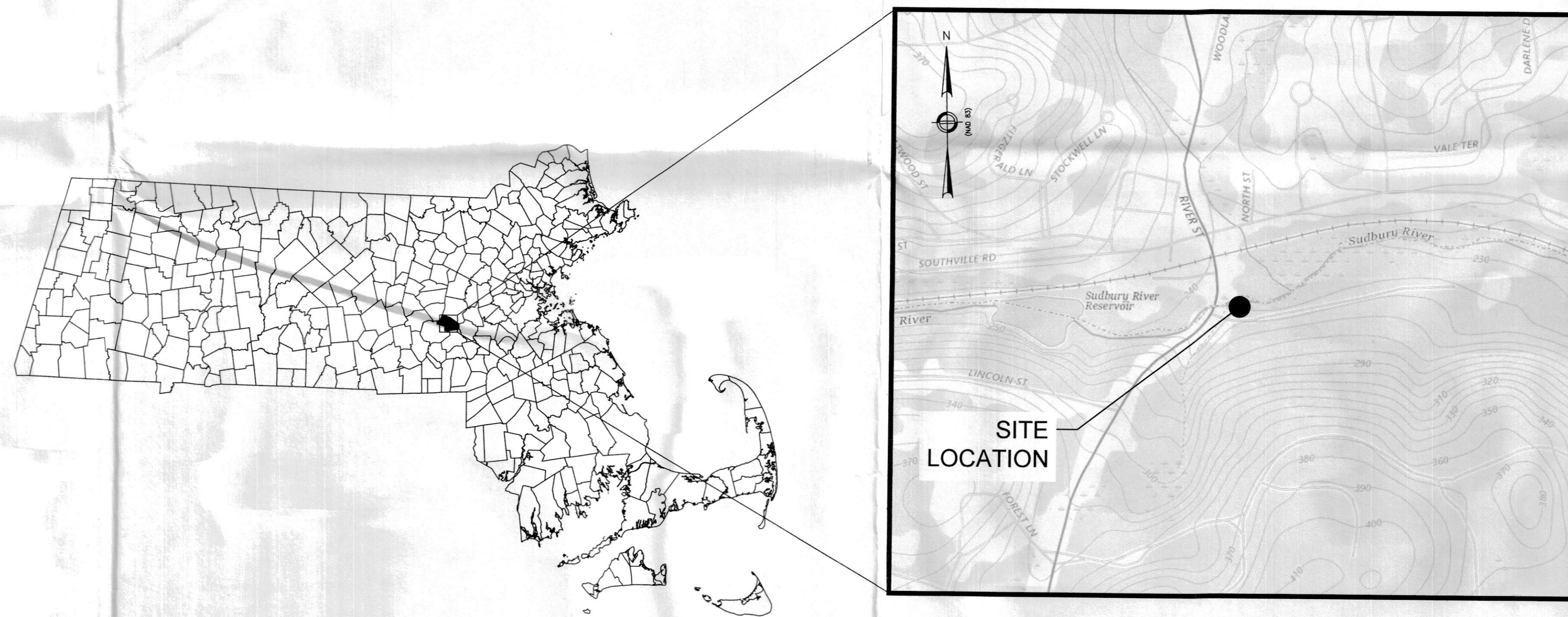


OFFICE OF FISHING AND BOATING ACCESS  
**SUDBURY RIVER ACCESS FACILITY**  
**ASHLAND, MA**

AUGUST 2021

CLIENT REPRESENTATIVES

DOUGLAS H. CAMERON – DIRECTOR – OFBA



<u>SHEET</u>	<u>TITLE</u>
C-1	EXISTING CONDITIONS
C-2	PROPOSED CONDITIONS
D-1	EROSION CONTROL DETAILS
D-2	DETAILS
P-1	100-YEAR FLOODPLAIN CUT/FILL
P-2	RESOURCE AREA IMPACTS
P-3	25-FOOT NO DISTURB IMPACTS



COMPREHENSIVE ENVIRONMENTAL INCORPORATED

• **BOLTON, MASSACHUSETTS**



APPROX. EDGE OF WATER AT TIME OF SURVEY. ELEV. = 229.0' (BASED ON GROUND SURVEY AND DRONE IMAGERY)

PROPERTY LINE (THREAD OF SUDBURY RIVER)

APPROX. WETLAND LINE

EXIST. BRIDGE

APPROX. ORDINARY HIGH WATER LINE (OHWL) ELEV. = 230'

SUDBURY RIVER

BENCHMARK (STAKE IN GROUND) NORTHING = 2922052.0840 EASTING = 650492.8470 ELEV. = 239.057'

COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

EDGE OF TREELINE (TYP.)

EXIST. OUTFALL INVERT ELEV. = 235.39'

EXIST. GUARDRAIL (TYP.)

EXIST. SIDEWALK

EXIST. GUARDRAIL (TYP.)

CEDEAR ST. / RTE. 85

TOWN BOUNDARY

PRIVATE DRIVEWAY

HOPKINTON ASHLAND

CURTIS SMITHSON 2 AIKENS ROAD HOPKINTON, MA 01748

BENCHMARK (STAKE IN GROUND) NORTHING = 2921955.3820 EASTING = 650249.0810 ELEV. = 253.265'

COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

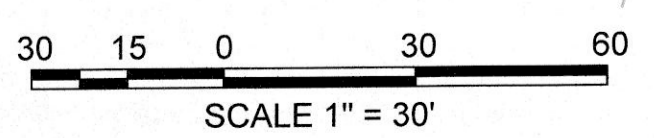
COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

BENCHMARK (STAKE IN GROUND) NORTHING = 2922017.8900 EASTING = 650499.4580 ELEV. = 243.198'

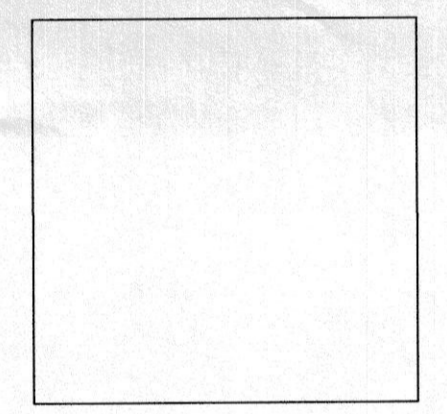
EXIST. ROCK/RUBBLE WALL (TYP.)

EXIST. FOUNDATION/STRUCTURE



GENERAL NOTES

- SURVEY WAS PERFORMED BY CEI ON 3/11/21 AND 3/12/21



P.E. STAMP

No.	Revision/Issue	Date

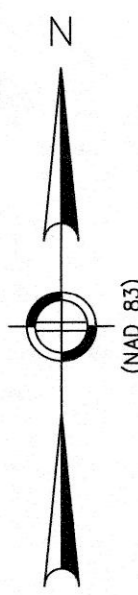
COMPREHENSIVE ENVIRONMENTAL INCORPORATED

41 MAIN ST.  
BOLTON, MA 01740

EXISTING CONDITIONS  
PLAN VIEW

Town of Ashland, MA

Project No.: 346-4	Sheet
Date: 3/16/2021	C-1
Drawn By: NBS	
Checked By: MLL	
Scale: AS SHOWN	



AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED USING LOAM AND SPECIFIED SEED MIXES (SEE PLANTING SCHEDULE DETAIL)

2:1 SLOPES TO BE STABILIZED WITH EXISTING BOULDERS ON SITE.

