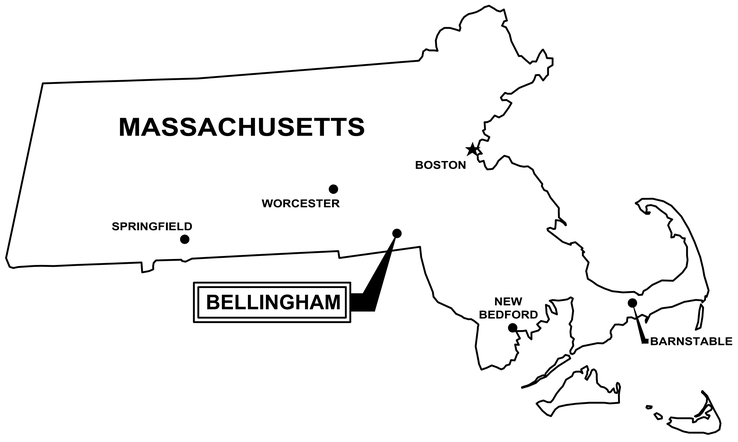
TOWN OF BELLINGHAM, MASSACHUSETTS

CONTRACT DRAWINGS FOR

WELL 10 ACCESS ROAD

MAY 2025



DRAWING INDEX

GENERAL

---	COVER SHEET

CIVIL

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EXISTING CONDITIONS

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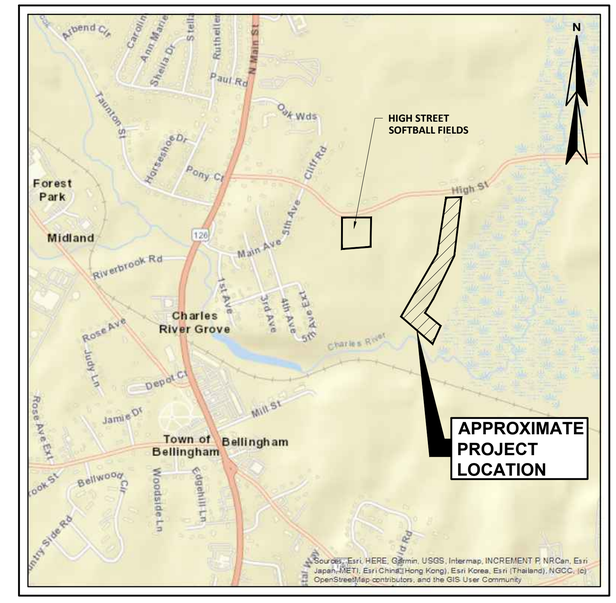
COMMONWEALTH OF MASSACHUSETTS
LAWRENCE A. RUSBECKI
CIVIL
No. 47984
REGISTERED PROFESSIONAL ENGINEER

5/12/2025



LOCATION PLAN

SCALE: 1"=15,000'

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WP PROJECT No. 21390

GENERAL NOTES

1. THE OWNER WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE PROJECT MANUAL SPECIFICATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION . COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE OWNER. ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW AT ALL TIMES. CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH THE MUTCD AND ALL STATE AND LOCAL REGULATIONS.

3. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

4. CONTRACTOR SHALL COMPLY WITH THE COORDINATION REQUIREMENTS AND RELATED COSTS, IF ANY, AS SPECIFIED IN SPECIFICATION SECTION 01050.

5. CONTRACTOR SHALL NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH A SLANTED TYPE TEXT.

6. ALL EXISTING UTILITIES AND STORM DRAIN LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE. ANY EXISTING UTILITIES, STORM DRAIN LINES OR CULVERTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, EXCEPT WHEN IN DIRECT CONFLICT WITH THE NEW WELL OR WHEN NOT SHOWN OR INDICATED.

7. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. INJURY TO ANY SUCH STRUCTURES CAUSED BY OR RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE . ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY.

8. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48-HOUR NOTICE TO THE RESPECTIVE UTILITY POLE OWNER. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES.

9. ALL TEST PITS SHALL BE EXCAVATED PRIOR TO CONSTRUCTION LAYOUT AND RESULTS REPORTED TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE PLANS. TESTS PITS ARE REQUIRED WHERE SHOWN ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER. TEST PITS WILL BE DUG AT LEAST 10 CALENDAR DAYS PRIOR TO CONNECTING PROPOSED WORK.

EXISTING SITE CONDITIONS

1. THE LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE AND MAY NOT BE COMPLETE. NO GUARANTEE IS MADE THAT UTILITIES OR STRUCTURES WILL BE ENCOUNTERED WHERE SHOWN, OR THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. ALL LOCATIONS AND SIZES OF EXISTING UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD WITH TEST PITS AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION OF NEW FACILITIES OR PIPING THAT MAY BE AFFECTED. THE CONTRACTOR WILL REALIGN NEW PIPE LOCATIONS AS REQUIRED TO CONFORM TO EXISTING LINES AND AS APPROVED BY THE ENGINEER.

2. BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY COMPANY REPRESENTATIVE PRIOR TO COMMENCING WORK. REFER TO SPECIFICATION SECTION 01050. ADDITIONAL TEST PITS, BEYOND THOSE SHOWN, MAY BE REQUIRED.

GAS/ ELECTRIC:
EVERSOURCE
(888) 663 - 3797

WATER/SEWER/DRAIN:
BELLINGHAM DEPT OF PUBLIC WORKS
315 DEPOT STREET
BELLINGHAM, MA
508-966-5813

TELEPHONE/CABLE:
VERIZON
800-922-0204

DIG SAFE:
888-344-7233

BELLINGHAM CON COM
CONSERVATION AGENT,
HANNAH CHASE
508-657-2858 - OFFICE

SITE DEMOLITION

1. REFER TO THE EXISTING CONDITIONS PLAN FOR EXISTING WELAND RESOURSES AND EXISTING SITE FEATURES. REFER TO THE LAYOUT DRAWING FOR LIMITS OF WORK.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE OWNER RESERVES THE RIGHT TO RETAIN ANY SUCH PIPING, EQUIPMENT AND MATERIALS DESIGNATED FOR DEMOLITION. SUCH MATERIALS TO BE RETAINED SHALL BE PROPERLY STORED IN AN ON-SITE LOCATION. COORDINATE LOCATION AND MATERIALS TO BE SALVAGED WITH THE OWNER/ENGINEER. REFER TO SPECIFICATION SECTION 02050A.

3. THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AS PART OF THE PROJECT RECORD DOCUMENTS IN ACCORDANCE WITH SPECIFICATION SECTION 01720.

SITE CLEARING, GRUBBING AND GRADING

1. STRIPPING OF TOPSOIL (LOAM) SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02115. REFER TO THE LAYOUT AND GRADING DRAWINGS FOR LIMIT OF WORK AND STRIPPING.

2. CONTRACTOR SHALL MINIMIZE CLEARING OPERATIONS. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02110. CLEARING LIMITS SHALL BE AS INDICATED ON THE DRAWINGS, BUT AT ALL TIMES WITHIN EXISTING ROAD RIGHTS_OF_WAY OR EASEMENTS. ALL CLEARING AND GRUBBING MATERIAL SHALL BE THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT A SITE PROVIDED BY THE CONTRACTOR IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS.

3. CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK, AND CONFINE SOIL SEDIMENT TO WITHIN THE LIMITS OF EXCAVATION AND GRADING. PRIOR TO BEGINNING EXCAVATION WORK, EROSION CONTROL FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE ACTUAL LIMITS OF GRUBBING AND/OR GRADING, AND AS SHOWN ON THE DRAWINGS. EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS ARE A MINIMUM, CONTRACTOR SHALL TAKE ALL OTHER NECESSARY MEASURES. EROSION CONTROL FENCE SHALL ALSO BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION. ALL INSTALLED EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE END OF THE PROJECT. REFER TO SPECIFICATION SECTION 02270.

4. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY SILT SACK FILTERS TO PREVENT ENTRY OF SEDIMENT FROM RUNOFF WATERS DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL COLLECTED SEDIMENT, AND THAT WHICH COLLECTS IN THE STORM DRAIN SYSTEM. REFER TO THE CIVIL DETAIL DRAWINGS.

7. CONTRACTOR SHALL CONTROL DUST ON THE CONSTRUCTION SITE TO A REASONABLE LIMIT, AS DETERMINED BY THE ENGINEER, AND AS OUTLINED IN SPECIFICATION SECTION 01562

8. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS AND PLANT DRIVES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP.

9. THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF AT A LOCATION PROVIDED BY THE CONTRACTOR. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING. THE CONTRACTOR SHALL DISPOSE OF UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS.

10. CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL DISTURBED ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.

11. WHERE EXISTING PAVEMENT IS REMOVED AND REPLACED, MATCH EXISTING GRADES TO THE EXTENT POSSIBLE. COORDINATE FINE GRADING WITH THE ENGINEER.

12. ALL ROAD AND DRIVE CROSS SLOPES SHALL PITCH 1/4-INCH PER FOOT MINIMUM. ALL PAVED SURFACES SHALL PITCH 1% UNLESS OTHERWISE NOTED. REFER TO THE CIVIL DETAIL DRAWINGS.

13. ALL NON-ROADWAY AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 4-INCHES OF SOIL SHALL BE LOAM . REFER TO SPECIFICATION SECTION 02485, LANDSCAPING/LOAM AND SEED.

14. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO DRAINAGE SYSTEM, OFF-SITE AREAS AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO THE OWNER.

