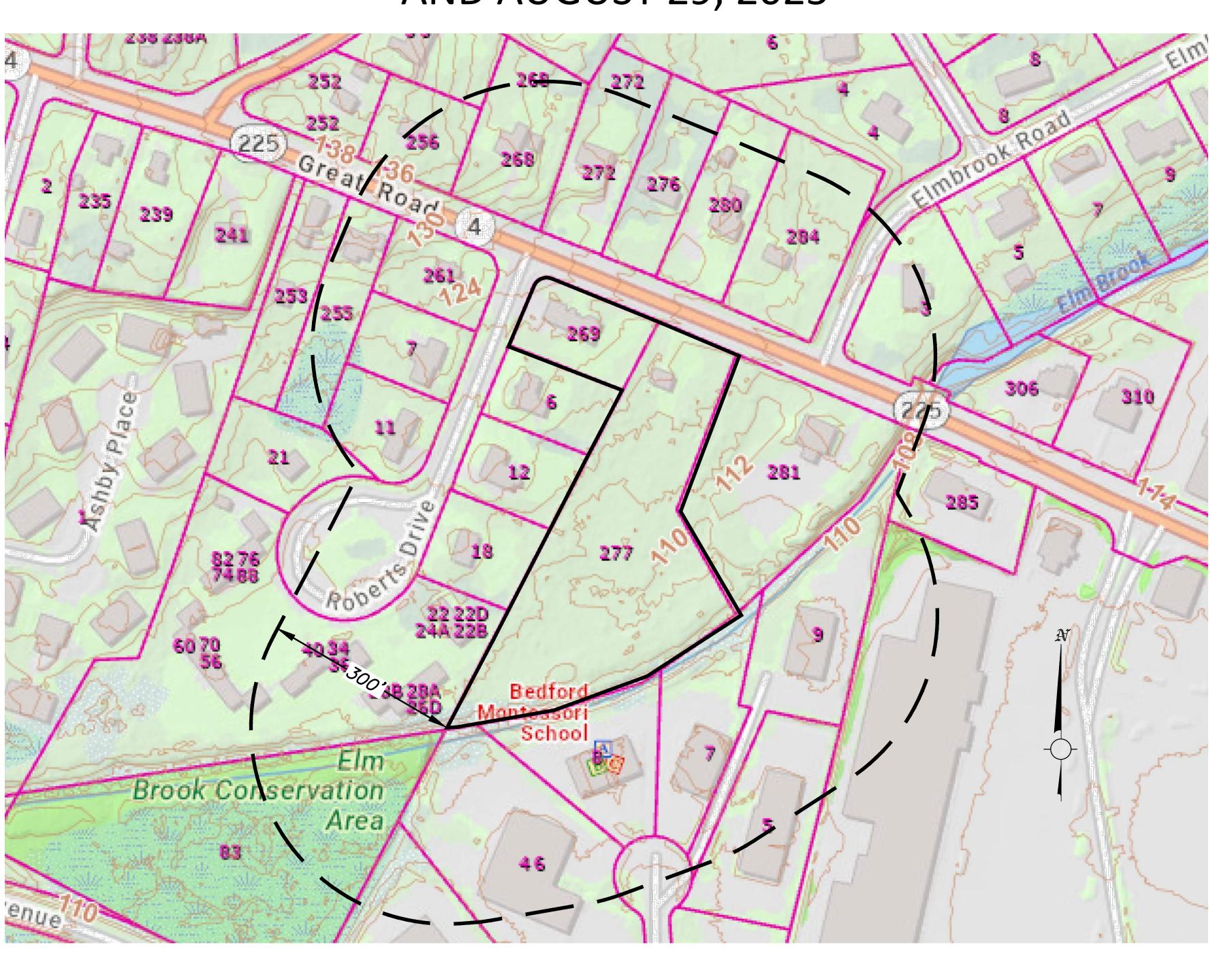
NOTES:

- THE INFORMATION DEPICTED ON THIS PLAN HAS BEEN COMPILED FROM
 THE TOWN OF BEDEORD GIS SYSTEM
- 2. LAND USE WITHIN 300 FEET OF THE SUBJECT PROPERTY IS PRIMARILY SINGLE FAMILY DWELLINGS AND A MONTESSORI SCHOOL

269 & 277 GREAT ROAD ASSESSORS MAP 64 LOTS 83 A & 84 SITE DEVELOPMENT PLAN SET

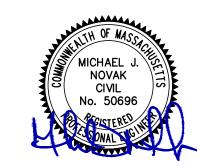
LOCATED IN BEDFORD, MA APRIL 28, 2025

REVISED: MAY 14, 2025, AUGUST 25, 2025, AND AUGUST 29, 2025



PREPARED BY:



