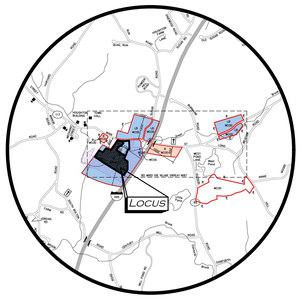
PRELIMINARY APPLICATION FOR COMPREHENSIVE PERMIT

ALTA NASHOBA VALLEY

580 MAIN STREET
BOLTON, MA



LOCUS & ZONING MAP
(NOT TO SCALE)

PROJECT TEAM

APPLICANT
LIMITED DIVIDEND AFFILIATE OF WP
EAST ACQUISITIONS, LLC.
91 HARTWELL AVENUE, 3RD FLOOR
LEXINGTON, MA 02421

SITE ENGINEER / SURVEYOR
ALLEN & MAJOR ASSOCIATES, INC.
10 MAIN STREET
LAKEVILLE, MA 02347-1674
(508)-923-1010

ARCHITECT
MARKET SQUARE ARCHITECTS
104 CONGRESS STREET, SUITE 203
PORTSMOUTH, NH 03801

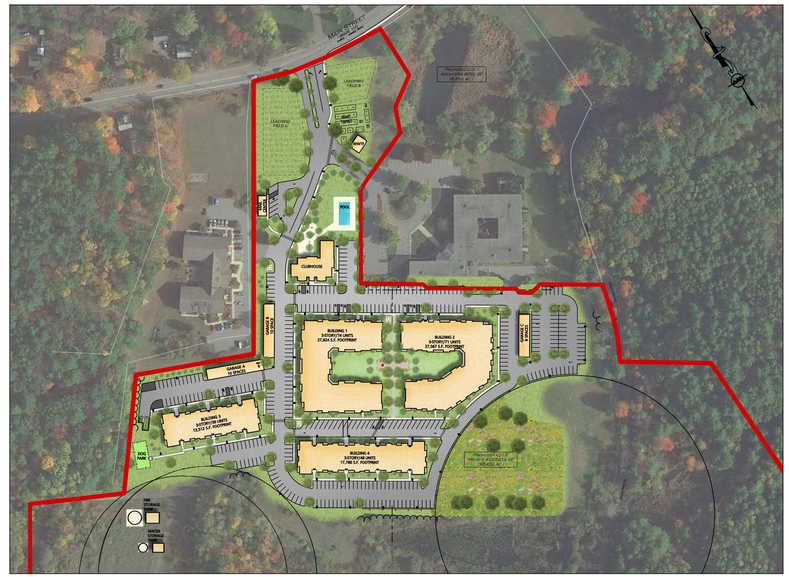
LANDSCAPE ARCHITECT
GRADY CONSULTING, LLC
71 EVERGREEN STREET, SUITE 1
KINGSTON, MA 02364

WETLAND CONSULTANT
GODDARD CONSULTING LLC
291 MAIN STREET, SUITE 8
NORTHBOROUGH, MA 01532

GEOTECHNICAL ENGINEER
HALEY & ALDRICH
465 MEDFORD ST, SUITE 2200
BOSTON, MA 02129

TRAFFIC ENGINEER
TEC, INC.
146 DASCOMB RD
ANDOVER, MA 01810

WATER/WASTEWATER ENGINEER
ON-SITE ENGINEERING, INC.
279 EAST CENTRAL STREET, PMB 241
FRANKLIN, MA 02038



LIST OF DRAWINGS

DRAWING TITLE	SHEET NO.	ISSUED
EXISTING CONDITIONS	V-101 - V-104	05-03-2021
NOTES & ABBREVIATIONS	C-001 - C-002	09-10-2021
CONCEPTUAL PROPERTY LINE MODIFICATION	C-003	09-10-2021
EROSION CONTROL PLAN	C-100	09-10-2021
OVERALL LAYOUT AND MATERIALS PLAN	C-101	09-10-2021
LAYOUT AND MATERIALS PLAN	C-102 - C-104	09-10-2021
OVERALL GRADING AND DRAINAGE PLAN	C-105	09-10-2021
GRADING AND DRAINAGE PLAN	C-106 - C-108	09-10-2021
OVERALL UTILITIES PLAN	C-109	09-10-2021
UTILITIES PLAN	C-110 - C-112	09-10-2021
DETAILS	C-501 - C-507	09-10-2021
VEHICLE MOVEMENT PLAN	C-601	09-10-2021
LANDSCAPE PLAN (BY OTHERS)	1	09-10-2021
ARCH PLANS - BUILDING 1 (BY OTHERS)	B1.A1.01 - B1.A2.00	09-10-2021
ARCH PLANS - BUILDING 2 (BY OTHERS)	B2.A1.01 - B2.A2.00	09-10-2021
ARCH PLANS - BUILDING 3 (BY OTHERS)	B3.A1.01 - B3.A2.00	09-10-2021
ARCH PLANS - BUILDING 4 (BY OTHERS)	B4.A1.01 - B4.A2.00	09-10-2021
ARCH PLANS - CLUBHOUSE (BY OTHERS)	CH.A1.01 - CH.A2.00	09-10-2021
ARCH PLANS - GARAGES (BY OTHERS)	GA.A1.01 - GC.A2.01	09-10-2021
ARCH PLANS - MAIL AND PARCEL (BY OTHERS)	MP.A1.01 - MP.A2.01	09-10-2021

UNIT MATRIX

ALTA NASHOBA VALLEY - UNIT MATRIX

BUILDING #4

UNIT TYPE	AVG UNIT SIZE	FLOOR 1	FLOOR 2	FLOOR 3	TOTAL UNITS	NRSF
1 Bed/1 BA	794	8	4	4	16	12,710
2 Bed/1 or 2 BA	1,069	6	10	10	26	27,784
3 Bed/2 BA	1,351	2	2	2	6	8,106
TOTAL/AVERAGE	1,013	16	16	16	48	48,600

BUILDING #3

UNIT TYPE	AVG UNIT SIZE	FLOOR 1	FLOOR 2	FLOOR 3	TOTAL UNITS	NRSF
1 Bed/1 BA	811	6	2	2	10	8,108
2 Bed/1 or 2 BA	1,041	4	8	8	20	20,824
3 Bed/2 BA	1,351	2	2	2	6	8,106
TOTAL/AVERAGE	1,029	12	12	12	36	37,038

BUILDING #2

UNIT TYPE	AVG UNIT SIZE	FLOOR 1	FLOOR 2	FLOOR 3	TOTAL UNITS	NRSF
1 Bed/1 BA	814	9	9	9	27	21,987
2 Bed/2 BA	1,111	12	13	13	38	42,231
3 Bed/2 BA	1,409	2	2	2	6	8,454
TOTAL/AVERAGE	1,024	23	24	24	71	72,672

BUILDING #1

UNIT TYPE	AVG UNIT SIZE	FLOOR 1	FLOOR 2	FLOOR 3	TOTAL UNITS	NRSF
1 Bed/1 BA	825	11	12	12	35	28,859
2 Bed/2 BA	1,104	11	11	11	33	36,423
3 Bed/2 BA	1,087	2	2	2	6	8,322
TOTAL/AVERAGE	995	24	25	25	74	73,604

TOTAL - PROJECT

UNIT TYPE	AVG UNIT SIZE	FLOOR 1	FLOOR 2	FLOOR 3	TOTAL UNITS	NRSF
1 Bed/1 BA	814	34	27	27	88	71,664
2 Bed/1 or 2 BA	1,088	33	42	42	117	127,262
3 Bed/2 BA	1,375	8	8	8	24	32,988
TOTAL/AVERAGE	1,013	75	77	77	229	231,914

UNIT TYPE	MARKET - UNITS	MARKET - %	AFFORDABLE - UNITS	AFFORDABLE - %	TOTAL UNITS	ADA - UNITS	ADA - %
1 Bed/1 BA	66	39%	22	10%	88	4	5%
2 Bed/1 or 2 BA	87	38%	30	13%	117	6	5%
3 Bed/2 BA	18	8%	6	3%	24	2	8%
TOTAL	171	75%	58	25%	229	12	5%

USE	GROSS SF	NET SF
RESIDENTIAL	262,155	231,914
CLUBHOUSE	5,491	5,491
MAIL/PACKAGE	835	835
GARAGES	8,898	8,898
TOTAL	276,379	247,138

PARKING TOTALS	
At Grade Spaces	354
Garage Spaces	28
Total Spaces	382
Ratio per unit	1.67

PRELIMINARY APPLICATION FOR COMPREHENSIVE PERMIT
SEPTEMBER 10, 2021

M:\PROJECTS\1670-15\CIVIL\DRAWINGS\CURRENT\C-1670-15 - COVER.DWG

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Utility Statement

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. ALLEN & MAJOR ASSOCIATES, INC. (A&M) MAKES NO GUARANTEE THAT THE UTILITIES SHOWN HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. A&M FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. A&M HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

Locus References

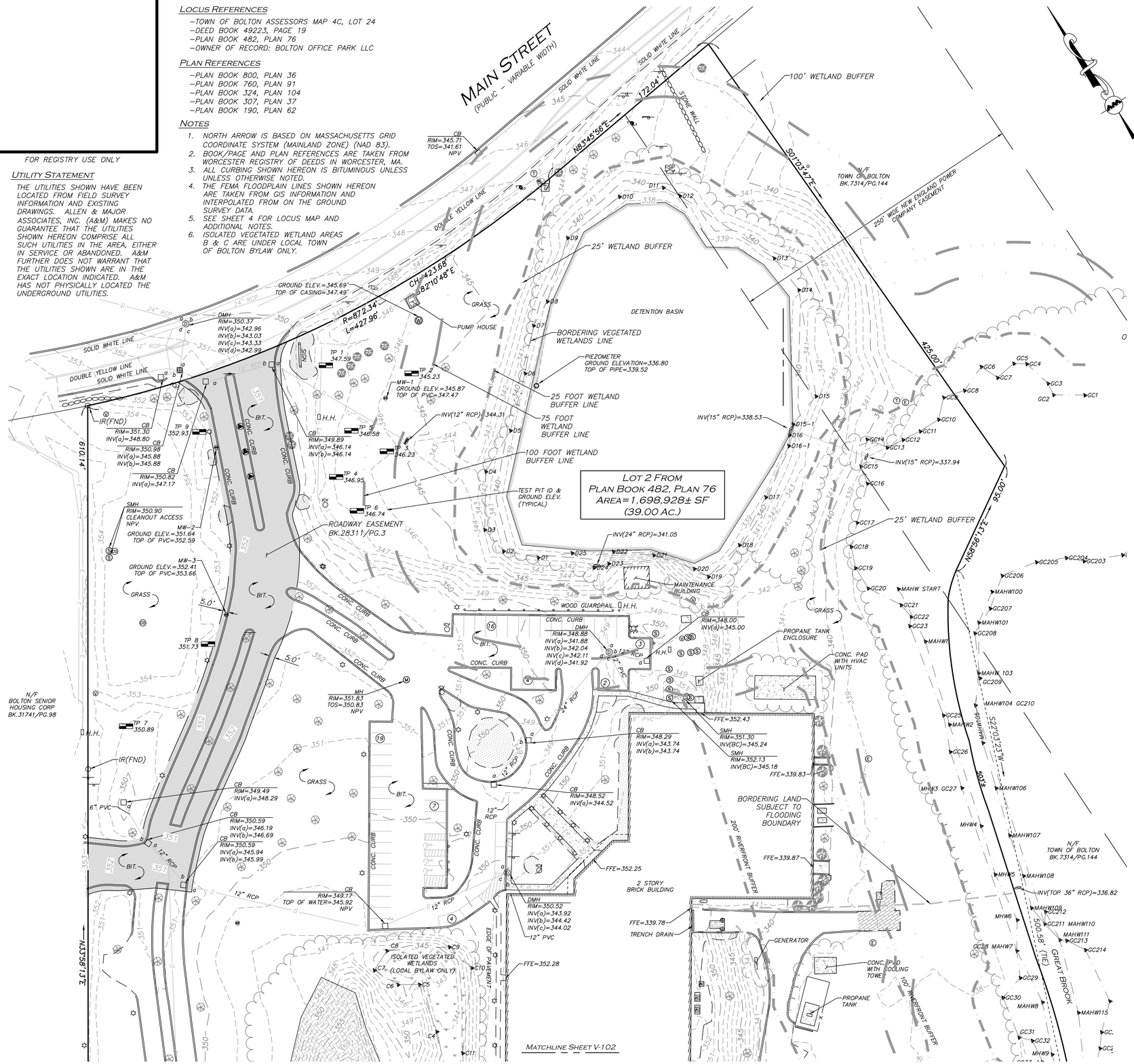
–TOWN OF BOLTON ASSESSORS MAP 4C, LOT 24
–DEED BOOK 49223, PAGE 19
–PLAN BOOK 482, PLAN 76
–OWNER OF RECORD: BOLTON OFFICE PARK LLC

Plan References

–PLAN BOOK 800, PLAN 36
–PLAN BOOK 760, PLAN 91
–PLAN BOOK 324, PLAN 104
–PLAN BOOK 307, PLAN 37
–PLAN BOOK 190, PLAN 62

Notes

1. NORTH ARROW IS BASED ON MASSACHUSETTS GRID COORDINATE SYSTEM (MAINLAND ZONE) (NAD 83).
2. BOOK/PAGE AND PLAN REFERENCES ARE TAKEN FROM WORCESTER REGISTRY OF DEEDS IN WORCESTER, MA.
3. ALL CURBING SHOWN HEREON IS BITUMINOUS UNLESS UNLESS OTHERWISE NOTED.
4. THE FEMA FLOODPLAIN LINES SHOWN HEREON ARE TAKEN FROM GIS INFORMATION AND INTERPOLATED FROM ON THE GROUND SURVEY DATA.
5. SEE SHEET 4 FOR LOCUS MAP AND ADDITIONAL NOTES.
6. ISOLATED VEGETATED WETLAND AREAS B & C ARE UNDER LOCAL TOWN OF BOLTON BYLAW ONLY.



LEGEND

IRON ROD (IR)	
DRAIN MANHOLE (DMH)	D
SEWER MANHOLE (SMH)	S
ELECTRIC MANHOLE (EMH)	E
MISC. MANHOLE (MH)	M
TELEPHONE MANHOLE (TMH)	T
CATCH BASIN (CB)	
UTILITY POLE	
UTILITY POLE W/RISER	
GUY WIRE	
FIRE HYDRANT	
WATER GATE	
BOLLARD	
CLEANOUT	CO
INVERT (INV)	
FLARED END SECTION	
LIGHT	
TREE	
BUSH / SHRUB	
VENT	
SIGN	
SIGN	
FIRE STANDPIPE	
ROUND CATCH BASIN (RCB)	
TRANSFORMER	
WELL	W
MONITOR WELL	MW
DOWNSPOUT	
WETLAND FLAG	A31
HAND HOLE	H.H.
AIR CONDITIONER	AC
TELEPHONE BOX	T
FLAG POLE	
HANDICAPPED PARKING SPACE	
IRRIGATION CONTROL VALVE	
POSITION INDICATOR VALVE	
PAINTED ARROW	
PARKING SPACE COUNT	16
CONCRETE	
LANDSCAPED AREA (LSA)	
RIP–RAP	
WETLAND AREA	
BRICK	
BUILDING	
BUILDING OVERHANG	
WETLAND	
EASEMENT LINE	
PROPERTY LINE	
1' CONTOUR	53
5' CONTOUR	55
ABUTTERS LINE	
STONE WALL	
CONCRETE RETAINING WALL	
TREE LINE	
EDGE OF PAVEMENT	
EDGE OF GRAVEL	
EDGE OF BRICK	
EDGE OF WATER	
CURB	
CHAIN LINK FENCE	x
GUARDRAIL	
SEWER LINE	S
DRAIN LINE	D
OVERHEAD WIRES	OHW
FOOTPRINT AREA	FPA
BUILDING HEIGHT	BH
BITUMINOUS	BIT.
CONCRETE	CONC.
GRANITE	GRAN.
FOUND	FND
NOW OR FORMERLY	N/F
BOOK	BK.
PAGE	PG.

Parking Summary

Standard Stalls	421
Handicapped Stalls	5
Total Stalls	426

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

N:\PROJECTS\1670-15\SURVEY\DRAWINGS\CURRENT\S-1670-15-EC.DWG

WE HEREBY CERTIFY THAT:
THIS PLAN IS THE RESULT OF AN ACTUAL ON THE GROUND SURVEY PERFORMED ON OR BETWEEN JANUARY 11, 2021 AND SEPTEMBER 3, 2021.
THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS DATED JANUARY 1, 1976 AND REVISED JANUARY 12, 1988.
ACCORDING TO DEEDS AND PLANS OF RECORD, THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIP, AND THE LINES OF THE STREETS OR WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS AND WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR THE DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.
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THE ABOVE IS CERTIFIED TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF TO THE ABOVE NAMED PARTIES AND NO OTHERS.

ALLEN & MAJOR ASSOCIATES, INC.

SEPT. 10, 2021

PROFESSIONAL LAND SURVEYOR FOR ALLEN & MAJOR ASSOCIATES, INC.

COMMONWEALTH OF MASSACHUSETTS
NORMAN I. LIPSITZ
No. 28446
PROFESSIONAL LAND SURVEYOR

09/10/21

REV	DATE	DESCRIPTION
2.	09/10/2021	VARIOUS REVISIONS
1.	09/03/2021	TEST PITS AND MONITORING WELLS

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
WP EAST ACQUISITIONS, LLC
91 HARTWELL AVENUE, 3RD FLOOR
LEXINGTON, MA 02421

PROJECT:
580 MAIN STREET
BOLTON, MA

PROJECT NO.	1670-15	DATE:	05/03/2021
SCALE:	1" = 40'	DWG. NAME:	S-1670-15-EC
DRAFTED BY:	KAC	CHECKED BY:	NIL

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
100 COMMERCE WAY
WOBURN MA 01801-8501
TEL: (781) 935-6889
FAX: (781) 935-2896
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE: EXISTING CONDITIONS

SHEET No. V-101

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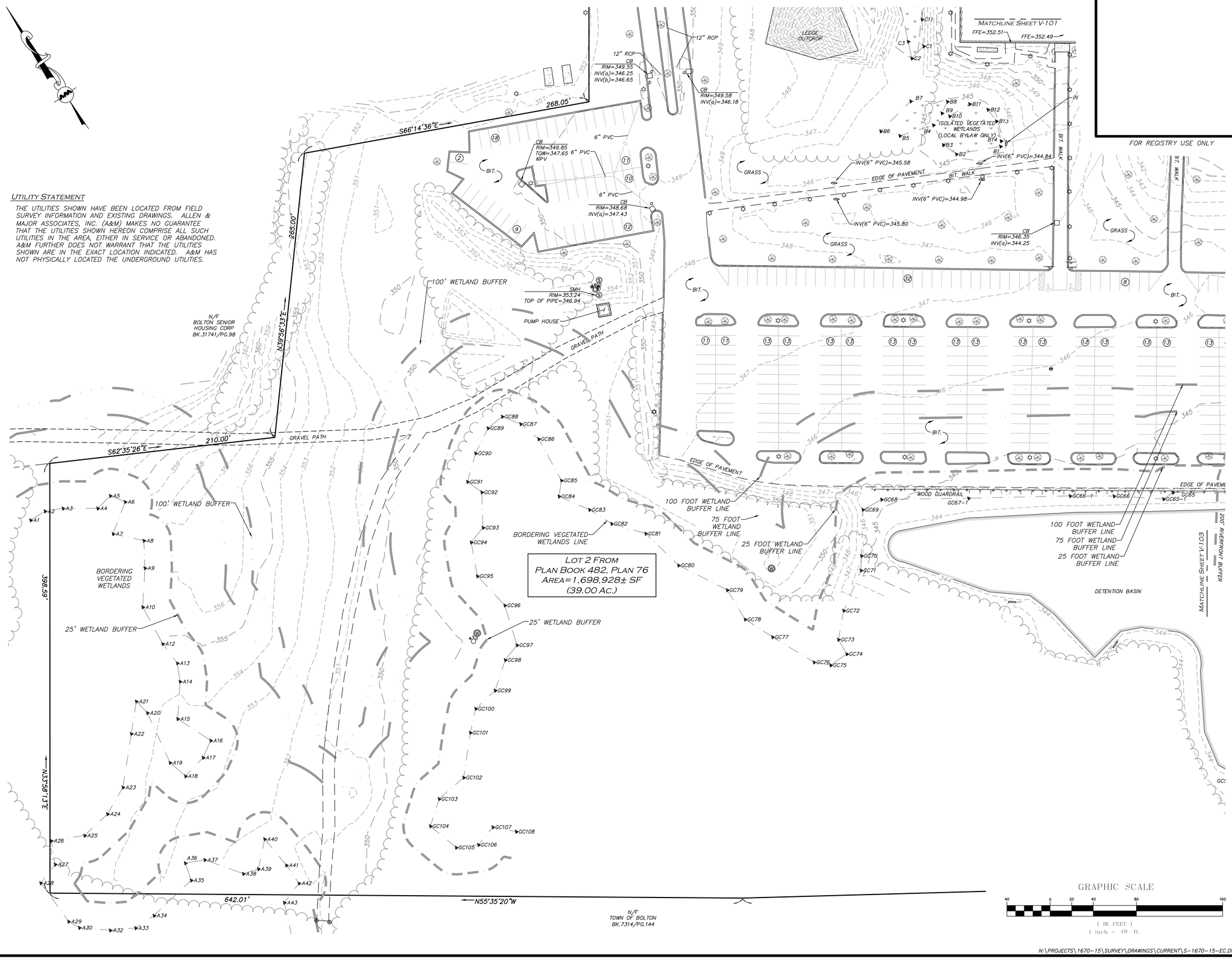

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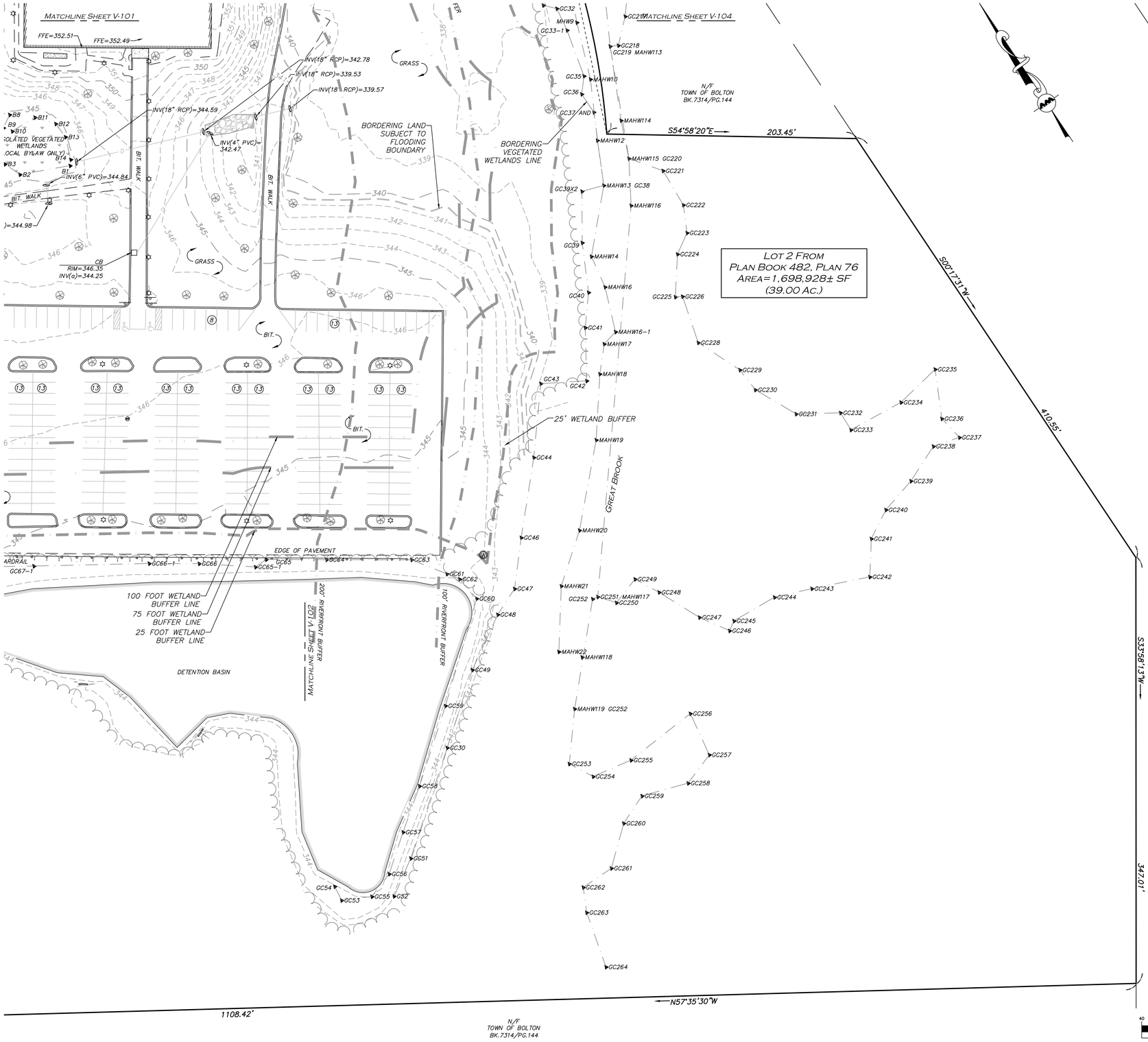

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40 0 20 40 80 160

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DRAWING TITLE:
EXISTING CONDITIONS