SILT BOOM/TURBIDITY CURTAIN (SEE DETAILS)

PROPOSED FISHING AREA. PERIMETER TO BE LINED WITH GRANITE CURBING. (SEE DETAILS)

6' WIDE ACCESS PATH FOR KAYAK/CANOE LAUNCH (SEE DETAILS)

6' WIDE PRECAST CONCRETE PAD FOR KAYAK/CANOE LAUNCH (SEE DETAILS)

PROPOSED GRAVEL PARKING AREA WITH FIVE (5) 8' WIDE x 23' LONG PARKING SPOTS

PROPOSED 3' WIDE INFILTRATION TRENCH (SEE DETAILS)

MIN. 6' WIDE ACCESS PATH (SEE DETAILS)

PROPOSED RETAINING WALL (SEE DETAILS)

LINEAR SEDIMENTATION AND EROSION CONTROLS (SEE DETAILS)

APPROX. EDGE OF WATER AT TIME OF SURVEY. ELEV. = 229.0' (BASED ON GROUND SURVEY AND DRONE IMAGERY)

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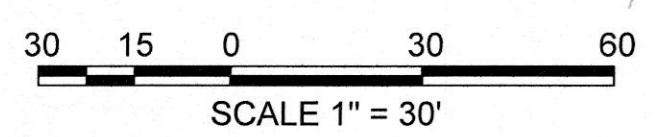
CURTIS SMITHSON  
2 AIKENS ROAD  
HOPKINTON, MA 01748

COMMONWEALTH OF MASSACHUSETTS  
100 CAMBRIDGE STREET  
BOSTON, MA 02110

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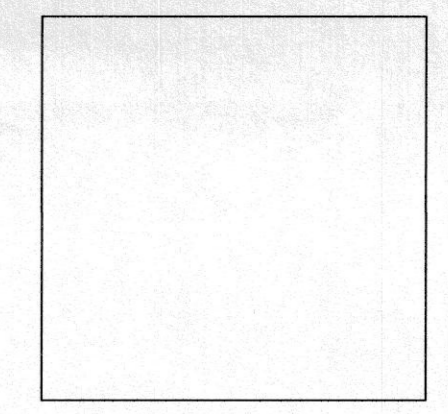
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GENERAL NOTES

- SURVEY WAS PERFORMED BY CEI ON 3/11/21 AND 3/12/21



P.E. STAMP

No.	Revision/Issue	Date

COMPREHENSIVE ENVIRONMENTAL INCORPORATED

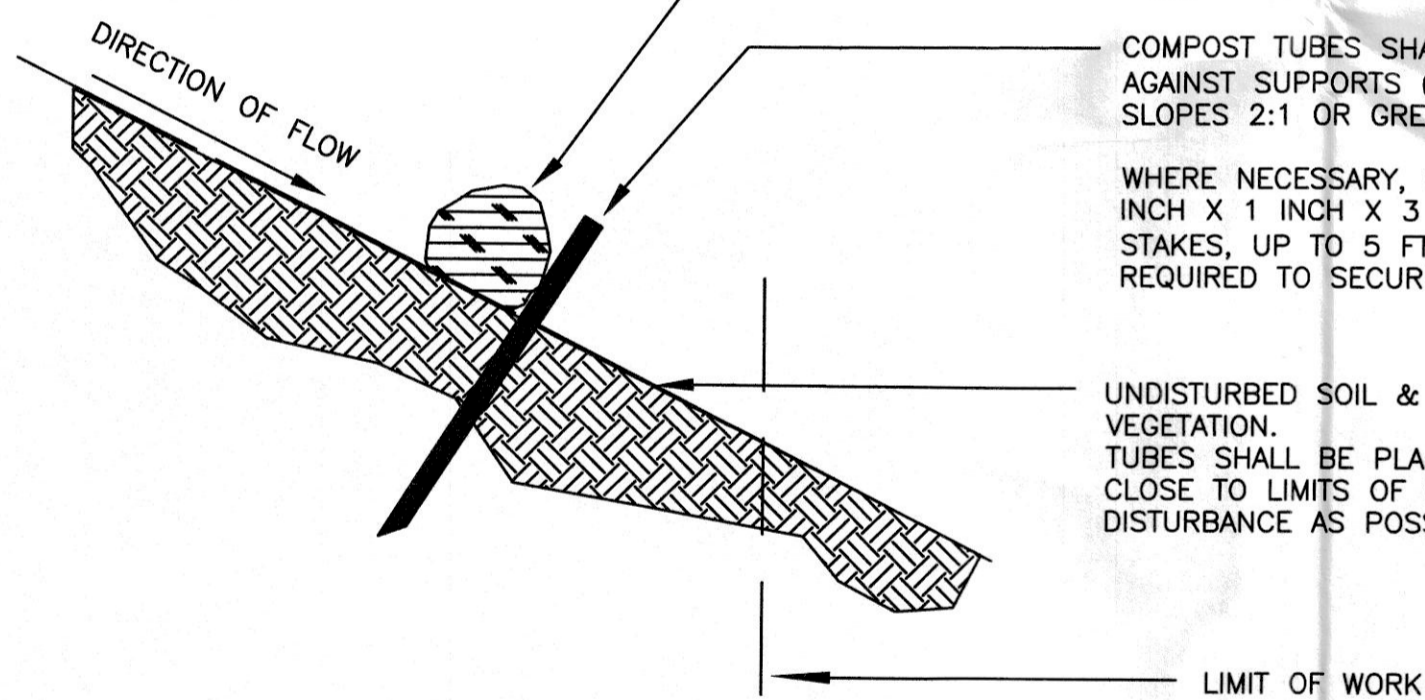
41 MAIN ST.  
BOLTON, MA 01740

PROPOSED CONDITIONS  
PLAN VIEW

Town of Ashland, MA

Project No.: 346-4 Date: 5/25/2021	Sheet
Drawn By: NBS Checked By: MLL Scale: AS SHOWN	<b>C-2</b>

- GENERAL NOTES:
1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES (300mm) FOR SLOPES UP TO 50 FEET (15.24m) IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
  2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
  3. TUBE LOCATION MAY BE SHIFTED TO ADJUST TO LANDSCAPE FEATURES, BUT SHALL PROTECT UNDISTURBED AREA AND VEGETATION TO MAXIMUM EXTENT POSSIBLE.
  4. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
  5. ADDITIONAL TUBES SHALL BE USED AT THE DIRECTION OF THE ENGINEER.
  6. ADDITIONAL STAKING SHALL BE USED AT THE DIRECTION OF THE ENGINEER.