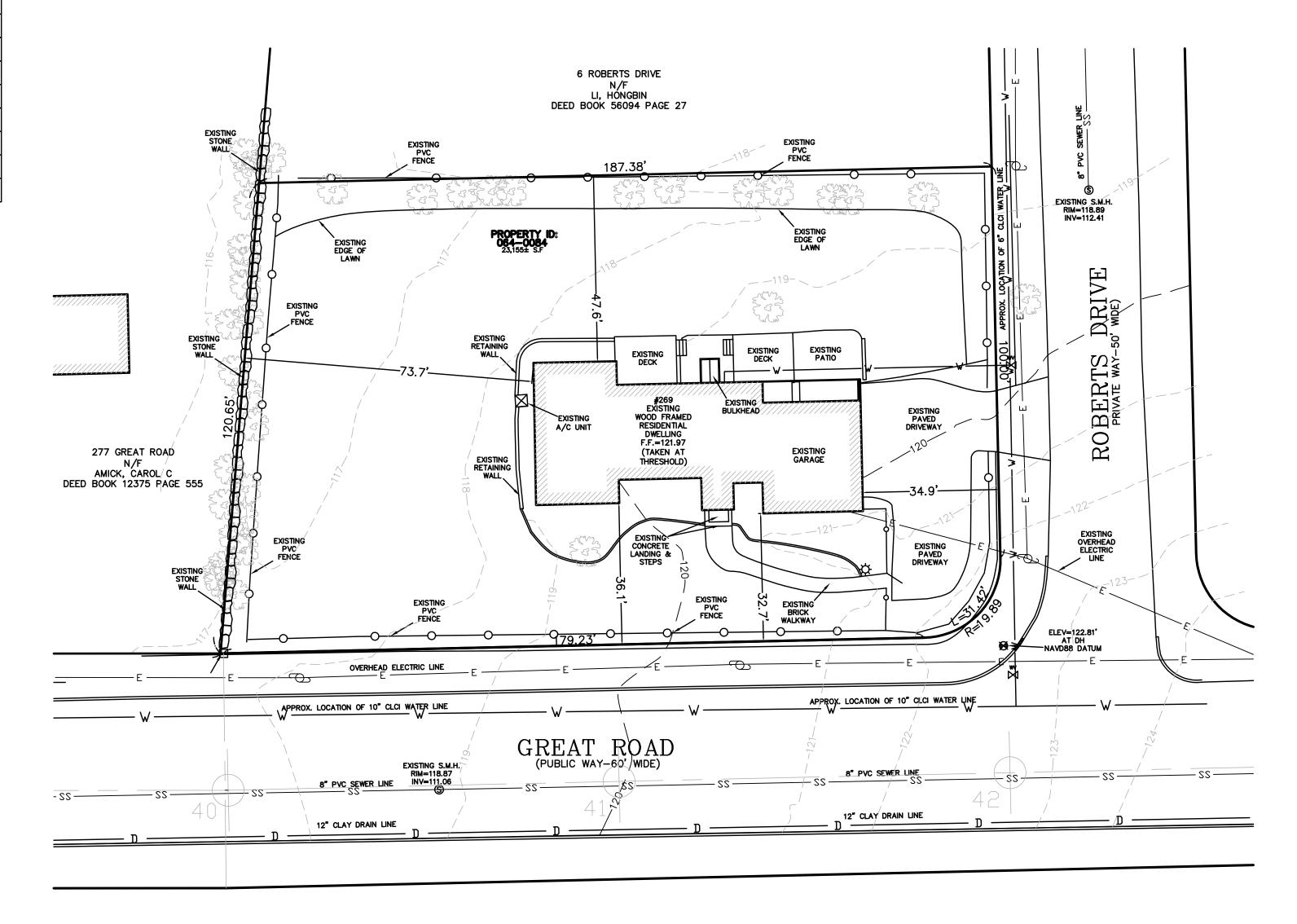


SHEET INDEX

- C-1 COVER SHEET
- C-2 RECORD CONDITIONS PLAN 1 OF 2
- C-3 RECORD CONDITIONS PLAN 2 OF 2
- C-4 CONSTRUCTION MANAGEMENT PLAN
- C-5 SITE LAYOUT PLAN
- C-6 SITE GRADING AND DRAINAGE
- C-7 CUT / FILL EXHIBIT
- C-8 SITE UTILITY
- C-9 DETAILS

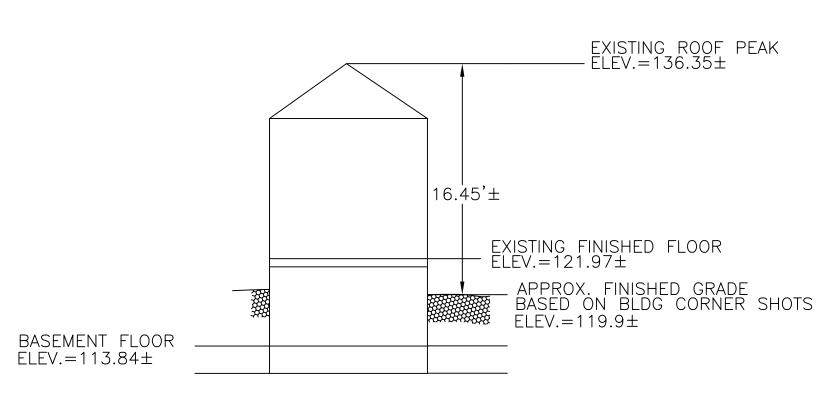
LOCUS CONTEXT MAP
(SCALE 1"=100")

	LEGEND
·	BOUND
0	IRON PIN/PIPE
	TREE
N	TREE STUMP
0	SIGN
S	SEWER MANHOLE
0	DRAIN MANHOLE
=	CATCH BASIN
w X	WATER VALVE
***	HYDRANT
GV	GAS VALVE
(E)	ELECTRIC MANHOLE
P	UTILITY POLE
≎	LIGHT POLE
M	MANHOLE
	EXISTING BUILDING
	RETAINING WALL
\bigcirc	FENCE
s	SEWER LINE
W	WATER LINE
G	GAS LINE
E	ELECTRIC LINE
50	CONTOUR LINE (MJR)
50	CONTOUR LINE (MNR)



NOTES:

- 1. INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY SPRUHAN ENGINEERING, P.C. AS OF 10/15/2024.
- 2. DEED REFERENCE: BOOK 45389, PAGE 349
 PLAN REFERENCE: PLAN #983, END OF BOOK 8084 OF 1953
 MIDDLESEX COUNTY SOUTH DISTRICT REGISTRY OF DEEDS
- 3. THIS PLAN IS NOT INTENDED TO BE RECORDED.
- 4. I CERTIFY THAT THE DWELLING SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE X, ON FLOOD HAZARD BOUNDARY MAP NUMBER 25017C0382G, IN COMMUNITY NUMBER: 255209, DATED 07/08/2025.
- 5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT USES OF THE LAND; HOWEVER THIS NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
- 6. FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.
- 7. NO RESPONSIBILITY IS TAKEN FOR ZONING TABLE AS SPRUHAN ENGINEERING, P.C. ARE NOT ZONING EXPERTS. TABLE IS TAKEN FROM TABLE PROVIDED BY LOCAL ZONING ORDINANCE. CLIENT AND/OR ARCHITECT TO VERIFY THE ACCURACY OF ZONING ANALYSIS.
- 8. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER VALVES, ETC. AND COMPILED FROM PLANS SUPPLIED BY GOVERNMENT AGENCIES.
- 9. THE ELEVATIONS SHOWN ARE BASED ON NAVD88 DATUM.