SHEET No.
V-103

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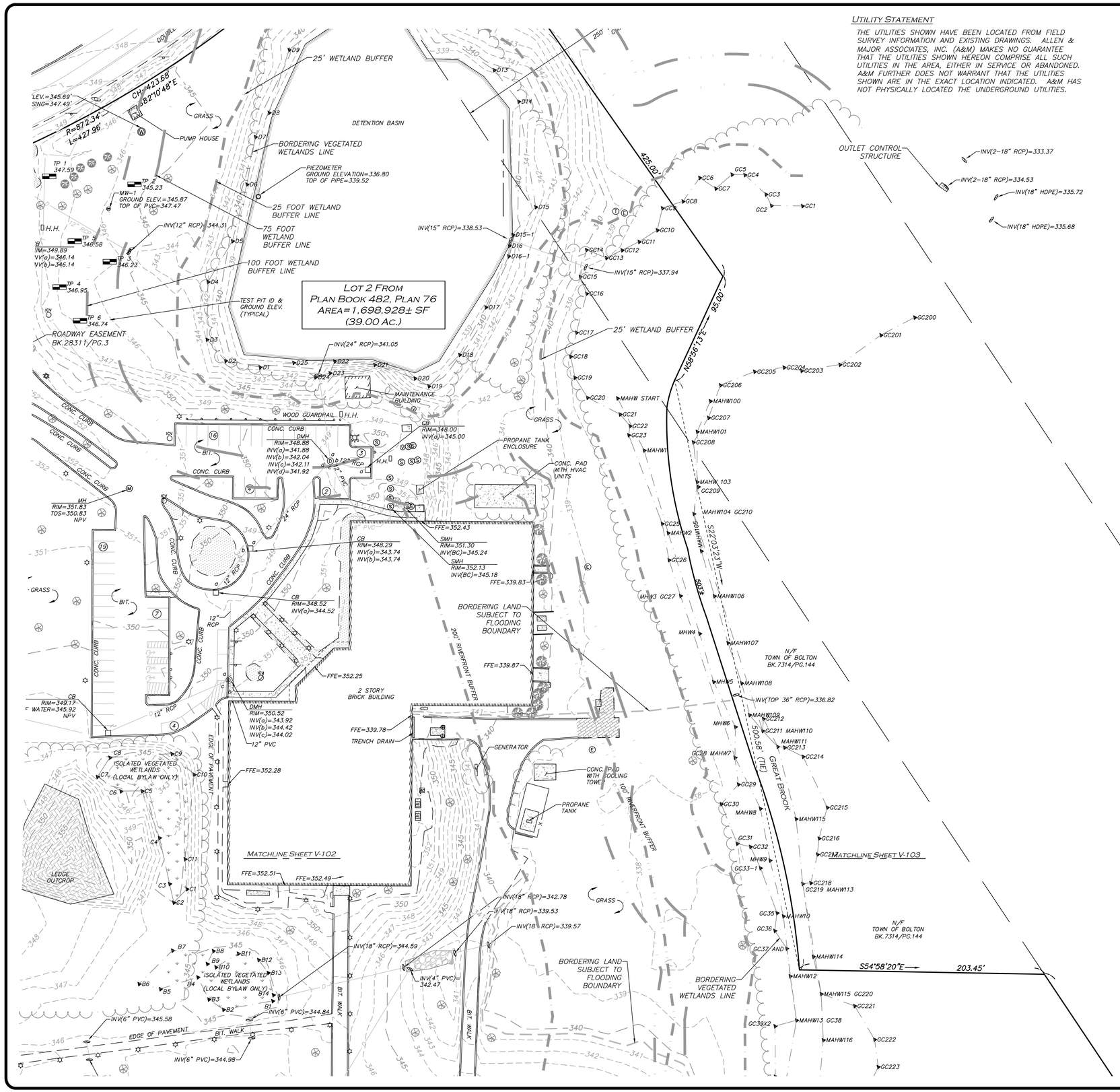
25' WETLAND BUFFER
DETENTION BASIN
BORDERING VEGETATED WETLANDS LINE
PIEZOMETER GROUND ELEVATION=336.80 TOP OF PIPE=339.52
25 FOOT WETLAND BUFFER LINE
75 FOOT WETLAND BUFFER LINE
100 FOOT WETLAND BUFFER LINE
LOT 2 FROM PLAN BOOK 482, PLAN 76 AREA=1,698,928± SF (39.00 Ac.)
TEST PIT ID & GROUND ELEV. (TYPICAL)
ROADWAY EASEMENT BK.28311/PG.3
PUMP HOUSE
MAINTENANCE BUILDING
WOOD GUARDRAIL
PROPANE TANK ENCLOSURE
CONC. PAD WITH HVAC UNITS
2 STORY BRICK BUILDING
GENERATOR
CONC. PAD WITH COOLING TOWE
PROPANE TANK
BORDERING LAND SUBJECT TO FLOODING BOUNDARY
200' RIVERFRONT BUFFER
100' RIVERFRONT BUFFER
ISOLATED VEGETATED WETLANDS (LOCAL BYLAW ONLY)
LEDGE OUTCROP
EDGE OF PAVEMENT
BIT. WALK
MATCHLINE SHEET V-102
MATCHLINE SHEET V-103
OUTLET CONTROL STRUCTURE
INV(2-18" RCP)=333.37
INV(2-18" RCP)=334.53
INV(18" HDPE)=335.72
INV(18" HDPE)=335.68
INV(15" RCP)=338.53
INV(15" RCP)=337.94
INV(24" RCP)=341.05
INV(TOP 36" RCP)=336.82
INV(18" RCP)=342.78
INV(18" RCP)=339.53
INV(18" RCP)=339.57
INV(18" RCP)=344.59
INV(4" PVC)=342.47
INV(6" PVC)=345.58
INV(6" PVC)=344.84
INV(6" PVC)=344.98
N58°56'13"E 95.00'
S22°03'23"W 502±
S54°58'20"E 203.45'
(TIE) GREAT BROOK
N/F TOWN OF BOLTON BK.7314/PG.144
MAHW START
MAHW 103 GC209
MAHW104 GC210
MAHW106
MAHW107
MAHW108
MAHW109
MAHW110
MAHW111
MAHW115
MAHW114
MAHW12
MAHW115 GC220
MAHW13 GC38
MAHW116
MAHW10
MAHW8
MAHW7
MAHW6
MAHW2
MAHW100
MAHW101
MAHW113
MH3 GC27
MH4
MH5
MH6
MH9
GC28 MAHW7
GC29
GC30
GC31
GC32
GC33-1
GC35
GC36
GC37 AND
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NOTES

GENERAL NOTES:

1. TOPOGRAPHIC INFORMATION AND EXISTING SITE FEATURES WERE OBTAINED FROM AN ACTUAL FIELD SURVEY PERFORMED BY ALLEN & MAJOR ASSOCIATES, INC, 100 COMMERCE WAY, WOBURN, MASSACHUSETTS.
2. ZONING DISTRICT IS LIMITED BUSINESS DISTRICT.
3. THE PROPERTY LOCATED AT 580 MAIN STREET, BOLTON, MASSACHUSETTS IS SUBJECT TO AN APPROVAL NOT REQUIRED SUBDIVISION PROCESS. SITE WORK SHOWN ON THE SUBSEQUENT DRAWINGS IS SUBJECT TO ANR LOT 2 ONLY AS PART OF A COMPREHENSIVE PERMIT APPLICATION TO THE ZONING BOARD OF APPEALS. ANY WORK SHOWN ON ANR LOT 1 IS FOR COORDINATION PURPOSES ONLY AND SHALL BE DESIGNED AND PERMITTED BY OTHERS AS REQUIRED BY THE TOWN OF BOLTON REGULATIONS.
4. ANR LOT 2 SIZE: 32.43± ACRES
5. OVERALL LOT SIZE: 39.08± ACRES.
6. DURING CONSTRUCTION, ALL VEHICLES MUST BE PARKED ON SITE.
7. DURING CONSTRUCTION, ALL STAGING AND DELIVERIES WILL OCCUR ON SITE.
8. THIS PROJECT WILL BE SERVED BY PRIVATE WELL, PRIVATE ON-SITE SEWER, TELEPHONE, CABLE AND ELECTRIC. ALL UTILITY LINES WILL BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
9. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS AT NO ADDITIONAL COST.
10. ALL PROPOSED MAIN BUILDING ENTRANCES AND WALKS SHALL BE HANDICAP ACCESSIBLE PER FEDERAL ADA & MAAB REGULATIONS.
11. ALL SITE WORK DONE FOR THIS PROJECT SHALL BE IN STRICT ACCORDANCE WITH THE SITE PLANS AND SITE WORK SPECIFICATIONS FOR CONSTRUCTION.
12. ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTIES DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR AT THEIR OWN EXPENSE.
13. ALL PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED AND RESTORED BY A SURVEYOR REGISTERED IN THE STATE OF MASSACHUSETTS AT THE CONTRACTOR'S EXPENSE.
14. ALL APPLICABLE PERMITS AND AN APPROVED SET OF PLANS SHALL BE AVAILABLE AT THE CONSTRUCTION SITE.
15. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION MEETING THE WITH THE APPROPRIATE CITY DEPARTMENTS, THE APPROPRIATE UTILITY COMPANIES, THE OWNER AND OWNER'S REPRESENTATIVE. THE MEETING SHALL TAKE PLACE PRIOR TO THE START OF CONSTRUCTION AND THE CONTRACTOR MUST PROVIDE 48 HOURS NOTICE TO ALL ATTENDEES PRIOR TO THE START OF THE MEETING.
16. APPROPRIATE WARNING SIGNS, MARKERS, BARRICADES AND/OR FLAG MEN SHALL BE PROVIDED TO REGULATE TRAFFIC. CONSTRUCTION TRAFFIC CONTROLS SHALL BE IMPLEMENTED AND OPERATED ACCORDING TO THE MASS DEPARTMENT OF TRANSPORTATION, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE LOCAL AUTHORITY.
17. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ADDITIONAL BENCHMARK INFORMATION IF REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING BENCHMARKS. IF IT IS NECESSARY TO RELOCATE A BENCHMARK, IT SHALL BE RELOCATED BY A MASSACHUSETTS PROFESSIONAL LAND SURVEYOR AND DONE SO AT THE CONTRACTOR'S EXPENSE.
18. ALL BUILDING DIMENSIONS ARE MEASURED TO THE OUTSIDE FACE OF THE BUILDING.
19. ALL RADII ARE 3 FEET UNLESS OTHERWISE NOTED.
20. ALL PARKING LOT AND AISLE DIMENSIONS ARE TAKEN FROM THE FACE OF CURB AND INDICATE EDGE OF PAVEMENT.
21. CONSTRUCTION DURING WET WEATHER OR WINTER CONDITIONS IS TO BE ANTICIPATED AND PROVISIONS TO ADEQUATELY ADDRESS THESE CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST.
22. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO CARRY OUT THE WORK INCLUDING BUT NOT LIMITED TO DEMOLITION.
23. DISPOSAL OF ALL DEMOLISHED MATERIALS INCLUDING EXISTING MISC. CONSTRUCTION DEBRIS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL MUNICIPAL REQUIREMENTS AT NO ADDITIONAL COST.
24. ALL DISTURBED AREAS NOT NOTED TO RECEIVE OTHER TREATMENT ARE TO RECEIVE SIX INCHES (6") MINIMUM OF TOPSOIL & SEED, AND BE MAINTAINED UNTIL ESTABLISHED & ACCEPTED OR AS SPECIFIED BY LANDSCAPE ARCHITECT.
25. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE PROTECTED, ABANDONED, REMOVED OR RELOCATED AS NECESSARY.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH THE LOCAL MUNICIPALITY'S GOVERNING AUTHORITY'S SPECIFICATIONS AND SHALL BE APPROVED BY SAME.
27. THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO DETERMINE EXACT POINT OF SERVICE CONNECTION AND DISCONNECTION AT EXISTING UTILITY.
28. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE BENCHMARKS SHOWN ON THE EXISTING CONDITIONS SITE PLAN AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR AT GROUNDBREAKING.
29. CONTRACTOR IS RESPONSIBLE FOR DIGGING TEST HOLES AND VERIFYING ANY EXISTING UTILITY OR STRUCTURE PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY THAT BASED ON EXACT LOCATION OF EXISTING UTILITIES, THERE ARE NO CONFLICTS BETWEEN THE EXISTING AND THE PROPOSED UTILITIES/DRAINAGE STRUCTURES.
30. THE CONTRACTOR SHALL ADHERE TO ALL PERMIT CONDITIONS PROVIDED BY ALL GOVERNING AGENCIES AT NO ADDITIONAL COSTS. THIS INCLUDES BUT IS NOT LIMITED TO BUILDING PERMITS, DEMOLITION PERMITS, PLUMBING AND ELECTRICAL PERMITS. PERMITS FROM THE PLANNING BOARD, CONSERVATION COMMISSION AND ZONING BOARD OF APPEALS.
31. DURING EXCAVATION, ANY EXISTING EARTH CUT MATERIALS THAT DO NOT MEET THE "ORDINARY FILL" SPECIFICATIONS OR "LOAM" SPECIFICATIONS AND CANNOT BE REUSED SHALL BE REMOVED OFFSITE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNERS. MATERIAL WHICH DOES NOT MEET THE SPECIFICATION INCLUDES ALL BOULDERS, ROCKS, CONSTRUCTION DEBRIS, AND MISC. MATERIAL. PRIOR TO REUSE, CONTRACTOR TO PROVIDE TESTING REPORT OF SIEVE ANALYSIS TO ENGINEER FOR APPROVAL. CONTRACTOR CAN AMEND MATERIALS AND CONTINUE TO RETEST AS NECESSARY AT NO ADDITIONAL COST TO OWNER. AFTER AMENDING, IF MATERIAL STILL DOES NOT MEET THE SPECIFICATIONS, IT IS TO BE REMOVED FROM SITE AT NO ADDITIONAL COST TO THE OWNER AND IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
32. ANY PROPOSED SIGNAGE SHALL BE APPROVED BY SEPARATE APPLICATION TO THE APPROPRIATE MUNICIPAL AUTHORITY INCLUDING BUT NOT LIMITED TO THE ZONING BOARD OF APPEALS. ALL PROPOSED SIGNAGE MUST MEET THE REQUIREMENTS OF THE LOCAL ZONING CODE OR AS SPECIFIED BY PERMIT AS ISSUED.
33. SITE CONSTRUCTION, ACCESS, UTILITY, GRADING AND SLOPE EASEMENTS TO BE COORDINATED AND ESTABLISHED PRIOR TO CONSTRUCTION AND ARE NOT SHOWN.
34. ALL CURBING TO BE BITUMINOUS CONCRETE CURB, EXCEPT ALL CURBING ABUTTING A SIDEWALK SHALL BE MONOLITHIC CURBING. CURBING TO THE FIRST INTERSECTION SHALL BE PRE-CAST CONCRETE.

GRADING & DRAINAGE NOTES:

1. EXISTING PAVEMENT SHALL BE SAW-CUT AND PAVEMENT JOINT SHALL BE INSTALLED WHERE NECESSARY TO ENSURE A SMOOTH CONTINUOUS GRADE.
2. ALL GRADING OPERATIONS SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANIES.
3. IN LANDSCAPED AREAS THE TOP ELEVATION OF MANHOLES SHALL MATCH THE FINISH GRADE OF THE TOPSOIL. IN PAVED AREAS THE TOP ELEVATIONS OF MANHOLES SHALL MATCH FINISH GRADE.
4. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED AS SOON AS POSSIBLE UPON COMPLETION OF CONSTRUCTION WORK IN THE AREA.
5. TEMPORARY TUBULAR BARRIER PROTECTION AND/OR SILT SACKS SHALL BE INSTALLED AND MAINTAINED AT EXISTING DRAINAGE STRUCTURES DURING CONSTRUCTION, TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE DRAINAGE SYSTEM.
6. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE PER DEMOLITION PLAN.
7. ALL CATCH BASINS, MANHOLES, INFILTRATION SYSTEMS, AND WATER QUALITY STRUCTURES ARE TO BE CLEANED TO REMOVE ALL CONSTRUCTION SILT AND DEBRIS PRIOR TO FINAL APPROVAL.
8. IF ANY EXISTING UTILITY STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER AT NO ADDITIONAL COST.
9. ALL STORM PIPES ENTERING STRUCTURES SHALL BE GROUTED TO ENSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
10. ALL STORM DRAIN MANHOLES SHALL HAVE TRAFFIC BEARING RING & COVERS & SHALL BE LABELED "DRAIN".
11. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
12. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
13. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES STEEPER THAN 3H:1V.
14. ALL DRAINAGE SYSTEM COMPONENTS SHALL CONFORM TO LOCAL REQUIREMENTS.

UTILITY NOTES:

1. THE LATEST STANDARDS OF THE LOCAL MUNICIPALITY SHALL BE FOLLOWED WHEN INSTALLING ANY STORM DRAIN WORK. STORM DRAIN WORK WILL BE INSPECTED BY THE LOCAL GOVERNING AUTHORITY PERSONNEL AND ALL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION.
3. ABANDONED EXISTING UTILITIES AND UTILITIES TO BE ABANDONED SHALL EITHER BE ABANDONED IN PLACE AS NOTED OR SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED. ALL UTILITIES SCHEDULED FOR ABANDONMENT OR REMOVAL AND DISPOSAL MUST BE COORDINATED BY THE CONTRACTOR WITH THE RESPECTIVE UTILITY OWNER. WHEN ABANDONED UTILITIES ARE TO BE LEFT IN PLACE, PLUG OR CAP THE ENDS OF THE CONDUITS AND PIPES. REMOVE ABANDONED UTILITY MANHOLES, JUNCTION BOXES AND SIMILAR STRUCTURES TO A MINIMUM DEPTH OF 4 FEET BELOW FINISHED GRADE AND PUNCTURE OR BREAK THE BOTTOM SLABS OF MANHOLES AND SIMILAR STRUCTURE TO ALLOW DRAINAGE. BACKFILL AND COMPACT EXCAVATIONS RESULTING FROM REMOVAL OF UTILITY FACILITATES, AS REQUIRED TO RESTORE THE ORIGINAL GRADE.
4. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENTS OF NATURAL GAS, ELECTRIC, TELEPHONE AND ANY OTHER UTILITY BY THE UTILITY OWNER.
5. THE CONTRACTOR SHALL USE THE FOLLOWING PIPE MATERIALS:
   - DRAIN – HDPE (HIGH DENSITY CORRUGATED POLYETHYLENE PIPE WITH SMOOTH INNER WALL), ASTM D2321 (UNLESS OTHERWISE SPECIFIED ON PLAN)
6. BEFORE UTILITY WORK BEGINS, THE CONTRACTOR WILL COORDINATE WITH THE LOCAL MUNICIPALITY FOR THE APPROPRIATE PERMIT AND INSPECTION FEES.
7. A MINIMUM OF 10 FEET CLEAR HORIZONTALLY SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY SEWER MAINS AND/OR STORM DRAINS. WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET TO A WATER MAIN, THE WATER MAIN SHALL BE LAID IN A SEPARATE TRENCH AND THE DIFFERENCE IN ELEVATION BETWEEN THE WATER MAIN AND THE SEWER MAIN SHALL BE AT LEAST 18 INCHES.
8. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES. COMPACTION BELOW INFILTRATION FIELDS SHALL BE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT.
9. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITY'S INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
10. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
11. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 5'-0" COVER AND A MAXIMUM OF 8'-0" COVER ON ALL WATERLINES.
12. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE BETWEEN THE PIPES. WHERE THE WATERLINE IS LESS THAN THE 18" VERTICAL CLEARANCE AND MEETING 10' HORIZONTAL CLEARANCE CANNOT BE MET, THE WATER MUST BE ENCASED IN CONCRETE.
13. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 P.S.I.
14. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER, SEWER AND ELECTRICAL AND TELECOMMUNICATIONS LINES.
15. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
16. DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING UTILITIES.

ABBREVIATIONS

ABAN	ABANDON
ADJ	ADJUST
B	BORING
BC	BOTTOM OF CURB
BIT	BITUMINOUS
BCB	BITUMINOUS CONCRETE BERM
BLDG	BUILDING
BM	BENCH MARK
BOS	BOTTOM OF SLOPE
BOW	BOTTOM OF WALL
BRK	BRICK
BV&B	BUTTERFLY VALVE & BOX
BVW	BORDERING VEGETATED WETLAND
CATV	CABLE TELEVISION
CB	CATCH BASIN
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CI	CAST IRON (PIPE)
CL	CENTERLINE
CLDI	CEMENT LINED DUCTILE IRON (PIPE)
CM	CONSTRUCTION MANAGER
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTRACTOR
CRD	COORDINATE
CPP	CORRUGATED POLYETHYLENE PIPE
CUL	CULVERT
CY	CUBIC YARD
DB	DISTRIBUTION BOX
DBL	DOUBLE
DEM	DEMOLISH
DET	DETENTION
DI	DUCTILE IRON (PIPE)
DIA	DIAMETER
DIM	DIMENSION
DMH	DRAIN MANHOLE
DW	DOMESTIC WATER (OR DRY WELL)
DWG	DRAWING
DYCL	DOUBLE YELLOW CENTERLINE
EHH	ELECTRIC HANDHOLE
EL	ELEVATION
ELEC	ELECTRIC
EMH	ELECTRIC MANHOLE
EOP	EDGE OF PAVEMENT
EOR	EDGE OF ROAD
EOW	EDGE OF WETLANDS
ETC	ELECTRIC, TELEPHONE, CABLE
EXIST	EXISTING
EXT	EXTERIOR
FA	FIRE ALARM
FCC	FLUSH CONCRETE CURB
FES	FLARED END SECTION
FFE	FINISH FLOOR ELEVATION
FLNP	FIRE LANE NO PARKING
FPS	FEET PER SECOND
FS	FIRE SERVICE
FT	FOOT/FEET
GC	GENERAL CONTRACTOR
GEN	GENERAL
GG	GAS GATE
GR	GUIDE RAIL
GRAN	GRANITE
GV	GATE VALVE
GV&B	GATE VALVE & BOX
GW	GROUND WATER
HCR	HANDICAP RAMP
HOR	HORIZONTAL
HT	HEIGHT
HW	HEADWALL
HWY	HIGHWAY
HYD	HYDRANT
ID	INSIDE DIAMETER
IN	INCHES
INCL	INCLUDE
INST	INSTALLED
INV, I.E.	INVERT, INVERT ELEVATION
L	LENGTH
LB	LEACHING BASIN
LP	LIGHT POLE
MAT	MATERIAL
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNTED
MW	MONITORING WELL
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OHW	OVERHEAD WIRE
OVHD	OVERHEAD
OW	OBSERVATION WELL
PC	POINT OF CURVATURE
PCC	PRECAST CONCRETE CURB
PI	POINT OF INTERSECTION
PKG	PARKING
PL	PROPERTY LINE
PLMB	PLUMBING
POC	POINT ON CURVATURE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROP, P	PROPOSED
PT	POINT (OR POINT OF TANGENT)
PVC	POLYVINYL CHLORIDE (PIPE)
R&R	REMOVE & RESET/REPLACE
R&S	REMOVE & STACK
RCP	REINFORCED CONCRETE PIPE
RD	ROAD (OR ROOF DRAIN)
RED	REDUCER
RELOC	RELOCATE
REM	REMOVE
RET	RETAIN, RETAINING OR RETENTION
ROW	RIGHT OF WAY
RR	RAILROAD
RWL	RAIN WATER LEADER
RWY	ROADWAY
SD	SUBDRAIN
SF	SQUARE FEET
SGC	SLOPED GRANITE CURB
SMH	SEWER MANHOLE
SP	STANDPIPE
SPEC	SPECIFICATION
STA	STATION
STC	STORMCEPTOR
STD	STANDARD
STRTL	STRUCTURAL
SWEL	SOLID WHITE EDGE LINE
SW	SIDEWALK
SWLL	SOLID WHITE LANE LINE
SYCL	SOLID YELLOW CENTERLINE
TB	TEST BORING
TC	TOP OF CURB
TD	TRENCH DRAIN
TEL, T	TELEPHONE
TMH	TELEPHONE MANHOLE
TOS	TOP OF SLOPE
TOW	TOP OF WALL
TP	TEST PIT
TS&V	TAPPING SLEEVE & VALVE
TYP	TYPICAL
UD	UNDERDRAIN
UL	UNDERWRITERS LABORATORY
UP	UTILITY POLE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VGC	VERTICAL GRANITE CURB
WD	WOOD
WG	WATER GATE
WM	WATER MAIN
WMH	WATER MANHOLE
WSO	WATER SHUTOFF

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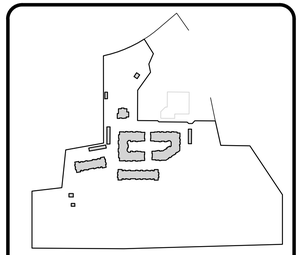

KEYSHEET

ISSUED FOR COMPREHENSIVE PERMIT APPLICATION
SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDEIRO
CIVIL
NO. 47083
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
WP EAST ACQUISITIONS, LLC.
91 HARTWELL AVENUE, 3RD FLOOR
LEXINGTON, MA 02421

PROJECT:
PRELIMINARY APPLICATION
FOR COMPREHENSIVE PERMIT
ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	NONE	DWG. NAME:	C1670-15
DESIGNED BY:	JPS	CHECKED BY:	PLC

PREPARED BY:
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DRAWING TITLE: ABBREVIATIONS & NOTES

SHEET No. C-001

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EROSION CONTROL NOTES

EROSION & SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE ADEQUATE TO MAINTAIN SEDIMENT ON SITE. ANY MODIFICATIONS TO SILT CONTROLS SHOWN ON THE APPROVED PLANS AS A RESULT OF ACTUAL FIELD CONDITIONS OR CONSTRUCTION PRACTICES SHALL BE INSTALLED IN ACCORDANCE WITH B.M.P. (BEST MANAGEMENT PRACTICES) PER THE E.P.A. 2017 "CONSTRUCTION GENERAL PERMIT" MANUAL, AND MASSACHUSETTS 2003 EROSION & SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, ANY SUCH MODIFICATIONS FROM THE ABOVE MANUALS SHALL BE INSTALLED AS APPROVED BY THE ENGINEER OR THE LOCAL MUNICIPALITY.

2. AREAS OF EXPOSED SOIL UNDERGOING CONSTRUCTION THAT WILL NOT BE COVERED AND OR FINISHED GRADED SHALL BE STABILIZED AS SOON AS PRACTICABLE BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY (UNLESS MUNICIPALITY HAS STRICTER REQUIREMENTS WHICH SHALL BE FOLLOWED) IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY EROSION CONTROL MEASURES SHALL INCLUDE EROSION CONTROL MESH, NETTING OR MULCH AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND SHOWN ON THE DESIGN PLANS. IF MULCH IS USED, STRAW MULCH SHALL BE APPLIED AT THE RATE OF 4 BALES PER 1,000 SQUARE FEET. APPLICATION AREA SHALL BE SUFFICIENTLY COVERED WITH MULCH TO AVOID ANY VISIBLE SOIL EXPOSURE. MULCH SHALL BE KEPT MOIST TO AVOID LOSS DUE TO WIND. MULCH AND NETTING SHALL BE APPLIED IN THE BASE OF ALL GRASSED WATERWAYS, IN VEGETATIVE SLOPES WHICH EXCEED 15% AND DISTURBED AREAS WITHIN 100 FEET OF WETLANDS OR STREAMS.

3. IF DISTURBED AREAS DO NOT RECEIVE FINAL SEEDING BY OCTOBER 1ST OF THE CONSTRUCTION YEAR, THEN ALL DISTURBED AREAS SHALL BE SEEDED WITH A WINTER COVER CROP AT THE RATE OF 3 LBS PER 1,000 SQUARE FEET. WINTER SEEDING SHALL BE COVERED WITH EROSION CONTROL MESH (MULCH AND NETTING). HEAVY GRADE MATS SHALL BE USED IN THE BASE OF ALL GRASSED WATERWAYS ON VEGETATED SLOPES IN EXCESS OF 15%, AND ANY DISTURBED AREAS WITHIN 100 FEET OF WETLANDS OR STREAMS. MULCH AND NETTING SHALL ALSO BE PROVIDED FOR ADDITIONAL WINTER PROTECTION.

4. ALL TOPSOIL SHALL BE COLLECTED, STOCKPILED, SEEDED WITH RYE AT 3LBS PER 1,000 SQUARE FOOT AND MULCHED, AND REUSED AS REQUIRED. TUBULAR BARRIERS SHALL BE PLACED DOWN GRADIENT FROM STOCKPILED LOAM. LOAM SHALL BE STOCKPILED AT LOCATIONS DESIGNATED BY THE OWNER AND ENGINEER.

5. ALL TUBULAR BARRIERS, SILT SACKS, AND EROSION CONTROL BERMS SHALL BE INSTALLED ACCORDING TO THE SITE PREPARATION PLAN. THESE SHALL BE MAINTAINED DURING DEVELOPMENT TO REMOVE SEDIMENT FROM RUNOFF WATER. ALL THE FILTER BARRIERS AND EROSION CONTROL BERMS SHALL BE INSPECTED AFTER ANY RAINFALL OR RUNOFF EVENT, MAINTAINED AND CLEANED UNTIL ALL AREAS HAVE AT LEAST 85–90% VIGOROUS PERENNIAL COVER OF GRASSES.

