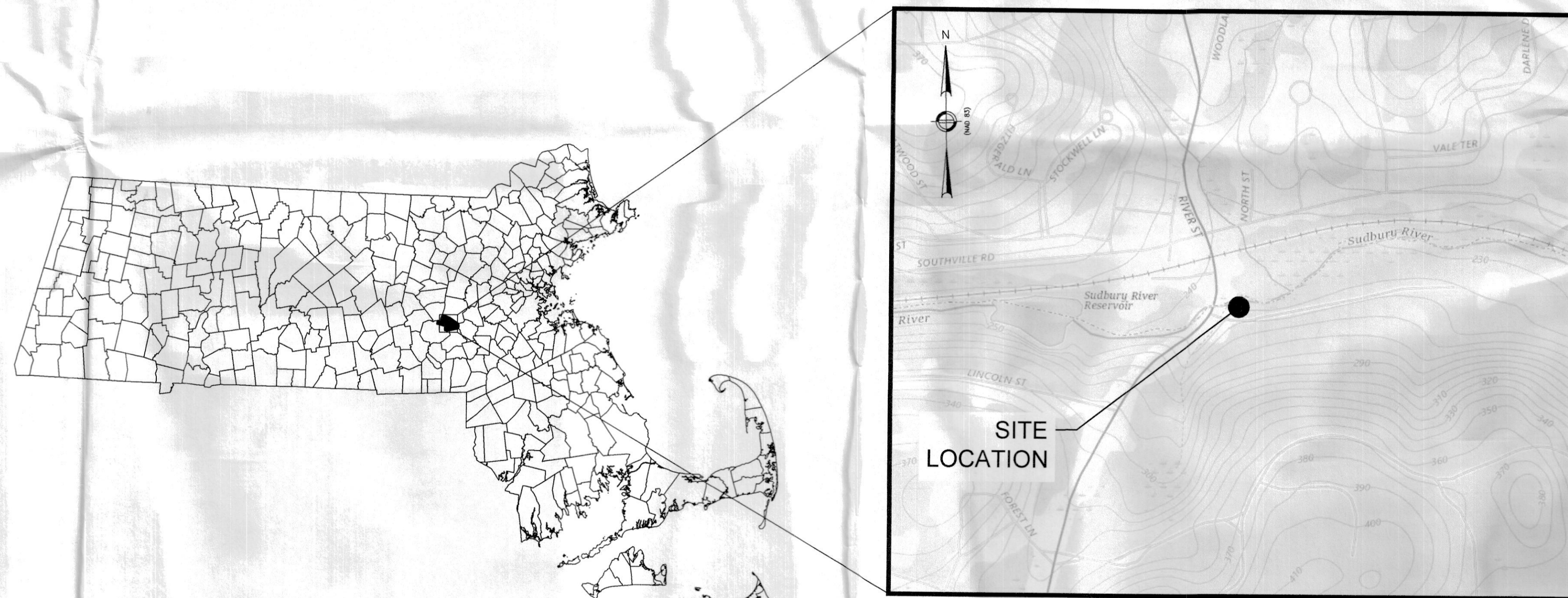


OFFICE OF FISHING AND BOATING ACCESS
SUDBURY RIVER ACCESS FACILITY
ASHLAND, MA

APRIL 2022

CLIENT REPRESENTATIVES

DOUGLAS H. CAMERON — DIRECTOR — OFBA

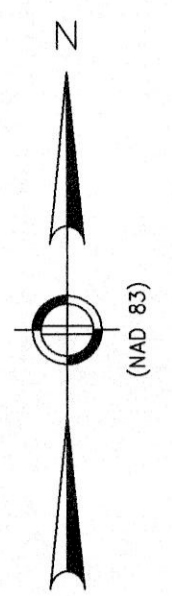


| <u>SHEET</u> | <u>TITLE</u> |
|--------------|------------------------------|
| C-1 | EXISTING CONDITIONS |
| C-2 | PROPOSED CONDITIONS |
| D-1 | EROSION CONTROL DETAILS |
| D-2 | DETAILS |
| P-1 | 100-YEAR FLOODPLAIN CUT/FILL |
| P-2 | RESOURCE AREA IMPACTS |
| P-3 | 25-FOOT NO DISTURB IMPACTS |



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

CEDRAR ST. / RTE. 85

EXIST. GUARDRAIL (TYP.)

TOWN BOUNDARY

PRIVATE DRIVEWAY

HOPKINTON ASHLAND

COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

EXIST. FOUNDATION/STRUCTURE

COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

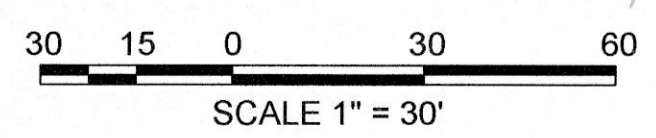
EXIST. ROCK/RUBBLE WALL (TYP.)

COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

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

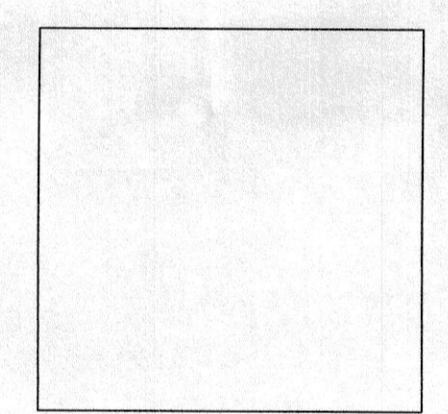
COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

CURTIS SMITHSON
2 AIKENS ROAD
HOPKINTON, MA 01748



GENERAL NOTES

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



P.E. STAMP

| No. | Revision/Issue | Date |
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COMPREHENSIVE ENVIRONMENTAL INCORPORATED

