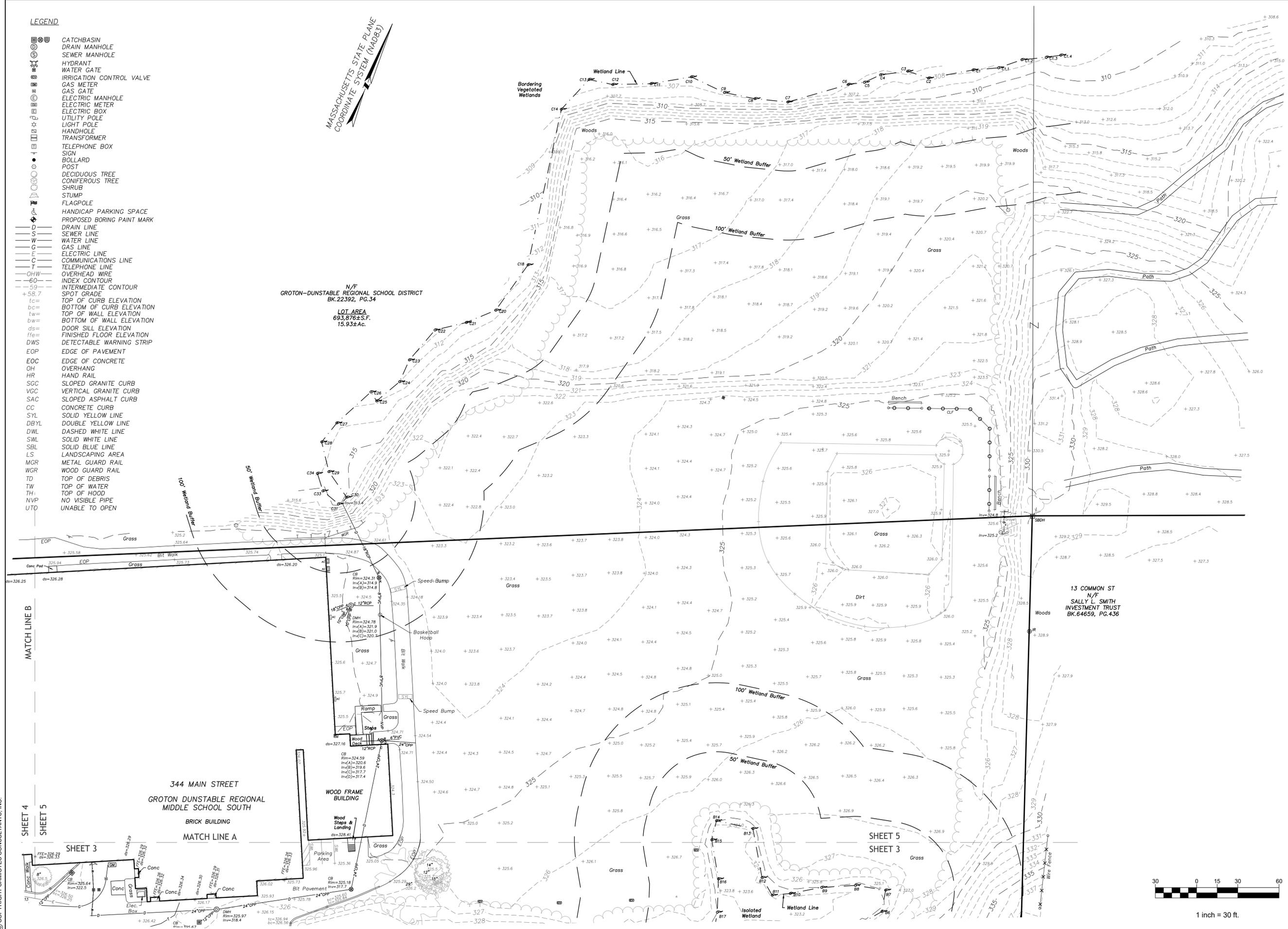
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- SWL
- SBL
- LS
- MGR
- WGR
- TD
- TW
- TH
- NVP
- UTO

MASSACHUSETTS STATE PLANE  
COORDINATE SYSTEM (NAD83)

N/F  
GROTON-DUNSTABLE REGIONAL SCHOOL DISTRICT  
BK.22392, PG.34

LOT AREA  
693,876±S.F.  
15.93±AC.

13 COMMON ST  
N/F  
SALLY L. SMITH  
INVESTMENT TRUST  
BK.64659, PG.436



**samnotes**  
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Civil Engineers + Land Surveyors  
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F 508.877.8349  
www.samnotes.com

**FLORENCE ROCHE  
ELEMENTARY SCHOOL  
342 MAIN STREET GROTON, MA**

SEAL

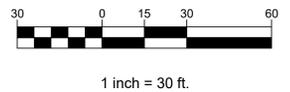


*D.F.*  
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REVISION	
1	9/27/2021 REVISED WETLAND FLAG LOCATIONS

**EXISTING CONDITIONS  
PLAN OF LAND**

JOB # 19088.00  
DATE: 9/10/2021  
SCALE: 1"=30'  
DRAWN BY: AJD  
APPROVED BY: SG  
FILE: 19088 ECP WS.DWG



**EX-5**

SHEET 5 OF 5

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10/22/2021 3:54:29 PM

GENERAL NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY AND WAYS, MEANS, AND METHODS OF CONSTRUCTION.
- THE CONTRACTOR SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES AND OBTAIN ALL NECESSARY LICENSES AND PERMITS.
- GENERAL GRADING
  - THE CONTRACTOR SHALL:
    - MAINTAIN PROPER SITE DRAINAGE AT ALL TIMES DURING THE COURSE OF CONSTRUCTION AND PREVENT STORMWATER FROM RUNNING INTO, OR STANDING, IN EXCAVATED AREAS.
    - BACKFILL ANY CURB AFTER ITS CONSTRUCTION AND PRIOR TO THE PLACEMENT OF BASE COURSE MATERIAL.
    - UNSATURABLE MATERIAL SHALL BE CONSIDERED AS MATERIAL WHICH IS NOT SUITABLE FOR THE SUPPORT OF PAVEMENT AND BUILDING CONSTRUCTION, AND IS ENCOUNTERED BELOW NORMAL TOPSOIL DEPTHS AND THE PROPOSED SUB-GRADE ELEVATION. THE DECISION TO REMOVE SAID MATERIAL, AND TO WHAT EXTENT, SHALL BE MADE BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.
- GENERAL PAVING
  - THE CONTRACTOR SHALL:
    - REPAIR ANY BASE COURSE AND BINDER COURSE FAILURES PRIOR TO THE INSTALLATION OF THE FINAL BITUMINOUS CONCRETE SURFACE COURSE.
    - SWEEP CLEAN THE BINDER COURSE PRIOR TO THE INSTALLATION OF THE FINAL BITUMINOUS CONCRETE SURFACE COURSE. EXCESSIVE CLEANING OF THE BINDER COURSE THAT MAY BE REQUIRED, AND IS NOT THE FAULT OF THE PAVING CONTRACTOR, SHALL BE PAID FOR ON A TIME AND MATERIAL BASIS BY PRIOR AGREEMENT WITH THE GENERAL CONTRACTOR.
- INCIDENTAL TO CONSTRUCTION
  - A. ADHERE TO THE CRITERIA FOR THE SEPARATION BETWEEN WATER MAINS AND THE STORM AND SANITARY SEWER LINES AS DESCRIBED: WHEREVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATER MAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATER MAIN SHALL BE 18 INCHES. FURTHER, THE MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATER MAINS SHALL BE MAINTAINED UNLESS THE SEWER IS IN A SEPARATE TRENCH, KEEPING A MINIMUM 18-INCH VERTICAL SEPARATION, OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATER MAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OR UNSTABLE EARTH, KEEPING A MINIMUM 18 INCH VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED ABOVE CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER STANDARDS.
  - B. CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING GRADES AND COORDINATING WITH SUB-CONTRACTORS. ALL UNDERGROUND UTILITY STRUCTURE FRAMES SUCH AS MANHOLES, CATCH BASINS, AND INLETS. ALL CONFLICTS SHALL BE REPORTED TO THE ENGINEER.
  - C. CONTRACTOR SHALL POT-HOLE AROUND THE EXISTING UTILITIES TO DETERMINE THEIR EXACT LOCATIONS AND ELEVATIONS PRIOR TO THE CONSTRUCTION OF THE PROPOSED UTILITY IMPROVEMENTS.
  - D. CONTRACTOR SHALL COVER OPEN TRENCHES WHEN NOT ACTIVELY WORKING IN THEM. AT ALL TIMES STORMWATER SHALL BE REDIRECTED FROM OPEN TRENCHES AND PROVIDE DEWATERING MEASURES.
  - E. CONTRACTOR SHALL ADHERE TO STATE AND LOCAL DEWATERING REGULATIONS. DEWATER RECOMMENDATIONS ARE IN THE GEOTECHNICAL REPORT.
  - F. CONTRACTOR SHALL DISPOSE OF EXPORT MATERIAL IN A METHOD APPROVED BY LOCAL AND STATE JURISDICTIONAL BODIES.
- TESTING AND FINAL ACCEPTANCE
  - F. SPECIFIC COMPACTION TESTING SHALL BE SUBMITTED TO THE ENGINEER TO REVIEW.
  - G. APPROVAL OF THE PAVEMENT SUB-GRADE BY THE OWNER'S GEOTECHNICAL ENGINEER SHALL BE REQUIRED PRIOR TO THE PLACEMENT OF THE PAVEMENT MATERIAL.
  - H. SANITARY SEWER MAINS AND SERVICES SHALL BE TESTED FOR LEAKAGE AND DEFLECTION IN ACCORDANCE WITH THE CITY OF SOUTH PORTLAND AND MUNICIPAL SANITARY SEWER CONSTRUCTION AND INSPECTION PROCEDURES (LATEST EDITION). SEE DOCUMENT ALSO FOR ALLOWABLE TESTING LIMITS. SERVICE STUBS MUST BE PROPERLY PLUGGED AND SEALED AND CLEARLY LOCATED AT THEIR TERMINATION POINTS PRIOR TO TESTING. ALL SEWER MAINS, SERVICE LINES, AND MANHOLES SHALL BE CLEAN AND FREE OF DEBRIS PRIOR TO THEIR FINAL ACCEPTANCE.
  - I. WATER MAINS AND WATER SERVICE LINES SHALL BE PROTECTED AGAINST ENTRANCE OF HYDROCARBONS THROUGH DIFFUSION AND THROUGH ANY MATERIAL USED IN CONSTRUCTION OF THE LINE.
- MINIMUM REQUIREMENT FOR MANHOLE STRUCTURES
  - A. THE FRAME LIP SHALL BE CLEANED AND DEBRIS TO PROVIDE WATER-TIGHT SEAL BETWEEN THE FRAME AND THE MANHOLE COVER GASKET.
  - B. MORTAR SHALL BE USED BETWEEN THE FRAME AND ADJUSTING RINGS AND BETWEEN ADJUSTING RINGS AND THE CONE SECTION IN ALL PAVED AREAS. 1/2" STICK MAY BE USED IN LANDSCAPE AREAS.
  - C. NO MORE THAN A TOTAL OF EIGHT (8) INCHES OF MANHOLE ADJUSTING RINGS SHALL BE ALLOWED.
  - D. ALL STEPS MUST BE INSTALLED, ALIGNED, AND CLEANED.
  - E. ALL PINHOLES MUST BE MORTARED WITH BRUSH FINISH TO PROVIDE A WATER-TIGHT SEAL.
  - F. THE UPSTREAM AND DOWNSTREAM PIPE CAVITIES MUST BE FILLED WITH MORTAR AND SMOOTHED WITH A BRUSH FINISH.
  - G. THE UPSTREAM AND DOWNSTREAM FLOW LINES (INVERTS) SHALL HAVE A SMOOTH TRANSITION FROM THE PIPE TO THE MANHOLE INVERT.
  - H. ALL MANHOLE STRUCTURES SHALL BE FREE OF ANY TYPE OF INFILTRATION (WATER LEADING INTO THE STRUCTURE).
  - I. IF THERE IS AN INTERNAL DROP IN THE STRUCTURE, THERE MUST BE A SMOOTH TRANSITION FROM THE PIPE TO THE INVERT (I.E. CHANNEL THE FLOW FROM THE PIPE TO THE MANHOLE INVERT).
  - J. ALL MANHOLES SHALL BE CLEANED OF ANY ACCUMULATION OF SILT, DEBRIS, OR FOREIGN MATTER OF ANY KIND, AND SHALL BE FREE FROM SUCH ACCUMULATIONS AT THE TIME OF FINAL INSPECTION.
- THE CONTRACTOR SHALL PRESERVE BENCHMARKS, REFERENCE POINTS AND STAKES. RESETTLE ANY BENCHMARK, REFERENCE POINTS OR STAKES AT CONTRACTOR'S EXPENSE.
- IF THE CONTRACTOR FINDS ANY DISCREPANCIES BETWEEN THE PLANS AND THE PHYSICAL CONDITIONS ON THE LAIENS AS GIVEN BY THE ENGINEER, THEY SHALL IMMEDIATELY INFORM THE ENGINEER, IN WRITING, ANY WORK DONE AFTER SUCH A DISCOVERY, UNTIL AUTHORIZED, WILL BE AT THE CONTRACTOR'S RISK.
- ASSURANCES OF COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT (ADA) IS THE RESPONSIBILITY OF THE CONTRACTOR.
- THE TRAFFIC CONTROL DEVICES MUST COMPLY WITH MASSDOT REQUIREMENTS AND BE APPROVED PRIOR TO CONSTRUCTION.
- DEWATERING
  - A DEWATERING PLAN IS NEEDED TO ADDRESS EXCAVATION DE-WATERING FOLLOWING HEAVY RAINFALL EVENTS OR WHERE THE EXCAVATION MAY INTERCEPT THE GROUNDWATER TABLE DURING CONSTRUCTION. THE COLLECTED WATER NEEDS TREATMENT AND A DISCHARGE POINT THAT WILL NOT CAUSE DOWNSTREAM EROSION AND OFF SITE SEDIMENTATION OR WITHIN A RESOURCE. PLEASE FOLLOW THE DETAILS OF SUCH A PLAN.
- BASIC STANDARDS - EROSION CONTROL MEASURES
  - MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE APPLICANT WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL, INSPECTIONS AND MAINTENANCE.

GENERAL DEMOLITION NOTES

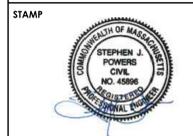
- THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION REMOVAL AND DISPOSAL IN A LOCATION APPROVED BY ALL JURISDICTIONS OF ALL STRUCTURES, PAVS, WALLS, FLOORS, FOUNDATIONS, PARKING, DRIVES, DRAINAGE, STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL, PER THE SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
- THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO ADJACENT PROPERTIES AT ALL TIMES. UTILITY SERVICES SHALL NOT BE INTERRUPTED WITHOUT THE APPROVAL OF THE CONSTRUCTION MANAGER AND COORDINATION THROUGH THE STORE MANAGER OR OUTLET USERS.
- THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PAID TO THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ON-SITE LOCATIONS OF EXISTING UTILITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION OF UTILITY SERVICES TO THE EXISTING BUILDINGS PRIOR TO THE DEMOLITION OF THE BUILDINGS.
- THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ON-SITE LOCATIONS OF EXISTING UTILITIES.
- ALL EXISTING SEWERS, PIPING, AND UTILITIES SHOWN ARE NOT TO BE INTERFERED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND AND ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DEMOLITION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK. UTILITIES DETERMINED TO BE ABANDONED AND LEFT IN PLACE SHALL BE GROUTED IF UNDER BUILDING.
- ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE, AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE ADJACENT ROAD RIGHT OF WAY DURING CONSTRUCTION.
- CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCINGS, BARRICADES, ENCLOSURES, ETC. (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY THE CONSTRUCTION MANAGER.
- PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
- SHOULD REMOVAL AND/OR RELOCATION ACTIVITIES DAMAGE FENCING, AND/OR STORM INLET STRUCTURES, THE CONTRACTOR SHALL PROVIDE NEW MATERIALS/STRUCTURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. EXCEPT FOR MATERIALS DESIGNED TO BE RELOCATED ON THIS PLAN, ALL OTHER CONSTRUCTION MATERIALS SHALL BE NEW.
- CONTRACTOR MAY LIMIT SAW CUT & PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
- CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE. CONTRACTOR SHALL COORDINATE/PHASE ALL CONSTRUCTION ACTIVITY WITHIN PROXIMITY OF THE BUILDING AND UTILITY INTERSECTIONS WITH THE STORE MANAGER TO MINIMIZE DISTURBANCE AND INCONVENIENCE TO STORE OPERATION AND THE CUSTOMERS.
- THE CONTRACTOR SHALL COORDINATE WATER MAIN WORK WITH THE FIRE DEPT. AND THE DPW TO PLAN PROPOSED IMPROVEMENTS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONTINUOUSLY AVAILABLE TO THE STORE AND SITE THROUGHOUT THE SPECIFIC WORK AND THROUGH ALL PHASES OF CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATER MAIN SHUT OFFS WITH THE DPW DURING CONSTRUCTION. ANY COSTS ASSOCIATED WITH WATER MAIN SHUT OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION WILL BE PROVIDED.
- DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
- CONTRACTOR MUST COORDINATE WITH CONSTRUCTION MANAGER PRIOR TO ANY CONSTRUCTION TO ESTABLISH TRAFFIC FLOW DURING ALL PHASES.

GENERAL GRADING/DRAINAGE NOTES

- ALL GRADING AND SITE PREPARATION SHALL CONFORM WITH SITE ENGINEERING AND LANDSCAPE ARCHITECTURE CONSTRUCTION.
- ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO NATIONAL GRID CONSTRUCTION SPECIFICATIONS AND DETAILS.
- PRIOR TO ANY EXCAVATION OF THE PROJECT SITE, THE CONTRACTOR SHALL NOTIFY THE PERMITTING AUTHORITIES AND HOLD A PRE-CONSTRUCTION MEETING.
- ALL INDICATED ELEVATIONS ARE FINISHED ELEVATIONS.
- FIELD VERIFY LOCATIONS, SIZES AND IF APPLICABLE INVERTS OF EXISTING UTILITIES FOR PROPOSED CONNECTIONS PRIOR TO CONSTRUCTION.
- LOCATE AND PROTECT ALL UTILITIES ASSOCIATED WITH THE PROJECT PRIOR TO CONSTRUCTION.
- INSTALL EROSION AND SEDIMENT CONTROL MEASURES BEFORE BEGINNING SITE WORK. THESE MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
- MAINTAIN PROPER SITE DRAINAGE AT ALL TIMES DURING CONSTRUCTION. PREVENT STORM WATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS.
- CUT AND FILL SLOPES SHALL HAVE A MAXIMUM SLOPE OF 3:1.
- ALL EXCAVATION SHALL INCLUDE CLEARING, STRIPPING, AND STOCKPILING TOPSOIL, REMOVING UNSUITABLE MATERIALS. THE CONSTRUCTION OF EMBANKMENTS, CONSTRUCTION FILLS AND THE FINAL SHAPING AND TRIMMING TO THE LINES AND GRADES SHOWN ON THE PLANS.
- ALL TREES, BRUSH, AND ORGANIC TOPSOIL AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED, UNLESS OTHERWISE SPECIFIED, AND DISPOSED OF AT AN OFF-SITE LOCATION. WITH THE EXCEPTION THAT ENOUGH TOPSOIL SHALL BE RETAINED FOR RESURFACE AND GENERAL LANDSCAPING, AREAS WHICH ARE TO BE FILED SHALL BE COMPACTED PER THE GEOTECHNICAL REPORT.
- STRIP AND STOCKPILE TOPSOIL, SPREAD TOPSOIL ON LANDSCAPE AREAS PER LANDSCAPE CONSTRUCTION DRAWINGS AND REMOVE EXCESS TOPSOIL FROM SITE. PREPARE SUB-GRADES FOR PAVEMENT AND CURBS AND BACKFILL CURBS AFTER CURB CONSTRUCTION.
- PROVIDE SUPPLY OF TOPSOIL FOR LANDSCAPE CONTRACTOR FOR INSTALLATION IN ALL LANDSCAPE ISLANDS. SPECIFICATIONS PER LANDSCAPE ARCHITECT.
- PROVIDE AND INSTALL TOPSOIL IN DISTURBED AREAS TO BE GRASSED, INCLUDING PAVEMENT SHOULDERERS.
- CERTIFICATION SAID COMPACTION SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER OR HIS/HER REPRESENTATIVE, PRIOR TO THE PLACEMENT OF THE BASE COURSE MATERIAL. BOTH PROOF ROLLING AND COMPACTION TESTING MUST BE APPROVED AND WITNESSED BY THE ENGINEER PRIOR TO CONSTRUCTING THE BASE AND SURFACE COURSES THEREON.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE TO ALL INLETS AND CATCH BASINS. AREAS OF SURFACE POONDING SHALL BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
- IF AREAS ARE DISTURBED BEFORE PROPOSED GRADES BY NEGLIGENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY REGRADING OR REPAIR TO MATCH ORIGINAL EXISTING CONDITIONS.
- SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. SHORING SHALL BE IN ACCORDANCE WITH ALL O.S.H.A. AND LOCAL REGULATIONS.
- STRUCTURES FOR STORM SEWERS SHALL BE IN ACCORDANCE WITH THESE IMPROVEMENT PLANS AND THE APPLICABLE STANDARD SPECIFICATIONS, WHERE GRANULAR TRENCH BACKFILL IS REQUIRED AROUND THESE STRUCTURES, THE COST SHALL BE CONSIDERED AS INCIDENTAL AND SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE STRUCTURE.
- CONFIRM INVERTS OF ALL CONFLICTING EXISTING STORM INLETS AND SANITARY SEWER MANHOLES BEFORE COMMENCING CONSTRUCTION. A GEOTEXTILE MATTING SHALL BE USED FOR EROSION CONTROL ON ALL SLOPES GREATER THAN 3:1v.
- CONTRACTOR SHALL ADJUST GRADES BY VARYING THE PAVEMENT SECTIONS ACCORDINGLY. EXISTING COMPACTED SUBGRADE TO BE DISTURBED AS LITTLE AS POSSIBLE. AT THE VERY LEAST MINIMUM PAVEMENT SECTION REQUIREMENTS AS SPECIFIED BY THE CONSTRUCTION ENGINEER SHALL BE USED.
- CONTRACTOR TO ADJUST EXISTING TREES/LANDSCAPING PER FINAL GRADES. SEE LANDSCAPE PLANS FOR DETAILS. CONTRACTOR SHALL OBTAIN ALL NECESSARY CONSTRUCTION EASEMENTS PRIOR TO STARTING WORK.

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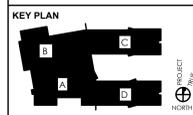


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PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**

342 Main Street  
Grolon, MA 01450

NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

PROJECT NO 19088.00

DRAWN BY WJP

CHECKED BY SP

SCALE AS SHOWN

DATE 05/26/2022

SHEET TITLE

GENERAL NOTES

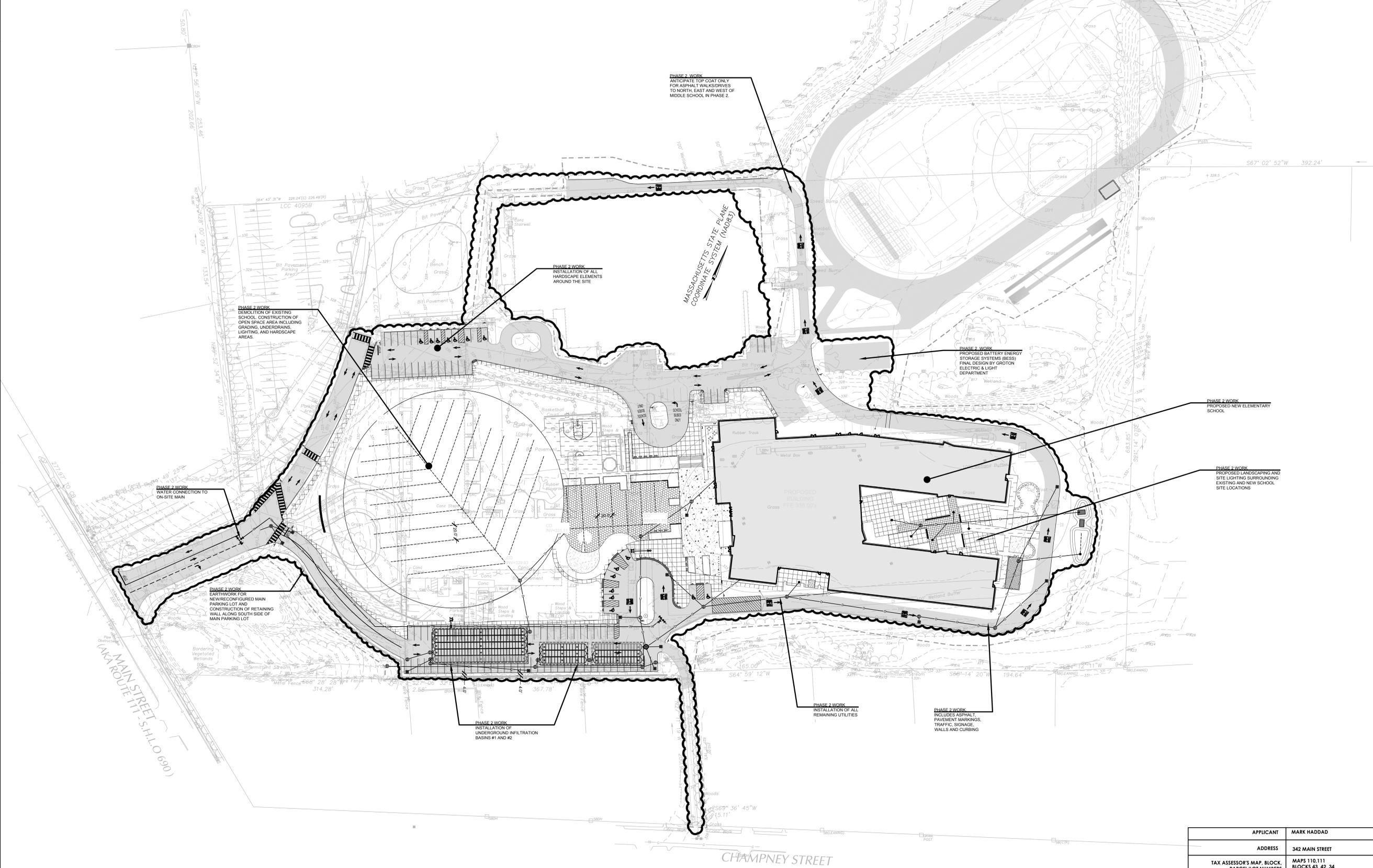
APPLICANT	MARK HADDAD	SHEET NO
ADDRESS	342 MAIN STREET	<b>C001</b>
TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS	MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34	

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**PHASE 2 SUBMITTAL:**

AS NOTED ABOVE, THE PROPOSED PROJECT IS TO BE BUILT IN TWO PHASES. PHASE 2 WILL INCORPORATE THE FOLLOWING (AND LIMITS OF WORK ARE DESIGNATED ON THE PHASE 2 PLAN SET SUBMITTAL):

- CONSTRUCTION OF THE NEW ELEMENTARY SCHOOL BUILDING.
- INSTALLATION OF UNDERGROUND INFILTRATION BASINS #1 AND #2.
- INSTALLATION OF ALL HARDSCAPE ELEMENTS, INCLUDING ASPHALT PAVING, CONCRETE SIDEWALKS, OPEN SPACE HARDSCAPE ELEMENTS (COURTYARDS, BASKETBALL COURT, ETC.).
- EARTHWORK FOR THE NEW/RECONFIGURED MAIN PARKING LOT, INCLUDING CONSTRUCTION OF RETAINING WALL ALONG SOUTH SIDE OF MAIN PARKING LOT.
- DEMOLITION OF EXISTING SCHOOL.
- CONSTRUCTION OF OPEN SPACE AREA IN PLACE OF EXISTING SCHOOL (AS SHOWN IN PLAN SET), INCLUDING GRADING, UNDERDRAINS, LIGHTING, AND HARDSCAPE AREAS.
- ALL OF THE REMAINING UTILITIES AND FINAL CONNECTIONS NOT COVERED IN PHASE 1 (INCLUDING THE FINAL STORMWATER CONVEYANCE SYSTEM CONNECTIONS).
- LANDSCAPING SURROUNDING EXISTING AND NEW SCHOOL SITE LOCATIONS, INCLUDING PRESENTATION OF MATERIALS.
- SITE LIGHTING, INCLUDING PRESENTATION OF PHOTOMETRIC SITE PLANS.
- BATTERY ENERGY STORAGE SYSTEM (BESS) - THIS SYSTEM WILL BE DESIGNED BY GELD AND WILL PROVIDE BATTERY STORAGE (STORING UNUSED ELECTRICAL POWER FROM THE GRID) FOR EMERGENCY SITUATIONS WHERE THE SURROUNDING AREA MAY LOSE POWER (I.E. SEVERE WEATHER).



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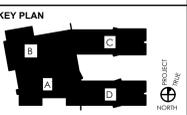
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PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**

342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWIM REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

PROJECT NO 19088.00

DRAWN BY WJP

CHECKED BY SP

SCALE AS SHOWN

DATE 05/24/2022

SHEET TITLE  
**CONSTRUCTION  
PHASE 2 WORK**

APPLICANT MARK HADDAD

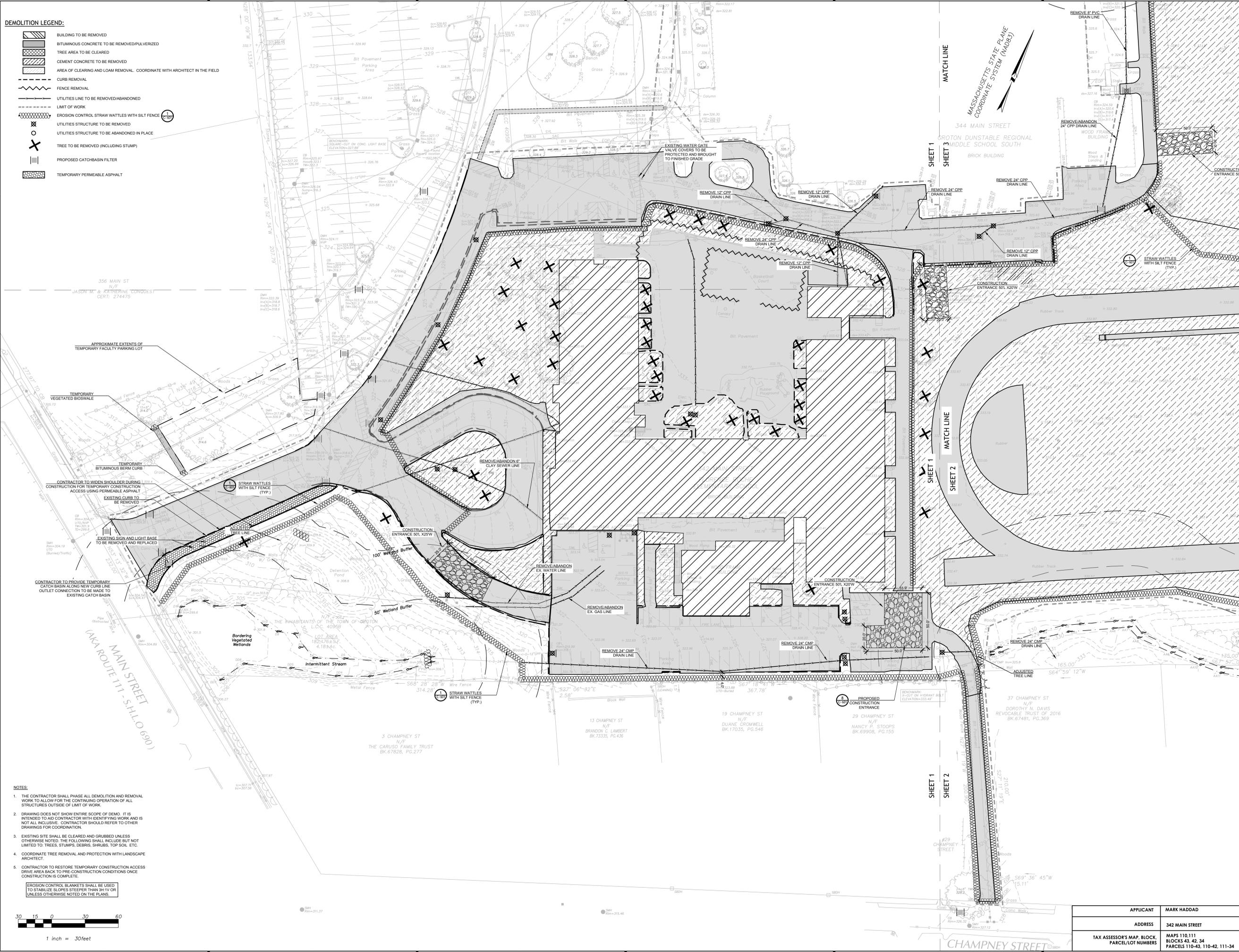
ADDRESS 342 MAIN STREET

TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS MAPS 110.111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

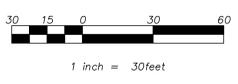
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**C002**

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- DEMOLITION LEGEND:**
- BUILDING TO BE REMOVED
  - BITUMINOUS CONCRETE TO BE REMOVED/PULVERIZED
  - TREE AREA TO BE CLEARED
  - CEMENT CONCRETE TO BE REMOVED
  - AREA OF CLEARING AND LOAM REMOVAL. COORDINATE WITH ARCHITECT IN THE FIELD
  - CURB REMOVAL
  - FENCE REMOVAL
  - UTILITIES LINE TO BE REMOVED/ABANDONED
  - LIMIT OF WORK
  - EROSION CONTROL STRAW WATTLES WITH SILT FENCE
  - UTILITIES STRUCTURE TO BE REMOVED
  - UTILITIES STRUCTURE TO BE ABANDONED IN PLACE
  - TREE TO BE REMOVED (INCLUDING STUMP)
  - PROPOSED CATCHBASIN FILTER
  - TEMPORARY PERMEABLE ASPHALT



- NOTES:**
- THE CONTRACTOR SHALL PHASE ALL DEMOLITION AND REMOVAL WORK TO ALLOW FOR THE CONTINUING OPERATION OF ALL STRUCTURES OUTSIDE OF LIMIT OF WORK.
  - DRAWING DOES NOT SHOW ENTIRE SCOPE OF DEMO. IT IS INTENDED TO AID CONTRACTOR WITH IDENTIFYING WORK AND IS NOT ALL INCLUSIVE. CONTRACTOR SHOULD REFER TO OTHER DRAWINGS FOR COORDINATION.
  - EXISTING SITE SHALL BE CLEARED AND GRUBBED UNLESS OTHERWISE NOTED. THE FOLLOWING SHALL INCLUDE BUT NOT LIMITED TO: TREES, STUMPS, DEBRIS, SHRUBS, TOP SOIL, ETC.
  - COORDINATE TREE REMOVAL AND PROTECTION WITH LANDSCAPE ARCHITECT.
  - CONTRACTOR TO RESTORE TEMPORARY CONSTRUCTION ACCESS DRIVE AREA BACK TO PRE-CONSTRUCTION CONDITIONS ONCE CONSTRUCTION IS COMPLETE.
- EROSION CONTROL BLANKETS SHALL BE USED TO STABILIZE SLOPES STEEPER THAN 3H:1V OR UNLESS OTHERWISE NOTED ON THE PLANS.



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**KEY PLAN**

**PROJECT TITLE**

**FLORENCE ROCHE  
ELEMENTARY SCHOOL**

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Groton, MA 01450

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**PROJECT NO** 19088.00

**DRAWN BY** WJP

**CHECKED BY** SP

**SCALE** AS SHOWN

**DATE** 05/24/2022

**SHEET TITLE**

**SITE  
PREPARATION  
PLAN**

**APPLICANT** MARK HADDAD

**ADDRESS** 342 MAIN STREET

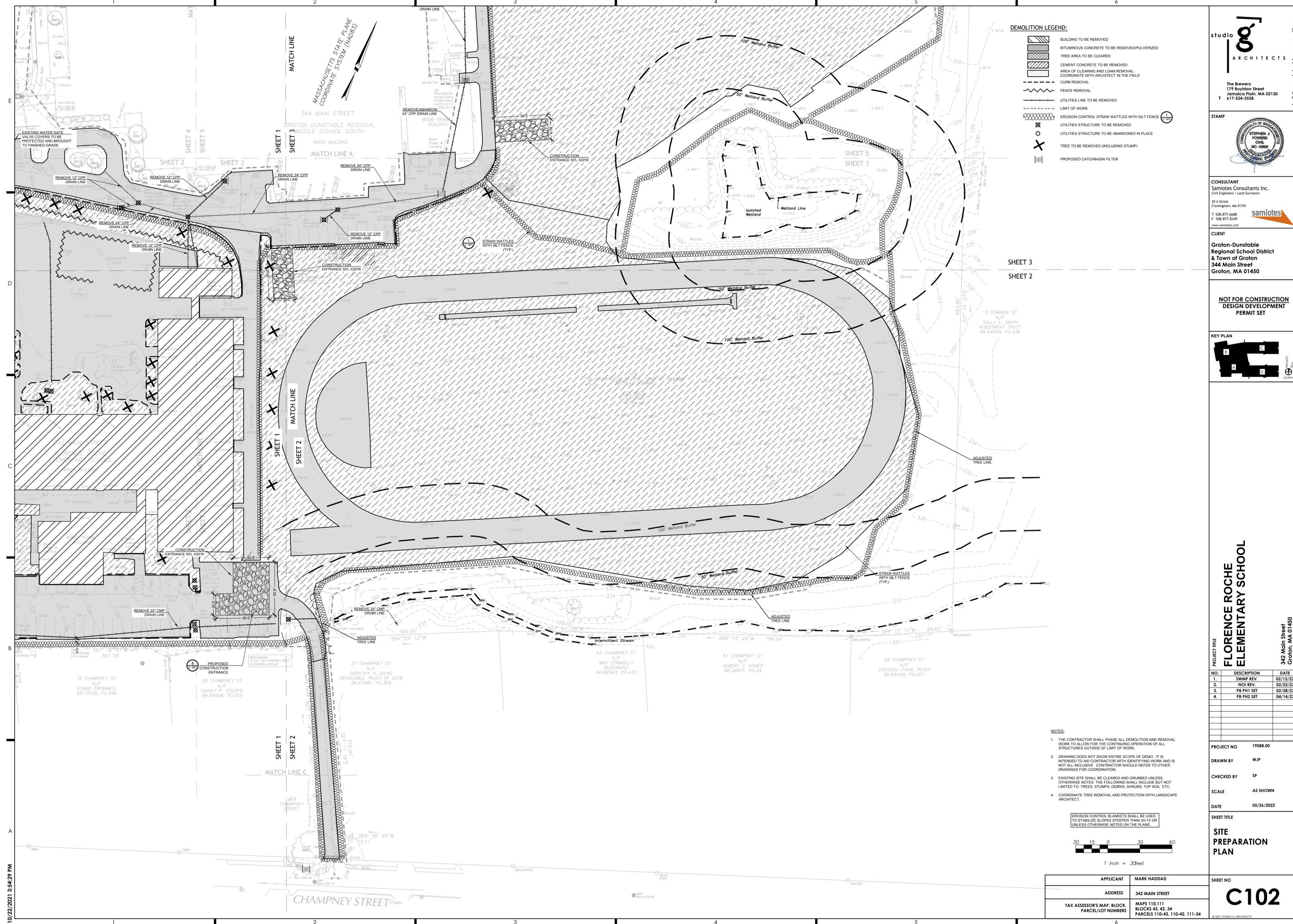
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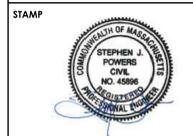
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**DEMOLITION LEGEND:**

	BUILDING TO BE REMOVED
	BITUMINOUS CONCRETE TO BE REMOVED/PULVERIZED
	TREE AREA TO BE CLEARED
	CEMENT CONCRETE TO BE REMOVED
	AREA OF CLEARING AND LOAM REMOVAL COORDINATE WITH ARCHITECT IN THE FIELD
	CURB REMOVAL
	FENCE REMOVAL
	UTILITIES LINE TO BE REMOVED
	LIMIT OF WORK
	EROSION CONTROL STRAW WATTLES WITH SILT FENCE
	UTILITIES STRUCTURE TO BE REMOVED
	UTILITIES STRUCTURE TO BE ABANDONED IN PLACE
	TREE TO BE REMOVED (INCLUDING STUMP)
	PROPOSED CATCHBASIN FILTER

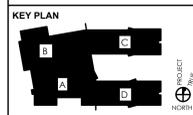
**studio architects**  
 The Brewery  
 177 Boylston Street  
 Jamaica Plain, MA 02130  
 T 617-524-5558



**CONSULTANT**  
 Samiotes Consultants Inc.  
 Civil Engineers + Land Surveyors  
 20 A Street  
 Framingham, MA 01701  
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 F 508.877.8349  
 www.samiotes.com

**CLIENT**  
 Groton-Dunstable Regional School District & Town of Groton  
 344 Main Street  
 Groton, MA 01450

**NOT FOR CONSTRUCTION**  
 DESIGN DEVELOPMENT  
 PERMIT SET



**PROJECT TITLE**  
**FLORENCE ROCHE ELEMENTARY SCHOOL**  
 342 Main Street  
 Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

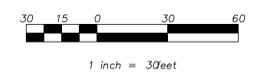
**PROJECT NO** 19088.00  
**DRAWN BY** WJP  
**CHECKED BY** SP  
**SCALE** AS SHOWN  
**DATE** 05/24/2022

**SHEET TITLE**  
**SITE PREPARATION PLAN**

**SHEET NO**  
**C102**

- NOTES:**
- THE CONTRACTOR SHALL PHASE ALL DEMOLITION AND REMOVAL WORK TO ALLOW FOR THE CONTINUING OPERATION OF ALL STRUCTURES OUTSIDE OF LIMIT OF WORK.
  - DRAWING DOES NOT SHOW ENTIRE SCOPE OF DEMO. IT IS INTENDED TO ADD CONTRACTOR WITH IDENTIFYING WORK AND IS NOT ALL INCLUSIVE. CONTRACTOR SHOULD REFER TO OTHER DRAWINGS FOR COORDINATION.
  - EXISTING SITE SHALL BE CLEARED AND GRUBBED UNLESS OTHERWISE NOTED. THE FOLLOWING SHALL INCLUDE BUT NOT LIMITED TO TREES, STUMPS, DEBRIS, SHRUBS, TOP SOIL, ETC.
  - COORDINATE TREE REMOVAL AND PROTECTION WITH LANDSCAPE ARCHITECT.

EROSION CONTROL BLANKETS SHALL BE USED TO STABILIZE SLOPES STEEPER THAN 3H:1V OR UNLESS OTHERWISE NOTED ON THE PLANS.



<b>APPLICANT</b>	MARK HADDAD
<b>ADDRESS</b>	342 MAIN STREET
<b>TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS</b>	MAPS 110.111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

10/22/2021 3:54:29 PM

- DEMOLITION LEGEND:**
- BUILDING TO BE REMOVED
  - BITUMINOUS CONCRETE TO BE REMOVED/PULVERIZED
  - TREE AREA TO BE CLEARED
  - CEMENT CONCRETE TO BE REMOVED
  - AREA OF CLEARING AND LOAM REMOVAL COORDINATE WITH ARCHITECT IN THE FIELD
  - CURB REMOVAL
  - FENCE REMOVAL
  - UTILITIES LINE TO BE REMOVED
  - LIMIT OF WORK
  - EROSION CONTROL STRAW WATTLES WITH SILT FENCE
  - UTILITIES STRUCTURE TO BE REMOVED
  - UTILITIES STRUCTURE TO BE ABANDONED IN PLACE
  - TREE TO BE REMOVED (INCLUDING STUMP)
  - PROPOSED CATCHBASIN FILTER

- NOTES:**
- THE CONTRACTOR SHALL PHASE ALL DEMOLITION AND REMOVAL WORK TO ALLOW FOR THE CONTINUING OPERATION OF ALL STRUCTURES OUTSIDE OF LIMIT OF WORK.
  - DRAWING DOES NOT SHOW ENTIRE SCOPE OF DEMO. IT IS INTENDED TO AID CONTRACTOR WITH IDENTIFYING WORK AND IS NOT ALL INCLUSIVE. CONTRACTOR SHOULD REFER TO OTHER DRAWINGS FOR COORDINATION.
  - EXISTING SITE SHALL BE CLEARED AND GRUBBED UNLESS OTHERWISE NOTED. THE FOLLOWING SHALL INCLUDE BUT NOT LIMITED TO: TREES, STUMPS, DEBRIS, SHRUBS, TOP SOIL, ETC.
  - COORDINATE TREE REMOVAL AND PROTECTION WITH LANDSCAPE ARCHITECT.

EROSION CONTROL BLANKETS SHALL BE USED TO STABILIZE SLOPES STEEPER THAN 3H:1V OR UNLESS OTHERWISE NOTED ON THE PLANS.