COMPOST FILTER TUBE MINIMUM 12 INCHES (300mm) IN DIAMETER WITH AN EFFECTIVE HEIGHT OF 9.5 INCHES (240mm).

TUBES FOR COMPOST FILTERS SHALL BE JUTE MESH OR APPROVED PHOTO-BIODEGRADABLE MATERIAL, HOWEVER PHOTO-BIODEGRADABLE FABRIC SHALL BE REMOVED AT END OF CONTRACT.

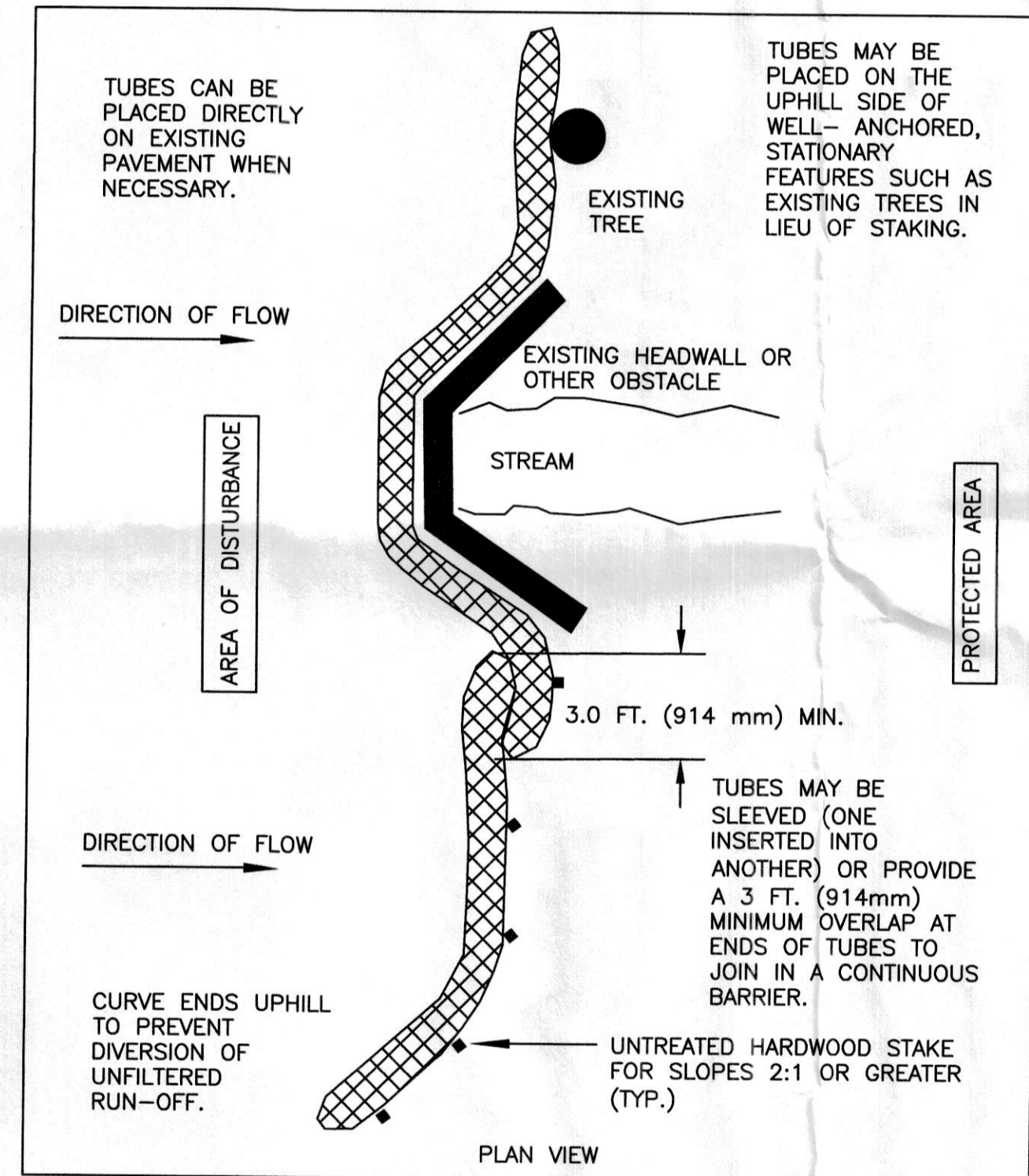
TAMP TUBES IN PLACE TO ENSURE GOOD CONTACT WITH SOIL SURFACE. IT IS NOT NECESSARY TO TRENCH TUBES INTO EXISTING GRADE.

COMPOST TUBES SHALL BE STAKED OR LEANED AGAINST SUPPORTS (TREES, CINDER BLOCKS) ON SLOPES 2:1 OR GREATER.

WHERE NECESSARY, STAKING SHALL BE MIN. 1 INCH X 1 INCH X 3 FEET UNTREATED HARDWOOD STAKES, UP TO 5 FT. (1.5m) APART OR AS REQUIRED TO SECURE TUBES IN PLACE.

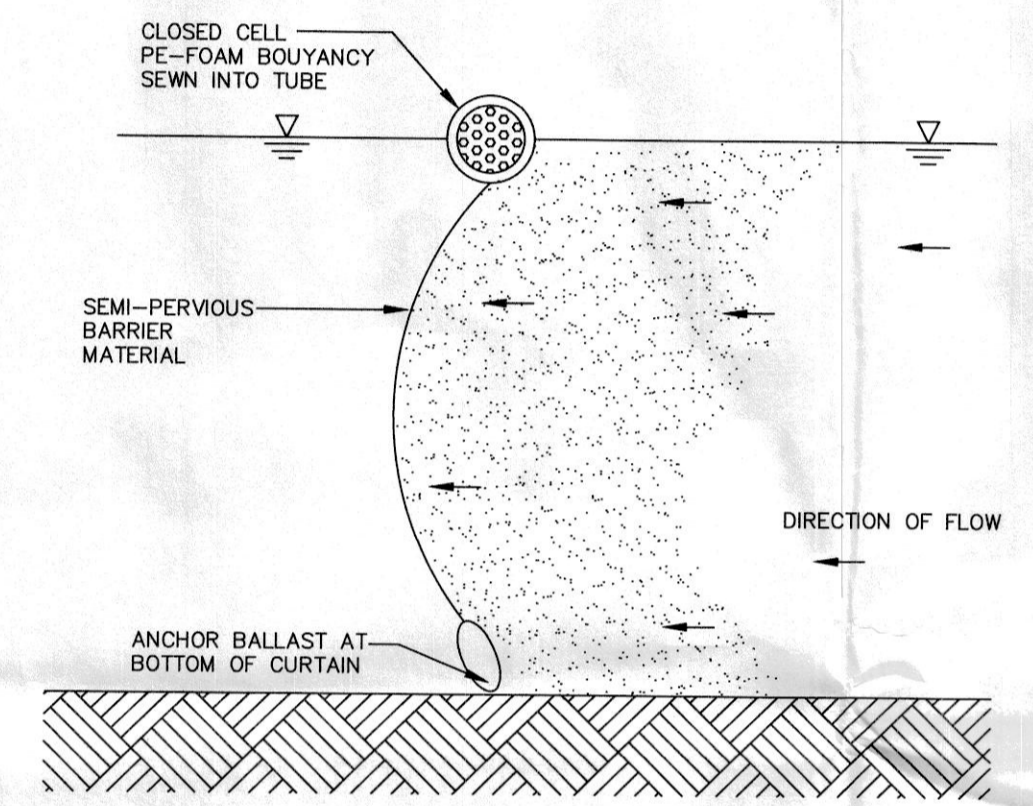
UNDISTURBED SOIL & VEGETATION. TUBES SHALL BE PLACED AS CLOSE TO LIMITS OF SOIL DISTURBANCE AS POSSIBLE.