CIVIL SITE LAYOUT

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION. REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

2. REFER TO THE SITE GRADING DRAWINGS FOR ADDITIONAL LAYOUT INFORMATION.

3. THE LOCATIONS AND LIMITS OF ALL ON-SITE WORK AND WELL AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO, THE OWNER AND ENGINEER. THE CONTRACTOR SHALL LIMIT ACTIVITIES TO THESE AREAS.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETTING ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY CONSTRUCTION. THIS WORK SHALL BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OF MA, AT NO ADDITIONAL COST TO THE OWNER.

5. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

6. ALL ELEVATIONS REFER TO THE }NAVD 1988 DATUM. ORIENTATION IS GRID NORTH ON THE MA STATE PLANE COORDINATE SYSTEM. PROJECT BENCH MARK IS SHOWN ON THE DRAWINGS AND IS DERIVED FROM NAD 1983. CONTRACTOR SHALL VERIFY BENCHMARK ELEVATIONS PRIOR TO USING IN CONSTRUCTION.

7. EXISTING CONDITIONS SITE PLAN DEVELOPED FROM SURVEY DRAWING PREPARED BY LANDTECH CONSULTANTS, DATED OCTOBER 2024, AND EXISTING RECORD DRAWING INFORMATION.

8. WETLAND BOUNDARIES DELINEATED BY CARON ENVIRONMENTAL CONSULTING IN SEPTEMBER 2024. WETLANDS FLAGS SURVEYED BY LANDTECH CONSULTANTS.

SPECIAL CONSTRUCTION NOTES

1. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL CONVENE A PRE-CONSTRUCTION MEETING WITH THE TOWN REPRESENTATIVES, CONSULTING ENGINEER, CONSTRUCTION MANAGER, CONSERVATION AGENT AND ANY OTHER AUTHORITIES HAVING JURISDICTION(S).

2. CONTRACTOR SHALL PROVIDE TWO-SETS OF AS-BUILT DRAWINGS AS WELL AS AN ELECTRIC CAD FILE PRIOR TO FINAL PAYMENT. AS-BUILT DRAWINGS SHALL BE IN ACCORDANCE WITH THE OWNERS ELECTRONIC FILE REQUIREMENTS. THE AS-BUILT DRAWINGS SHALL INCLUDE ALL SITE FEATURES, UTILITIES, GRADE ELEVATIONS WITH VERTICAL AND HORIZONTAL LOCATIONS. THE PLAN SHALL BE STAMPED/ SIGNED BY A PROFESSIONAL LAND SURVEYOR WITHIN THE STATE OF MASSACHUSETTS.

3. THE TOWN OF BELLINGHAM, SIGNED WPA FORM 5 - ORDER OF CONDITIONS IS NOT TO BE CONSTRUED AS AN ALL-INCLUSIVE APPROVAL, AS OTHER APPROVALS MAY BE NECESSARY, I.E. TOWN FORESTER, PLANNING & ZONING DEPARTMENT, FIRE DEPARTMENT AND DEPARTMENT OF PUBLIC WORKS, ETC.

4. ANY WORK AND MATERIAL WITHIN THE TOWN RIGHT-OF-WAY SHALL CONFORM TO THE TOWN DPW REQUIREMENTS.

5. THE CONTRACTOR MUST OBTAIN A STREET OPENING AND TRENCH PERMIT BEFORE CONSTRUCTION.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION. REPORT ANY LAOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

7. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

CIVIL ABBREVIATIONS

&	AND
Ø, DIA	DIAMETER
#, NO	NUMBER
AC	ASBESTOS CEMENT
APP'D	APPROVED
BR	BRICK
BLDG	BUILDING
CB	CATCH BASIN
CEN	CENTER
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CIPP	CURED-IN-PLACE-PIPE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
COR	CORNER
CY	CUBIC YARD
DEMO	DEMOLITION
DMH	DRAIN MANHOLE
DI	DUCTILE IRON
DR	DRAIN
DWG	DRAWING
EL	ELEVATION
EMH	ELECTRIC MANHOLE
FM	FORCE MAIN
FT	FEET
G	GAS
HDPE	HIGH DENSITY POLYETHYLENE
HYD	HYDRANT
IN	INCH
INF	INFLUENT
INV	INVERT
LB	POUNDS
LF	LINEAR FOOT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MW	MONITORING WELL
N	NORTH
NGVD	NATIONAL GEODETIC VERTICAL DATUM
N/A	NOT AVAILABLE/APPLICABLE
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OUT	OUTFALL
PC	PERFORATED CLAY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PS	PRIMARY SLUDGE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REQ'D	REQUIRED
S	SLOPE, SEWER
SD	STORM DRAIN
SF	SQUARE FEET
SMH	SANITARY SEWER MANHOLE
SQ	SQUARE
STA	STATION
T, XFMR	TRANSFORMER
TBM	TEMPORARY BENCH MARK
THK	THICKNESS
TOS	TOP OF STRUCTURE
TYP	TYPICAL
UD	UNDERDRAIN
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
VC	VITRIFIED CLAY
VF	VERTICAL FOOT
W/	WITH
W	POTABLE WATER

LEGEND

EXISTING		PROPOSED
	PROPERTY/ROW LINE	
	SETBACK LINE	
	EASEMENT LINE	
	CENTERLINE	
	EDGE OF PAVEMENT	
	CURBING	
	EDGE OF GRAVEL	
	EDGE OF CONCRETE	
122	CONTOUR	123
	BUILDING	
	STONEWALL	
	TREELINE	
	CHAIN LINK FENCE	
	BARB WIRE FENCE	
	RETAINING WALL	
	GUARDRAIL	
8" S	SEWER	8"S
4" FM	SEWER FORCE MAIN	4"FM
4" G	GAS	4"G
8" W	WATER	8"W
15" SD	STORM DRAIN	15"SD
6" UD	UNDERDRAIN	6"UD
12" CMP	CULVERT	12" CMP
	UNDERGROUND ELECTRIC	
	OVERHEAD ELECTRIC	
	UNDERGROUND TELEPHONE	
	UNDERGROUND CABLE TV	
	IRON PIPE/REBAR	
	DRILLHOLE	
	MONUMENT	
	SURVEY CONTROL POINT	
x 124.6	SPOT ELEVATION	x 134.5
SMH	SEWER MANHOLE	SMH
DMH	DRAINAGE MANHOLE	DMH
CB CB CB EMH	CATCH BASIN	CB CB
EMH	ELECTRIC MANHOLE	EMH
TMH	TELEPHONE MANHOLE	TMH
	SHUTOFF VALVE	
	WATER SERVICE SHUTOFF	
	YARD HYDRANT	
	HYDRANT	
	GAS SERVICE SHUTOFF	
	GAS GATE VALVE	
	UTILITY POLE	
	UTILITY POLE W/ GUY	
	UTILITY POLE W/ LIGHT	
	LIGHT POLE	
	BOLLARD	
	FLAGPOLE	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	SHRUB	
	WETLAND FLAG	
	EDGE OF WATER	
	STREAM	
	EDGE OF WETLANDS	
	FLOODPLAIN	
	WETLANDS	
	DRAINAGE FLOW	
	DRAINAGE SWALE	
	PAVEMENT MARKINGS	
	SIGN	
MB	MAILBOX	
	TEMPORARY BENCH MARK	
TP	TEST PIT	
B	TEST BORING	
P	TEST PROBE	
MW	MONITORING WELL	
	LIMIT OF WORK	
	SILT FENCE	
	STRAW WATTLE	
	RIPRAP	
	RAILROAD	
	MATCHLINE	

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			

PROJECT NO: 21390
DESIGNED: L.RUSIECKI
CAD COORD: S.CANTWELL
CAD: S.CANTWELL
CHECKED: L.RUSIECKI
DATE: 2025-2-26
APPROVED: L.RUSIECKI
DATE: 5/12/2025
SUBMISSION: WETLANDS