6. ADJACENT ROADS SHALL BE PERIODICALLY SWEPT OR WASHED TO AVOID TRACKING MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA AS OFTEN AS NECESSARY (WHICH COULD BE ON A DAILY BASIS) TO REMOVE ANY SOIL OR SEDIMENTS AT NO ADDITIONAL COST TO THE OWNER. A WATERING TRUCK WILL BE USED TO PERIODICALLY SPRINKLE CONSTRUCTION AREAS IN ORDER TO KEEP THE LEVEL OF DUST TO A MINIMUM DURING THE DRY MONTHS AT NO ADDITIONAL COST TO THE OWNER.

7. THE CONTRACTOR SHALL USE EXTREME CAUTION TO AVOID ALLOWING SEDIMENTS TO ENTER THE STORM DRAIN SYSTEM DURING CONSTRUCTION. BOTH EXISTING AND PROPOSED CATCH BASIN INLETS SHALL BE PROTECTED DURING CONSTRUCTION BY THE USE SILT SACKS AND/OR TUBULAR BARRIERS AROUND EACH INLET AS NOTED ON THE PLANS. INLET PROTECTION MAY BE REMOVED ONLY AFTER FINISHED AREAS ARE PAVED AND THE VEGETATED SLOPES ARE ESTABLISHED WITH AT LEAST 85–90% OF VIGOROUS PERENNIAL GROWTH.

8. AS APPLICABLE, EROSION CONTROL MESH SHALL BE APPLIED IN ACCORDANCE WITH THE PLANS OVER ALL FINISHED SEEDED AREAS AS SPECIFIED ON THE DESIGN PLANS.

9. AT A MINIMUM, ALL TUBULAR BARRIERS AND FILTER FABRIC SHALL REMAIN IN PLACE UNTIL SEEDINGS OR PLANTINGS HAVE BECOME 85–90% ESTABLISHED. THE LOCAL CONSERVATION COMMISSION MUST APPROVE THE REMOVAL OR RELOCATION OF ANY OF THE TUBULAR BARRIERS AND FILTER FABRIC. ONCE THE TUBULAR BARRIERS ARE REMOVED THE AREAS ARE TO BE LOAMED AND SEEDED TO ACHIEVE FULL STABILIZATION.

10. AT THE OWNER'S DISCRETION ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED TO MAINTAIN STABILITY OF EARTHWORKS AND FINISHED GRADED AREAS. THE CONTRACTOR, AT HIS EXPENSE, WILL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY ADDITIONAL MEASURES AS SPECIFIED BY THE OWNER. THIS INCLUDES BUT IS NOT LIMITED TO REQUESTS BY MA DEP, THE ENGINEER AND THE LOCAL MUNICIPALITY, AS AUTHORIZED BY THE OWNER. FAILURE TO COMPLY WITH THE OWNER'S DIRECTIONS WILL RESULT IN DISCONTINUATION OF CONSTRUCTION ACTIVITIES.

11. INSPECTIONS AND MONITORING MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. WEEKLY INSPECTIONS SHALL BE HELD THROUGH THE DURATION OF CONSTRUCTION ACTIVITY. WEEKLY INSPECTION REPORTS SHALL BE MAINTAINED BY THE CONTRACTOR AND LOCATED IN THE CONTRACTORS FIELD OFFICE ONSITE. IN ADDITION TO THE NORMAL WEEKLY INSPECTIONS, THE CONTRACTOR SHALL PERFORM AN INSPECTION OF ALL EROSION CONTROL MEASURES AFTER EACH RAINFALL OR RUNOFF EVENT, AND PERFORM THE NECESSARY REPAIRS. THE INSPECTIONS SHALL INCLUDE BUT NOT BE LIMITED TO THE SITE'S DOWN STREAM DISCHARGE POINTS.

12. IF ANY EVIDENCE OF SEDIMENTATION IS OBSERVED AT THE STORMWATER MANAGEMENT AREA INLETS, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROVIDE A PLAN TO THE ENGINEER TO REMOVE ANY ACCUMULATED SEDIMENT IN THESE AREAS. THE CONTRACTOR SHALL ALSO IMMEDIATELY PROVIDE ADDITIONAL ON SITE EROSION AND SEDIMENTATION CONTROL MEASURES TO PREVENT FURTHER DEGRADATION OF THE AREA.

13. FOLLOWING THE TEMPORARY OR FINAL SEEDINGS, THE CONTRACTOR SHALL INSPECT THE WORK AREA SEMI–MONTHLY TO ENSURE THE AREAS HAVE A MINIMUM OF 85–90% VEGETATED VIGOROUS GROWTH. RE–SEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW UP INSPECTIONS IN THE EVENT OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.

14. CONTRACTOR & ALL SITE SUBCONTRACTORS SHALL BE FAMILIAR WITH & FOLLOW ALL APPROVED PERMITS AND CONDITIONS. CONTRACTOR SHALL MAINTAIN A COPY OF ALL APPROVED PERMITS ONSITE. ALL CONDITIONS & RECOMMENDATIONS WITHIN THE APPROVED PERMITS SHALL BE COMPLETED.

15. ALL EROSION MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE ADEQUATE TO MAINTAIN SEDIMENT ON SITE. ANY MODIFICATIONS SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR THE LOCAL MUNICIPALITY.

16. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL REMAIN IN PLACE UNTIL ALL SITE WORK IS COMPLETE AND GROUND COVER IS ESTABLISHED.

17. TOP OF STOCKPILES SHALL BE COVERED IN SUCH MANNER THAT STORMWATER DOES NOT INFILTRATE THE MATERIALS AND THEREBY RENDER THE SAME UNSUITABLE FOR FILL USE.

EROSION & SEDIMENTATION CONTROL NOTES (CONTINUED):

18. ALL DISTURBED OR EXPOSED AREAS SUBJECT TO EROSION SHALL BE STABILIZED WITH MULCH OR SEEDED FOR TEMPORARY VEGETATIVE COVER. NO AREA, SUBJECT TO EROSION SHALL BE LEFT DISTURBED AND UNSTABILIZED FOR PERIODS LONGER THAN IS ABSOLUTELY NECESSARY TO CARRY OUT THAT PORTION OF THE CONSTRUCTION WORK OR SIX MONTHS AFTER SOIL HAS BEEN DISTURBED WHICHEVER IS LESS.

19. CULVERT/PIPE INLETS AND OUTFALLS SHALL BE PROTECTED BY TUBULAR BARRIER FILTERS AND STONE CHECK DAMS UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED.

20. TUBULAR BARRIER DIKES SHALL BE CONSTRUCTED AT ALL EXISTING & PROPOSED CATCH BASINS. NO SEDIMENTATION SHALL ENTER THE ON–SITE OR OFF–SITE DRAINAGE SYSTEMS AT ANY TIME.

21. ALL EROSION CONTROL MEASURES SHALL BE ROUTINELY INSPECTED, CLEANED AND REPAIRED OR REPLACED AS NECESSARY THROUGHOUT ALL PHASES OF CONSTRUCTION. IN ADDITION, INSPECTIONS SHALL TAKE PLACE WEEKLY AND BEFORE AND AFTER EACH RAINFALL EVENT.

22. ALL PROPOSED SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH JUTE MESH AND PROTECTED FROM EROSION UNTIL WORK IS COMPLETE AND GROUND COVER IS ESTABLISHED.

23. THE CONTRACTOR SHALL KEEP ON SITE AT ALL TIMES ADDITIONAL TUBULAR BARRIERS FOR INSTALLATION AT THE DIRECTION OF THE ENGINEER OR THE TOWN ENGINEER TO MITIGATE ANY EMERGENCY CONDITION.

24. AS CONSTRUCTION DISTURBANCE IS GREATER THAN 1 ACRE, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION GENERAL PERMIT NOI, AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WILL NEED TO BE SUBMITTED TO THE EPA. THE NPDES PERMIT FOR STORM WATER DISCHARGE, & CONSTRUCTION GENERAL PERMIT NOI WILL BE REQUIRED TO BE SUBMITTED AT LEAST 14 DAYS PRIOR TO COMMENCING CONSTRUCTION BY THE CONTRACTOR.

25. OWNER AND CONTRACTOR ARE RESPONSIBLE FOR COMPLIANCE WITH THE CONSTRUCTION GENERAL PERMIT NOI. WEEKLY SWPPP INSPECTION REPORTS TO BE PERFORMED BY CONTRACTOR. COPIES OF ALL SWPPP INSPECTION REPORTS SHALL BE PROVIDED TO THE LOCAL MUNICIPALITY, EPA, DEP, OR ANY OTHER AUTHORITY REQUESTING WITHIN 3 DAYS OF EACH INSPECTION.

26. APPLICABLE WORK AND MATERIALS SHALL COMPLY WITH ALL LOCAL, MA DEP, EPA CONSTRUCTION GENERAL PERMIT STANDARDS. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE SITE PLAN REGULATIONS FROM THE LOCAL AND USDA SOIL CONSERVATION SERVICE VEGETATIVE PRACTICES IN SITE DEVELOPMENT.

27. A WATERING TRUCK SHALL BE USED TO PERIODICALLY SPRINKLE CONSTRUCTION AREAS IN ORDER TO KEEP THE LEVEL OF DUST TO A MINIMUM DURING THE DRY MONTHS AND AS REQUIRED.

28. IF DEWATERING IS NECESSARY IT SHALL ONLY BE COMPLETED AS FOLLOWS: THE DISCHARGE SHALL BE STOPPED IMMEDIATELY IF THE RECEIVING AREA SHOWS ANY SIGN OF INSTABILITY OR EROSION. ALL CHANNELS, SWALES, AND DITCHES DUG FOR DISCHARGING WATER FROM THE EXCAVATED AREA SHALL BE STABLE PRIOR TO DIRECTING DISCHARGE TO THEM. IF A CONSTRUCTION EQUIPMENT BUCKET IS USED, IT SHALL EMPTY THE MATERIAL TO A STABLE AREA. NO DEWATERING SHALL OCCUR DURING PERIODS OF INTENSE, HEAVY RAIN. FLOW TO THE SEDIMENT REMOVAL STRUCTURE SHALL NOT EXCEED THE STRUCTURE'S CAPACITY TO SETTLE AND FILTER FLOW OR ITS VOLUME CAPACITY. WHENEVER POSSIBLE, THE DISCHARGE FROM THE SEDIMENT REMOVAL STRUCTURE SHALL DRAIN TO A WELL–VEGETATED BUFFER BY SHEET FLOW WHILE MAXIMIZING THE DISTANCE TO THE NEAREST WATER RESOURCE AND MINIMIZING THE SLOPE OF THE BUFFER AREA. THERE SHALL BE NO DIRECT DISCHARGE TO EXISTING WETLANDS OR STREAMS. ALL DISCHARGE SHALL BE IN COMPLIANCE WITH STATE, LOCAL, AND FEDERAL REQUIREMENTS.

29. INITIATE STABILIZATION OF EXPOSED AREAS IMMEDIATELY IF CONSTRUCTION WORK TEMPORARILY OR PERMANENTLY CEASES.

30. ALL DISCHARGES FROM POLLUTION SOURCES ARE PROHIBITED ONSITE SUCH AS FUELS, WASTEWATER FROM WASH OUT OF CONCRETE, WASTEWATER FROM CLEAN OUT OF PAINTS, FORM RELEASE OILS, SOLVENTS, ADHESIVES, CURING COMPOUNDS, POLLUTANTS USED FOR MAINTENANCE OF VEHICLES AND EQUIPMENT, SOAPS & SOLVENTS, TOXIC OR HAZARDOUS SUBSTANCES, CHEMICALS AND OILS. IF A POLLUTANT IS DISCHARGED IT NEEDS TO BE IMMEDIATELY CLEANED UP BY REMOVING THE CHEMICAL AND AFFECTED SOIL OR AREA OF SPILL FROM THE SITE IN ACCORDANCE WITH BOTH THE MANUFACTURER RECOMMENDATIONS, FEDERAL, STATE, AND LOCAL REQUIREMENTS. DO NOT HOSE DOWN AND SPREAD SPILLED ITEM. ALL CHEMICALS USED ON THE SITE SHALL BE IN LEAK–PROOF CONTAINERS STORED AWAY FROM WETLANDS, SURFACE WATERS, STORMWATER INLETS, AND DRAINAGE MEASURES. SPILL KITS SHALL BE AVAILABLE ONSITE FOR EMERGENCY USE. THERE SHALL BE A SECONDARY CONTAINMENT MEASURE OF ALL CHEMICALS IN ADDITION TO SPILL–PROOF CONTAINERS.

31. PRIOR TO COMMENCEMENT OF CONSTRUCTION, APPLICABLE CONTRACTOR PERSONNEL MUST HAVE AN UNDERSTANDING OF THE EPA CONSTRUCTION GENERAL PERMIT REQUIREMENTS AND THEIR SPECIFIC RESPONSIBILITIES UNDER THE PERMIT. AT A MINIMUM, PERSONNEL MUST BE TRAINED AND UNDERSTAND THE FOLLOWING: LOCATION OF ALL STORMWATER CONTROLS AND HOW TO MAINTAIN THEM, PROCEDURES FOR COMPLYING WITH THE POLLUTION PREVENTION REQUIREMENTS. PROCEDURES FOR CONDUCTING INSPECTIONS, RECORDING FINDINGS, AND TAKING CORRECTIVE ACTION.

32. ALL SEDIMENT TRACKED ONTO ROADWAYS MUST BE REMOVED AT END OF EACH WORK DAY.

33. ALL USE OF CATIONIC TREATMENT CHEMICALS (EXAMPLES INCLUDE POLYMERS, CHITOSAN, CATIONIC PAM, FLOCCULANTS OR OTHER CHEMICAL UTILIZED FOR STABILIZATION) ARE PROHIBITED. IF ALL OTHER AVAILABLE STABILIZATION MEASURES ARE NOT POSSIBLE AND USE OF CATIONIC CHEMICALS IS ABSOLUTELY NECESSARY THE CONTRACTOR WILL NEED TO CONTACT THE EPA NEW ENGLAND OFFICE IN WRITING FOR APPROVAL AND SPECIFIC REQUIREMENTS (MAXIMUM DOSAGE RATE, RESIDUAL TESTING, SPECIFIC LIMITATIONS, ETC) PRIOR TO USE.

34. IF USING NON–VEGETATIVE STABILIZATION MEASURES, IT MUST BE COMPLETED NO LATER THAN 14 DAYS AFTER INITIATING STABILIZATION. ALL AREAS OF EXPOSED SOILS MUST BE COVERED.

35. INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE AT LEAST ONCE EVERY 7 DAYS BY THE CONTRACTOR. AT A MINIMUM INSPECTIONS SHALL INCLUDE ALL DISTURBED AREAS, ALL STORMWATER CONTROLS AND POLLUTION PREVENTION MEASURES, ALL LOCATIONS WHERE STABILIZATION MEASURES HAVE BEEN IMPLEMENTED, EQUIPMENT AND MATERIAL STORAGE AREAS, ALL AREAS WHERE STORMWATER FLOWS AND ALL POINTS OF DISCHARGE. WHEN CORRECTIVE ACTIONS ARE REQUIRED, THE CONTRACTOR MUST IMMEDIATELY TAKE ALL STEPS TO PREVENT POLLUTANT DISCHARGES UNTIL A PERMANENT SOLUTION IS IMPLEMENTED. AS NECESSARY NEW OR MODIFIED CONTROLS MUST BE INSTALLED AND OPERATIONAL, THE REPAIR MUST BE COMPLETED WITHIN 7 DAYS FROM THE TIME OF DISCOVERY. WITHIN 24 HOURS OF A TRIGGERING CONDITION OCCURRING THAT REQUIRES A CORRECTIVE ACTION, A CORRECTIVE ACTION REPORT MUST BE COMPLETED.

MAINTENANCE:

ALL MEASURES STATED ON THE STORMWATER POLLUTION PREVENTION PLANS, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION BY CONTRACTOR UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.

2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A HEALTHY STAND OF GRASS IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.

3. ALL SEDIMENT CONTROLS SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE TUBULAR SEDIMENT CONTROLS WHEN IT REACHES HALF THE HEIGHT OF THE CONTROL MEASURE OR AS REQUESTED BY THE OWNER OR ENGINEER.

4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

CONSTRUCTION GENERAL PERMIT NOTES AND NARRATIVE:

NARRATIVE: THE STORMWATER POLLUTION PREVENTION PLANS CONSIST OF THE SITE PREPARATION PLAN TOGETHER WITH AN EXISTING CONDITIONS PLANS, GRADING PLANS, ABBREVIATIONS AND NOTES SHEETS, AND DETAIL SHEETS.

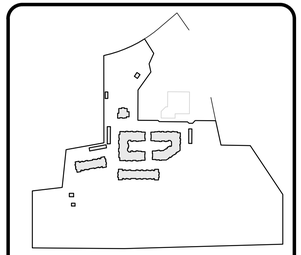
THE EROSION CONTROL PLAN WILL BE IMPLEMENTED TO:

A. TREAT EROSION AS SOON AS POSSIBLE AFTER DISTURBANCE.

B. PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA AND ENTERING THE RECEIVING WATERS.

C. CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED TO MINIMIZE EROSION.

D. ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.



KEYSHEET

ISSUED FOR COMPREHENSIVE PERMIT APPLICATION
SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDEIRO
CIVIL
NO. 47083
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
WP EAST ACQUISITIONS, LLC.
91 HARTWELL AVENUE, 3RD FLOOR
LEXINGTON, MA 02421

PROJECT:
PRELIMINARY APPLICATION FOR COMPREHENSIVE PERMIT
ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	NONE	DWG. NAME:	C1670-15
DESIGNED BY:	JPS	CHECKED BY:	PLC

PREPARED BY:
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DRAWING TITLE: ABBREVIATIONS & NOTES

SHEET No. C-002

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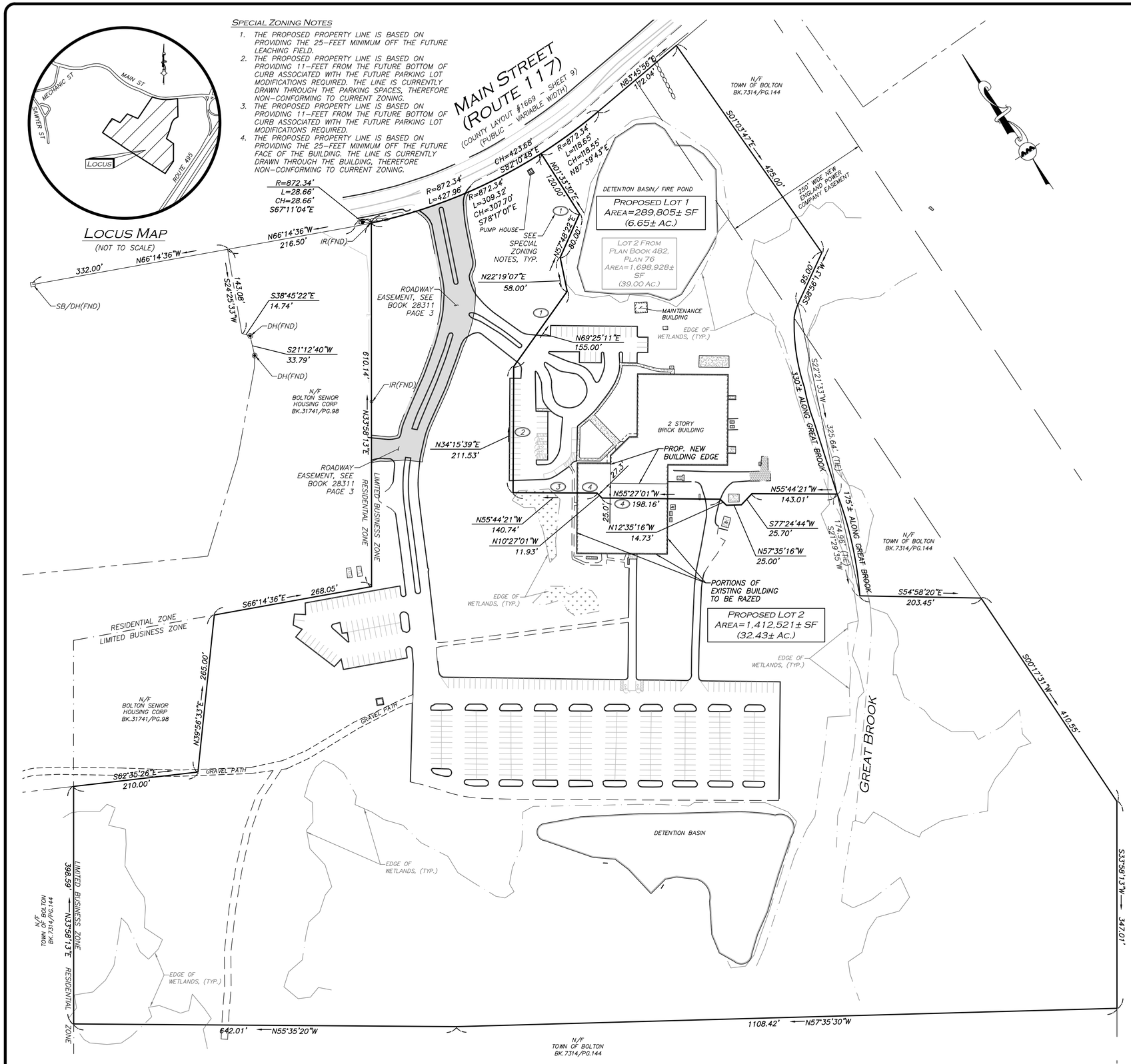
Special Zoning Notes

1. THE PROPOSED PROPERTY LINE IS BASED ON PROVIDING THE 25-FEET MINIMUM OFF THE FUTURE LEACHING FIELD.
2. THE PROPOSED PROPERTY LINE IS BASED ON PROVIDING 11-FEET FROM THE FUTURE BOTTOM OF CURB ASSOCIATED WITH THE FUTURE PARKING LOT MODIFICATIONS REQUIRED. THE LINE IS CURRENTLY DRAWN THROUGH THE PARKING SPACES, THEREFORE NON-CONFORMING TO CURRENT ZONING.
3. THE PROPOSED PROPERTY LINE IS BASED ON PROVIDING 11-FEET FROM THE FUTURE BOTTOM OF CURB ASSOCIATED WITH THE FUTURE PARKING LOT MODIFICATIONS REQUIRED.
4. THE PROPOSED PROPERTY LINE IS BASED ON PROVIDING THE 25-FEET MINIMUM OFF THE FUTURE FACE OF THE BUILDING. THE LINE IS CURRENTLY DRAWN THROUGH THE BUILDING, THEREFORE NON-CONFORMING TO CURRENT ZONING.



Locus References

- TOWN OF BOLTON ASSESSORS MAP 4C, LOT 24
- DEED BOOK 49223, PAGE 19
- PLAN BOOK 482, PLAN 76
- OWNER OF RECORD: BOLTON OFFICE PARK LLC

Plan References

- PLAN BOOK 800, PLAN 36
- PLAN BOOK 760, PLAN 91
- PLAN BOOK 324, PLAN 104
- PLAN BOOK 307, PLAN 37
- PLAN BOOK 190, PLAN 62

Notes

1. NORTH ARROW IS BASED ON MASSACHUSETTS GRID COORDINATE SYSTEM (MAINLAND ZONE) (NAD 83).
2. BOOK/PAGE AND PLAN REFERENCES ARE TAKEN FROM WORCESTER REGISTRY OF DEEDS IN WORCESTER, MA.
3. THE FEMA FLOODPLAIN LINES SHOWN HEREON ARE TAKEN FROM GIS INFORMATION AND INTERPOLATED FROM ON THE GROUND SURVEY DATA.
4. PORTIONS OF THE SITE IS LOCATED WITH A FEMA FLOOD ZONE X AND A FLOOD ZONE AE AS SHOWN ON FIRM MAP 25027C0486F DATED JULY 16, 2014.
5. THE SUBJECT PROPERTY IS SUBJECT TO A SPECIAL PERMIT ISSUED BY THE BOARD OF SELECTMEN ON OCTOBER 25, 1986.
6. THE INTENT OF THIS PLAN IS TO DEPICT THE PROPOSED MODIFICATION TO THE PROPERTY AT 580 MAIN STREET THROUGH THE APPROVAL NOT REQUIRED SUBDIVISION PROCESS AS PERFORMED BY OTHERS. SITE WORK SHOWN ON THE SUBSEQUENT DRAWINGS IS SUBJECT TO ANR LOT 2 ONLY AS PART OF A COMPREHENSIVE PERMIT APPLICATION TO THE ZONING BOARD OF APPEALS. ANY WORK SHOWN ON ANR LOT 1 IS FOR COORDINATION PURPOSES ONLY AND SHALL BE DESIGNED AND PERMITTED BY OTHERS AS REQUIRED BY THE TOWN OF BOLTON REGULATIONS.

Zoning Table - Limited Business District

ITEM	REQUIRED
LOT AREA (MIN)	1.5 ACRES
LOT FRONTAGE (MIN)	200'
LOT WIDTH (MIN)	150' (1)
FRONT YARD SETBACK (MIN)	50'
SIDE YARD SETBACK (MIN)	25' (2)
REAR YARD SETBACK (MIN)	25' (2)
BUILDING COVERAGE (MAX)	20%
BUILDING HEIGHT (MAX)	32'
IMPERVIOUS COVERAGE (MAX)	50%

(1) MINIMUM LOT WIDTH SHALL BE MEASURED AT A DISTANCE OF 100-FT FROM THE STREET.

(2) SIDE & REAR YARD SETBACKS SHALL BE INCREASED TO 50 FEET IF ABUTTING A RESIDENTIAL USE.

(3) THE PROPERTY IS ALSO LOCATED WITHIN THE WIRELESS COMMUNICATION OVERLAY DISTRICT (WCOD), MIXED USE VILLAGE OVERLAY DISTRICT (MVOD) AND THE FLOODPLAIN OVERLAY DISTRICT.

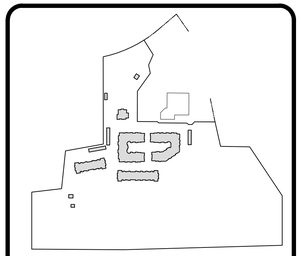
LEGEND

EXISTING BOUND	
IRON ROD (IR)	
DRILL HOLE (DH)	
BUILDING	
PROPERTY LINE	
ABUTTERS LINE	
WETLAND AREA	
WETLAND	
STONE BOUND W/DRILL HOLE	SB/DH
EASEMENT LINE	
STONE WALL	
EDGE OF WATER	
CENTERLINE	CL
FOUND	FND
NOW OR FORMERLY	N/F
BOOK	BK.
PAGE	PG.
SPECIAL ZONING NOTES	1

GRAPHIC SCALE

80 0 40 80 160 320

(IN FEET)
1 inch = 80 ft.