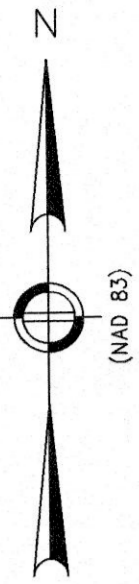


41 MAIN ST.
BOLTON, MA 01740

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)

PROPERTY LINE (THREAD OF SUDBURY RIVER)

APPROX. WETLAND LINE

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

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

COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

BENCHMARK (STAKE IN GROUND) NORTHING = 2921955.382 EASTING = 650249.081 ELEV. = 253.26'

COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

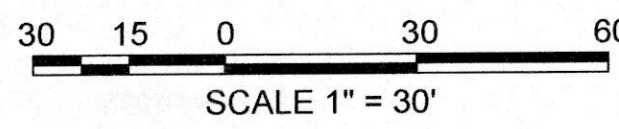
COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

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COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

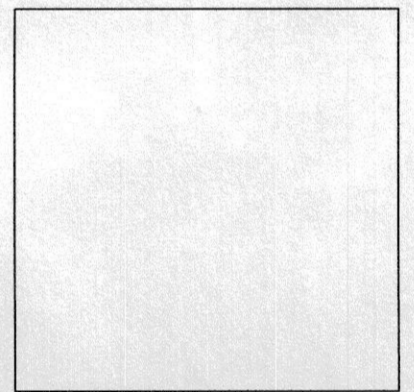
COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

CURTIS SMITHSON
2 AIKENS ROAD
HOPKINTON, MA 01748



GENERAL NOTES

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



P.E. STAMP

| No. | Revision/Issue | Date |
|-----|----------------|------|
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COMPREHENSIVE ENVIRONMENTAL INCORPORATED



41 MAIN ST.
BOLTON, MA 01740

PROPOSED CONDITIONS
PLAN VIEW

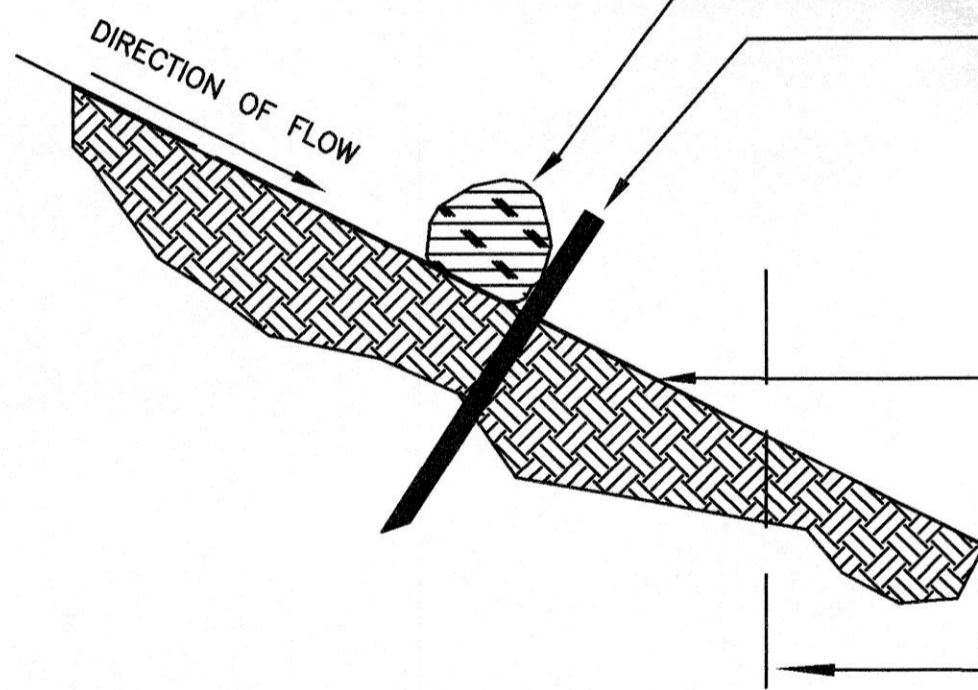
Town of Ashland, MA

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

GENERAL NOTES

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.