COMMONWEALTH OF MASSACHUSETTS
LAWRENCE A RUSIECKI
CIVIL
No. 47864
REGISTERED PROFESSIONAL ENGINEER
5/12/2025

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BURLINGTON, MA 01803

TOWN OF BELLINGHAM, MA
WELL 10 ACCESS ROAD

GENERAL NOTES, LEGEND, AND ABBREVIATIONS

DRAWING
C-1

LAST SAVED BY: SHAWN.CANTWELL 5/12/2025 11:38 AM
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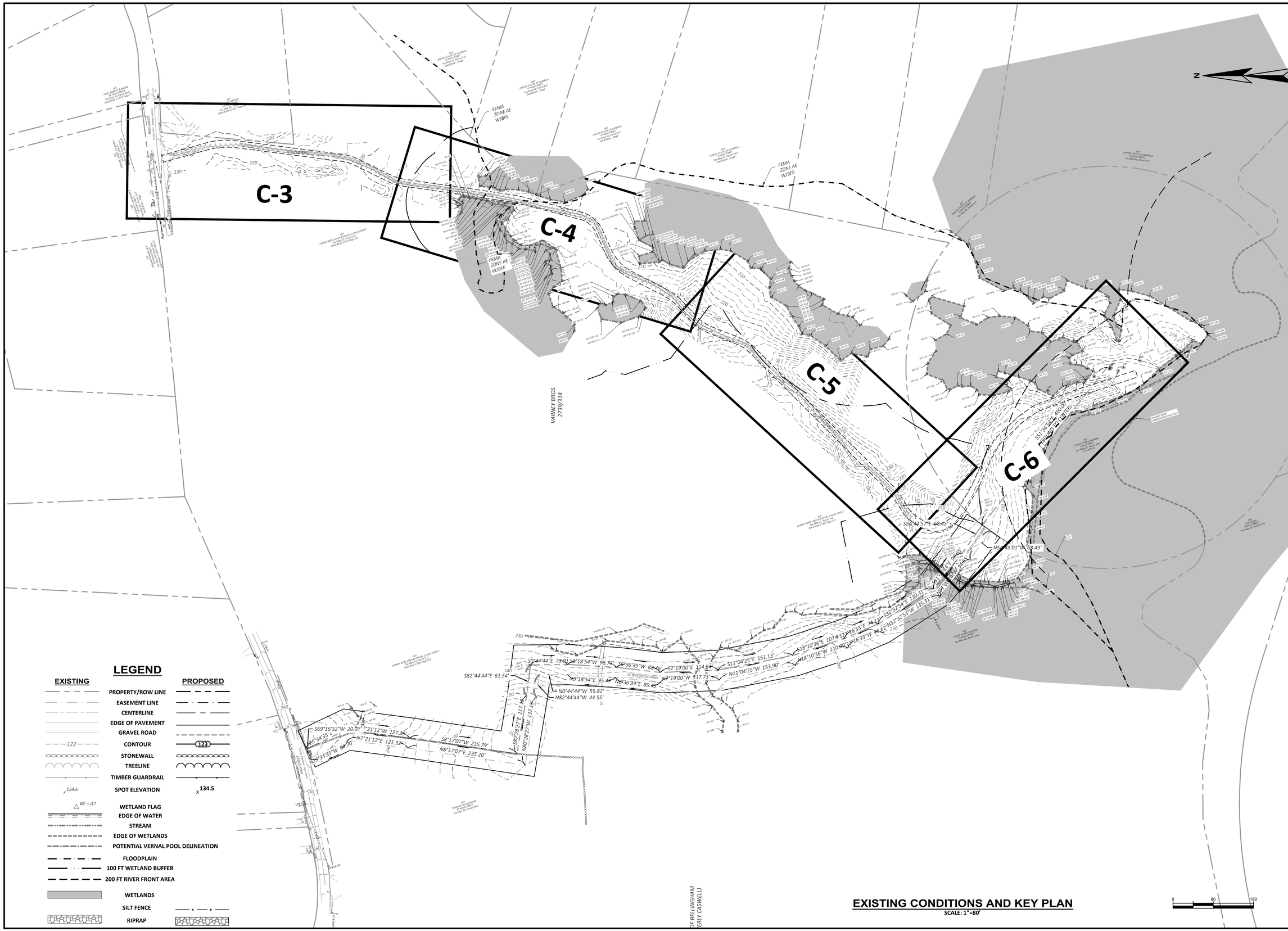

EXISTING CONDITIONS AND KEY PLAN

SCALE: 1"=80'

NO	REVISIONS	APP'D	DATE
1			
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TOWN OF BELLINGHAM, MA
WELL 10 ACCESS ROAD

EXISTING CONDITIONS AND KEY PLAN

DRAWING
C-2

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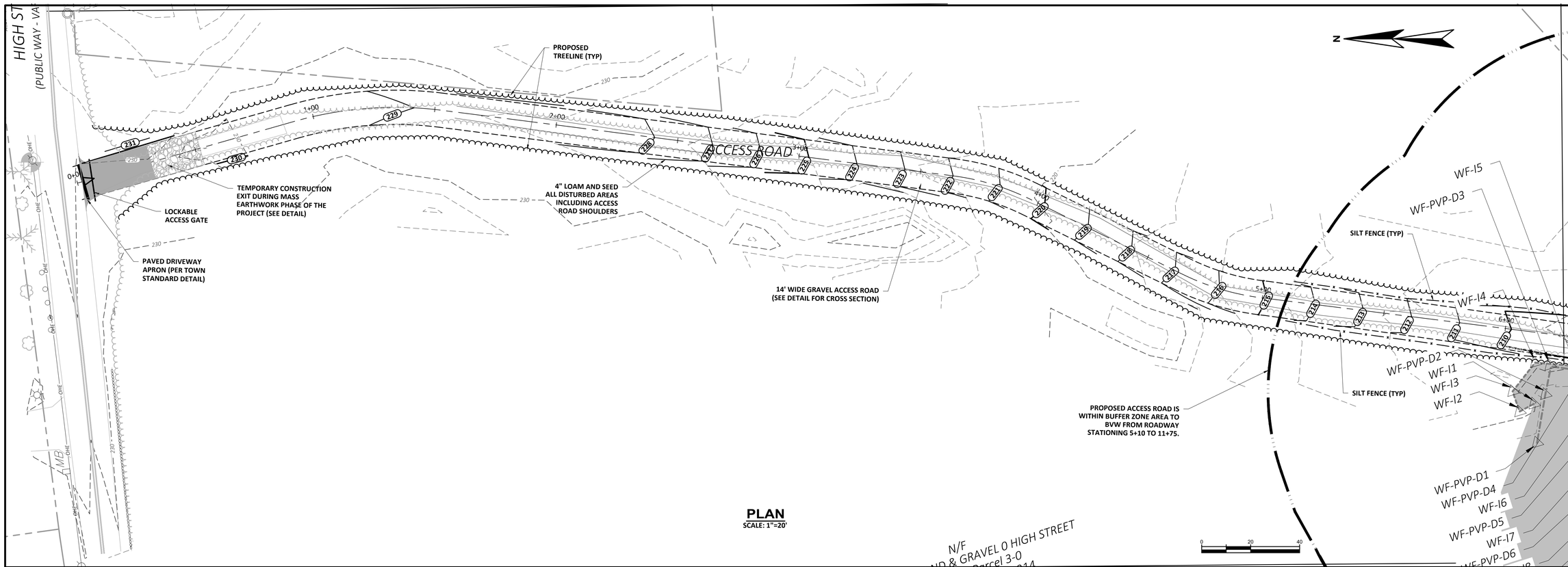
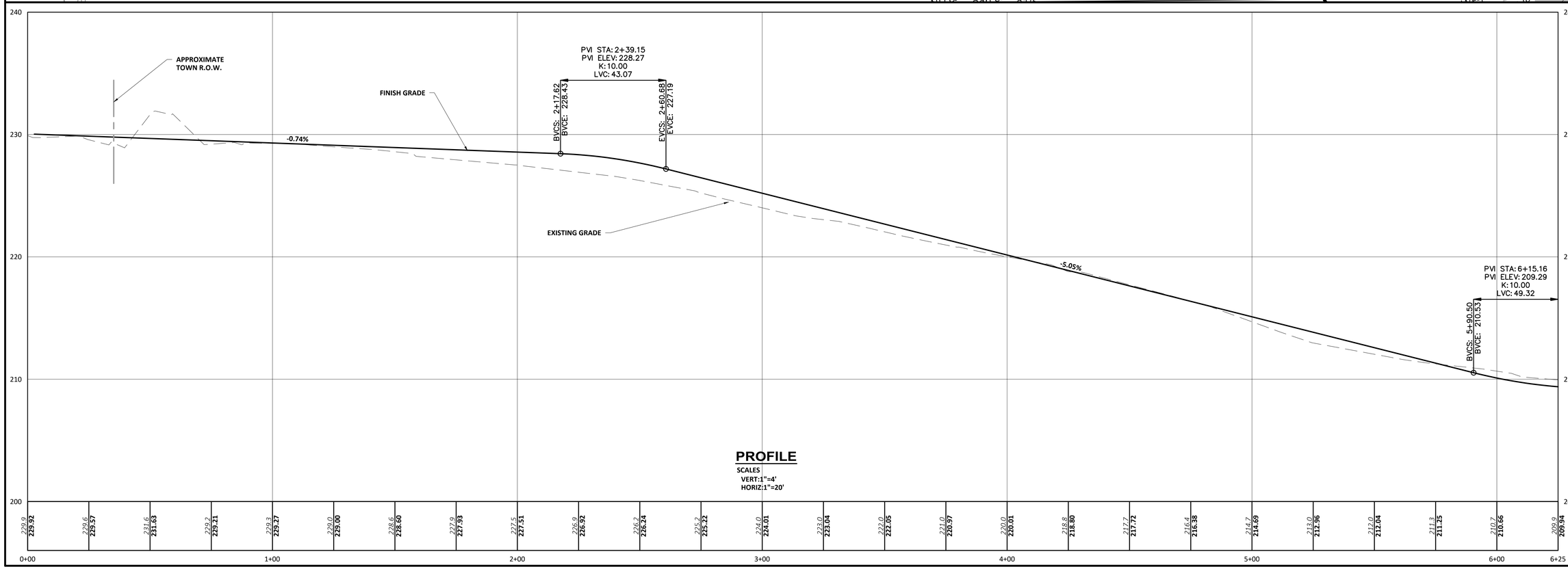


PLAN

SCALE: 1"=20'



PROFILE

SCALES
VERT:1"=4'
HORIZ:1"=20'

\\WRIGHT-PIERCE.COM\WPMFS\VOL4\ENG\MA\BELLINGHAM\21390-WELL10ACCESSROADDESIGN_DRAWINGS\CIV\21390-CS-PLANPROFILE1.DWG | 21390-CS-PlanProfile | 1:2.5849 | ---- | 5/27/2025 9:32:51 AM | LAWRENCE.RUSIECKI