EXISTING PROFILE NOT TO SCALE



Spruhan Engineering, P.C.

> 80 JEWETT ST, (SUITE 2) NEWTON, MA 02458

Tel: 617-816-0722 Email:edmond@spruhaneng.com

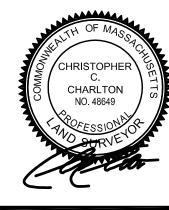
269 GREAT ROAD BEDFORD MASSACHUSETTS

SURVEY PLAN

REVISION BLOCK

DESCRIPTION	DATE
FLOOD MAP UPDATE	06/25/25
STATE HIGHWAY STATIONS	07/24/25

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DATE: 10/22/2024

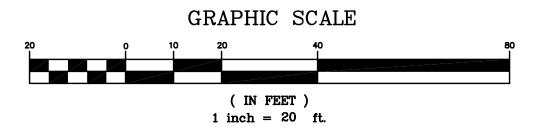
DRAWN BY: K.K

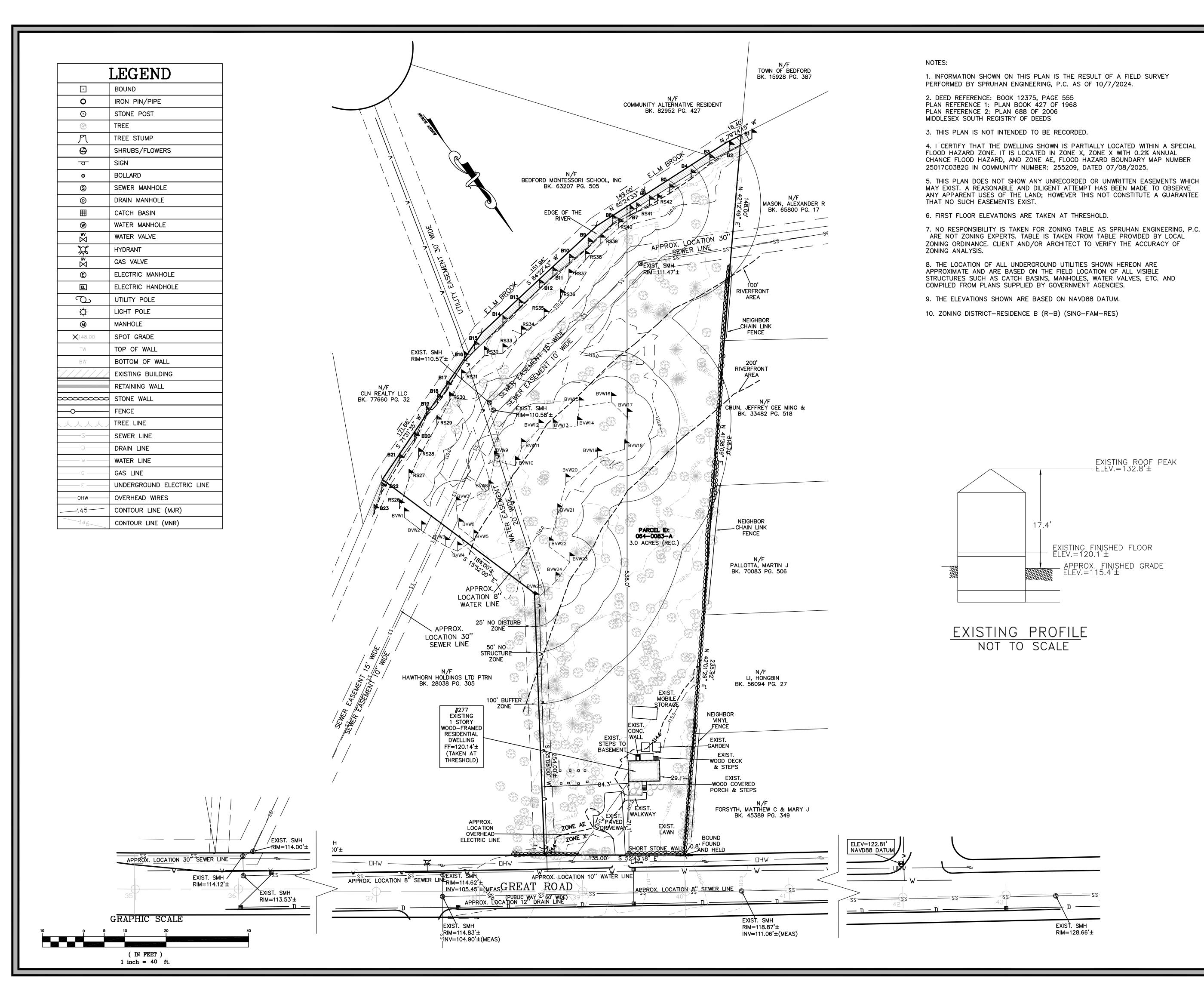
CHECKED BY: C.C

APPROVED BY: C.C

EXISTING CONDITIONS

SHEET 1 OF 1







Spruhan Engineering, P.C.