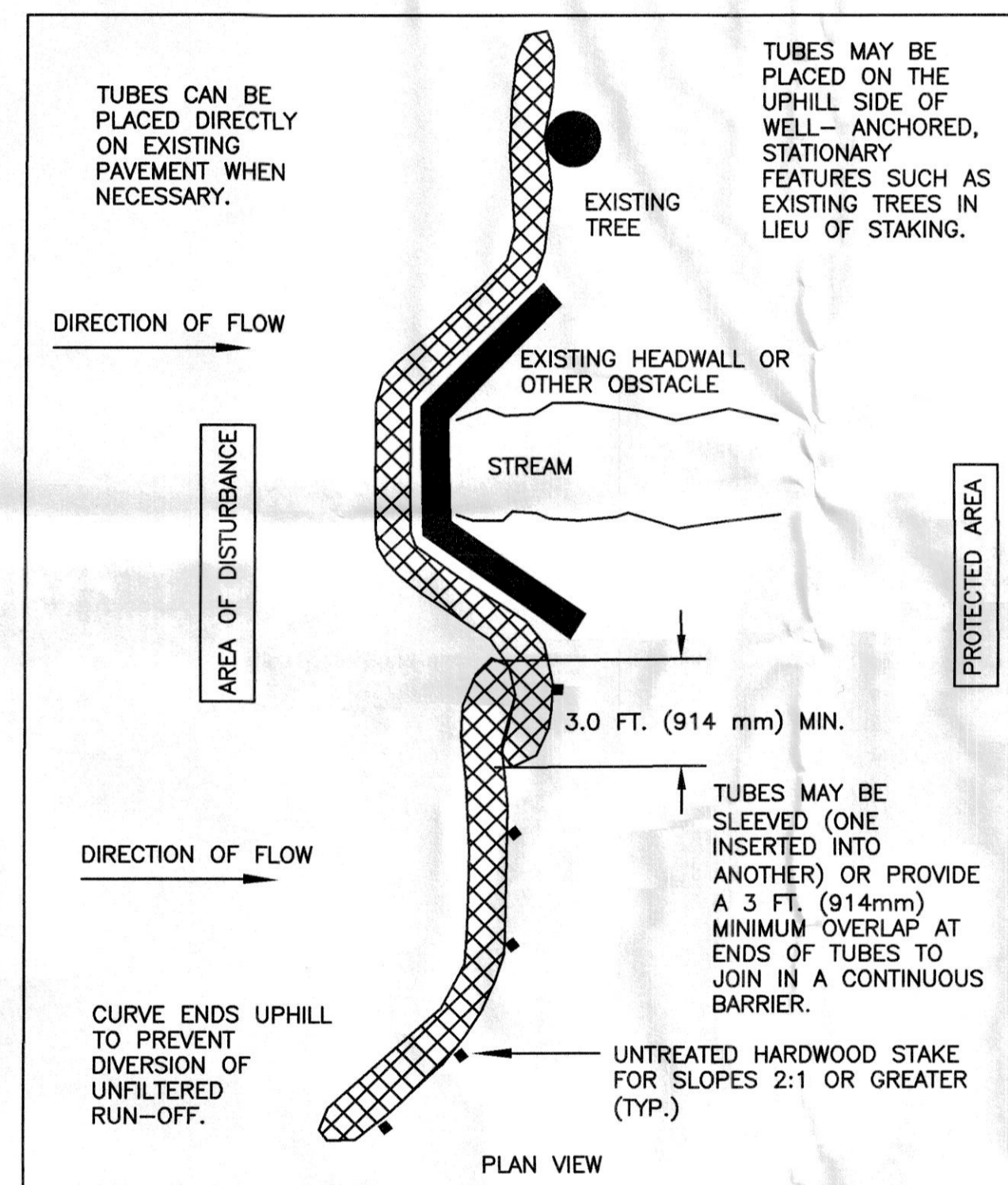
WHERE NECESSARY, STAKING SHALL BE MIN. 1 INCH X 1 INCH X 3 FEET UNTREATED HARDWOOD STAKES, UP TO 5 FT. (1.5m) APART OR AS REQUIRED TO SECURE TUBES IN PLACE.

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

LIMIT OF WORK

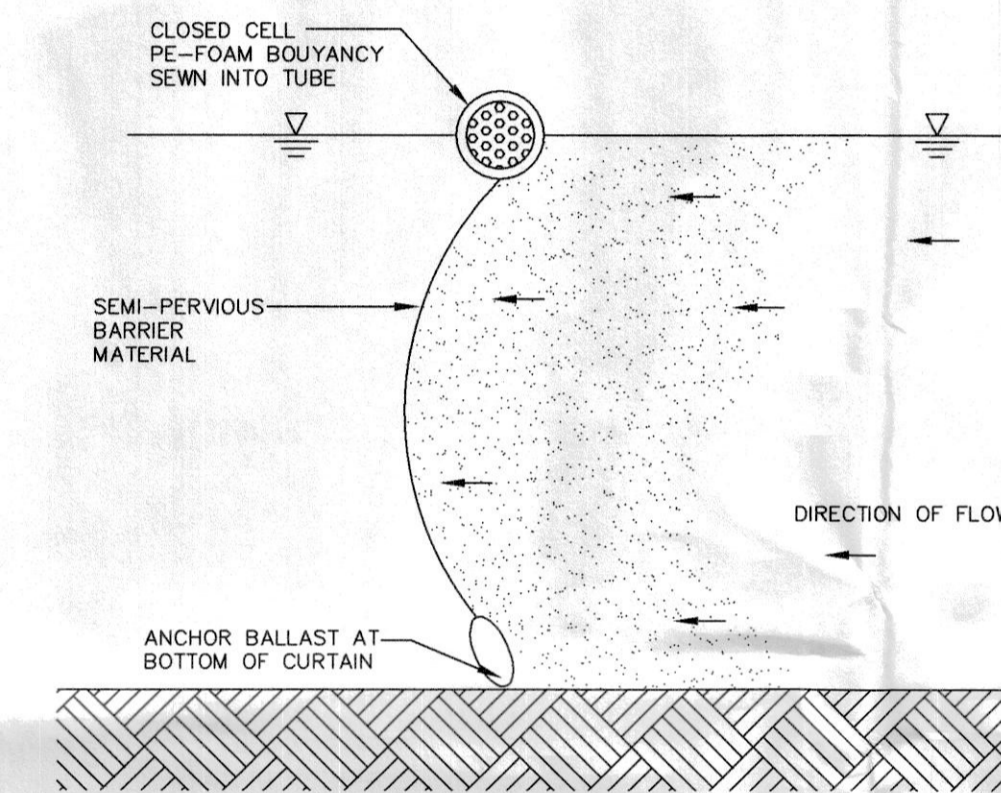
LINEAR SEDIMENTATION AND EROSION CONTROL DETAIL

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.