NO	REVISIONS	APP'D	DATE
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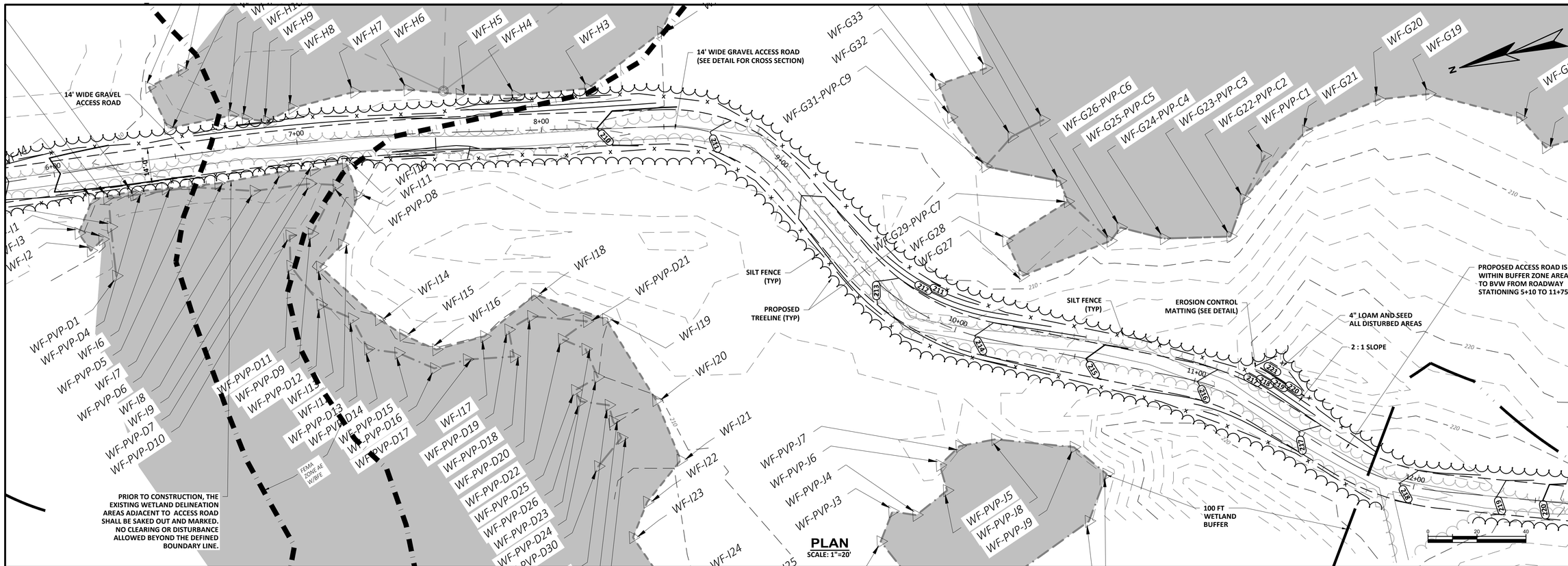
BURLINGTON, MA 01803

TOWN OF BELLINGHAM, MA
WELL 10 ACCESS ROAD

PLAN AND PROFILE STA. 0+00 TO 6+25

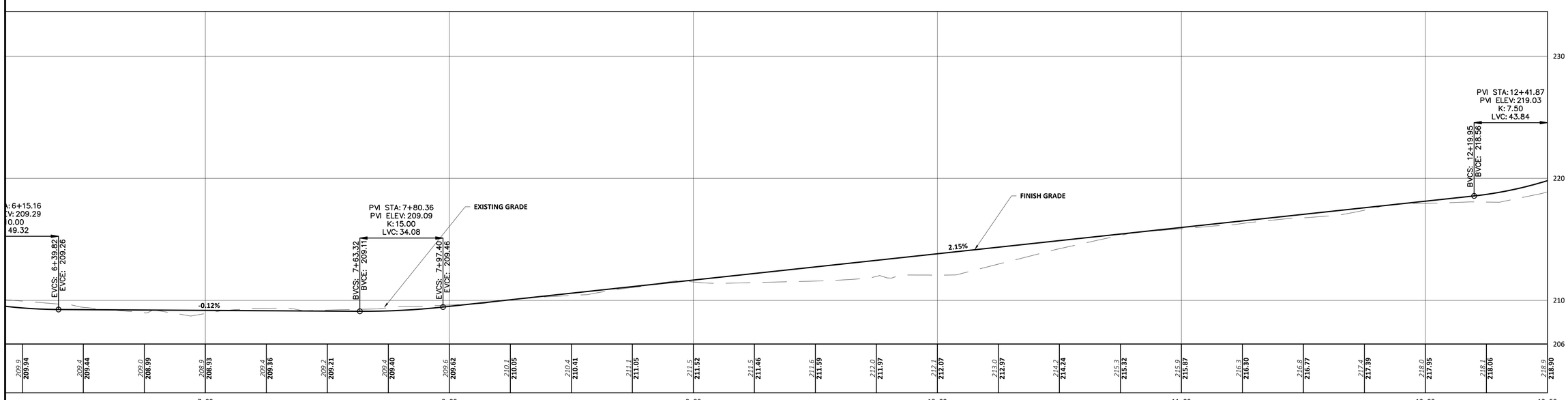
DRAWING
C-3

LAST SAVED BY: SHAWN.CANTWELL 5/12/2025 11:51 AM



PLAN

SCALE: 1"=20'



PROFILE

SCALES
VERT:1"=4'
HORIZ:1"=20'

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6			

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PLAN AND PROFILE STA. 6+25 TO 12+50

DRAWING
C-4

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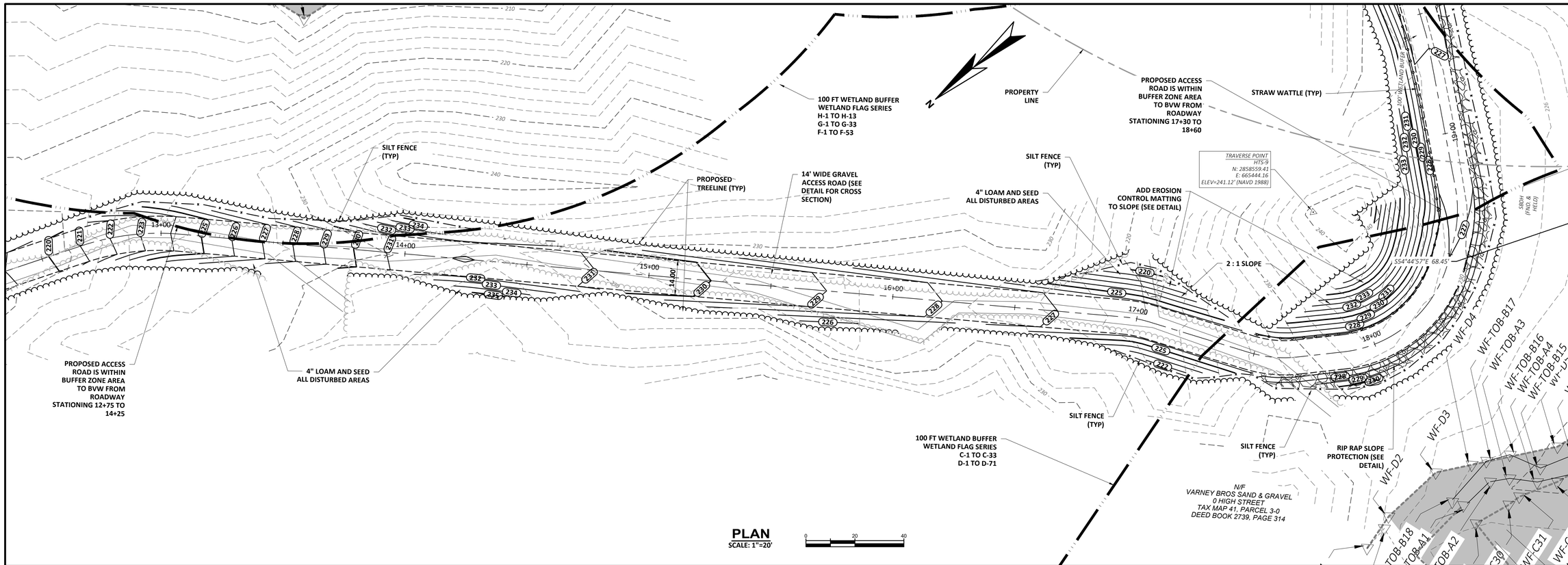

PLAN

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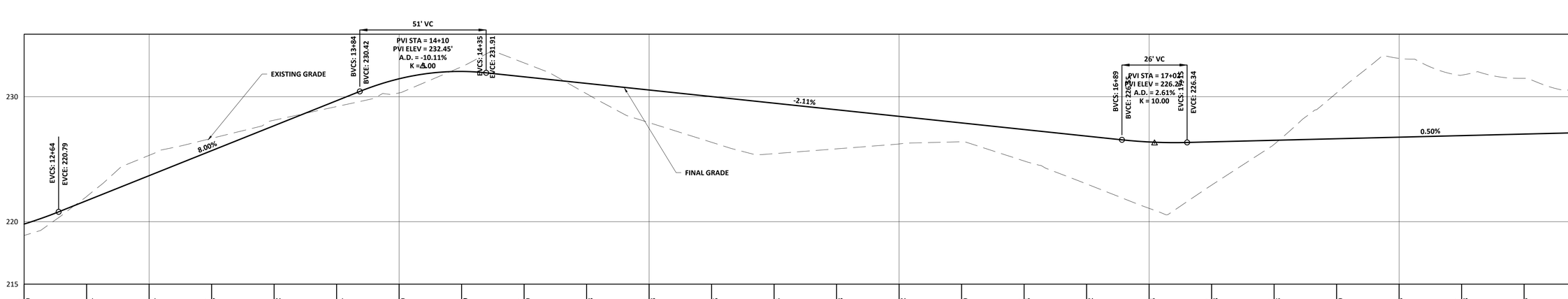