KEYSHEET

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SCALE:	1" = 80'	DWG. NAME:	C1670-15
DESIGNED BY:	KAC/PGM	CHECKED BY:	PLC

PREPARED BY:

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DRAWING TITLE:
CONCEPTUAL PROPERTY LINE MODIFICATION PLAN

SHEET No.
C-003

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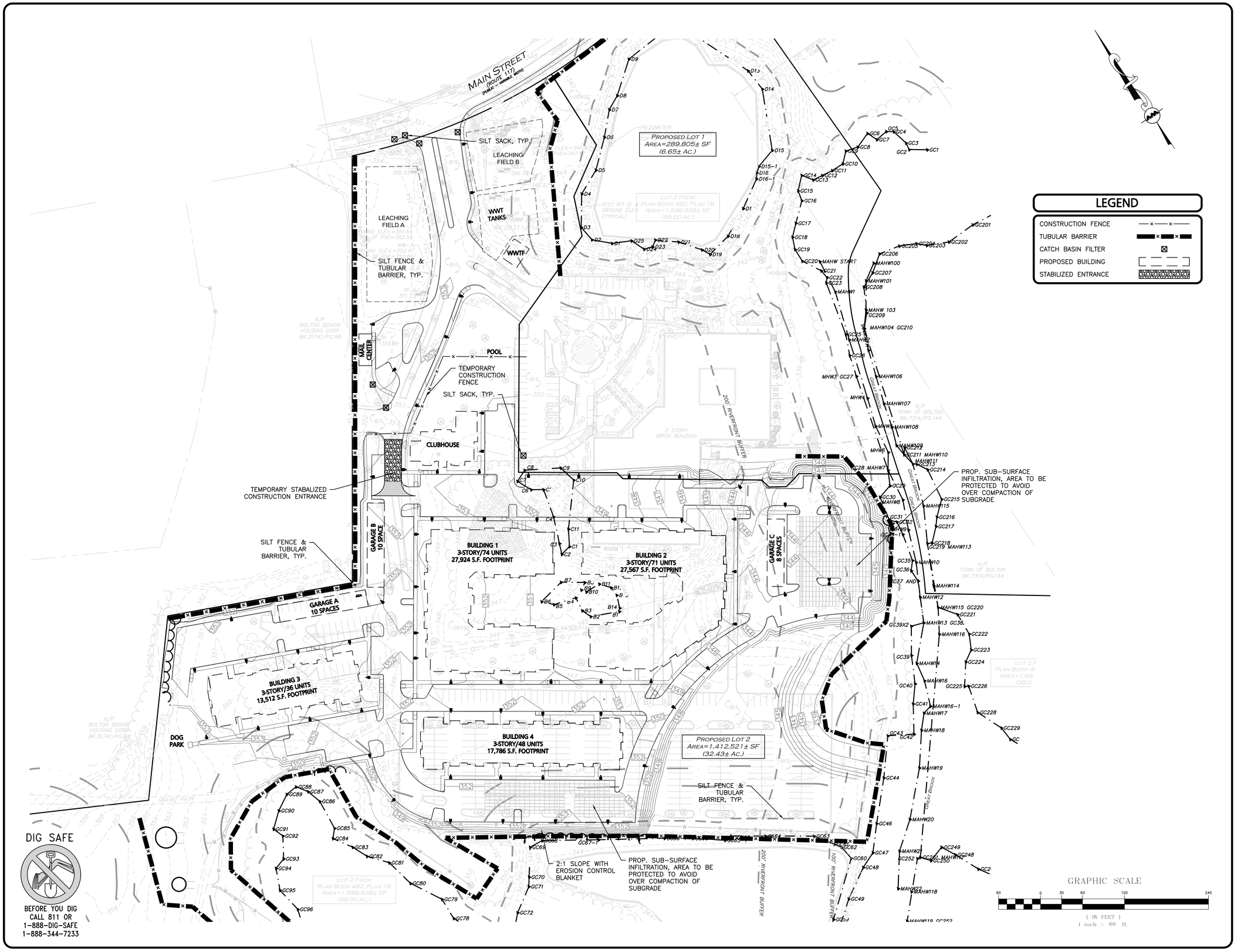

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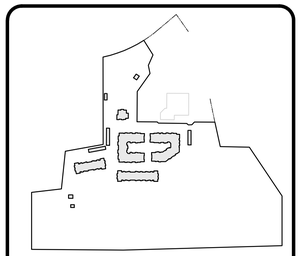

KEYSHEET

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SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDEIRO
CIVIL
NO. 47083
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DRAWING TITLE: EROSION CONTROL PLAN

SHEET No. C-100

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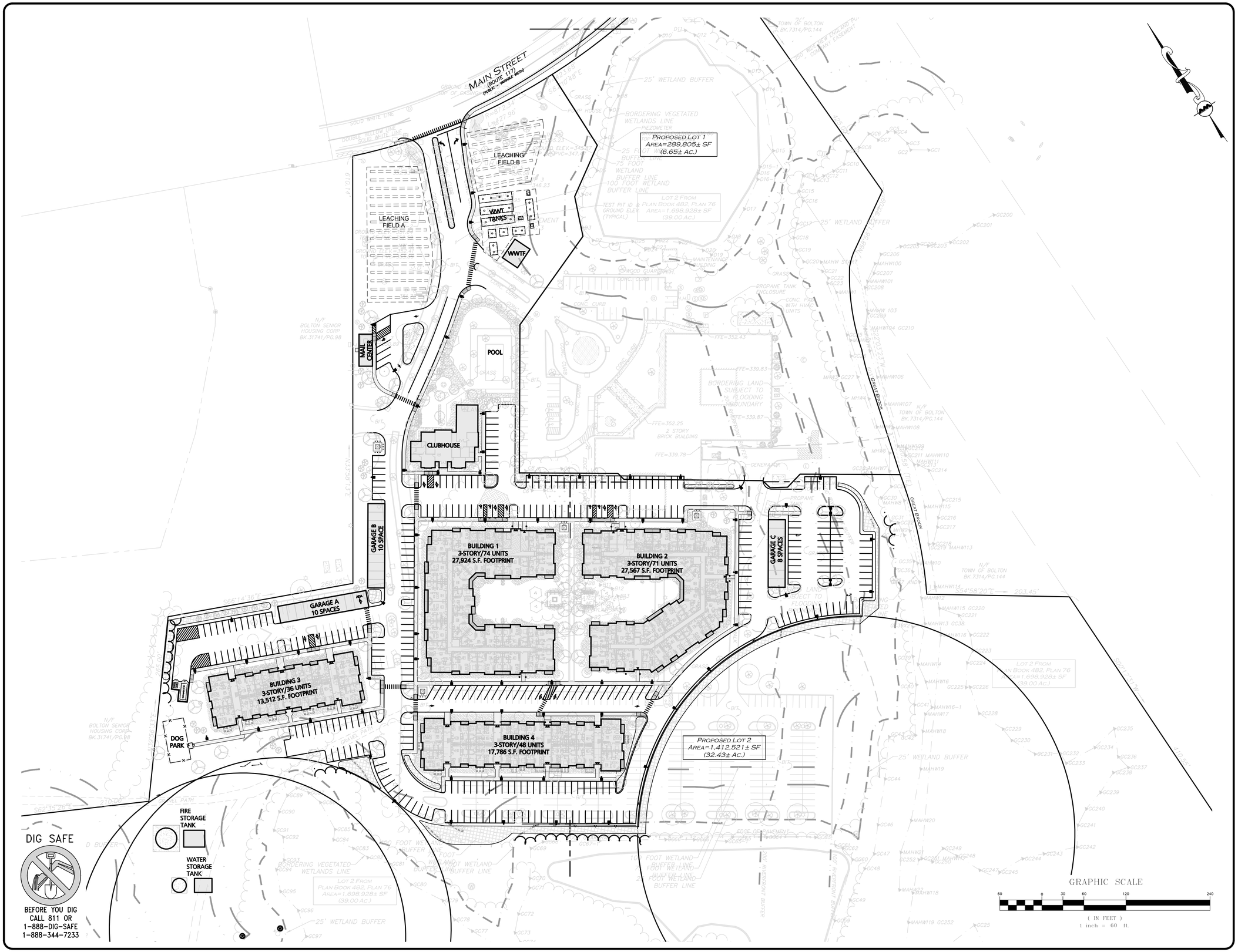

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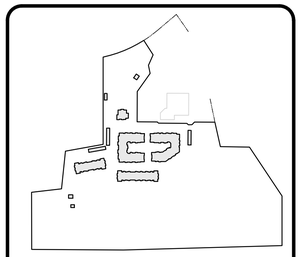

KEYSHEET

ISSUED FOR COMPREHENSIVE PERMIT APPLICATION
SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDEIRO
CIVIL
NO. 47083
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
WP EAST ACQUISITIONS, LLC.
91 HARTWELL AVENUE, 3RD FLOOR
LEXINGTON, MA 02421

PROJECT:
PRELIMINARY APPLICATION
FOR COMPREHENSIVE PERMIT
ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	1" = 60'	DWG. NAME:	C1670-15
DESIGNED BY:	PGM/JPS	CHECKED BY:	PLC

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
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10 MAIN STREET
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DRAWING TITLE:
OVERALL LAYOUT
& MATERIALS PLAN

SHEET No.
C-101

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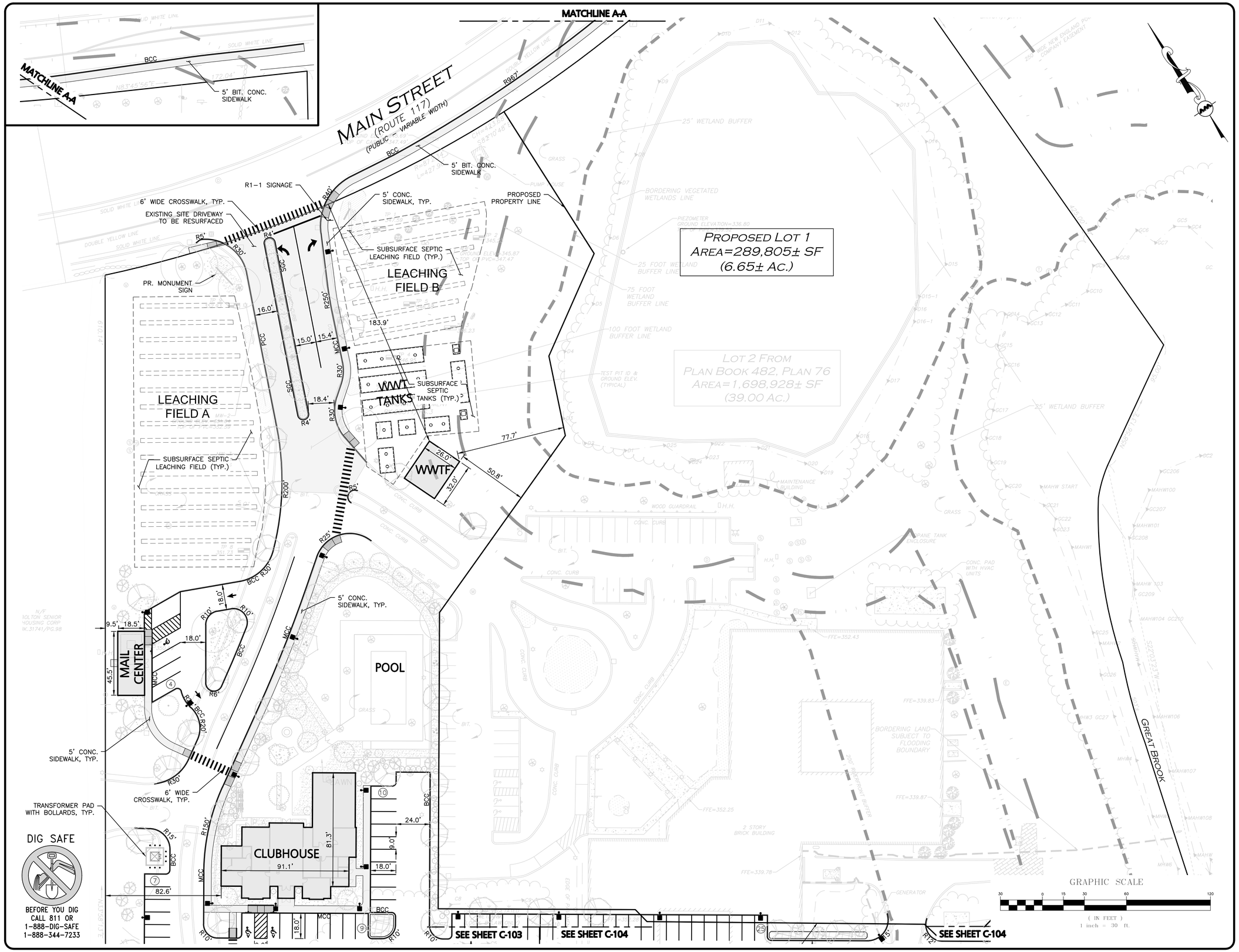

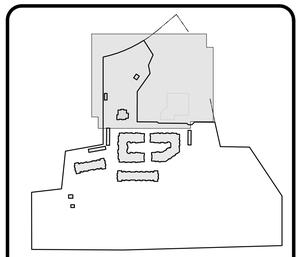

KEYSHEET

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PHILIP L. CORDEIRO
CIVIL
NO. 47089
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
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PROJECT:
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ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	1" = 30'	DWG. NAME:	C1670-15
DESIGNED BY:	PGM/JPS	CHECKED BY:	PLC

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DRAWING TITLE: LAYOUT & MATERIALS PLAN

SHEET No. C-102

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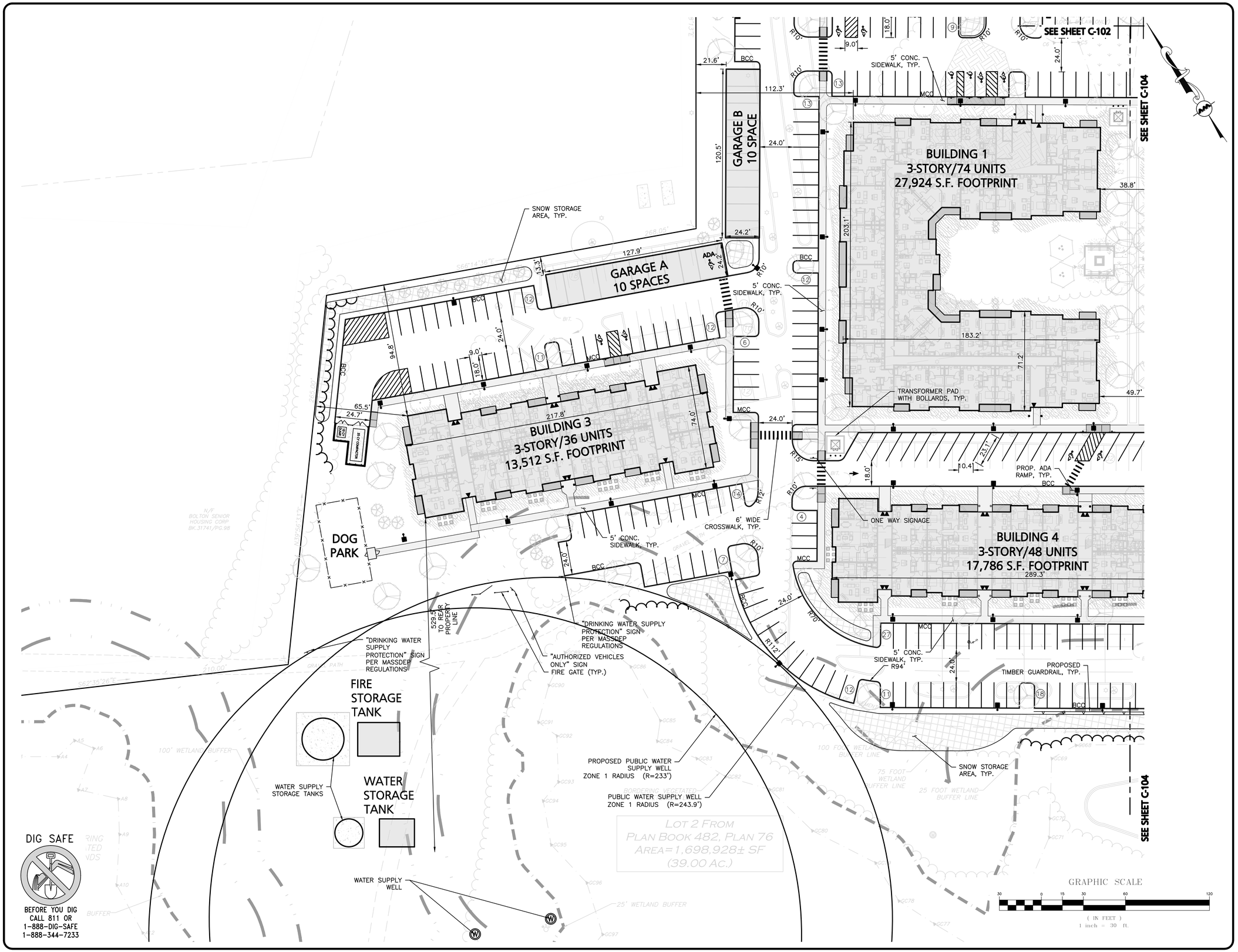

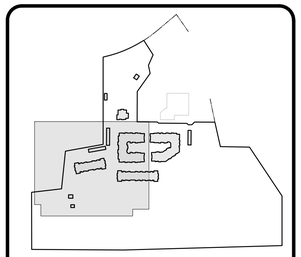

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SEPTEMBER 10, 2021

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PHILIP L. CORDEIRO
CIVIL
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PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

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LEXINGTON, MA 02421

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ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	1" = 30'	DWG. NAME:	C1670-15
DESIGNED BY:	PGM/JPS	CHECKED BY:	PLC

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DRAWING TITLE: LAYOUT & MATERIALS PLAN

SHEET No. C-103

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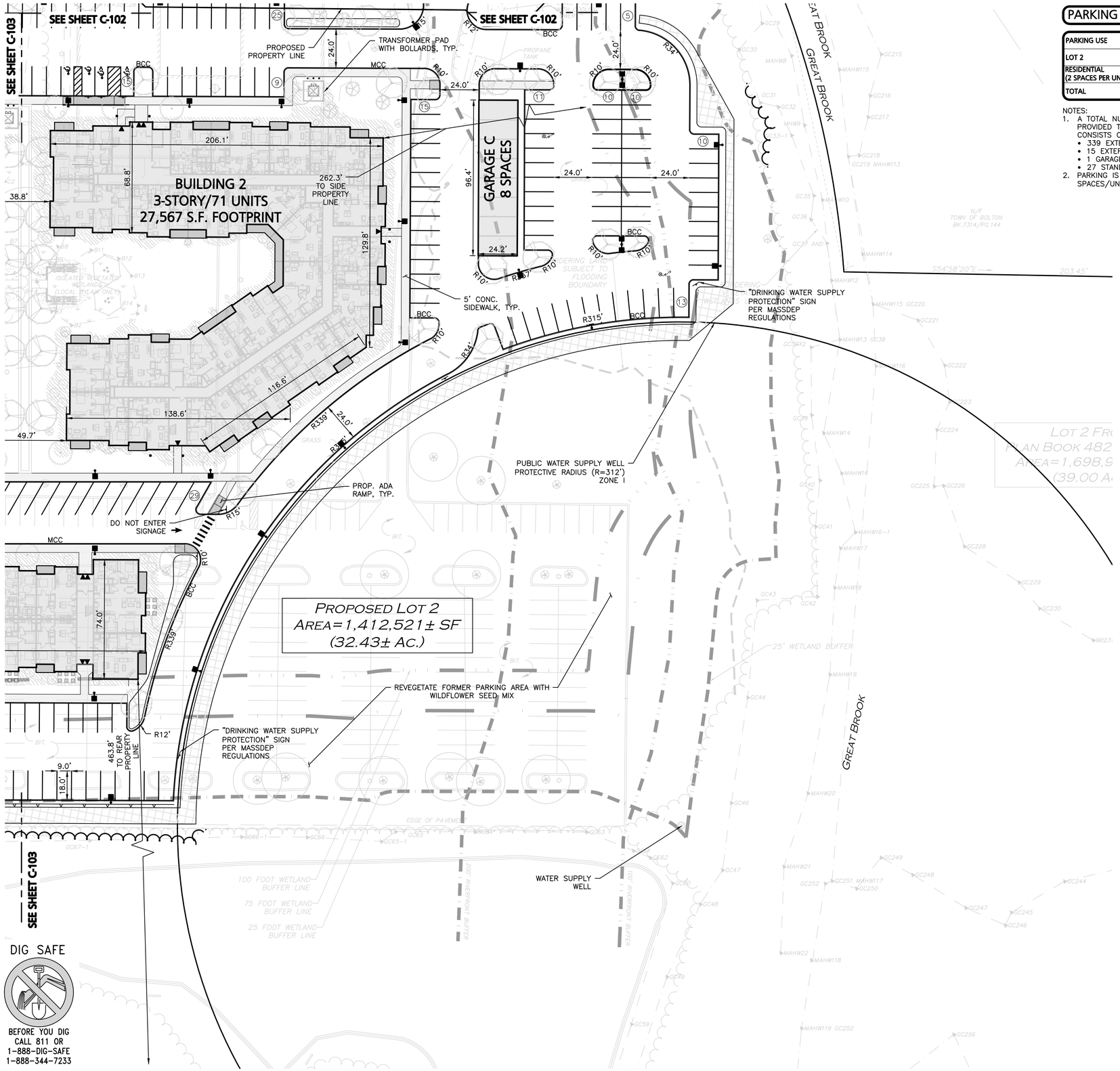


PARKING & LOADING REQUIREMENTS

PARKING USE	REQUIRED	PROVIDED
LOT 2		
RESIDENTIAL (2 SPACES PER UNIT)	2 x 229 = 458	382
TOTAL	458 SPACES	382 SPACES

NOTES:
1. A TOTAL NUMBER OF 382 PARKING SPACES ARE PROVIDED THROUGHOUT THE SITE ON LOT 2, WHICH CONSISTS OF THE FOLLOWING BREAKDOWN:
   - 339 EXTERIOR STANDARD SPACES
   - 15 EXTERIOR ACCESSIBLE SPACES
   - 1 GARAGE ACCESSIBLE SPACE
   - 27 STANDARD GARAGE SPACES
2. PARKING IS PROVIDED AT A RATIO OF 1.67 SPACES/UNIT.

LEGEND

PROP. PROPERTY LINE
SIGN
BOLLARD
BUILDING
BUILDING ARCHITECTURE
BUILDING INTERIOR WALLS
CURB
RETAINING WALL
PARKING STRIPING
ROADWAY STRIPING
TRAFFIC ARROWS
HEAVY DUTY CONCRETE
SIDEWALK
BRICK SIDEWALK
ADA ACCESSIBLE RAMP
ADA DET. WARNING SURFACE
SNOW STORAGE
GRAVEL ACCESS
SETBACK LINE
SAW-CUT LINE
PARKING COUNT (10)
STEEL GUARDRAIL
WOOD GUARDRAIL
CHAIN LINK FENCE
WOOD FENCE
DECORATIVE FENCE
TREE LINE
TRANSFORMER (T)

ZONING SUMMARY CHART
LIMITED BUSINESS DISTRICT

ITEM	REQUIRED	PROP. LOT 2
MINIMUM LOT AREA	1.5 AC.	32.43 AC.
MINIMUM LOT FRONTAGE	200'	309.32'
MINIMUM LOT WIDTH	150'	366.16'
MINIMUM FRONT SETBACK	50'	183.92'
MINIMUM SIDE SETBACK	25'	9.52'
MINIMUM REAR SETBACK	25'	463.80'
BUILDING HEIGHT	32'	N/A(4)
MAX IMPERVIOUS COVERAGE	50%	18.12%

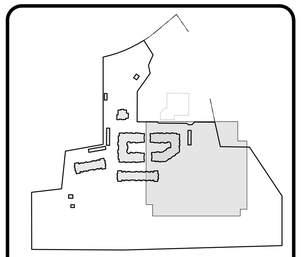
NOTES:
(1) MINIMUM LOT WIDTH SHALL BE MEASURED AT A DISTANCE OF 100-FT FROM THE STREET.

(2) SIDE & REAR YARD SETBACKS SHALL BE INCREASED TO 50 FEET IF ABUTTING A RESIDENTIAL USE.

(3) THE PROPERTY IS ALSO LOCATED WITHIN THE WIRELESS COMMUNICATION OVERLAY DISTRICT (WCOD), MIXED USE VILLAGE OVERLAY DISTRICT (MVOD) AND THE FLOODPLAIN OVERLAY DISTRICT.

(4) BUILDING HEIGHT IS DEFINED UNDER SECTION 250-13. f. OF THE TOWN OF BOLTON CODE. NO MAXIMUM HEIGHT IS SPECIFIED FOR RESIDENTIAL USE STRUCTURES.

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.