P.E. STAMP

| No. | Revision/Issue | Date |
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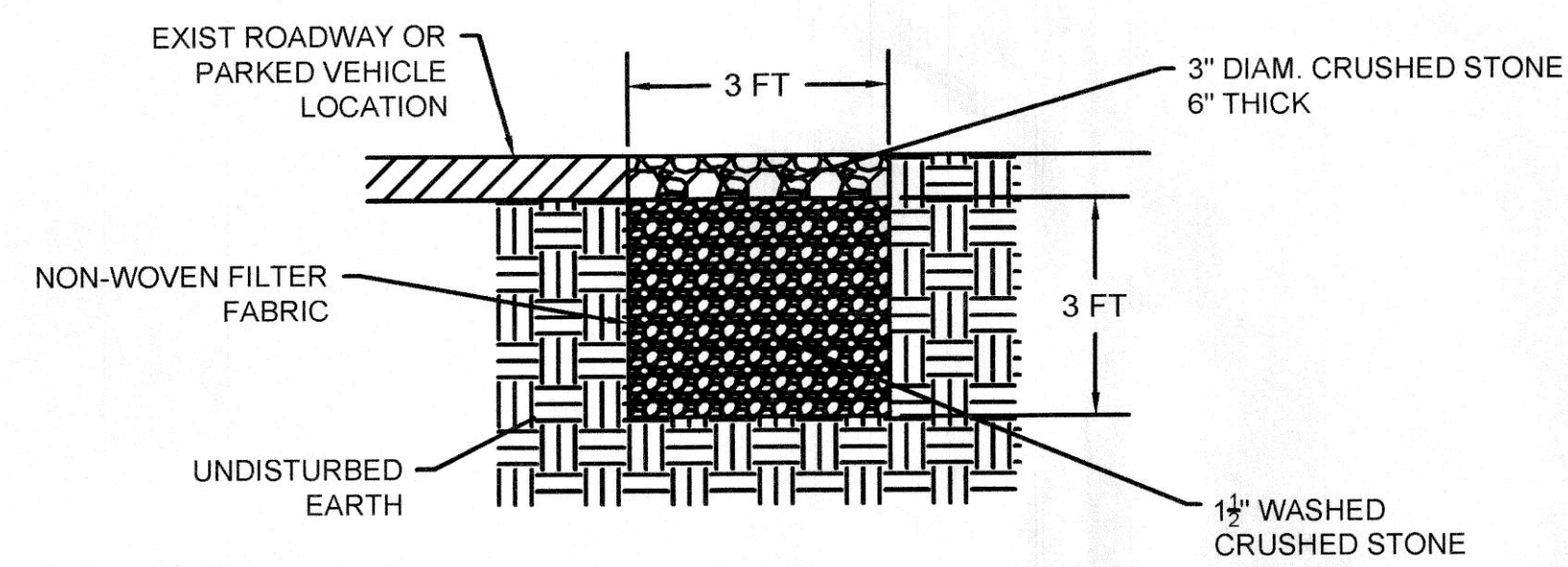
COMPREHENSIVE ENVIRONMENTAL INCORPORATED