**LINEAR SEDIMENTATION AND EROSION CONTROL DETAIL**  
SCALE: N.T.S.



TUBES CAN BE PLACED DIRECTLY ON EXISTING PAVEMENT WHEN NECESSARY.

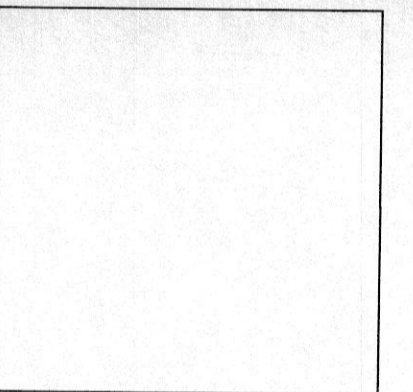
TUBES MAY BE PLACED ON THE UPHILL SIDE OF WELL-ANCHORED, STATIONARY FEATURES SUCH AS EXISTING TREES IN LIEU OF STAKING.



**TURBIDITY CURTAIN FOR SILTATION CONTROL**  
TYP. DETAIL  
SCALE: N.T.S.

- NOTES:
1. CONTRACTOR SHALL SUBMIT FOR REVIEW A PROPOSED TURBIDITY CURTAIN DESIGN PRIOR TO START OF CONSTRUCTION. CURTAIN TO BE DESIGNED AND INSTALLED BY SPECIALISTS WITH EXPERIENCE IN INSTALLING AND MAINTAINING TURBIDITY CURTAINS. CURTAIN DESIGN SHALL ACCOMMODATE, AS A MINIMUM, THE ORDINARY HIGH WATER AND APPROXIMATE NORMAL LOW WATER ELEVATIONS.
  2. CONTRACTOR SHALL PROVIDE ADEQUATE ANCHORING TO MAINTAIN THE EFFECTIVENESS OF THE TURBIDITY CURTAIN. IF NECESSARY, USE INTERMEDIATE ANCHOR POSTS FOR ADDITIONAL STABILITY (MAX. SPACING 50' O.C.)
  3. TURBIDITY CURTAIN SHALL BE 22 OZ.-500 LB/INCH FASTWATER SCREEN BY ELASTEC/AMERICAN MARINE, CARM, IL, OR APPROVED EQUAL.
  4. CONTRACTOR IS RESPONSIBLE FOR LOCATION AND ORIENTATION OF TURBIDITY CURTAIN TO PREVENT MIGRATION OF SILT.
  5. CONTRACTOR SHALL INSPECT AND MAINTAIN TURBIDITY CURTAIN AT THE START AND END OF EACH WORK DAY.
  6. ONLY AFTER CONSTRUCTION ACTIVITIES ARE COMPLETE AND THE SITE IS STABILIZED SHALL TURBIDITY CURTAIN BE REMOVED.