KEYSHEET

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SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDEIRO
CIVIL
NO. 47083
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

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DRAWING TITLE: LAYOUT & MATERIALS PLAN
SHEET No. C-104

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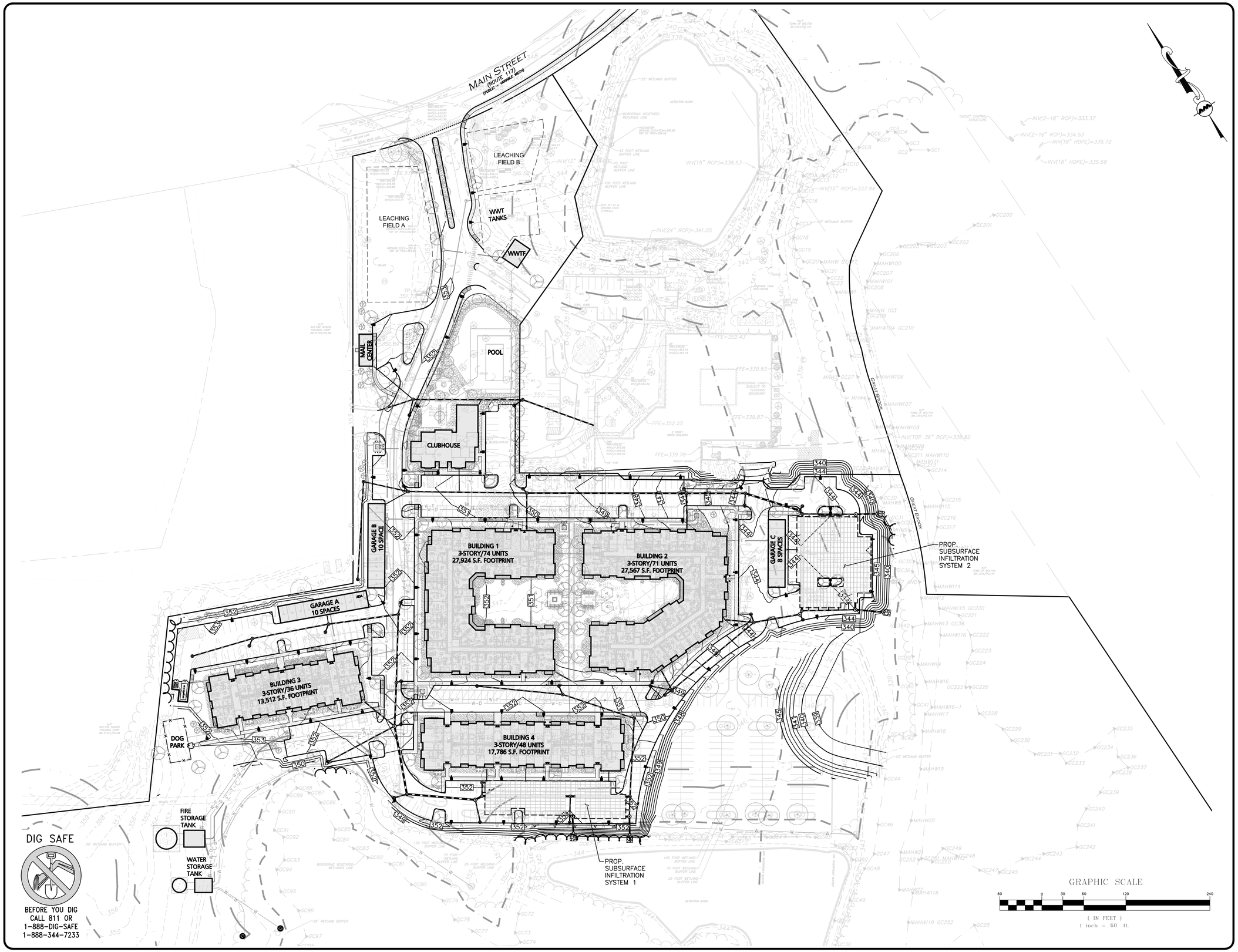

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1-888-344-7233

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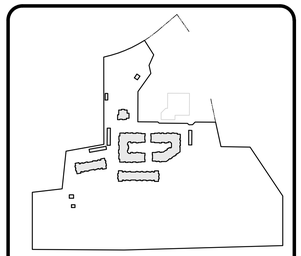

KEYSHEET

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SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDEIRO
CIVIL
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DRAWING TITLE:
GRADING & DRAINAGE
OVERVIEW PLAN

SHEET No.
C-105

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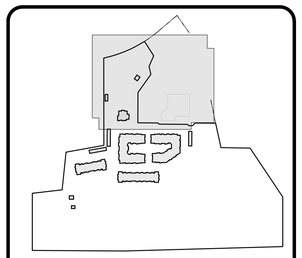

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DRAWING TITLE:	SHEET No.
GRADING & DRAINAGE PLAN	C-106

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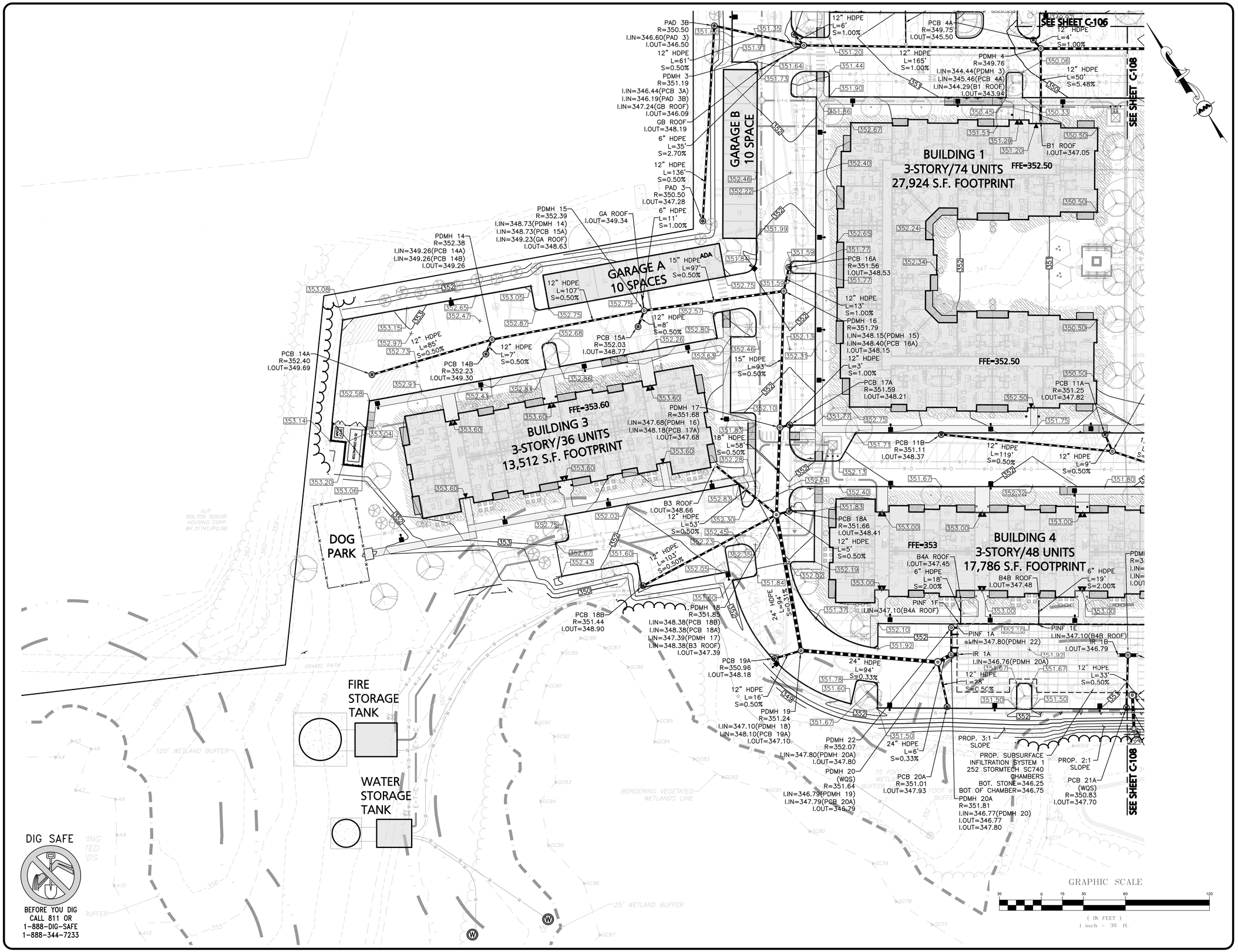

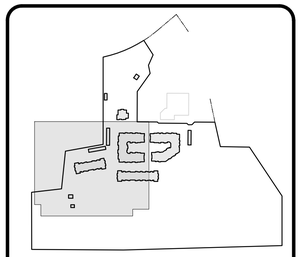

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DRAWING TITLE: GRADING & DRAINAGE PLAN

SHEET No. C-107

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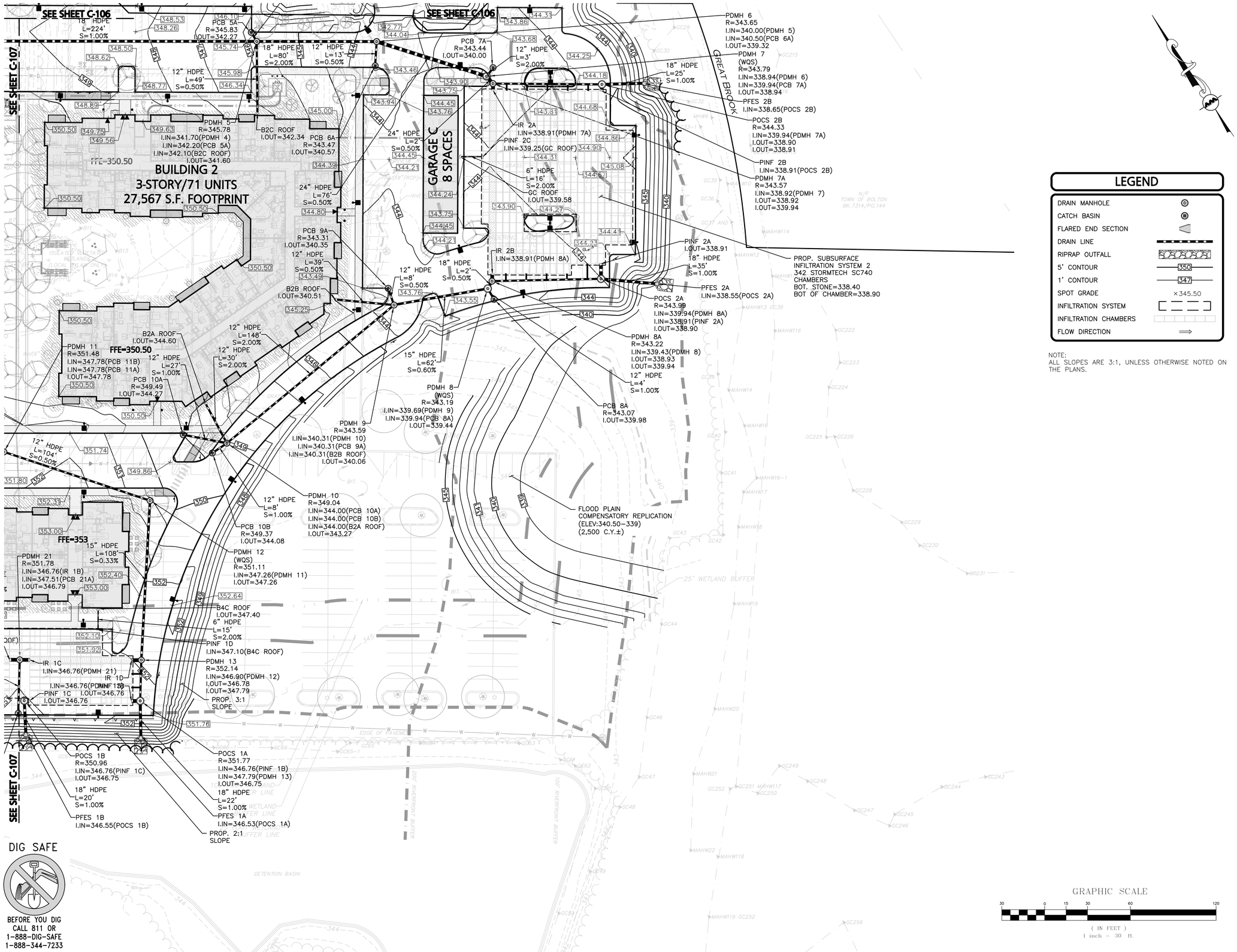
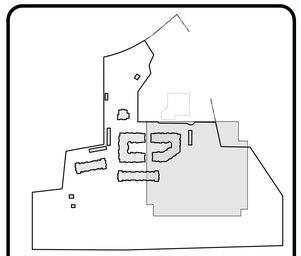


LEGEND

DRAIN MANHOLE	
CATCH BASIN	
FLARED END SECTION	
DRAIN LINE	
RIPRAP OUTFALL	
5' CONTOUR	350
1' CONTOUR	347
SPOT GRADE	×345.50
INFILTRATION SYSTEM	
INFILTRATION CHAMBERS	
FLOW DIRECTION	

NOTE:
ALL SLOPES ARE 3:1, UNLESS OTHERWISE NOTED ON THE PLANS.



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PROJECT:
PRELIMINARY APPLICATION
FOR COMPREHENSIVE PERMIT
ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	1" = 30'	DWG. NAME:	C1670-15
DESIGNED BY:	PGM	CHECKED BY:	PLC

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
10 MAIN STREET
LAKEVILLE, MA 02347
TEL: (508) 923-1010
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WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE:
GRADING & DRAINAGE PLAN

SHEET No.
C-108

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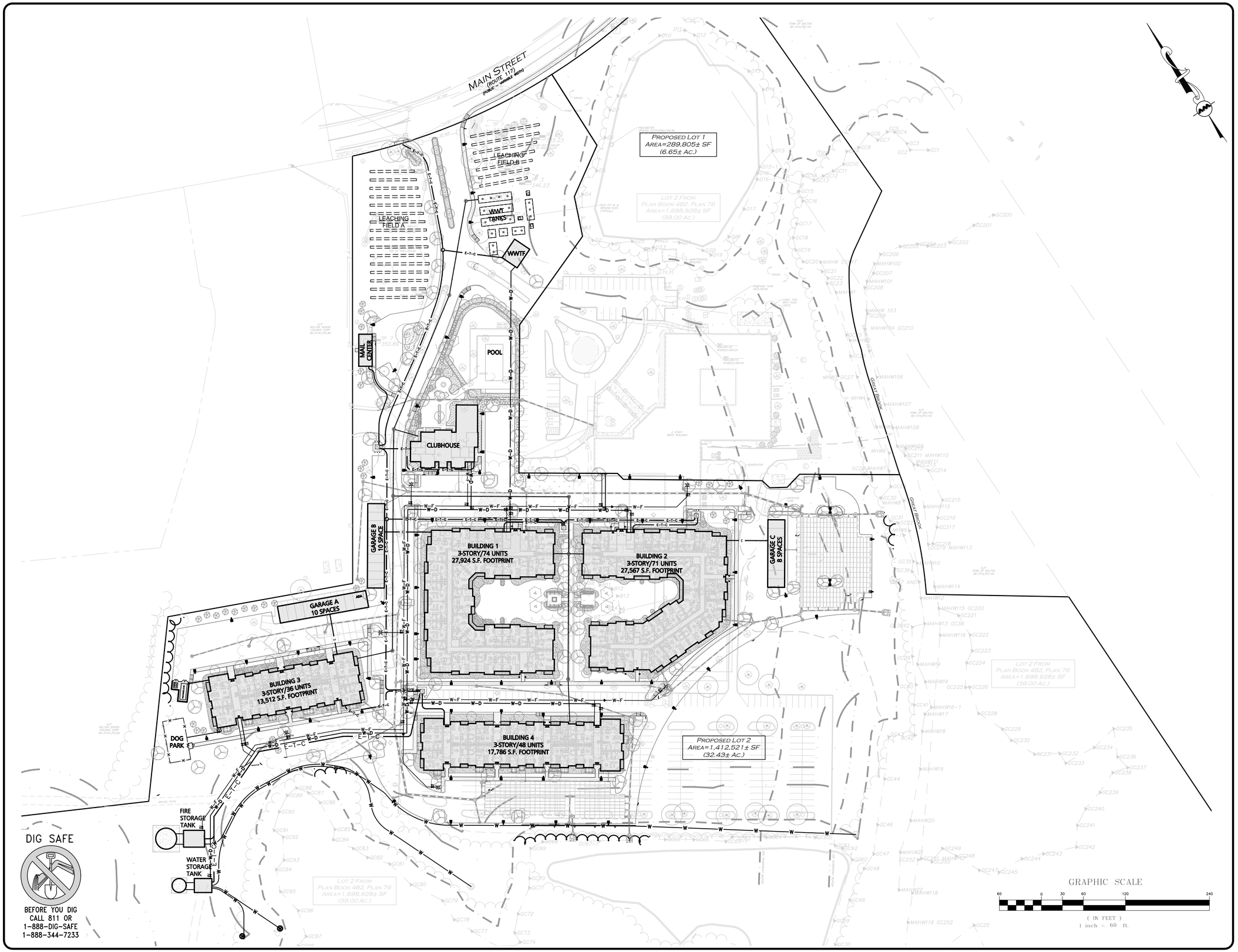

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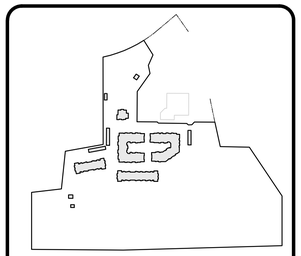

KEYSHEET

ISSUED FOR COMPREHENSIVE PERMIT APPLICATION
SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDEIRO
CIVIL
NO. 47083
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
WP EAST ACQUISITIONS, LLC.
91 HARTWELL AVENUE, 3RD FLOOR
LEXINGTON, MA 02421

PROJECT:
PRELIMINARY APPLICATION
FOR COMPREHENSIVE PERMIT
ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	1" = 60'	DWG. NAME:	C1670-15
DESIGNED BY:		CHECKED BY:	PLC

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
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10 MAIN STREET
LAKEVILLE, MA 02347
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WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE: UTILITIES PLAN

SHEET No. C-109

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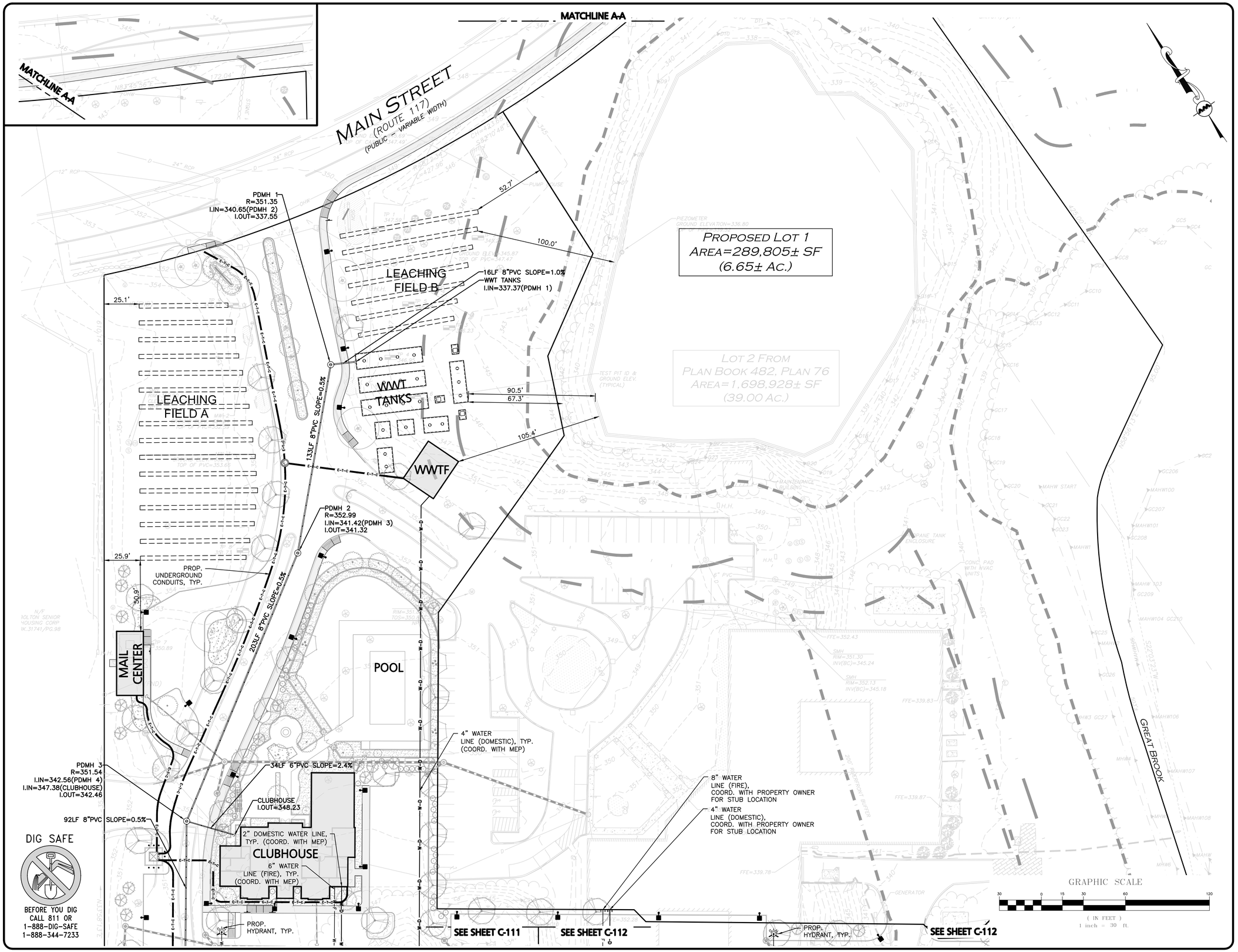

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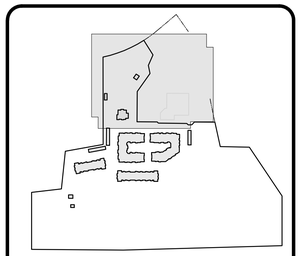

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DRAWING TITLE:	SHEET No.
UTILITIES PLAN	C-110

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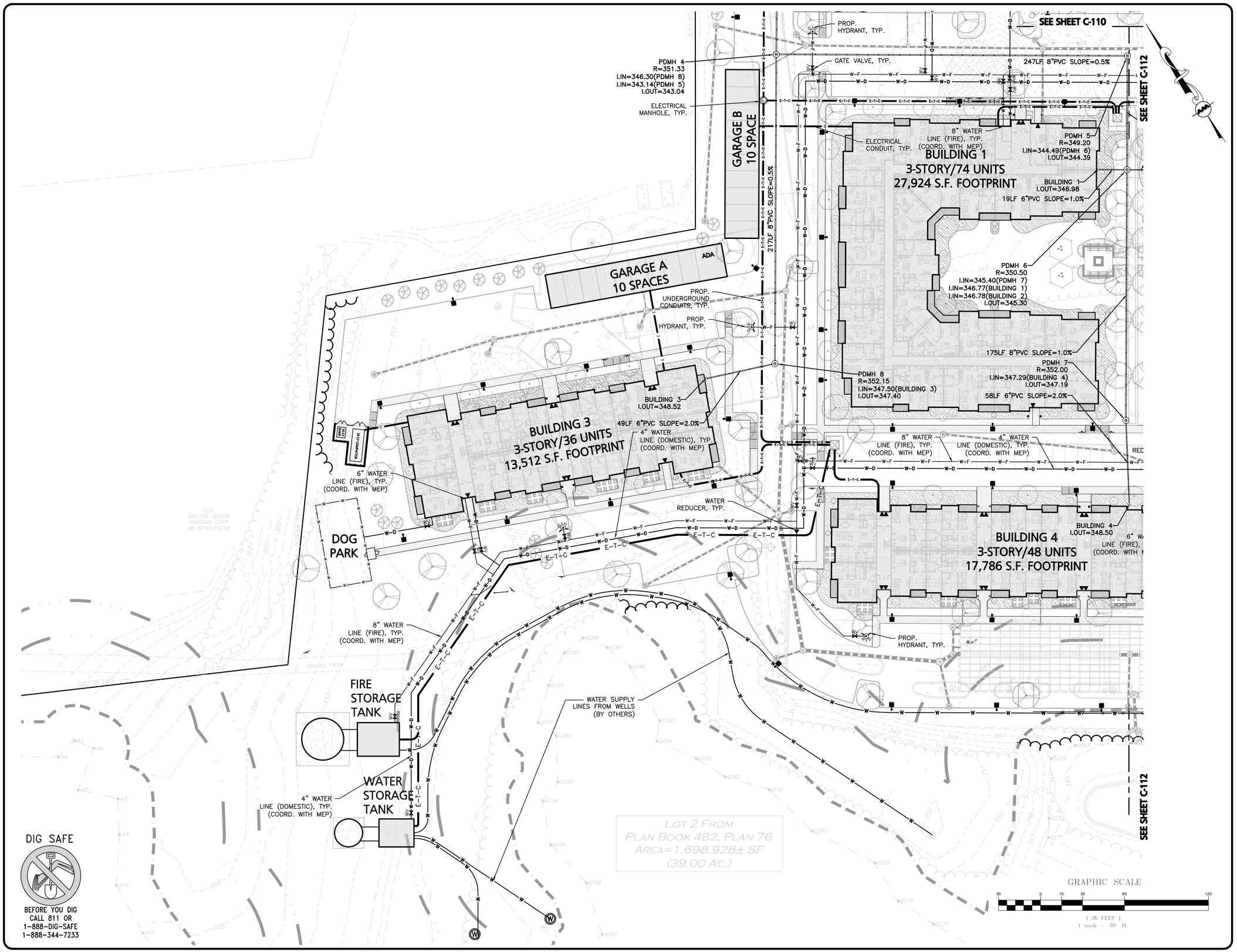

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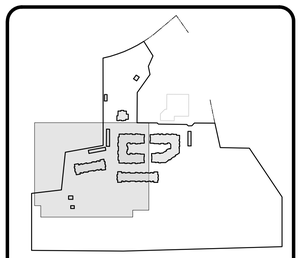

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PHILIP L. CORDEIRO
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DRAWING TITLE: UTILITIES PLAN

SHEET No. C-111

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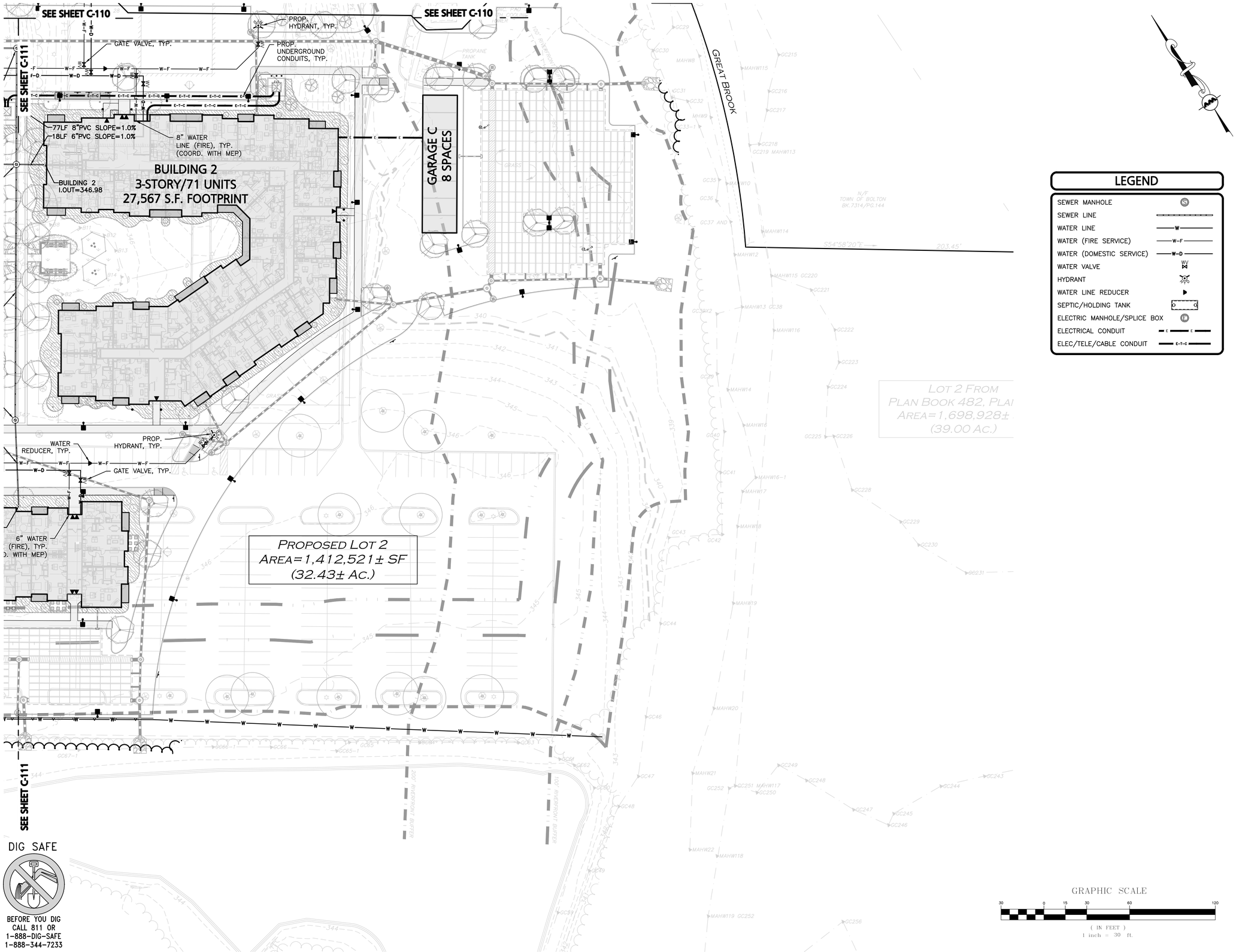
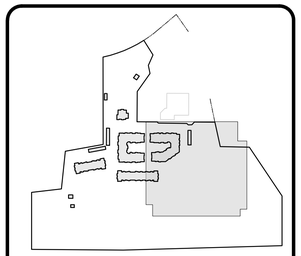


LEGEND

SEWER MANHOLE	S
SEWER LINE	
WATER LINE	W
WATER (FIRE SERVICE)	W-F
WATER (DOMESTIC SERVICE)	W-D
WATER VALVE	WV
HYDRANT	
WATER LINE REDUCER	
SEPTIC/HOLDING TANK	
ELECTRIC MANHOLE/SPLICE BOX	E
ELECTRICAL CONDUIT	E E
ELEC/TELE/CABLE CONDUIT	E-T-C



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PHILIP L. CORDEIRO
CIVIL
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REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
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REV	DATE	DESCRIPTION

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DRAWING TITLE: UTILITIES PLAN

SHEET No. C-112

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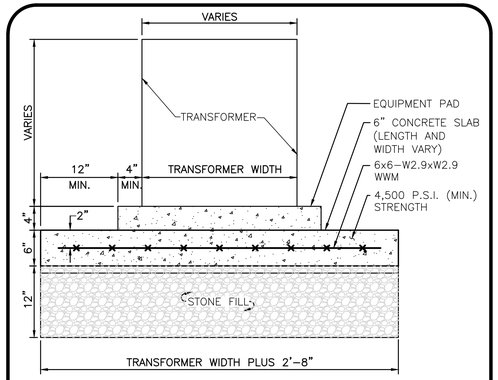
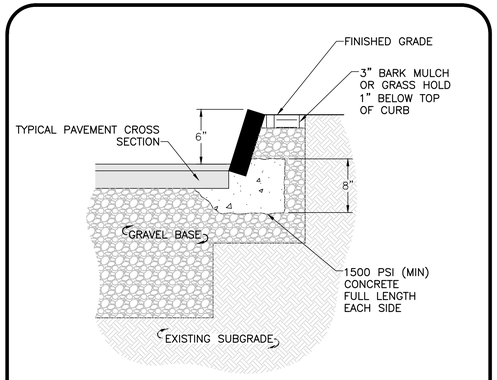
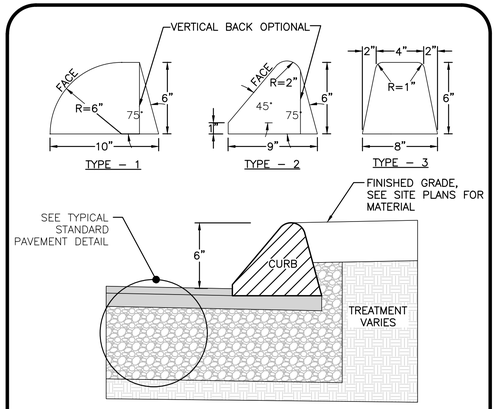


NOTES:
1. REFERENCE MECHANICAL/ELECTRICAL ENGINEER'S PLANS FOR ANY PIPE, CONDUIT AND GROUND WIRE LOCATIONS.
2. CONCRETE PAD AND BOLLARDS SHALL BE INSTALLED PER UTILITY PROVIDER REQUIREMENTS.