> 80 JEWETT ST, (SUITE 1) NEWTON, MA 02458

Tel: 617-816-0722 Email:edmond@spruhaneng.com

277 GREAT ROAD
BEDFORD
MASSACHUSETTS

SURVEY PLAN

REVISION BLOCK

DESCRIPTION	DATE
FLOOD MAP UPDATE	06/25/25
STATE HIGHWAY STATIONS	06/25/25 07/24/25

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DATE: 10/3/2024

DRAWN BY: L.O

CHECKED BY: C.C

APPROVED BY: C.C

EXISTING CONDITIONS

SHEET 1 OF 1

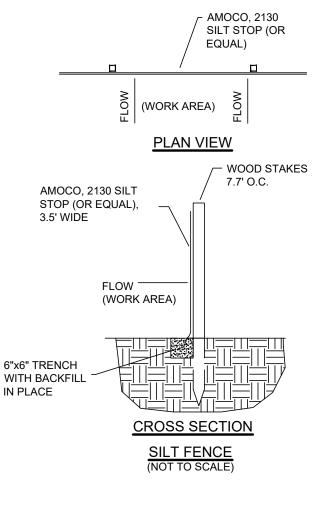
FOR TREE PROTECTION DETAIL REFERENCE MASS HIGHWAY

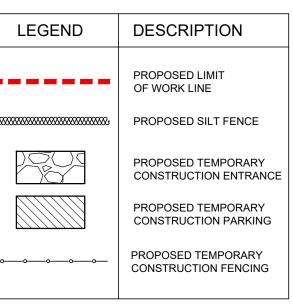
CONSTRUCTION FENCE/TREE PROTECTION

CONSTRUCTION MEASURES TO PRESERVE AND PROTECT TREES

ADDITIONAL EROSION CONTROL NOTES:

- 1. MINIMIZE TOTAL AREA OF DISTURBANCE AND MINIMIZE UNNECESSARY CLEARING AND GRADING FROM ALL CONSTRUCTION SITES. CLEARING AND GRADING ALL ONLY BE PERFORMED WITHIN AREAS NEEDED TO BUILD THE PROJECT, INCLUDING STRUCTURES, UTILITIES, ROADS, RECREATIONAL AMENITIES, POST- CONSTRUCTION STORMWATER MANAGEMENT FACILITIES, AND RELATED INFRASTRUCTURE.
- 2. PRIOR TO ANY LAND DISTURBANCE ACTIVITIES COMMENCING ON THE SITE, THE DEVELOPER SHALL PHYSICALLY MARK LIMITS OF THE ALLOWABLE DISTURBANCE ON THE SITE WITH TAPE, SIGNS, OR ORANGE CONSTRUCTION FENCE, SO THAT WORKERS CAN SEE THE AREAS TO BE PROTECTED. THE PHYSICAL MARKERS SHALL BE INSPECTED DAILY BY THE PERMITTEE.
- 3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH
- 4. EROSION AND SEDIMENT CONTROL MEASURES USED SHALL BE CHOSEN BASED ON THE GOAL OF MINIMIZING
- 5. STORMWATER RUNOFF VELOCITIES SHALL BE MINIMIZED TO THE GREATEST EXTENT PRACTICABLE. INCREASES IN RUNOFF VELOCITIES DUE TO THE REMOVAL OF EXISTING VEGETATIVE COVER DURING DEVELOPMENT AND THE RESULTING INCREASE IN IMPERMEABLE SURFACE AREA AFTER DEVELOPMENT MUST
- 6. PROTECT DISTURBED AREAS FROM STORMWATER RUNOFF. BEST MANAGEMENT PRACTICES (BMPS) CAN BE UTILIZED TO PREVENT WATER FROM ENTERING AND RUNNING OVER THE DISTURBED AREA. DIVERSIONS AND OTHER CONTROL PRACTICES TO INTERCEPT RUNOFF FROM HIGHER WATERSHED AREAS, STORE OR DIVERT IT $AWAY\ FROM\ VULNERABLE\ AREAS,\ AND\ DIRECT\ IT\ TOWARD\ STABILIZED\ OUTLETS\ MAY\ BE\ USED.$
- 7. SEDIMENT TRAPPING AND SETTLING DEVICES SHALL BE EMPLOYED TO TRAP AND/OR RETAIN SUSPENDED SEDIMENTS AND ALLOW TIME FOR THEM TO SETTLE OUT IN CASES WHERE PERIMETER SEDIMENT CONTROLS (E.G., SILT FENCE AND HAY BALES) ARE DEEMED TO BE INEFFECTIVE IN TRAPPING SUSPENDED SEDIMENTS
- 8. STORMWATER MANAGEMENT FACILITIES TO BE USED AFTER CONSTRUCTION SHALL NOT BE USED AS BMPS DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE STORMWATER AGENCY. MANY TECHNOLOGIES ARE NOT DESIGNED TO HANDLE THE HIGH CONCENTRATIONS OF SEDIMENTS TYPICALLY FOUND IN CONSTRUCTION RUNOFF, AND THUS MUST BE PROTECTED FROM CONSTRUCTION RELATED
- 9. ON AND OFF-SITE MATERIAL STORAGE AREAS, INCLUDING CONSTRUCTION AND WASTE MATERIALS, SHALL BE PROPERLY PROTECTED AND MANAGED.
- 10. SOIL STOCKPILES MUST BE STABILIZED OR COVERED AT THE END OF EACH WORKDAY. STOCKPILE SIDE SLOPES SHALL NOT BE GREATER THAN 2:1. ALL STOCKPILES SHALL BE SURROUNDED BY SEDIMENT CONTROLS.
- 11. PROJECTS MUST COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS INCLUDING WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS, AND AIR QUALITY REOUIREMENTS, INCLUDING DUST AND DEBRIS CONTROL.
- 12. INTERIM AND PERMANENT STABILIZATION MEASURES SHALL BE INSTITUTED ON A DISTURBED AREA IMMEDIATELY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED ON THAT PORTION OF THE SITE. TWO METHODS ARE AVAILABLE FOR STABILIZING DISTURBED AREAS: MECHANICAL (OR STRUCTURAL) METHODS AND VEGETATIVE METHODS. IN SOME CASES, BOTH ARE COMBINED IN ORDER TO CONTROL EROSION.
- 13. THE DURATION OF THE EXPOSURE OF DISTURBED AREAS DUE TO REMOVAL OF VEGETATION AND/OR RE-GRADING SHALL BE STATED IN WRITING IN A SCHEDULE THAT WILL BE PREPARED AT THE TIME OF APPLICATION FOR PERMIT AND MAINTAINED AS PART OF THE PROJECT RECORDS.
- 14. DUST CONTROL SHALL BE USED DURING GRADING OPERATIONS. DUST CONTROL METHODS MAY CONSIST OF GRADING FINE SOILS ON CALM DAYS ONLY OR DAMPENING THE GROUND WITH WATER.
- 15. DURING CONSTRUCTION, ALL DISTURBED AREAS SHALL BE ENCLOSED WITH EROSION CONTROL MEASURES THE DOWN GRADIENT DIRECTION OR IN ANY DIRECTION TO WHICH EROSION CAN OCCUR.
- 16. DURING CONSTRUCTION, ANY SITE ENTRANCE FROM A PAVED, PUBLIC WAY SHALL BE IMPROVED WITH A TEMPORARY CONSTRUCTION ENTRANCE BUILT IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS TO PREVENT
- 17. DURING CONSTRUCTION, CATCHBASIN OR OTHER DRAINAGE SYSTEM INLET STRUCTURES DOWN GRADIENT OF THE CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH SILT SACKS OR OTHER INLET PROTECTION
- 18. IF THE WORK PRODUCES OR DISTRIBUTES SOIL ON PUBLIC OR PRIVATE WAYS, THAT SOIL SHALL BE CLEANED UP BY THE RESPONSIBLE PARTY AS SOON AS POSSIBLE BUT IN ALL CASES WITHIN TWENTY-FOUR (24) HOURS.
- 19. IF THE WORK CAUSES THE DISCHARGE OF SOIL TO TOWN DRAINAGE STRUCTURES, ALL AFFECTED DOWNSTREAM PIPES SHALL BE CLEANED BY THE RESPONSIBLE PARTY WITHIN THREE (3) DAYS.