PROFILE

SCALES
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HORIZ:1"=20'

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PROJECT NO: 21390
DESIGNED: L.RUSIECKI
CAD COORD: S.CANTWELL
CAD: S.CANTWELL
CHECKED: L.RUSIECKI
DATE: 2025-2-26
APPROVED: L. RUSIECKI
DATE: 5/12/2025
SUBMISSION: WETLANDS

COMMONWEALTH OF MASSACHUSETTS
LAWRENCE A. RUSIECKI
CIVIL
No. 47864
REGISTERED PROFESSIONAL ENGINEER
5/12/2025

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PLAN AND PROFILE STA 12+50 TO 18+25

DRAWING
C-5

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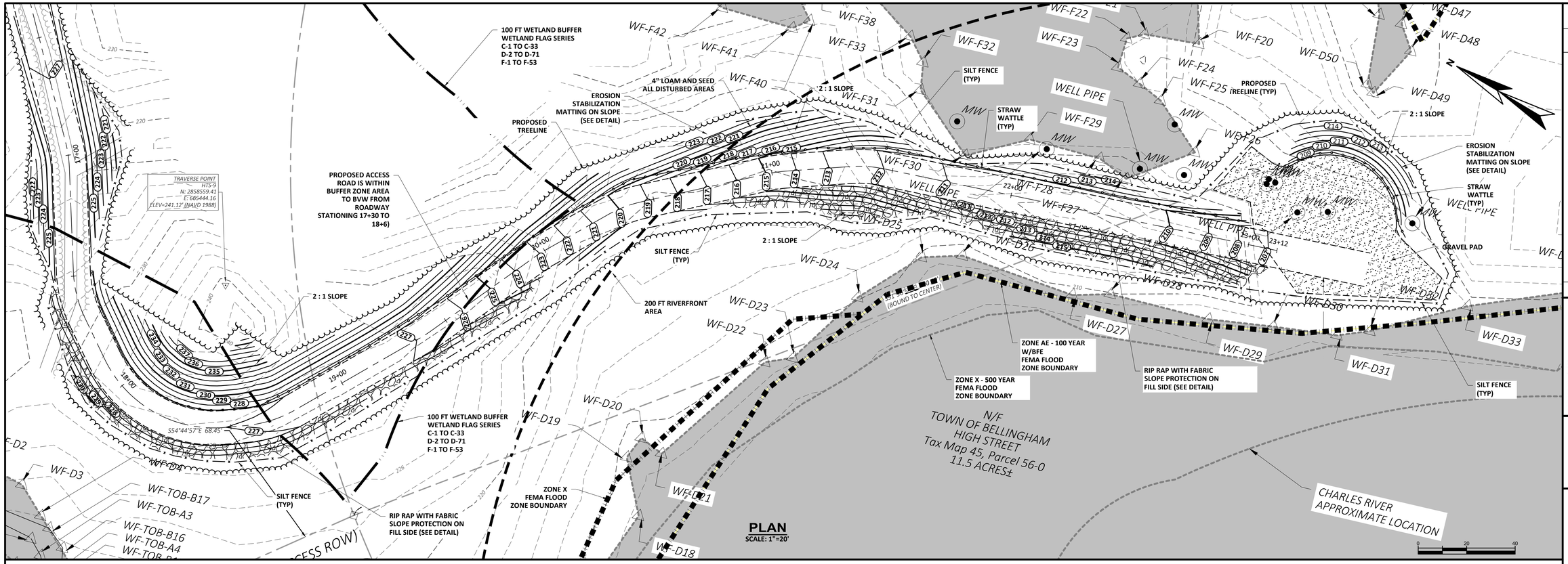

PLAN

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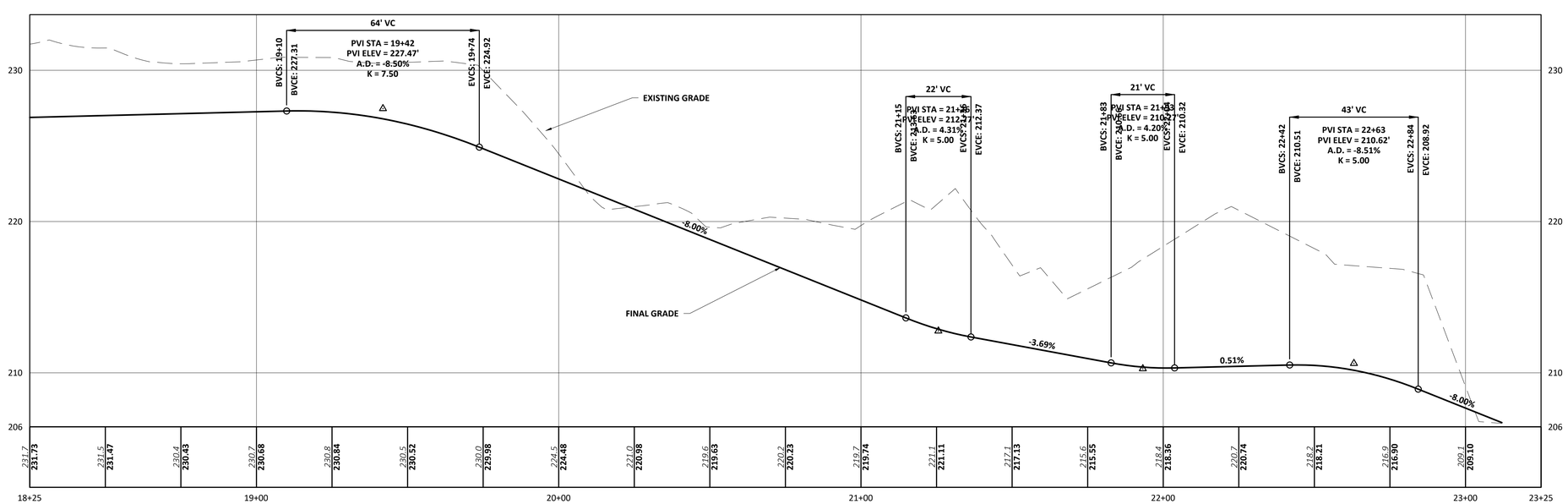

PROFILE

SCALES
VERT:1"=4'
HORIZ:1"=20'

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PLAN AND PROFILE STA 18+25 TO 23+25

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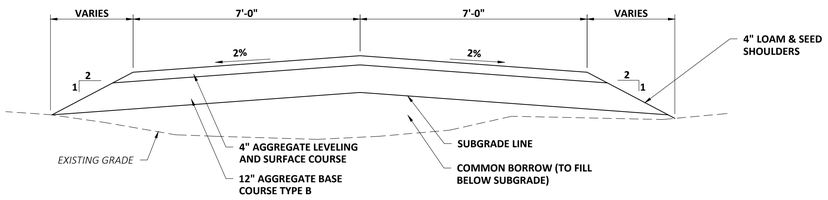

TYPICAL ACCESS ROAD SECTION
STA 0+00 TO STA 23+52
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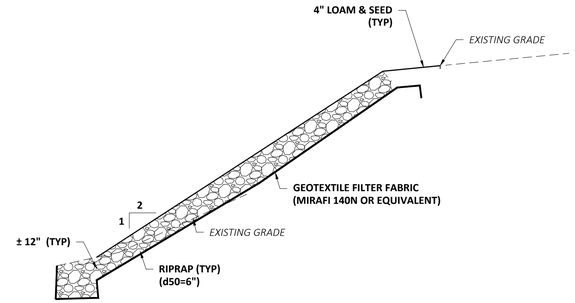
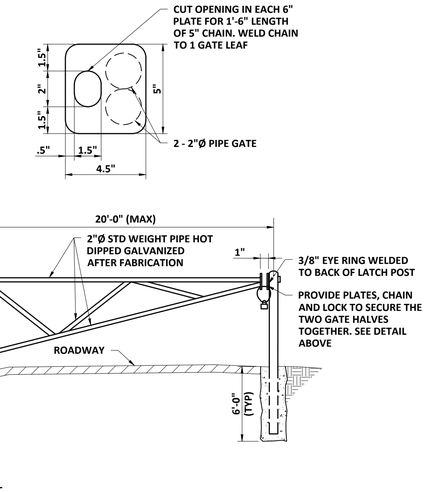


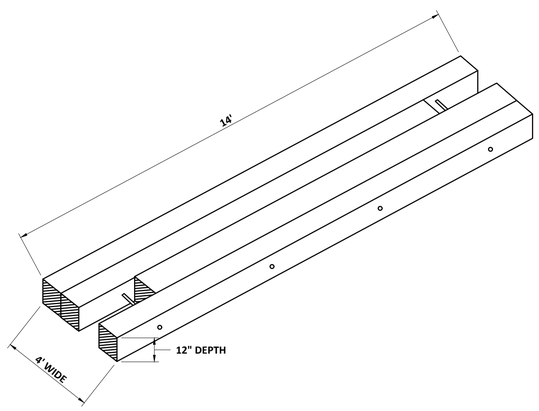
RIPRAP SLOPE PROTECTION
SCALE: NTS

NOTES:
1. PLACE RIPRAP AT 2:1 (HORIZONTAL:VERTICAL) SLOPE MAXIMUM.
2. TOE OF SLOPE RIPRAP SHOULD BE KEYED INTO THE EXISTING GROUND SURFACE A MINIMUM OF 1'-4".
3. A NON-WOVEN GEOTEXTILE FILTER FABRIC (MIRAFI 140N OR EQUIVALENT) SHOULD BE INSTALLED OVER SUBGRADE PRIOR TO PLACING RIPRAP. THE FILTER FABRIC SHOULD OVERLAP THE TOP OF THE RIPRAP.
4. WHERE REQUIRED, GRANULAR BORROW SHOULD BE PLACED IN 12" THICK LIFTS AND COMPACTED TO 92% OF IT'S MAXIMUM DRY DENSITY PER ASTM D-698 (STANDARD PROCTOR).