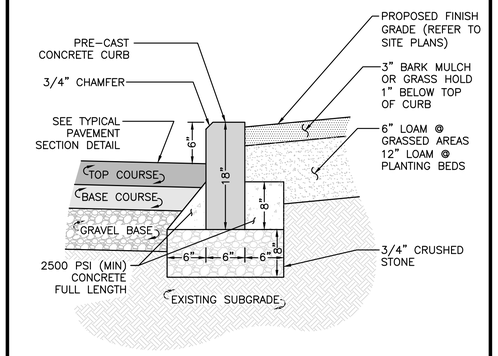
TRANSFORMER PAD DETAIL (11)
NOT TO SCALE



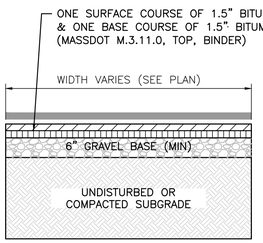
SLOPED GRANITE CURB (10)
NOT TO SCALE



BITUMINOUS CONCRETE CURB (9)
NOT TO SCALE



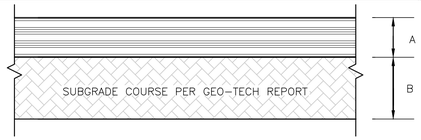
PRECAST CONCRETE CURB (8)
NOT TO SCALE



NOTES

1. SEE PLAN FOR ELEVATIONS.

BITUMINOUS WALKWAY (7)
NOT TO SCALE

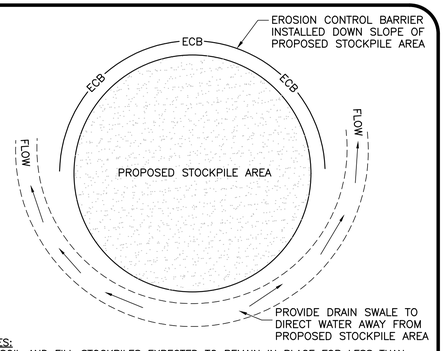


NOTES:
1. SURFACE COURSE, BASE, AND SUBGRADE SHALL BE PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS FOR LOCAL SOILS OR DRAINAGE CONDITIONS AND/OR METHODS.
2. SUBGRADE SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY (AS DETERMINED BY ASTM D1557).
3. COORDINATE PAVEMENT DETAIL WITH GEOTECHNICAL ENGINEER.

STANDARD DUTY PAVING
A= 1.5" ASPHALT CONCRETE - SURFACE COURSE (M.3.11.0, TABLE A, TOP COURSE)
2.5" ASPHALT CONCRETE - BINDER COURSE (M.3.11.0, TABLE A, BINDER COURSE)

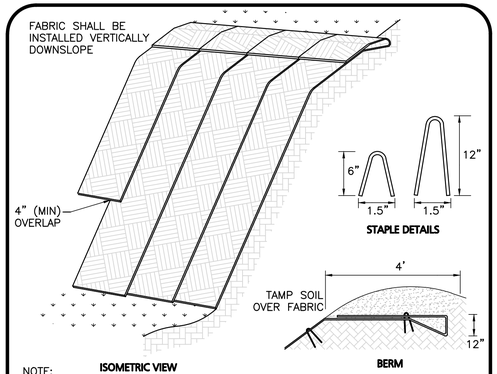
B= 12" SUBBASE COURSE (MASSDOT 1.03.0, TYPE B)

STANDARD DUTY BITUMINOUS PAVEMENT (6)
NOT TO SCALE



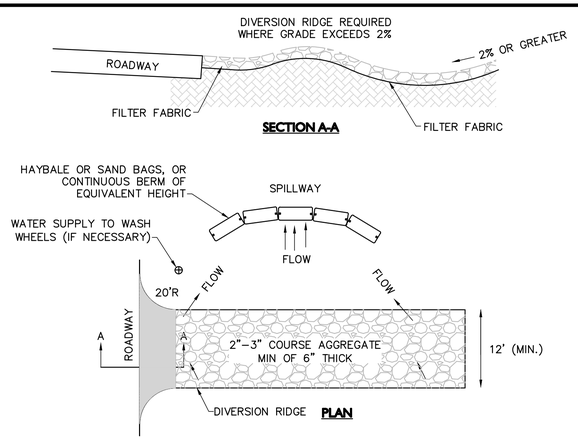
NOTES:
1. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR LESS THAN 90 DAYS SHALL BE COVERED WITH STRAW AND MULCH (AT 100LBS/1,000 SF), OR WITH AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.
2. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR 90 DAYS OR MORE SHALL BE SEEDED WITH WINTER RYE (FOR FALL SEEDING AT 1LB/1,000 SF) OR OATS (FOR SUMMER SEEDING AT 2LB/1,000 SF) AND THEN COVERED WITH HAY MULCH (AT 100LB/1,000 SF) OR AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.

STOCKPILE PROTECTION (5)
NOT TO SCALE



NOTE:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. FABRIC SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING FABRIC.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
4. CHOOSE MATERIAL BASED ON SLOPE, SOILS, AND APPLICATION.

EROSION CONTROL FABRIC (4)
NOT TO SCALE



NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

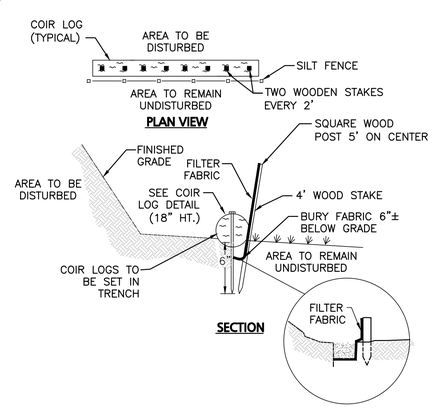
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTERING THE PUBLIC RIGHT-OF-WAY.

3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

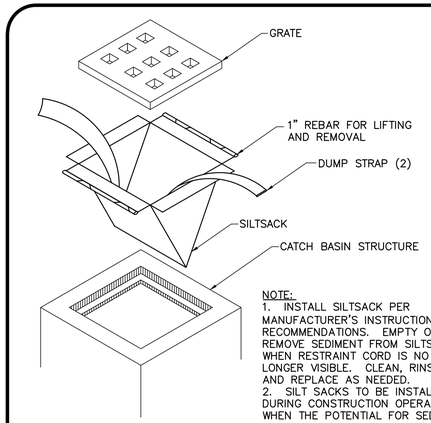
4. USE SANDBAGS, HAYBALES, OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED.

5. FIRST 20' OF CONSTRUCTION ENTRANCE SHALL BE PAVED.

TEMPORARY CONSTRUCTION ENTRANCE/EXIT (3)
NOT TO SCALE

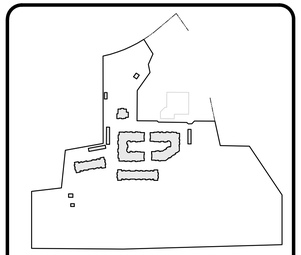


SILT FENCE AND COIR LOG (2)
NOT TO SCALE



NOTE:
1. INSTALL SILTSACK PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. EMPTY OR REMOVE SEDIMENT FROM SILTSACK WHEN RESTRAINT CORD IS NO LONGER VISIBLE. CLEAN, RINSE, AND REPLACE AS NEEDED.
2. SILT SACKS TO BE INSTALLED DURING CONSTRUCTION OPERATIONS WHEN THE POTENTIAL FOR SEDIMENT TO ENTER EXISTING & PROPOSED BASINS EXISTS.

SILTSACK INLET DETAIL (1)
NOT TO SCALE



KEYSHEET

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SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDERO
CIVIL
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REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
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DRAWING TITLE: DETAILS

SHEET No. C-501

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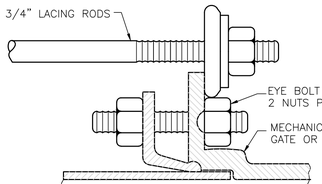


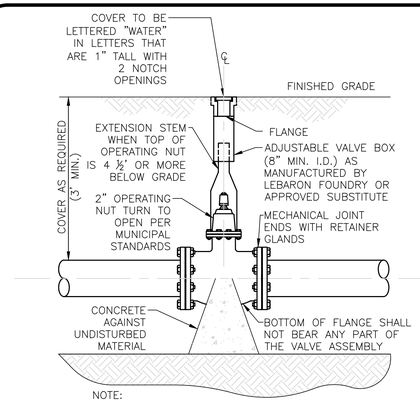
PIPE SIZE	No. LACING RODS
4", 6" & 8"	2 – 3/4" *
10" & 12"	4 – 3/4" *
16"	4 – 3/4" *
20"	6 – 3/4" *

* STANDARD LENGTHS ARE 6' & 10'. COUPLINGS MAY BE USED FOR LONGER LENGTHS.

NOTES:

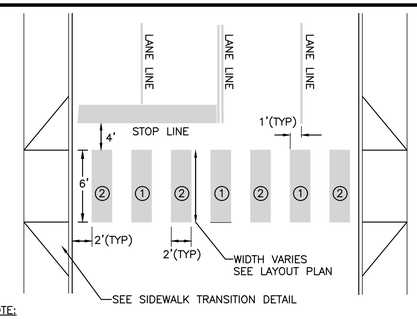
1. NUMBER OF LACING RODS IS BASED ON MAXIMUM PRESSURE OF 125 P.S.I. IN MAIN.
2. EYE–BOLTS AND LACING RODS ARE TO BE FABRICATED FROM A–36 STEEL.
3. STEEL LACING RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 36,000 P.S.I.
4. EYE–BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 7,000 LBS. EACH.

MECHANICAL JOINT LACING DETAIL (10)
NOT TO SCALE



NOTE:
1.) CONTRACTOR MAY USE ANCHOR TEES AT HIS OPTION.
2.) HYDRANTS AND VALVES TO OPERATE PER MUNICIPAL STANDARDS

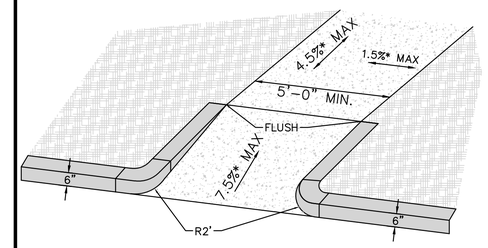
GATE VALVE (9)
NOT TO SCALE



NOTE:

1. LANE LINE STRIP: THIS IS LOCATED IN THE LINE WITH EACH LANE LINE AND HALF THE STRIP ON EACH SIDE.
2. MID LINE STRIP: THIS IS LOCATED MIDWAY BETWEEN EACH LANE LINE STRIP.
3. TO BE HIGH VISIBLITY & RETRO REFLECTIVE EPOXY MATERIAL.
4. TO BE PAINTED YELLOW.
5. CROSSWALKS AT MAJOR INTERSECTIONS TO BE 10' WIDE.
6. ALL STRIPING SHALL COMPLY WITH MUTCD STANDARDS.

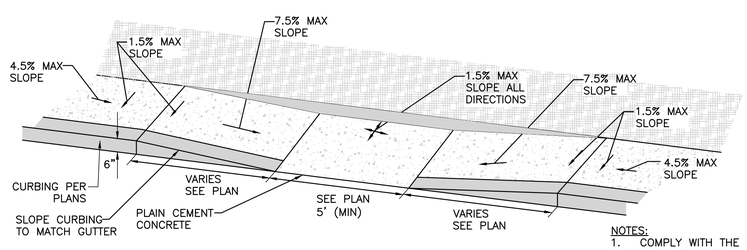
CROSSWALK STRIPING (8)
NOT TO SCALE

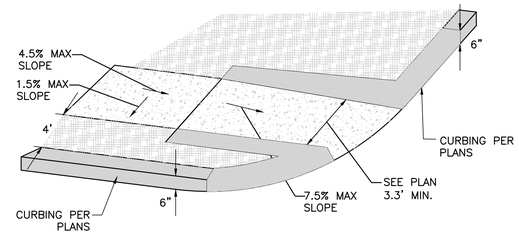


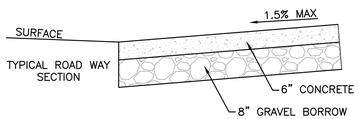
NOTES:

1. * = TOLERANCE FOR CONSTRUCTION ±0.5%

ADA RAMP (A) (7)
NOT TO SCALE





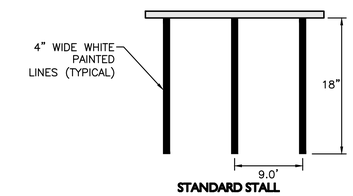


SECTION VIEW

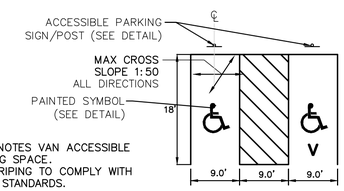
NOTES:

1. COMPLY WITH THE LATEST ADA AND MASS DOT CONSTRUCTION STANDARD DRAWINGS E107.1.0 TO E107.6.9 AND E107.9.0
2. THE DIMENSIONS SHOWN AT ROADWAY EDGE ARE FIXED DISTANCES.
3. RAMP CROSS SECTION TO BE THE SAME AS ADJACENT SIDEWALK; I.E. DEPTH OF SURFACE AND FOUNDATION.
4. PORTLAND CEMENT CONCRETE RAMPS ARE TO BE TEXTURED BY BROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP.
5. IN NO CASE ARE THE RAMPS TO BE PLACED BEHIND THE STOP LINE.
6. THE DIMENSIONS ARE SUBJECT TO CHANGE IN THE FIELD IF EXISTING APPURTENANCES OR CONDITIONS WILL MAKE THE RAMP LOCATIONS IMPRACTICAL OR UNSAFE. CONSULT CIVIL ENGINEER PRIOR TO MAKING ANY MODIFICATIONS.

ACCESSIBLE RAMP & CURB TRANSITION (6)
NOT TO SCALE



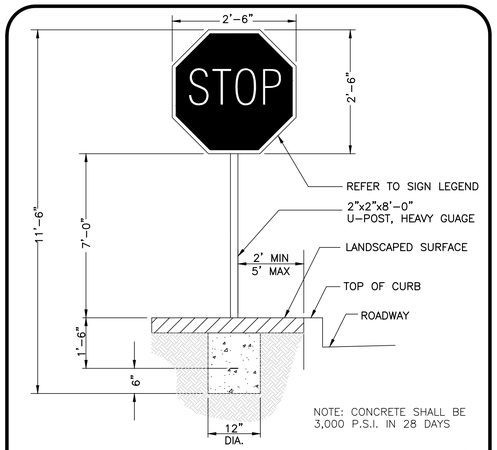
STANDARD STALL



NOTE:
1. "V" DENOTES VAN ACCESSIBLE PARKING SPACE.
2. ALL STRIPING TO COMPLY WITH MUTCD STANDARDS.

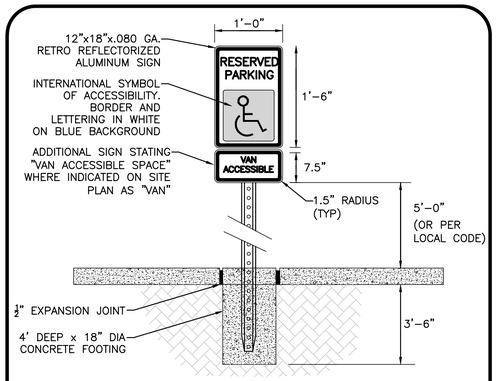
ADA STANDARD AND VAN ACCESSIBLE PARKING SPACE

ADA AND STANDARD PARKING STRIPING (5)
NOT TO SCALE



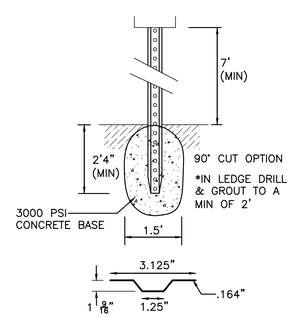
NOTE: CONCRETE SHALL BE 3,000 P.S.I. IN 28 DAYS

STOP SIGN DETAIL (4)
NOT TO SCALE



NOTES:
1. SPECIFIC CODE SHALL BE REFERENCED FOR LOCAL AND STATE REQUIREMENTS.
2. PROVIDE (1) SIGN PER ADA SPACE. SEE SITE PLAN FOR EXACT LOCATION.
3. EXPANSION JOINT MATERIAL NOT REQUIRED WITH FLEXIBLE PAVEMENT.
4. ALL SIGNAGE TO COMPLY WITH MUTCD STANDARDS.

ADA ACCESSIBLE PARKING SIGN (3)
NOT TO SCALE

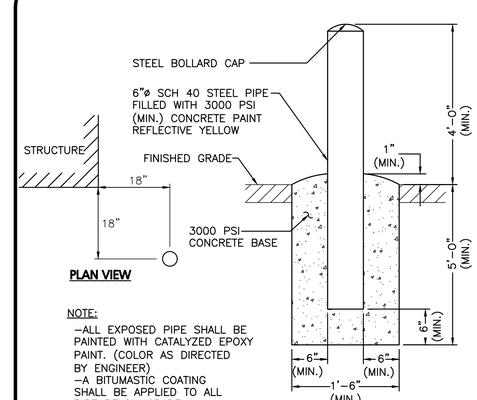


STANDARD SIGN POST
NOT TO SCALE

NOTE:
1. HEAVY DUTY GUAGE

LENGTH: AS REQUIRED
WEIGHT PER LF: 2.50 LBS (MIN)
HOLES: ⅜" DIAMETER, 1" C–C FULL LENGTH
STEEL: SHALL CONFORM TO ASTM A–499 OR ASTM A–576
FINISH: SHALL BE PAINTED WITH 2 COATS OF AN APPROVED MEDIUM GREEN, BAKED ON OR AIR DRIED, PAINT OF WEATHER RESISTANT QUALITY.

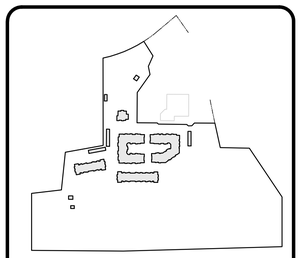
SIGN POST DETAIL (2)
NOT TO SCALE



PLAN VIEW

NOTE:
–ALL EXPOSED PIPE SHALL BE PAINTED WITH CATALYZED EPOXY PAINT. (COLOR AS DIRECTED BY ENGINEER)
–A BITUMASTIC COATING SHALL BE APPLIED TO ALL PIPE BELOW GRADE

FIXED BOLLARD (1)
NOT TO SCALE



KEYSHEET

ISSUED FOR COMPREHENSIVE PERMIT APPLICATION
SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDEIRO
CIVIL
NO. 47083
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
WP EAST ACQUISITIONS, LLC.
91 HARTWELL AVENUE, 3RD FLOOR
LEXINGTON, MA 02421

PROJECT:
PRELIMINARY APPLICATION FOR COMPREHENSIVE PERMIT
ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	AS SHOWN	DWG. NAME:	C1670-15
DESIGNED BY:	JPS	CHECKED BY:	PLC

PREPARED BY:

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environmental consulting ◆ landscape architecture
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DRAWING TITLE: DETAILS

SHEET No. C-502

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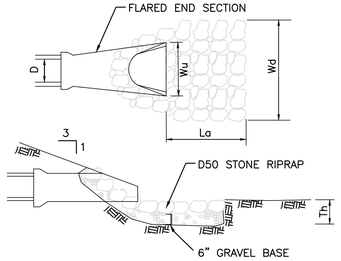
RIPRAP SIZING CHART

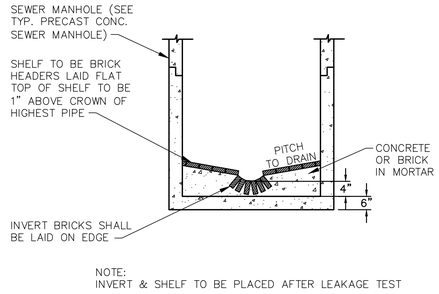
FES#	D	Q100	La	Wu	Wd	Th	D50
1A	1.50'	10.06	20.4'	4.5'	21.9'	0.5'	0.57'
1B	1.50'	10.06	20.4'	4.5'	21.9'	0.5'	0.57'
2A	1.50'	7.33	17.7'	4.5'	19.2'	0.5'	0.38'
2B	1.50'	7.33	17.7'	4.5'	19.2'	0.5'	0.38'

RIP RAP SHALL EXTEND FROM THE FES TO THE BOTTOM OF THE PROPOSED AREA OR FURTHER AS SHOWN ON THE GRADING & DRAINAGE PLAN.



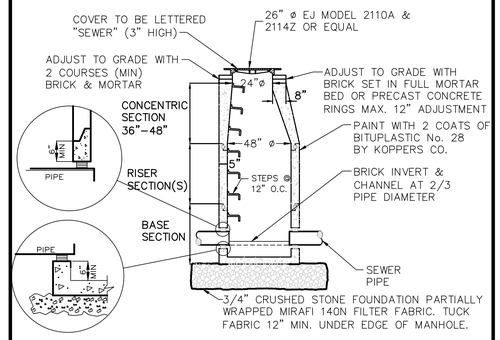
FLARED END SECTION WITH RIP RAP DISSIPATER (9)
NOT TO SCALE

MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOW THROUGH CHANNEL.



NOTE:
INVERT & SHELF TO BE PLACED AFTER LEAKAGE TEST

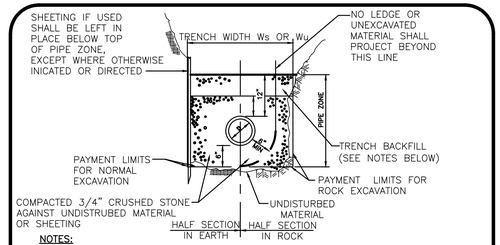
TYPICAL BRICK INVERT SECTION FOR SEWER MANHOLES (8)
NOT TO SCALE



NOTES:

1. ALL INSIDE DROPS (IF NEEDED) REQUIRE A 5' DIAMETER

PRECAST CONCRETE SEWER MANHOLE (7)
NOT TO SCALE



NOTES:

1. TRENCH BACKFILL TO BE USED WITHIN THE RIGHT-OF-WAY SHALL CONSIST OF EITHER GRAVEL BORROW MEETING MHD SPECIFICATION M1.03.0, TYPE "B" OR PROCESSED GRAVEL BORROW FOR SUBBASE MEETING MHD SPECIFICATION M1.03.1.

2. WHEE THE REMOVAL OF 100 SQUARE FEET OR LESS OF ASPHALT IS REQUIRED WITHIN THE RIGHT OF WAY, THEN THE TRENCH BACKFILL MATERIAL SHALL CONSIST OF CONTROLLED DENSITY FILL MEETING MHD SPECIFICATION M4.08.0, TYPE "1E" OR "2E".

3. TRENCH BACKFILL MATERIAL TO BE USED OF THE RIGHT-OF-WAY MAY CONSIST OF MATERIAL GENERATED DURING EXCAVATIONS PROVIDED ALL STONES GREATER THAN 4" ARE REMOVED PRIOR TO PLACEMENT AND COMPACTION

4. GRANULAR TRENCH BACKFILL MATERIAL USED WITHIN THE RIGHT-OF-WAY SHALL BE PLACED IN MAXIMUM 6" LIFTS AND MECHANICALLYCOMPACTED TO A MINIMUM OF 95% OF THE MATERIAL'S MAXIMUM DRY DENSITY AND TO 90% ELSEWHERE AS DETERMINED BY ASTM D 1557.