GENERAL NOTES



P.E. STAMP

No.	Revision/Issue	Date

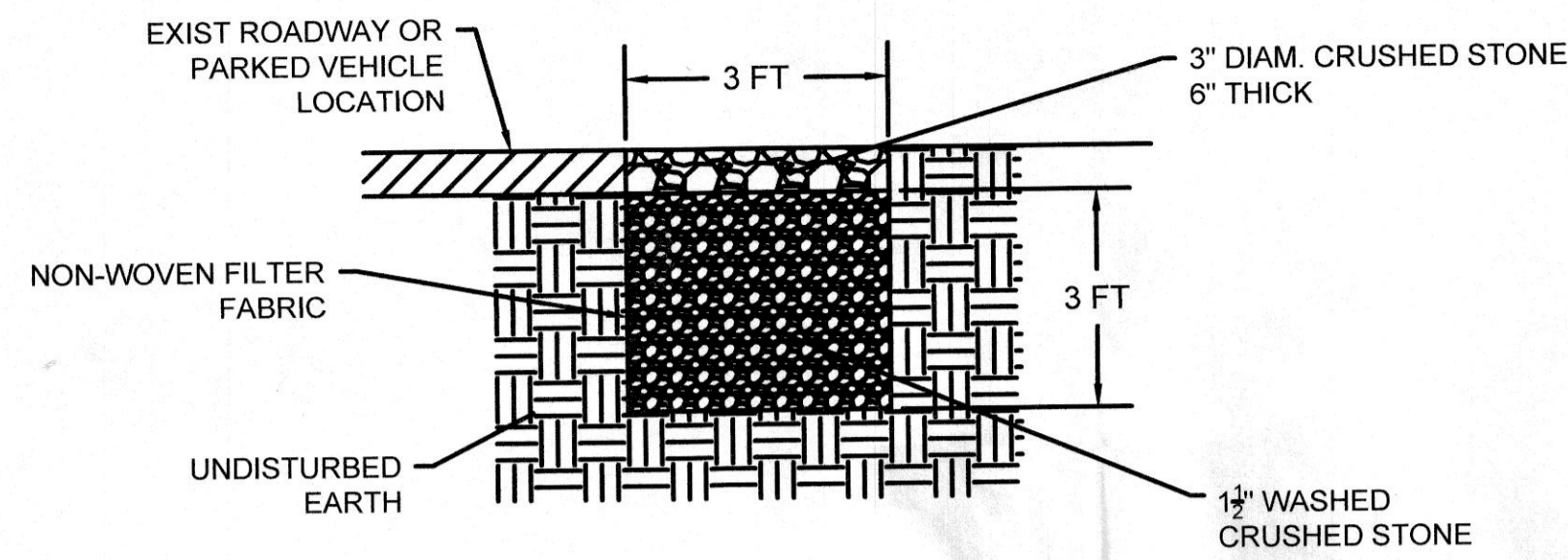
COMPREHENSIVE ENVIRONMENTAL INCORPORATED

41 MAIN ST.  
BOLTON, MA 01740

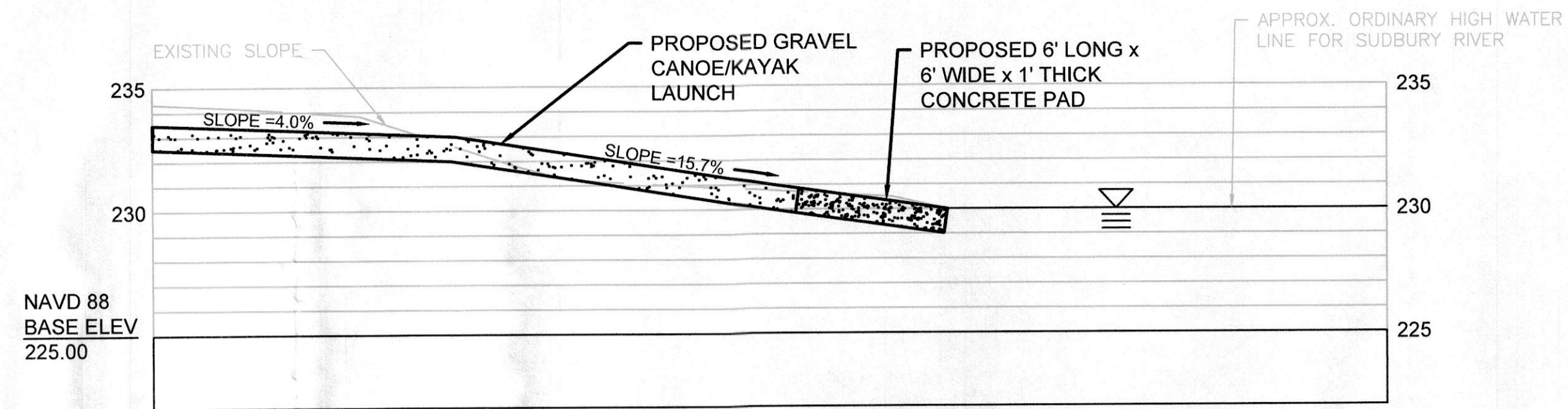
EROSION CONTROL DETAILS

Town of Ashland, MA

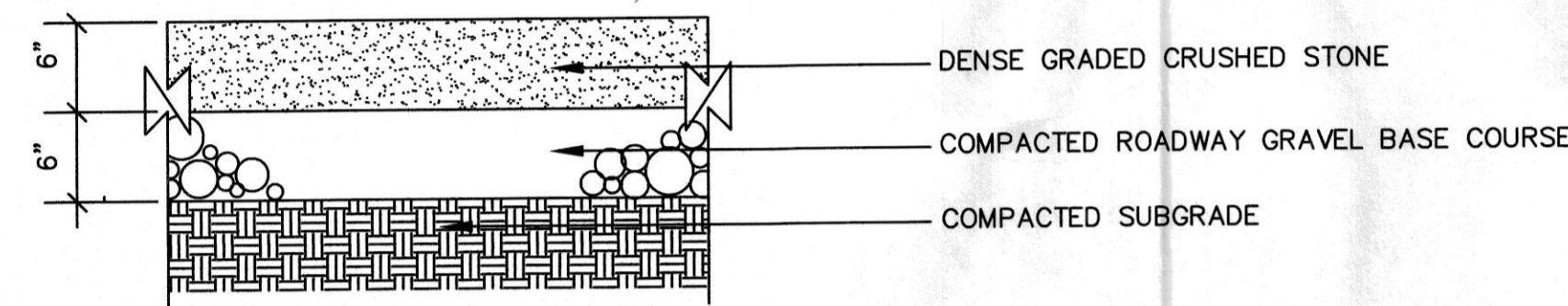
Project No.: 346-4	Sheet
Date: 5/25/2021	D-1
Drawn By: NBS	
Checked By: MLL	
Scale: AS SHOWN	