REFER TO ATHLETIC TRACK PLANS (LL101,102, AND 103) FOR TRACK DETAILS ON LAYOUT, AND MATERIALS

**studio architects**  
 ARCHITECTS  
 The Brewery  
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 T 617-524-5558  
 building sustainable communities

**STAMP**  
  
 STEPHEN J. POWERS  
 CIVIL ENGINEER  
 NO. 45896  
 STATE OF MASSACHUSETTS

**CONSULTANT**  
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**CLIENT**  
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 Regional School District  
 & Town of Groton  
 344 Main Street  
 Groton, MA 01450

**NOT FOR CONSTRUCTION**  
 DESIGN DEVELOPMENT  
 PERMIT SET

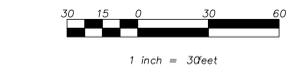
**KEY PLAN**  
  
 PROJECT  
 342 Main Street  
 Groton, MA 01450

**PROJECT TITLE**  
**FLORENCE ROCHE  
 ELEMENTARY SCHOOL**  
 342 Main Street  
 Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWAMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

<b>PROJECT NO</b>	19088.00
<b>DRAWN BY</b>	WJP
<b>CHECKED BY</b>	SP
<b>SCALE</b>	AS SHOWN
<b>DATE</b>	05/24/2022

**SHEET TITLE**  
**SITE  
 PREPARATION  
 PLAN**



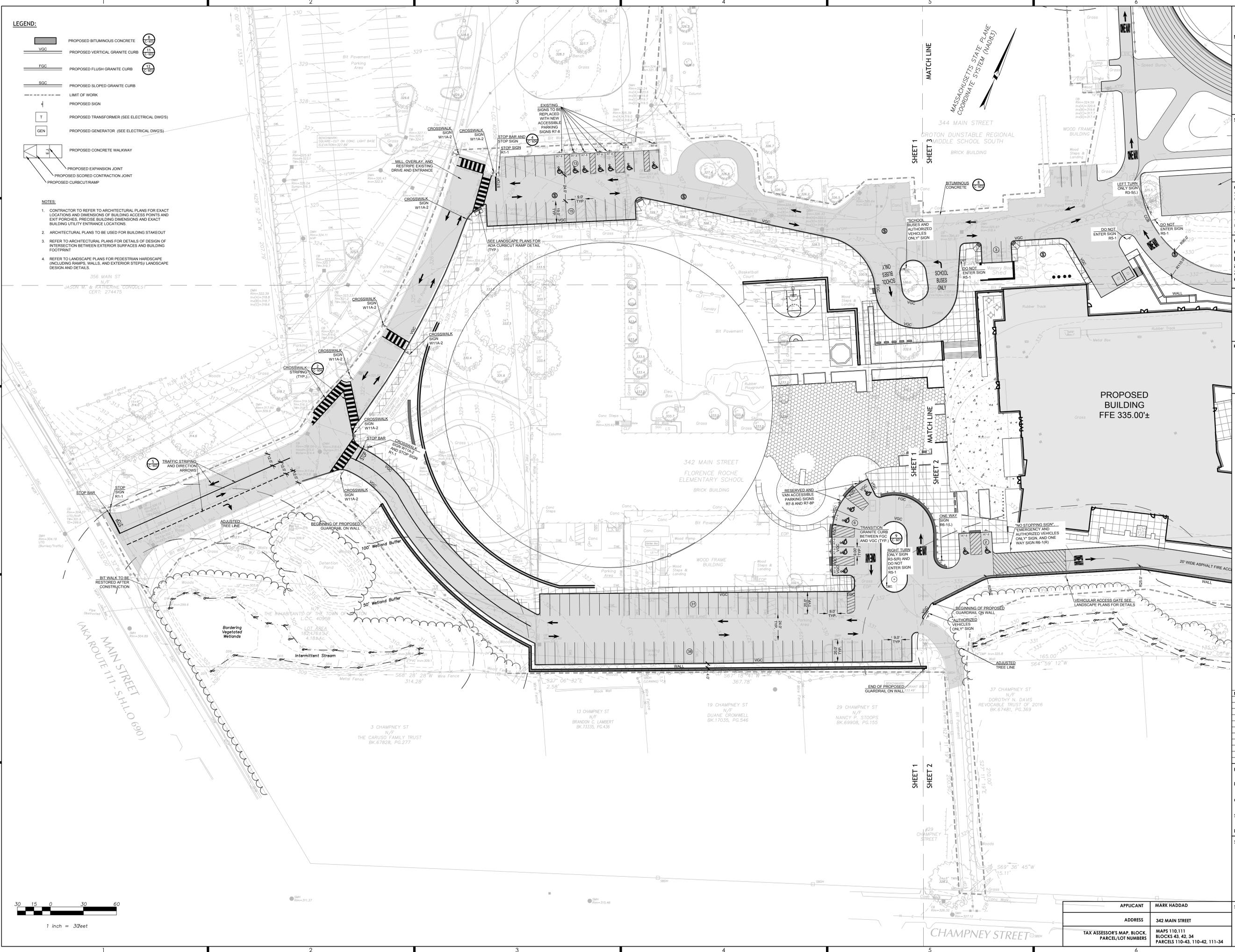
<b>APPLICANT</b>	MARK HADDAD
<b>ADDRESS</b>	342 MAIN STREET
<b>TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS</b>	MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

**SHEET NO**  
**C103**  
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10/22/2021 3:54:29 PM

- LEGEND:**
- PROPOSED BITUMINOUS CONCRETE
  - PROPOSED VERTICAL GRANITE CURB
  - PROPOSED FLUSH GRANITE CURB
  - PROPOSED SLOPED GRANITE CURB
  - LIMIT OF WORK
  - PROPOSED SIGN
  - PROPOSED TRANSFORMER (SEE ELECTRICAL DWG'S)
  - PROPOSED GENERATOR (SEE ELECTRICAL DWG'S)
  - PROPOSED CONCRETE WALKWAY
  - PROPOSED EXPANSION JOINT
  - PROPOSED SCORED CONTRACTION JOINT
  - PROPOSED CURB CUT RAMP

- NOTES:**
- CONTRACTOR TO REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF BUILDING ACCESS POINTS AND EXIT PORCHES. PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
  - ARCHITECTURAL PLANS TO BE USED FOR BUILDING STAKEOUT
  - REFER TO ARCHITECTURAL PLANS FOR DETAILS OF DESIGN OF INTERSECTION BETWEEN EXTERIOR SURFACES AND BUILDING FOOTPRINT
  - REFER TO LANDSCAPE PLANS FOR PEDESTRIAN HARDSCAPE (INCLUDING RAMP, WALLS, AND EXTERIOR STEPS) LANDSCAPE DESIGN AND DETAILS.



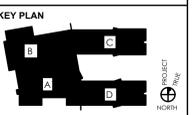
studio **oo** ARCHITECTS  
 The Brewery  
 177 Boylston Street  
 Jamaica Plain, MA 02130  
 T 617-524-5558  
 building sustainable communities

STAMP  
  
 STEPHEN J. POWERS  
 CIVIL ENGINEER  
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 344 Main Street  
 Groton, MA 01450

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 DESIGN DEVELOPMENT  
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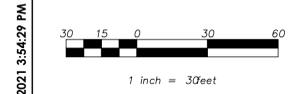
PROJECT TITLE  
**FLORENCE ROCHE  
 ELEMENTARY SCHOOL**  
 342 Main Street  
 Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

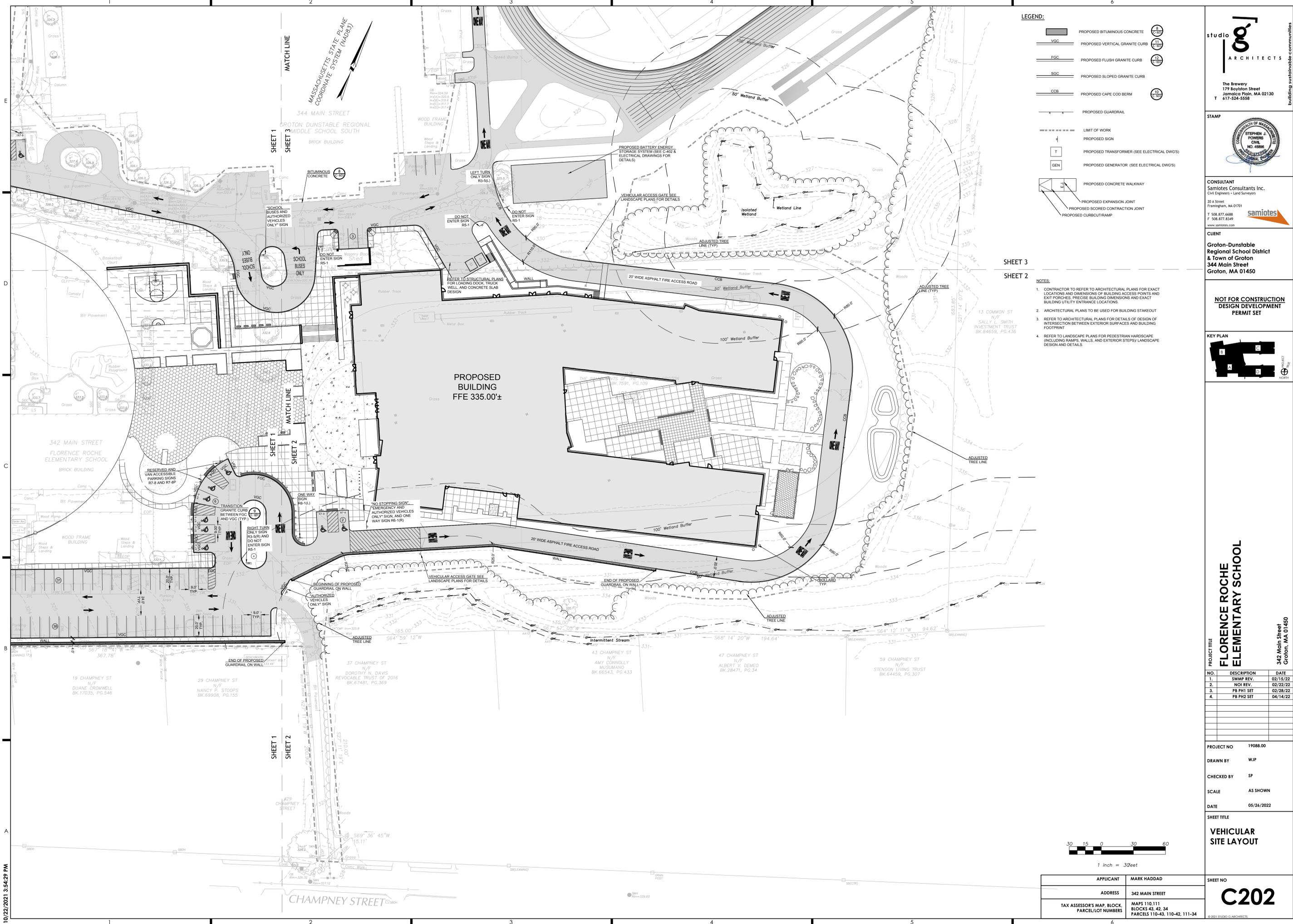
PROJECT NO 19088.00  
 DRAWN BY WJP  
 CHECKED BY SP  
 SCALE AS SHOWN  
 DATE 05/24/2022

SHEET TITLE  
**VEHICULAR  
 SITE LAYOUT**

APPLICANT	MARK HADDAD	SHEET NO	<b>C201</b>
ADDRESS	342 MAIN STREET		
TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS	MAPS 110, 111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34		



10/22/2021 3:54:29 PM



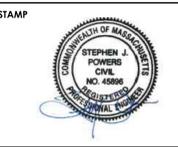
- LEGEND:**
- PROPOSED BITUMINOUS CONCRETE
  - PROPOSED VERTICAL GRANITE CURB
  - PROPOSED FLUSH GRANITE CURB
  - PROPOSED SLOPED GRANITE CURB
  - PROPOSED CAPE COD BERM
  - PROPOSED GUARDRAIL
  - LIMIT OF WORK
  - PROPOSED SIGN
  - PROPOSED TRANSFORMER (SEE ELECTRICAL DWG'S)
  - PROPOSED GENERATOR (SEE ELECTRICAL DWG'S)
  - PROPOSED CONCRETE WALKWAY
  - PROPOSED EXPANSION JOINT
  - PROPOSED SCORED CONCRETE JOINT
  - PROPOSED CURB/TRAMP

SHEET 3  
SHEET 2

- NOTES:**
- CONTRACTOR TO REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF BUILDING ACCESS POINTS AND EXIT PORCHES, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
  - ARCHITECTURAL PLANS TO BE USED FOR BUILDING STAKEOUT
  - REFER TO ARCHITECTURAL PLANS FOR DETAILS OF DESIGN OF INTERSECTION BETWEEN EXTERIOR SURFACES AND BUILDING FOOTPRINT
  - REFER TO LANDSCAPE PLANS FOR PEDESTRIAN HARDSCAPE (INCLUDING RAMPS, WALLS, AND EXTERIOR STEPS) LANDSCAPE DESIGN AND DETAILS.

**studio**  
**ARCHITECTS**

The Brewery  
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Jamaica Plain, MA 02130  
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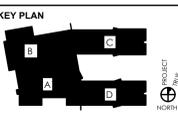


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344 Main Street  
Groton, MA 01450

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**DESIGN DEVELOPMENT**  
**PERMIT SET**



**PROJECT TITLE**  
FLORENCE ROCHE  
ELEMENTARY SCHOOL

342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

**PROJECT NO** 19088.00  
**DRAWN BY** WJP  
**CHECKED BY** SP  
**SCALE** AS SHOWN  
**DATE** 05/26/2022

**SHEET TITLE**  
VEHICULAR  
SITE LAYOUT

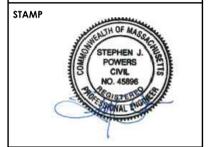


<b>APPLICANT</b>	MARK HADDAD	<b>SHEET NO</b>	<b>C202</b>
<b>ADDRESS</b>	342 MAIN STREET		
<b>TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS</b>	MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34		

10/22/2021 3:54:29 PM

- LEGEND:**
- PROPOSED BITUMINOUS CONCRETE
  - PROPOSED VERTICAL GRANITE CURB
  - PROPOSED FLUSH GRANITE CURB
  - PROPOSED SLOPED GRANITE CURB
  - PROPOSED CAPE COD BERM
  - PROPOSED GUARDRAIL
  - PROPOSED SIGN
  - PROPOSED TRANSFORMER (SEE ELECTRICAL DWGS)
  - PROPOSED GENERATOR (SEE ELECTRICAL DWGS)
  - PROPOSED CONCRETE WALKWAY
  - PROPOSED EXPANSION JOINT
  - PROPOSED SCORED CONTRACTION JOINT
  - PROPOSED CURBCUT RAMP

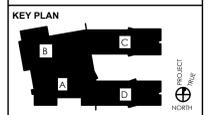
- NOTES:**
- CONTRACTOR TO REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF BUILDING ACCESS POINTS AND EXIT PORCHES, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
  - ARCHITECTURAL PLANS TO BE USED FOR BUILDING STAKEOUT
  - REFER TO ARCHITECTURAL PLANS FOR DETAILS OF DESIGN OF INTERSECTION BETWEEN EXTERIOR SURFACES AND BUILDING FOOTPRINT
  - REFER TO LANDSCAPE PLANS FOR PEDESTRIAN HARDSCAPE (INCLUDING RAMPS, WALLS, AND EXTERIOR STEPS) LANDSCAPE DESIGN AND DETAILS.



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**CLIENT**  
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& Town of Groton  
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Groton, MA 01450

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DESIGN DEVELOPMENT  
PERMIT SET



**PROJECT TITLE**  
FLORENCE ROCHE  
ELEMENTARY SCHOOL

342 Main Street  
Groton, MA 01450

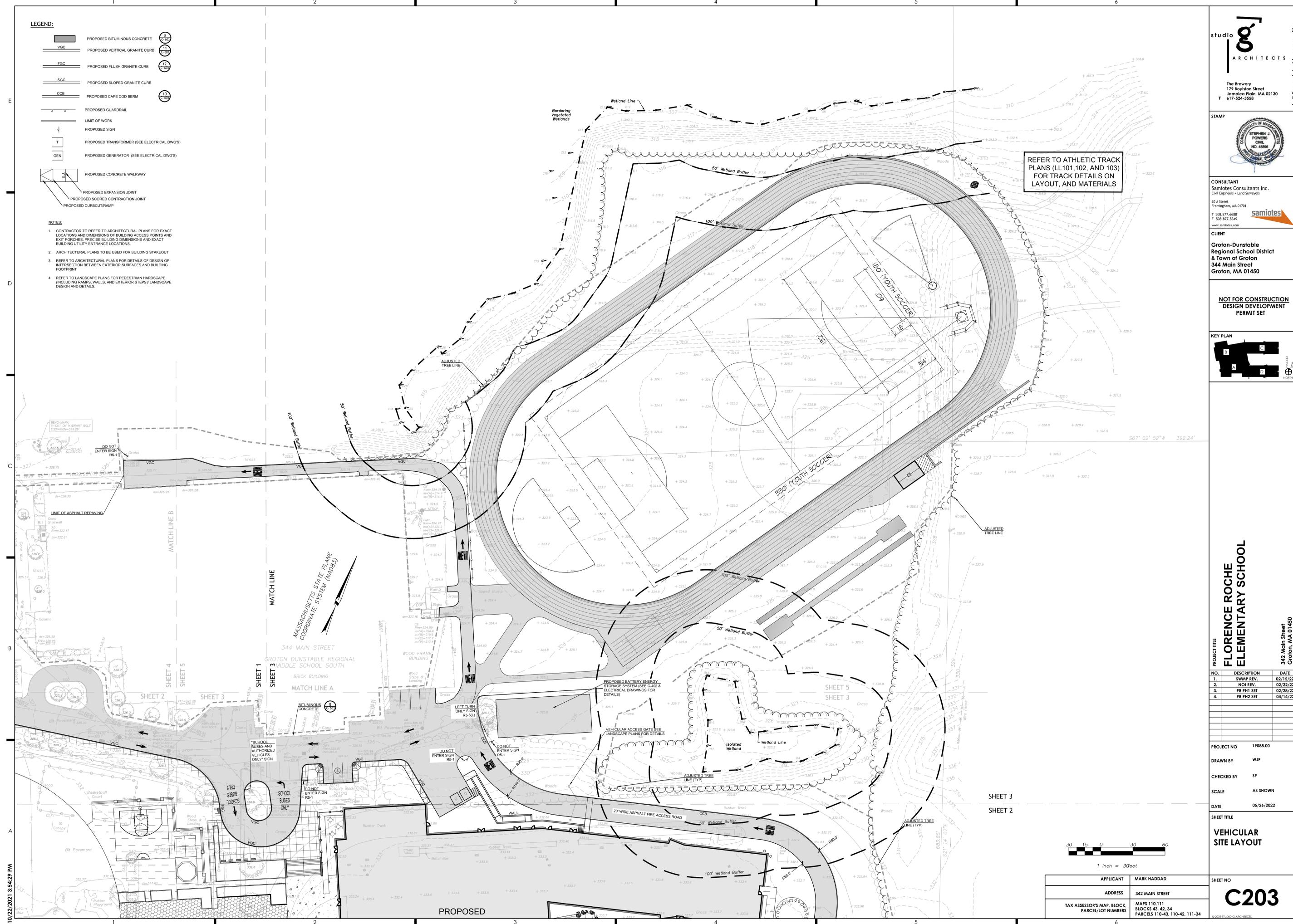
NO.	DESCRIPTION	DATE
1.	SWAMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

**PROJECT NO** 19088.00  
**DRAWN BY** WJP  
**CHECKED BY** SP  
**SCALE** AS SHOWN  
**DATE** 05/24/2022

**SHEET TITLE**  
VEHICULAR  
SITE LAYOUT

<b>APPLICANT</b>	MARK HADDAD
<b>ADDRESS</b>	342 MAIN STREET
<b>TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS</b>	MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

**SHEET NO**  
**C203**



REFER TO ATHLETIC TRACK  
PLANS (LL101,102, AND 103)  
FOR TRACK DETAILS ON  
LAYOUT, AND MATERIALS

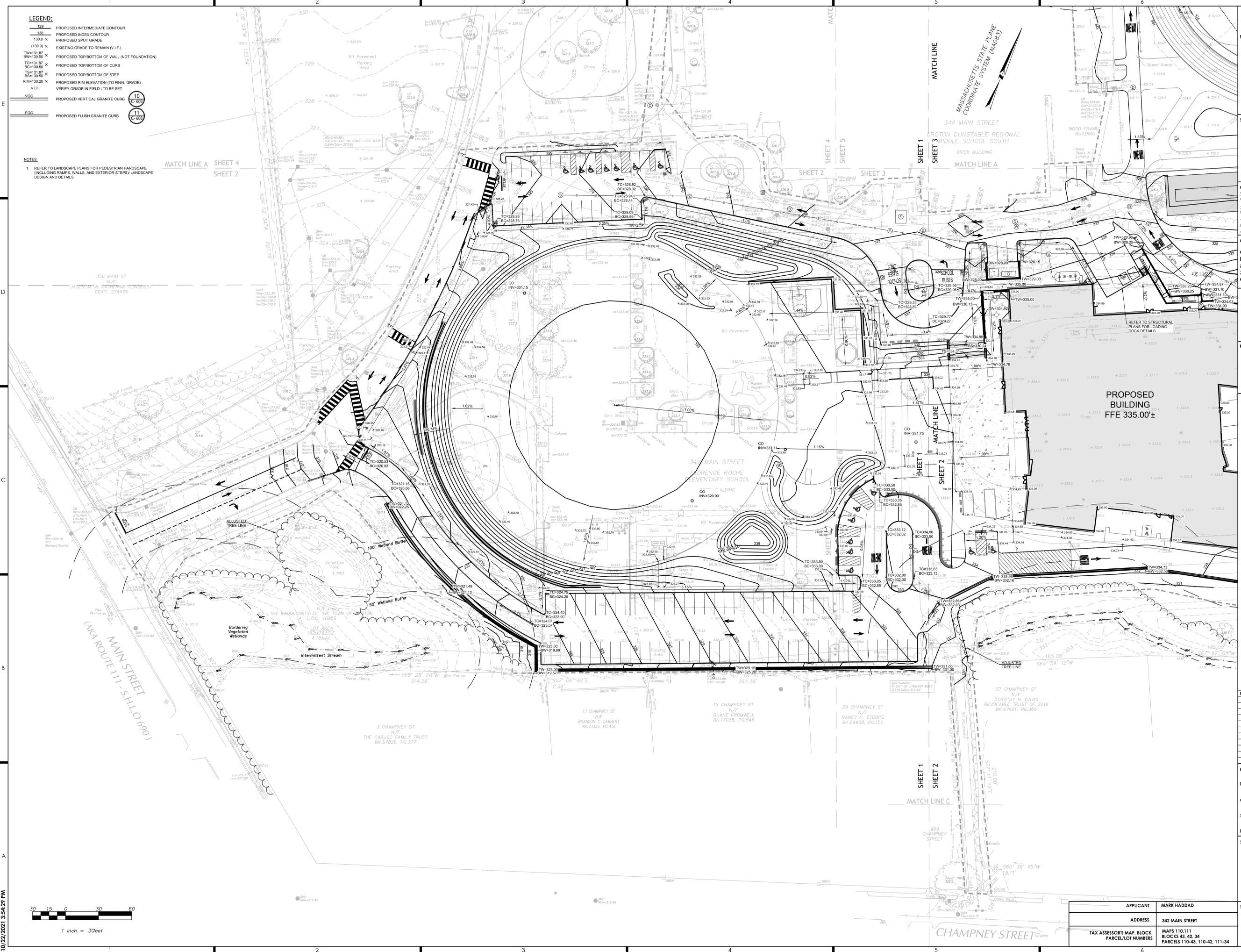


10/22/2021 3:54:29 PM

- LEGEND:**
- 129 PROPOSED INTERMEDIATE CONTOUR
  - 130 PROPOSED INDEX CONTOUR
  - 130.0 X PROPOSED SPOT CONTOUR
  - 130.0 X EXISTING GRADE TO REMAIN (V.I.F.)
  - TW=131.87 PROPOSED TOP/BOTTOM OF WALL (NOT FOUNDATION)
  - TC=131.87 PROPOSED TOP/BOTTOM OF CURB
  - BC=130.50 PROPOSED TOP/BOTTOM OF STEP
  - TS=131.87 PROPOSED TOP/BOTTOM OF STB
  - BS=130.50 PROPOSED RIM ELEVATION (TO FINAL GRADE)
  - RM=130.20 X V.I.F. VERIFY GRADE IN FIELD, TO BE SET
  - VGC PROPOSED VERTICAL GRANITE CURB
  - FGC PROPOSED FLUSH GRANITE CURB

**NOTES:**

- REFER TO LANDSCAPE PLANS FOR PEDESTRIAN HARDSCAPE (INCLUDING RAMP, WALLS, AND EXTERIOR STEPS) LANDSCAPE DESIGN AND DETAILS.



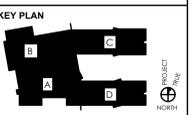
**studio architects**  
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 177 Boylston Street  
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 T 617-524-5558

**STAMP**  
 STATE OF MASSACHUSETTS  
 COMMONWEALTH OF MASSACHUSETTS  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL ENGINEERING  
 NO. 45886  
 EXPIRES 12/31/2024  
 STEPHEN J. POWERS

**CONSULTANT**  
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 Regional School District  
 & Town of Groton  
 344 Main Street  
 Groton, MA 01450

**NOT FOR CONSTRUCTION**  
 DESIGN DEVELOPMENT  
 PERMIT SET



**PROJECT TITLE**  
**FLORENCE ROCHE  
 ELEMENTARY SCHOOL**  
 342 Main Street  
 Groton, MA 01450

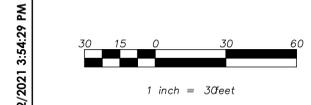
NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

**PROJECT NO** 19088.00  
**DRAWN BY** WJP  
**CHECKED BY** SP  
**SCALE** AS SHOWN  
**DATE** 05/24/2022

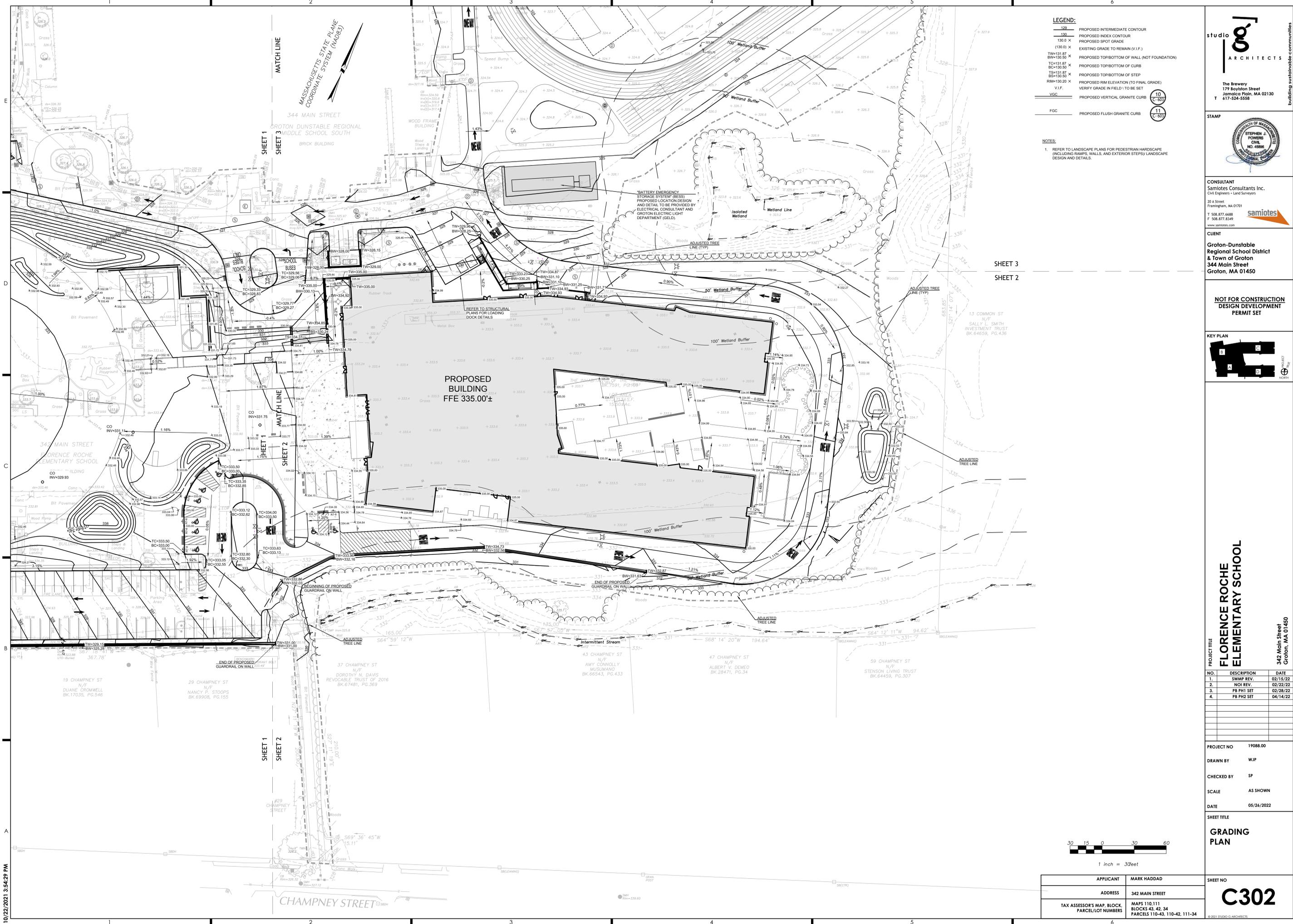
**SHEET TITLE**  
**GRADING  
 PLAN**

**APPLICANT** MARK HADDAD  
**ADDRESS** 342 MAIN STREET  
**TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS** MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

**SHEET NO**  
**C301**



10/22/2021 3:54:29 PM



**LEGEND:**

120	PROPOSED INTERMEDIATE CONTOUR
130	PROPOSED INDEX CONTOUR
(130.0) X	PROPOSED SPOT GRADE
(130.0) X	EXISTING GRADE TO REMAIN (V.I.F.)
TW=131.87 BW=130.50	PROPOSED TOP/BOTTOM OF WALL (NOT FOUNDATION)
TC=131.87 BC=130.50	PROPOSED TOP/BOTTOM OF CURB
TS=131.87 BS=130.50	PROPOSED TOP/BOTTOM OF STEP
RIM=130.20 X	PROPOSED RIM ELEVATION (TO FINAL GRADE)
V.I.F.	VERIFY GRADE IN FIELD (TO BE SET)
FGC	PROPOSED FLUSH GRANITE CURB

**NOTES:**

- REFER TO LANDSCAPE PLANS FOR PEDESTRIAN HARDSCAPE (INCLUDING RAMPS, WALLS, AND EXTERIOR STEPS) LANDSCAPE DESIGN AND DETAILS.

**studio architects**  
ARCHITECTS

The Brewery  
177 Boylston Street  
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T 617-524-5558

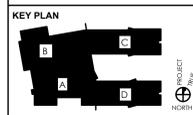
**STAMP**

**CONSULTANT**  
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**CLIENT**  
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344 Main Street  
Groton, MA 01450

**NOT FOR CONSTRUCTION**  
DESIGN DEVELOPMENT PERMIT SET



**PROJECT TITLE**  
FLORENCE ROCHE ELEMENTARY SCHOOL

342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

**PROJECT NO** 19088.00

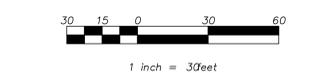
**DRAWN BY** WJP

**CHECKED BY** SP

**SCALE** AS SHOWN

**DATE** 05/24/2022

**SHEET TITLE**  
GRADING PLAN

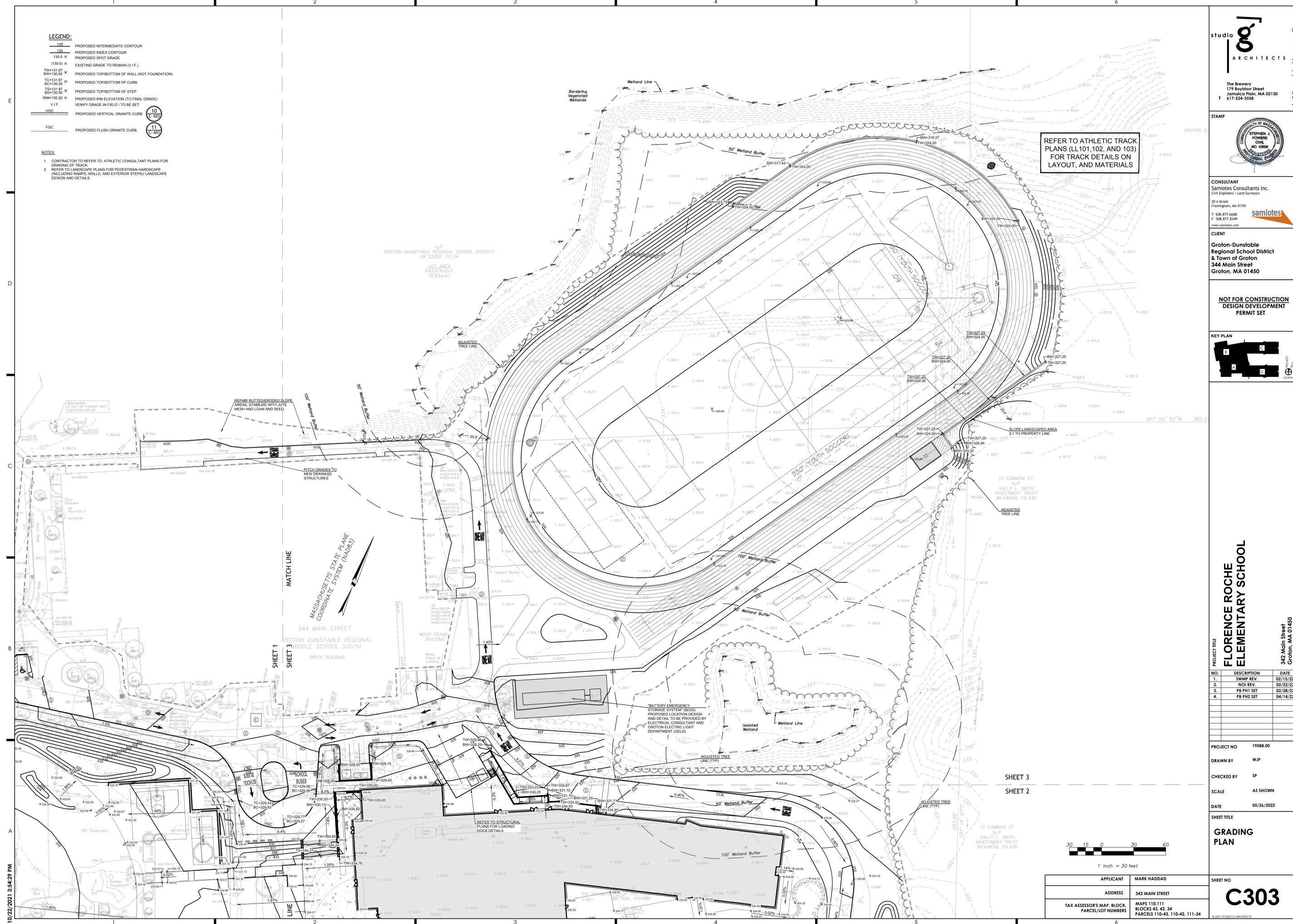


<b>APPLICANT</b>	MARK HADDAD	<b>SHEET NO</b>
<b>ADDRESS</b>	342 MAIN STREET	<b>C302</b>
<b>TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS</b>	MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34	

10/22/2021 3:54:29 PM

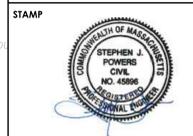
- LEGEND:**
- 130 PROPOSED INTERMEDIATE CONTOUR
  - 130.0 X PROPOSED INDEX CONTOUR
  - 130.0 X PROPOSED SPOT GRADE
  - (130.0) X EXISTING GRADE TO REMAIN (V.I.F.)
  - TW=131.87  
BW=130.50 X PROPOSED TOP/BOTTOM OF WALL (NOT FOUNDATION)
  - TC=131.87  
BC=130.50 X PROPOSED TOP/BOTTOM OF CURB
  - TS=131.87  
BS=130.50 X PROPOSED TOP/BOTTOM OF STEP
  - RM=130.20 X PROPOSED RIM ELEVATION (TO FINAL GRADE)
  - V.I.F. VERIFY GRADE IN FIELD (TO BE SET)
  - VGC PROPOSED VERTICAL GRANITE CURB
  - FGC PROPOSED FLUSH GRANITE CURB

- NOTES:**
1. CONTRACTOR TO REFER TO ATHLETIC CONSULTANT PLANS FOR GRADING OF TRACK.
  2. REFER TO LANDSCAPE PLANS FOR PEDESTRIAN HARDSCAPE (INCLUDING RAMPS, WALLS, AND EXTERIOR STEPS) LANDSCAPE DESIGN AND DETAILS.



REFER TO ATHLETIC TRACK PLANS (LL101,102, AND 103) FOR TRACK DETAILS ON LAYOUT, AND MATERIALS

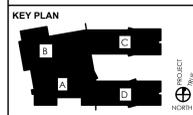
studio **oo** ARCHITECTS  
The Brewery  
177 Boylston Street  
Jamaica Plain, MA 02130  
T 617-524-5558



CONSULTANT  
Samiotes Consultants Inc.  
Civil Engineers & Land Surveyors  
30 A Street  
Framingham, MA 01701  
T 508.877.6688  
F 508.877.8349  
www.samiotes.com

CLIENT  
Groton-Dunstable Regional School District & Town of Groton  
344 Main Street  
Groton, MA 01450

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DESIGN DEVELOPMENT  
PERMIT SET



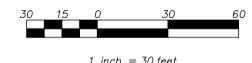
PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWAMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

PROJECT NO 19088.00  
DRAWN BY WJP  
CHECKED BY SP  
SCALE AS SHOWN  
DATE 05/24/2022

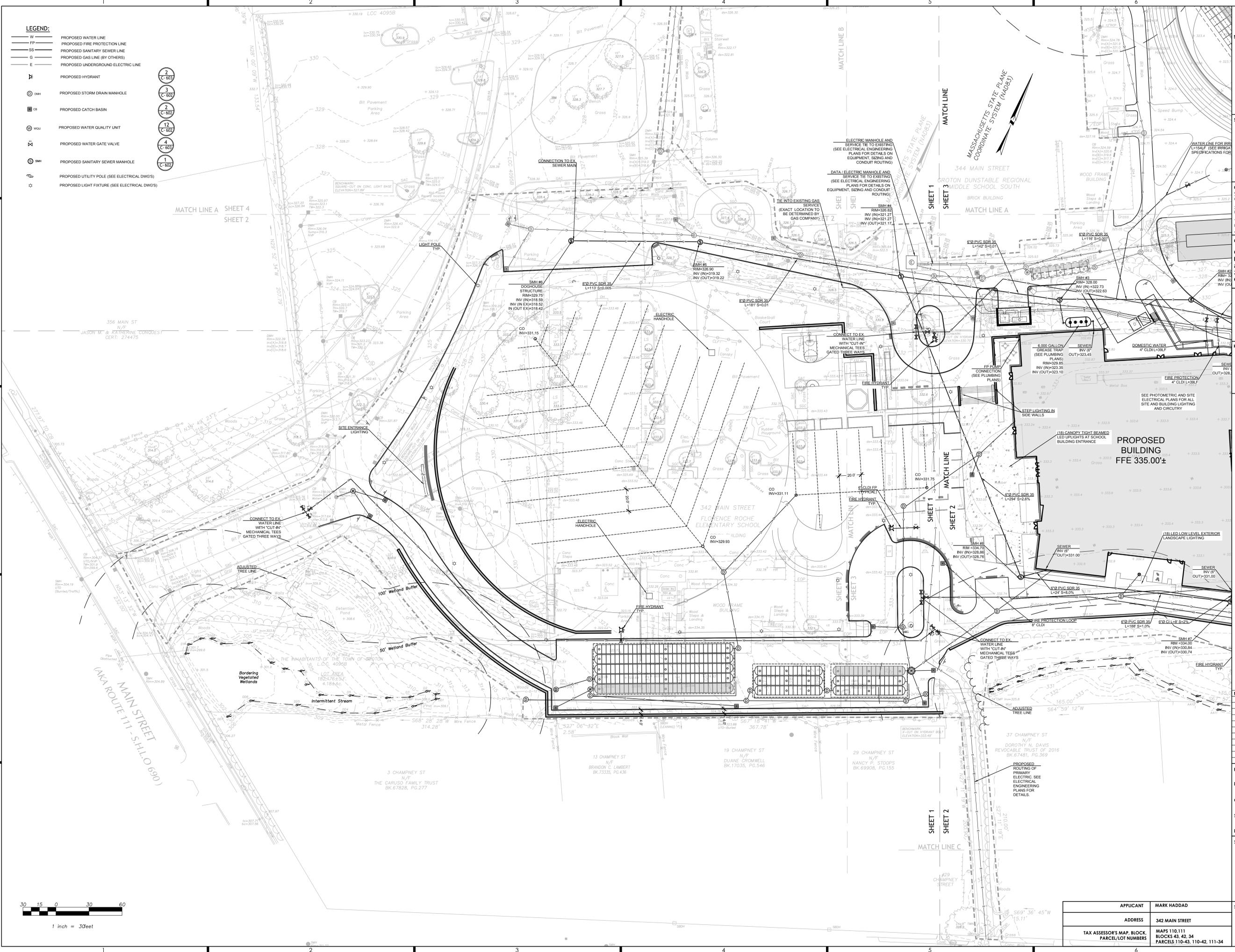
SHEET TITLE  
**GRADING  
PLAN**

SHEET NO  
**C303**



APPLICANT	MARK HADDAD
ADDRESS	342 MAIN STREET
TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS	MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

10/22/2021 3:54:29 PM



- LEGEND:**
- W PROPOSED WATER LINE
  - FP PROPOSED FIRE PROTECTION LINE
  - SS PROPOSED SANITARY SEWER LINE
  - G PROPOSED GAS LINE (BY OTHERS)
  - E PROPOSED UNDERGROUND ELECTRIC LINE
  - PH PROPOSED HYDRANT
  - DMH PROPOSED STORM DRAIN MANHOLE
  - CB PROPOSED CATCH BASIN
  - WQU PROPOSED WATER QUALITY UNIT
  - WGV PROPOSED WATER GATE VALVE
  - SMH PROPOSED SANITARY SEWER MANHOLE
  - UP PROPOSED UTILITY POLE (SEE ELECTRICAL DWG'S)
  - LF PROPOSED LIGHT FIXTURE (SEE ELECTRICAL DWG'S)

- 2 C-603
- 3 C-602
- 2 C-602
- 12 C-602
- 4 C-603
- 1 C-602

studio  
ARCHITECTS

The Brewery  
177 Boylston Street  
Jamaica Plain, MA 02130  
T 617-524-5558

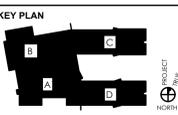
building sustainable communities



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Civil Engineers - Land Surveyors  
30 A Street  
Frammingham, MA 01701  
T 508.877.6688  
F 508.877.8349  
www.samiotes.com

**CLIENT**  
Gronon-Dunstable  
Regional School District  
& Town of Gronon  
344 Main Street  
Gronon, MA 01450

**NOT FOR CONSTRUCTION  
DESIGN DEVELOPMENT  
PERMIT SET**



SEE PHOTOMETRIC AND SITE  
ELECTRICAL PLANS FOR ALL  
SITE AND BUILDING LIGHTING  
AND CIRCUITRY

**PROPOSED BUILDING  
FFE 335,000±**

(1) CANOPY TIGHT BEAMER  
LED LIGHTS AT SCHOOL  
BUILDING ENTRANCE

(18) LED LOW LEVEL EXTERIOR  
LANDSCAPE LIGHTING

**PROJECT TITLE**  
FLORENCE ROCHE  
ELEMENTARY SCHOOL

342 Main Street  
Gronon, MA 01450

NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

**PROJECT NO** 19088.00

**DRAWN BY** WJP

**CHECKED BY** SP

**SCALE** AS SHOWN

**DATE** 05/24/2022

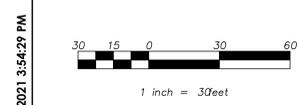
**SHEET TITLE**  
CIVIL UTILITY  
PLAN

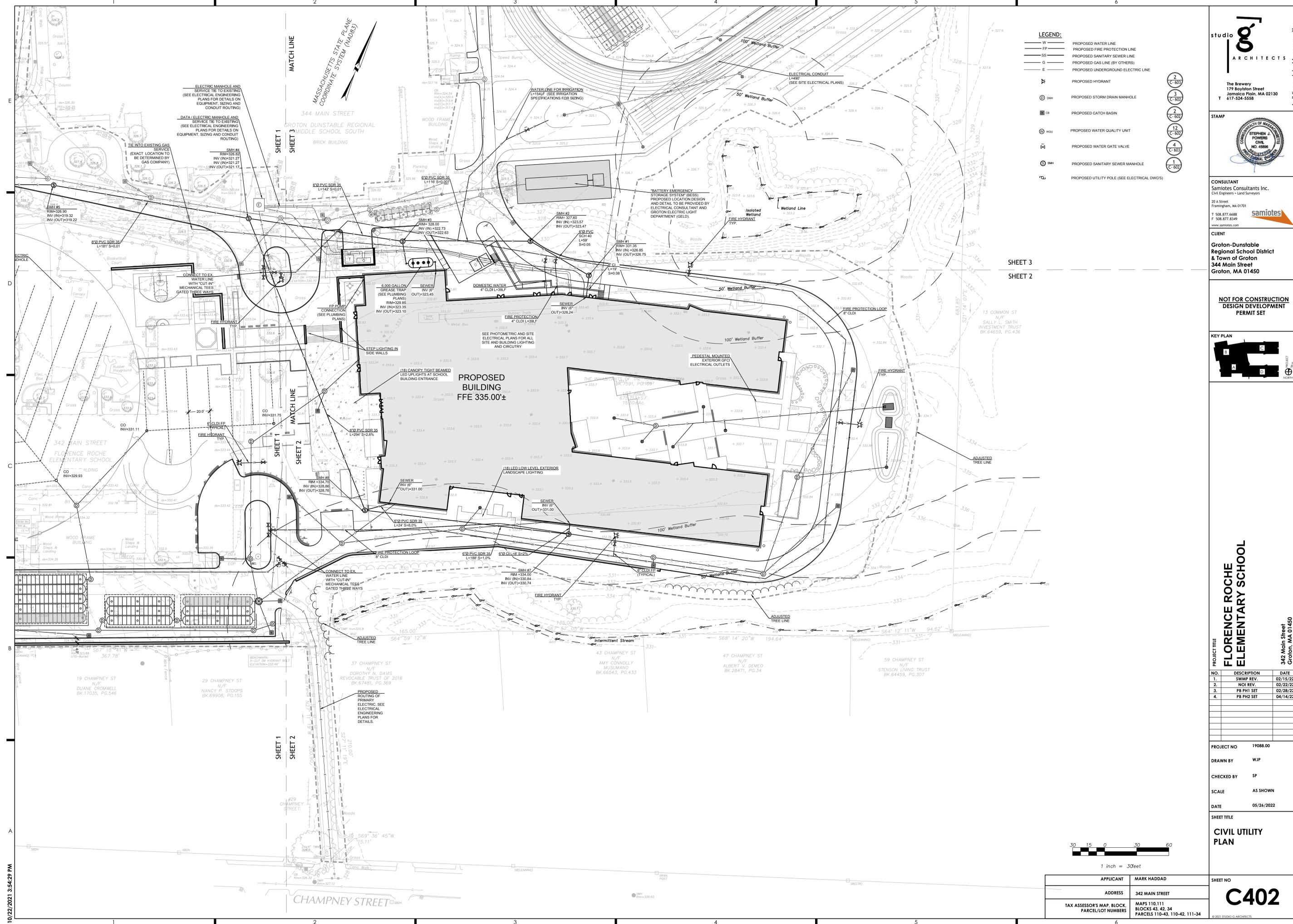
**APPLICANT** MARK HADDAD

**ADDRESS** 342 MAIN STREET

**TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS** MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

**SHEET NO**  
**C401**

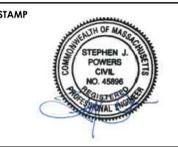




- LEGEND:**
- W — PROPOSED WATER LINE
  - FP — PROPOSED FIRE PROTECTION LINE
  - SS — PROPOSED SANITARY SEWER LINE
  - G — PROPOSED GAS LINE (BY OTHERS)
  - E — PROPOSED UNDERGROUND ELECTRIC LINE
  - ⊕ PROPOSED HYDRANT
  - ⊙ (D&H) PROPOSED STORM DRAIN MANHOLE
  - ⊕ (CB) PROPOSED CATCH BASIN
  - ⊙ (WQU) PROPOSED WATER QUALITY UNIT
  - ⊕ (WGV) PROPOSED WATER GATE VALVE
  - ⊙ (SM) PROPOSED SANITARY SEWER MANHOLE
  - ⊕ (UL) PROPOSED UTILITY POLE (SEE ELECTRICAL DWGS)