41 MAIN ST.
BOLTON, MA 01740

EROSION CONTROL DETAILS

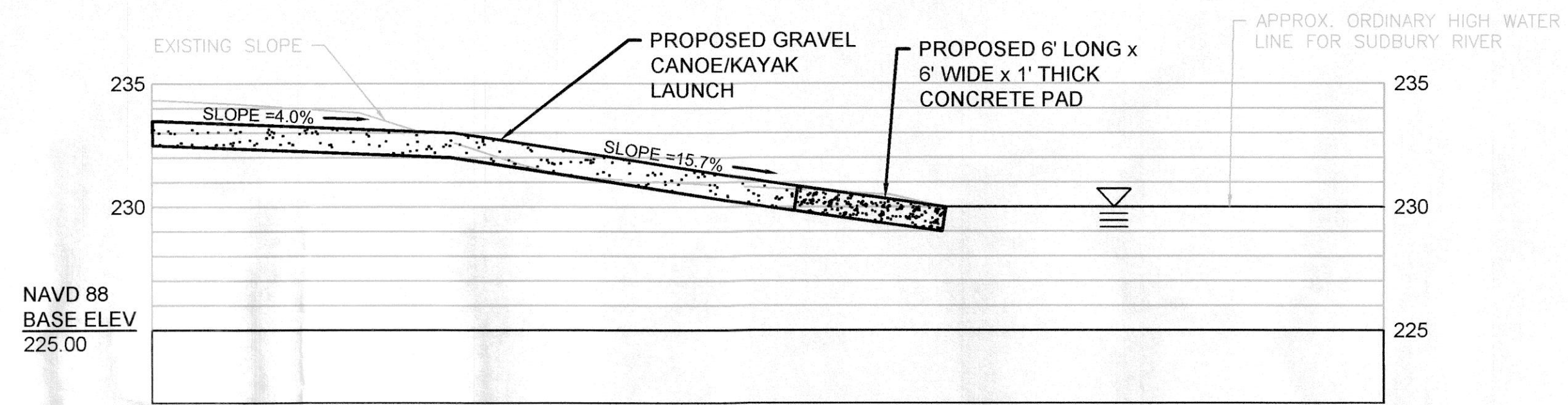
Town of Ashland, MA

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



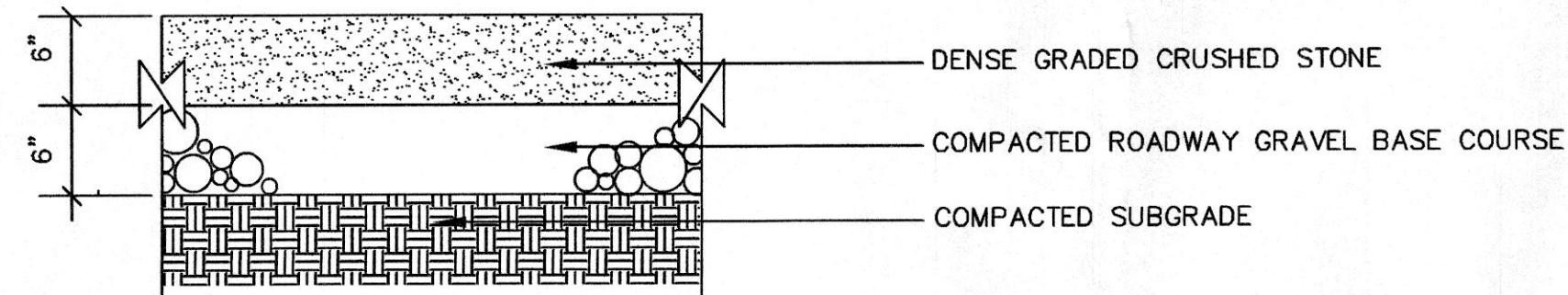
3-FT WIDE INFILTRATION TRENCH DETAIL

N.T.S



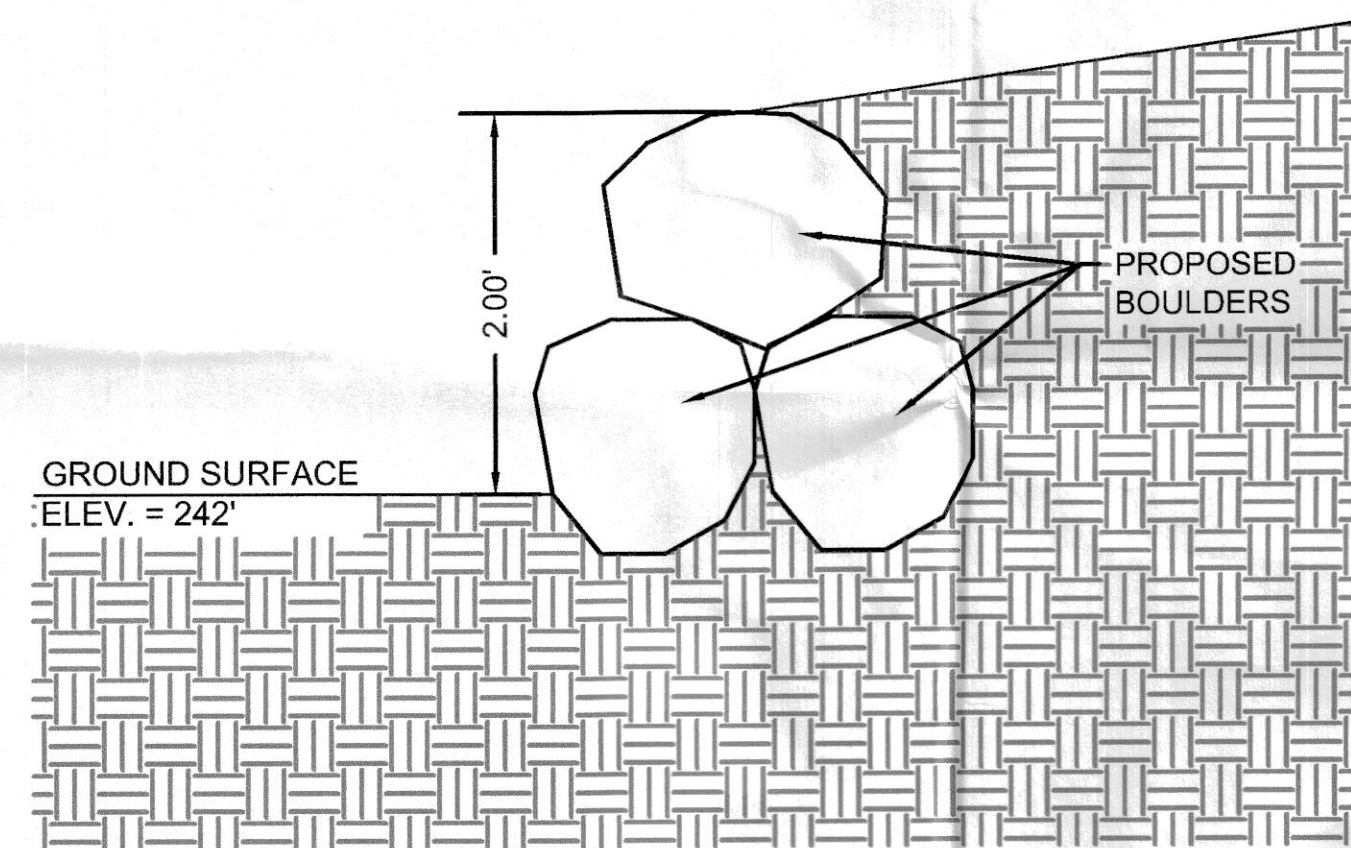
KAYAK/CANOE LAUNCH PROFILE

SCALE: 1"=5'