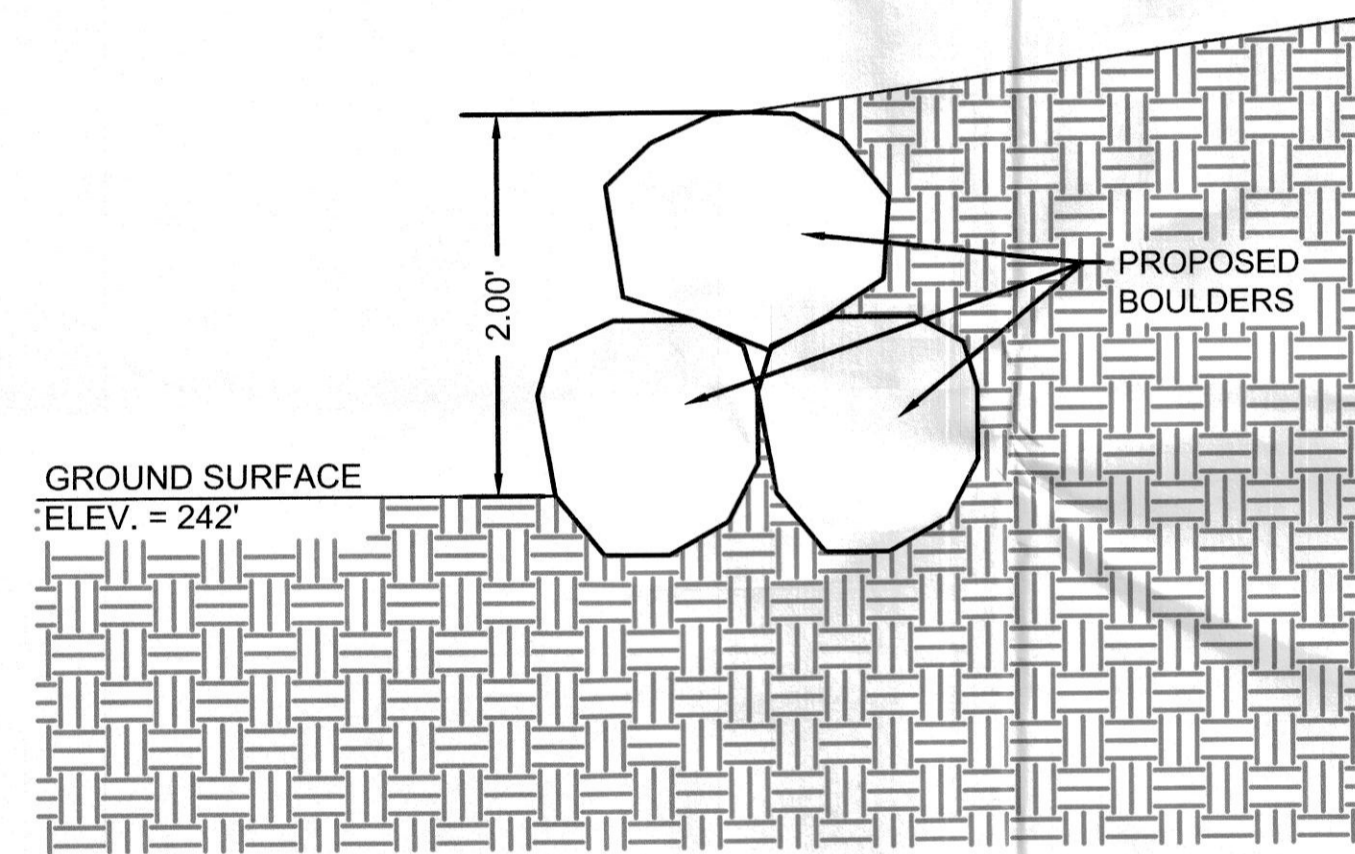
**3-FT WIDE INFILTRATION TRENCH DETAIL**  
N.T.S



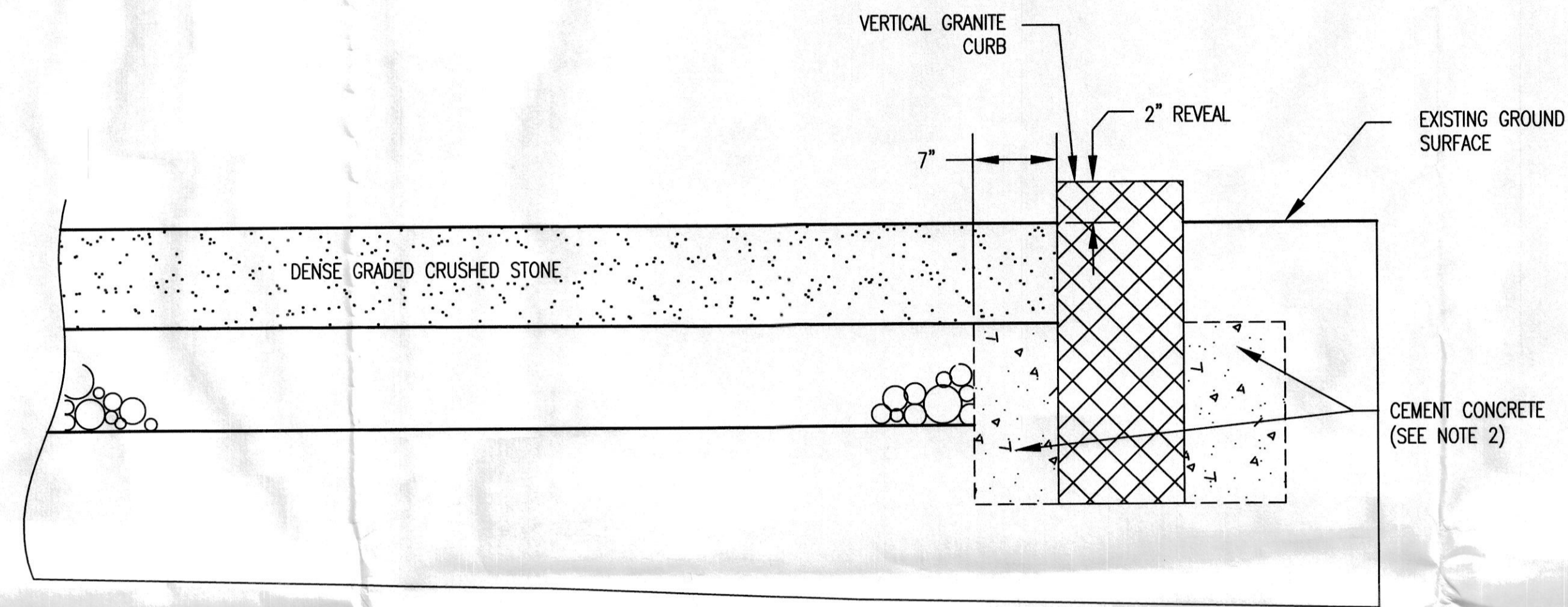
**KAYAK/CANOE LAUNCH PROFILE**  
SCALE: 1"=5'



**GRAVEL PARKING AREA**  
SCALE: NTS

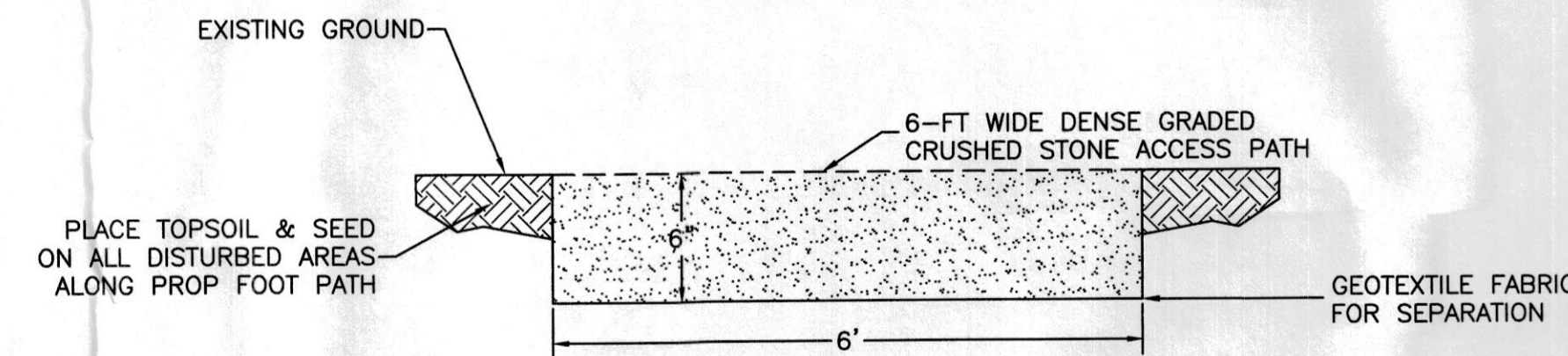


**PARKING AREA RETAINING WALL DETAIL**  
SCALE: 1"=1'



- NOTES:
1. ANY CLASS CEMENT CONCRETE WILL BE ACCEPTABLE.
  2. CUT STONE TO BE REQUIRED CURVATURE IF SET ON RADIUS OF 100 FT. OR LESS.
  3. MASS. TYPE VA-4 - MIN. LENGTH 6'  
TOP WIDTH 6"  
DEPTH 17"-19"  
MIN. BOT. WIDTH 4"(FOR 2/3 LENGTH)

**GRANITE CURB DETAIL**  
SCALE: NTS



**ACCESS PATH**  
SCALE: NTS

PLANTING SCHEDULE		
PLANTING TYPE	SPECIES	PLANTING NOTES
SEED MIXTURE	NEW ENGLAND WETMIX (NEW ENGLAND WETLAND PLANTS, INC.)	SEED MIXTURE APPLIED IN AREAS OF TEMPORARY BORDERING VEGETATED WETLANDS (BVW) IMPACT AT A RATE OF 1 LB./2500 SQ. FT. BVW RESTORATION AREAS ARE TO BE RAKED PRIOR TO SEEDING.
SEED MIXTURE	NEW ENGLAND CONSERVATION / WILDLIFE MIX (NEW ENGLAND WETLAND PLANTS, INC.)	SEED MIXTURE APPLIED IN AREAS OF TEMPORARY BUFFER ZONE IMPACT AT A RATE OF 1 LB./1750 SQ. FT. AREAS ARE TO BE STABILIZED WITH A WEED-FREE STRAW MULCH.