- 2 C-603
- 3 C-603
- 2 C-602
- 12 C-602
- 4 C-603
- 1 C-602

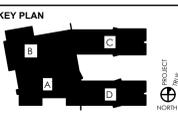
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 The Brewery  
 177 Boylston Street  
 Jamaica Plain, MA 02130  
 T 617-524-5558  
 building sustainable communities



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 Samiotes Consultants Inc.  
 Civil Engineers + Land Surveyors  
 20 A Street  
 Framingham, MA 01701  
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 F 508.877.8349  
 www.samiotes.com

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 Groton-Dunstable Regional School District & Town of Groton  
 344 Main Street  
 Groton, MA 01450

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 DESIGN DEVELOPMENT PERMIT SET



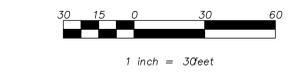
**PROJECT TITLE**  
 FLORENCE ROCHE ELEMENTARY SCHOOL  
 342 Main Street  
 Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

**PROJECT NO** 19088.00  
**DRAWN BY** WJP  
**CHECKED BY** SP  
**SCALE** AS SHOWN  
**DATE** 05/24/2022

**SHEET TITLE**  
 CIVIL UTILITY PLAN

**SHEET NO**  
**C402**



<b>APPLICANT</b>	MARK HADDAD
<b>ADDRESS</b>	342 MAIN STREET
<b>TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS</b>	MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

10/22/2021 3:54:29 PM

- LEGEND:**
- TW=131.87  
BW=130.50 X PROPOSED TOP/BOTTOM OF WALL (NOT FOUNDATION)
  - W PROPOSED WATER LINE
  - FP PROPOSED FIRE PROTECTION LINE
  - SS PROPOSED SANITARY SEWER LINE
  - G PROPOSED GAS LINE (BY OTHERS)
  - E PROPOSED UNDERGROUND ELECTRIC LINE
  - H PROPOSED HYDRANT
  - DMH PROPOSED STORM DRAIN MANHOLE
  - CB PROPOSED CATCH BASIN
  - WQU PROPOSED WATER QUALITY UNIT
  - WGV PROPOSED WATER GATE VALVE
  - SMH PROPOSED SANITARY SEWER MANHOLE
  - UP PROPOSED UTILITY POLE (SEE ELECTRICAL DWGS)

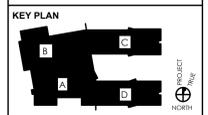
- 2  
C-603
- 3  
C-602
- 2  
C-602
- 12  
C-601
- 4  
C-603
- 1  
C-602



**CONSULTANT**  
Samiotes Consultants Inc.  
Civil Engineers + Land Surveyors  
30 A Street  
Framingham, MA 01701  
T 508.877.6688  
F 508.877.8349  
www.samiotes.com

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Groton-Dunstable  
Regional School District  
& Town of Groton  
344 Main Street  
Groton, MA 01450

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DESIGN DEVELOPMENT  
PERMIT SET



**PROJECT TITLE**  
FLORENCE ROCHE  
ELEMENTARY SCHOOL  
342 Main Street  
Groton, MA 01450

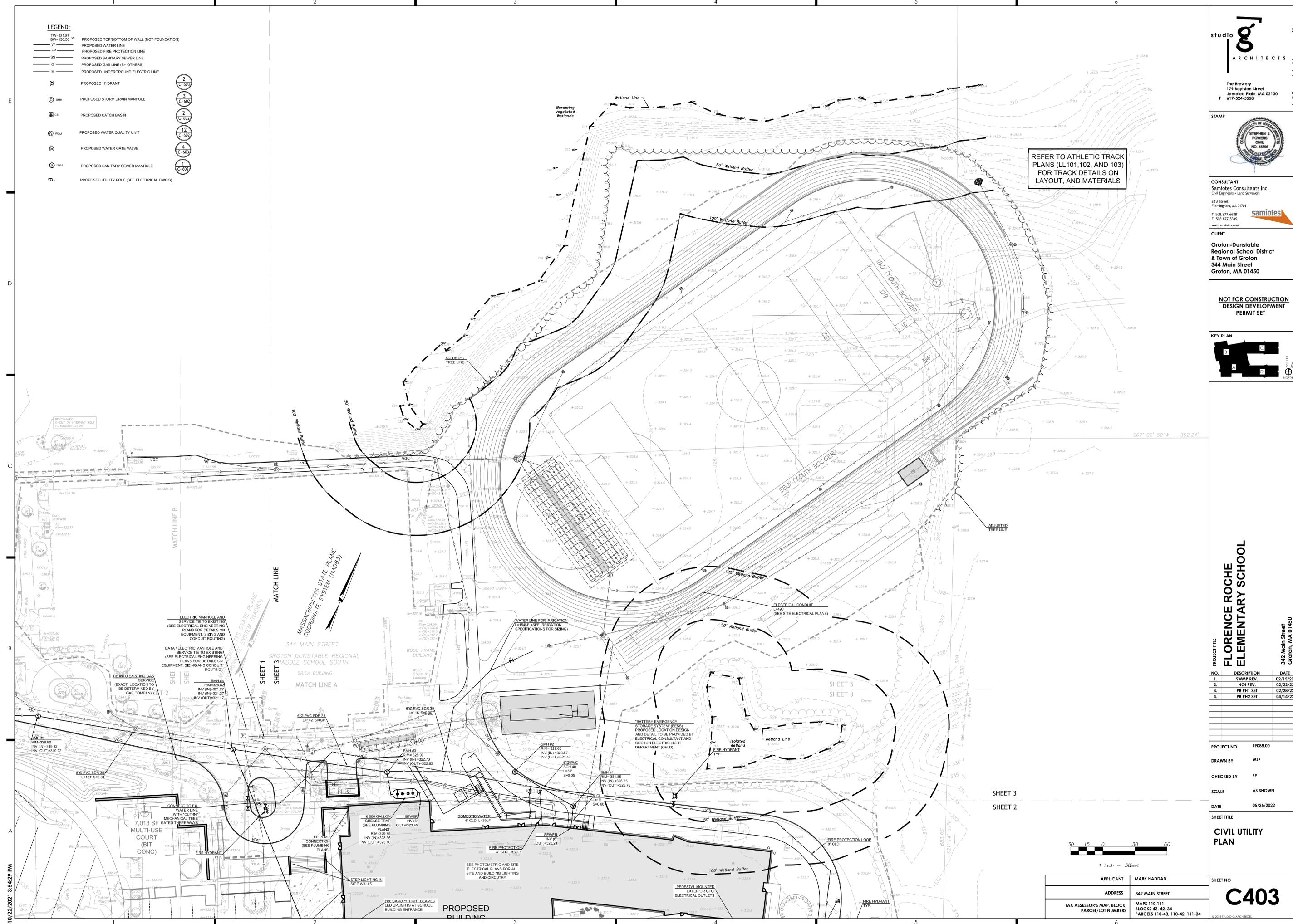
NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

**PROJECT NO** 19088.00  
**DRAWN BY** WJP  
**CHECKED BY** SP  
**SCALE** AS SHOWN  
**DATE** 05/24/2022

**SHEET TITLE**  
CIVIL UTILITY  
PLAN

<b>APPLICANT</b>	MARK HADDAD
<b>ADDRESS</b>	342 MAIN STREET
<b>TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS</b>	MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

**SHEET NO**  
**C403**



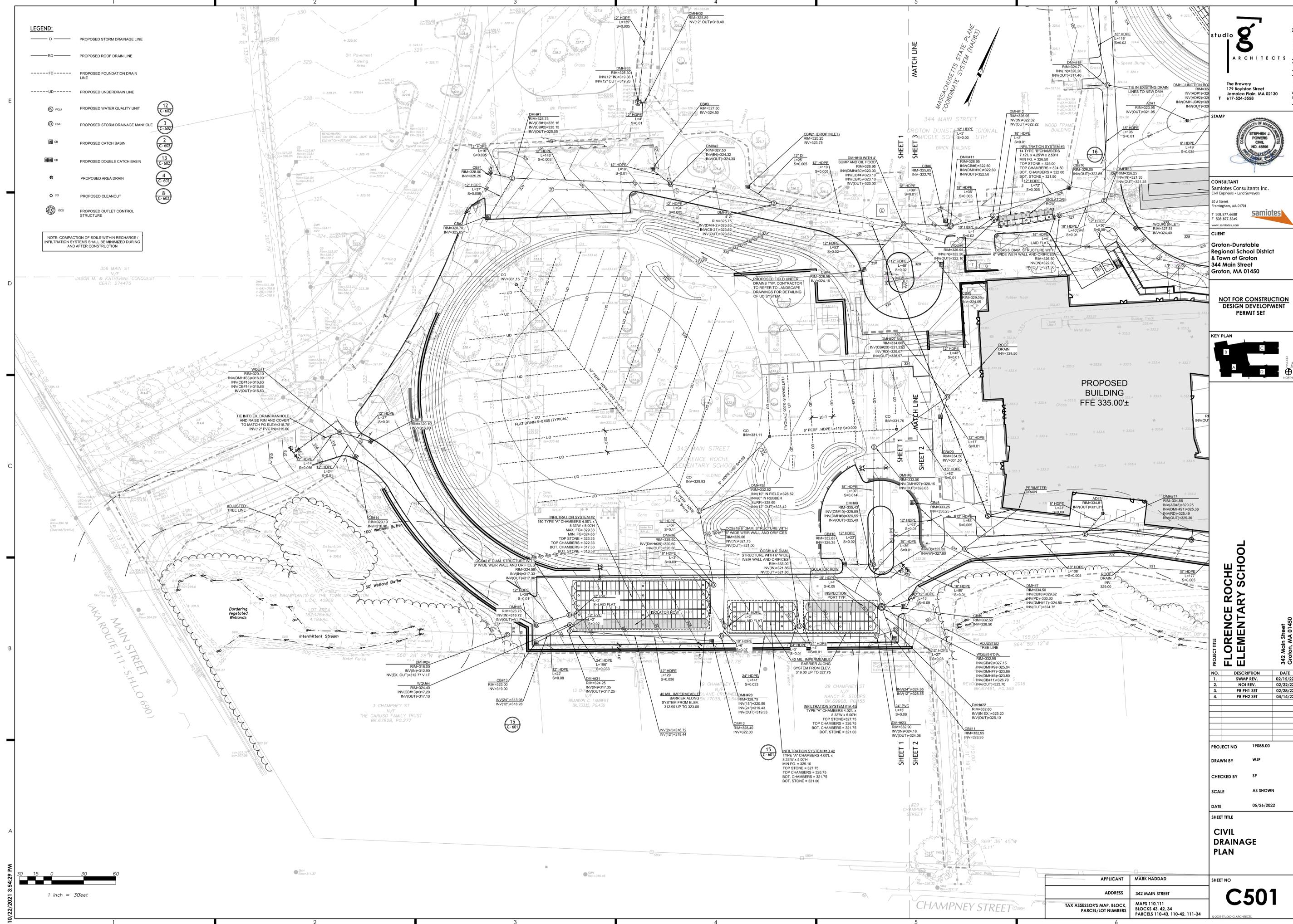
REFER TO ATHLETIC TRACK  
PLANS (LL101,102, AND 103)  
FOR TRACK DETAILS ON  
LAYOUT, AND MATERIALS

10/22/2021 3:54:29 PM

- LEGEND:**
- D — PROPOSED STORM DRAINAGE LINE
  - RD — PROPOSED ROOF DRAIN LINE
  - FD — PROPOSED FOUNDATION DRAIN LINE
  - UD — PROPOSED UNDERDRAIN LINE
  - WQU — PROPOSED WATER QUALITY UNIT
  - DMH — PROPOSED STORM DRAINAGE MANHOLE
  - CB — PROPOSED CATCH BASIN
  - CB — PROPOSED DOUBLE CATCH BASIN
  - AD — PROPOSED AREA DRAIN
  - CO — PROPOSED CLEANOUT
  - OCSS — PROPOSED OUTLET CONTROL STRUCTURE

NOTE: COMPACTION OF SOILS WITHIN RECHARGE / INFILTRATION SYSTEMS SHALL BE MINIMIZED DURING AND AFTER CONSTRUCTION

- 12 (C-607)
- 3 (C-607)
- 2 (C-607)
- 13 (C-607)
- 4 (C-607)
- 8 (C-607)



studio **oo** ARCHITECTS

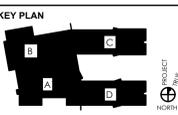
The Brewery  
177 Boylston Street  
Jamaica Plain, MA 02130  
T 617-524-5558

STAMP

CONSULTANT  
Samiotes Consultants Inc.  
Civil Engineers & Land Surveyors  
20 A Street  
Framingham, MA 01701  
T 508.877.6688  
F 508.877.8349  
www.samiotes.com

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Groton-Drumstaber  
Regional School District  
& Town of Groton  
344 Main Street  
Groton, MA 01450

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DESIGN DEVELOPMENT  
PERMIT SET



PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

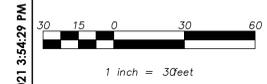
NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

PROJECT NO 19088.00  
DRAWN BY WJP  
CHECKED BY SP  
SCALE AS SHOWN  
DATE 05/24/2022

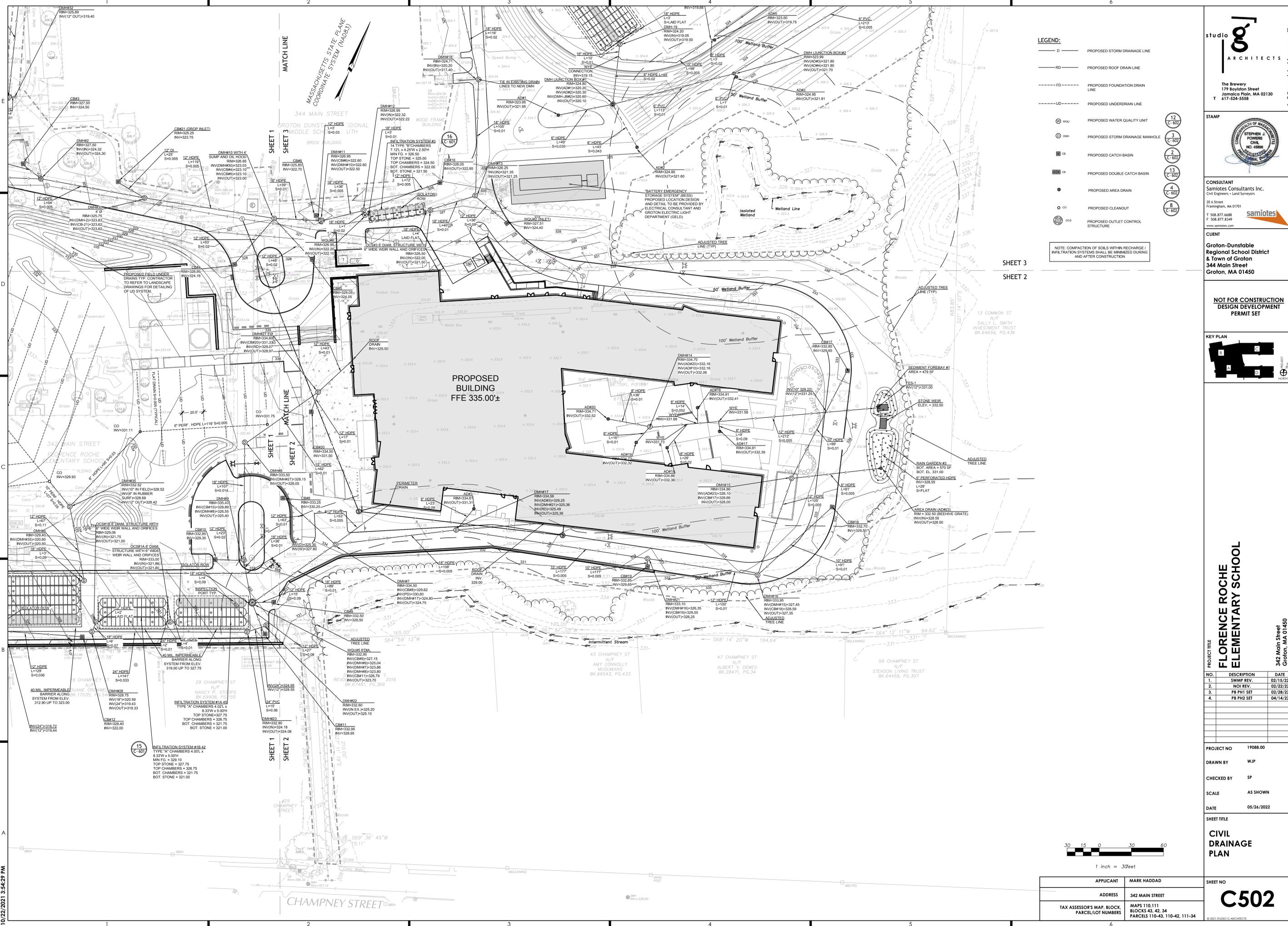
SHEET TITLE  
**CIVIL  
DRAINAGE  
PLAN**

APPLICANT MARK HADDAD  
ADDRESS 342 MAIN STREET  
TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS MAPS 110, 111, BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

SHEET NO  
**C501**



10/22/2021 3:54:29 PM



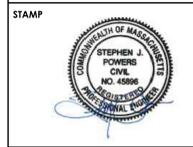
- LEGEND:**
- D — PROPOSED STORM DRAINAGE LINE
  - RD — PROPOSED ROOF DRAIN LINE
  - FD — PROPOSED FOUNDATION DRAIN LINE
  - UD — PROPOSED UNDERDRAIN LINE
  - WQU — PROPOSED WATER QUALITY UNIT
  - DMH — PROPOSED STORM DRAINAGE MANHOLE
  - CB — PROPOSED CATCH BASIN
  - CB — PROPOSED DOUBLE CATCH BASIN
  - AD — PROPOSED AREA DRAIN
  - CO — PROPOSED CLEANOUT
  - OCS — PROPOSED OUTLET CONTROL STRUCTURE

- 12 C-607
- 3 C-607
- 2 C-607
- 13 C-607
- 4 C-607
- 8 C-607

NOTE: COMPACTION OF SOILS WITHIN RECHARGE / INFILTRATION SYSTEMS SHALL BE MINIMIZED DURING AND AFTER CONSTRUCTION

SHEET 3  
SHEET 2

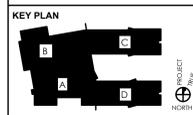
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Jamaica Plain, MA 02130  
T 617-524-5558



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Samioles Consultants Inc.  
Civil Engineers & Land Surveyors  
20 A Street  
Framingham, MA 01701  
T 508.877.6688  
F 508.877.8349  
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344 Main Street  
Groton, MA 01450

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DESIGN DEVELOPMENT  
PERMIT SET

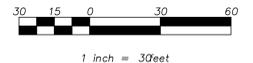


PROJECT TITLE  
**FLORENCE ROCHE ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

PROJECT NO 19088.00  
DRAWN BY WJP  
CHECKED BY SP  
SCALE AS SHOWN  
DATE 05/24/2022

SHEET TITLE  
**CIVIL DRAINAGE PLAN**



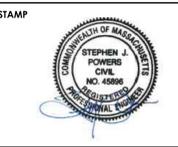
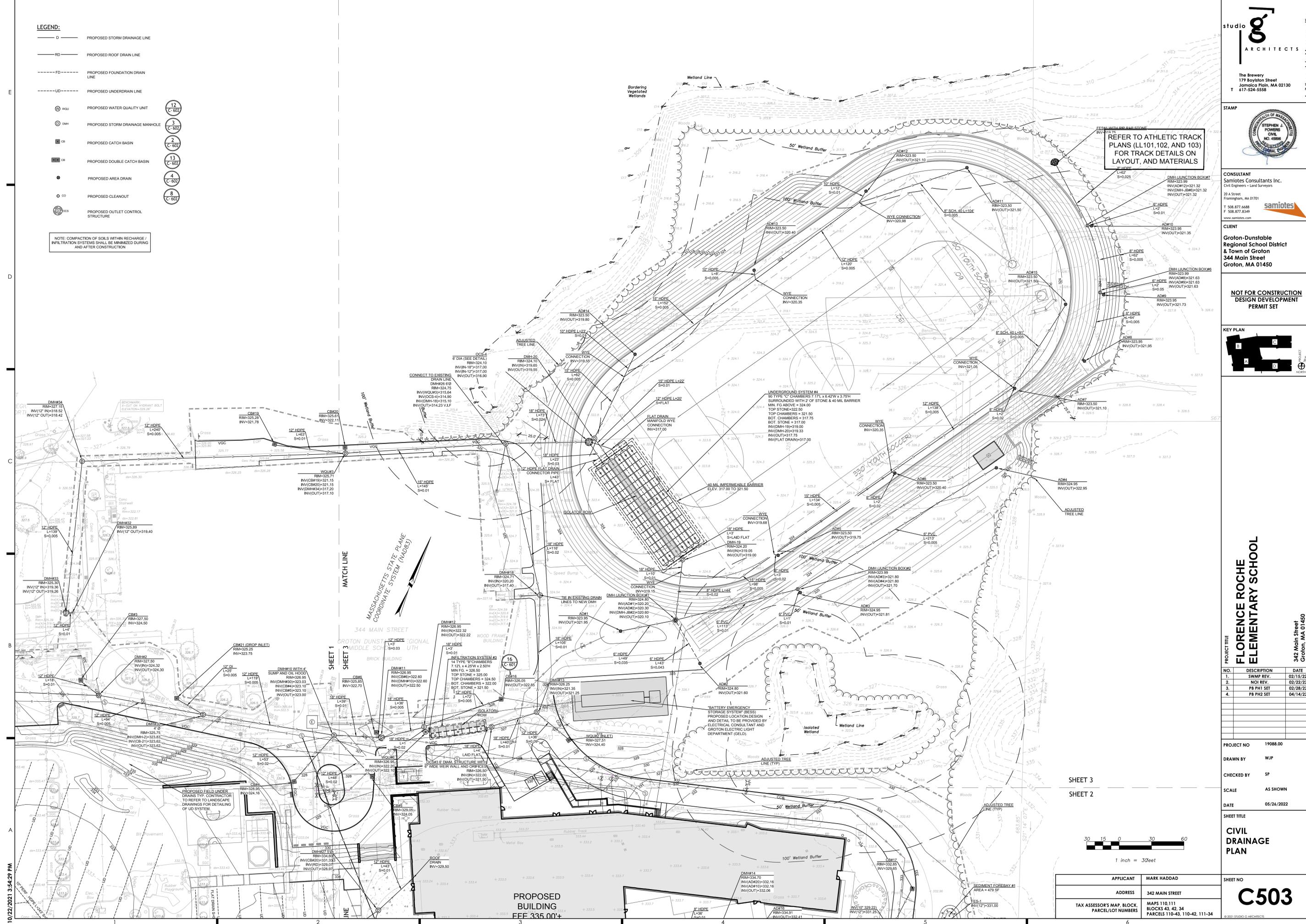
APPLICANT	MARK HADDAD	SHEET NO	<b>C502</b>
ADDRESS	342 MAIN STREET	TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS	MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

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- LEGEND:**
- D PROPOSED STORM DRAINAGE LINE
  - RD PROPOSED ROOF DRAIN LINE
  - FD PROPOSED FOUNDATION DRAIN LINE
  - UD PROPOSED UNDERDRAIN LINE
  - WQI PROPOSED WATER QUALITY UNIT
  - DMH PROPOSED STORM DRAINAGE MANHOLE
  - CB PROPOSED CATCH BASIN
  - CB PROPOSED DOUBLE CATCH BASIN
  - AD PROPOSED AREA DRAIN
  - CO PROPOSED CLEANOUT
  - OCS PROPOSED OUTLET CONTROL STRUCTURE

- 12" C-607
- 3" C-607
- 2" C-607
- 13" C-607
- 4" C-607
- 8" C-607

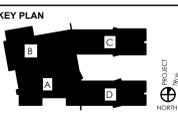
NOTE: COMPACTION OF SOILS WITHIN RECHARGE / INFILTRATION SYSTEMS SHALL BE MINIMIZED DURING AND AFTER CONSTRUCTION



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 Samiotes Consultants Inc.  
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 F 508.877.8349  
 www.samiotes.com

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 344 Main Street  
 Groton, MA 01450

**NOT FOR CONSTRUCTION**  
 DESIGN DEVELOPMENT PERMIT SET



**FLORENCE ROCHE ELEMENTARY SCHOOL**  
 342 Main Street  
 Groton, MA 01450

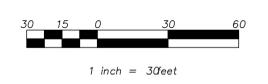
NO.	DESCRIPTION	DATE
1.	SWAMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

PROJECT NO 19088.00  
 DRAWN BY WJP  
 CHECKED BY SP  
 SCALE AS SHOWN  
 DATE 05/24/2022

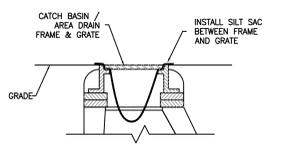
**CIVIL DRAINAGE PLAN**

SHEET NO **C503**

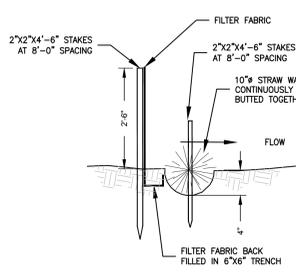
APPLICANT	MARK HADDAD
ADDRESS	342 MAIN STREET
TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS	MAPS 110, 111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34



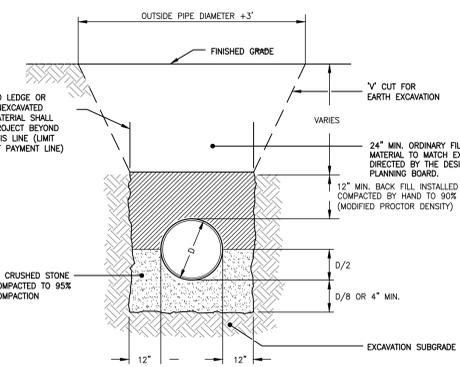
10/22/2021 3:54:29 PM



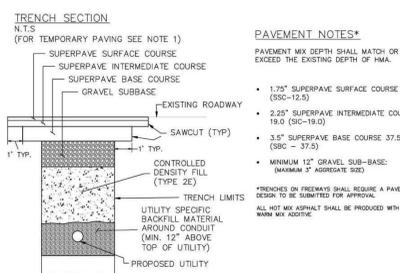
1 CATCH BASIN W/ SILT SAC  
NTS



2 SILTY FENCE WITH STRAW WATTLE  
NTS



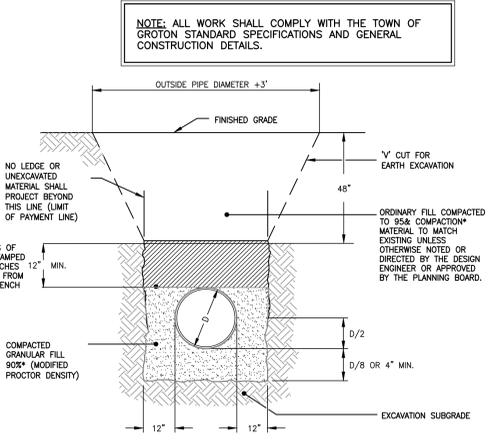
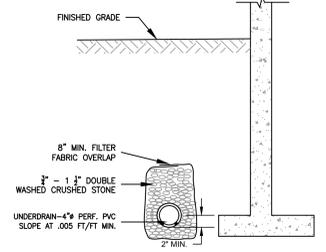
3 TRANSITIONAL GRANITE CURB  
NTS



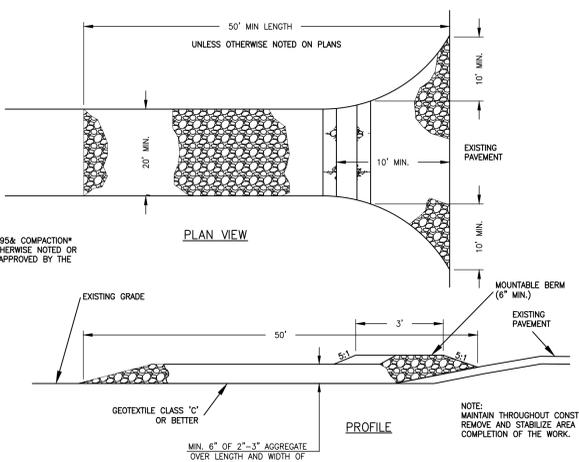
4 TRENCH PATCHING DETAIL  
NTS

**PAVEMENT NOTES\***  
PAVEMENT MIX DEPTH SHALL MATCH OR EXCEED THE EXISTING DEPTH OF PAV.  
• 1.75" SUPERPAVE SURFACE COURSE 12.5 (SBC-12.5)  
• 2.25" SUPERPAVE INTERMEDIATE COURSE 19.0 (SBC-19.0)  
• 3.5" SUPERPAVE BASE COURSE 37.5 (SBC-37.5)  
• MINIMUM 12" GRAVEL SUB-BASE (MINIMUM 1" AGGREGATE SIZE)  
\*TRENCHES ON FREeways SHALL REQUIRE A PAVEMENT DESIGN TO BE SUBMITTED FOR APPROVAL.  
ALL HOT MIX ASPHALT SHALL BE PRODUCED WITH A WARM MIX ADDITIVE.  
NOTES:  
1. IF A TEMPORARY PATCH IS TO BE USED, THE COF SHALL BE PLACED TO THE ELEVATION OF THE ADJOINING SUBGRADE. THEN GRAVEL SHALL BE PLACED AND COMPACTED TO WITHIN 3 1/2 INCHES OF THE FINISHED GRADE. THE LAST 3 1/2 INCHES SHALL BE HOT MIX ASPHALT PLACED IN TWO LAYERS: 1 1/2" SURFACE COURSE OVER 2" INTERMEDIATE COURSE.  
2. MATERIAL WHICH MEETS THE SPECIFICATION FOR GRAVEL BORROW TYPE C (M10.0 TYPE C), PLACED AND COMPACTED IN LAYERS NO GREATER THAN 6", MAY BE USED IN PLACE OF THE COF WITH APPROVAL FROM THE DISTRICT HIGHWAY DIRECTOR.  
3. THE EXPOSED EDGES OF ALL LONGITUDINAL AND TRANSVERSE SAW CUT JOINTS SHALL BE TREATED WITH HOT POURED RUBBERIZED ASPHALT JOINT SEALANT MEETING MASSDOT SPECIFICATIONS.  
4. YELLOW METAL FOL MARKING TAPE SHALL BE PLACED 18" OVER THE CONDUIT (METAL MARKING TAPE SHOULD BE USED FOR NON-METALLIC CONDUIT).  
5. FOR ROADS WITH AN EXISTING CEMENT CONCRETE BASE, A REINFORCED, HIGH EARLY STRENGTH AIR ENTRAINED, CLASS "C" CEMENT CONCRETE SLAB SHALL BE CAST IN PLACE TO MEET THE EXISTING PAVEMENT. SPECIFIC JOINT DETAILS WITH THE EXISTING PAVEMENT SHALL BE APPROVED DEPENDENT ON THE EXISTING SITE CONDITIONS.  
6. ALL TRENCH DIMENSIONS SHALL BE IN ACCORDANCE WITH SUB-SECTION 140.80 OF THE MASSDOT STANDARDS AND SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.  
7. SIC 18.0 MAY BE SUBSTITUTED FOR SBC-37.5

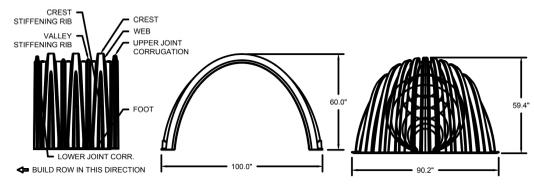
5 FOUNDATION UNDERDRAIN  
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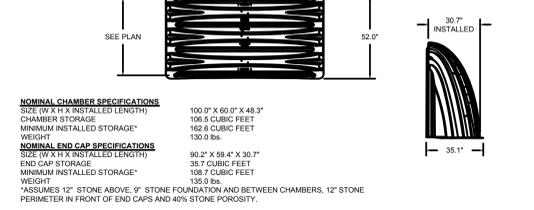
6 WATER MAIN TRENCH IN FIRM GROUND  
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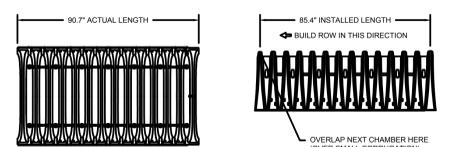
7 TRENCH SECTION - PVC/RCP GRAVITY PIPE  
NTS



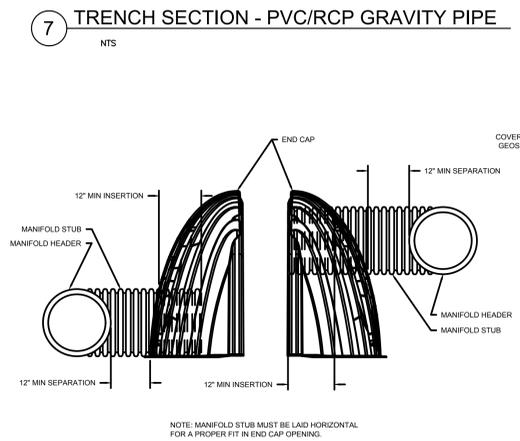
8 STABILIZED CONSTRUCTION ENTRANCE  
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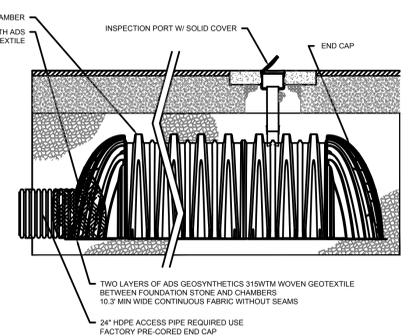
9 INFILTRATION SYSTEM TYPE "A" CHAMBER  
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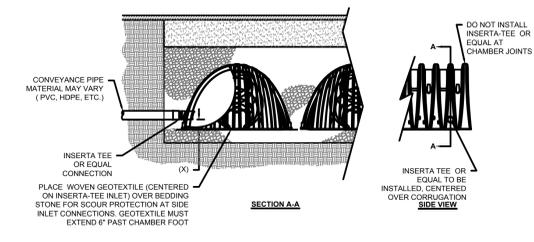
10 INFILTRATION SYSTEM TYPE "B" CHAMBER  
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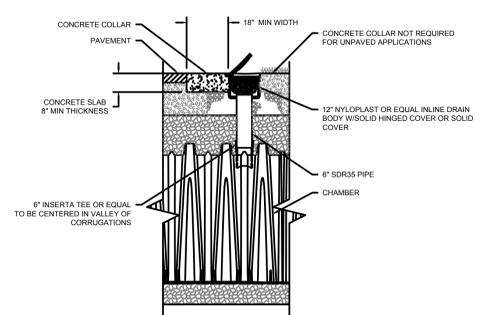
11 INFILTRATION SYSTEM END CAP INSERTION DETAIL  
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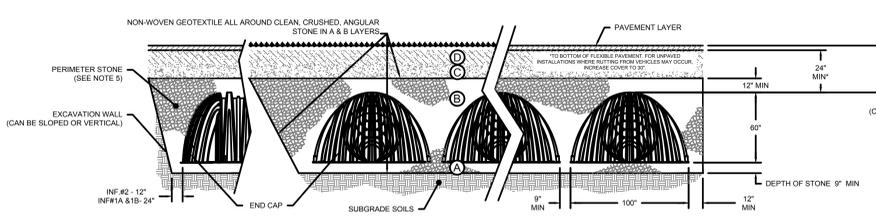
12 INFILTRATION SYSTEM ISOLATOR ROW DETAIL  
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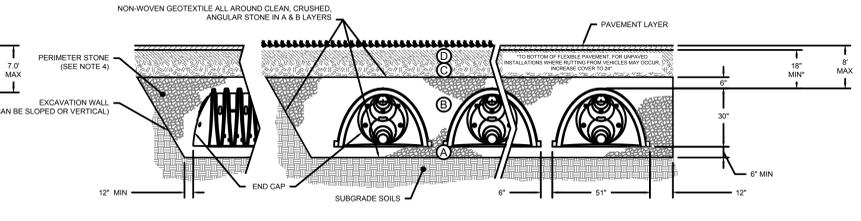
13 INSERTA-TEE SIDE INLET DETAIL  
NTS



14 INFILTRATION SYSTEM 6" INSPECTION PORT DETAIL  
NTS



15 INFILTRATION SYSTEM TYPE "A" CROSS SECTION DETAIL  
NTS



16 INFILTRATION SYSTEM TYPE "B" CROSS SECTION DETAIL  
NTS

**ACCEPTABLE FILL MATERIALS: INFILTRATION CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDEDMENT STONE (B) LAYERS TO 2\"/>		

17 INFILTRATION SYSTEM TYPE "A" CROSS SECTION DETAIL  
NTS

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The Brewery  
177 Boylston Street  
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STEPHEN J. POWERS  
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344 Main Street  
Groton, MA 01450

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DESIGN DEVELOPMENT  
PERMIT SET

KEY PLAN  
PROJECT  
NORTH

PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWAMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

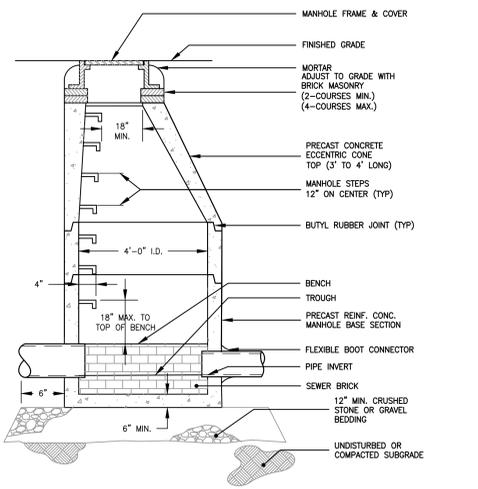
PROJECT NO 19088.00  
DRAWN BY WJP  
CHECKED BY SP  
SCALE AS SHOWN  
DATE 05/24/2022  
SHEET TITLE

CIVIL DETAIL  
SHEET

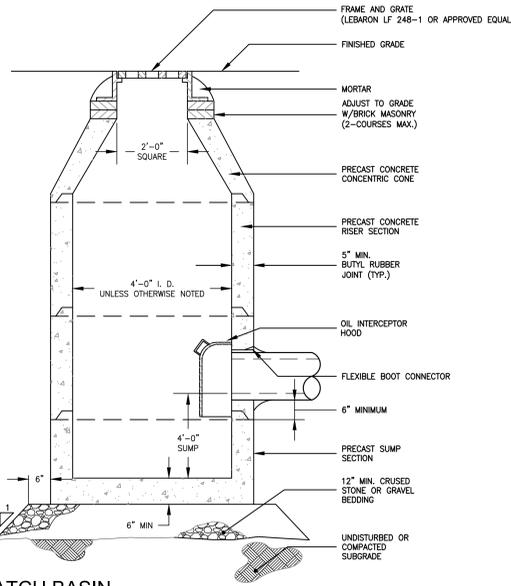
SHEET NO  
**C601**  
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10/22/2021 3:54:29 PM

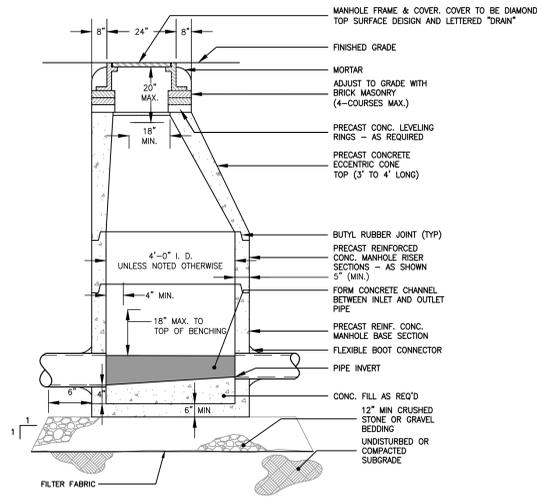
NOTE: ALL WORK SHALL COMPLY WITH THE TOWN OF GROTON STANDARD SPECIFICATIONS AND GENERAL CONSTRUCTION DETAILS.



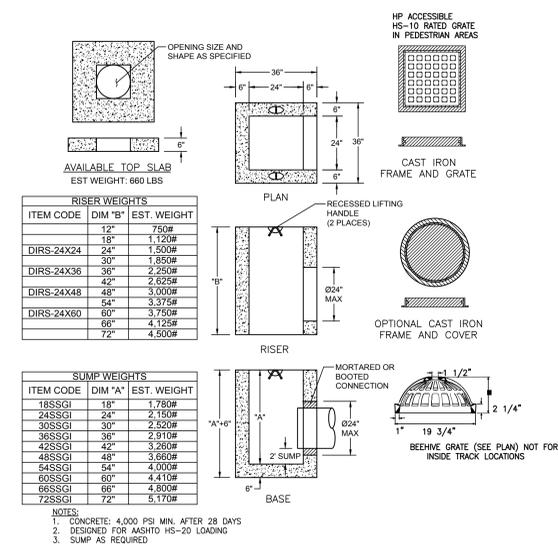
1 PRECAST SEWER MANHOLE



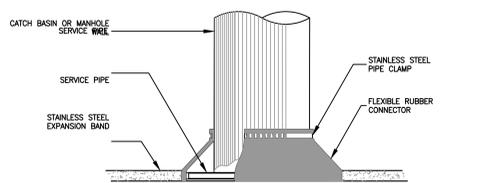
2 CATCH BASIN



3 PRECAST STORM DRAIN MANHOLE

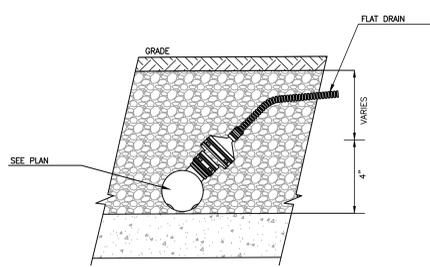


4 AREA DRAIN / DRAIN BASIN

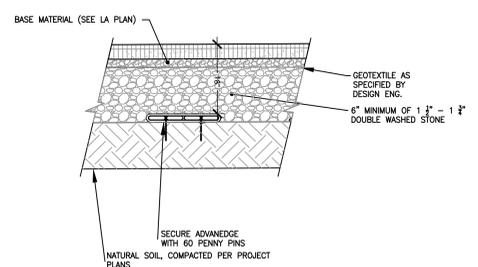


NOTES:  
 1. OPENING IN CONCRETE WALL SHALL BE CORED USING HIGH SPEED DIAMOND DRILL.  
 2. ALL METAL FIXTURES SHALL BE OF STAINLESS STEEL.  
 3. SERVICE LINE SHALL BE FLUSH WITH THE INSIDE OF THE CONCRETE WALL.