GRAVEL PARKING AREA

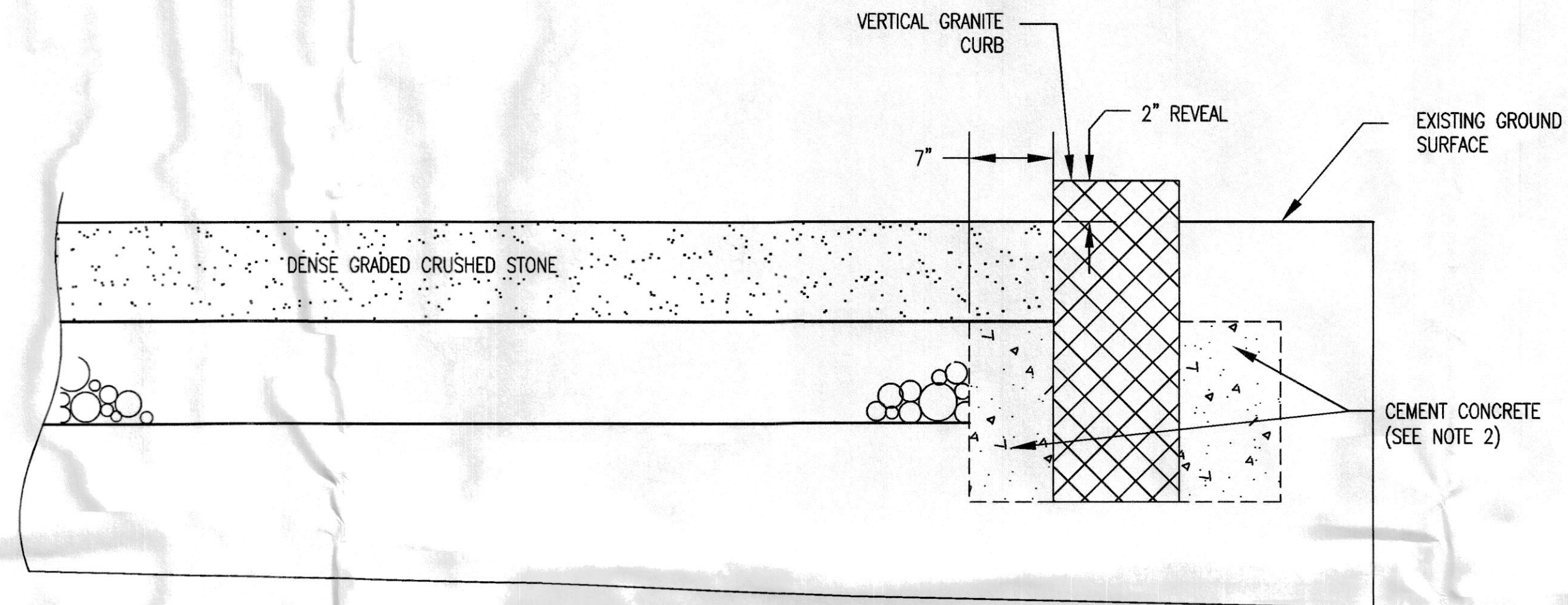
SCALE: N.T.S



PARKING AREA RETAINING WALL DETAIL

SCALE: 1"=1'

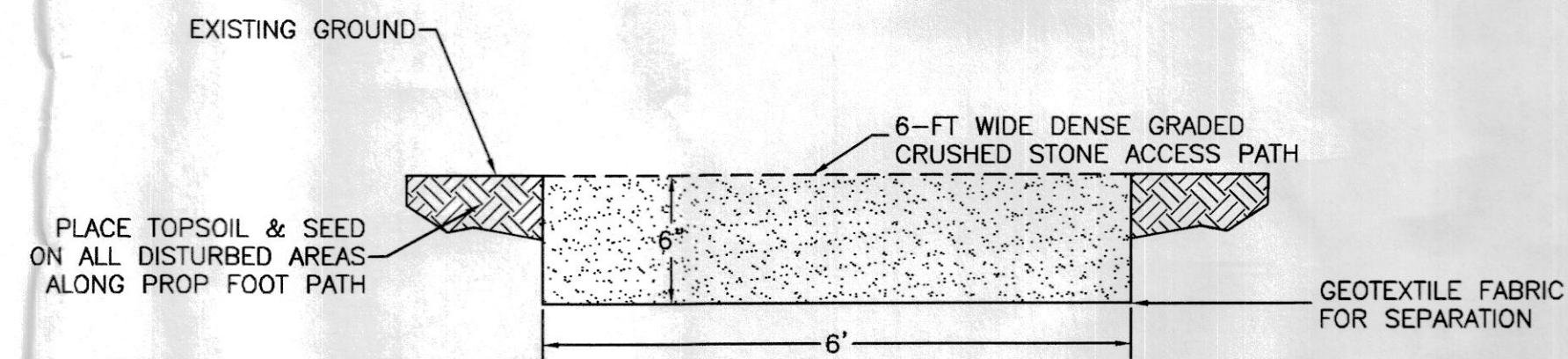
| PLANTING SCHEDULE | | |
|-------------------|--|--|
| PLANTING TYPE | SPECIES | PLANTING NOTES |
| SEED MIXTURE | NEW ENGLAND WETMIX (NEW ENGLAND WETLAND PLANTS, INC.) | SEED MIXTURE APPLIED IN AREAS OF TEMPORARY BORDERING VEGETATED WETLANDS (BVW) IMPACT AT A RATE OF 1 LB./2500 SQ. FT. BVW RESTORATION 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. |



GRANITE CURB DETAIL

SCALE: N.T.S

- 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)



ACCESS PATH

SCALE: N.T.S

GENERAL NOTES

| | | |
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| No. | Revision/Issue | Date |
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COMPREHENSIVE ENVIRONMENTAL INCORPORATED

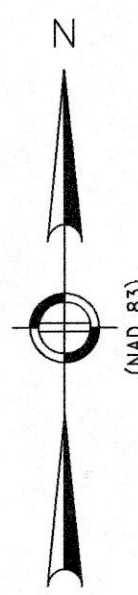
41 MAIN ST.
BOLTON, MA 01740

DETAILS

Town of Ashland, MA

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

D-2



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.

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

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

COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

PROPOSED 3' WIDE INFILTRATION TRENCH (SEE DETAILS)

FEMA 100-YEAR FLOOD ELEV. = 234.0'

MIN. 6' WIDE ACCESS PATH (SEE DETAILS)

COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

PROPOSED LINEAR SEDIMENTATION AND EROSION CONTROLS (SEE DETAILS)

PROPOSED RETAINING WALL (SEE DETAILS)

LINEAR SEDIMENTATION AND EROSION CONTROLS (SEE DETAILS)

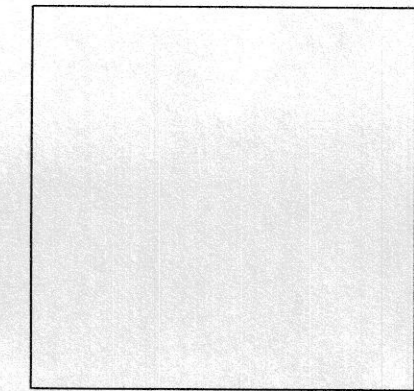
EXIST. ROCK/RUBBLE WALL (TYP.)