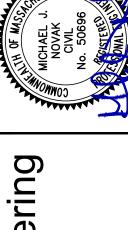
ALL TREES WITHIN LIMIT OF WORK TO BE REMOVED.

NOT FOR CONSTRUCTION

ALL UNDERGROUND UTILITY DATA REPRESENTS RECORD INFORMATION RECOVERED THROUGH RESEARCH WITHOUT SURFACE DEMARCATION NOR SUBSURFACE VERIFICATION.

GREAT FEDFORD,

ROAD, MA

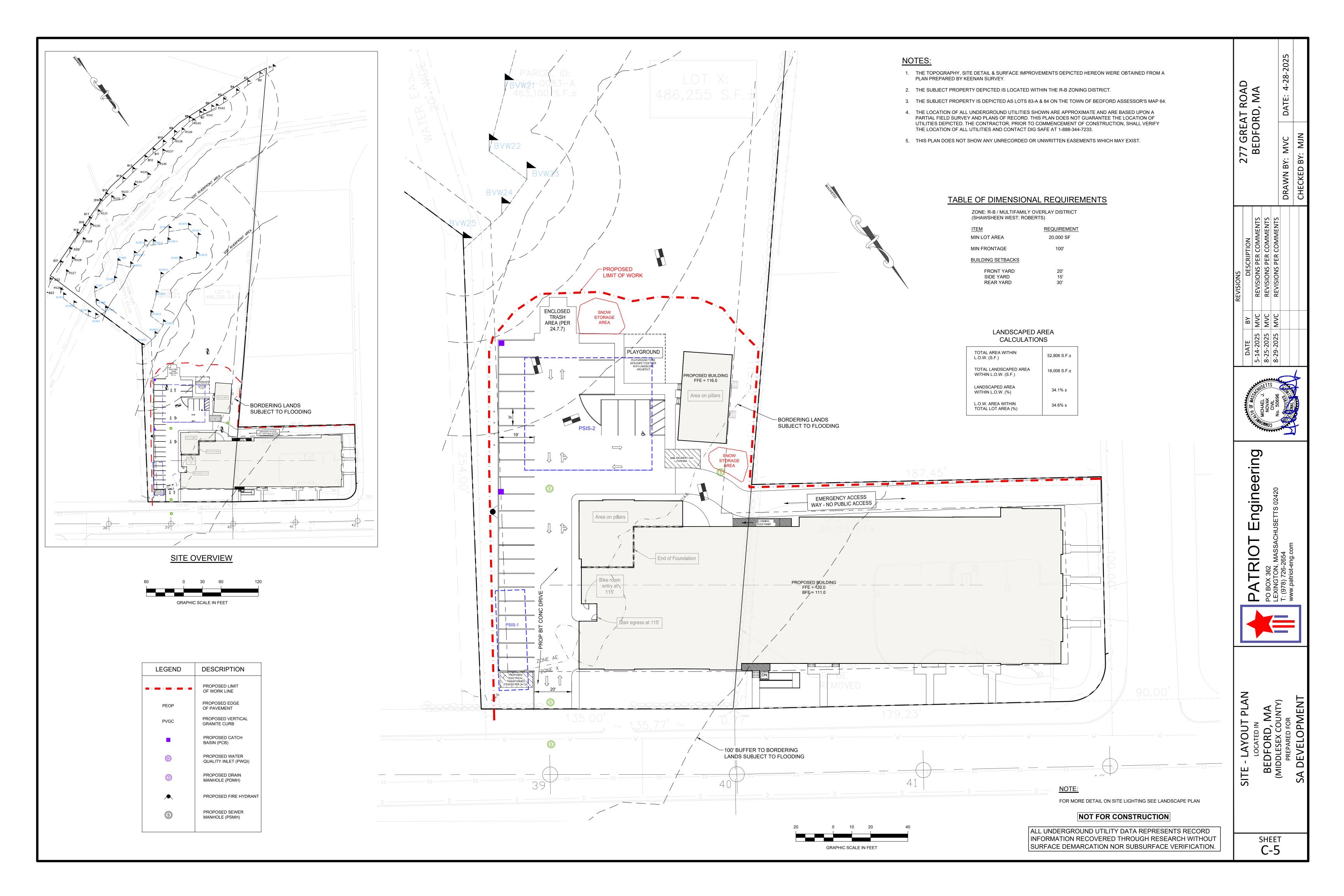


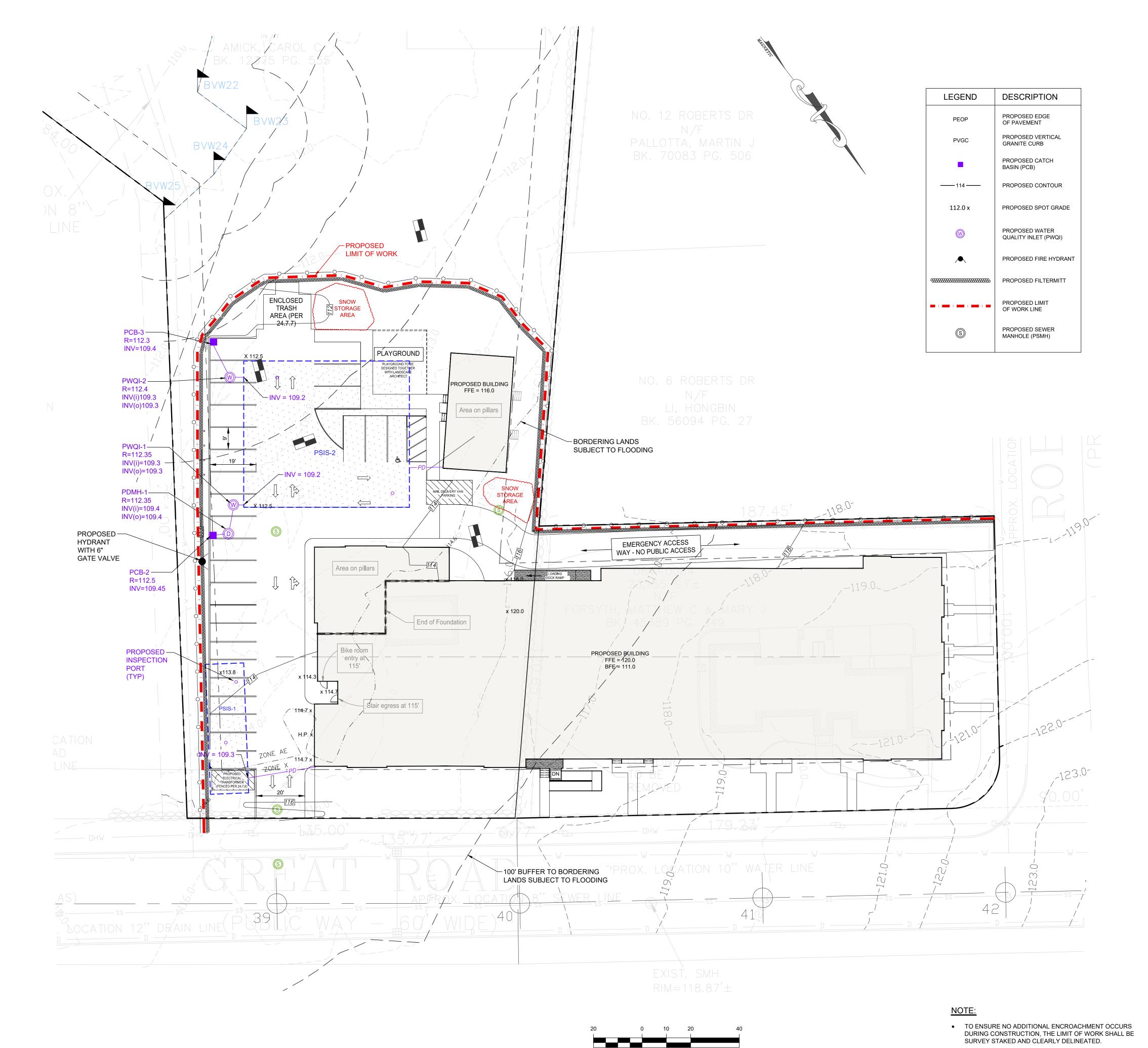
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BED!

MANAGE NOIL

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- 1. THE TOPOGRAPHY, SITE DETAIL & SURFACE IMPROVEMENTS DEPICTED HEREON WERE OBTAINED FROM A PLAN PREPARED BY KEENAN SURVEY.
- 2. THE SUBJECT PROPERTY DEPICTED IS LOCATED WITHIN THE R-B ZONING DISTRICT.
- 3. THE SUBJECT PROPERTY IS DEPICTED AS LOTS 83-A & 84 ON THE TOWN OF BEDFORD ASSESSOR'S
- 4. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED UPON A PARTIAL FIELD SURVEY AND PLANS OF RECORD. THIS PLAN DOES NOT GUARANTEE THE LOCATION OF UTILITIES DEPICTED. THE CONTRACTOR, PRIOR TO COMMENCEMENT OF CONSTRUCTION, SHALL VERIFY THE LOCATION OF ALL UTILITIES AND CONTACT DIG SAFE AT
- 5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST.
- 6. FOR ADDITIONAL HARDSCAPE DETAILS AND INFORMATION SEE LANDSCAPE PLAN.
- 7. FOR ADDITIONAL LIGHTING DETAILS AND INFORMATION SEE LANDSCAPE PLAN.