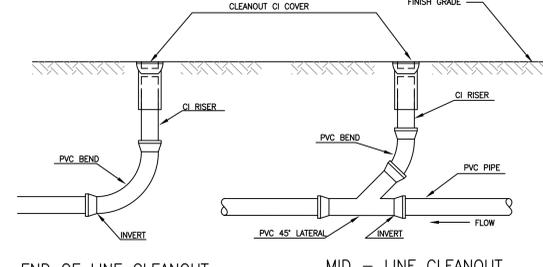
5 PIPE CONNECTION TO MANHOLE



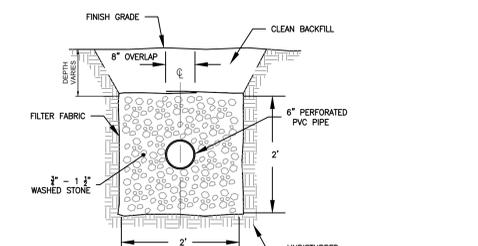
6 FLAT DRAIN CONNECTION



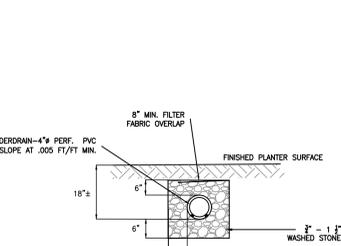
7 FLAT DRAIN DETAIL



8 CLEANOUT

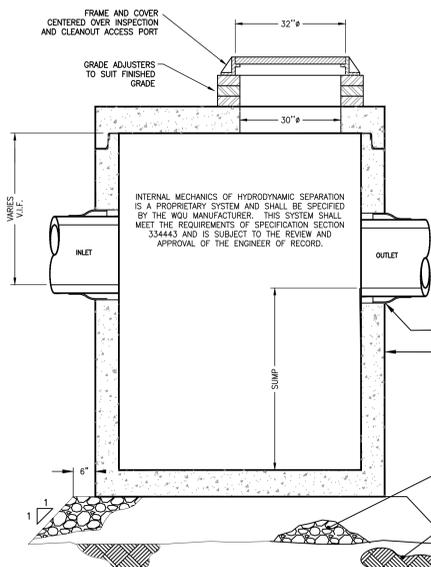


9 INFILTRATION TRENCH

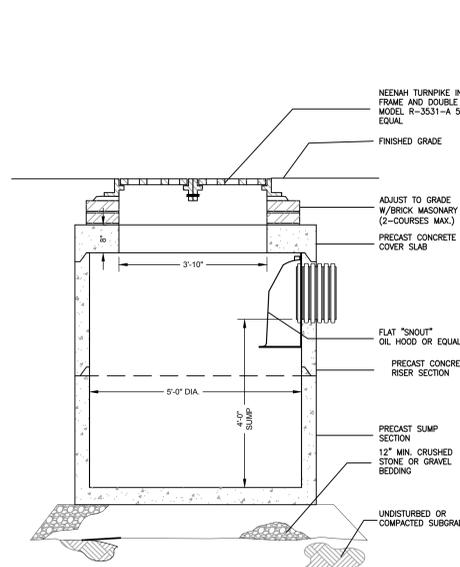


10 PLANTER UNDERDRAIN

DISCHARGE POINT	FLOW RATE Q(MIN)	ANNUAL SEDIMENT LOAD (CF/YR)
WQU#1	0.341	15.65
WQU#2	0.144	6.63
WQU#3	0.389	17.86
WQU#4	0.644	29.57
WQU#5	3.308	71.34
WQU#6	1.419	65.18



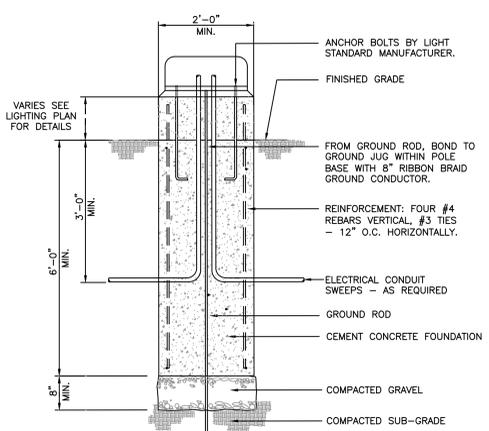
12 WATER QUALITY UNIT



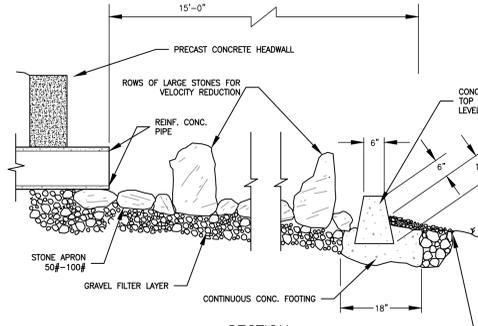
13 DOUBLE CATCH BASIN

NOTE:  
 CONTRACTOR TO OBTAIN LIGHT POLE MANUFACTURER'S APPROVAL OF LIGHT POLE FOOTING DETAIL PRIOR TO INSTALLATION.

NOTE:  
 POLE BASE SHALL BE 6" BELOW FINISHED GRADE REGARDLESS OF EXPOSURE HEIGHT. REFER TO SHEET ES-101 FOR BASE EXPOSURE DETAILS.



14 LIGHT POLE BASE



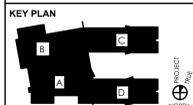
11 VELOCITY REDUCING DEVICE



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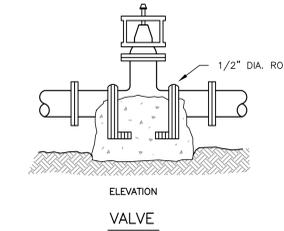
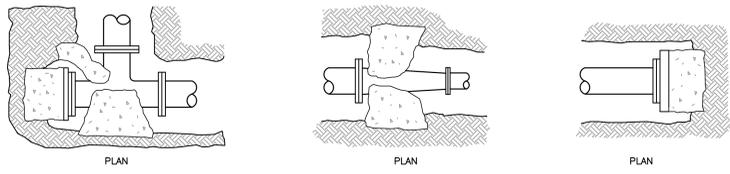
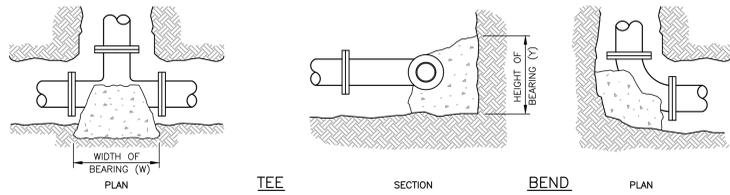
PROJECT TITLE  
**FLORENCE ROCHE  
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 342 Main Street  
 Groton, MA 01450

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PROJECT NO 19088.00  
 DRAWN BY WJP  
 CHECKED BY SP  
 SCALE AS SHOWN  
 DATE 05/24/2022

SHEET TITLE  
**CIVIL DETAIL  
 SHEET**

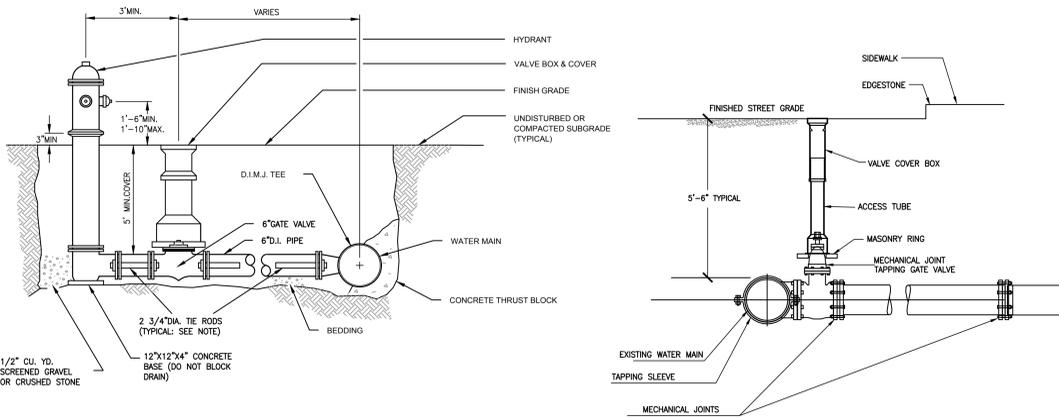
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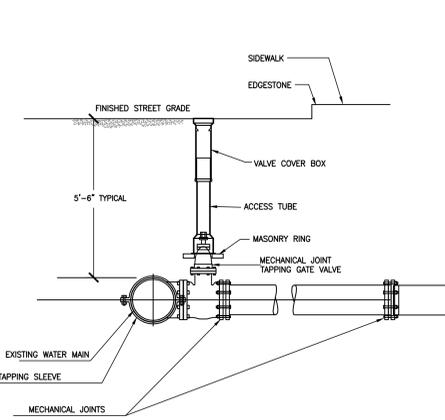
PIPE SIZE	WATER PIPE		
	TEE, DEAD END, 90° BEND	45° & 22-8° BENDS	
4" OR LESS	3 SQ. FEET	3 SQ. FEET	
6"	4 SQ. FEET	3 SQ. FEET	
8"	6 SQ. FEET	3 SQ. FEET	
10"	9 SQ. FEET	5 SQ. FEET	
12"	13 SQ. FEET	7 SQ. FEET	
16"	23 SQ. FEET	12 SQ. FEET	

- THRUST BLOCKS TO EXTEND TO UNDISTURBED GROUND.
- ALL CONCRETE SHALL BE CLASS B.
- TABLE IS BASED ON 3000 LB./SQ. FT. SOIL. IF SOIL CONDITIONS ARE FOUND TO INDICATE SOIL BEARING LESS, THE AREAS SHALL BE INCREASED ACCORDINGLY.
- AREAS FOR PIPES GREATER THAN 16" SHALL BE CALCULATED FOR EACH PROJECT.
- FOR ALL NON BEARING VERTICAL SURFACES.

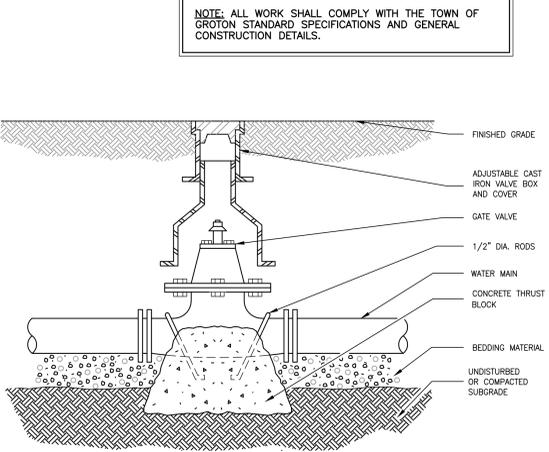
1 THRUST BLOCKS (WATER SYSTEM)



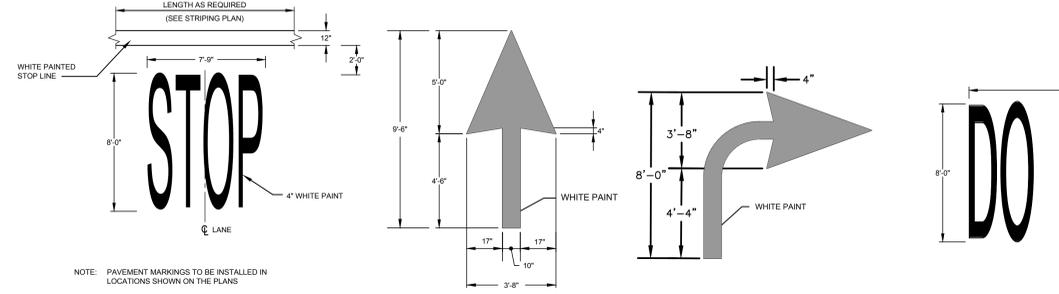
2 HYDRANT



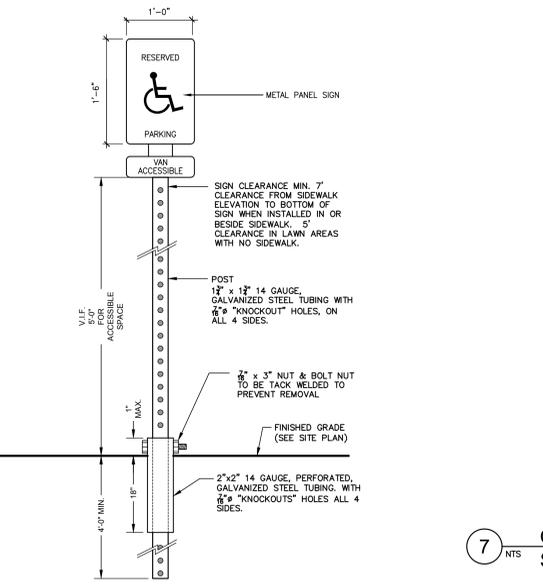
3 WATER PIPE CONNECTION WITH TAPPING SLEEVE



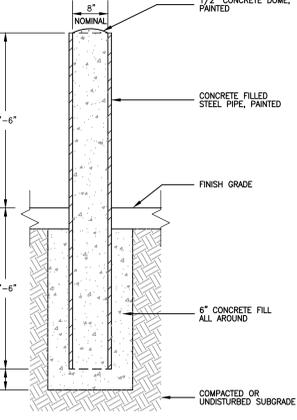
4 GATE VALVE AND BOX



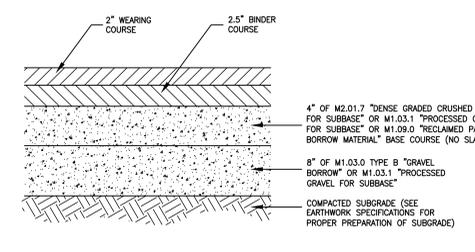
5 PAVEMENT MARKING DETAIL



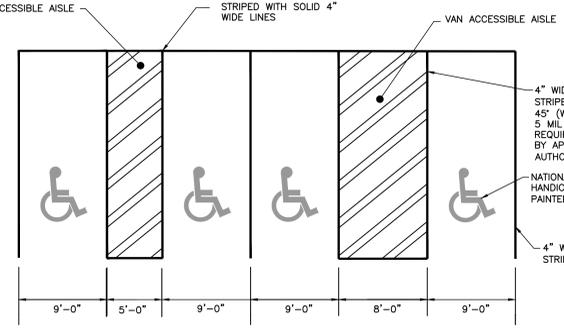
6 TELESCOPING-BREAKAWAY TRAFFIC SIGN POST



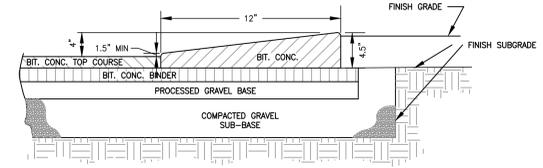
7 CONCRETE FILLED STEEL PIPE BOLLARD



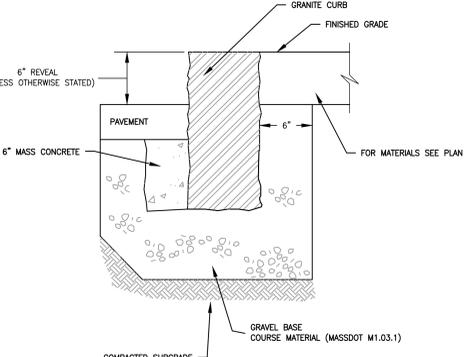
8 HEAVY DUTY BITUMINOUS PAVEMENT



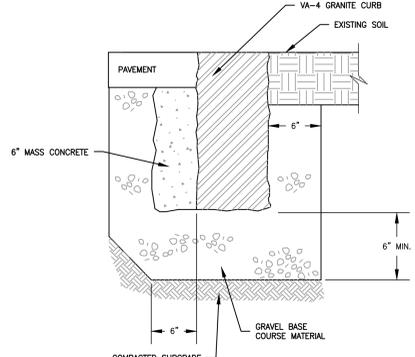
9 HANDICAP PARKING STALL DETAIL



10 CAPE COD BERM



11 VERTICAL GRANITE CURB



12 FLUSHED GRANITE CURB

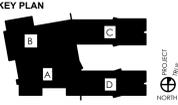
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PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

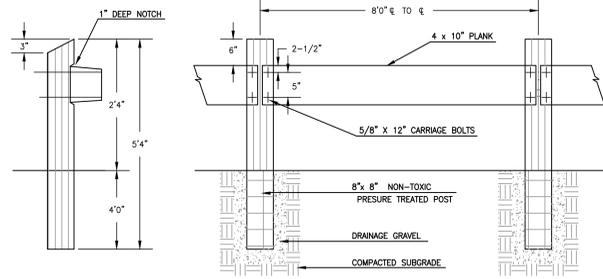
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PROJECT NO 19088.00  
DRAWN BY WJP  
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SCALE AS SHOWN  
DATE 05/24/2022  
SHEET TITLE

CIVIL DETAIL SHEET

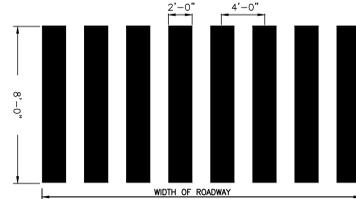
APPLICANT MARK HADDAD  
ADDRESS 342 MAIN STREET  
TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS MAPS 110.111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

SHEET NO  
**C603**



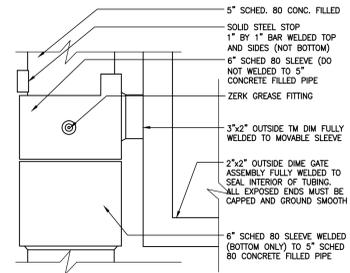
**1 WOOD GUARDRAIL**

NTS

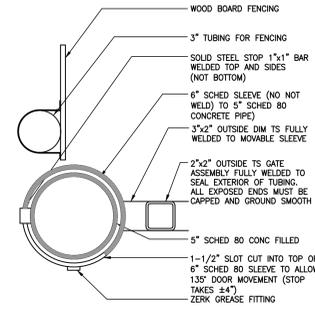


**2 PEDESTRIAN CROSSWALK DETAIL**

NTS

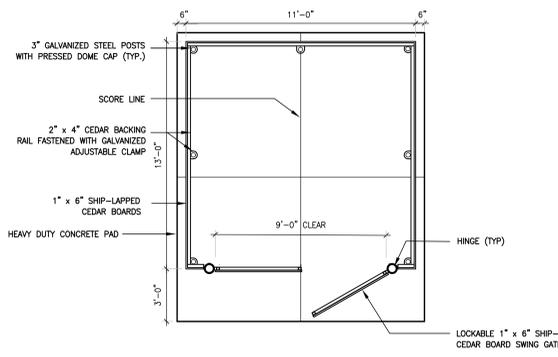


**HINGE DETAIL**



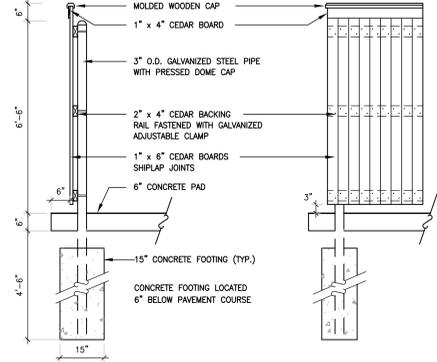
**HINGE DETAIL (PLAN)**

NOTE: ALL WORK SHALL COMPLY WITH THE TOWN OF GROTON STANDARD SPECIFICATIONS AND GENERAL CONSTRUCTION DETAILS.



**3 DUMPSTER ENCLOSURE PLAN & ENCLOSURE**

SCALE: NTS



IDENTIFICATION NUMBER	SIZE OF SIGN (INCHES)		UNIT AREA SF	TEXT <small>SEE MUTCD 2009 FOR TEXT DIMENSIONS AND COLORS</small>	NUMBER OF SIGNS REQUIRED	AREA IN SQUARE FEET
	WIDTH	HEIGHT				
R1-1	30"	30"	5.18		3	67.34
R3-5(L)	30"	36"	7.50		1	7.50
R3-5(R)	30"	36"	7.50		1	7.50
R5-1	30"	30"	6.25		4	37.50
R6-1(L)	36"	12"	3.00		1	9.00
R6-1(R)	36"	12"	3.00		1	9.00
R7-8	12"	18"	1.50		8	12.00
R7-8P	18"	9"	1.13		2	3.40
W11A-2	30"	30"	3.13		9	53.21

**4 TRAFFIC CONTROL SIGNAGE SCHEDULE**

NTS

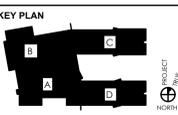
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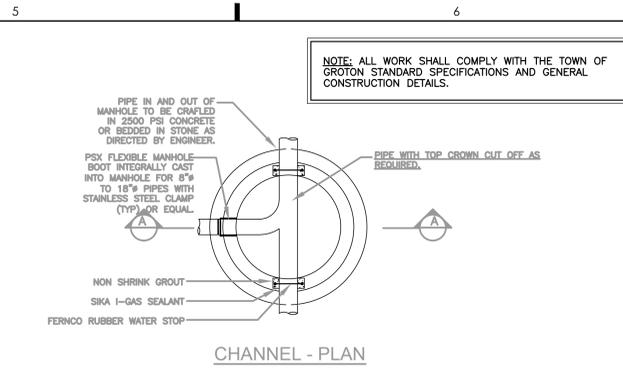
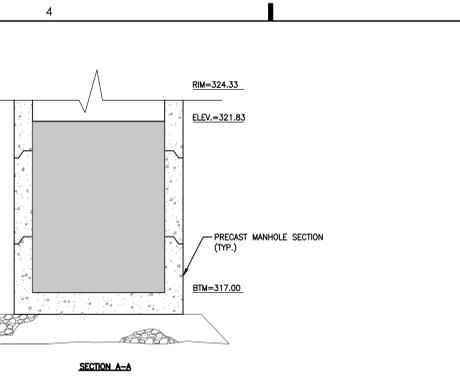
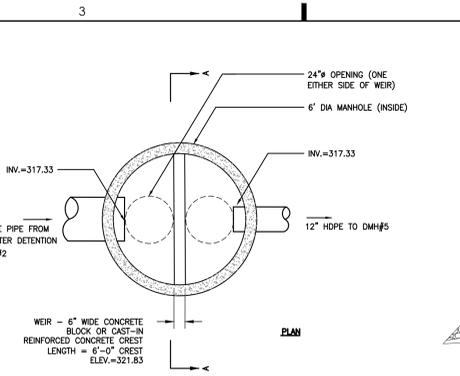
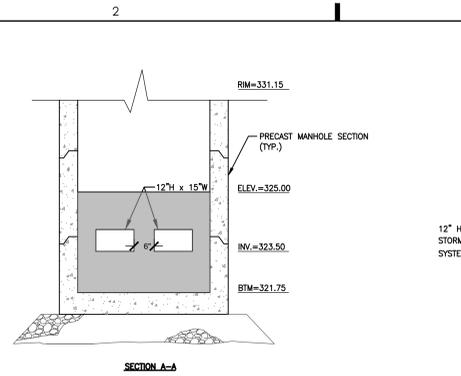
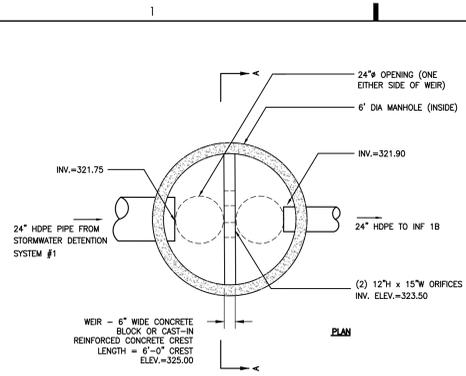
NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

PROJECT NO	19088.00
DRAWN BY	WJP
CHECKED BY	SP
SCALE	AS SHOWN
DATE	05/24/2022

**SHEET TITLE**  
CIVIL DETAIL SHEET

APPLICANT	MARK HADDAD	SHEET NO <b>C604</b>
ADDRESS	342 MAIN STREET	
TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS	MAPS 110, 111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34	

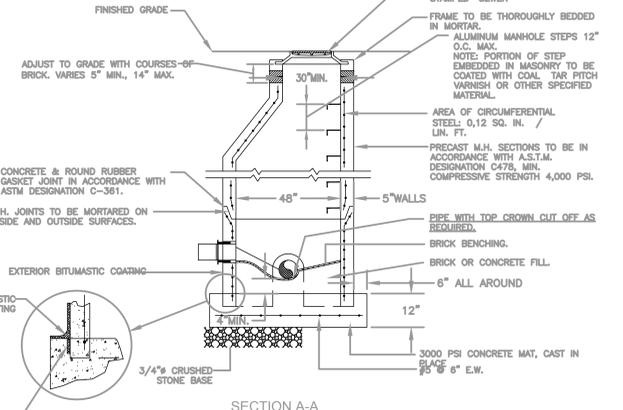
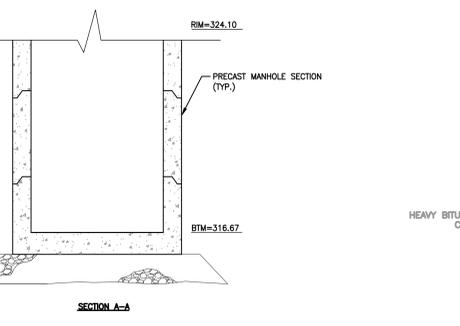
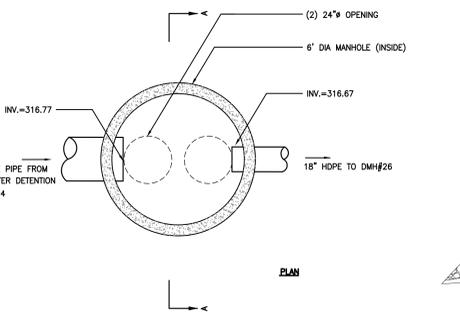
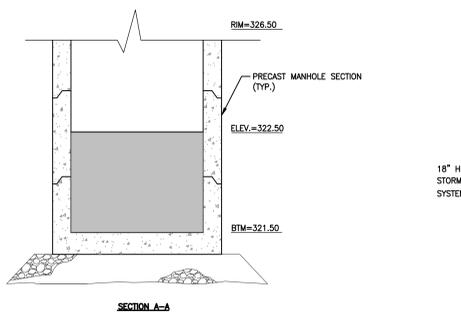
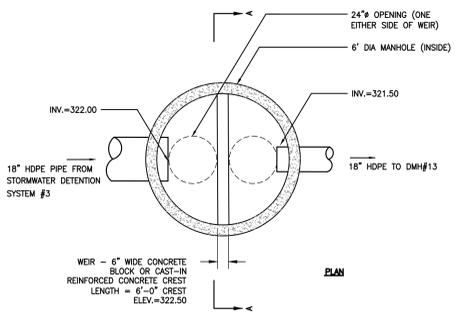
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1 OUTLET CONTROL STRUCTURE (OCS-1A)

2 OUTLET CONTROL STRUCTURE (OCS-2)

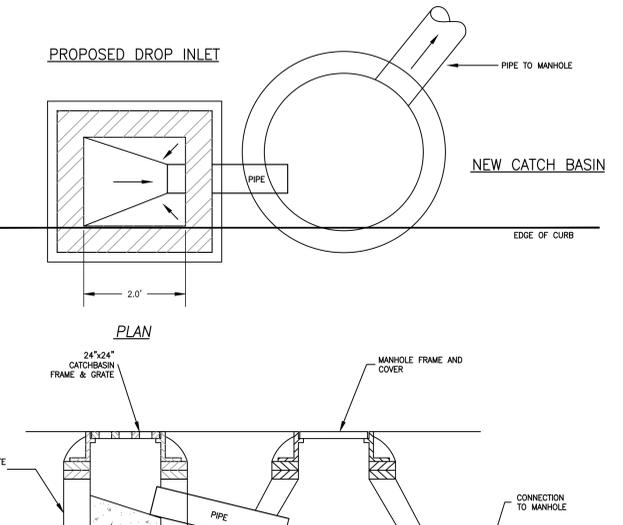
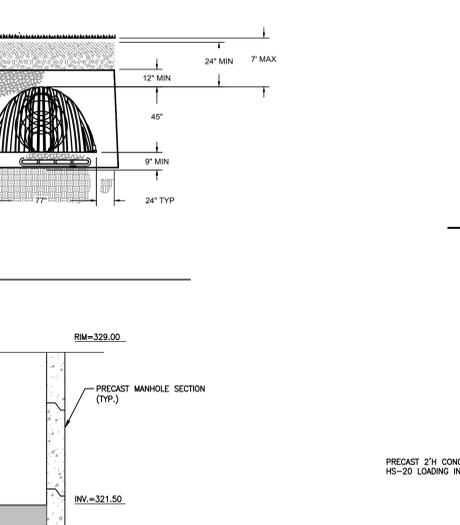
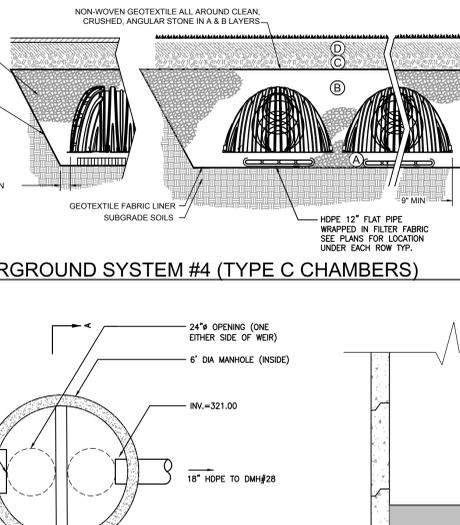
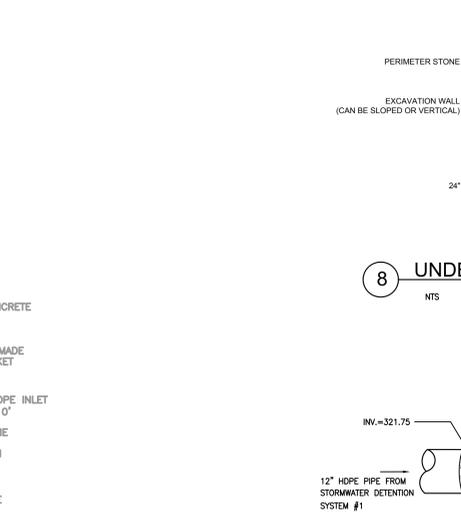
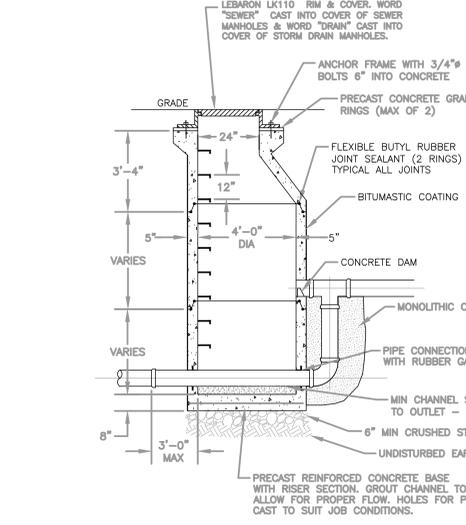
5 DOGHOUSE MANHOLE DETAIL



3 OUTLET CONTROL STRUCTURE (OCS-3)

4 OUTLET CONTROL STRUCTURE (OCS-4)

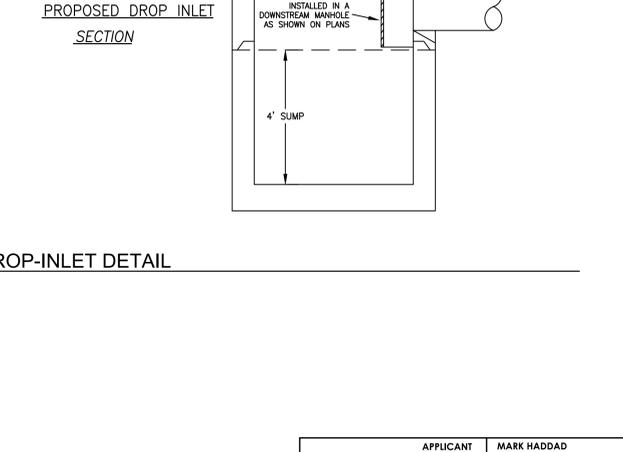
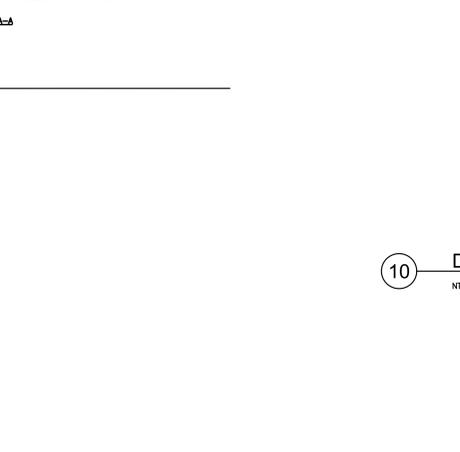
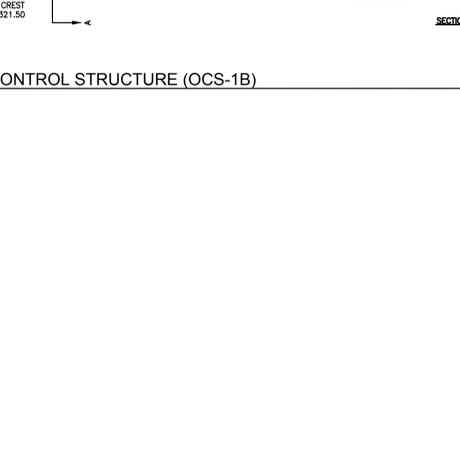
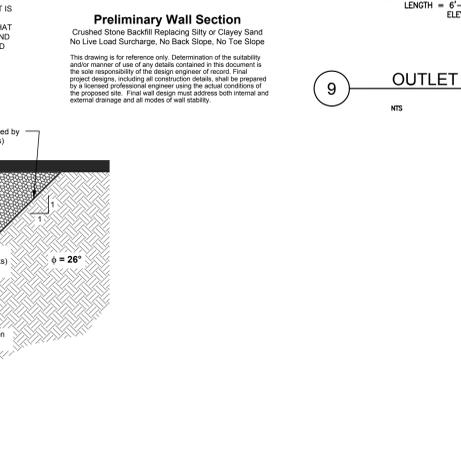
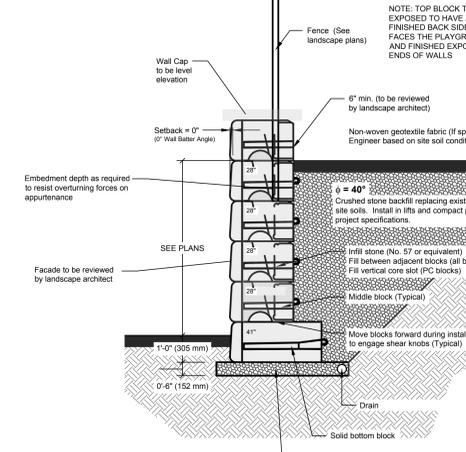
6 DOGHOUSE MANHOLE DETAIL



6 DOGHOUSE MANHOLE DETAIL

8 UNDERGROUND SYSTEM #4 (TYPE C CHAMBERS)

10 DROP-INLET DETAIL



7 MODULAR BLOCK RETAINING WALL

9 OUTLET CONTROL STRUCTURE (OCS-1B)

10 DROP-INLET DETAIL

The Brewery  
177 Boylston Street  
Jamaica Plain, MA 02130  
T 617-524-5558

**STAMP**

STEPHEN J. POWERS  
CIVIL  
NO. 45806  
MASSACHUSETTS

**CONSULTANT**  
Samiotes Consultants Inc.  
Civil Engineers - Land Surveyors  
30 A Street  
Framingham, MA 01701  
T 508.877.6688  
F 508.877.8349  
www.samiotes.com

**CLIENT**  
Groton-Dunstable  
Regional School District  
& Town of Groton  
344 Main Street  
Groton, MA 01450

**NOT FOR CONSTRUCTION  
DESIGN DEVELOPMENT  
PERMIT SET**

**KEY PLAN**

**PROJECT TITLE**  
FLORENCE ROCHE  
ELEMENTARY SCHOOL

342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

**PROJECT NO** 19088.00

**DRAWN BY** WJP

**CHECKED BY** SP

**SCALE** AS SHOWN

**DATE** 05/24/2022

**SHEET TITLE**

**CIVIL DETAIL  
SHEET**

APPLICANT	MARK HADDAD
ADDRESS	342 MAIN STREET
TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS	MAPS 110.111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

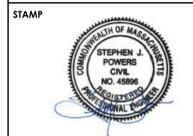
**SHEET NO**

**C605**

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**LEGEND:**  
 PROPOSED SNOW STORAGE AREAS

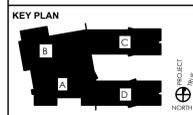
studio  
**ARCHITECTS**  
 The Brewery  
 177 Boylston Street  
 Jamaica Plain, MA 02130  
 T 617-524-5558  
 building sustainable communities



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 Groton, MA 01450

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 DESIGN DEVELOPMENT  
 PERMIT SET



**PROJECT TITLE**  
**FLORENCE ROCHE  
 ELEMENTARY SCHOOL**  
 342 Main Street  
 Groton, MA 01450

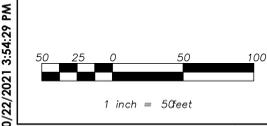
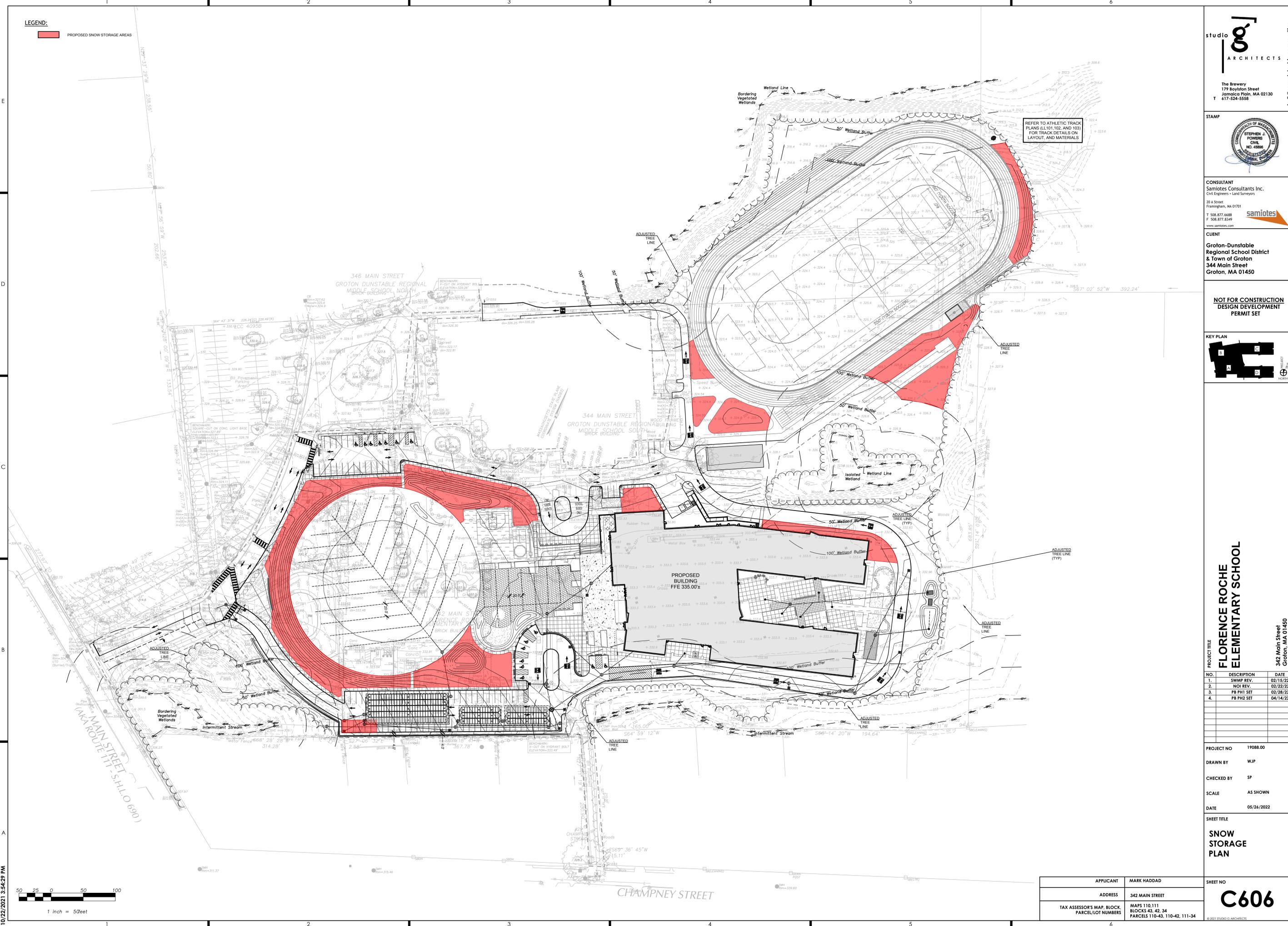
NO.	DESCRIPTION	DATE
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2.	NOI REV.	02/22/22
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**PROJECT NO** 19088.00  
**DRAWN BY** WJP  
**CHECKED BY** SP  
**SCALE** AS SHOWN  
**DATE** 05/24/2022

**SHEET TITLE**  
**SNOW  
 STORAGE  
 PLAN**

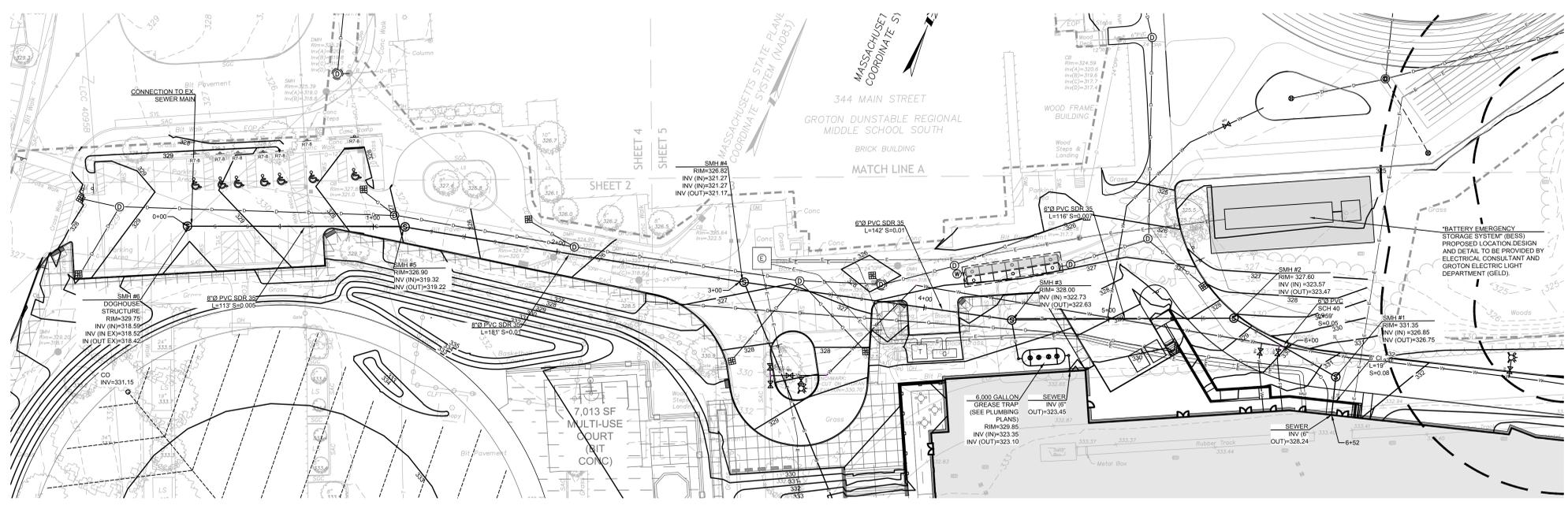
**SHEET NO**  
**C606**

<b>APPLICANT</b>	MARK HADDAD
<b>ADDRESS</b>	342 MAIN STREET
<b>TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS</b>	MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34

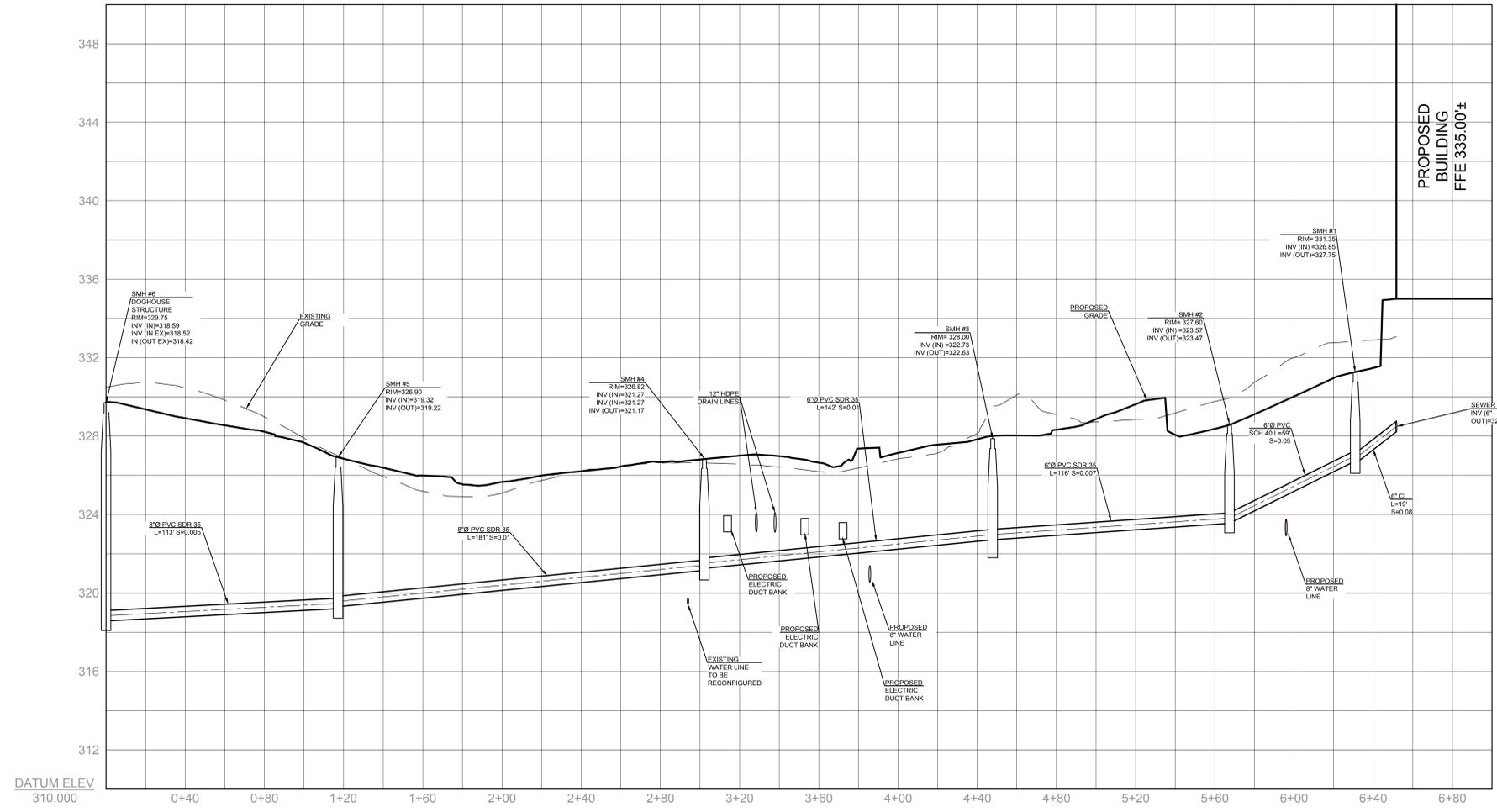


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NOTE: ALL WORK SHALL COMPLY WITH THE TOWN OF GROTON STANDARD SPECIFICATIONS AND GENERAL CONSTRUCTION DETAILS.