COMMONWEALTH OF MASSACHUSETTS 100 CAMBRIDGE STREET BOSTON, MA 02110

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

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 = 213 CF (AREA = 213 SF)
- LOCATION OF FLOODPLAIN MITIGATION/COMPENSATORY FLOOD STORAGE = 354 CF (AREA = 354 SF)



P.E. STAMP

| No. | Revision/Issue | Date |
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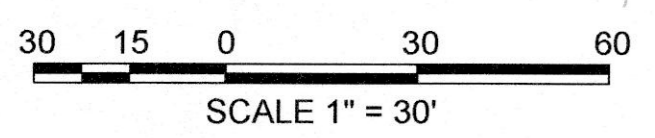


41 MAIN ST. BOLTON, MA 01740

100-YEAR FLOOD PLAIN CUT/FILL IMPACTS

Town of Ashland, MA

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



CURTIS SMITHSON
2 AIKENS ROAD
HOPKINTON, MA 01748



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

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

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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)

TEMPORARY IMPACTS

- BORDERING VEGETATED WETLAND (653 SF)
- LAND UNDER WATER-BODIES AND WATERWAYS (0 SF)
- BORDERING LAND SUBJECT TO FLOODING (1,900 SF)
- BANK (49 LF)
- 100FT BUFFER ZONE (4,911 SF)
- 200FT RIVERFRONT (4,911 SF)

PERMANENT IMPACTS

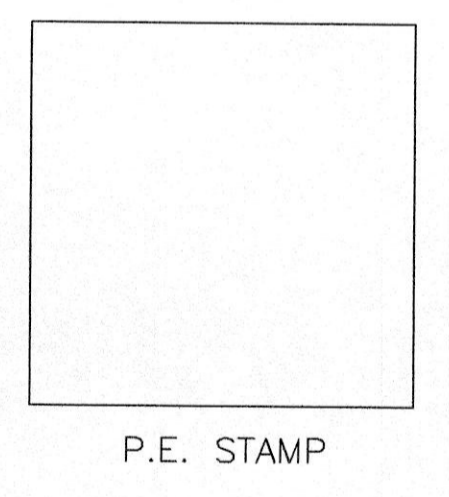
- BORDERING VEGETATED WETLAND (0 SF)
- LAND UNDER WATER-BODIES AND WATERWAYS (0 SF)
- BORDERING LAND SUBJECT TO FLOODING (200 SF)
- BANK (12 LF)
- 100FT BUFFER ZONE (4,488 SF)
- 200FT RIVERFRONT (4,488 SF)

PROPOSED

- TOTAL = 653 SF
- TOTAL = 0 SF
- TOTAL = 2,100 SF
- TOTAL = 61 LF
- TOTAL = 9,399 SF
- TOTAL = 9,399 SF

GENERAL NOTES

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



| No. | Revision/Issue | Date |
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COMPREHENSIVE ENVIRONMENTAL INCORPORATED

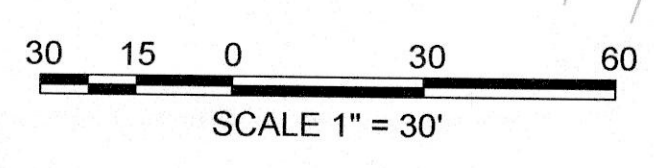
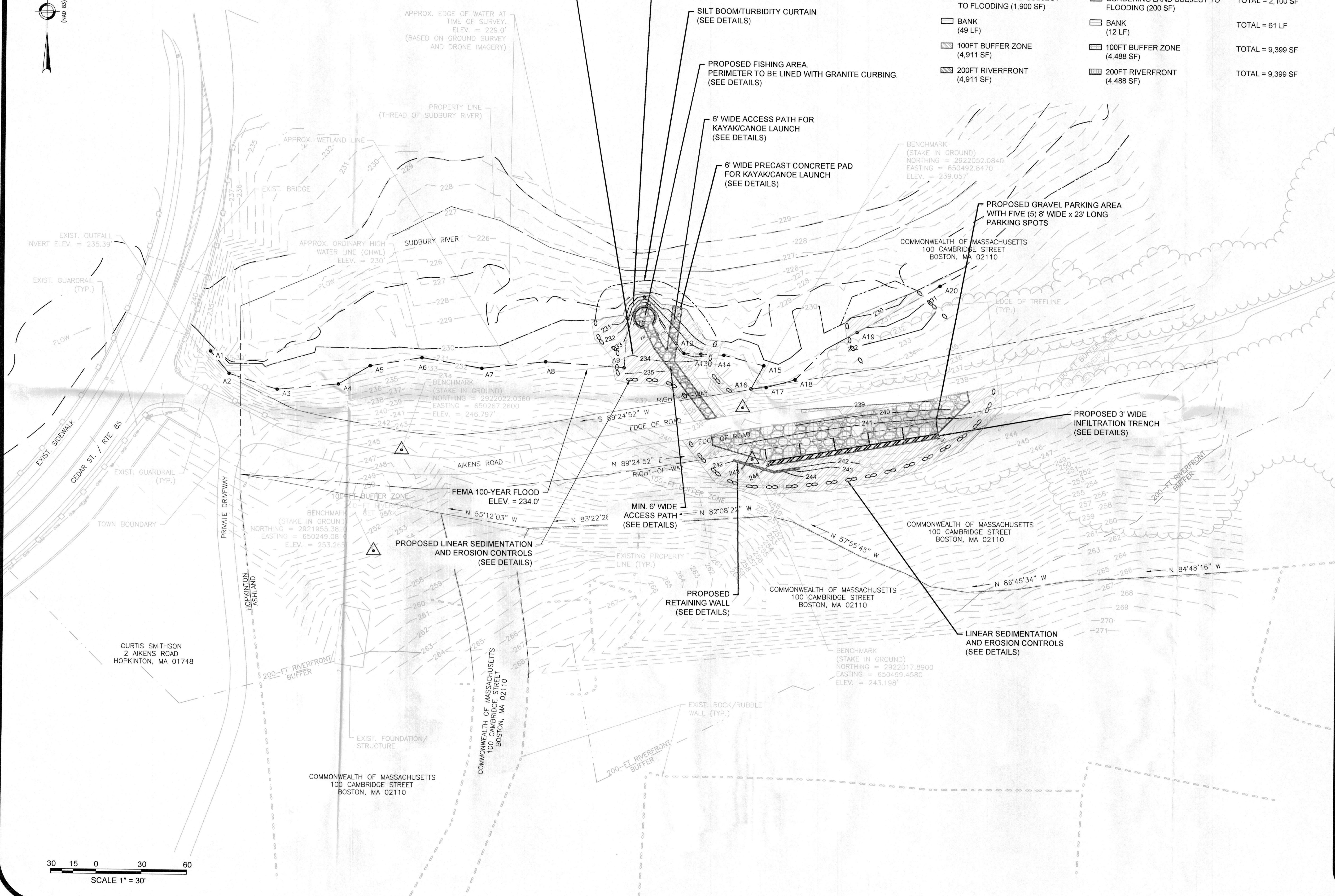
41 MAIN ST.
BOLTON, MA 01740