GRADING & DRAINAGE NOTES:

- 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 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
- 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.
- 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 IF N.P.D.E.S. PERMIT IS APPLICABLE.
- 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.
- 15. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) MUST BE FILED WITH THE NPDES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

TABLE OF DIMENSIONAL REQUIREMENTS

ZONE: R-B / MULTIFAMILY OVERLAY DISTRICT (SHAWSHEEN WEST: ROBERTS)

<u>ITEM</u>	REQUIREME
MIN LOT AREA	20,000 SF
MIN FRONTAGE	100'
BUILDING SETBACKS	
FRONT YARD	20'
SIDE YARD	15'
REAR YARD	30'

COMPENSATORY FLOOD STORAGE / CUT / FILL CALCS

<u>ELEV</u>	CUT(CF)	FILL(CF)	TOTAL (CF)
112-113	377	267	-110
113-114	1860	693	-1167
114-114.6	1862	1220	-642
TOTAL	4099	2180	-1919
	(0 5		
	(CF)	CUBIC FEET	

TOTAL DISTURBED AREA WITHIN BORDERING LANDS SUBJECT TO FLOODING = 19,803 S.F.± (45.5% OF AN ACRE).

ALL TREES WITHIN LIMIT OF WORK TO BE REMOVED

NOT FOR CONSTRUCTION

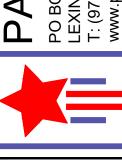
ALL UNDERGROUND UTILITY DATA REPRESENTS RECORD INFORMATION RECOVERED THROUGH RESEARCH WITHOUT SURFACE DEMARCATION NOR SUBSURFACE VERIFICATION.

GREAT ROAD EDFORD, MA



| ₩ | ₩ | ₩ |





- GRADING & DRAINAGE
LOCATED IN
BEDFORD, MA
(MIDDLESEX COUNTY)

SITE

SHEET C-6



NOTES:

- 1. THE TOPOGRAPHY, SITE DETAIL & SURFACE IMPROVEMENTS DEPICTED HEREON WERE OBTAINED FROM A PLAN PREPARED BY KEENAN SURVEY.
- 2. THE SUBJECT PROPERTY DEPICTED IS LOCATED WITHIN THE R-B ZONING DISTRICT.
- 3. THE SUBJECT PROPERTY IS DEPICTED AS LOTS 83-A & 84 ON THE TOWN OF BEDFORD ASSESSOR'S MAP 64.
- 4. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED UPON A PARTIAL FIELD SURVEY AND PLANS OF RECORD. THIS PLAN DOES NOT GUARANTEE THE LOCATION OF UTILITIES DEPICTED. THE CONTRACTOR, PRIOR TO COMMENCEMENT OF CONSTRUCTION, SHALL VERIFY THE LOCATION OF ALL UTILITIES AND CONTACT DIG SAFE AT 1-888-344-7233.
- 5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST.

TABLE OF DIMENSIONAL REQUIREMENTS

ZONE: R-B / MULTIFAMILY OVERLAY DISTRICT (SHAWSHEEN WEST: ROBERTS)

REQUIREMENT 20,000 SF MIN LOT AREA MIN FRONTAGE 100' **BUILDING SETBACKS** FRONT YARD

SIDE YARD REAR YARD

COMPENSATORY FLOOD STORAGE / CUT / FILL CALCS

<u>ELEV</u>	CUT(CF)	FILL(CF)	TOTAL(CF)
112-113	377	267	-110
113-114	1860	693	-1167
114-114.6	1862	1220	-642
TOTAL	4099	2180	-1919
1011 E	1000		1010
	(CF)	CUBIC FEET	

TOTAL DISTURBED AREA WITHIN BORDERING LANDS SUBJECT TO FLOODING = 19,803 S.F.± (45.5% OF AN ACRE).

LEGEND	DESCRIPTION
	PROPOSED CUT
	PROPOSED FILL
PEOP	PROPOSED EDGE OF PAVEMENT
PVGC	PROPOSED VERTICAL GRANITE CURB
•	PROPOSED CATCH BASIN (PCB)
 114 	PROPOSED CONTOUR
112.0 x	PROPOSED SPOT GRADE
(1)	PROPOSED WATER QUALITY INLET (PWQI)
, ●\	PROPOSED FIRE HYDRANT
	PROPOSED FILTERMITT
	PROPOSED LIMIT OF WORK LINE
	PROPOSED SEWER MANHOLE (PSMH)

NOT FOR CONSTRUCTION

ALL UNDERGROUND UTILITY DATA REPRESENTS RECORD INFORMATION RECOVERED THROUGH RESEARCH WITHOUT SURFACE DEMARCATION NOR SUBSURFACE VERIFICATION.