NOTES:
1. FURNISH MASTER PREMIUM PADLOCK WITH FOUR SETS OF KEYS.
2. APPLY HIGH VISIBILITY REFLECTIVE TAPE TO BOTH SIDES OF GATE AT THE TIME OF INSTALLATION.

SINGLE LEAF PIPE GATE
SCALE: NTS



TIMBER TRACK MAT
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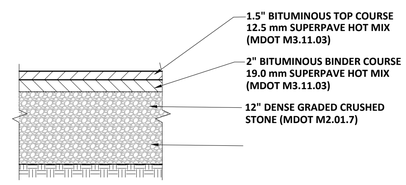

DRIVEWAY APRON PAVEMENT
SCALE: "NTS"

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TOWN OF BELLINGHAM, MA
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EROSION AND SEDIMENTATION CONTROL NOTES

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN URBAN AND SUBURBAN AREAS AS CONTAINED IN THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS", FRANKLIN, HAMPDEN, HAMPSHIRE CONSERVATION DISTRICTS, DATED MARCH, 1997.

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES REQUIRED FOR THE PUMP STATION AND WATER METERING STATION ARE SHOWN ON THE GRADING/EROSION CONTROL PLANS. PROVIDE SILT FENCE, STONE CHECK DAMS AND OTHER EROSION CONTROL MEASURES AS REQUIRED TO ADEQUATELY PREVENT SEDIMENT TRANSPORT AS NOTED IN THE BMP.

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS", FRANKLIN, HAMPDEN, HAMPSHIRE CONSERVATION DISTRICTS, DATED MARCH, 1997.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE MAINTAINED IN AN UNTREATED OR UNVEGETATED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL, AREAS TO BE VEGETATED SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
3. SEDIMENT BARRIERS (SILT FENCE, STONE CHECK DAMS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF UPGRADIENT DRAINAGE AREAS.
4. INSTALL SILT FENCE AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE SILT FENCE DETAIL FOR PROPER INSTALLATION. SILT FENCE WILL REMAIN IN PLACE PER NOTE #5.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSURE. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2 TO 1) UNLESS STABILIZED WITH PERMANENT EROSION CONTROL MEASURES.
7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT TO BE COMPLETED 30 DAYS PRIOR TO THE ANTICIPATED DATE OF THE FIRST KILLING FROST, USE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY PERMANENT SEEDING, UNTIL UPGRADIENT AREAS ARE STABILIZED.
8. WHEN FEASIBLE, TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINISH GRADED SHALL BE COMPLETED 30 DAYS PRIOR TO THE FIRST KILLING FROST.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND REVEGETATED AS FOLLOWS:
    - A. A MINIMUM OF FOUR (4) INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
    - B. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT DEEMED FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE OR 18.4 POUNDS PER 1,000 SQUARE FEET USING 10-20-20 (N-P205-K20) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SQ. FT.).
    - C. FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED WITH A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED WITH A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYE GRASS: SEEDING RATE IS 3.0 LB PER 1000 SQ. FT. LAWN QUALITY SOD MAY BE SUBSTITUTED FOR SEED.
    - D. STRAW MULCH AT THE RATE OF 70-90 LB PER 1000 SQUARE FEET OR A HYDRO-APPLICATION OF CELLULOSE FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER WILL BE USED ON STRAW MULCH FOR WIND CONTROL.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE WORK AREA IS STABILIZED.
12. WETLANDS (EXCEPTING THOSE WHICH ARE TO BE FILLED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS) WILL BE PROTECTED WITH SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
13. IN GENERAL, AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS SHALL HAVE A MAXIMUM PERIOD OF EXPOSURE OF NOT MORE THAN 15 DAYS.
14. FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IN ALL AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS.

EROSION CONTROL DURING WINTER CONSTRUCTION

1. WINTER CONSTRUCTION PERIOD DEFINED: NOVEMBER 1 THROUGH APRIL 15.
2. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY PRECIPITATION EVENT.
4. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW AT A RATE OF 100 POUNDS PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED, AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES, MULCH SHALL BE APPLIED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.
5. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE-FREEZING TEMPERATURES, THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1 AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED, AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE 200%-300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT EXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS PERMIT, ALL DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION IN ACCORDANCE WITH THE STANDARD DETAILS.
6. A) BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE EITHER WOOD CELLULOSE FIBER OR BE ANCHORED WITH MULCH NETTING OR CHEMICAL TACK.

   B) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3%, FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.

   C) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1, THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
7. AFTER NOVEMBER 1, THE CONTRACTOR SHALL APPLY DORMANT SEEDING OR MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.
8. DURING WINTER CONSTRUCTION PERIODS, ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

MULCH ANCHORING

ANCHOR MULCH WITH: MULCH NETTING (AS PER MANUFACTURER); ASPHALT EMULSION (0.05 GALLONS PER SQ. YD.); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); OR BE WOOD CELLULOSE FIBER (2000 LB/ACRE). WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

ADDITIONAL TEMPORARY SEED MIXTURE (OR PERIODS LESS THAN 12 MONTHS)

DATES	SEED	RATE
4/1 - 7/1 8/15 - 9/15	OATS	80 LB/ACRE
4/1 - 6/1 (8/15 - 9/15)	ANNUAL RYE GRASS	40 LB/ACRE
(8/15 - 10/15)	WINTER RYE	120 LB/ACRE
(11/1 - 4/1)	MULCH W/ DORMANT SEED	80 LB/ACRE*
(5/1 - 6/30)	FOXTAIL MILLET	30 LB/ACRE

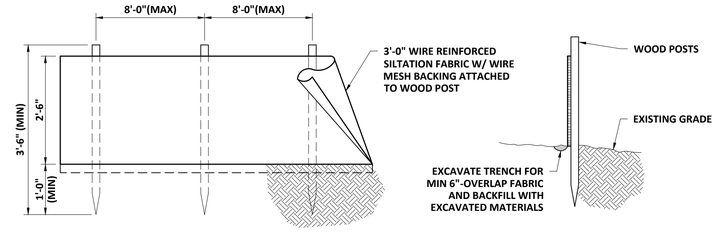
*SEED RATE ONLY

MULCH AND MULCH ANCHORING

MULCH

LOCATION	MULCH	RATE (1000 S.F.)
PROTECTED AREA	STRAW OR HYDROSEED *	100 POUNDS
WINDY AREAS	STRAW OR HYDROSEED (ANCHORED) *	100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES (GREATER THAN 3:1)	JUTE MESH, EXCELSIOR MAT OR EQUIV.	AS REQUIRED AS REQUIRED

* A HYDRO-APPLICATION OF CELLULOSE FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SHALL BE USED ON HAY MULCH FOR WIND CONTROL.



SILT FENCE INSTALLATION DETAIL
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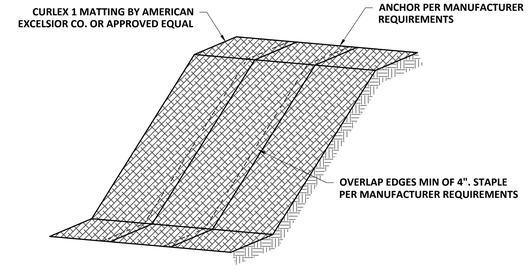
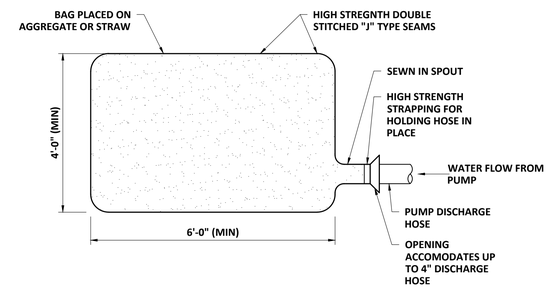
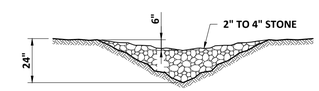


NOTE:
INSTALL ON SLOPES 3:1 OR GREATER

EROSION CONTROL MATTING - SLOPES
SCALE: NTS



DEWATERING FILTER BAG
SCALE: NTS



CROSS SECTION

DITCH SLOPE (FT/FT)	L (FT)
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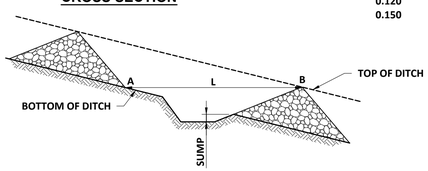
0.030	66
0.040	50
0.050	40
0.080	25
0.100	20
0.120	17
0.150	13