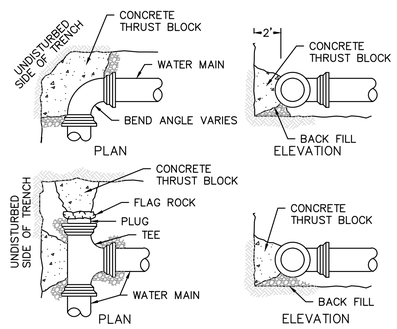
SEWER TRENCH (6)
NOT TO SCALE

MINIMUM THRUST BLOCK BEARING AREAS

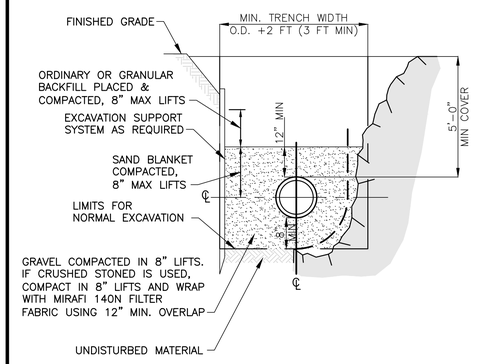
PIPE DIAMETER	90° BEND (SQ. FT.)	45° BEND (SQ. FT.)	22.5° BEND (SQ. FT.)	TEES, PLUGS, CAPS & HYDRANTS (SQ.FT.)
6"	5	3	3	4
8"	9	6	3	9
10"	13	7	4	12
12"	20	10	5	16

NOTES:
1. ALL WATER MAIN FITTINGS, BENDS, TEES, PLUGS ETC. SHALL BE RESTRAINED W/ THRUST BLOCKS EXCEPT WHERE NOTED.
2. ALL THRUST BLOCKS & COLLARS SHALL BE INSTALLED SO THAT THEY BEAR AGAINST UNDISTURBED EARTH.
3. SIZE OF CONCRETE THRUST BLOCKS SHALL BE AS NOTED BELOW.
4. MINIMUM COMPRESSIVE STRENGTH OF THRUST BLOCK CONCRETE SHALL BE 3,000 P.S.I.
5. KEEP CONCRETE CLEAR OF MECHANICAL JOINTS.
6. THE BELOW PREDICATED ON A WATER PRESSURE OF 225 PSI AND A SOIL RESISTANCE OF 2000 PSF (TILL). FOR OTHER SOILS THE VALUES IN THE ABOVE TABLE SHALL BE MULTIPLIED BY:

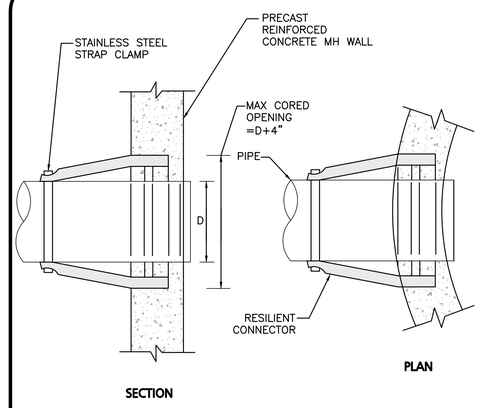
SOFT CLAY	4
SAND	2
SAND & GRAVEL	1.33
SHALE	0.4



THRUST BLOCK DETAIL (5)
NOT TO SCALE



WATER TRENCH SECTION (4)
NOT TO SCALE

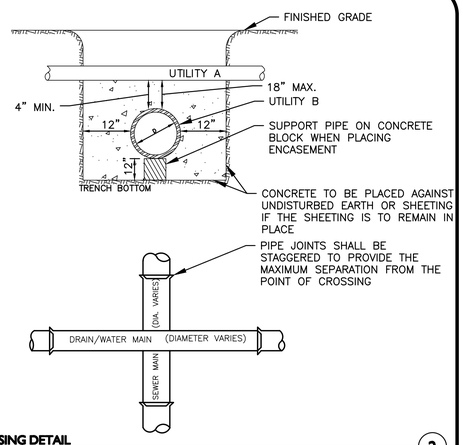


WATERTIGHT RESILIENT CONNECTION TO SEWER MANHOLES (3)
NOT TO SCALE

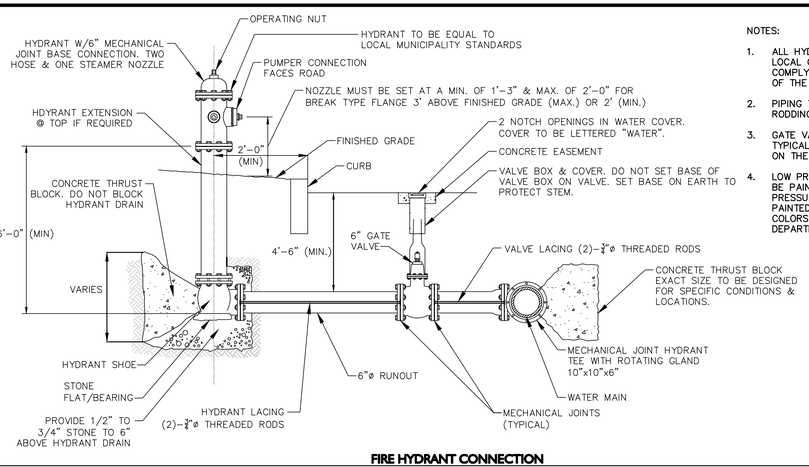
NOTES:

WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET BETWEEN A SEWER MAIN AND A WATER/DRAIN MAIN:

1. THE WATER/DRAIN MAIN SHALL BE LAID IN A SEPARATE TRENCH AND THE DIFFERENCE IN ELEVATION BETWEEN THE WATER/DRAIN MAIN AND THE SEWER MAIN SHALL BE AT LEAST 18 INCHES.
2. THE PIPE CROSSING SHALL OCCUR AS CLOSE TO 90° AS PRACTICABLE.
3. THE PIPE JOINTS SHALL BE STAGGERED TO PROVIDE THE MAXIMUM SEPARATION FROM THE POINT OF CROSSING.
4. THE CROSSING SHALL BE ENCASED IN CONCRETE FOR THE ENTIRE WIDTH OF THE TRENCH AND FOR A DISTANCE OF 10 LINEAR FEET CENTERED ON THE CROSSING.
5. UTILITIES A AND B CAN BE EITHER NEW OR EXISTING.
6. WHEN ONE UTILITY IS A SANITARY SEWER. IT IS PREFERABLE TO BE POSITIONED AS SHOWN FOR UTILITY B.
7. ENCASEMENT EXTENDS 10'-0" ON EACH SIDE OF THE CENTERLINE OF UTILITY A.
8. PIPE MUST BE BRACED VERTICALLY AND HORIZONTALLY TO PREVENT FLOATATION DURING PLACEMENT OF CONCRETE.



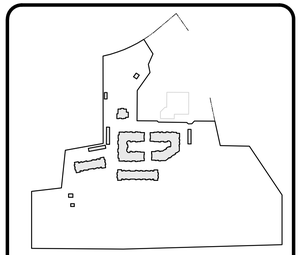
SEWER, WATER/DRAIN CROSSING DETAIL (2)
NOT TO SCALE



NOTES:

1. ALL HYDRANTS, VALVES AND LOCAL CONNECTIONS SHALL COMPLY WITH THE SPECIFICATIONS OF THE LOCAL MUNICIPALITY.
2. PIPING TO BE RESTRAINED WITH RODDING OR RETAINING GLANDS.
3. GATE VALVE INSTALLATION IS TYPICAL FOR ALL GATES SHOWN ON THE DRAWINGS.
4. LOW PRESSURE FIRE HYDRANT TO BE PAINTED YELLOW AND HIGH PRESSURE FIRE HYDRANT TO BE PAINTED RED UNLESS SPECIFIC COLORS SPECIFIED BY BOLTON FIRE DEPARTMENT.

FIRE HYDRANT CONNECTION (1)
NOT TO SCALE



KEYSHEET

ISSUED FOR COMPREHENSIVE PERMIT APPLICATION
SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDERO
CIVIL
NO. 47083
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
WP EAST ACQUISITIONS, LLC.
91 HARTWELL AVENUE, 3RD FLOOR
LEXINGTON, MA 02421

PROJECT:
PRELIMINARY APPLICATION FOR COMPREHENSIVE PERMIT
ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	AS SHOWN	DWG. NAME:	C1670-15
DESIGNED BY:	JPS	CHECKED BY:	PLC

PREPARED BY:

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environmental consulting ◆ landscape architecture
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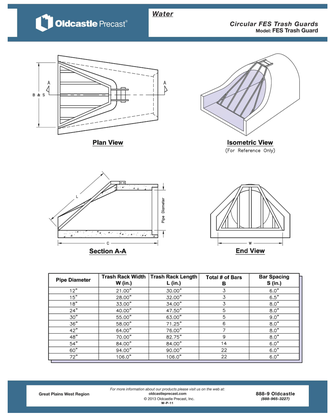
NOT USED
NOT TO SCALE

(10)



Pipe Diameter	Trash Rack Width W (in.)	Trash Rack Length L (in.)	Total # of Bars B	Bar Spacing S (in.)
12"	21.00"	30.00"	3	6.0"
15"	28.00"	32.00"	3	6.5"
18"	33.00"	34.00"	3	8.0"
24"	40.00"	47.50"	5	8.0"
30"	55.00"	63.00"	5	9.0"
36"	58.00"	71.25"	6	9.0"
42"	64.00"	78.00"	7	8.0"
48"	70.00"	82.75"	9	8.0"
54"	84.00"	84.00"	14	6.0"
60"	94.00"	90.00"	22	6.0"
72"	106.0"	106.0"	23	6.0"

Great Plains West Region

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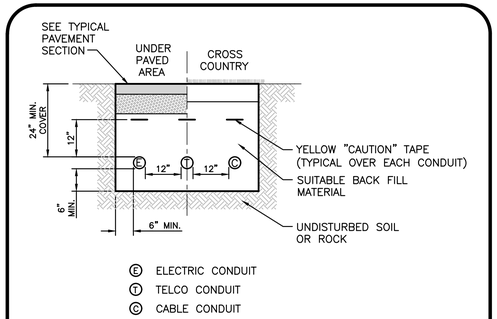
(580-965-3257)

FLARED END TRASH RACK DETAIL
NOT TO SCALE

(9)

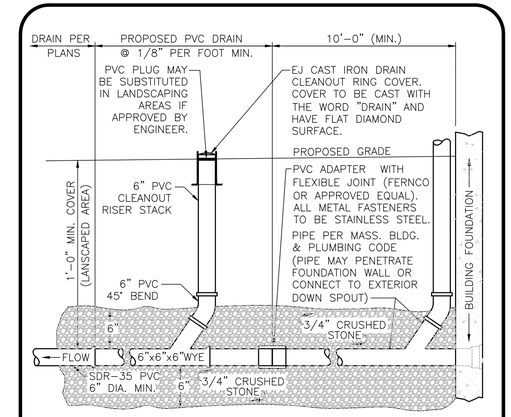


NOTES:

1. SCHEDULE 80 PVC CONDUIT REQUIRED UNDER ROAD AND DRIVEWAY SURFACES.
2. ALL UTILITY INSTALLATION REQUIREMENTS, SEPARATIONS, AND CONDUIT SIZES TO BE VERIFIED WITH EACH UTILITY COMPANY PRIOR TO INSTALLATION OF ANY UNDERGROUND UTILITY CONDUIT.
3. SEE SITE ELECTRICAL PLAN FOR SPECIFIC DETAILS

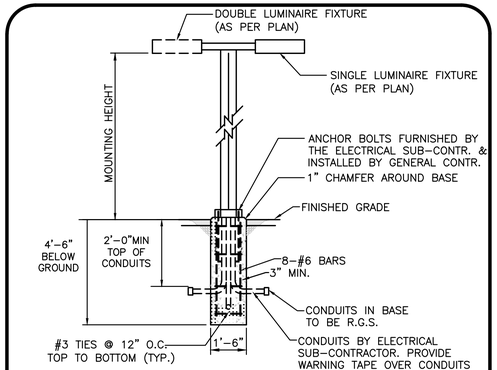
BURIED CONDUIT DETAIL
NOT TO SCALE

(8)



ROOF DRAIN
NOT TO SCALE

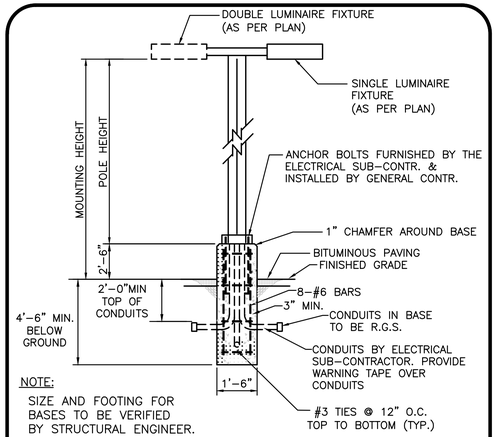
(7)



NOTE:
SIZE AND FOOTING FOR BASES TO BE VERIFIED BY STRUCTURAL ENGINEER.

FLUSH LIGHT POLE BASE
NOT TO SCALE

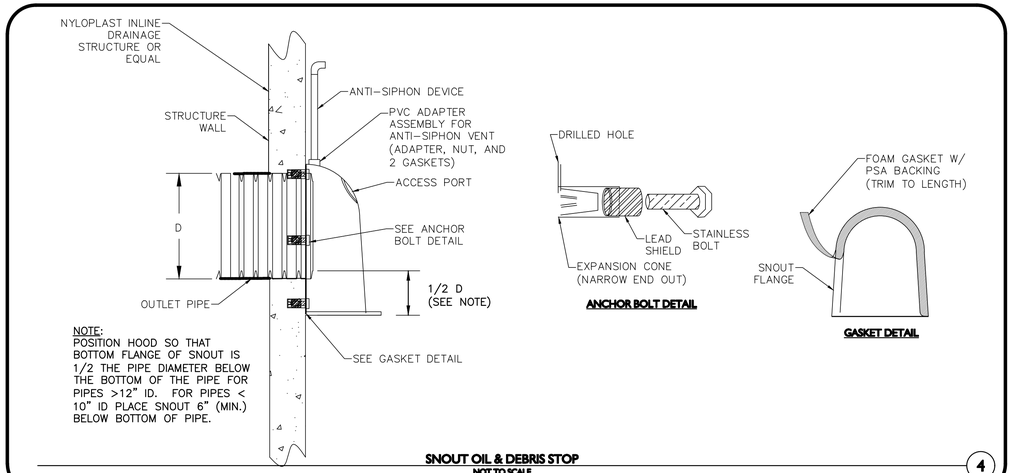
(6)



NOTE:
SIZE AND FOOTING FOR BASES TO BE VERIFIED BY STRUCTURAL ENGINEER.

RAISED LIGHT POLE BASE
NOT TO SCALE

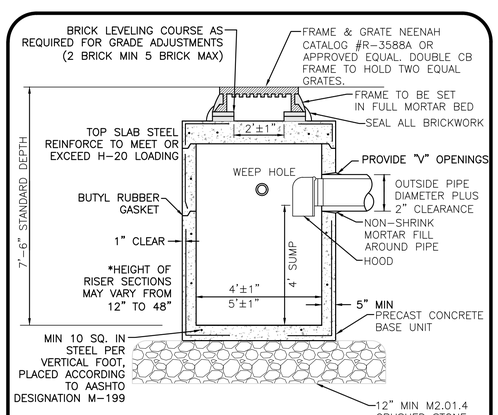
(5)



NOTE:
POSITION HOOD SO THAT BOTTOM FLANGE OF SNOUT IS 1/2 THE PIPE DIAMETER BELOW THE BOTTOM OF THE PIPE FOR PIPES >12" ID. FOR PIPES < 10" ID PLACE SNOUT 6" (MIN.) BELOW BOTTOM OF PIPE.

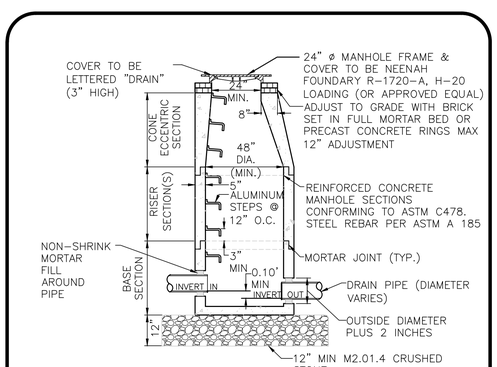
SNOUT OIL & DEBRIS STOP
NOT TO SCALE

(4)



CATCH BASIN
NOT TO SCALE

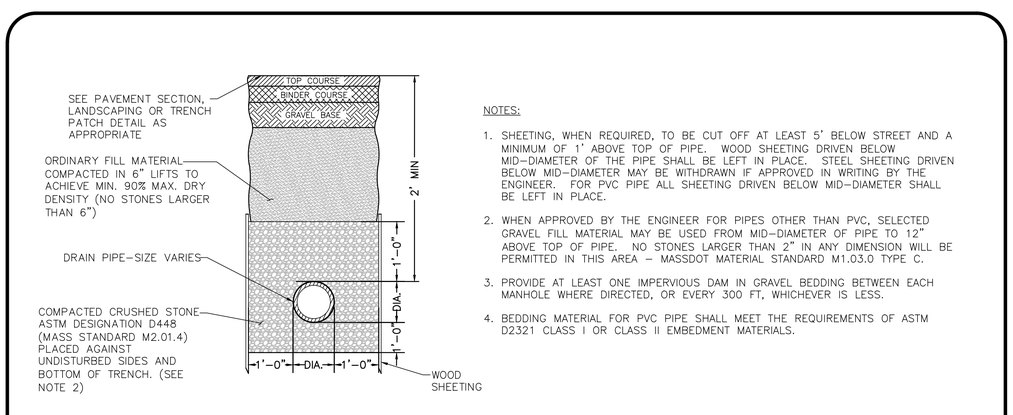
(3)



NOTE:
1. THE MANHOLE, INCLUDING ALL COMPONENT PARTS, SHALL HAVE ADEQUATE SPACE AND STRENGTH QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE. SPACE REQUIREMENT AND CONFIGURATIONS SHALL BE AS SHOWN ON THE DRAWING. THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND (H-20 LOADING) WITHOUT FAILURE.
VERTICAL FOOT OF MANHOLE.

PRECAST DRAIN MANHOLE
NOT TO SCALE

(2)

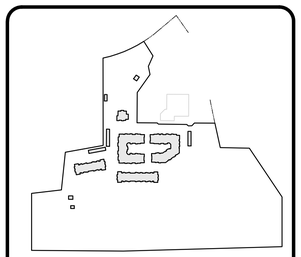


NOTES:

1. SHEETING, WHEN REQUIRED, TO BE CUT OFF AT LEAST 5' BELOW STREET AND A MINIMUM OF 1' ABOVE TOP OF PIPE. WOOD SHEETING DRIVEN BELOW MID-DIAMETER OF THE PIPE SHALL BE LEFT IN PLACE. STEEL SHEETING DRIVEN BELOW MID-DIAMETER MAY BE WITHDRAWN IF APPROVED IN WRITING BY THE ENGINEER. FOR PVC PIPE ALL SHEETING DRIVEN BELOW MID-DIAMETER SHALL BE LEFT IN PLACE.
2. WHEN APPROVED BY THE ENGINEER FOR PIPES OTHER THAN PVC, SELECTED GRAVEL FILL MATERIAL MAY BE USED FROM MID-DIAMETER OF PIPE TO 12" ABOVE TOP OF PIPE. NO STONES LARGER THAN 2" IN ANY DIMENSION WILL BE PERMITTED IN THIS AREA – MASSDOT MATERIAL STANDARD M1.03.0 TYPE C.
3. PROVIDE AT LEAST ONE IMPERVIOUS DAM IN GRAVEL BEDDING BETWEEN EACH MANHOLE WHERE DIRECTED, OR EVERY 300 FT, WHICHEVER IS LESS.
4. BEDDING MATERIAL FOR PVC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D2321 CLASS I OR CLASS II EMBEDMENT MATERIALS.

DRAINAGE TRENCH
NOT TO SCALE

(1)



KEYSHEET

ISSUED FOR COMPREHENSIVE PERMIT APPLICATION
SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDEIRO
CIVIL
NO. 47083
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
WP EAST ACQUISITIONS, LLC.
91 HARTWELL AVENUE, 3RD FLOOR
LEXINGTON, MA 02421

PROJECT:
PRELIMINARY APPLICATION FOR COMPREHENSIVE PERMIT
ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	AS SHOWN	DWG. NAME:	C1670-15
DESIGNED BY:	JPS	CHECKED BY:	PLC

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
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environmental consulting ◆ landscape architecture
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DRAWING TITLE: DETAILS

SHEET No. C-504

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STORMWATER CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740, SC-310, OR APPROVED EQUAL.
2. CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
5. CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
7. ONLY CHAMBERS APPROVED WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
   a. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
   b. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
   c. STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
8. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
9. ISOLATOR ROWS WILL BE DENOTED BY YELLOW ON THE SITE PLANS.

IMPORTANT – NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310/SC-740 SYSTEM

1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS.

STORMTECH RECOMMENDS 3 BACKFILL METHODS:
- STONESHOOTER LOCATED OFF THE CHAMBER BED.
- BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUB-GRADE.
- BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.

4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM – 6" SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2".
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
- NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
- NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".

3. FULL 36" OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

   USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

   CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

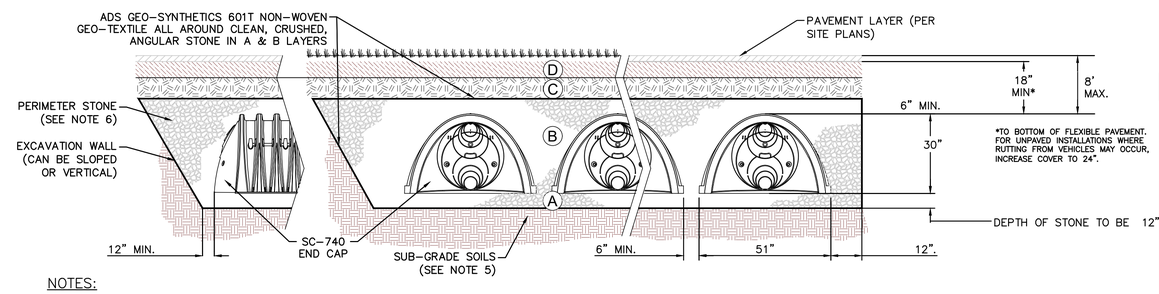
StormTech®
Detention • Retention • Water Quality

70 INWOOD ROAD, SUITE 3 | ROCKY HILL | CT | 06067
860-529-8188 | 888-892-2694 | WWW.STORMTECH.COM

GENERAL NOTES
NOT TO SCALE
1

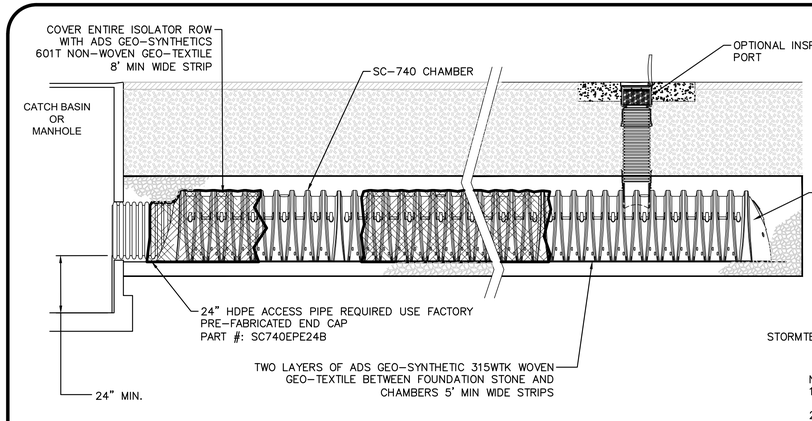
	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUB-BASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUB-GRADE REQUIREMENTS.	N/A	PREPARE PER SITE PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUB-BASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUB-BASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUB-GRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. [2] [3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



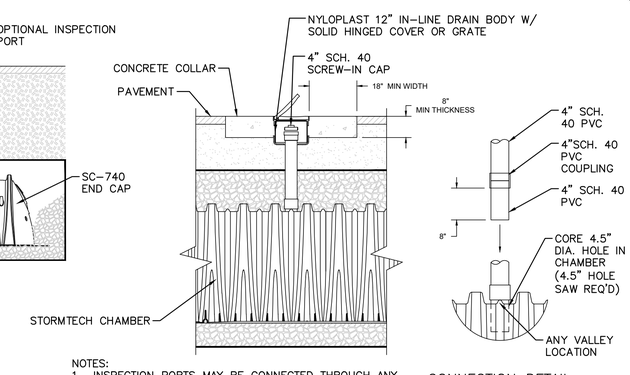
NOTES:
1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. CONTRACTOR IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUB-GRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
6. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUB-BASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS
NOT TO SCALE
2



STORMTECH ISOLATOR ROW*

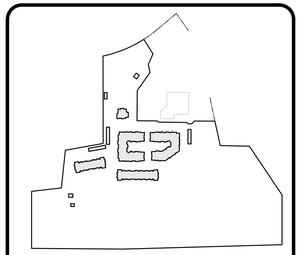
ISOLATOR ROW & INSPECTION PORT
NOT TO SCALE
3



NOTES:
1. INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY
2. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED.