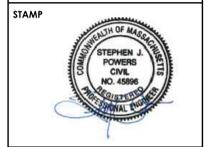


1 SEWER MAIN SITE PLAN  
SCALE: 1" = 30'



2 SEWER MAIN PROFILE  
SCALE: HORIZONTAL 1" = 30' VERTICAL 1" = 10'

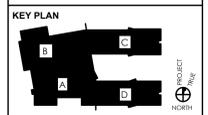
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344 Main Street  
Groton, MA 01450

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DESIGN DEVELOPMENT  
PERMIT SET



PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
1.	SWMP REV.	02/15/22
2.	NOI REV.	02/22/22
3.	PB PH1 SET	02/28/22
4.	PB PH2 SET	04/14/22

PROJECT NO 19088.00  
DRAWN BY WJP  
CHECKED BY SP  
SCALE AS SHOWN  
DATE 05/24/2022

SHEET TITLE  
**CIVIL DETAIL  
SHEET**

APPLICANT	MARK HADDAD	SHEET NO	<b>C607</b>
ADDRESS	342 MAIN STREET		
TAX ASSESSOR'S MAP, BLOCK, PARCEL/LOT NUMBERS	MAPS 110,111 BLOCKS 43, 42, 34 PARCELS 110-43, 110-42, 111-34		

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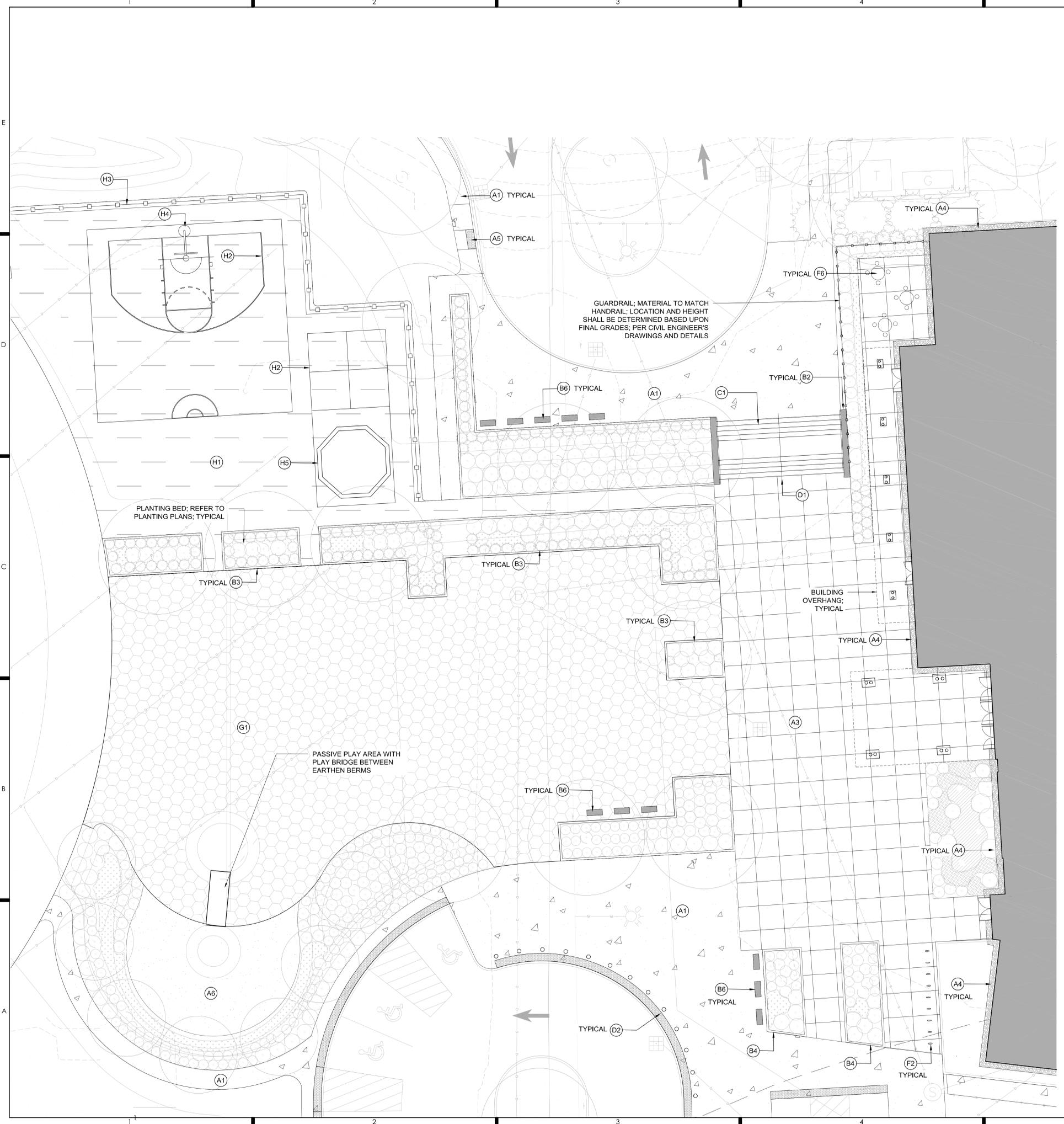
SEE MATERIAL KEY ON SHEET L101 OR L103

NO.	DESCRIPTION	DATE

PROJECT NO 19025  
 DRAWN BY JW  
 CHECKED BY KAC  
 SCALE 1"=10'-0"  
 DATE 04/14/2022

SHEET TITLE  
**ENLARGEMENT - FRONT PLAZA AND PLAY**

SHEET NO  
**L102**

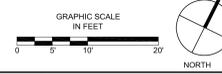


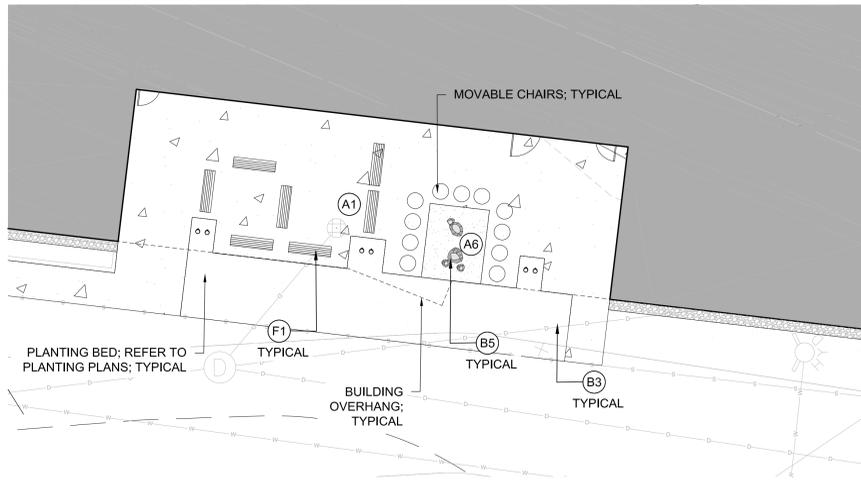
**LAYOUT & MATERIALS NOTES:**

1. ALL LINE AND GRADE WORK PER THE DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A REGISTERED CIVIL ENGINEER OR SURVEYOR ENGAGED BY THE CONTRACTOR.
2. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
3. ALL DIMENSIONS ARE FROM FACE OF BUILDING FOUNDATION, WALL OR CURB UNLESS OTHERWISE NOTED.
4. THE DIMENSIONS SHOWN ON THE DRAWINGS INDICATE DESIGN INTENT AND MUST BE FIELD VERIFIED PRIOR TO THE PREPARATION OF SHOP DRAWINGS. SHOP DRAWINGS FOR ALL PAVING LAYOUT SHALL BE BASED UPON ACTUAL LAYOUT AND FIELD MEASUREMENTS BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL STAKE THE CENTERLINE AND EDGES OF ALL ELEMENTS IN THE FIELD FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING THE WORK.
6. RESTORE EXISTING CONDITIONS, INCLUDING REPAVING, RESETTING SITE IMPROVEMENTS, AND SEEDING, AS NECESSARY IN AREAS OF PROPOSED UTILITY IMPROVEMENTS.
7. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING THE LOCATIONS OF ANY EXISTING SITE ELEMENTS TO BE RESET IN THEIR SAME HORIZONTAL LOCATION.

**LEGEND**

- PROPERTY LINE
- - - WETLAND BUFFER
- - - LIMIT OF WORK
- BASELINE
- ⊕ CENTERLINE
- FACE OF RISER
- CONTROL JOINT
- EXPANSION JOINT
- ▬ PROPOSED WALL
- ▬ PROPOSED BICYCLE RACK
- ▬ PROPOSED BENCH (BACKED)
- ⊙ SITTING BOULDER
- ▨ BITUMINOUS CONCRETE (PEDESTRIAN)
- ▩ CAST-IN-PLACE CONCRETE (PEDESTRIAN)
- ▩ CAST-IN-PLACE CONCRETE (VEHICULAR)
- ▨ STABILIZED STONEDUST (PEDESTRIAN)
- ▨ POURED-IN-PLACE RESILIENT RUBBER PLAY SURFACING
- ▨ LAWN SEED - WARM SEASON MIX
- ▨ LAWN SEED - TALL FESCUE





1 OUTDOOR STEAM PATIO  
SCALE: 1" = 10'-0"

PLAN

KEY DETAIL DESCRIPTION

A1	DETAIL 1/L401	CAST-IN-PLACE CONCRETE; PEDESTRIAN
A2	DETAIL 2/L401	BITUMINOUS CONCRETE; PEDESTRIAN
A3	DETAIL 3/L401	CAST-IN-PLACE CONCRETE; VEHICULAR
A4	DETAIL 4/L401	STONE DRIP EDGE
A5	DETAIL 5/L401	ADA CURB CUT RAMP WITH DETECTABLE WARNING PANEL
A6	DETAIL 6/L401	STABILIZED STONEDUST; PEDESTRIAN
B1	DETAIL 1/L402	CAST-IN-PLACE CONCRETE SEATWALL; AMPHITHEATER; SEE ADD ALTERNATE L104
B2	DETAIL 2/L402	CAST-IN-PLACE CONCRETE WALL
B3	DETAIL 3/L402	PRE-CAST CONCRETE CURB
B4	DETAIL 4/L402	GRANITE CURB
B5	DETAIL 5/L402	ORNAMENTAL BOULDER
B6	DETAIL 6/L402	GRANITE SLAB BENCH

KEY DETAIL DESCRIPTION

C1	DETAIL 7/L402	CAST-IN-PLACE CONCRETE STAIRS
C2	DETAIL 8/L402	LARGE NATURAL STEPPING STONES
D1	DETAIL 1/L403	HANDRAIL
D2	DETAIL 2/L403	BOLLARD; VEHICULAR
D3	DETAIL 3/L403	CHAIN LINK FENCE; 4'-0" HIGH
D4	DETAIL 4/L404	CHAIN LINK FENCE GATE; DOUBLE
D5	DETAIL 5/L403	CHAIN LINK FENCE GATE; SINGLE
D6	DETAIL 6/L403	UTILITY SCREEN FENCE ENCLOSURE
D7	DETAIL 7/L403	VEHICULAR GATE
E1	DETAIL 1/L404	INTENTIONALLY OMITTED
E2	DETAIL 2/L404	INTENTIONALLY OMITTED
E3	-----	INTENTIONALLY OMITTED

KEY DETAIL DESCRIPTION

F1	DETAIL 3/L404	BENCH; 6'-0" LONG; SURFACE MOUNT
F2	DETAIL 4/L404	BICYCLE RACK; EMBEDDED
F3	DETAIL 5/L404	INTENTIONALLY OMITTED
F4	DETAIL 6/L404	RAISED PLANTER; FREE STANDING
F5	DETAIL 7/L404	FLAGPOLE
F6	DETAIL 8/L404	MOVABLE TABLES AND CHAIRS
G1	DETAIL 1/L405	POURED-IN-PLACE RESILIENT RUBBER PLAY SURFACING
G2	DETAIL 2/L405	CONCRETE CURB WITH FENCE AT PLAYGROUND
H1	DETAIL 3/L405	BITUMINOUS CONCRETE SPORT COURT SURFACING
H2	DETAIL 4/L405	LINE STRIPING
H3	DETAIL 5/L405	SPORT COURT FENCE
H4	DETAIL 6/L405	BASKETBALL HOOP; ADJUSTABLE GOOSE NECK
H5	DETAIL 7/L405	GAGA PIT; 20'-0" DIAMETER



2 OUTDOOR LEARNING LAB  
SCALE: 1" = 10'-0"

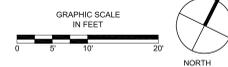
PLAN

LAYOUT & MATERIALS NOTES:

1. ALL LINE AND GRADE WORK PER THE DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A REGISTERED CIVIL ENGINEER OR SURVEYOR ENGAGED BY THE CONTRACTOR.
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5. THE CONTRACTOR SHALL STAKE THE CENTERLINE AND EDGES OF ALL ELEMENTS IN THE FIELD FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING THE WORK.
6. RESTORE EXISTING CONDITIONS, INCLUDING REPAVING, RESETTLE SITE IMPROVEMENTS, AND SEEDING, AS NECESSARY IN AREAS OF PROPOSED UTILITY IMPROVEMENTS.
7. CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING THE LOCATIONS OF ANY EXISTING SITE ELEMENTS TO BE RESET IN THEIR SAME HORIZONTAL LOCATION.

LEGEND

- PROPERTY LINE
- WETLAND BUFFER
- LIMIT OF WORK
- BASELINE
- CL CENTERLINE
- FR FACE OF RISER
- CONTROL JOINT
- EXPANSION JOINT
- PROPOSED WALL
- PROPOSED BICYCLE RACK
- PROPOSED BENCH (BACKED)
- SITTING BOULDER
- BITUMINOUS CONCRETE (PEDESTRIAN)
- CAST-IN-PLACE CONCRETE (PEDESTRIAN)
- CAST-IN-PLACE CONCRETE (VEHICULAR)
- STABILIZED STONEDUST (PEDESTRIAN)
- POURED-IN-PLACE RESILIENT RUBBER PLAY SURFACING
- LAWN SEED - WARM SEASON MIX
- LAWN SEED - TALL FESCUE

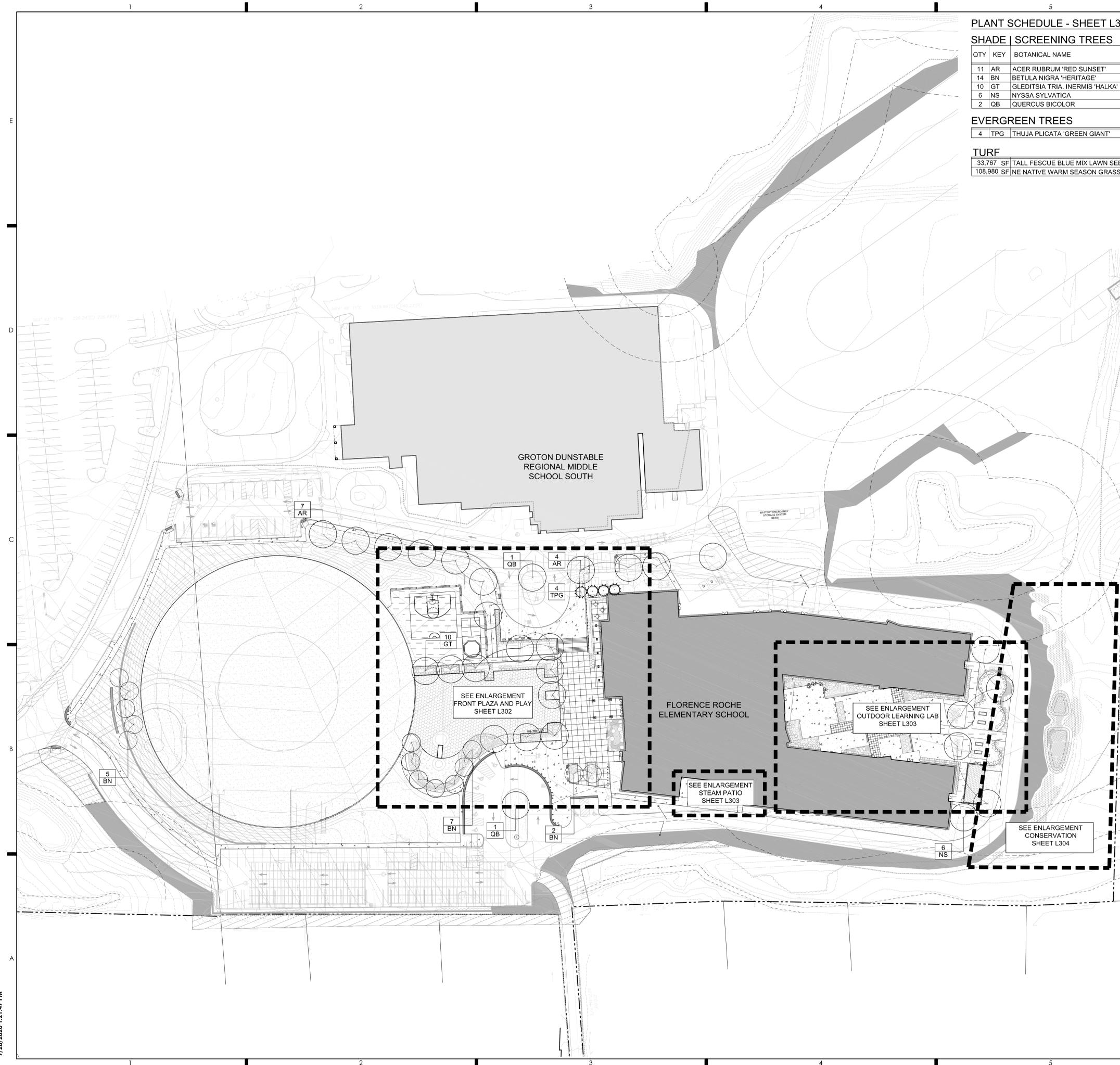


NO.	DESCRIPTION	DATE

PROJECT NO	19025
DRAWN BY	JW
CHECKED BY	KAC
SCALE	1" = 10'-0"
DATE	04/14/2022

SHEET TITLE  
ENLARGEMENT -  
OUTDOOR  
LEARNING LAB  
AND STEAM PATIO

SHEET NO  
L103



PLANT SCHEDULE - SHEET L301 TREES AND TURF

SHADE | SCREENING TREES

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	NOTES
11	AR	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2.5'-3" CAL.	BALL & BURLAP	30' O.C. (N)
14	BN	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	14'-16' HT	B&B	30' O.C. (N)
10	GT	GLEDTISIA TRIA. INERMIS 'HALKA'	HALKA HONEYLOCUST	2.5'-3" CAL.	B&B	30' O.C. (N)
6	NS	NYSSA SYLVATICA	BLACK TUPELO	2.5'-3" CAL.	B&B	30' O.C. (N)
2	QB	QUERCUS BICOLOR	SWAMP WHITE OAK	3"-3.5" HT.	B&B	30' O.C. (N)

EVERGREEN TREES

4	TPG	THUJA PLICATA 'GREEN GIANT'	GREEN GIANT WESTERN ARBORVITAE	8'-10' HT.	BALL & BURLAP	20' O.C. (N)
---	-----	-----------------------------	--------------------------------	------------	---------------	--------------

TURF

33,767 SF	TALL FESCUE BLUE MIX LAWN SEED	SUMMIT SEED, ROCKFORD, WA; 800.457.6748	(N)
108,980 SF	NE NATIVE WARM SEASON GRASS MIX	NE WETLAND PLANTS, MA; 413.548.8000	(N)

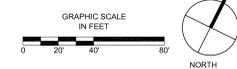
O.C. = ON-CENTER SPACING  
 (N) = NATIVE SPECIES  
 NEWP = NEW ENGLAND WETLAND PLANT SIZES

PLANTING PLAN NOTES:

1. ALL PLANTING SOILS SHALL BE (1) PART TOPSOIL, (1) PART COMPOSTED ORGANIC MATTER, (1) PART NATIVE SOIL MIXED PRIOR TO PLANTING INSTALLATION.
2. THE CONTRACTOR SHALL CONFIRM THE ACTUAL DEPTH OF ALL PLANTING AREAS PRIOR TO ANY PLANT MATERIAL BEING SECURED. REPORT ANY LEDGE OR SUBSTANDARD SOIL/SUBSURFACE CONDITIONS TO THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL CONSIDER THE DISPLACEMENT OF PLANTING SOIL FOR THE PLANT MATERIAL ROOT BALLS IN THE OVERALL PLANTING BED FINISHED GRADE. ALLOW ENOUGH ROOM IN THE PLANTING BED ELEVATION TO SPREAD DISPLACED SOIL AND STILL MEET THE INDICATED FINISHED GRADE INCLUDING THE 2" OF HARDWOOD MULCH.
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10. ALL LAWN AREAS DISTURBED BY CONSTRUCTION OPERATIONS INSIDE AND OUTSIDE THE LIMIT OF WORK SHALL BE LOAMED AND SEEDED.

LEGEND

- PROPERTY LINE
- - - WETLAND BUFFER
- LIMIT OF WORK
- EXISTING DECIDUOUS TREE | SHRUB TO REMAIN
- ⊙ EXISTING EVERGREEN TREE | SHRUB TO REMAIN
- PROPOSED DECIDUOUS TREE | SHRUB
- ⊙ PROPOSED EVERGREEN TREE | SHRUB
- ⊠ TREE TAG
- ⊠ SHRUB TAG
- ⊠ PERENNIAL TAG
- ▨ LAWN SEED - WARM SEASON MIX
- ▨ LAWN SEED - TALL FESCUE
- BUFFER ENHANCEMENT SEEDING AREA



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7 Central St., Arlington, MA 02117  
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CLIENT  
Groton-Dunstable  
Regional School District  
344 Main Street,  
Groton, MA 01450

NOT FOR CONSTRUCTION  
DESIGN DEVELOPMENT  
SET

PROJECT TITLE  
FLORENCE ROCHE  
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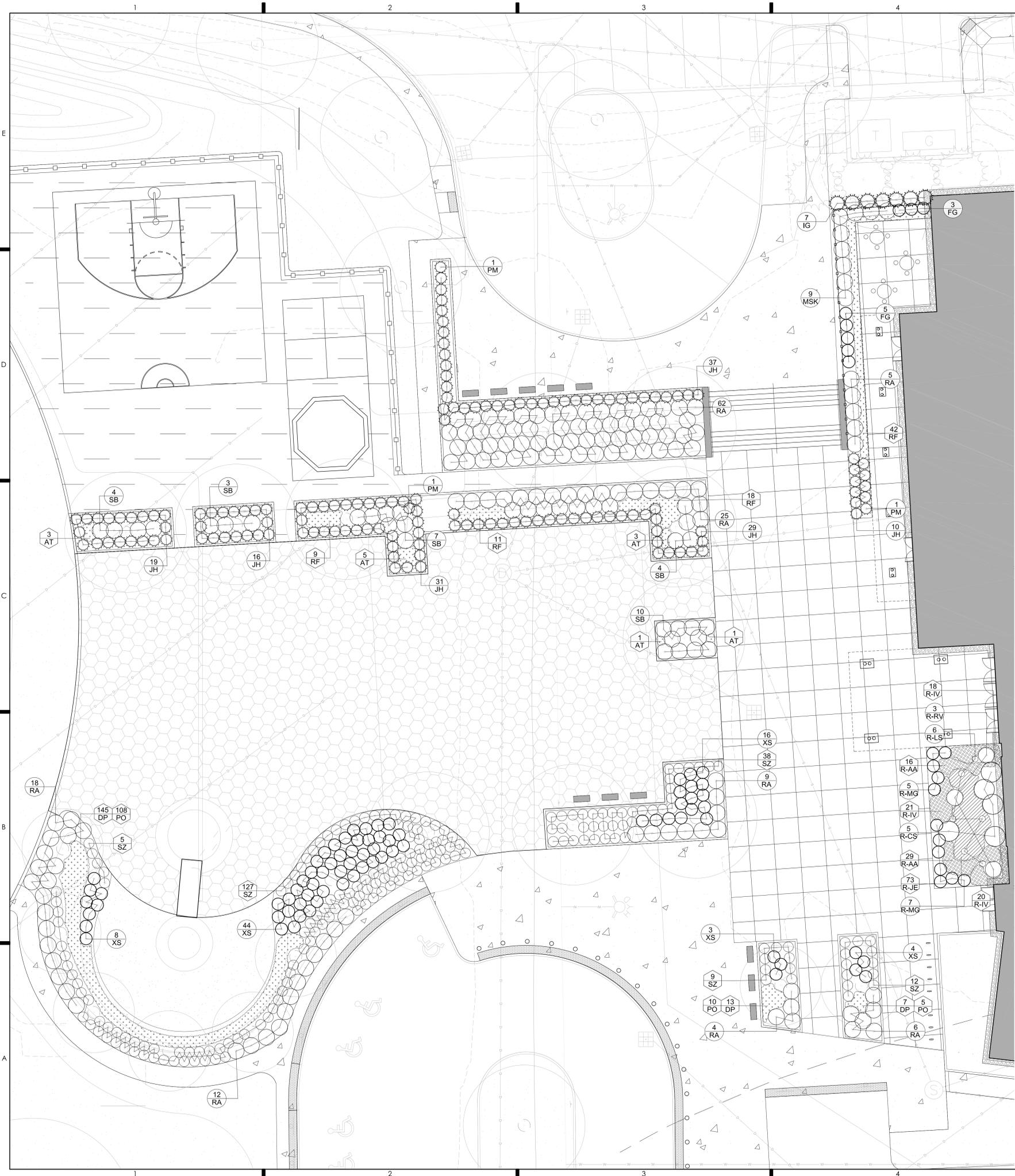
NO.	DESCRIPTION	DATE

PROJECT NO 19025  
 DRAWN BY JW  
 CHECKED BY KAC  
 SCALE 1" = 40'-0"  
 DATE 04/14/2022

SHEET TITLE  
PLANTING  
TREES AND  
TURF

SHEET NO  
L301

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PLANT SCHEDULE - SHEET L302 PLANTING FRONT PLAZA AND PLAY

DECIDUOUS SHRUBS

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	NOTES
8	FG	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	18"-24" HT.	#3 CONT.	3' O.C. (N)
141	RA	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	18"-24" HT.	#3 CONT.	4' O.C. (N)
28	SB	SPIRAEA BIMALDA 'ANTHONY WATERER'	ANTHONY WATERER SPIREA	24"-30" HT.	#5 CONT.	4' O.C. (N)
75	XS	XANTHORIZA SIMPLICISSIMA	YELLOWROOT	15"-18" HT.	#2 CONT.	3' O.C. (N)

EVERGREEN SHRUBS

142	JH	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR JUNIPER	15"-18" SP.	#2 CONT.	3' O.C. (N)
7	IG	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	18"-24" HT.	#7 CONT.	4' O.C. (N)
3	PM	PINUS MUGO 'PUMILIO'	DWARF MUGO PINE	18"-24" HT.	B&B	5' O.C.

GRASSES

9	MSK	MISCANTHUS SINENSIS 'LITTLE KITTEN'	LITTLE KITTEN MAIDEN GRASS	NA	#2 GAL/CONT.	4' O.C.
191	SZ	SCHIZACHYRIUM 'TWILIGHT ZONE'	TWILIGHT LITTLE BLUESTEM	NA	#2 GAL/CONT.	30" O.C. (N)

PERENNIALS

13	AT	ASCLEPIAS TUBEROSA	BUTTERFLY WEED	NA	#1 GAL/CONT.	24" O.C. (N)
165	DP	DENNSTAEDIA PUNCTILOBULA	HAY-SCENT FERN	NA	2 QT/GAL.	18" O.C. (N)
123	PO	POLYGONATUM ODORATUM 'VARIEGATUM'	VARIEGATED SOLOMON'S SEAL	NA	1 QT/CONT.	12" O.C. (N)
80	RF	RUDBECKIA FULGIDA 'GOLDSTURM'	GOLDSTURM BLACK-EYE SUSAN	NA	#1 GAL/CONT.	24" O.C. (N)

RAIN GARDEN

45	R-AA	ACORUS AMERICANA	SWEETFLAG	NA	NEWP 2" PLUG	18" O.C. (N)
5	R-CS	CORNUS SERICEA	RED-OSIER DOGWOOD	NA	NEWP #1 POT	36"-48" HT (N)
59	R-IV	IRIS VERSICOLOR	BLUE FLAG IRIS	NA	NEWP 2" PLUG	18" O.C. (N)
73	R-JE	JUNCUS EFFUSUS	SOFT RUSH	NA	NEWP 2" PLUG	18" O.C. (N)
6	R-LS	LIATRIS SPICATA	MARSH BLAZING STAR	NA	NEWP 2" PLUG	18" O.C. (N)
12	R-MG	MYRICA GALE	SWEETGALE	NA	NEWP #1 POT	24"-36" HT (N)
3	R-RV	RHODODENDRON VISCOSUM	SWAMP AZALEA	NA	NEWP #1 POT	36"-48" HT (N)

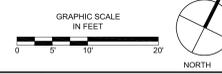
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7 Canal St., Andover, MA 01810  
www.terraink.com

CLIENT  
**Groton-Dunstable Regional School District**  
344 Main Street,  
Groton, MA 01450

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DESIGN DEVELOPMENT  
SET

PROJECT TITLE  
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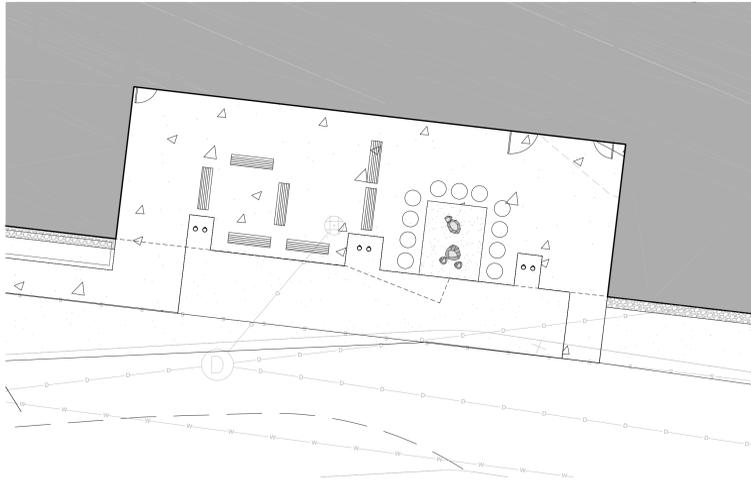
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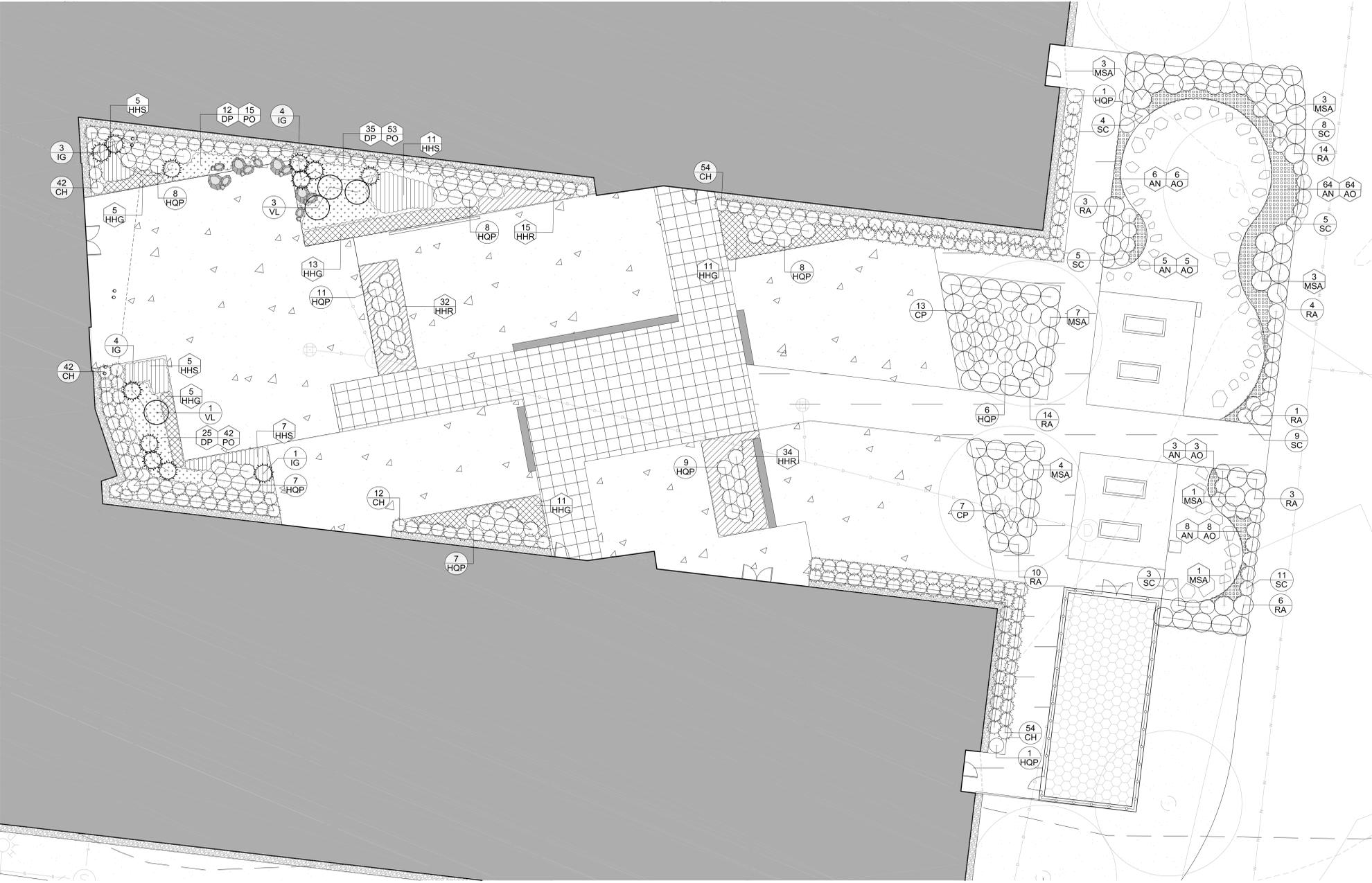
SHEET TITLE  
**PLANTING FRONT PLAZA AND PLAY**

SHEET NO  
**L302**

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1 OUTDOOR STEAM PATIO - NO PLANTING; SEED ONLY  
SCALE: 1" = 10'-0" PLAN



2 OUTDOOR LEARNING LAB  
SCALE: 1" = 10'-0" PLAN

PLANT SCHEDULE - SHEET L303 OUTDOOR LEARNING LAB AND STEAM PATIO

DECIDUOUS SHRUBS

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	NOTES
20	CP	COMPTONIA PEREGRINA	SWEETFERN	15"-18" HT.	#2 CONT.	3' O.C. (N)
65	HQP	HYDRANGEA QUERCIFOLIA 'PEE WEE'	PEE WEE OAKLEAF HYDRANGEA	24"-30" HT.	#5 CONT.	3' O.C. (N)
55	RA	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	18"-24" HT.	#3 CONT.	4' O.C. (N)
4	VL	VIBURNUM LENTAGO	NANNYBERRY VIBURNUM	30"-36" HT.	#7 CONT.	5' O.C. (N)

EVERGREEN SHRUBS

204	CH	CEPHALOTAXUS HARRINGTONIA 'PROSTRATA'	PROSTRATE JAPANESE PLUM YEW	24"-30" HT.	#3 CONT.	3' O.C.
12	IG	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	18"-24" HT.	#7 CONT.	4' O.C. (N)

GRASSES

22	MSA	MISCANTHUS SINENSIS 'ADAGIO'	ADAGIO MAIDEN GRASS	NA	#2 GAL/CONT.	4' O.C.
45	SC	SCHIZACHYRIUM SCOPARIUM 'CAROUSEL'	CAROUSEL LITTLE BLUESTEM	NA	#2 GAL.	36" O.C. (N)

PERENNIALS

86	AN	ASTER NOVAE-ANGLIAE 'PURPLE DOME'	PURPLE DOME NE ASTER	NA	#1 GAL/CONT.	18" O.C. (N)
86	AO	ASTER OBLONGIFOLIUS 'OCTOBER SKIES'	OCTOBER SKIES AROMATIC ASTER	NA	#1 GAL/CONT.	18" O.C. (N)
72	DP	DENNSTAEDTIA PUNCTILOBULA	HAY-SCENT FERN	NA	2 QT/GAL.	18" O.C. (N)
45	HHG	HOSTA 'GUACAMOLE'	GUACAMOLE GREEN VERIEGATED HOSTA	NA	#1 GAL/CONT.	36" O.C.
81	HHR	HOSTA 'RAINBOW'S END'	RAINBOW'S END GREEN VARIEGATED HOSTA	NA	#1 GAL/CONT.	24" O.C.
28	HHS	HOSTA 'ROYAL STANDARD'	ROYAL STANDARD GREEN HOSTA	NA	#1 GAL/CONT.	36" O.C.
110	PO	POLYGONATUM ODORATUM 'VARIEGATUM'	VARIEGATED SOLOMON'S SEAL	NA	1 QT/CONT.	12" O.C. (N)

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- ↑ TGS TREE TAG
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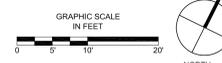
PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street, Groton, MA 01450

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PROJECT NO 19025  
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SHEET TITLE  
**PLANTING  
OUTDOOR  
LEARNING LAB  
AND STEAM PATIO**

SHEET NO  
**L303**



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RAIN GARDEN PERENNIALS

119	R-AA	ACORUS AMERICANA	SWEETFLAG	NA	NEWP #2 PLUG	18" O.C. (N)
71	R-EM	EUPATORIUM MACULATUM	SPOTTED JOE PYE WEED	NA	NEWP #2 PLUG	18" O.C. (N)
97	R-IV	IRIS VERSICOLOR	BLUE FLAG IRIS	NA	NEWP #2 PLUG	18" O.C. (N)
13	R-LS	LIATRIS SPICATA	MARSH BLAZING STAR	NA	NEWP #2 PLUG	18" O.C. (N)
109	R-SP	SYMPHYOTRICHUM (ASTER) PUNICEUM	SWAMP ASTER	NA	NEWP #2 PLUG	18" O.C. (N)

RAIN GARDEN GRASSES

53	R-JE	JUNCUS EFFUSUS	SOFT RUSH	NA	NEWP #2 PLUG	18" O.C. (N)
10	R-SZ	SCHIZACHYRIUM SCOPARIUM 'TWILIGHT ZONE'	TWILIGHT ZONE LITTLE BLUESTEM	NA	2 GAL/CONT.	36" O.C. (N)

O.C. = ON-CENTER SPACING  
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NEWP = NEW ENGLAND WETLAND PLANT SIZES

BUFFER ENHANCEMENT SEED

42,217 SF	NEW ENGLAND ROADSIDE MATRIX UPLAND SEED MIX	NE WETLAND PLANTS, INC., MA; 413.548.8000 (N)
	MIX INCLUDES: VIRGINIA WILD RYE; LITTLE BLUESTEM; RED FESCUE; BIG BLUESTEM; INDIAN GRASS; SWITCH GRASS; PARTRIDGE PEA; BUTTERFLY MILKWEED; PANICLEDLEAF TICK TREFOL; EVENING PRIMROSE; BLACK-EYED SUSAN; HOLLOW-STEM JOE PYE WEED; GREY DOGWOOD; SILKY DOGWOOD; STAGHORN SUMAC (2022 MIX)	APPLICATION RATE 35 LBS/ ACRE

NOTE: ALL SITE PERMITTING PLANT QUANTITIES AREA APPROXIMATE AND WILL BE FURTHER REFINED IN THE CONSTRUCTION DOCUMENTS.

RAIN GARDEN DECIDUOUS TREES

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	NOTES
5	R-AR	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	1.5"-2" CAL.	BALL & BURLAP	30' O.C. (N)
3	R-BN	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH; MULTISTEM	8'-10' HT.	BALL & BURLAP	20' O.C. (N)

RAIN GARDEN DECIDUOUS SHRUBS

58	R-AB	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	RED CHOKEBERRY	18"-24" HT.	#3 CONT.	4' O.C. (N)
19	R-CP	COMPTONIA PEREGRINA	SWEET FERN	24"-36" HT.	NEWP #1 POT	3' O.C. (N)
27	R-CS	CORNUS SERICEA	RED-OSIER DOGWOOD	36"-48" HT.	NEWP #1 POT	5' O.C. (N)
5	R-IVF	ILEX VERTICILLATA 'FEMALE'	FEMALE WINTERBERRY	36"-48" HT.	NEWP #1 POT	5' O.C. (N)
1	R-IVM	ILEX VERTICILLATA 'MALE'	MALE WINTERBERRY	36"-48" HT.	NEWP #1 POT	5' O.C. (N)
10	R-MG	MYRICA GALE	SWEETGALE	24"-36" HT.	NEWP #1 POT	3' O.C. (N)
11	R-RA	RHUS AROMATICA	FRAGRANT SUMAC	36"-48" HT.	NEWP #1 POT	6' O.C. (N)
15	R-RAGRHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	15"-18" HT.	#2 CONT.	4' O.C. (N)	
28	R-VL	VIBURNUM LENTAGO	NANNYBERRY VIBURNUM	36"-48" HT.	NEWP #1 POT	8' O.C. (N)
4	R-RV	RHODODENDRON VISCOSUM	SWAMP AZALEA	36"-48" HT.	NEWP #1 POT	4' O.C. (N)
34	R-VA	VACCINIUM ANGUSTIFOLIUM	LOWBUSH BLUEBERRY	12"-18" HT.	2 QT / CONT.	2' O.C. (N)

CONSERVATION NOTES:

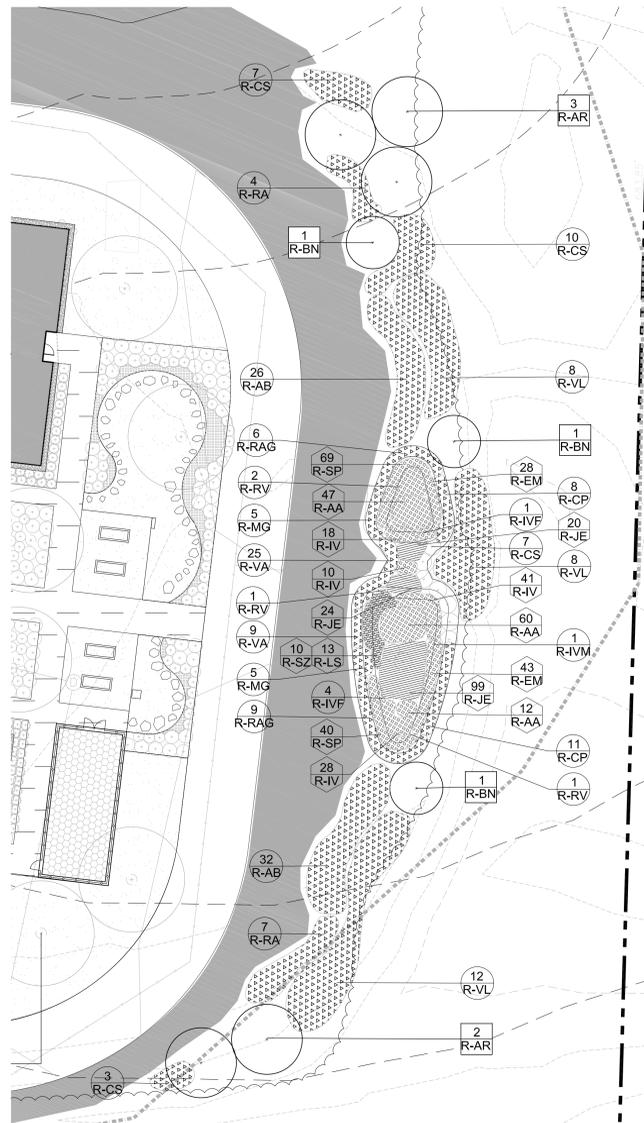
- FOLLOWING INSTALLATION OF ALL PLANT MATERIAL, THE CONTRACTOR AND OWNER'S REPRESENTATIVE SHALL INSPECT THE RAIN GARDEN BIOSWALE/BUFFER ENHANCEMENT SEEDING PLANTING WORK UNDER CONSERVATION COMMISSION'S JURISDICTION. IF PLANT MATERIALS AND WORKMANSHIP ARE ACCEPTABLE TO THE OWNER'S REPRESENTATIVE, WRITTEN NOTICE WILL BE GIVEN BY THE OWNER'S REPRESENTATIVE TO THE CONTRACTOR STATING THAT THE WORK HAS RECEIVED ACCEPTANCE AND THAT THE GUARANTEE PERIOD SHALL COMMENCE.
- THE GUARANTEE PERIOD SHALL EXTEND UNTIL OCTOBER 15 IN THE SECOND CALENDAR YEAR FOLLOWING THE YEAR IN WHICH THE ACCEPTANCE WAS GRANTED. THE MINIMUM DURATION OF THE GUARANTEE PERIOD SHALL BE 24 MONTHS.