GENERAL NOTES

P.E. STAMP		
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COMPREHENSIVE ENVIRONMENTAL INCORPORATED

41 MAIN ST.  
BOLTON, MA 01740

DETAILS

Town of Ashland, MA

Project No.: 346-4	Sheet
Date: 5/25/2021	D-2
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AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED USING LOAM AND SPECIFIED SEED MIXES (SEE PLANTING SCHEDULE DETAIL)

2:1 SLOPES TO BE STABILIZED WITH EXISTING BOULDERS ON SITE.

SILT BOOM/TURBIDITY CURTAIN (SEE DETAILS)

PROPOSED FISHING AREA. PERIMETER TO BE LINED WITH GRANITE CURBING. (SEE DETAILS)

6' WIDE ACCESS PATH FOR KAYAK/CANOE LAUNCH (SEE DETAILS)

6' WIDE PRECAST CONCRETE PAD FOR KAYAK/CANOE LAUNCH (SEE DETAILS)

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PROPOSED 3' WIDE INFILTRATION TRENCH (SEE DETAILS)

APPROX. EDGE OF WATER AT TIME OF SURVEY. ELEV. = 229.0' (BASED ON GROUND SURVEY AND DRONE IMAGERY)

PROPERTY LINE (THREAD OF SUDBURY RIVER)

APPROX. WETLAND LINE

APPROX. ORDINARY HIGH WATER LINE (OHWL) ELEV. = 230'

SUDBURY RIVER

BENCHMARK (STAKE IN GROUND) NORTHING = 2922052.0840 EASTING = 650492.8470 ELEV. = 239.057'

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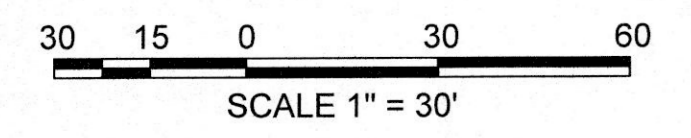
COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

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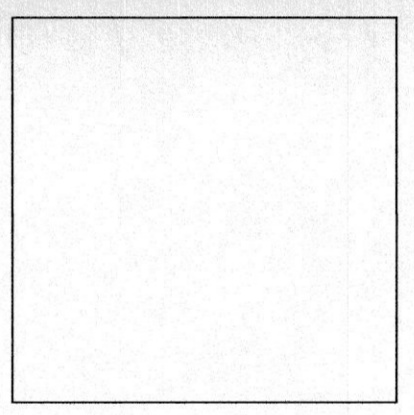
COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

CURTIS SMITHSON  
2 AIKENS ROAD  
HOPKINTON, MA 01748



**GENERAL NOTES**

- FEMA 100-YEAR FLOODPLAIN ELEVATION = 234.0'
- \*CUT WITHIN 100-YEAR FLOODPLAIN = 461 CF (AREA = 461 SF)
- \*DOES NOT INCLUDE FLOODPLAIN MITIGATION AREA
- FILL WITHIN 100-YEAR FLOODPLAIN = 364 CF (AREA = 364 SF)
- LOCATION OF FLOODPLAIN MITIGATION/COMPENSATORY FLOOD STORAGE = 364 CF (AREA = 364 SF)



P.E. STAMP

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COMPREHENSIVE ENVIRONMENTAL INCORPORATED

41 MAIN ST.  
BOLTON, MA 01740

**100-YEAR FLOOD PLAIN CUT/FILL IMPACTS**

Town of Ashland, MA

Project No.: 346-4	Sheet
Date: 9/25/2021	<b>P-1</b>
Drawn By: NBS	
Checked By: MLL	
Scale: AS SHOWN	



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2:1 SLOPES TO BE STABILIZED WITH EXISTING BOULDERS ON SITE.

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SILT BOOM/TURBIDITY CURTAIN (SEE DETAILS)

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6' WIDE ACCESS PATH FOR KAYAK/CANOE LAUNCH (SEE DETAILS)

6' WIDE PRECAST CONCRETE PAD FOR KAYAK/CANOE LAUNCH (SEE DETAILS)

**TEMPORARY IMPACTS**

- ▨ BORDERING VEGETATED WETLAND (960 SF)
- ▨ LAND UNDER WATER-BODIES AND WATERWAYS (0 SF)
- ▨ BORDERING LAND SUBJECT TO FLOODING (1,250 SF)
- ▨ BANK (32 LF)
- ▨ 100FT BUFFER ZONE (7,820 SF)
- ▨ 200FT RIVERFRONT (8,382 SF)

**PERMANENT IMPACTS**

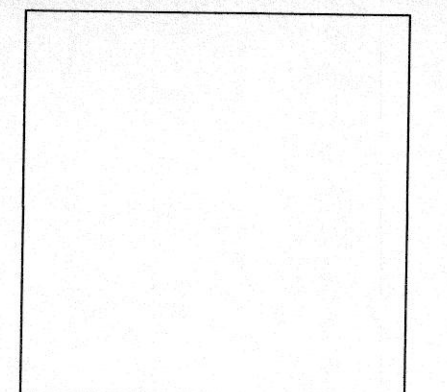
- ▨ BORDERING VEGETATED WETLAND (0 SF)
- ▨ LAND UNDER WATER-BODIES AND WATERWAYS (0 SF)
- ▨ BORDERING LAND SUBJECT TO FLOODING (200 SF)
- ▨ BANK (12 LF)
- ▨ 100FT BUFFER ZONE (4,488 SF)
- ▨ 200FT RIVERFRONT (4,488 SF)

**PROPOSED ALTERATION**

- TOTAL = 1,668 SF
- TOTAL = 0 SF
- TOTAL = 1,450 SF
- TOTAL = 44 LF
- TOTAL = 12,308 SF
- TOTAL = 12,870 SF

**GENERAL NOTES**

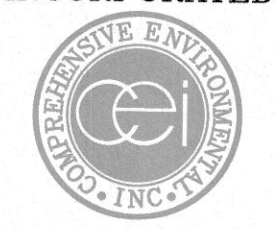
- FEMA 100-YEAR FLOODPLAIN ELEVATION = 234.0'
- BANK RUNS FROM FLAG A9 TO A12. BVW EVERYWHERE ELSE