CONNECTION DETAIL
NTS

INSPECTION PORT DETAIL



KEYSHEET

ISSUED FOR COMPREHENSIVE PERMIT APPLICATION
SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDEIRO
CIVIL
NO. 47083
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
WP EAST ACQUISITIONS, LLC.
91 HARTWELL AVENUE, 3RD FLOOR
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PROJECT:
PRELIMINARY APPLICATION FOR COMPREHENSIVE PERMIT
ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	AS SHOWN	DWG. NAME:	C1670-15
DESIGNED BY:	JPS	CHECKED BY:	PLC

PREPARED BY:

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DRAWING TITLE:	SHEET No.
DETAILS	C-505

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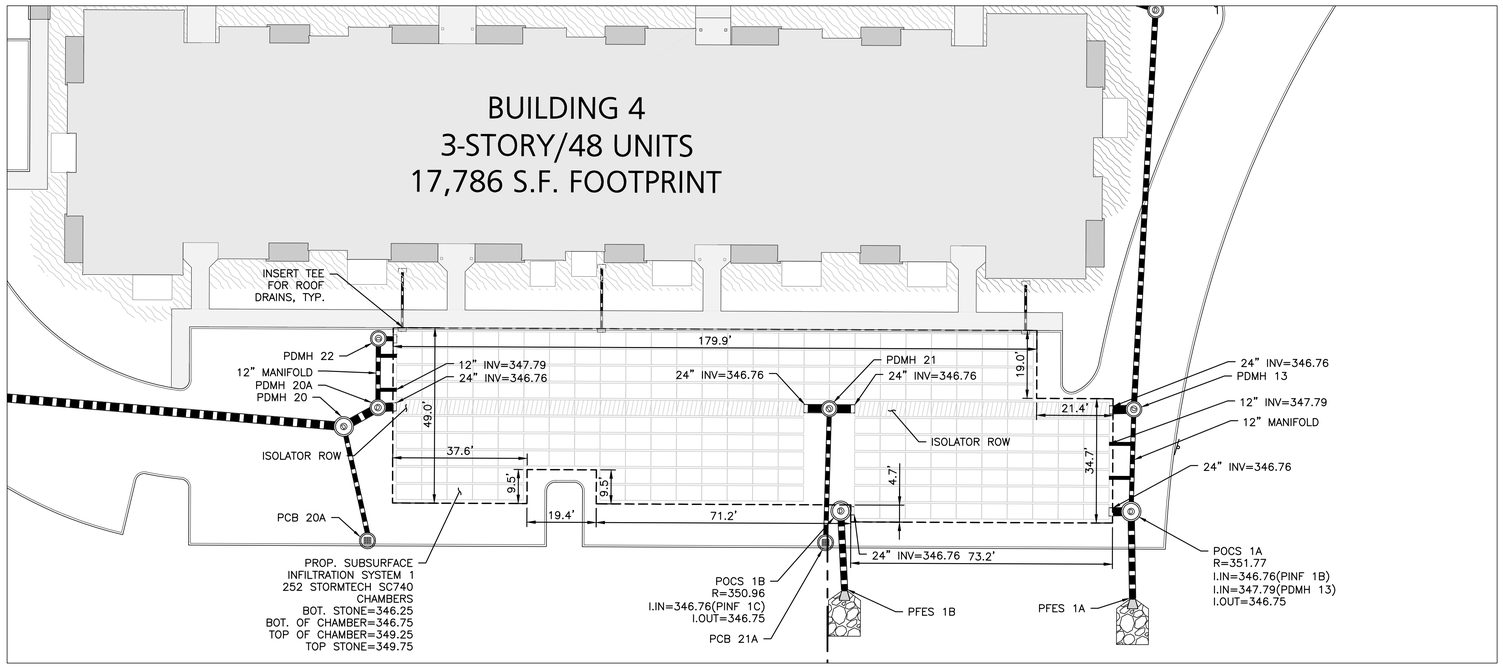
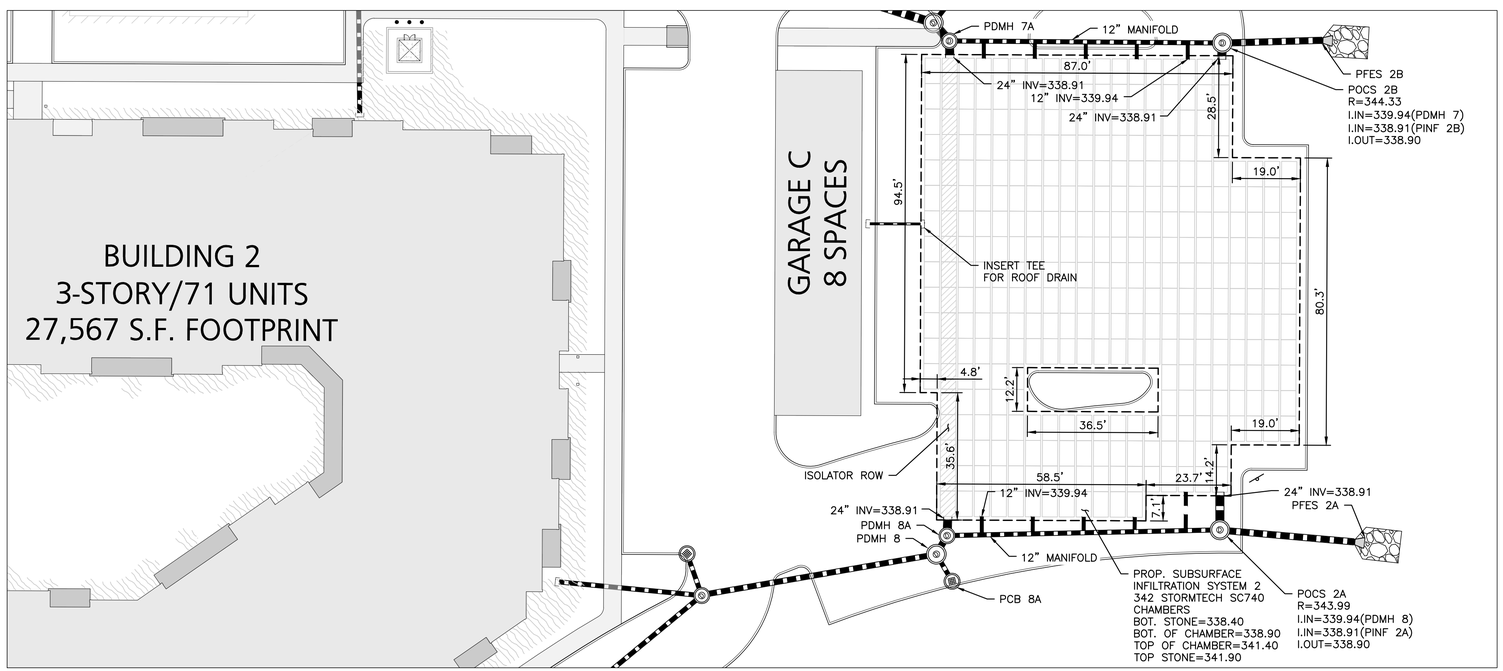


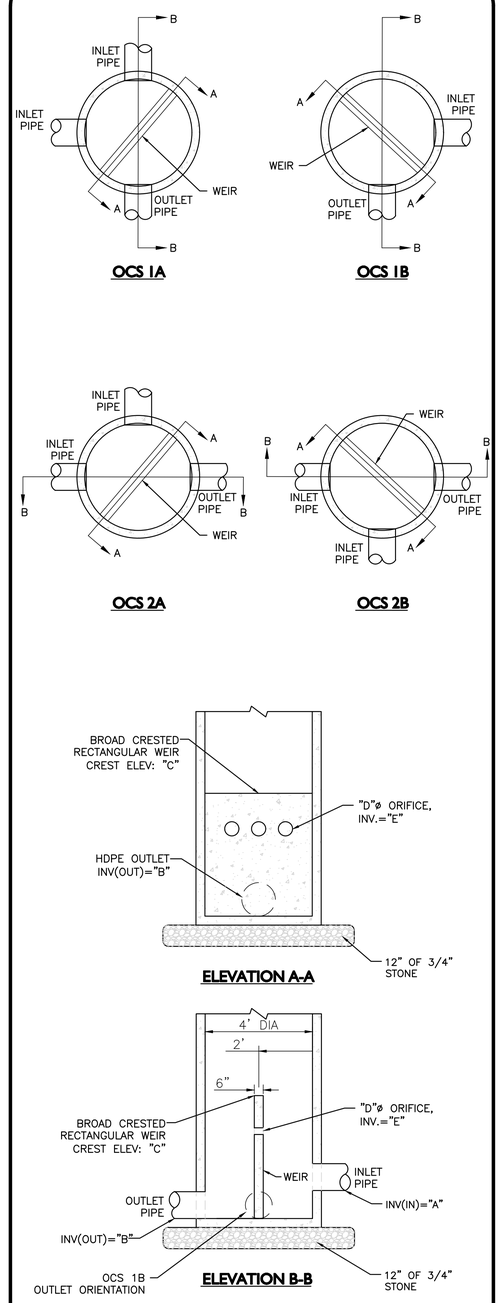
STORMTECH SC-740 SUBSURFACE FIELD #1
SCALE=1"=20'

3



STORMTECH SC-740 SUBSURFACE FIELD #2
SCALE=1"=20'

2

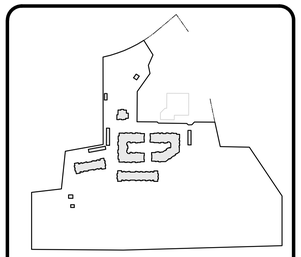


NAME	INV(IN) "A"	INV(OUT) "B"	WEIR ELEV "C"	ORIFICE DIA "D"	ORIFICE INV "E"
OCS 1A	346.76(24")				
	347.79(12")	346.75(18")	348.85	3-8"	347.95
OCS 1B	346.76(24")	346.75(18")	348.85	3-8"	347.95
OCS 2A	338.91(24")				
	339.94(12")	338.90(18")	341.30	3-6"	339.38
OCS 2B	338.91(24")				
	339.94(12")	338.90(18")	341.30	3-6"	339.38

NOTE: REFER TO DRAIN MANHOLE DETAIL FOR SPECS.

OUTLET CONTROL STRUCTURE (OCS)
NOT TO SCALE

1



KEYSHEET

ISSUED FOR COMPREHENSIVE PERMIT APPLICATION
SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDEIRO
CIVIL
NO. 47083
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
WP EAST ACQUISITIONS, LLC.
91 HARTWELL AVENUE, 3RD FLOOR
LEXINGTON, MA 02421

PROJECT:
PRELIMINARY APPLICATION
FOR COMPREHENSIVE PERMIT
ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	AS SHOWN	DWG. NAME:	C1670-15
DESIGNED BY:	JPS	CHECKED BY:	PLC

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
10 MAIN STREET
LAKEVILLE, MA 02347
TEL: (508) 923-1010
FAX: (508) 923-6309
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE: DETAILS

SHEET No. C-506

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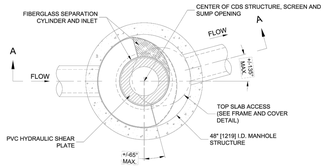
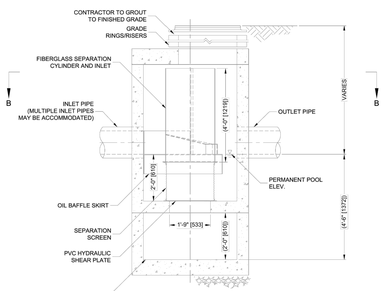
M:\PROJECTS\1670-15\CIVIL\DRAWINGS\CURRENT\C-1670-15_DETAILS.DWG



PLAN VIEW B-B
N.T.S.



ELEVATION A-A
N.T.S.

CDS2015-4-C DESIGN NOTES

CDS2015-4-C RATED TREATMENT CAPACITY IS 1.4 CFS, OR PER LOCAL REGULATIONS.

THE STANDARD CDS2015-4-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES

FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (CFS OR L/s)			*
PEAK FLOW RATE (CFS OR L/s)			*
RETURN PERIOD OF PEAK FLOW (YRS)			*
SCREEN APERTURE (2400 OR 4700)			*
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*
RIM ELEVATION			*
ANTI-FLOTATION BALLAST		WIDTH	HEIGHT
		*	*
NOTES/SPECIAL REQUIREMENTS:			

* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO..
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

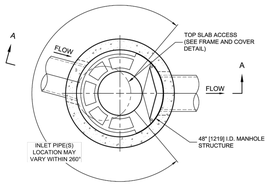
CDS2015-4-C
ONLINE CDS
STANDARD DETAIL

NOTE:

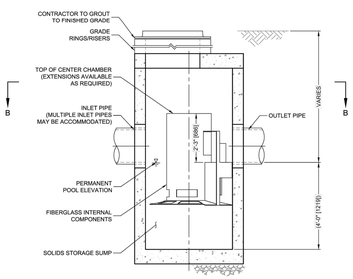
1. CONTECH CDS 2015-4-C IS TO BE USED FOR PDMH 2 & PDMH 8.
2. SEE SHEET C-105 – C-108 FOR INVERTS.

CONTECH CDS 2015-4-C (WATER QUALITY STRUCTURE)
NOT TO SCALE

4



PLAN VIEW B-B
NOT TO SCALE



ELEVATION A-A
NOT TO SCALE

CASCADE separator™

CASCADE SEPARATOR DESIGN NOTES

CS-4 RATED TREATMENT CAPACITY IS 2.0 CFS, OR PER LOCAL REGULATIONS.
THE STANDARD CS-4 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES

FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (cfs [L/s])			
PEAK FLOW RATE (cfs [L/s])			
RETURN PERIOD OF PEAK FLOW (yrs)			
RIM ELEVATION			
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			
NOTES / SPECIAL REQUIREMENTS:			

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
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800-338-1122 513-645-7000 513-645-7993 FAX

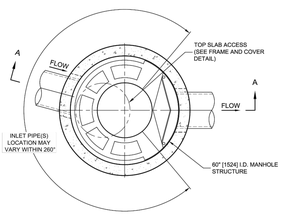
CS-4
CASCADE SEPARATOR
STANDARD DETAIL

NOTE:

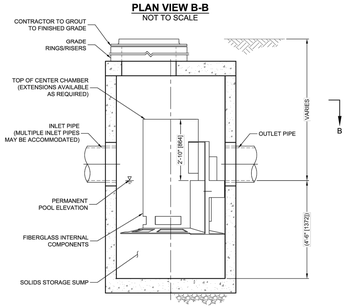
1. CONTECH CASCADE CS-5 IS TO BE USED FOR PDMH 4.
2. SEE SHEET C-106 FOR INVERTS.

CASCADE CS-4 (WATER QUALITY STRUCTURE)
NOT TO SCALE

3



PLAN VIEW B-B
NOT TO SCALE



ELEVATION A-A
NOT TO SCALE

CASCADE separator™

CASCADE SEPARATOR DESIGN NOTES

CS-5 RATED TREATMENT CAPACITY IS 3.50 CFS, OR PER LOCAL REGULATIONS.
THE STANDARD CS-5 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES

FRAME AND COVER
(DIAMETER VARIES)
NOT TO SCALE

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (cfs [L/s])			
PEAK FLOW RATE (cfs [L/s])			
RETURN PERIOD OF PEAK FLOW (yrs)			
RIM ELEVATION			
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			
NOTES / SPECIAL REQUIREMENTS:			

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

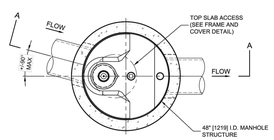
CS-5
CASCADE SEPARATOR
STANDARD DETAIL

NOTE:

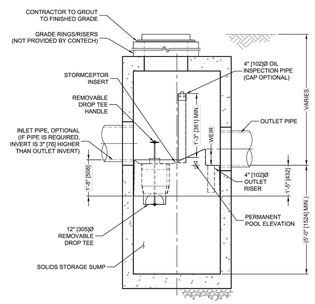
1. CONTECH CASCADE CS-5 IS TO BE USED FOR PDMH 7.
2. SEE SHEET C-106 FOR INVERTS.

CASCADE CS-5 (WATER QUALITY STRUCTURE)
NOT TO SCALE

2



PLAN VIEW
TOP SLAB NOT SHOWN



SECTION A-A

Stormceptor®
FOR FACTORY INFORMATION, DIAL TOLL FREE 1.888.579.CDS(2337)

FRAME AND COVER
(MAY VARY)
NOT TO SCALE

FRAME AND GRATE
(MAY VARY)
NOT TO SCALE

STORMCEPTOR DESIGN NOTES

THE STANDARD STC450i CONFIGURATION WITH ROUND, SOLID FRAME AND COVER, AND INLET PIPE IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (cfs [L/s])			
PEAK FLOW RATE (cfs [L/s])			
RETURN PERIOD OF PEAK FLOW (yrs)			
RIM ELEVATION			
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			
NOTES / SPECIAL REQUIREMENTS:			

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STORMCEPTOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. STORMCEPTOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMCEPTOR MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

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800-338-1122 513-645-7000 513-645-7993 FAX

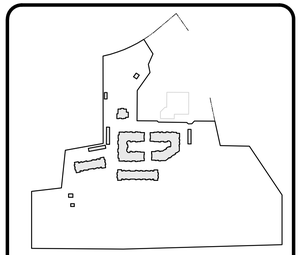
STC450i
STORMCEPTOR
STANDARD DETAIL

NOTE:

1. STORMCEPTOR 450I IS TO BE USED FOR PCB 21A & PDMH 12.
2. SEE SHEET C-106 FOR INVERTS.

STORMCEPTOR 450I (WATER QUALITY STRUCTURE)
NOT TO SCALE

1



KEYSHEET

ISSUED FOR COMPREHENSIVE PERMIT APPLICATION
SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDERO
CIVIL
NO. 47083
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
WP EAST ACQUISITIONS, LLC.
91 HARTWELL AVENUE, 3RD FLOOR
LEXINGTON, MA 02421

PROJECT:
PRELIMINARY APPLICATION FOR COMPREHENSIVE PERMIT
ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	AS SHOWN	DWG. NAME:	C1670-15
DESIGNED BY:	JPS	CHECKED BY:	PLC

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com

10 MAIN STREET
LAKEVILLE, MA 02347
TEL: (508) 923-1010
FAX: (508) 923-6309

WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE: DETAILS

SHEET No. C-507

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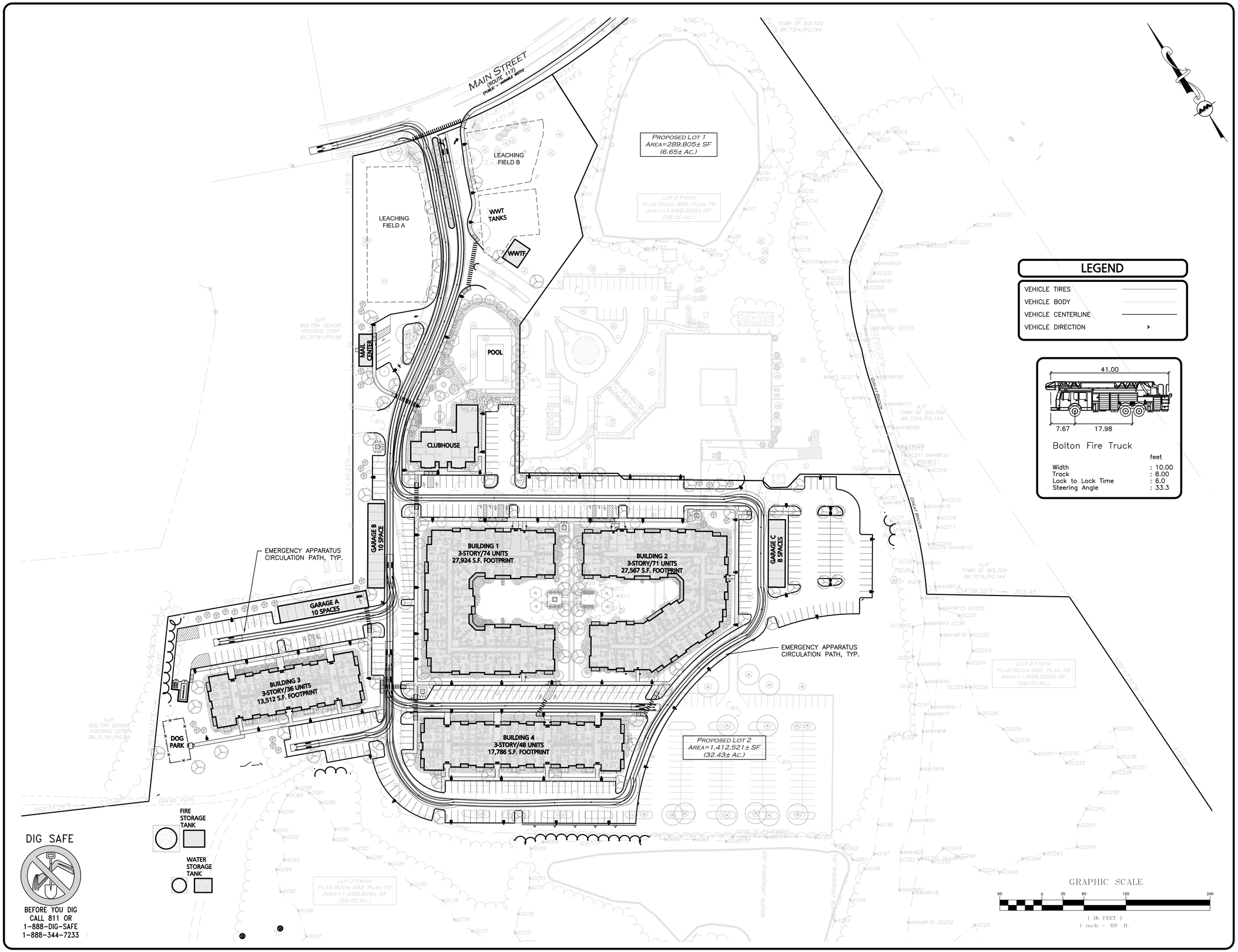
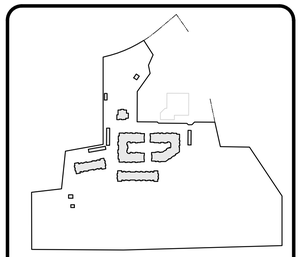


LEGEND

VEHICLE TIRES	
VEHICLE BODY	
VEHICLE CENTERLINE	
VEHICLE DIRECTION	›

Bolton Fire Truck

	feet
Width	: 10.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 33.3



KEYSHEET

ISSUED FOR COMPREHENSIVE PERMIT APPLICATION
SEPTEMBER 10, 2021

COMMONWEALTH OF MASSACHUSETTS
PHILIP L. CORDEIRO
CIVIL
NO. 47083
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
LIMITED DIVIDEND AFFILIATE OF
WP EAST ACQUISITIONS, LLC.
91 HARTWELL AVENUE, 3RD FLOOR
LEXINGTON, MA 02421

PROJECT:
PRELIMINARY APPLICATION
FOR COMPREHENSIVE PERMIT
ALTA NASHOBA VALLEY
580 MAIN STREET BOLTON, MA

PROJECT NO.	1670-15	DATE:	09-10-2021
SCALE:	1" = 60'	DWG. NAME:	C1670-15
DESIGNED BY:	PGM/JPS	CHECKED BY:	PLC

PREPARED BY:

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environmental consulting ◆ landscape architecture
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DRAWING TITLE:
VEHICLE
MOVEMENT PLAN

SHEET No.
C-601

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CONCEPT PLANT SCHEDULE

CLUMP TREES
BIRCH, KATSURA, FRINGE TREE
BETULA NIGRA / RIVER BIRCH MULTI-TRUNK

EVERGREEN TREES (B&B 6-7' HGT.)
PICEA ABIES / NORWAY SPRUCE
PICEA GLAUCA / WHITE SPRUCE
PINUS STROBUS / WHITE PINE

FLOWERING TREES (B&B 3" CAL.)
CORNUS FLORIDA / EASTERN DOGWOOD
PRUNUS CERASIFERA 'THUNDERCLOUD' / THUNDERCLOUD PLUM
PRUNUS SERRULATA 'KWANZAN' / FLOWERING CHERRY
PYRUS CALLERYANA 'CHANTICLEER' / CHANTICLEER PEAR
SYRINGA RETICULATA / JAPANESE TREE LILAC

PYRIMIDAL EVERGREENS (B&B 5-6' HGT.)
15' O.C.
THUJA PLICATA 'GREEN GIANT' / WESTERN RED CEDAR

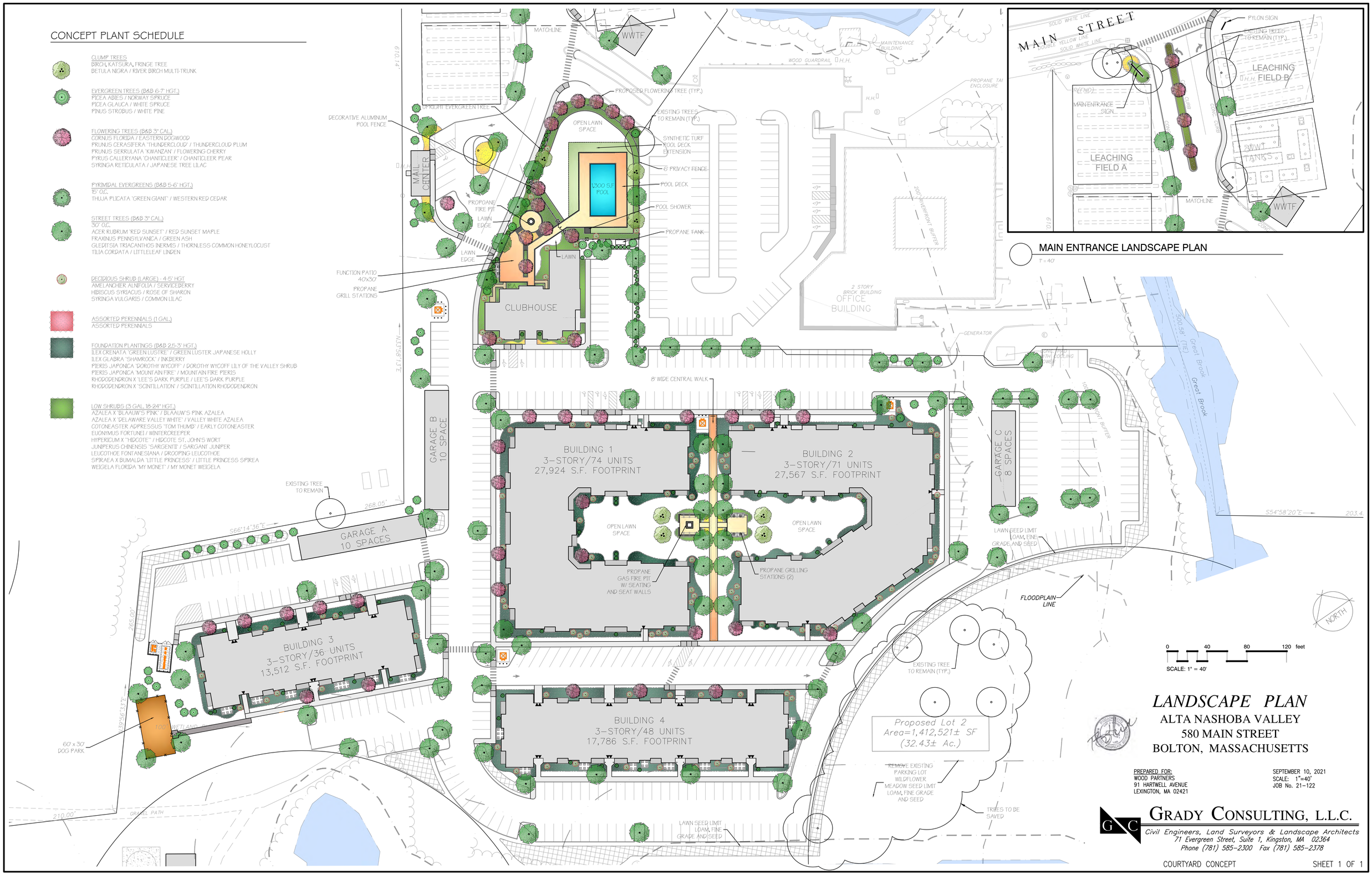
STREET TREES (B&B 3" CAL.)
30' O.C.
ACER RUBRUM 'RED SUNSET' / RED SUNSET MAPLE
FRAXINUS PENNSYLVANICA / GREEN ASH
GLEDITSIA TRIACANTHOS INERMIS / THORNLESS COMMON HONEYLOCUST
TILIA CORDATA / LITTLELEAF LINDEN

DECIDIOUS SHRUB (LARGE) - 4-5' HGT.
AMELANCHIER ALNIFOLIA / SERVICEBERRY
HIBISCUS SYRIACUS / ROSE OF SHARON
SYRINGA VULGARIS / COMMON LILAC

ASSORTED PERENNIALS (1 GAL.)
ASSORTED PERENNIALS

FOUNDATION PLANTINGS (B&B 2.5-3' HGT.)
ILEX CRENATA 'GREEN LUSTRE' / GREEN LUSTER JAPANESE HOLLY
ILEX GLABRA 'SHAMROCK' / INKBERRY
PIERIS JAPONICA 'DOROTHY WYCOFF' / DOROTHY WYCOFF LILY OF THE VALLEY SHRUB
PIERIS JAPONICA 'MOUNTAIN FIRE' / MOUNTAIN FIRE PIERIS
RHODODENDRON X 'LEE'S DARK PURPLE / LEE'S DARK PURPLE
RHODODENDRON X 'SCINTILLATION' / SCINTILLATION RHODODENDRON

LOW SHRUBS (3 GAL. 18-24" HGT.)
AZALEA X 'BLAAUW'S PINK' / BLAAUW'S PINK AZALEA
AZALEA X 'DELAWARE VALLEY WHITE' / VALLEY WHITE AZALEA
COTONEASTER ADPRESSUS 'TOM THUMB' / EARLY COTONEASTER
EUONYMUS FORTUNEI / WINTERCREEPER
HYPERICUM X 'HIDCOTE'' / HIDCOTE ST. JOHN'S WORT
JUNIPERUS CHINENSIS 'SARGENTII' / SARGANT JUNIPER
LEUCOTHOE FONTANESIANA / DROOPING LEUCOTHOE
SPIRAEA X BUMALDA 'LITTLE PRINCESS' / LITTLE PRINCESS SPIREA
WEIGELA FLORIDA 'MY MONET' / MY MONET WEIGELA



LANDSCAPE PLAN

ALTA NASHOBA VALLEY
580 MAIN STREET
BOLTON, MASSACHUSETTS

PREPARED FOR:
WOOD PARTNERS
91 HARTWELL AVENUE
LEXINGTON, MA 02421

SEPTEMBER 10, 2021
SCALE: 1"=40'
JOB No. 21-122

GRADY CONSULTING, L.L.C.
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COURTYARD CONCEPT