PLANTING PLAN NOTES:

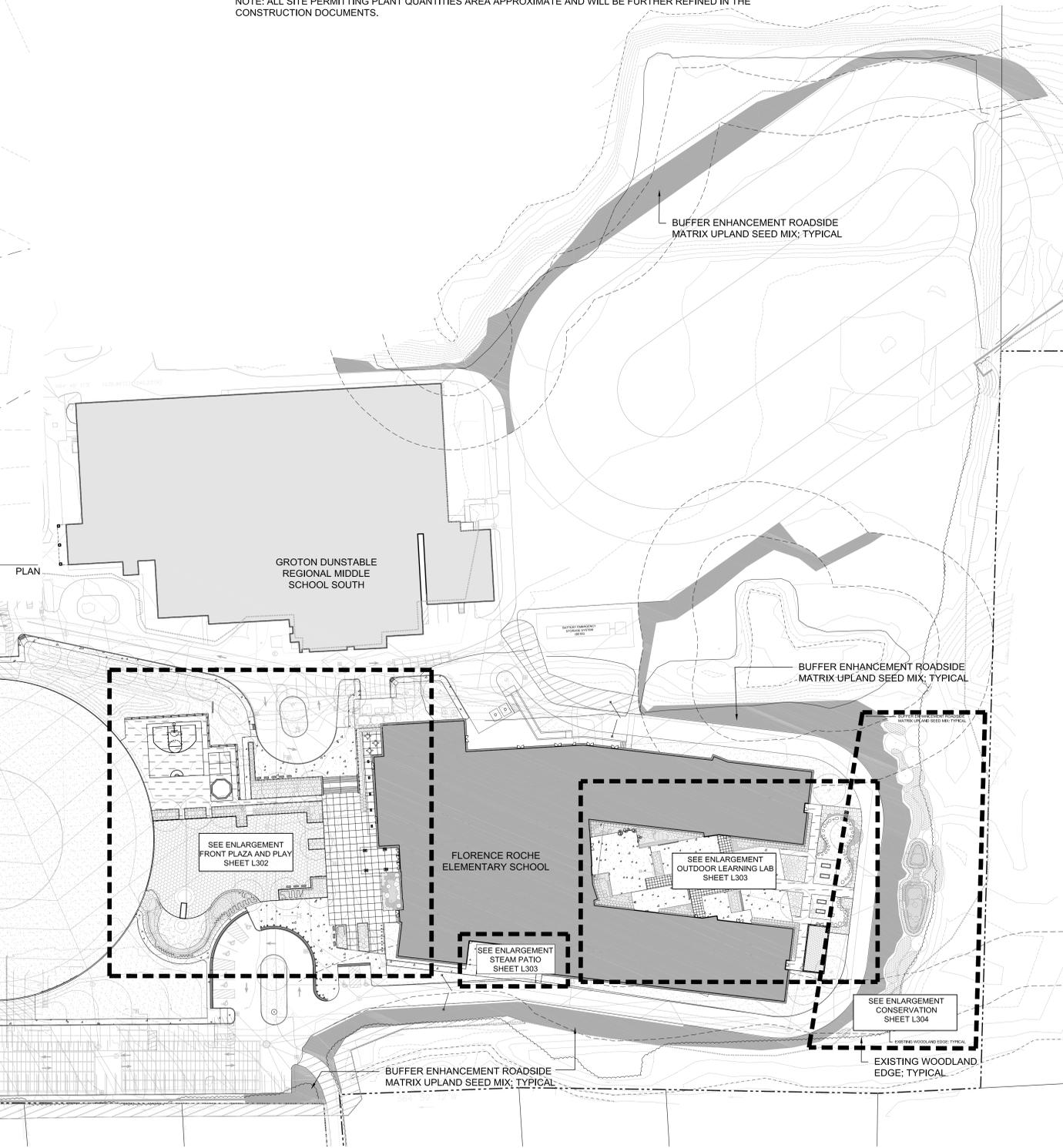
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- ANY MATERIALS ACCUMULATED OVER THE ROOT FLARE OF A TREE OR SHRUB MUST BE REMOVED COMPLETELY UNTIL THE ROOT FLARE IS EXPOSED AND ALL GIRDLING ROOTS REMOVED PRIOR TO PLANTING.
- THE CONTRACTOR SHALL LOCATE AND VERIFY WITH THE OWNER'S REPRESENTATIVE ALL TREES, SHRUBS, PERENNIALS, AND/OR GROUNDCOVER TO REMAIN, TO BE REMOVE, OR TO BE TRANSPLANTED. PROTECT IN PLACE ALL EXISTING TREES, SHRUBS, AND GROUNDCOVER TO REMAIN.
- ALL NEW PLANTING MATERIAL SHALL CONFORM TO MINIMUM GUIDELINES ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (AAN). IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY AND THE PLANT HEIGHT SHALL BE MEASURED FROM THE ROOT FLARE, NOT THE BOTTOM OF POT OR BURLAP BALL.
- STAKE THE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF PLANTING.
- IN THE EVENT THAT QUANTITY DISCREPANCIES OR MATERIAL OMISSIONS OCCUR BETWEEN THE PLANT MATERIALS LIST AND THE DRAWINGS, THE HIGHER NUMBER OF PLANTS SHALL GOVERN. THE CONTRACTOR SHALL REPORT DISCREPANCIES TO THE OWNER'S REPRESENTATIVE.
- ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, FRUIT, COLOR, AND CULTURE MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE.
- ALL LAWN AREAS DISTURBED BY CONSTRUCTION OPERATIONS INSIDE AND OUTSIDE THE LIMIT OF WORK SHALL BE LOAMED AND SEEDED.

LEGEND

- PROPERTY LINE
- - - WETLAND BUFFER
- LIMIT OF WORK
- EXISTING DECIDUOUS TREE | SHRUB TO REMAIN
- ⊗ EXISTING EVERGREEN TREE | SHRUB TO REMAIN
- PROPOSED DECIDUOUS TREE | SHRUB
- ⊗ PROPOSED EVERGREEN TREE | SHRUB
- ⊕ TREE TAG
- ⊕ SHRUB TAG
- ⊕ PERENNIAL TAG
- BUFFER ENHANCEMENT SEEDING AREA
- ▨ CON COM RAIN GARDEN PERENNIAL | SHRUB
- ▨ LAWN SEED - WARM SEASON MIX
- ▨ LAWN SEED - TALL FESCUE



1 RAIN GARDEN ENLARGEMENT  
SCALE: 1" = 20'-0"



2 BUFFER ENHANCEMENT SEEDING AREA  
SCALE: 1" = 50'-0"



The Brewery  
177 Boylston Street  
Jamaica Plain, MA 02130  
T 617-524-5558  
F 617-524-5544

STAMP



CLIENT  
Groton-Dunstable  
Regional Middle District  
344 Main Street,  
Groton, MA 01450

NOT FOR CONSTRUCTION  
DESIGN DEVELOPMENT  
SET

PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street, Groton, MA 01450

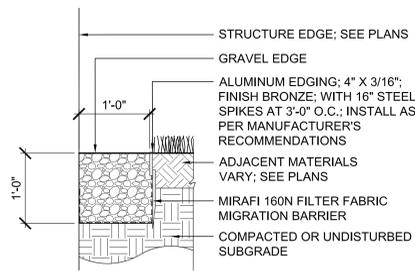
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PROJECT NO 19025  
DRAWN BY JW  
CHECKED BY KAC  
SCALE AS SHOWN  
DATE 04/14/2022  
SHEET TITLE

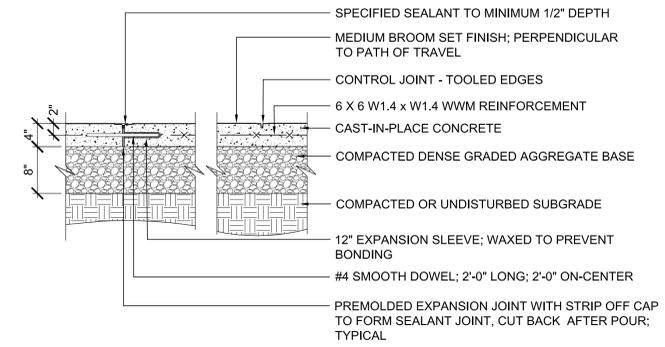
PLANTING  
CONSERVATION

SHEET NO  
**L304**

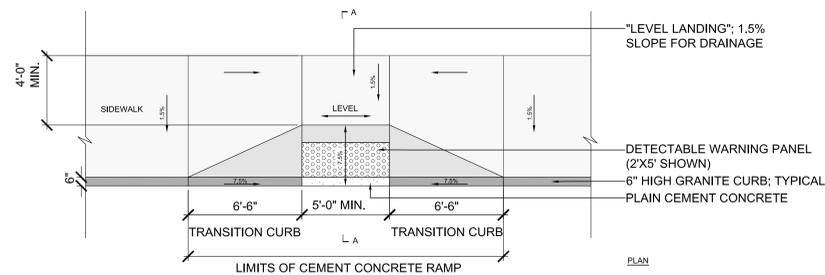




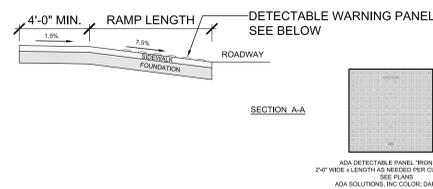
④ STONE DRIP EDGE  
SCALE: N.T.S. SECTION



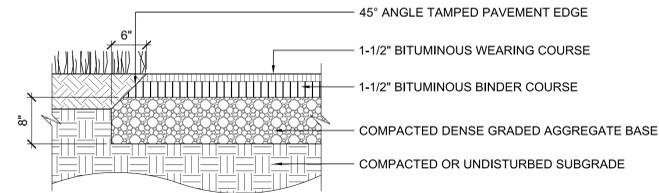
① CAST-IN-PLACE CONCRETE; PEDESTRIAN  
SCALE: N.T.S. SECTION



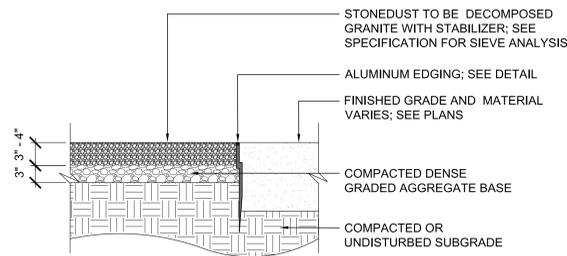
⑤ ADA CURB CUT RAMP WITH DETECTABLE WARNING PAVER  
SCALE: N.T.S. PLAN



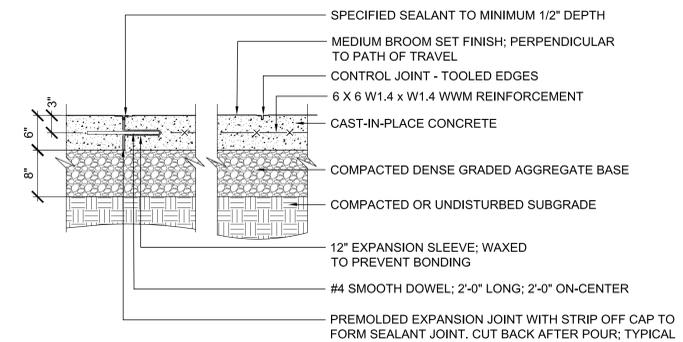
ADA DETECTABLE PANEL "IRON DOME"  
2'-0" WIDE x 4'-0" MIN. RAMP LENGTH  
ADA SOLUTIONS, INC. COLOR: DARK GREY



② BITUMINOUS CONCRETE; PEDESTRIAN  
SCALE: N.T.S. SECTION



⑥ STABILIZED STONEDUST; PEDESTRIAN  
SCALE: N.T.S. SECTION



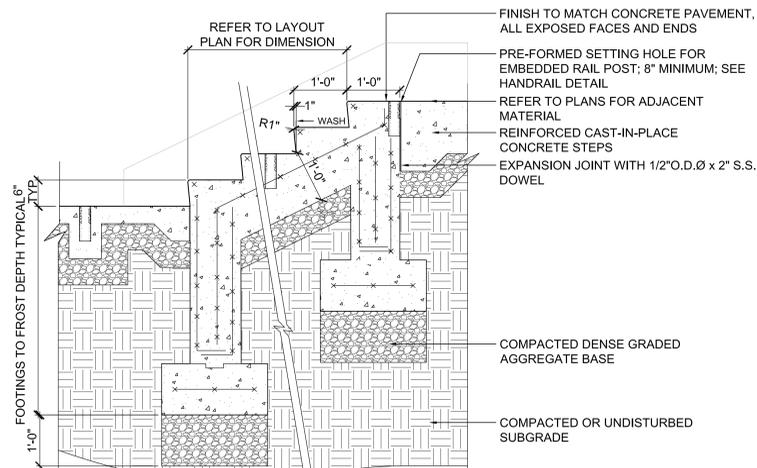
③ CAST-IN-PLACE CONCRETE; VEHICULAR  
SCALE: N.T.S. SECTION

NO.	DESCRIPTION	DATE

PROJECT NO 19025  
DRAWN BY JW  
CHECKED BY KAC  
SCALE AS SHOWN  
DATE 04/14/2022

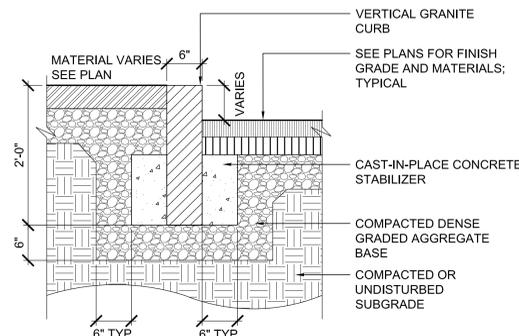
SHEET TITLE  
DETAILS -  
PAVING

SHEET NO  
L401

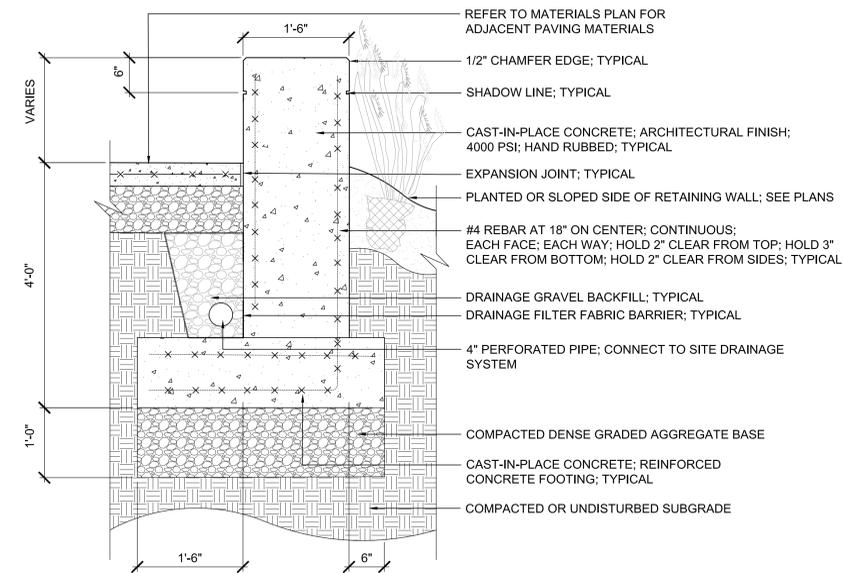


- NOTES:
1. CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, ELEVATIONS, AND CODE FOR ALL STAIRS PRIOR TO INSTALLATION.
  2. CAST IN PLACE CONCRETE STAIRS REQUIRE SHOP DRAWINGS BY CONTRACTOR TO BE APPROVED BY OWNER.
  3. ALL INFORMATION SHOWN IN THIS DETAIL IS FOR COORDINATION PURPOSES ONLY.

7 CAST-IN-PLACE CONCRETE STAIRS  
SCALE: N.T.S. SECTION

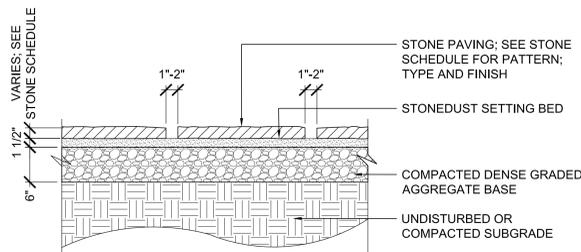


4 GRANITE CURB  
SCALE: N.T.S. SECTION



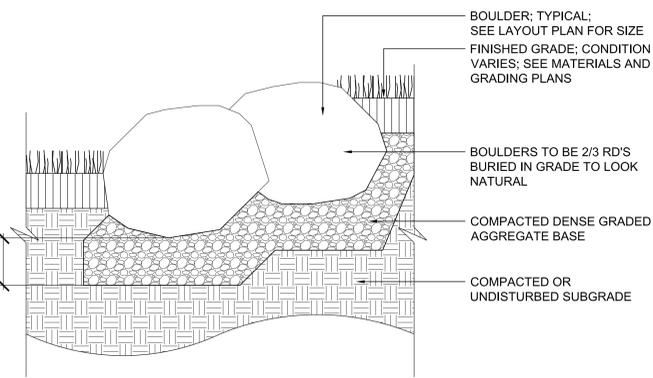
- NOTES:
1. PROVIDE LAYOUT SHOP DRAWINGS TO OWNER REPRESENTATIVE PRIOR TO FABRICATION.
  2. VERIFY ALL WALL DIMENSIONS FOR SHOP DRAWINGS AND PRIOR TO WALL CONSTRUCTION IN FIELD.

1 CAST-IN-PLACE CONCRETE SEATWALL; AMPHITHEATER; SEE ADD ALTERNATE SHEET L104  
SCALE: N.T.S. SECTION

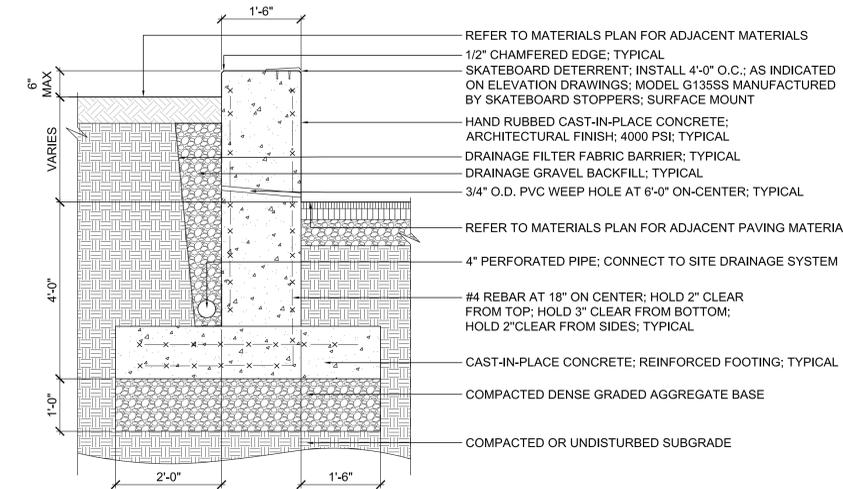


- NOTES:
1. OWNER'S REPRESENTATIVE AND CLIENT TO APPROVE MOCK SAMPLE LAYOUT OF STONE PATTERN IN THE FIELD.
  2. STONE PIECES SHALL BE PLACED IN PATTERN NOTED ON PLANS.
  3. ALL STONES SHALL BE SET LEVEL AND FLUSH WITH FINISH GRADE.

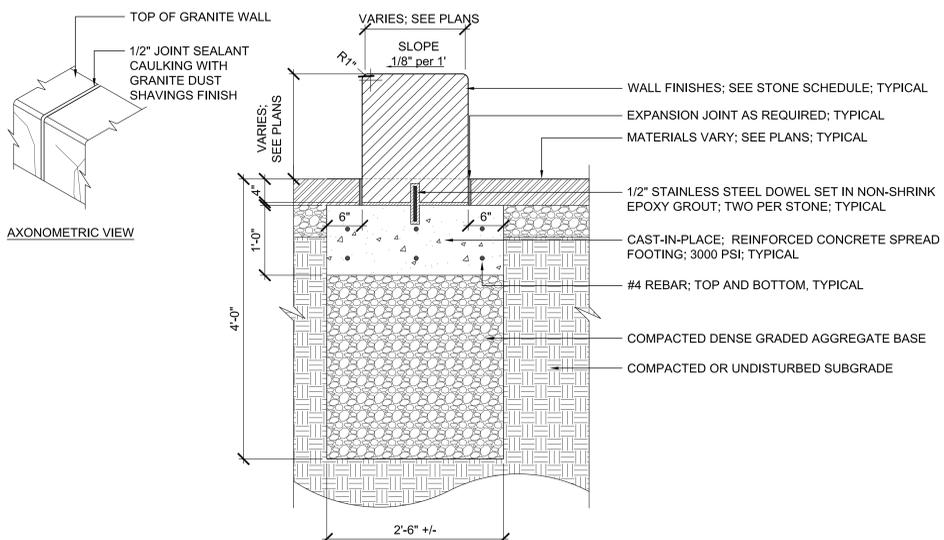
8 LARGE NATURAL STEPPING STONES  
SCALE: N.T.S. SECTION



5 ORNAMENTAL BOULDER  
SCALE: N.T.S. SECTION

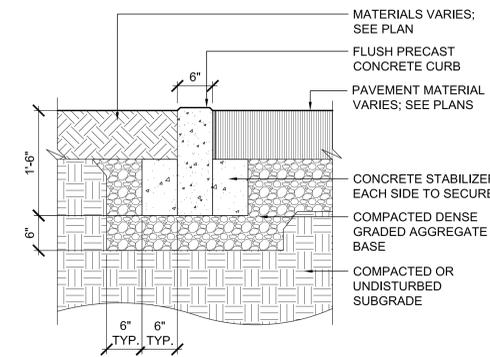


2 CAST-IN-PLACE CONCRETE WALL  
SCALE: N.T.S. SECTION



- NOTES:
1. PROVIDE SKATEBOARD DETERRENT CENTERED ON EACH 4'-0" WALL SEGMENT ADJACENT TO CONCRETE PAVEMENT ONLY
  2. PROVIDE SHOP DRAWINGS TO LANDSCAPE ARCHITECT PRIOR TO FABRICATION

6 GRANITE SLAB BENCH  
SCALE: N.T.S. SECTION



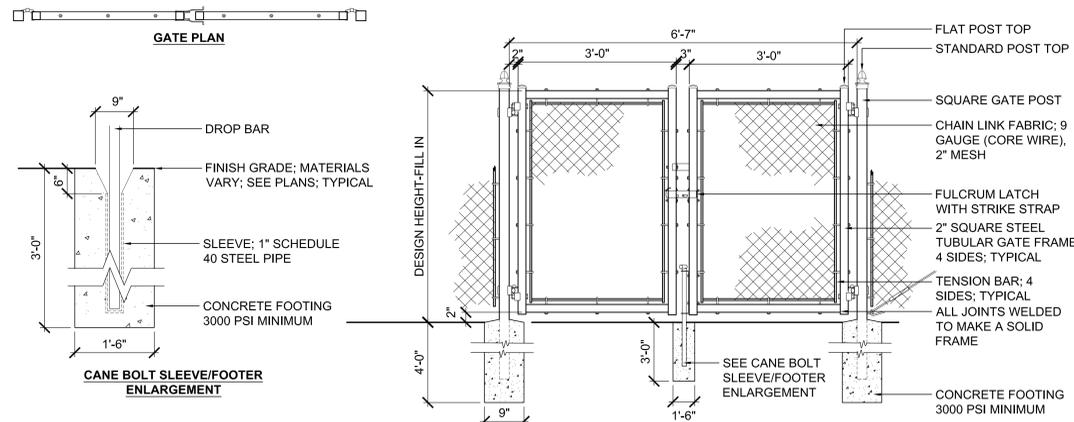
3 PRECAST CONCRETE CURB  
SCALE: N.T.S. SECTION

NO.	DESCRIPTION	DATE

PROJECT NO 19025  
DRAWN BY JW  
CHECKED BY KAC  
SCALE AS SHOWN  
DATE 04/14/2022

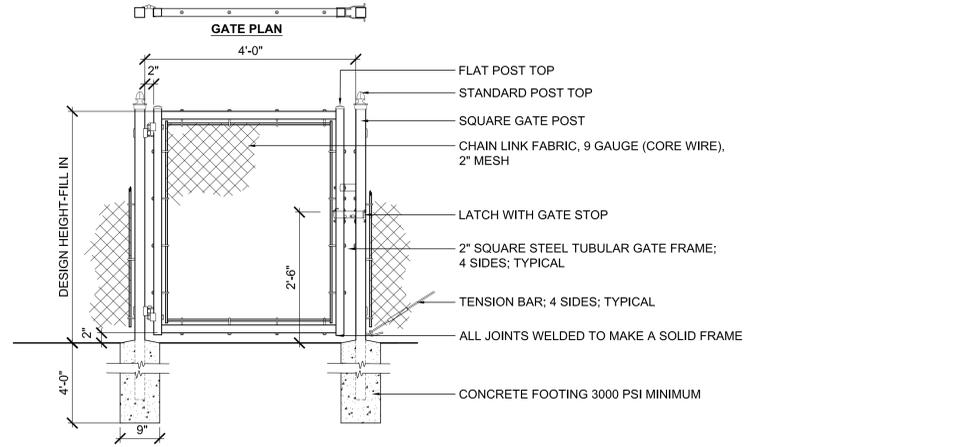
SHEET TITLE  
DETAILS -  
SEATWALLS, BOULDERS,  
CURBS AND STAIRS

SHEET NO  
L402



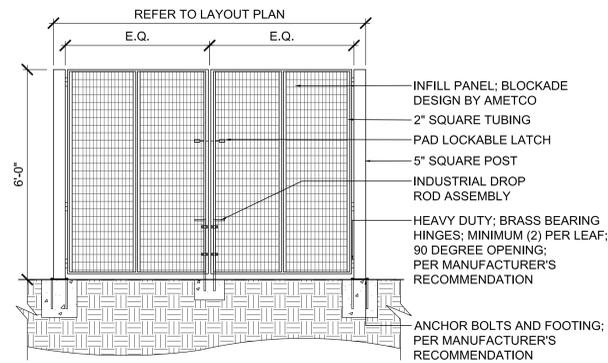
NOTE:  
1. SEE NOTES AT CHAIN LINK FENCE DETAIL 3/L403.

4 CHAIN LINK GATE; DOUBLE  
SCALE: N.T.S.



NOTE:  
1. SEE NOTES AT CHAIN LINK FENCE DETAIL 3/L403.

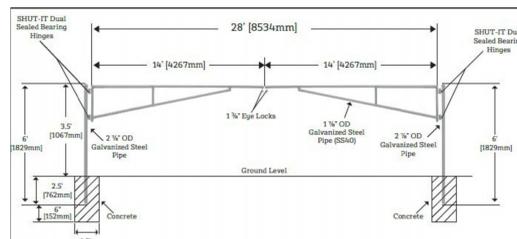
5 CHAIN LINK GATE; SINGLE  
SCALE: N.T.S.



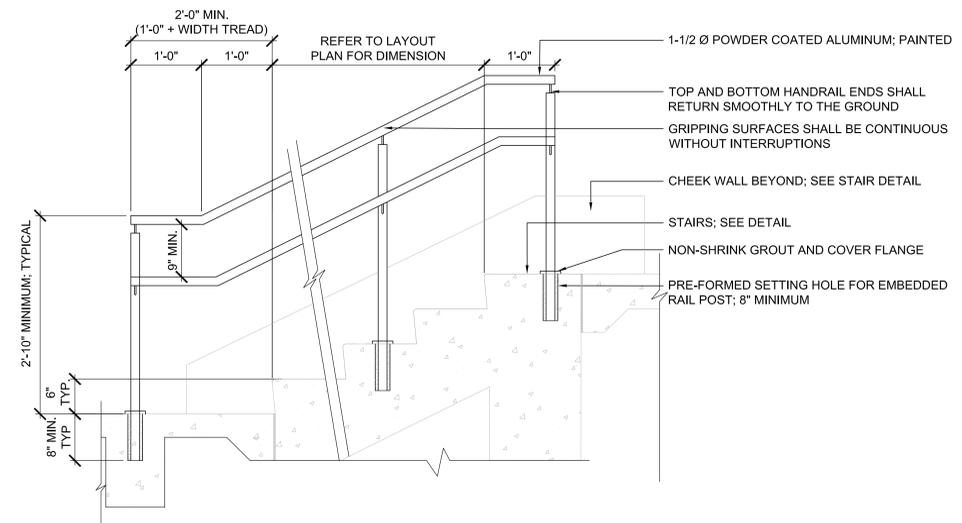
FRONT VIEW AT DOUBLE SWING GATE

NOTE:  
1. SHOP DRAWINGS REQUIRED FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE.  
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION.  
3. REFER TO MANUFACTURER'S SPECIFICATION FOR SIZE OF FOOTINGS AND ATTACHMENTS.  
4. FOOTINGS AND ATTACHMENTS TO BE REVIEWED AND APPROVED BY A MASSACHUSETTS LICENSED STRUCTURAL ENGINEER

6 UTILITY SCREEN FENCE ENCLOSURE  
SCALE: N.T.S.

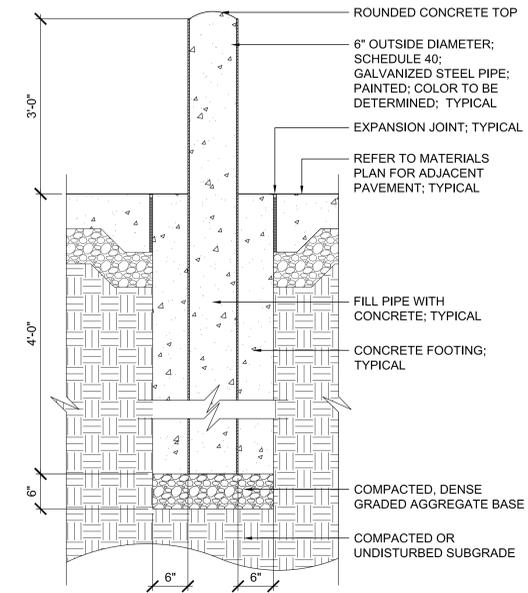


7 VEHICULAR GATE  
SCALE: N.T.S.

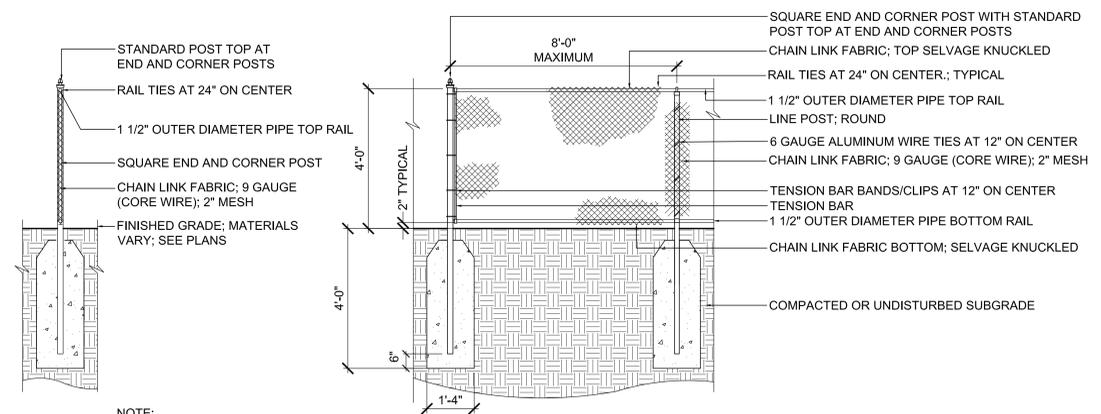


NOTES:  
1. CONTRACTOR TO FIELD VERIFY THE DIMENSIONS AND USE MOST STRINGENT CODE FOR ALL HANDRAILS PRIOR TO INSTALLATION. THIS DETAIL IS FOR COORDINATION PURPOSES ONLY. HANDRAILS REQUIRE SHOP DRAWINGS BY CONTRACTOR TO BE APPROVED BY OWNER'S REPRESENTATIVE.  
2. HANDRAILS ARE REQUIRED ON BOTH SIDES OF STAIRS.  
3. TOP HANDRAIL SHOULD PROJECT TOWARDS THE LANDING A MINIMUM OF 12 INCHES FROM THE EDGE OF FIRST NOSING; AS SHOWN.  
4. BOTTOM HANDRAIL SHOULD PROJECT 12 INCHES PLUS THE WIDTH OF THE TREAD FROM THE EDGE OF THE LAST STEP; AS SHOWN.  
5. TOP OF HANDRAIL GRIPPING SURFACE SHALL BE MOUNTED BETWEEN 34 INCHES (2'-10") AND 38 INCHES (3'-2") ABOVE THE STAIR NOSINGS.  
6. USE NON-SHRINK EPOXY BASED SEALANT FOR OUTDOOR ENVIRONMENT AS RECOMMENDED BY THE HANDRAIL MANUFACTURER.  
7. ALTERNATIVELY, USE POLYETHYLENE FOAM JOINT TO FULL DEPTH WITH POLYSULPHIDE SEALANT.

1 HANDRAIL  
SCALE: N.T.S.



2 BOLLARD; VEHICULAR  
SCALE: N.T.S.



NOTE:  
1. CHAIN LINK GATE AND FENCE EXHIBIT INTENT; STOCK CHAIN LINK FENCE AND GATE OF SIMILAR STYLE IS ACCEPTABLE.  
2. FABRICATOR TO VERIFY ALL DIMENSIONS IN FIELD PRIOR TO PRODUCING SHOP DRAWINGS.  
3. SHOP DRAWINGS REQUIRED FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO FABRICATION.  
4. ALL CHAIN LINK FENCE AND GATE COMPONENT FINISHES TO BE VINYL COATED; COLOR BLACK.  
5. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION.  
6. REFER TO MANUFACTURER'S SPECIFICATION FOR SIZE OF FOOTINGS AND ATTACHMENTS.  
7. PROVIDE SLEEVES AND FOOTINGS AT GATE OPEN AND CLOSED POSITIONS.

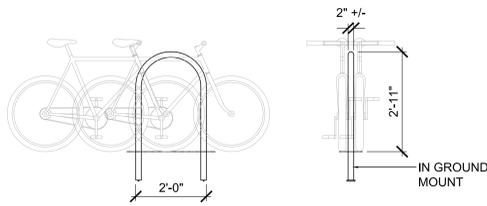
3 CHAIN LINK GATE; 4'-0" HIGH  
SCALE: N.T.S.

NO.	DESCRIPTION	DATE

PROJECT NO 19025  
DRAWN BY JW  
CHECKED BY KAC  
SCALE AS SHOWN  
DATE 04/14/2022

SHEET TITLE  
DETAILS -  
GUARDS AND  
FENCES

SHEET NO  
L403



④ BICYCLE RACK; EMBEDDED  
SCALE: N.T.S. ELEVATION

**Monarch Series - ICC**  
Internal Cam Cleat  
Rope Hayard  
Ground Set Installation

**AMERICAN**  
FLOOR BOLTS  
MADE IN THE USA

**ICC30D61 - AD**

**ICC-GS**

**Ornament**  
(Colors Available - See Specification Box)  
Cast Aluminum Revolving Track Assembly  
with Aluminum Spindle, Stainless Steel Ball Bearings  
(Steel Bearings on Taggler 50 and Over),  
Brass Bushing, and Removable Hood

**F Top Diameter**

**A Mounting Height**

**D Taper Length**

**C Total Length**

**E Butt Diameter**

**G Wall Thickness**  
Alloy 6063-T6 Tapered Aluminum Tube

**Span Aluminum Collar**  
(Options Available - See Specification Box)  
Perimeter caulked by installer

**2" Cap - Cement or Waterproof Compound**  
and Hardware Wedges (By Installer)

**3/16" Steel Plate Welded to Sleeve**

**3/16" Steel Support Plate**

**Lightning Spike -**  
3/4" Diameter Steel Rod

**Accessory Specifications**  
Anodized - Dark Bronze (AD), Clear Anodized Ball (90055-004), Standard Spun Collar (94028-004)

**Specifications**

A. Mounting Height	30"
B. Set Depth	3'-0"
C. Total Length	33'-0"
D. Taper Length	13'-0"
E. Butt Diameter	6.000"
F. Top Diameter	3.000"
G. Wall Thickness	0.188"
Flagpole Sections	1
Flagpole Weight	200 lbs.
Max Flag Size	8' x 12'
Max Wind Speed w/ Flag	100 mph
Max Wind Speed No Flag	165 mph

**Notes**

**Note:** Foundation design not included. Foundation dimensions should be determined by a qualified engineer familiar with site soil conditions.

Customer Name: \_\_\_\_\_  
Dealer: \_\_\_\_\_  
Project: Florence Roché Elementary Location: \_\_\_\_\_

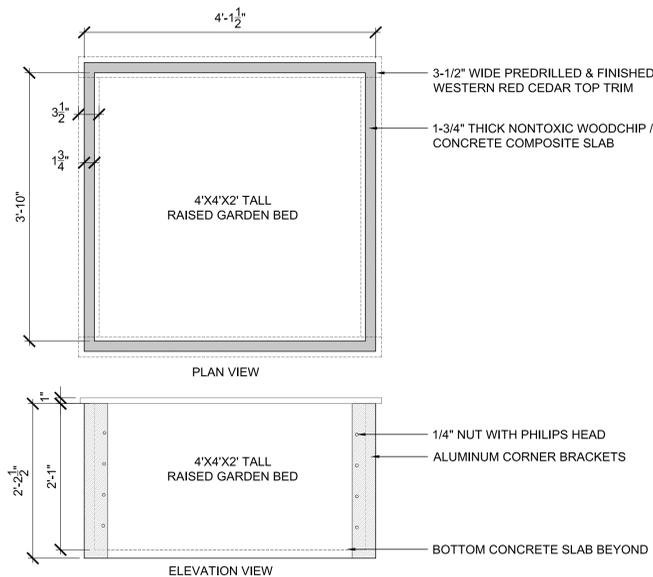
⑦ FLAGPOLE  
SCALE: N.T.S. PRODUCT DATA SHEET

⑤ DRINKING FOUNTAIN WITH BOTTLE FILLER  
SCALE: N.T.S. SECTION

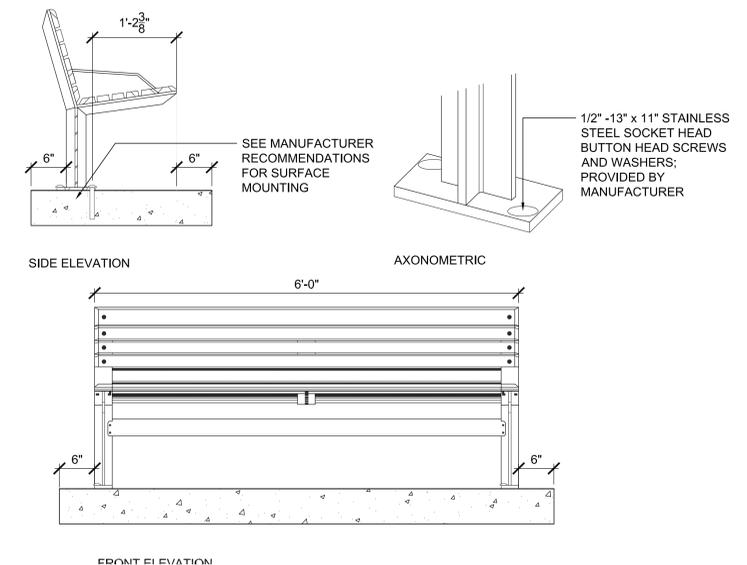
② SHADE SAIL; STANCHION EMBEDDED INTO GROUND  
SCALE: N.T.S. IMAGE



⑧ MOVABLE TABLES AND CHAIRS  
SCALE: N.T.S. IMAGE



⑥ RAISED PLANTER; FREE STANDING  
SCALE: N.T.S. PLAN | SECTION



③ BENCH; 6'-0" LONG; SURFACE MOUNT  
SCALE: N.T.S. SECTION

INTENTIONALLY OMITTED

INTENTIONALLY OMITTED

INTENTIONALLY OMITTED

NO.	DESCRIPTION	DATE

PROJECT NO 19025

DRAWN BY JW

CHECKED BY KAC

SCALE AS SHOWN

DATE 04/14/2022

SHEET TITLE

**DETAILS -  
SITE STRUCTURES  
AND FURNISHINGS**

SHEET NO

**L404**

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NO.	DESCRIPTION	DATE

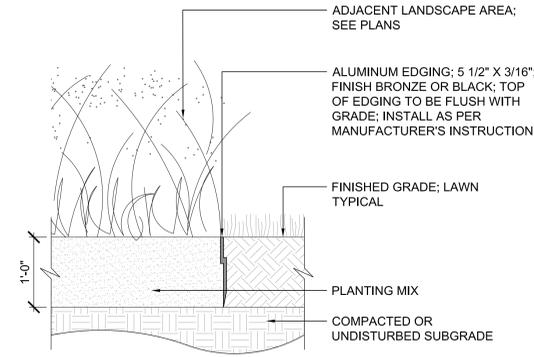
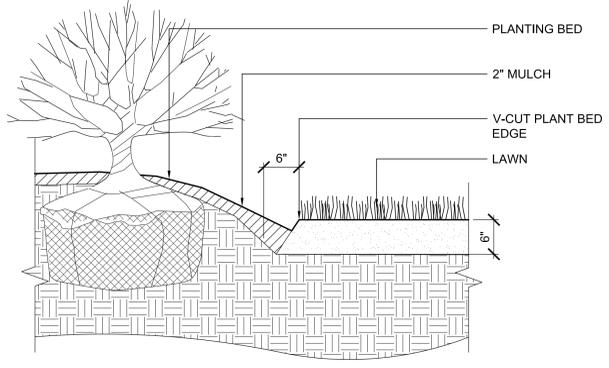
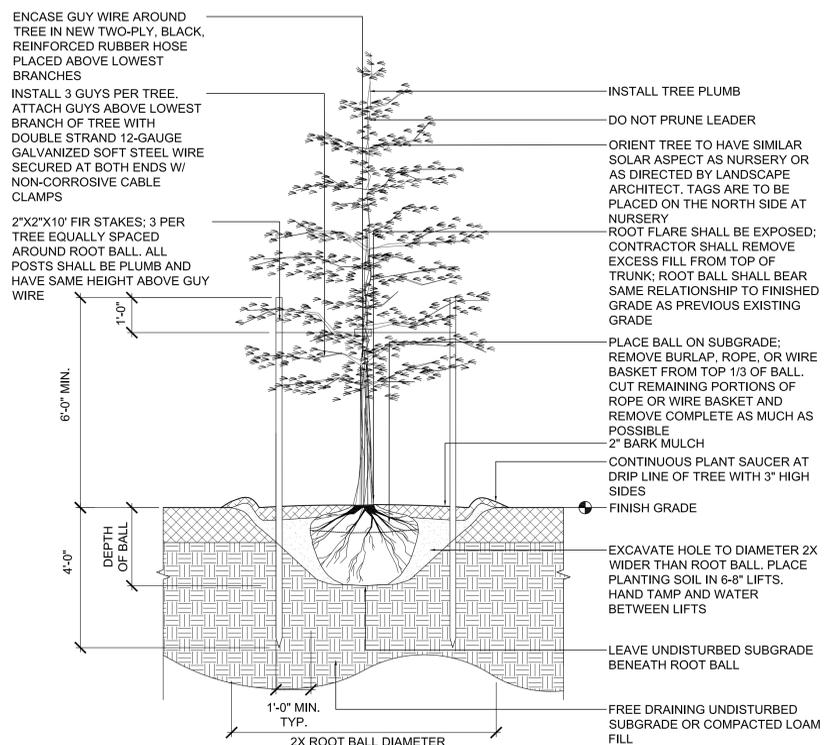
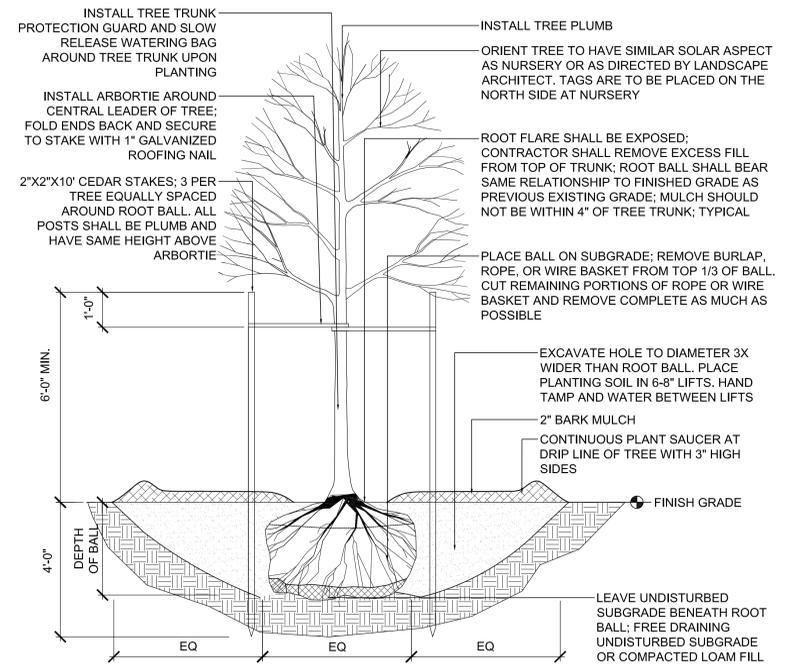
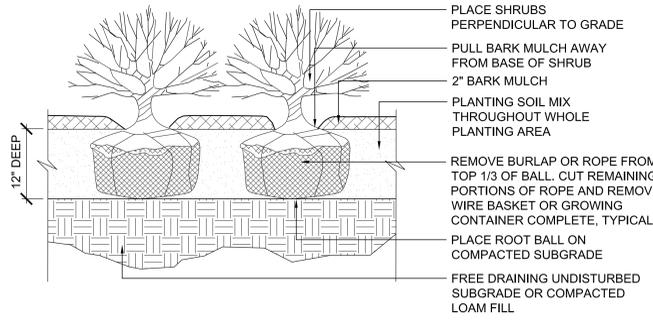
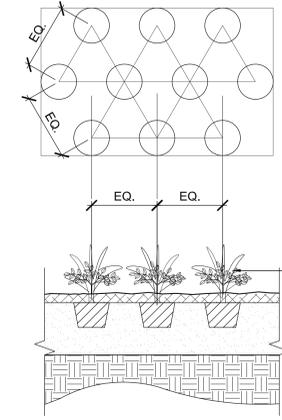
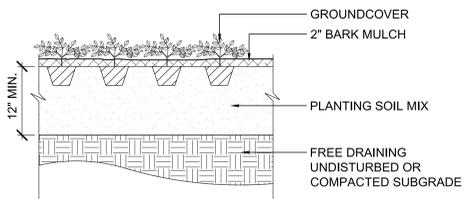
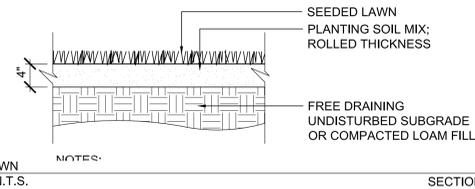
PROJECT NO 19025

DRAWN BY JW

CHECKED BY KAC

SCALE AS INDICATED

DATE 04/14/2022



STAMP

CONSULTANT

**terra**ink  
landscape architecture + planning  
17 Canal St., Boston, MA 02114  
www.terraink.com

CLIENT

Groton-Dunstable  
Regional School District  
344 Main Street,  
Groton, MA 01450