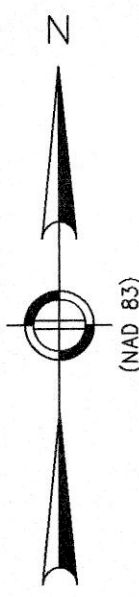
RESOURCE AREA IMPACTS

Town of Ashland, MA

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

Sheet
P-2





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.

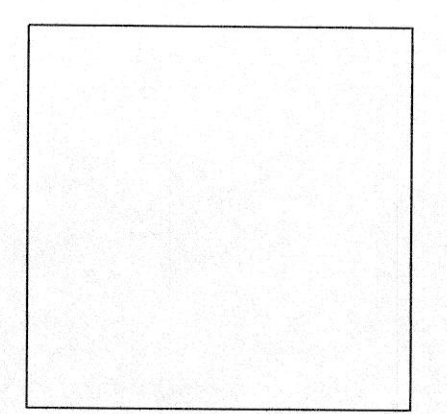
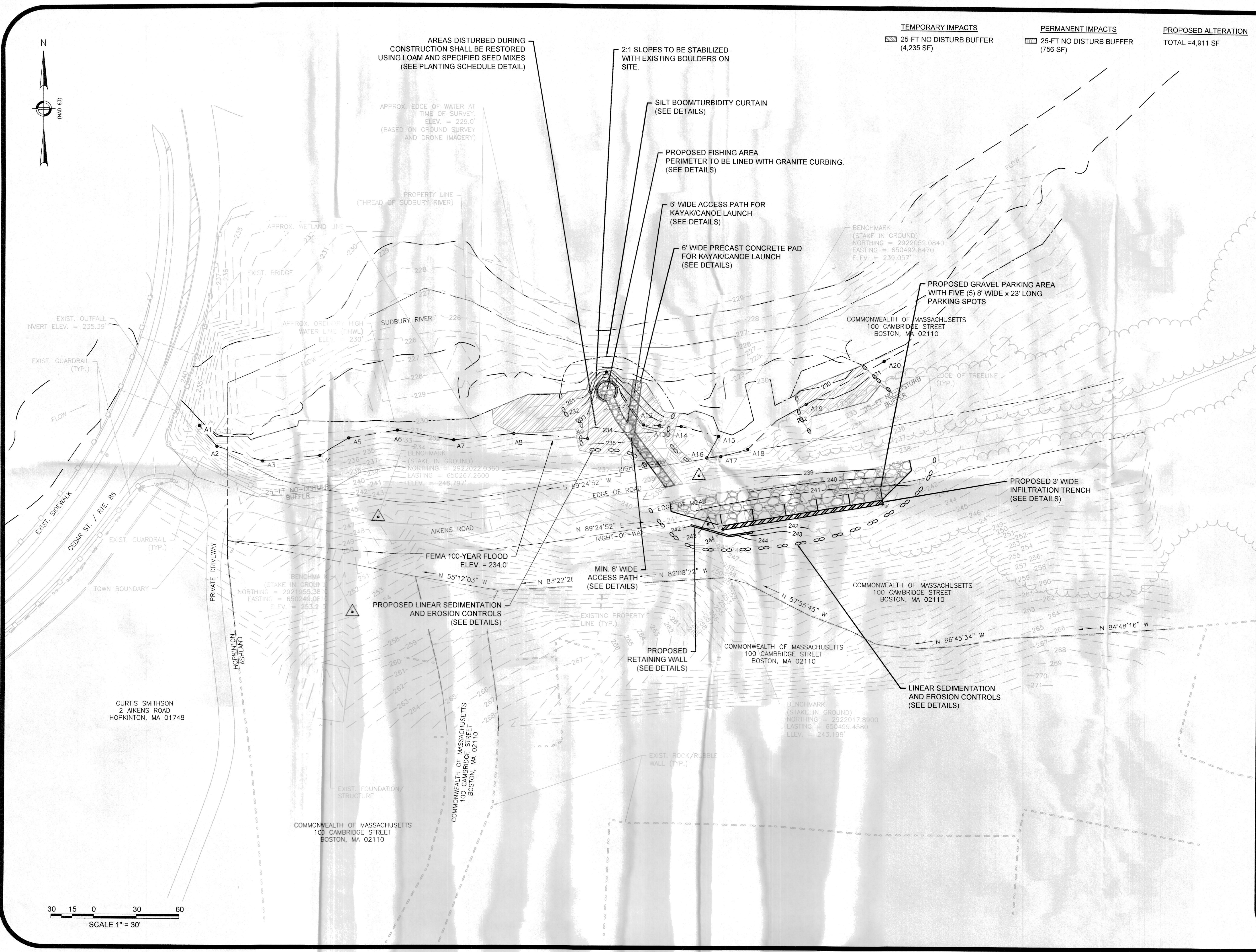
TEMPORARY IMPACTS
 25-FT NO DISTURB BUFFER (4,235 SF)

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

PROPOSED ALTERATION
 TOTAL = 4,911 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

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 | |