PROFILE

STONE CHECK DAM DETAIL
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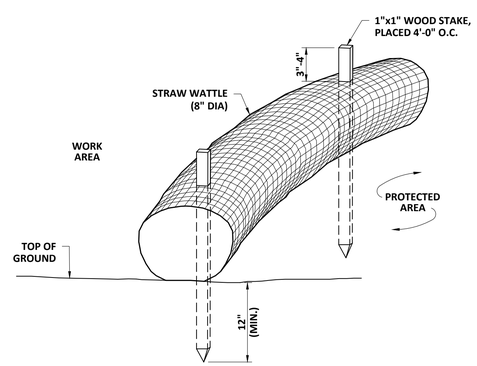
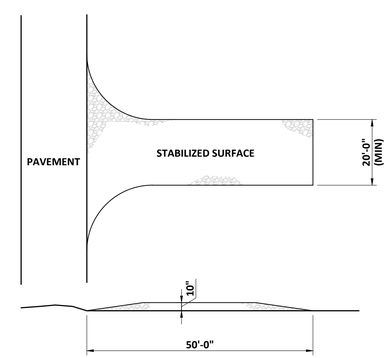


NOTE:
STRAW WATTLE SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

STRAW WATTLE DETAIL
NTS



(TEMPORARY, TO BE REMOVED AT PROJECT COMPLETION)

TEMPORARY CONSTRUCTION EXIT
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TOWN OF BELLINGHAM, MA
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EROSION CONTROL NOTES AND DETAILS

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SURVEY NOTES

1. TOPOGRAPHIC AND BOUNDARY INFORMATION SHOWN HEREON WAS OBTAINED FROM AN ON THE GROUND AND SURVEY CONDUCTED BY LANDTECH CONSULTANTS, INC. IN APRIL OF 2023 AND OCTOBER OF 2024.
2. THIS PLAN IS BASED ON THE REFERENCED PLANS, DEEDS, AND RESULTS OF A GROUND SURVEY. THE CERTIFICATION SHOWN IS INTENDED TO MEET THE REGISTRY OF DEEDS REQUIREMENTS, AND IS NOT A CERTIFICATION TO THE TITLE OR OWNERSHIP OF THE PROPERTY SHOWN, OR AS TO THE EXISTENCE OF UNRECORDED EASEMENTS. OWNERS OF ADJOINING PROPERTIES ARE SHOWN ACCORDING TO CURRENT ASSESSORS RECORDS.
3. THE BEARINGS, DISTANCES AND COORDINATES ARE BASED ON AND SHOWN HEREON IN U.S. SURVEY FEET IN MA. STATE PLANE COORDINATE SYSTEM REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83), CORS ADJUSTMENT (NA2011/GEOID 12A) AS DETERMINED BY REDUNDANT GPS OBSERVATIONS PERFORMED IN APRIL OF 2023 UTILIZING THE MACORS RTK GPS NETWORK.
4. THE VERTICAL DATUM FOR THIS PROJECT IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), CORS ADJUSTMENT (NA2011/GEOID 12A) AS DETERMINED BY REDUNDANT GPS OBSERVATIONS PERFORMED IN APRIL OF 2023 UTILIZING THE MACORS RTK GPS NETWORK.
5. UTILITY INFORMATION SHOWN HEREON IS BASED ON RECORD INFORMATION AND FIELD OBSERVATIONS. A SUBSURFACE INVESTIGATION WAS NOT PERFORMED.
6. WETLAND FLAGS WERE DELINEATED BY OTHERS AND LOCATED BY LANDTECH IN APRIL OF 2023 AND OCTOBER OF 2024.
7. THE SUBJECT PARCEL IS PARTIALLY LOCATED IN FLOOD ZONE AE (AREAS DETERMINED TO BE PARTIALLY INSIDE SPECIAL FLOOD HAZARD AREAS) AND ZONE X, AS DEFINED IN FEMA FLOOD INSURANCE RATE MAP COMMUNITY PANEL No. 25021C0304E WITH AN EFFECTIVE DATE OF JULY 17, 2012.

DEED REFERENCES

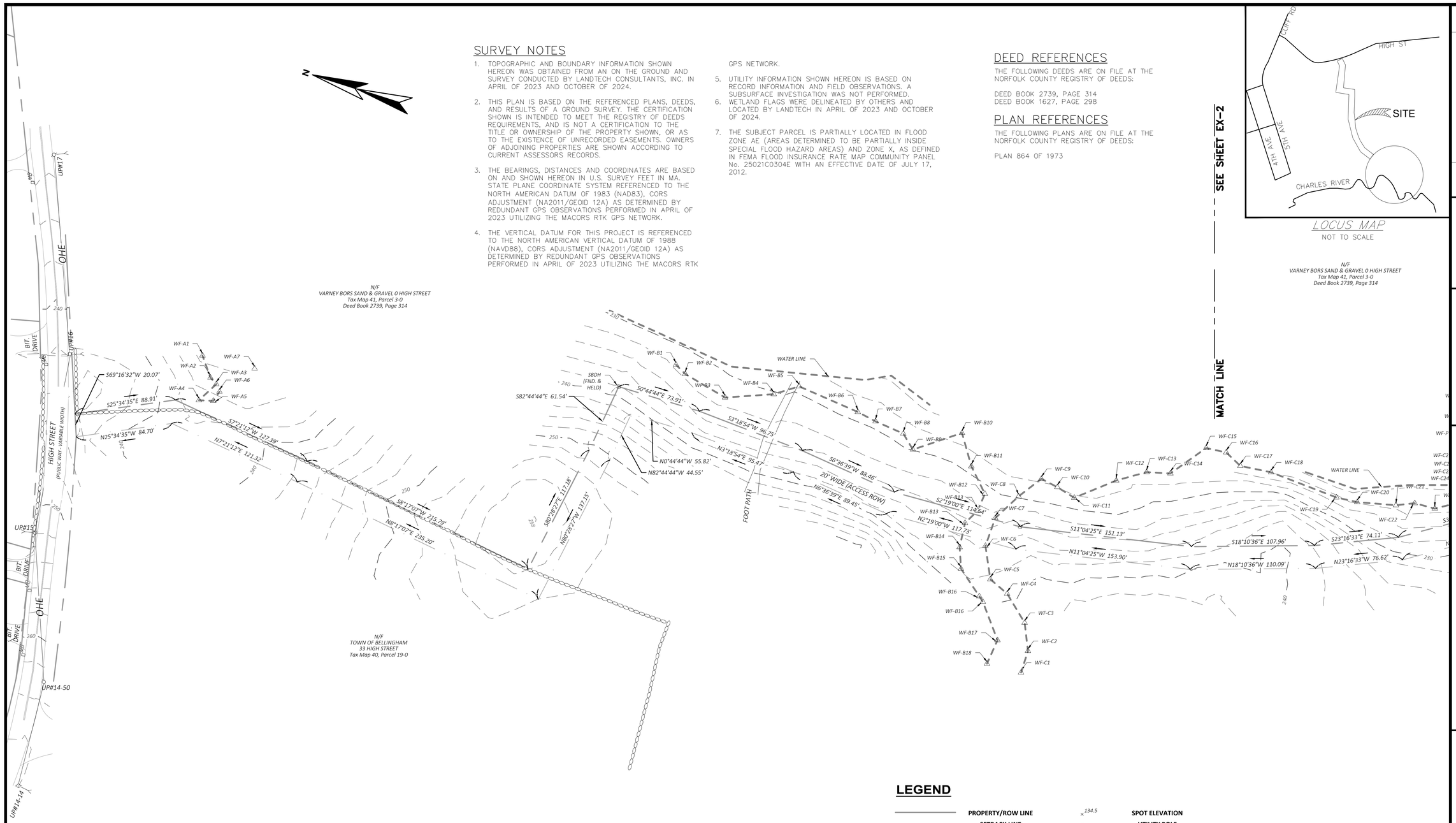
THE FOLLOWING DEEDS ARE ON FILE AT THE NORFOLK COUNTY REGISTRY OF DEEDS:

DEED BOOK 2739, PAGE 314
DEED BOOK 1627, PAGE 298

PLAN REFERENCES

THE FOLLOWING PLANS ARE ON FILE AT THE NORFOLK COUNTY REGISTRY OF DEEDS:

PLAN 864 OF 1973



LOCUS MAP
NOT TO SCALE

LEGEND

	PROPERTY/ROW LINE	134.5	SPOT ELEVATION
	SETBACK LINE		UTILITY POLE
	EASEMENT LINE		UTILITY POLE W/ GUY
	EDGE OF PAVEMENT		LIGHT POLE
	CURBING		CONIFEROUS TREE
	EDGE OF GRAVEL		DECIDUOUS TREE
	EDGE OF CONCRETE		SHRUB
122	CONTOUR		WETLAND FLAG
	STONEWALL		EDGE OF WATER
	TREELINE		STREAM
	CHAIN LINK FENCE		EDGE OF WETLANDS
	STOCKADE FENCE		FLOODPLAIN
OHE	OVERHEAD ELECTRIC		WETLANDS
	IRON PIPE/REBAR	MB	MAILBOX
	DRILLHOLE	MW	MONITORING WELL
	MONUMENT		

0 40 80 120
SCALE IN FEET

CERTIFICATION

I CERTIFY THAT THE PROPERTY LINES SHOWN HEREON ARE THE LINES DIVIDING EXISTING OWNERSHIPS, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.