NOT FOR CONSTRUCTION  
DESIGN DEVELOPMENT  
SET

PROJECT TITLE

**FLORENCE ROCHE  
ELEMENTARY SCHOOL**

342 Main Street, Groton, MA 01450

NO.	DESCRIPTION	DATE

PROJECT NO 19025

DRAWN BY JW

CHECKED BY KAC

SCALE AS SHOWN

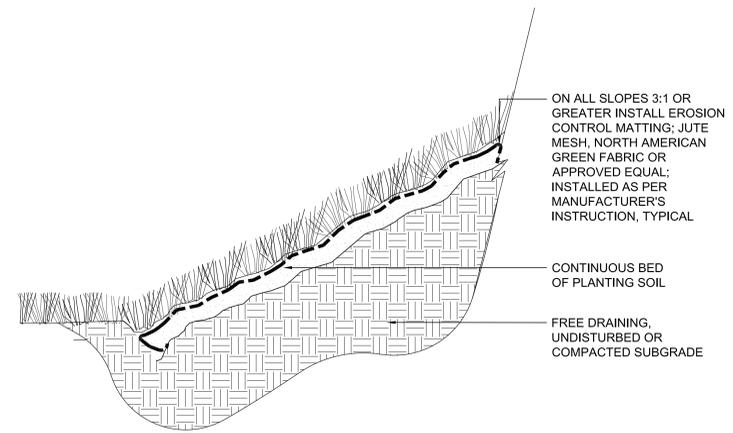
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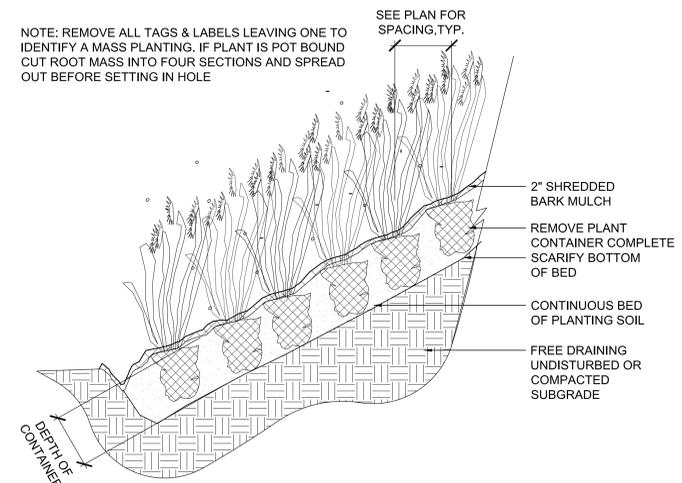
**DETAILS -  
PLANTING**

SHEET NO

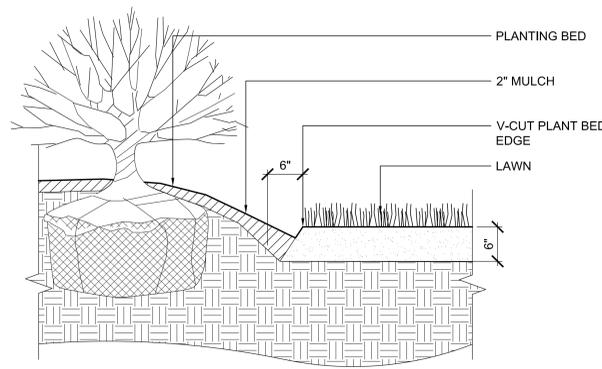
**L407**



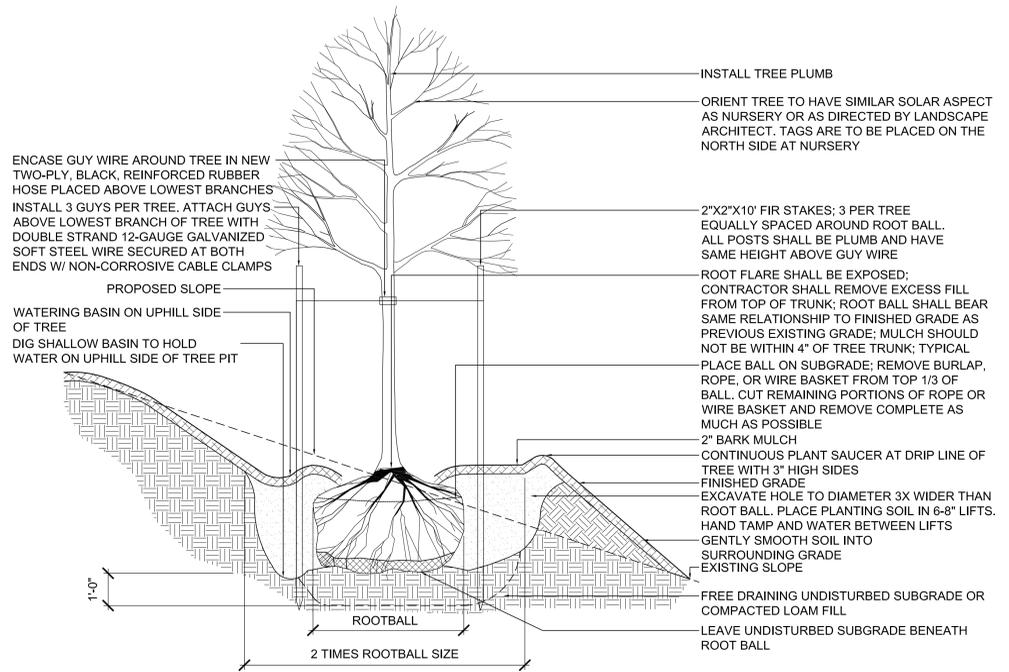
1 TURF PLANTING ON SLOPE  
SCALE: N.T.S. SECTION



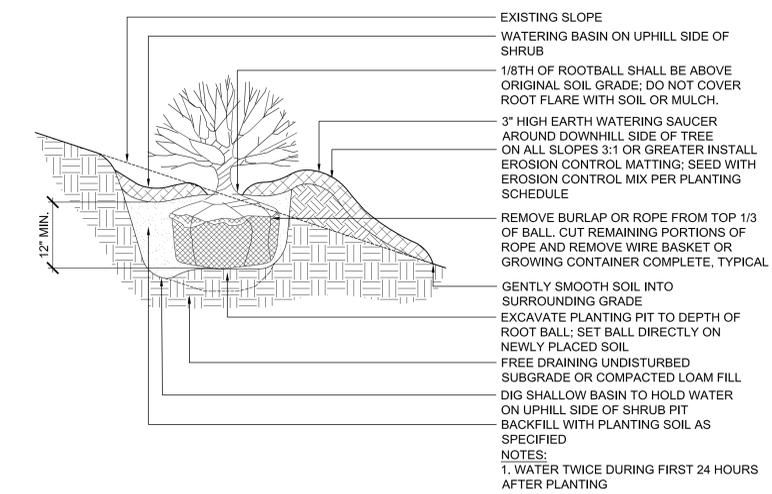
2 PERENNIAL PLANTING ON SLOPE  
SCALE: N.T.S. SECTION



4 SHOVEL CUT PLANTING BED EDGE  
SCALE: N.T.S. SECTION



5 DECIDUOUS TREE PLANTING ON SLOPE  
SCALE: N.T.S. SECTION

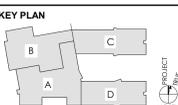


3 SHRUB PLANTING ON SLOPE  
SCALE: N.T.S. SECTION

STAMP

CONSULTANT

CLIENT  
Gronon-Dunstable  
Regional School District  
344 Main Street  
Gronon, MA 01450



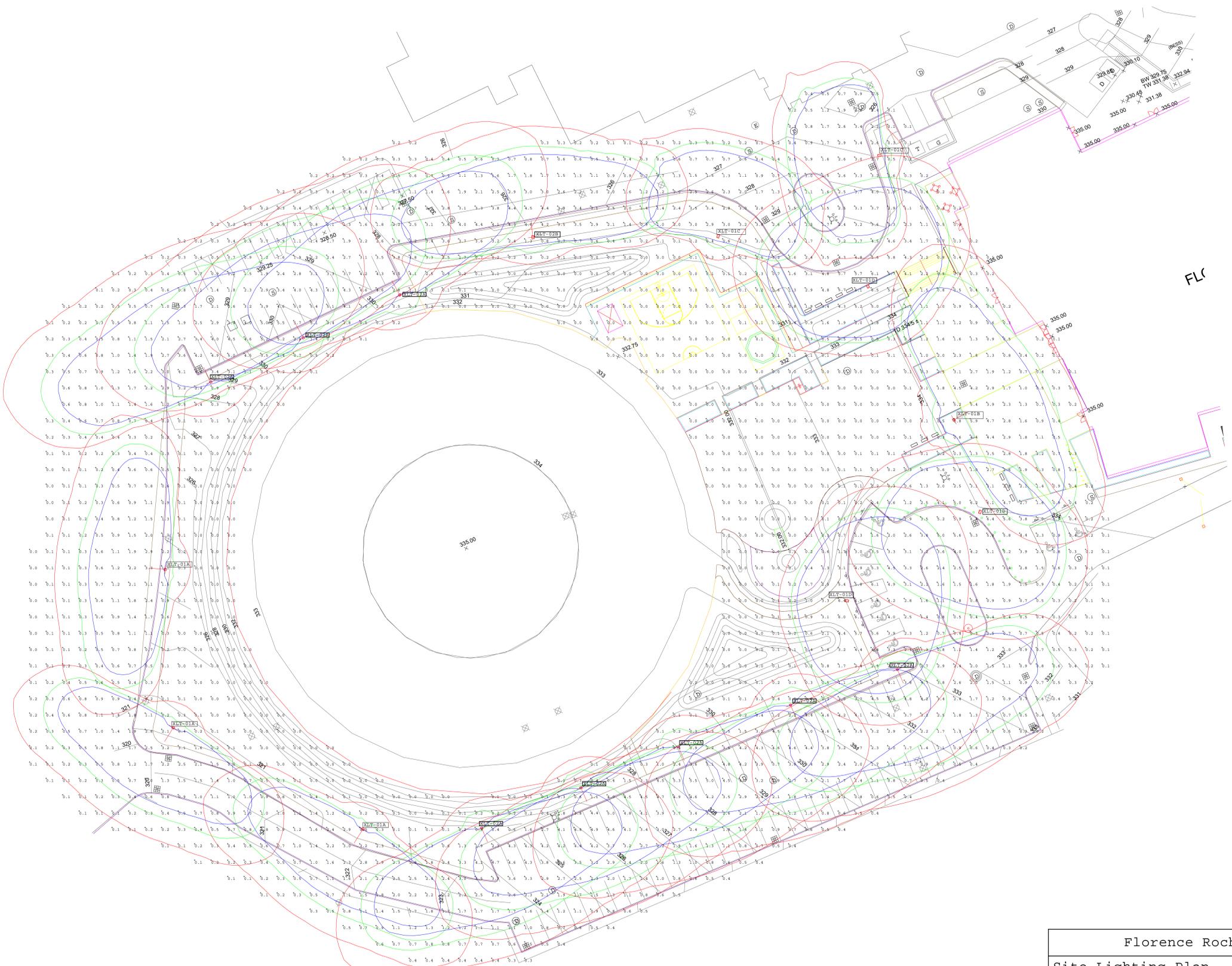
PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Gronon, MA 01450

NO.	DESCRIPTION	DATE
REV.	FOR 3000 K FIXT.	06/20/2022

PROJECT NO 21915.1  
DRAWN BY DL  
CHECKED BY DY  
SCALE  
DATE 2022-04-06

SHEET TITLE  
**EXTERIOR  
LIGHTING  
CALCULATIONS**

SHEET NO  
**XLT-100**



Florence Roche Elementary School (FRES)  
Site Lighting Plan  
Photometric Notes  
**Hours of operation**

**Exterior lighting poles will be controlled via an astronomical time clock device, connected to the over all building management system. Typical hours of operation will be from dawn to 8:00 AM and from dusk to 9:00 PM**

Symbol	Qty	Label	Fixture Mounting Height	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
■	1	XLT-02B	25'-0"	Single	VLL-PLD-11-80LED-700mA-30K-HS		0.950	16260	173.6	173.6
■	3	XLT-01D	20'-0"	Single	US Architectural VLL-PLD-IV-80LED-700mA-30K		0.950	22451	173.6	520.8
■	1	XLT-01B	20'-0"	Single	US Architectural VLL-PLD-III-W-80LED-700mA-30K-HS		0.950	16101	173.6	173.6
■	8	XLT-02A	25'-0"	Single	US Architectural VLL-PLD-III-W-80LED-700mA-30K-HS		0.950	16101	173.6	1388.8
■	3	XLT-01A	20'-0"	Single	US Architectural VLL-PLD-III-W-80LED-350mA-30K-HS		0.950	8817	85.4	256.2
■	2	XLT-01C	20'-0"	Single	US Architectural VLL-PLD-IV-80LED-350mA-30K-HS		0.950	9304	85.4	170.8

Calculation Summary		CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Label	Site Lighting	ILLUMINANCE	Fc	1.15	6.5	0.0	N.A.	N.A.

PROJECT TITLE: FLORENCE ROCHE ELEMENTARY SCHOOL  
NO. DESCRIPTION DATE  
REV. FOR 3000 K FIXT. 06/20/2022

PROJECT NO: 21915.1  
DRAWN BY: DL  
CHECKED BY: DY  
SCALE:  
DATE: 2022-04-06

SHEET TITLE: EXTERIOR LIGHTING FIXTURE CUTS  
SHEET NO: XLT-101

6/16/2022 10:02:33 AM

PICTORIAL IMAGE, EXTERIOR POLE CHART, DIMENSIONS TYPE III FIXTURE HEAD. Description: Exterior pole mounted parking lot LED area light fixture, TYPE III distribution. Heavy cast low copper aluminum housing with integral cooling fins. Optimal high output LED panel full mounting with integral driver. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. 20' high pole required. Support as required. Pole height will vary.

PICTORIAL IMAGE, EXTERIOR POLE CHART, DIMENSIONS TYPE III FIXTURE HEAD. Description: 20'-0" high by 5" square, fabricated from high grade structural steel tube, for TYPE XLT-01A fixture top/exterior pole mounted parking lot LED area light fixture, TYPE III distribution. Heavy cast low copper aluminum housing with integral cooling fins. Optimal high output LED panel full mounting with integral driver. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. 20' high pole required. Support as required. Pole height will vary.

PICTORIAL IMAGE, EXTERIOR POLE CHART, DIMENSIONS TYPE IV FIXTURE HEAD. Description: Exterior pole mounted parking lot LED area light fixture, TYPE IV distribution. Heavy cast low copper aluminum housing with integral cooling fins. Optimal high output LED panel full mounting with integral driver. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. 20' high pole required. Support as required. Pole height will vary.

PICTORIAL IMAGE, EXTERIOR POLE CHART, DIMENSIONS TYPE IV FIXTURE HEAD. Description: Exterior pole mounted parking lot LED area light fixture, TYPE IV distribution. Heavy cast low copper aluminum housing with integral cooling fins. Optimal high output LED panel full mounting with integral driver. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. 20' high pole required. Support as required. Pole height will vary.

PICTORIAL IMAGE, EXTERIOR POLE CHART, DIMENSIONS TYPE III FIXTURE HEAD. Description: Exterior pole mounted parking lot LED area light fixture, TYPE IV distribution. Heavy cast low copper aluminum housing with integral cooling fins. Optimal high output LED panel full mounting with integral driver. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. 20' high pole required. Support as required. Pole height will vary.

PICTORIAL IMAGE, EXTERIOR POLE CHART, DIMENSIONS TYPE II FIXTURE HEAD. Description: Exterior pole mounted parking lot LED area light fixture, TYPE IV distribution. Heavy cast low copper aluminum housing with integral cooling fins. Optimal high output LED panel full mounting with integral driver. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. 20' high pole required. Support as required. Pole height will vary.

PICTORIAL IMAGE, EXTERIOR POLE CHART, BASE MOUNTING INFORMATION 20'-0" POLE FOR TYPE XLT-01A FIXTURE. Description: 20'-0" high by 5" square, fabricated from high grade structural steel tube, for TYPE XLT-01A fixture top. Shall conform to ASTM-A-501-08 specifications which meets or exceeds minimum yield strength of 46,000 P.S.I. Wall thickness 1 1/4" (120 wall) or 7/8" (180 wall) as specified. Hot rolled steel base plate with slotted bolt holes for (4) anchor bolts. Support as required. Structural lighting pole to meet all local and state requirements.

PICTORIAL IMAGE, EXTERIOR POLE CHART, BASE MOUNTING INFORMATION 20'-0" POLE FOR TYPE XLT-01B FIXTURE. Description: 20'-0" high by 7" square, fabricated from high grade structural steel tube, for TYPE XLT-01B fixture top. Shall conform to ASTM-A-501-08 specifications which meets or exceeds minimum yield strength of 46,000 P.S.I. Wall thickness 1 1/4" (120 wall) or 7/8" (180 wall) as specified. Hot rolled steel base plate with slotted bolt holes for (4) anchor bolts. Support as required. Structural lighting pole to meet all local and state requirements.

PICTORIAL IMAGE, EXTERIOR POLE CHART, BASE MOUNTING INFORMATION 20'-0" POLE FOR TYPE XLT-01C FIXTURE. Description: 20'-0" high by 5" square, fabricated from high grade structural steel tube, for TYPE XLT-01C fixture top. Shall conform to ASTM-A-501-08 specifications which meets or exceeds minimum yield strength of 46,000 P.S.I. Wall thickness 1 1/4" (120 wall) or 7/8" (180 wall) as specified. Hot rolled steel base plate with slotted bolt holes for (4) anchor bolts. Support as required. Structural lighting pole to meet all local and state requirements.

PICTORIAL IMAGE, EXTERIOR POLE CHART, BASE MOUNTING INFORMATION 20'-0" POLE FOR TYPE XLT-01D FIXTURE. Description: 20'-0" high by 5" square, fabricated from high grade structural steel tube, for TYPE XLT-01D fixture top. Shall conform to ASTM-A-501-08 specifications which meets or exceeds minimum yield strength of 46,000 P.S.I. Wall thickness 1 1/4" (120 wall) or 7/8" (180 wall) as specified. Hot rolled steel base plate with slotted bolt holes for (4) anchor bolts. Support as required. Structural lighting pole to meet all local and state requirements.

PICTORIAL IMAGE, EXTERIOR POLE CHART, BASE MOUNTING INFORMATION 25'-0" POLE HEIGHT. Description: 25'-0" high by 5" square, fabricated from high grade structural steel tube, for TYPE XLT-01A fixture top. Shall conform to ASTM-A-501-08 specifications which meets or exceeds minimum yield strength of 46,000 P.S.I. Wall thickness 1 1/4" (120 wall) or 7/8" (180 wall) as specified. Hot rolled steel base plate with slotted bolt holes for (4) anchor bolts. Support as required. Structural lighting pole to meet all local and state requirements.

PICTORIAL IMAGE, EXTERIOR POLE CHART, BASE MOUNTING INFORMATION 25'-0" POLE HEIGHT. Description: 25'-0" high by 5" square, fabricated from high grade structural steel tube, for TYPE XLT-01A fixture top. Shall conform to ASTM-A-501-08 specifications which meets or exceeds minimum yield strength of 46,000 P.S.I. Wall thickness 1 1/4" (120 wall) or 7/8" (180 wall) as specified. Hot rolled steel base plate with slotted bolt holes for (4) anchor bolts. Support as required. Structural lighting pole to meet all local and state requirements.



AERIAL VIEW LOOKING SOUTH TOWARD MAIN ST AND CHAMPNEY ST



AERIAL VIEW LOOKING NORTHWEST TOWARD MAIN ST



AERIAL VIEW LOOKING NORTH FROM MAIN ST AND CHAMPNEY ST



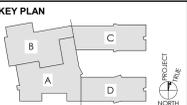
AERIAL VIEW LOOKING NORTHEAST FROM MAIN ST / CAMPUS ENTRY

STAMP

CONSULTANT

CLIENT  
Groton-Dunstable  
Regional School District  
& Town of Groton  
344 Main Street  
Groton, MA 01450

NOT FOR CONSTRUCTION  
CONSTRUCTION DOCUMENTS



PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE

PROJECT NO 21915.1  
DRAWN BY Author  
CHECKED BY Checker  
SCALE  
DATE 04/13/22

SHEET TITLE  
**EXISTING  
CAMPUS VIEWS**

SHEET NO  
**A001**



**CAMPUS PANORAMA CONTEXT VIEW FROM PARKING/DRIVE AREA**



**MIDDLE SCHOOL SOUTH MAIN ENTRY**



**SIDE ENTRY**



**REAR VIEW FROM BASEBALL FIELD**



**MIDDLE SCHOOL NORTH SIDE VIEW**



**MAIN ENTRY**



**REAR VIEW**

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Groton-Dunstable  
Regional School District  
& Town of Groton  
344 Main Street  
Groton, MA 01450

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CONSTRUCTION DOCUMENTS

KEY PLAN



PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**

342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE

PROJECT NO 21915.1  
DRAWN BY Author  
CHECKED BY Checker  
SCALE  
DATE 04/13/22

SHEET TITLE  
**EXISTING  
CAMPUS VIEWS**

SHEET NO  
**A002**



BUS DROP OFF VIEW



NEW FLORENCE ROCHE  
ELEMENTARY SCHOOL  
AERIAL VIEW



PARENT DROP OFF VIEW

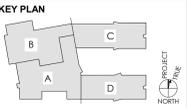
studio  
go.  
ARCHITECTS  
The Brewery  
179 Boylston Street  
Jamaica Plain, MA 02130  
617-524-5558



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CLIENT  
Groton-Dunstable  
Regional School District  
& Town of Groton  
344 Main Street  
Groton, MA 01450

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CONSTRUCTION DOCUMENTS



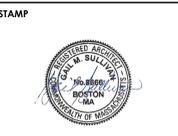
PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
	PB PH2 SET	04/14/22

PROJECT NO 21915.1  
DRAWN BY  
CHECKED BY  
SCALE  
DATE 04/13/22

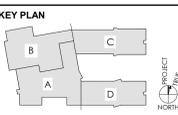
SHEET TITLE  
**EXTERIOR  
RENDERINGS**

SHEET NO  
**A003**



STAMP  
CONSULTANT  
CLIENT  
Groton-Dunstable  
Regional School District  
& Town of Groton  
344 Main Street  
Groton, MA 01450

NOT FOR CONSTRUCTION  
DESIGN DEVELOPMENT  
MSBA SET



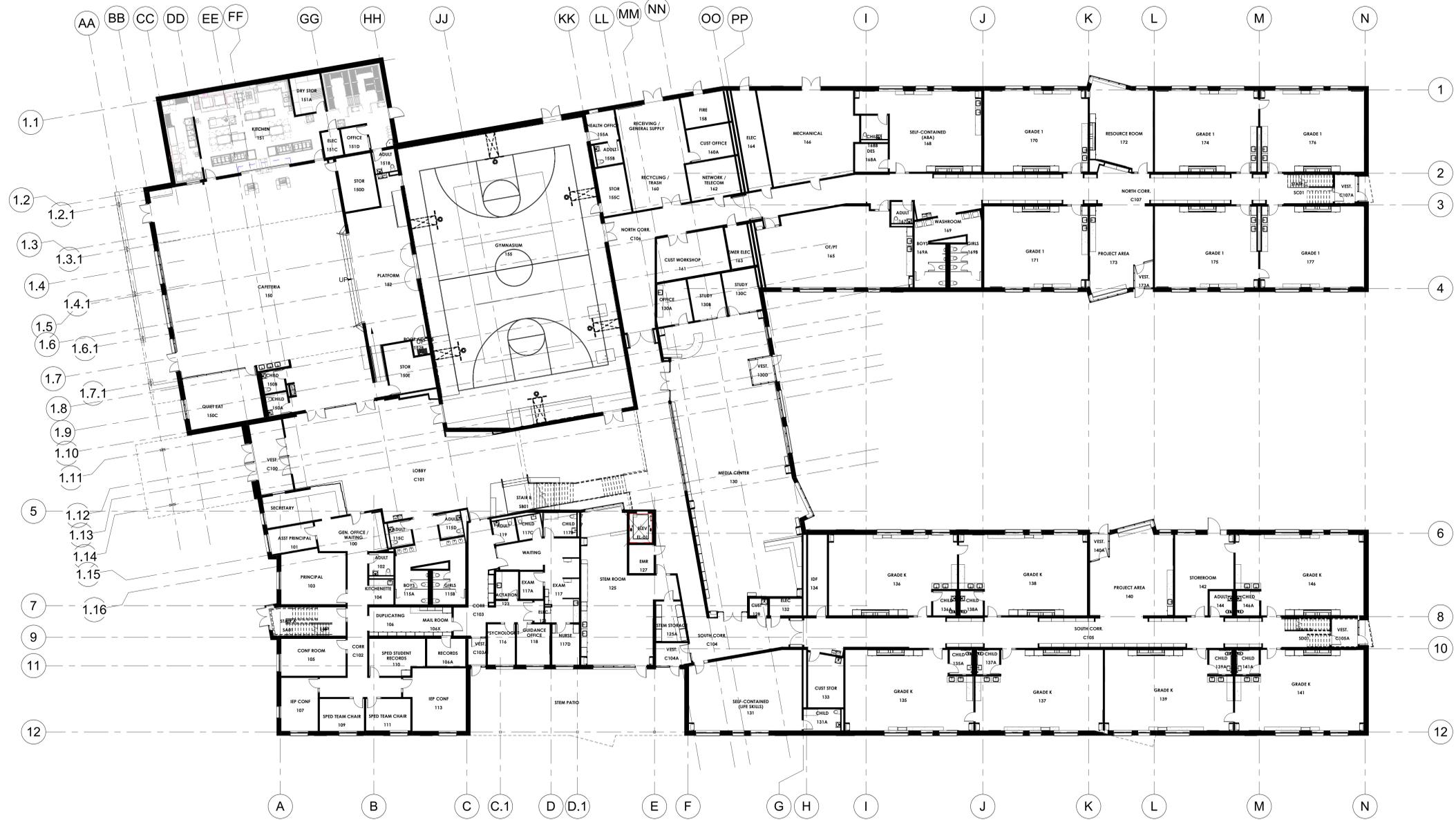
PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
1	PB PH2 SET	04/14/22

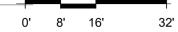
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DRAWN BY DE  
CHECKED BY SPM  
SCALE 1/16" = 1'-0"  
DATE 04/14/2022

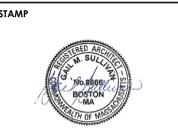
SHEET TITLE  
**FIRST FLOOR PLAN -  
OVERALL**

SHEET NO  
**A101**



(A) FIRST FLOOR PLAN OVERALL  
1/16" = 1'-0"

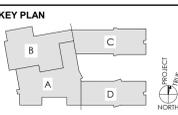




CONSULTANT

CLIENT  
 Groton-Dunstable  
 Regional School District  
 & Town of Groton  
 344 Main Street  
 Groton, MA 01450

**NOT FOR CONSTRUCTION**  
 DESIGN DEVELOPMENT  
 MSBA SET



PROJECT TITLE  
**FLORENCE ROCHE  
 ELEMENTARY SCHOOL**  
 342 Main Street  
 Groton, MA 01450

NO.	DESCRIPTION	DATE
1	PB PH2 SET	04/14/22

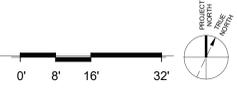
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 DRAWN BY DE  
 CHECKED BY SPM  
 SCALE 1/16" = 1'-0"  
 DATE 04/14/2022

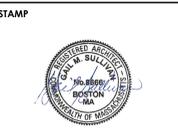
SHEET TITLE  
**SECOND FLOOR  
 PLAN - OVERALL**

SHEET NO  
**A102**



(A1) SECOND FLOOR PLAN OVERALL  
 1/16" = 1'-0"

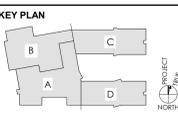




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Groton-Dunstable  
Regional School District  
& Town of Groton  
344 Main Street  
Groton, MA 01450

NOT FOR CONSTRUCTION  
DESIGN DEVELOPMENT  
MSBA SET



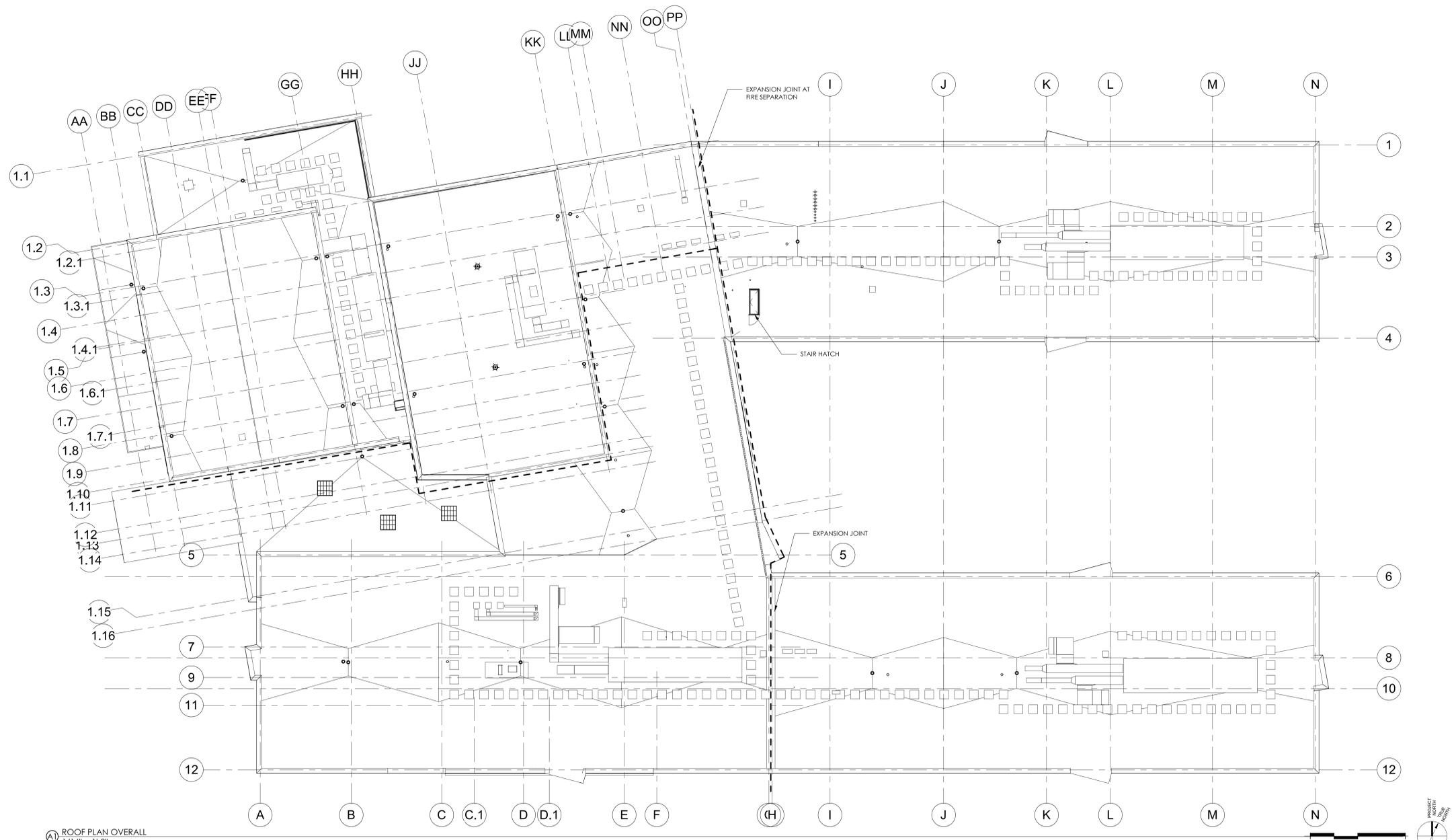
PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
1	PB PH2 SET	04/14/22

PROJECT NO 21915.1  
DRAWN BY DE  
CHECKED BY SPM  
SCALE 1/16" = 1'-0"  
DATE 04/14/2022

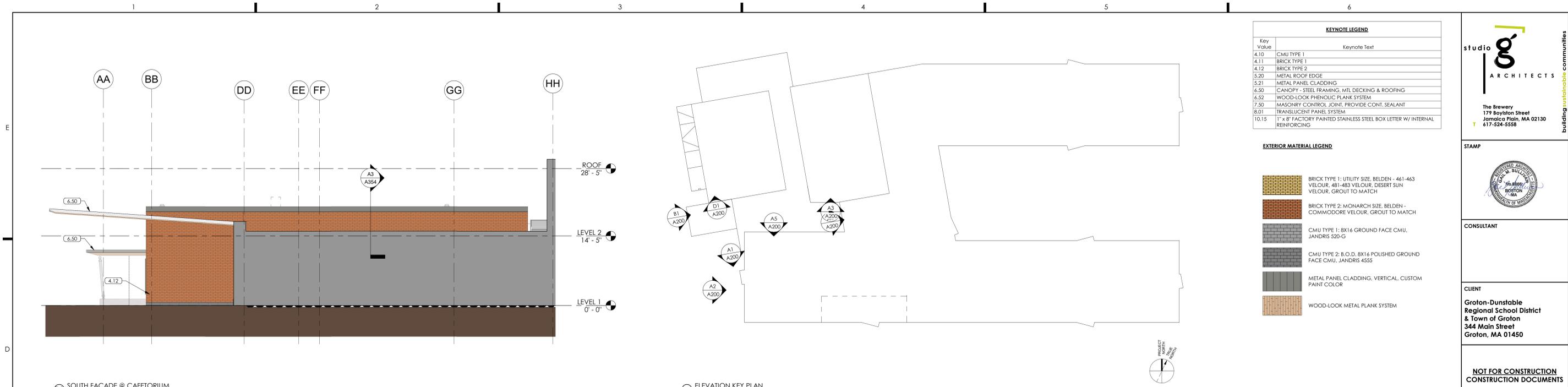
SHEET TITLE  
**ROOF PLAN  
OVERALL**

SHEET NO  
**A103**



AI ROOF PLAN OVERALL  
1/16" = 1'-0"



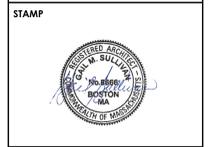


KEYNOTE LEGEND	
Key Value	Keynote Text
4.10	CMU TYPE 1
4.11	BRICK TYPE 1
4.12	BRICK TYPE 2
5.20	METAL ROOF EDGE
5.21	METAL PANEL CLADDING
6.52	CANOPY - STEEL FRAMING, MTL. DECKING & ROOFING
6.52	WOOD-LOOK PHENOLIC PLANK SYSTEM
7.50	MASONRY CONTROL JOINT, PROVIDE CONT. SEALANT
8.01	TRANSLUCENT PANEL SYSTEM
10.15	1" x 8" FACTORY PAINTED STAINLESS STEEL BOX LETTER W/ INTERNAL REINFORCING

EXTERIOR MATERIAL LEGEND	
	BRICK TYPE 1: UTILITY SIZE, BELDEN - 461-463 VELOUR, 481-483 VELOUR, DESERT SUN VELOUR, GROUT TO MATCH
	BRICK TYPE 2: MONARCH SIZE, BELDEN - COMMODORE VELOUR, GROUT TO MATCH
	CMU TYPE 1: 8X16 GROUND FACE CMU, JANDRIS 520-G
	CMU TYPE 2: B.O.D. 8X16 POLISHED GROUND FACE CMU, JANDRIS 4555
	METAL PANEL CLADDING, VERTICAL, CUSTOM PAINT COLOR
	WOOD-LOOK METAL PLANK SYSTEM

**studio**  
ARCHITECTS

The Brewery  
179 Boylston Street  
Jamaica Plain, MA 02130  
617-524-5558

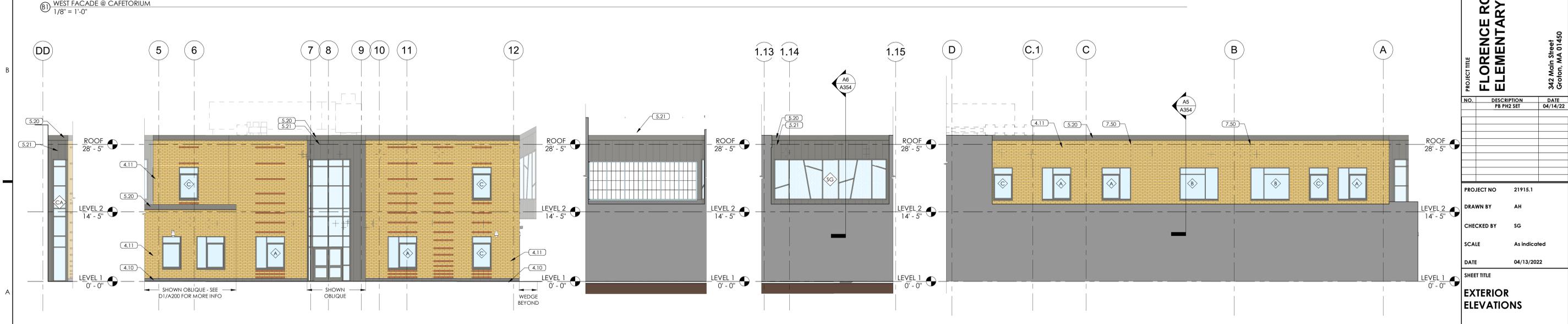
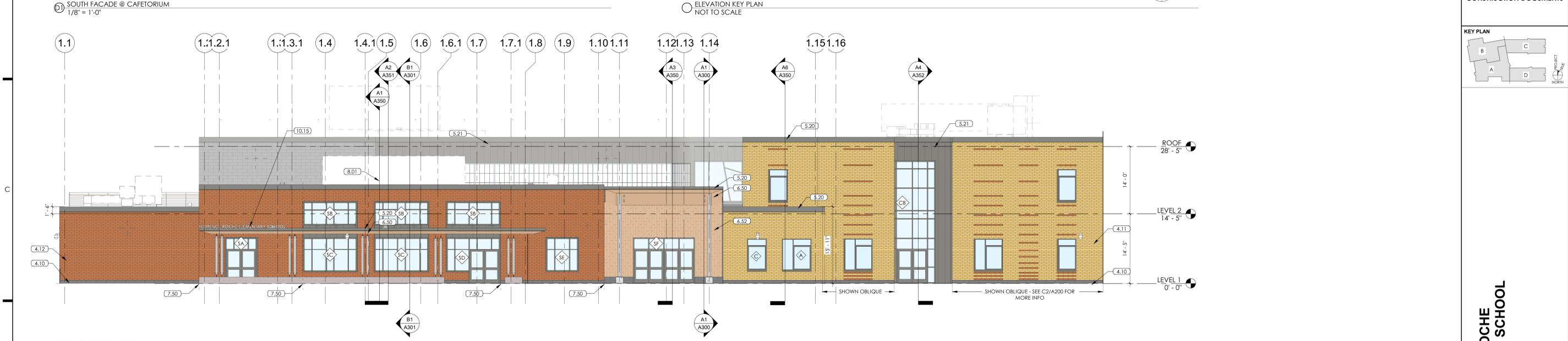
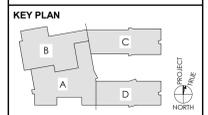


**STAMP**

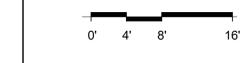
**CONSULTANT**

**CLIENT**  
Groton-Dunstable Regional School District & Town of Groton  
344 Main Street  
Groton, MA 01450

**NOT FOR CONSTRUCTION CONSTRUCTION DOCUMENTS**



**A1** WEST STAIR NW WALL 1/8" = 1'-0"  
**A2** WEST FACADE @ ACADEMIC WING 1/8" = 1'-0"  
**A3** SOUTH FACADE @ GYM 1/8" = 1'-0"  
**A4** WEST FACADE ABOVE LOBBY 1/8" = 1'-0"  
**A5** NORTH FACADE 3RD GRADE CLASSROOM WING 1/8" = 1'-0"



**PROJECT TITLE**  
FLORENCE ROCHE ELEMENTARY SCHOOL

342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
1	PB PH2 SET	04/14/22

**PROJECT NO** 21915.1  
**DRAWN BY** AH  
**CHECKED BY** SG  
**SCALE** As Indicated  
**DATE** 04/13/2022

**SHEET TITLE**  
EXTERIOR ELEVATIONS

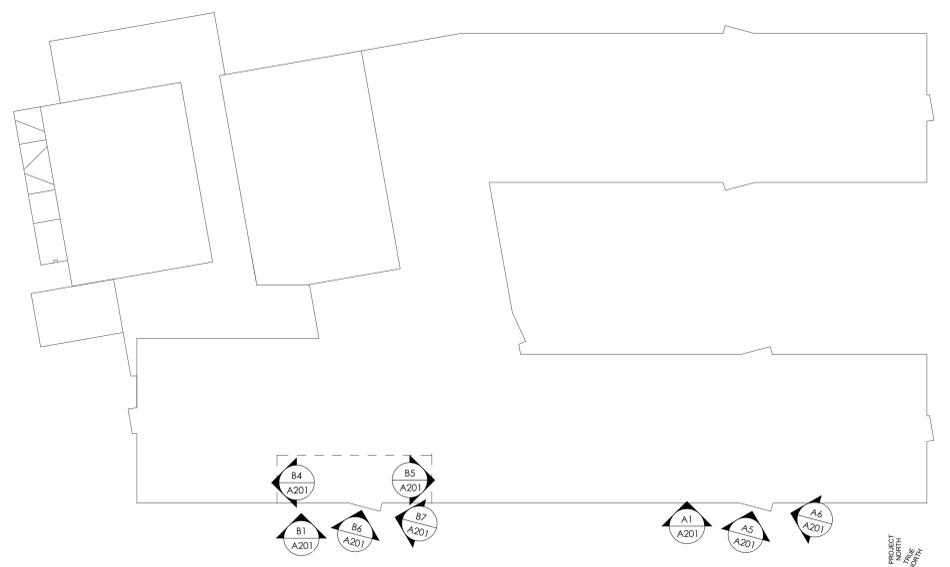
**SHEET NO**  
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4/14/2022 2:21:01 PM

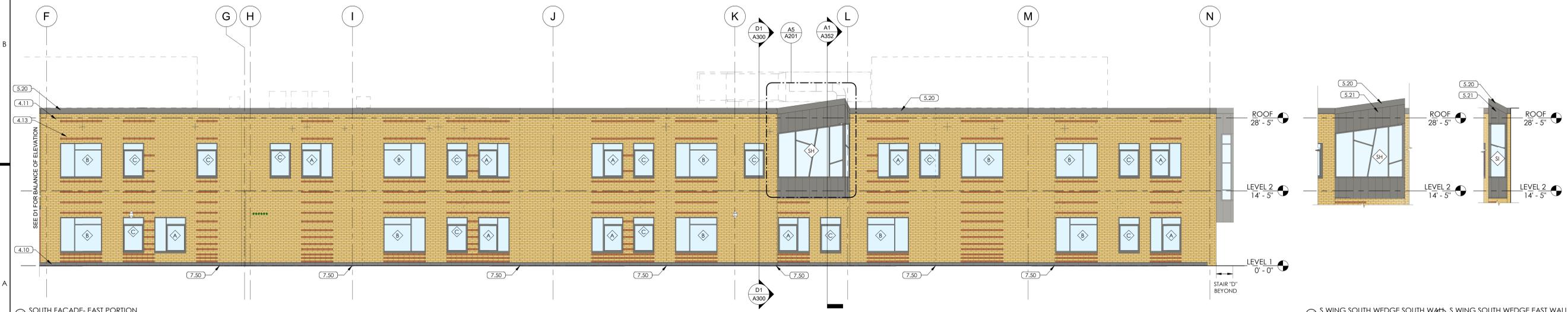
KEYNOTE LEGEND	
Key Value	Keynote Text
4.10	CMU TYPE 1
4.11	BRICK TYPE 1
4.12	BRICK TYPE 2
4.13	BRICK TYPE 3, PROTRUDE 3/4" FROM FACE OF FIELD MASONRY
5.20	METAL ROOF EDGE
5.21	METAL PANEL CLADDING
7.50	MASONRY CONTROL JOINT, PROVIDE CONT. SEALANT

EXTERIOR MATERIAL LEGEND	
	BRICK TYPE 1: UTILITY SIZE, BELDEN - 461-463 VELOUR, 481-483 VELOUR, DESERT SUN VELOUR, GROUT TO MATCH
	BRICK TYPE 2: MONARCH SIZE, BELDEN - COMMODORE VELOUR, GROUT TO MATCH
	CMU TYPE 1: 8X16 GROUND FACE CMU, JANDRIS 520-G
	CMU TYPE 2: B.O.D. 8X16 POLISHED GROUND FACE CMU, JANDRIS 455S
	METAL PANEL CLADDING, VERTICAL, CUSTOM PAINT COLOR
	WOOD-LOOK METAL PLANK SYSTEM

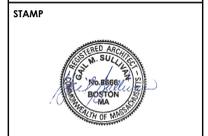
ELEVATION KEY PLAN  
 NOT TO SCALE



B SOUTH FACADE - WEST PORTION 1/8" = 1'-0"  
 B4 SOUTH FACADE PATIO WEST 1/8" = 1'-0"  
 B5 SOUTH FACADE PATIO EAST 1/8" = 1'-0"  
 B6 S WING WEST WEDGE SOUTH WALL 1/8" = 1'-0"  
 B7 S WING WEST WEDGE WEST WALL 1/8" = 1'-0"

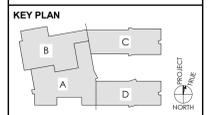


A SOUTH FACADE - EAST PORTION 1/8" = 1'-0"  
 A3 S WING SOUTH WEDGE SOUTH WALL 1/8" = 1'-0"  
 A4 S WING SOUTH WEDGE EAST WALL 1/8" = 1'-0"



CONSULTANT  
 CLIENT  
**Groton-Dunstable Regional School District & Town of Groton**  
 344 Main Street  
 Groton, MA 01450

NOT FOR CONSTRUCTION  
 CONSTRUCTION DOCUMENTS



PROJECT TITLE  
**FLORENCE ROCHE ELEMENTARY SCHOOL**  
 342 Main Street  
 Groton, MA 01450