P.E. STAMP

No.	Revision/Issue	Date

**COMPREHENSIVE ENVIRONMENTAL INCORPORATED**

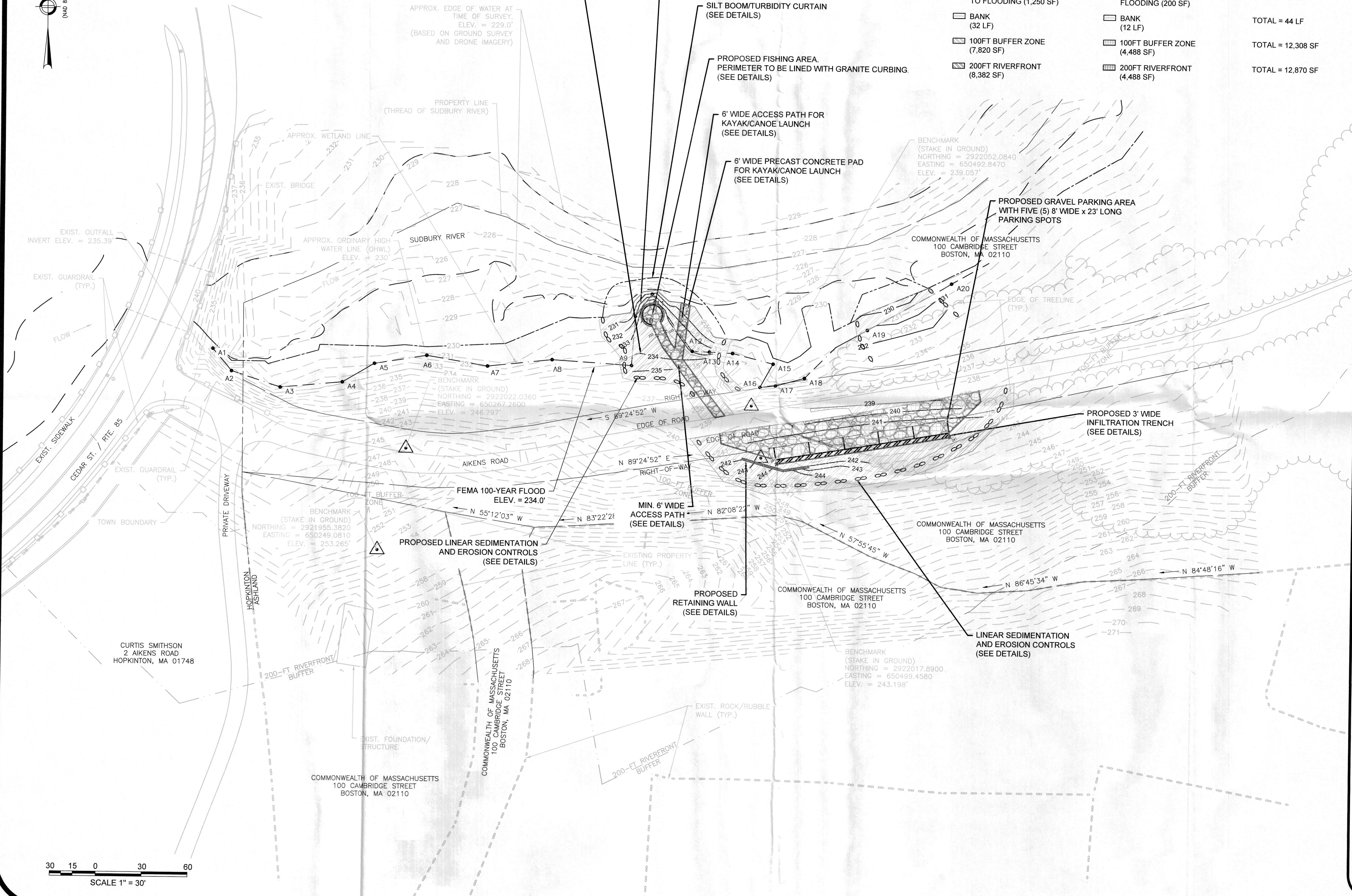
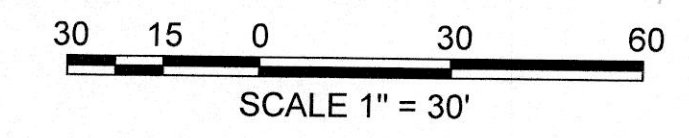


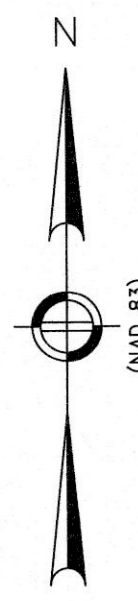
41 MAIN ST.  
BOLTON, MA 01740

**RESOURCE AREA IMPACTS**

Town of Ashland, MA

Project No.: 346-4	Sheet
Date: 5/25/2021	<b>P-2</b>
Drawn By: NBS	
Checked By: MLL	
Scale: AS SHOWN	





**TEMPORARY IMPACTS**  
 25-FT NO DISTURB BUFFER  
 (5,533 SF)

**PERMANENT IMPACTS**  
 25-FT NO DISTURB BUFFER  
 (756 SF)

**PROPOSED ALTERATION**  
 TOTAL = 6,289 SF

AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED USING LOAM AND SPECIFIED SEED MIXES (SEE PLANTING SCHEDULE DETAIL)

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SILT BOOM/TURBIDITY CURTAIN (SEE DETAILS)

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PROPOSED GRAVEL PARKING AREA WITH FIVE (5) 8' WIDE x 23' LONG PARKING SPOTS

PROPOSED 3' WIDE INFILTRATION TRENCH (SEE DETAILS)

FEMA 100-YEAR FLOOD ELEV. = 234.0'

PROPOSED LINEAR SEDIMENTATION AND EROSION CONTROLS (SEE DETAILS)

MIN. 6' WIDE ACCESS PATH (SEE DETAILS)

PROPOSED RETAINING WALL (SEE DETAILS)

LINEAR SEDIMENTATION AND EROSION CONTROLS (SEE DETAILS)

COMMONWEALTH OF MASSACHUSETTS  
 100 CAMBRIDGE STREET  
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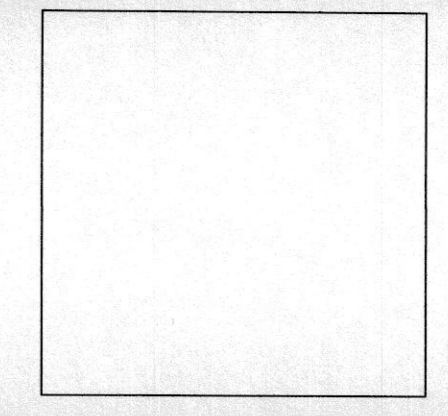
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**GENERAL NOTES**

- FEMA 100-YEAR FLOODPLAIN ELEVATION = 234.0'
- BANK RUNS FROM FLAG A9 TO A12. B.V.W. EVERYWHERE ELSE



P.E. STAMP

No.	Revision/Issue	Date

COMPREHENSIVE ENVIRONMENTAL INCORPORATED

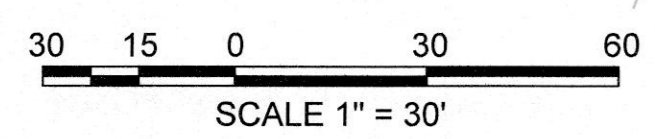


41 MAIN ST.  
 BOLTON, MA 01740

25-FOOT NO DISTURB IMPACTS

Town of Ashland, MA

Project No.: 346-4	Sheet
Date: 5/25/2021	P-3
Drawn By: NBS	
Checked By: MLL	
Scale: AS SHOWN	



SCALE 1" = 30'

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