MASSACHUSETTS REGISTERED LAND SURVEYOR
REGISTRATION No. 48095
(FOR LANDTECH CONSULTANTS, INC.)

DATE

DATE	REVISION	BY

PREPARED FOR:
JAMES CRAY, PE
WRIGHT-PIERCE
10 DORRANCE STREET
PROVIDENCE, RI 02903

CHECK MKG
DRAFT ZJJ
DESIGN MKG

EXISTING CONDITIONS PLAN
WELL 10
HIGH STREET
BELLINGHAM, MA

OCTOBER 31, 2024

SCALE: 1" = 40'

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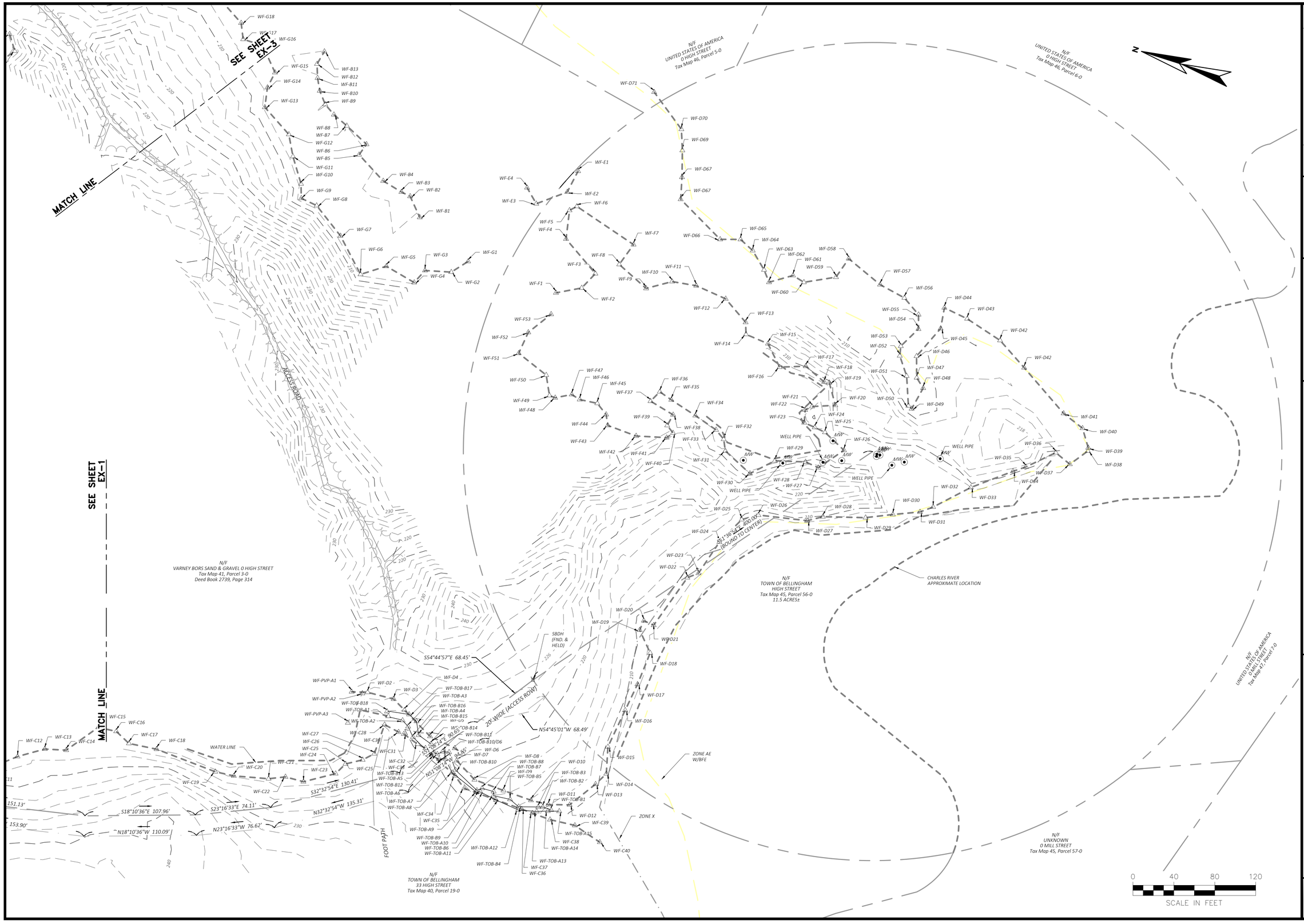
JOB NO. 23-124
DWG. NO. 11160
SHEET EX-1



DATE	REVISION	BY

PREPARED FOR:
JAMES CRAY, PE
WRIGHT-PIERCE
10 CORPORATE STREET
PROVIDENCE, RI 02903

DESIGN	DRAFT	CHECK
MKG	ZJJ	MKG

EXISTING CONDITIONS PLAN

WELL 10
HIGH STREET
BELLINGHAM, MA

OCTOBER 31, 2024

SCALE: 1" = 40'

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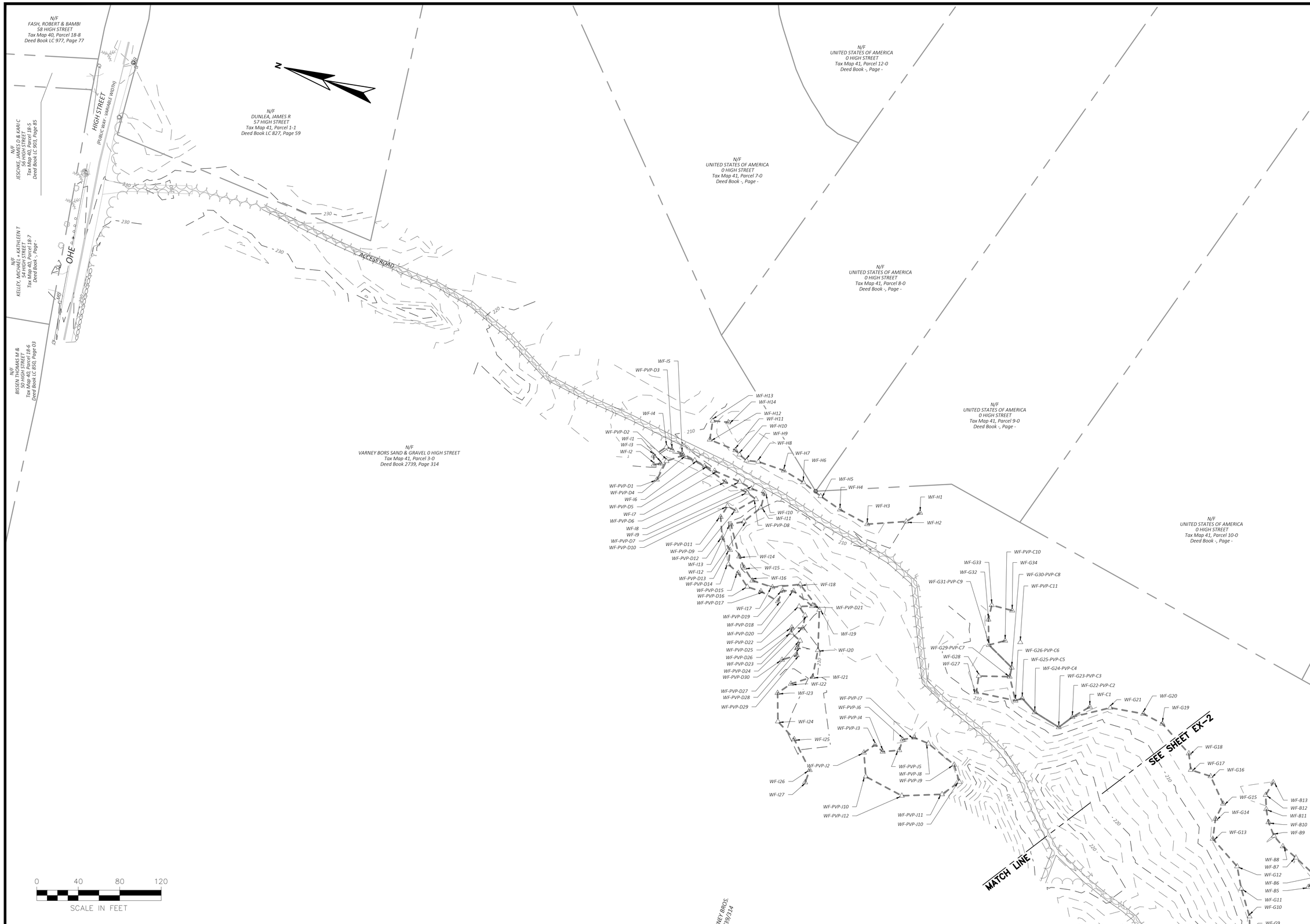
JOB NO.	DWG. NO.	SHEET
23-124	11160	EX-2



DATE	REVISION	BY

PREPARED FOR:
JAMES CRAY, PE
WRIGHT-PIERCE
10 DORRANCE STREET
PROVIDENCE, RI 02903

DESIGN	DRAFT	CHECK
MKG	ZJJ	MKG

EXISTING CONDITIONS PLAN

WELL 10
HIGH STREET
BELLINGHAM, MA

OCTOBER 31, 2024

SCALE: 1" = 40'

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23-124	11160	EX-3