NO.	DESCRIPTION	DATE
	PB PH2 SET	04/14/22

PROJECT NO: 21915.1  
 DRAWN BY: AH  
 CHECKED BY: SG  
 SCALE: As Indicated  
 DATE: 04/13/2022

SHEET TITLE  
**EXTERIOR ELEVATIONS**

SHEET NO  
**A201**



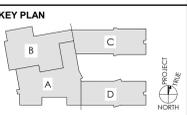


**STAMP**

**CONSULTANT**

**CLIENT**  
 Groton-Dunstable  
 Regional School District  
 & Town of Groton  
 344 Main Street  
 Groton, MA 01450

**NOT FOR CONSTRUCTION  
 CONSTRUCTION DOCUMENTS**



**PROJECT TITLE**  
 FLORENCE ROCHE  
 ELEMENTARY SCHOOL

342 Main Street  
 Groton, MA 01450

NO.	DESCRIPTION	DATE

**PROJECT NO** 21915.1  
**DRAWN BY** AH  
**CHECKED BY** SG  
**SCALE** As Indicated  
**DATE** 04/13/2022

**SHEET TITLE**  
 EXTERIOR  
 ELEVATIONS

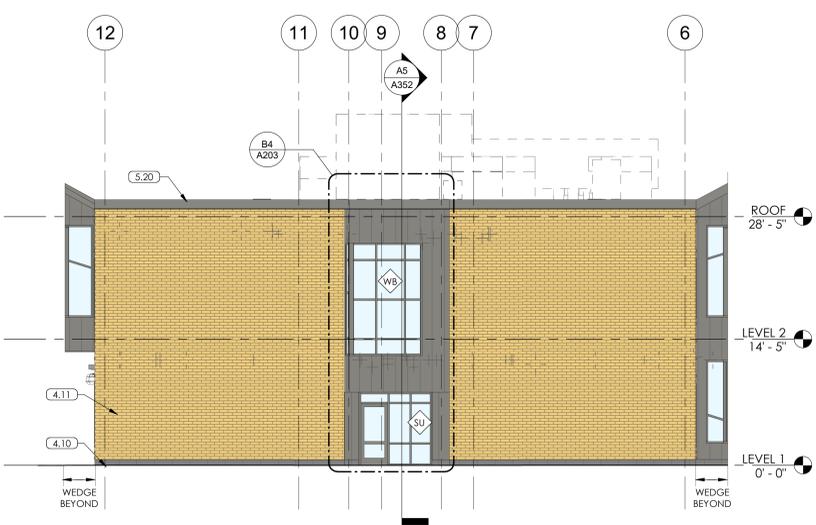
**SHEET NO**  
**A202**

**KEYNOTE LEGEND**

Key Value	Keynote Text
4.10	CMU TYPE 1
4.11	BRICK TYPE 1
4.13	BRICK TYPE 3, PROTRUDE 3/4" FROM FACE OF FIELD MASONRY
5.20	METAL ROOF EDGE
5.21	METAL PANEL CLADDING
7.50	MASONRY CONTROL JOINT, PROVIDE CONT. SEALANT

**EXTERIOR MATERIAL LEGEND**

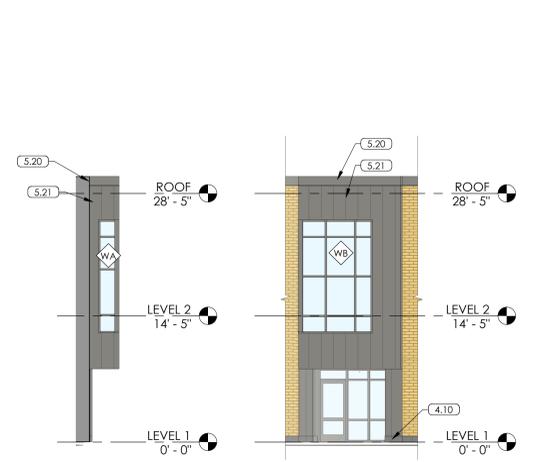
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	BRICK TYPE 2: MONARCH SIZE, BELDEN - COMMODORE VELOUR, GROUT TO MATCH
	CMU TYPE 1: 8X16 GROUND FACE CMU, JANDRIS 520-G
	CMU TYPE 2: B.O.D. 8X16 POLISHED GROUND FACE CMU, JANDRIS 4555
	METAL PANEL CLADDING, VERTICAL, CUSTOM PAINT COLOR
	WOOD-LOOK METAL PLANK SYSTEM



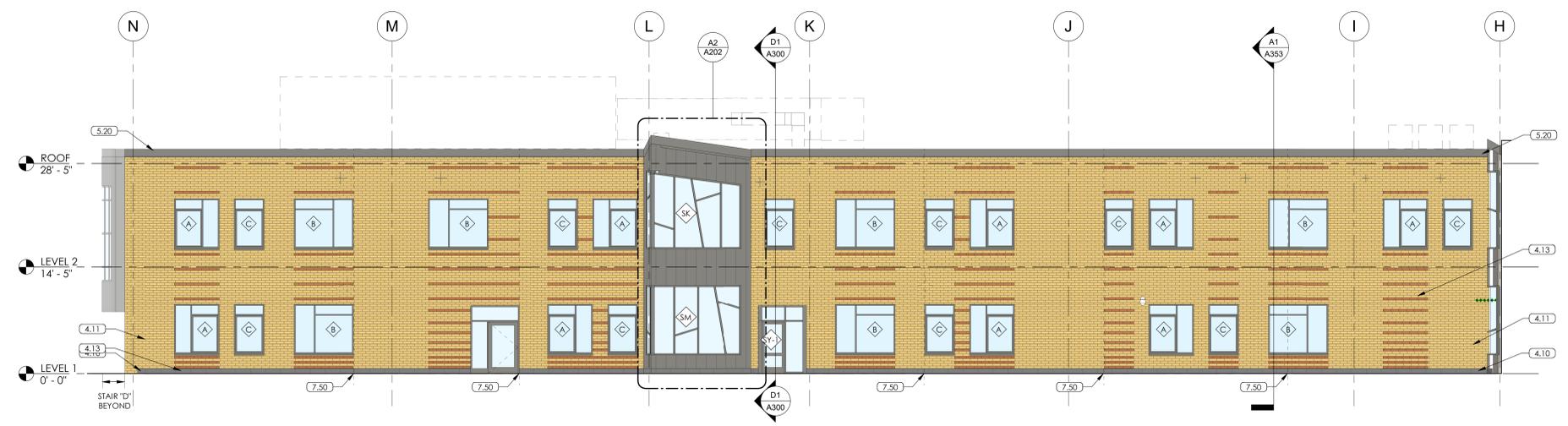
**E EAST ELEVATION SOUTH**  
 1/8" = 1'-0"



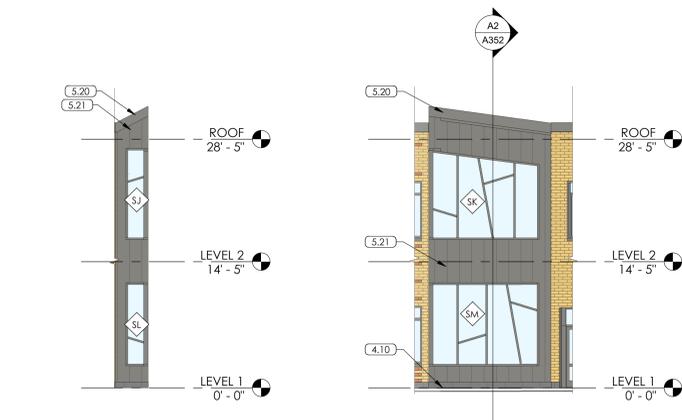
**ELEVATION KEY PLAN**  
 NOT TO SCALE



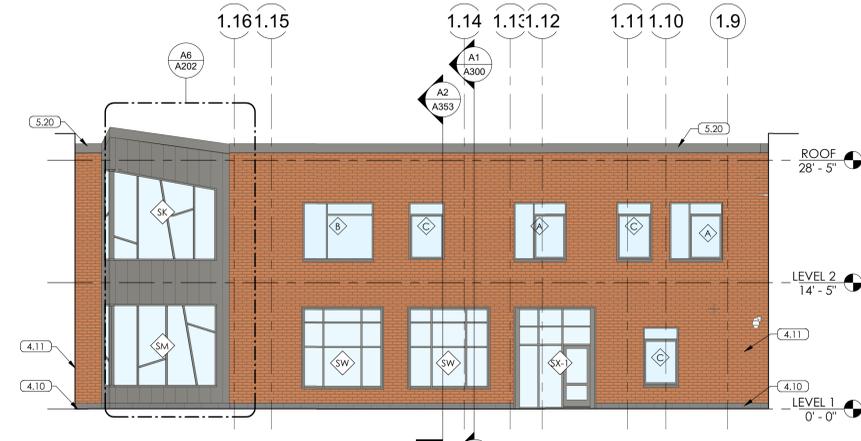
**B1 STAIR "D" SOUTH WALL** 1/8" = 1'-0"  
**B2 STAIR "D" EAST WALL** 1/8" = 1'-0"



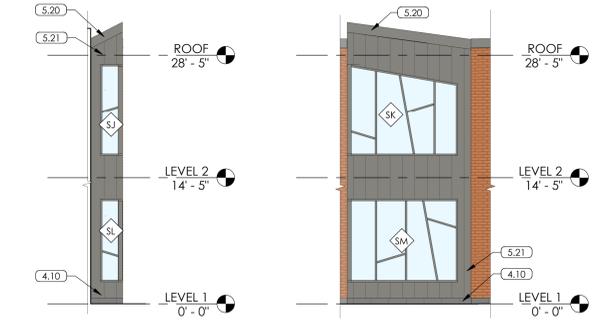
**B3 S WING NORTH FACADE** 1/8" = 1'-0"



**A1 S WING N WEDGE EAST WALL** 1/8" = 1'-0"  
**A2 S WING N WEDGE NORTH WALL** 1/8" = 1'-0"



**A3 MEDIA CENTER / MUSIC ROOM ELEVATION** 1/8" = 1'-0"



**A5 MEDIA CENTER WEDGE SHORT WALL** 1/8" = 1'-0"  
**A6 MEDIA CENTER WEDGE LONG WALL** 1/8" = 1'-0"

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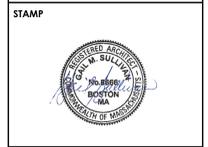
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KEYNOTE LEGEND	
Key Value	Keynote Text
4.10	CMU TYPE 1
4.11	BRICK TYPE 1
4.13	BRICK TYPE 3, PROTRUDE 3/4" FROM FACE OF FIELD MASONRY
5.20	METAL ROOF EDGE
5.21	METAL PANEL CLADDING
7.50	MASONRY CONTROL JOINT, PROVIDE CONT. SEALANT

EXTERIOR MATERIAL LEGEND	
	BRICK TYPE 1: UTILITY SIZE, BELDEN - 461-463 VELOUR, 481-483 VELOUR, DESERT SUN VELOUR, GROUT TO MATCH
	BRICK TYPE 2: MONARCH SIZE, BELDEN - COMMODORE VELOUR, GROUT TO MATCH
	CMU TYPE 1: 8X16 GROUND FACE CMU, JANDRIS 520-G
	CMU TYPE 2: B.O.D. 8X16 POLISHED GROUND FACE CMU, JANDRIS 4555
	METAL PANEL CLADDING, VERTICAL, CUSTOM PAINT COLOR
	WOOD-LOOK METAL PLANK SYSTEM

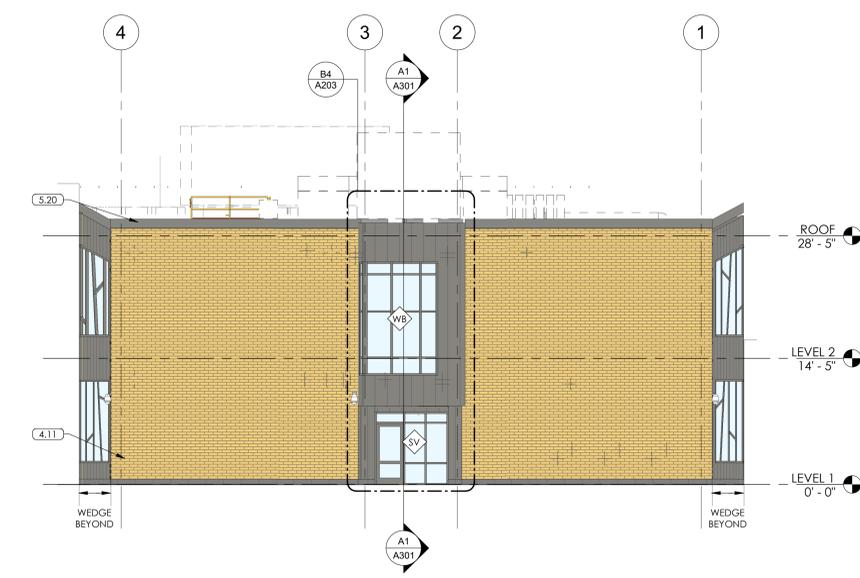
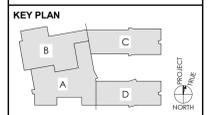
**studio G ARCHITECTS**  
 The Brewery  
 179 Boylston Street  
 Jamaica Plain, MA 02130  
 T 617-524-5558  
 building sustainable communities



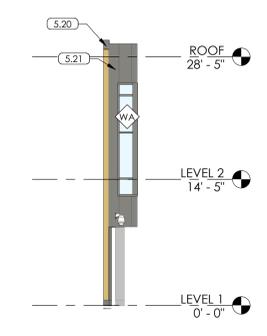
**CONSULTANT**

**CLIENT**  
 Groton-Dunstable Regional School District & Town of Groton  
 344 Main Street  
 Groton, MA 01450

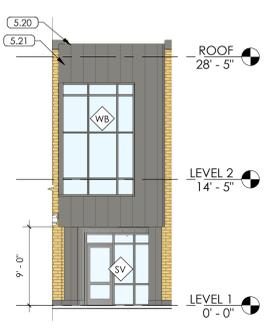
**NOT FOR CONSTRUCTION CONSTRUCTION DOCUMENTS**



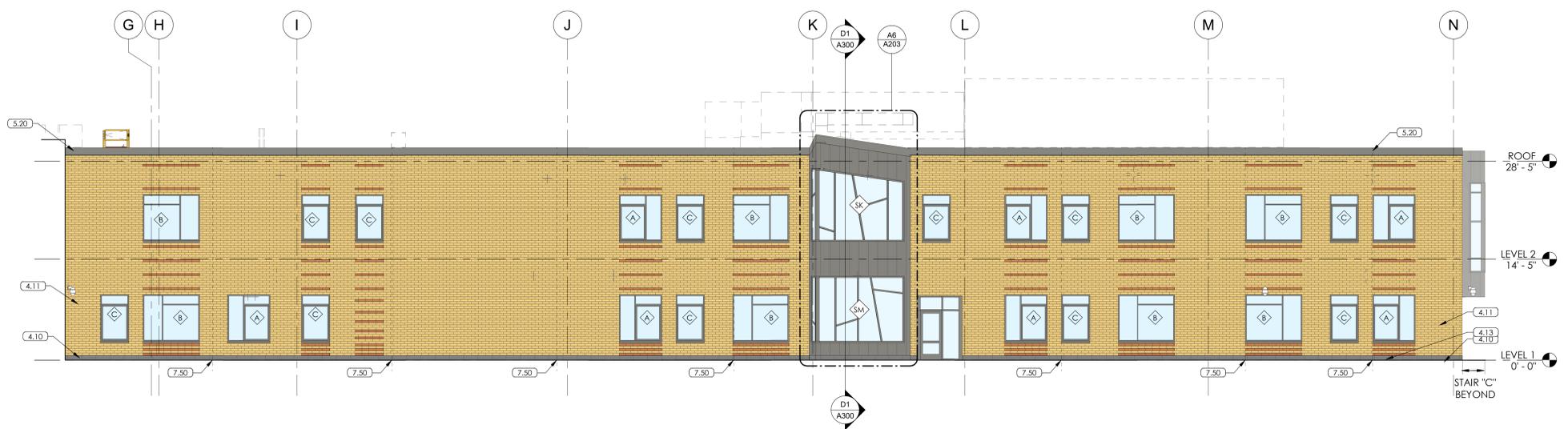
**B1 EAST ELEVATION NORTH**  
 1/8" = 1'-0"



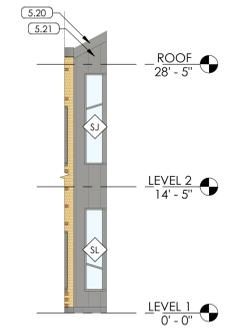
**B3 STAIR "C" SOUTH WALL**  
 1/8" = 1'-0"



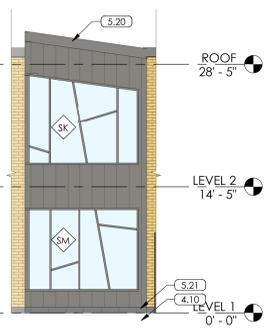
**B4 STAIR "C" EAST WALL**  
 1/8" = 1'-0"



**A1 N WING SOUTH FACADE**  
 1/8" = 1'-0"



**B5 N WING S WEDGE WEST WALL**  
 1/8" = 1'-0"



**B6 N WING S WEDGE SOUTH WALL**  
 1/8" = 1'-0"

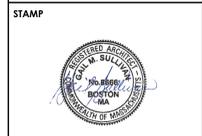
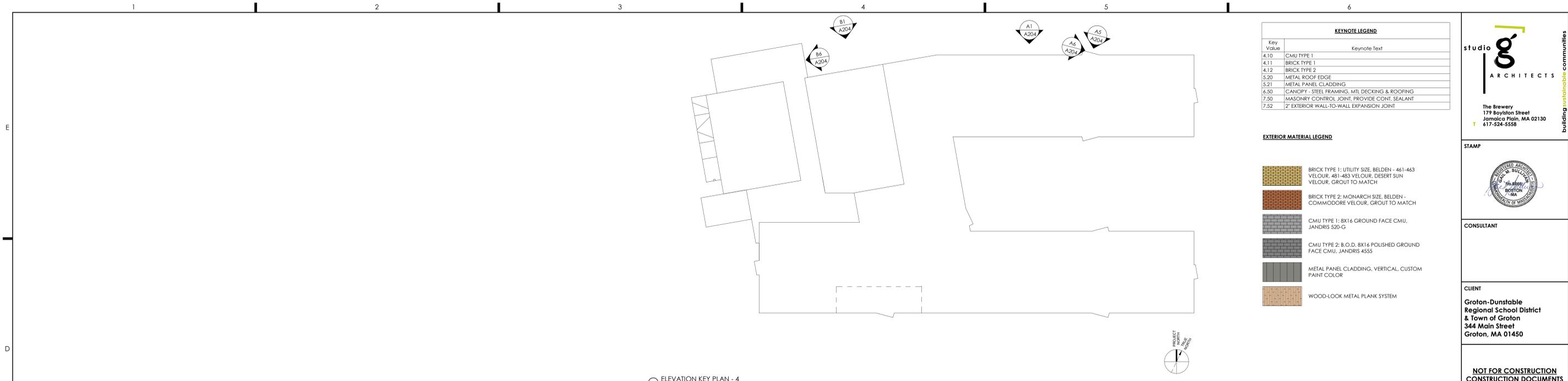
**PROJECT TITLE**  
 FLORENCE ROCHE ELEMENTARY SCHOOL  
 342 Main Street  
 Groton, MA 01450

NO.	DESCRIPTION	DATE
1	PB PH2 SET	04/14/22

**PROJECT NO** 21915.1  
**DRAWN BY** AH  
**CHECKED BY** SG  
**SCALE** As Indicated  
**DATE** 04/13/2022

**SHEET TITLE**  
 EXTERIOR ELEVATIONS

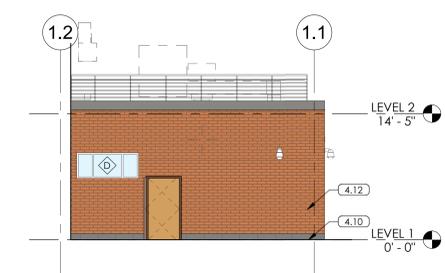
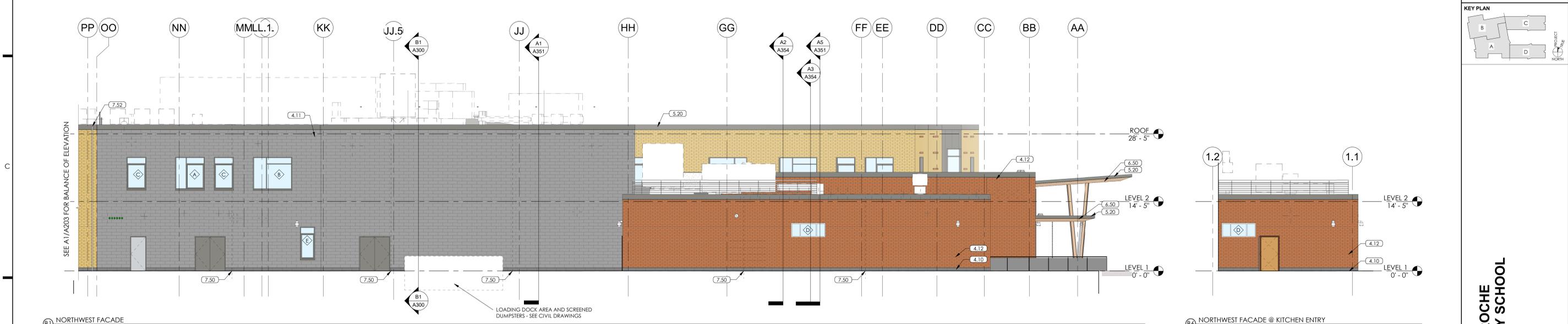
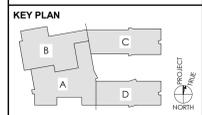
**SHEET NO**  
**A203**



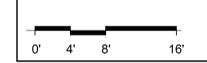
**CONSULTANT**

**CLIENT**  
Groton-Dunstable Regional School District & Town of Groton  
344 Main Street  
Groton, MA 01450

**NOT FOR CONSTRUCTION CONSTRUCTION DOCUMENTS**



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**PROJECT TITLE**  
FLORENCE ROCHE ELEMENTARY SCHOOL

342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE
	P8 PH2 SET	04/14/22

**PROJECT NO** 21915.1  
**DRAWN BY** AH  
**CHECKED BY** SG  
**SCALE** As Indicated  
**DATE** 04/13/2022

**SHEET TITLE**  
EXTERIOR ELEVATIONS

**SHEET NO**  
**A204**

PACKAGED ROOFTOP UNIT SCHEDULE

ITEM	SERVICE	LOCATION	UNIT TOTAL CFM	OUTDOOR AIR VOLUME CFM	SUPPLY EXT. S.P. (IN. WG.)	SUPPLY FAN				RETURN AIR VOLUME CFM	RETURN EXT. S.P. (IN. WG.)	RETURN FAN				WHEEL SUMMER			WHEEL WINTER			WHEEL EFFECTIVENESS		DX COOLING SECTION						HEATING SECTION (35% P.G.)						ELECTRICAL					OPERATING WEIGHT (LBS)	MANUFACTURER / MODEL NUMBER	REMARKS						
						FAN TYPE	TOTAL S.P. (IN. WG.)	# OF FANS	BHP (EACH)			MOTOR HP (EACH)	FAN TYPE	TOTAL S.P. (IN. WG.)	# OF FANS	BHP (EACH)	MOTOR HP (EACH)	OSA EAT DB / WB (°F)	OSA LAT DB / WB (°F)	EA EAT DB / WB (°F)	OSA EAT DB (°F)	OSA LAT DB / WB (°F)	EA EAT DB / WB (°F)	TOTAL %	SENS %	ENTERING AIR DB / WB (°F)	LEAVING AIR DB / WB (°F)	MAX APD (IN. WG.)	MAX FPM	TOTAL MBH	SENS. MBH	EER	EAT DB (°F)	LAT DB (°F)	TOTAL MBH	FLOW (GPM)	EWT DB (°F)	LWT DB (°F)	PD (FT)	V				PH	HZ	MCA	MOC		
RTU-1	ADMIN/OFFICES	LOW ROOF	5,000	1,500	2.25	PLENUM	3.73	1	4.72	7.5	5,000	1.25	PLENUM	1.55	1	2.55	3	NO ENERGY RECOVERY WHEEL						79.8	66.3	52.5	52.2	0.34	312	200	138.2	11.2	51.1	81	162.1	10.3	160	120	0.2	460	3	60	45.1	50	3,637	ADDISON / PRRA 210 C2	1,3,4,5		
RTU-2	CLASSROOMS	ROOF	25,000	9,000	2.25	PLENUM	6.13	4	8	10	25,000	1.25	PLENUM	3.3	4	4.6	5	91/74	78.5/66.6	74.6/63.3	0/0	56.2/44.8	72.9/54.1	76.9	77.1	78	66	53.92	53.39	0.58	450	959.15	652.51	-	0	65.83	1782.5	47.15	160	120	8.55	460	3	60	240.2	250	21,667	XNRGY /	1,2,3,4,5
RTU-3	CLASSROOMS	ROOF	25,000	9,000	2.25	PLENUM	6.13	4	8	10	25,000	1.25	PLENUM	3.3	4	4.6	5	91/74	78.5/66.6	74.6/63.3	0/0	56.2/44.8	72.9/54.1	76.9	77.1	78	66	53.92	53.39	0.58	450	959.15	652.51	-	0	65.83	1782.5	47.15	160	120	8.55	460	3	60	240.2	250	21,667	XNRGY /	1,2,3,4,5
RTU-4	CLASSROOMS	ROOF	25,000	9,000	2.25	PLENUM	6.13	4	8	10	25,000	1.25	PLENUM	3.3	4	4.6	5	91/74	78.5/66.6	74.6/63.3	0/0	56.2/44.8	72.9/54.1	76.9	77.1	78	66	53.92	53.39	0.58	450	959.15	652.51	-	0	65.83	1782.5	47.15	160	120	8.55	460	3	60	240.2	250	21,667	XNRGY /	1,2,3,4,5
RTU-5	CAFETERIA	LOW ROOF	12,000	6,000	1.5	PLENUM	3.64	1	12.09	15	12,000	1.5	PLENUM	2.71	2	1.88	3	91/74	79.5/66.4	75/62.5	0/1	45.3/37.6	70/52.9	75	76	77.2	64.5	52.2	51.9	0.3	287	412.9	299.3	12.6	38	78.5	527.4	25.5	160	120	0.7	460	3	60	98	110	10,307	ADDISON / PRRA 480 E6	1,2,3,4,5
RTU-6	GYMNASIUM	ROOF	7,500	3,750	1.5	PLENUM	5.04	1	8.29	10	7,500	1.25	PLENUM	2.32	1	2.15	3	91/74	79.5/66.4	75/62.5	0/1	45.3/37.7	70/52.9	75	76	77.2	64.5	51.8	51.5	0.66	468	264.1	189	12	38	76.5	313.1	15.9	160	120	0.3	460	3	60	64.2	80	5,734	ADDISON / PRRA 240 D4	1,2,3,4,5

NOTES:  
 1. SINGLE POINT 460V/3PH POWER CONNECTION. PROVIDE WITH UNIT MOUNTED MAIN DISCONNECT.  
 2. PROVIDE WITH ENTHALPY RECOVERY WHEEL WITH 1/2HP MOTOR.  
 3. MERV 8 AND MERV 15 PREFILTERS OUTSIDE AIR. MERV 8 FILTERS RETURN AIR.  
 4. PROVIDE 120V CIRCUIT FOR LIGHTS AND RECEPTACLE.  
 5. PROVIDE WITH AIR BLENDER.

MAKE-UP AIR UNIT SCHEDULE

ITEM	LOCATION	SERVICE	SUPPLY AIR VOLUME (CFM)	MIN OUTDOOR AIR VOLUME CFM	SUPPLY EXT. S.P. (IN. WG.)	SUPPLY FAN SECTION				DX COOLING SECTION				HEATING SECTION (35% P.G.)						ELECTRICAL					STANDBY POWER	OPERATING WEIGHT (LBS)	MANUFACTURER / MODEL NUMBER	REMARKS						
						# OF FANS	FAN TYPE	TOTAL S.P. (IN. WG.)	MAX BHP	MOTOR HP	ENTERING AIR DB / WB (°F)	LEAVING AIR DB / WB (°F)	MAX APD (IN. WG.)	TOTAL MBH	SENSIBLE MBH	EER	EAT DB (°F)	LAT DB (°F)	TOTAL MBH	FLOW (GPM)	EWT (°F)	LWT (°F)	PD (FT)	V					PH	HZ	MCA	MOP		
MUA-1	LOW ROOF	KITCHEN	3,500	3,500	1.25	1	DIRECT DRIVE PLENUM	3.4	2.72	5	91	74	60.2	59.2	0.89	175.6	112.8	12.4	0	65.5	248.7	15.1	160	120	0.4	460	3	60	34.7	45	N	2,745	ADDISON / PROA 180 C2L	1,2,3,4,5,6,7

NOTES:  
 1. (1) 460V/3PH SINGLEPOINT POWER CONNECTION FOR FANS AND WHEELS AND (1)120/160 FOR LIGHTS AND RECEPTACLES  
 2. PROVIDE WITH FACTORY MOUNTED AND WIRED VFD FOR EACH FAN  
 3. PROVIDE WITH TOTAL ENERGY RECOVERY WHEEL WITH 1/2HP MOTOR.  
 4. FROST CONTROL ON MODULATING WHEEL. WEATHERHOOD, ELECTROFIN COIL COATING, INSULATED & SPRING ISOLATED ROOF CURB, MOTORIZED AIR DAMPERS, FAN VFD CONTROLS, CONDENSATE OVERFLOW SWITCH, MODULATING HOT GAS REHEAT.  
 5. PROVIDE INVERTER DUTY, PREMIUM EFFICIENCY MOTORS WITH SHAFT GROUNDING RINGS FOR ALL FANS.  
 6. MERV 8 AND MERV 15 PREFILTERS OUTSIDE AIR. MERV 8 FILTERS EXHAUST AIR.  
 7. PROVIDE PIEZOMETER RING AIRFLOW MEASURING STATIONS ON FAN INLETS.

VARIABLE FREQUENCY DRIVE SCHEDULE

ITEM	LOCATION	SERVICE	UNIT HP	EQUIPMENT TYPE	ELECTRICAL DATA			EMERGENCY POWER	MANUFACTURER / MODEL NUMBER	REMARKS
					V	PH	HZ			
VFD-HWP-1	MECH RM	HWP-1	25	PUMP	460	3	60	Y	YASKAWA / Z1000U	1,2,3
VFD-HWP-2	MECH RM	HWP-2	25	PUMP	460	3	60	Y	YASKAWA / Z1000U	1,2,3
VFD-GHWP-1	MECH RM	GHWP-1	15	PUMP	460	3	60	N	YASKAWA / Z1000U	1,2,3
VFD-GHWP-2	MECH RM	GHWP-2	15	PUMP	460	3	60	N	YASKAWA / Z1000U	1,2,3

NOTES:  
 1. COMPLETE WITH BYPASS AND PASSIVE HARMONIC FILTER.  
 2. ALL REQUIRED ELECTRICAL AND CONTROL WIRING INTERFACES.  
 3. STARTUP & COMMISSIONING.  
 4. PROVIDE ALL REQUIRED WALL SUPPORTS.  
 5. SUBMIT HARMONIC CALCULATIONS FOR REVIEW AND RECORD.

HOT WATER BOILER SCHEDULE

ITEM	LOCATION	SERVICE	OUTPUT (MBH)	WATER			HEATER				STANDBY POWER	OPERATING WEIGHT (LBS)	MANUFACTURER / MODEL NUMBER	REMARKS				
				GPM	EWT (°F)	LWT (°F)	WATER PD (FT)	GAS INPUT (MBH)	MIN INLET GAS PRESSURE (IN.)	MAX INLET GAS PRESSURE (IN.)					V	PH	HZ	AMP
B-1	MECH ROOM	HOT WATER	2,400	120	120	160	-	2,500	4	14	120	1	60	20	Y	5133	VISSMAN / CA3B 2.5	1,2,3,4,5,6,7
B-2	MECH ROOM	HOT WATER	2,400	120	120	160	-	2,500	4	14	120	1	60	20	Y	5133	VISSMAN / CA3B 2.5	1,2,3,4,5,6,7
B-3	MECH ROOM	HOT WATER	2,400	120	120	160	-	2,500	4	14	120	1	60	20	Y	5133	VISSMAN / CA3B 2.5	1,2,3,4,5,6,7

NOTES:  
 1. PROVIDE BOILER CONTROLLER & INTERLOCK WITH BUILDING DDC SYSTEM.  
 2. PROVIDE SINGLE POINT POWER CONNECTION.  
 3. PROVIDE CONDENSATE TRAP AND MANUFACTURER'S NEUTRALIZER KIT.  
 4. INTERLOCK W/ ASSOCIATED BOILER CONTROL VALVE.  
 5. MOUNT ON CONCRETE HOUSEKEEPING PAD.  
 6. PROVIDE EXHAUST AL29-4C VENT.  
 7. PROVIDE MASSACHUSETTS STATE PLUMBING CODE GAS TRAIN WITH VENT LIMITERS FURNISHED BY DIV.23 WITH BOILER & INSTALLED BY DIV.22.

HEAT EXCHANGE (PLATE & FRAME) SCHEDULE

ITEM	LOCATION	SERVICE	CAPACITY (MBH)	HOT SIDE			COLD SIDE (35% PG)			OPERATING WEIGHT (LBS)	MANUFACTURER / MODEL NUMBER	REMARKS		
				GPM	EWT	LWT	GPM	EWT	LWT					
HX-1	MECH ROOM	GLYCOL HW	3900	200	160	120	5	206.7	115	155	6.4	2208	ALFA LAVAL / AQA4-FG	1,2,3,4,5

NOTES:  
 1. ASME AND AHRI RATED.  
 2. FLUID IS WATER UNLESS OTHERWISE NOTED.  
 3. COLD SIDE IS 35% PROPYLENE GLYCOL.  
 4. EPOXY COATED STEEL FRAME WITH STEEL PLATE CARRIERS, STEEL COMPRESSION BOLTS, GASKETS, 304 STAINLESS STEEL STEEL REPLACEABLE PLATES.  
 5. MINIMUM OF 25% CAPACITY INCLUDED IN FRAME LENGTH TO ALLOW FOR FUTURE EXPANSION.

FAN SCHEDULE

ITEM	SERVICE	LOCATION	TYPE	CFM	S.P. (IN.)	FAN RPM	DRIVE	MOTOR TYPE	ELECTRICAL				STANDBY POWER	MANUFACTURER / MODEL NUMBER	REMARKS
									MOTOR HP	V	PH	HZ			
EF-1	MECHANICAL ROOM	LEVEL 1	INLINE	1200	0.5	1701	DIRECT	ECM	1/4	120	1	60	N	GREENHECK / SQ-100-VG	1,2,3
EF-2	FIRE	LEVEL 1	INLINE	250	0.5	1638	DIRECT	ECM	1/10	120	1	60	N	GREENHECK / SQ-80-VG	1,2,3
EF-3	RECYCLING / TRASH	LEVEL 1	INLINE	1100	0.5	1605	DIRECT	ECM	1/4	120	1	60	N	GREENHECK / SQ-100-VG	1,2,3
EF-4	CUST. WORKSHOP	LEVEL 1	INLINE	250	0.5	1638	DIRECT	ECM	1/10	120	1	60	N	GREENHECK / SQ-80-VG	1,2,3
EF-5	NORTH CORR. BATHROOM	ROOF	CENTRIFUGAL	1540	1	1691	DIRECT	ECM	1/2	120	1	60	N	GREENHECK / G-120-VG	1,4,6
EF-6	ART CLASSROOM 241	ROOF	CENTRIFUGAL	1000	0.5	1646	DIRECT	ECM	1/4	120	1	60	N	GREENHECK / G-099-VG	1,4,6
EF-7	KILN 241A	ROOF	CENTRIFUGAL	1200	0.5	1675	DIRECT	ECM	1/4	120	1	60	N	GREENHECK / G-100-VG	1,4,6
EF-8	ART CLASSROOM 243	ROOF	CENTRIFUGAL	1000	0.5	1646	DIRECT	ECM	1/4	120	1	60	N	GREENHECK / G-099-VG	1,4,6
EF-9	SOUTH CORR. BATHROOM	ROOF	CENTRIFUGAL	1260	1	1539	DIRECT	ECM	1/2	120	1	60	N	GREENHECK / G-120-VG	1,4,6
EF-10	SOUTH CORR. BATHROOM	ROOF	CENTRIFUGAL	280	0.5	1632	DIRECT	ECM	1/10	120	1	60	N	GREENHECK / G-080-VG	1,4,6
EF-11	STEM 125	ROOF	UTILITY	1000	0.5	1088	DIRECT	ECM	3/4	120	1	60	N	GREENHECK / USF-13-B3	1,5,6,7
EF-12	ADMIN GENERAL EXH	ROOF	UTILITY	840	1	1634	DIRECT	ECM	1/2	120	1	60	N	GREENHECK / USF-10-B3	1,5,6,7
EF-13	EXAM 117A	ROOF	UTILITY	150	0.25	923	DIRECT	ECM	1/4	120	1	60	N	GREENHECK / USF-04-B3	1,5,6,7
EF-14	CAFETERIA GENERAL EXH	LOW ROOF	CENTRIFUGAL	165	0.25	1287	DIRECT	ECM	1/15	120	1	60	N	GREENHECK / G-070-VG	1,4,6
EF-15	KITCHEN GENERAL EXH	LOW ROOF	UTILITY	220	0.25	893	DIRECT	ECM	1/4	120	1	60	N	GREENHECK / USF-06-B3	1,5,6,7
KEF-1	KITCHEN	ROOF	UPBLAST	3,750	2	1432	BELT	VFD	3	460	3	60	N	GREENHECK / 200HP-30	6,8,9,10,11

NOTES:  
 1. PROVIDE EC MOTOR.  
 2. CEILING HUNG WITH 1" STATIC DEFLECTION SPRING ISOLATORS.  
 3. PROVIDE WITH BACKDRAFT DAMPER.  
 4. PROVIDE WITH 18" TALL CURB, GALVANIZED CONSTRUCTION RATED FOR 110-MPH WIND.  
 5. MOUNT ON 24" TALL SPRING VIBRATION ISOLATION BASES WITH 2" DEFLECTION SPRINGS.  
 6. RATED FOR OUTDOOR INSTALLATION INCLUDING MOTOR WEATHER GUARD. PROVIDE NEMA 3R/4X DISCONNECT SWITCH.  
 7. PROVIDE UPBLAST DISCHARGE POSITION, OUTLET GUARD, DRAIN WITH PLUG.  
 8. FAN SHALL BE RATED FOR UL 162 GREASE EXHAUST SERVICE.  
 9. PROVIDE PREMIUM EFFICIENCY MOTOR.  
 10. PROVIDE VENTILATED ROOF CURB, GALVANIZED CONSTRUCTION RATED FOR 110-MPH WIND. HEIGHT OF CURB SHALL BE SUCH THAT FAN DISCHARGE SHALL BE MINIMUM 40' ABOVE ROOF.  
 11. VFD FOR KITCHEN EXHAUST FAN TO BE PROVIDED WITH KITCHEN CONTRACTORS DEMAND CONTROLLED VENTILATION SYSTEM.

DESTRATIFICATION FAN SCHEDULE

ITEM	LOCATION	SERVICE	CFM	FAN RPM	TYPE	DIAMETER (FT)	V	PH	HZ	A	MANUFACTURER / MODEL NUMBER	REMARKS
DF-1	GYMNASIUM	GYMNASIUM	-	48	CEILING	24	460	3	60	10	BIG ASS FANS / POWERFOIL BREEZE	1,2,3,4
DF-2	GYMNASIUM	GYMNASIUM	-	48	CEILING	24	460	3	60	10	BIG ASS FANS / POWERFOIL BREEZE	1,2,3,4

NOTES:  
 1. ARCHITECT SHALL SELECT COLOR.  
 2. PROVIDE BARCON CONTROLLER WITH INTEGRATION TO BMS.  
 3. PROVIDE ECM.  
 4. PROVIDE 15 YEAR WARRANTY.

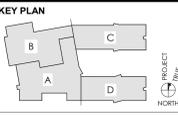


The Brewery  
 177 Boylston Street  
 Jamaica Plain, MA 02130  
 T 617-524-5558

CONSULTANT  
**RWS**  
 R. W. Sullivan Engineering  
 400FP Engineering (Code Commission)  
 The South Center, 520 Main St, Suite 203  
 Boston, Massachusetts 02126-1107  
 Phone: (617) 523-8227 Fax: (617) 523-8016  
 www.rwsinc.com  
 REG. JOB # 1904310

CLIENT  
**Groton-Dunstable Regional School District & Town of Groton**  
 344 Main Street  
 Groton, MA 01450

NOT FOR CONSTRUCTION  
 DESIGN DEVELOPMENT  
 MSBA SET



PROJECT TITLE  
**FLORENCE ROCHE ELEMENTARY SCHOOL**  
 342 Main Street  
 Groton, MA 01450

NO.	DESCRIPTION	DATE

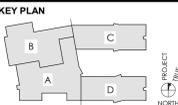
PROJECT NO 21915.1  
 DRAWN BY ELG  
 CHECKED BY TCS  
 SCALE 12" = 1'-0"  
 DATE 04/14/2022  
 SHEET TITLE

STAMP

CONSULTANT  
**RWS**  
R. W. Sullivan Engineering  
4500 Engineering Center  
The South Center, 520 Main St, Suite 203  
Boston, Massachusetts 02128-1181  
Phone: (617) 523-8227 Fax: (617) 523-8016  
www.rwsinc.com  
RWS\_JOB# 19043.00

CLIENT  
Groton-Dunstable  
Regional School District  
& Town of Groton  
344 Main Street  
Groton, MA 01450

NOT FOR CONSTRUCTION  
DESIGN DEVELOPMENT  
MSBA SET



PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE

PROJECT NO 21915.1  
DRAWN BY ELG  
CHECKED BY TCS  
SCALE 1/16" = 1'-0"  
DATE 03/24/2022

SHEET TITLE  
**HVAC SECOND  
FLOOR OVERALL  
PLAN**

SHEET NO  
**M102**



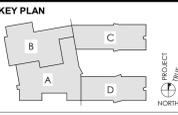
1 HVAC Overall LEVEL 2 DUCTWORK  
1/16" = 1'-0"

STAMP

CONSULTANT  
**RWS** R. W. Sullivan Engineering  
450 West Engineering Code Commission  
The South Center, 520 Main St, Suite 203  
Boston, Massachusetts 02128-1167  
Phone: (617) 523-8227 Fax: (617) 523-8016  
www.rwsinc.com  
RWS JOB # 19043.00

CLIENT  
Groton-Dunstable  
Regional School District  
& Town of Groton  
344 Main Street  
Groton, MA 01450

**NOT FOR CONSTRUCTION**  
DESIGN DEVELOPMENT  
MSBA SET



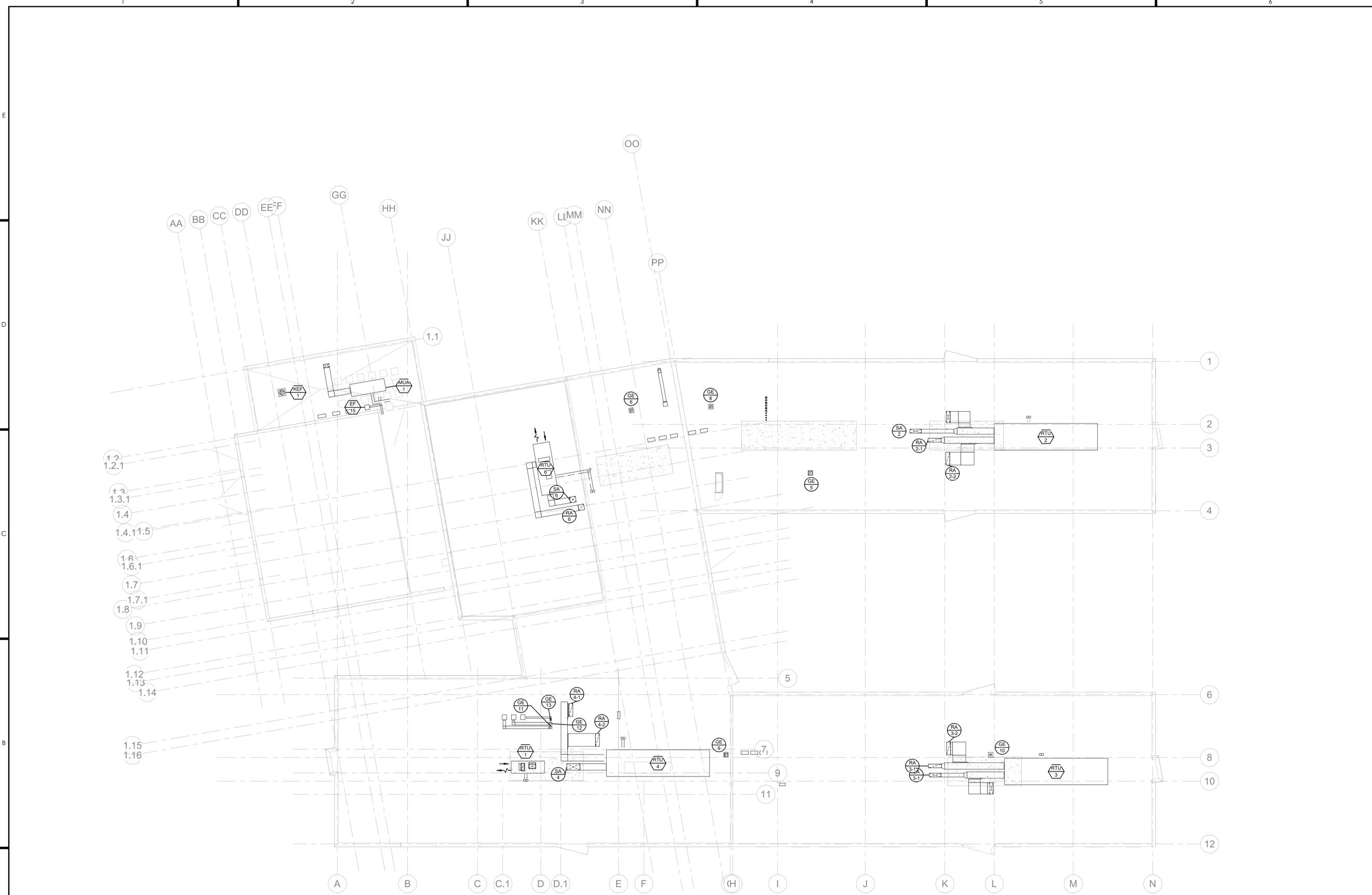
PROJECT TITLE  
**FLORENCE ROCHE  
ELEMENTARY SCHOOL**  
342 Main Street  
Groton, MA 01450

NO.	DESCRIPTION	DATE

PROJECT NO 21915.1  
DRAWN BY ELG  
CHECKED BY TCS  
SCALE 1/16" = 1'-0"  
DATE 03/24/2022

SHEET TITLE  
**HVAC ROOF  
OVERALL PLAN**

SHEET NO  
**M103**



1 HVAC Overall Roof  
1/16" = 1'-0"