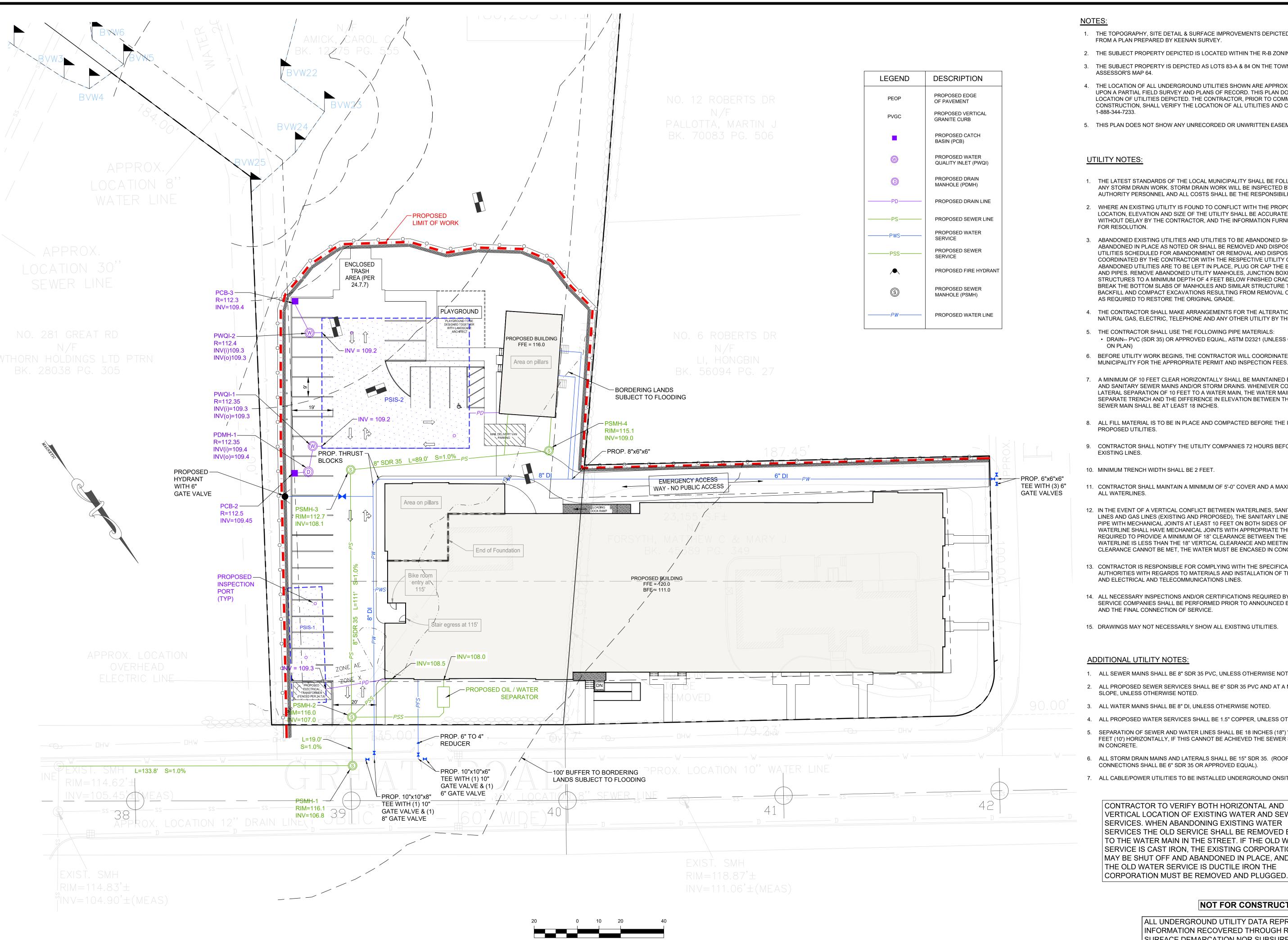
277 GREAT ROAD BEDFORD, MA

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PATRIOT

SHEET



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- 5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST.
- 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
- 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 CRADE 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-- PVC (SDR 35) OR APPROVED EQUAL, ASTM D2321 (UNLESS OTHERWISE SPECIFIED
- 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 THE INSTALLATION OF
- 9. CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINES.
- 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. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER, SEWER, GAS AND ELECTRICAL AND TELECOMMUNICATIONS LINES.
- 14. 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.
- 15. DRAWINGS MAY NOT NECESSARILY SHOW ALL EXISTING UTILITIES.

ADDITIONAL UTILITY NOTES:

- 1. ALL SEWER MAINS SHALL BE 8" SDR 35 PVC, UNLESS OTHERWISE NOTED.
- 2. ALL PROPOSED SEWER SERVICES SHALL BE 6" SDR 35 PVC AND AT A MINIMUM 2% SLOPE, UNLESS OTHERWISE NOTED.
- 3. ALL WATER MAINS SHALL BE 8" DI, UNLESS OTHERWISE NOTED.
- 4. ALL PROPOSED WATER SERVICES SHALL BE 1.5" COPPER, UNLESS OTHERWISE NOTED.
- SEPARATION OF SEWER AND WATER LINES SHALL BE 18 INCHES (18") VERTICALLY OR 10 FEET (10') HORIZONTALLY, IF THIS CANNOT BE ACHIEVED THE SEWER SHALL BE INCASED
- 6. ALL STORM DRAIN MAINS AND LATERALS SHALL BE 15" SDR 35. (ROOF AND YARD DRAIN CONNECTIONS SHALL BE 6" SDR 35 OR APPROVED EQUAL).
- 7. ALL CABLE/POWER UTILITIES TO BE INSTALLED UNDERGROUND ONSITE.

CONTRACTOR TO VERIFY BOTH HORIZONTAL AND VERTICAL LOCATION OF EXISTING WATER AND SEWER SERVICES. WHEN ABANDONING EXISTING WATER SERVICES THE OLD SERVICE SHALL BE REMOVED BACK TO THE WATER MAIN IN THE STREET. IF THE OLD WATER SERVICE IS CAST IRON, THE EXISTING CORPORATION MAY BE SHUT OFF AND ABANDONED IN PLACE, AND IF THE OLD WATER SERVICE IS DUCTILE IRON THE

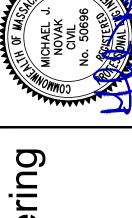
NOT FOR CONSTRUCTION

ALL UNDERGROUND UTILITY DATA REPRESENTS RECORD INFORMATION RECOVERED THROUGH RESEARCH WITHOUT SURFACE DEMARCATION NOR SUBSURFACE VERIFICATION.

ROAD, MA EAT | ORD, GR DF



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Ф Engine TRIO

SITE - UTILITY
LOCATED IN
BEDFORD, MA
(MIDDLESEX COUNTY

SHEET C-8

