

## WETLAND REPLICATION

### PART 1 GENERAL

- 1.01 EXTENT OF WORK
- A. THE TOWN OF HARVARD CONSERVATION COMMISSION WILL BE NOTIFIED 72 HOURS IN ADVANCE OF THE COMMENCEMENT OF THE WETLAND REPLICATION CONSTRUCTION.
- B. THE WORK INCLUDES THE FURNISHING OF ALL PLANT, LABOR, EQUIPMENT, MATERIALS AND REQUIRED PROFESSIONAL SERVICES IN CONNECTION WITH THE PROTECTION, REPLICATION AND PROVISION OF SPECIFIC MITIGATION AND ENHANCEMENT MEASURES TO MINIMIZE AND COMPENSATE FOR IMPACTS TO WETLANDS.
- C. IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT TO RETAIN A WETLAND SCIENTIST AND A MINIMUM OF FIVE YEARS EXPERIENCE IN SIMILAR WETLAND REPLICATIONS, AND THOROUGHLY VERSED IN THE COMMONWEALTH OF MASSACHUSETTS WETLANDS PROTECTION ACT (MGL CHAPTER 131, SECTION 40) AND ALL OTHER RELEVANT REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION. THIS INDIVIDUAL, HEREIN AFTER REFERRED TO AS "WETLAND SCIENTIST", SHALL BE APPROVED BY THE TOWN OF HARVARD CONSERVATION COMMISSION.

### PART 2 EXECUTION

- 2.01 GENERAL
- A. THE APPLICANT SHALL PLAN AND EXECUTE OPERATIONS IN A MANNER MINIMIZING THE AMOUNT OF EXCAVATED AND EXPOSED FILL, OR OTHER FOREIGN MATERIALS THAT MAY BE WASHED OR OTHERWISE CARRIED INTO THE REPLICATION AREAS.
- 2.02 EROSION/SEDIMENTATION CONTROL
- A. THE APPLICANT SHALL INSTALL STRAW WATTLES AND/OR SILTATION FENCING AND UTILIZE EROSION/SEDIMENTATION CONTROL METHODS PRIOR TO THE COMMENCEMENT OF ANY WORK.
- 2.03A REPLICATION AREA PREPARATION
- A. THE REPLICATION AREAS ARE TO BE CONSTRUCTED IN FULL PRIOR TO THE COMMENCEMENT OF ANY OTHER SITE WORK. THIS WETLAND REPLICATION SHALL BE PERFORMED UNDER THE DIRECTION AND GUIDANCE OF A QUALIFIED WETLAND SCIENTIST AND AS SPECIFIED HEREIN.
- A.1. ONCE MACHINE WORK TO EXCAVATE THE REPLICATION AREA, TRANSFER THE ORGANIC SOILS AND FINALIZE PREPARATION FOR PLANTING HAS BEEN COMPLETED, SITE WORK CAN BEGIN ON OTHER JURISDICTIONAL AREAS PROVIDED THE HAND PLANTING, TRANSPLANTING AND SEEDING IS BEING COMPLETED IN AN EXPEDIENT AND ONGOING MANNER.
- A.2. SITE WORK NOT WITHIN THE JURISDICTION OF THE HARVARD WETLAND BYLAW OR THE MASS WETLAND PROTECTION ACT IS NOT INCLUDED UNDER THIS REQUIREMENT.
- B. THE REPLICATION AREAS SHALL HAVE FINISHED GRADES WHICH MEET THE EXISTING GRADES IN THE ADJACENT WETLAND AS SHOWN ON THIS SHEET.
- C. BEFORE PLANTING THE REPLICATION AREAS, THE APPLICANT SHALL REMOVE ALL TREES, SHRUBS, STUMPS, AND SOD FROM THE REPLICATION AREAS. THESE ARE NOT TO BE STOCKPILED IN THE RESOURCE AREAS OR BUFFER ZONES WHILE AWAITING DISPOSITION.
- D. DURING THE REMOVAL OF THE TREES, SHRUBS, STUMPS AND SOD, SOME OF THE SOILS (WITHIN THE REPLICATION AREAS) WILL LIKELY BE REMOVED DURING THE PROCESS. ADDITIONAL WETLAND SOILS SHALL BE PROVIDED IN QUANTITIES SUFFICIENT TO ESTABLISH GRADES AS SHOWN. THE REPLACEMENT SOIL SHALL BE PURCHASED BY THE APPLICANT AT A 1:1 MIX OF PEAT TO LOAM.
- D.1. THE REPLICATION AREAS SHALL BE EXCAVATED TO A DEPTH OF 12 INCHES BELOW PROPOSED FINISH GRADES. THE REPLICATION AREAS ARE TO THEN BE BACKFILLED WITH A 1:1 MIXTURE OF LOAM TO PEAT.
- D.2. THE WETLAND SOILS SHALL BE DEPOSITED IN THE REPLICATION AREAS IN A MANNER MINIMIZING TRAVEL AND SUBSEQUENT COMPACTION OF THE UNDERLYING MATERIAL AND REPLACEMENT WETLAND SOILS.
- D.3. THE REPLICATION AREAS SHALL NOT HAVE FINISHED GRADING WHICH RESULTS IN A COMPLETELY FLAT TOPOGRAPHY. THE FINISH GRADING SHOULD RESULT IN A SHALLOW PIT AND MOUND TOPOGRAPHY THROUGHOUT THE REPLICATION AREAS.
- E. ALL FILL MUST BE STOCKPILED BEYOND THE RESOURCE AREAS AND BUFFER ZONES. PRECAUTIONS SHALL BE TAKEN AS NECESSARY TO PREVENT EROSION OF THE STOCKPILED MATERIAL. BEFORE FILL IS PUT INTO PLACE, ALL TREES, BRUSH AND STUMPS SHALL BE REMOVED FROM THE AREAS TO BE FILLED. THESE ARE NOT TO BE STOCKPILED IN THE RESOURCE AREAS OR BUFFER ZONES WHILE AWAITING DISPOSITION.
- F. ANY SIGNIFICANT FIELD CHANGES DEEMED NECESSARY TO ACHIEVE FINAL GRADING WITHIN TWELVE INCHES FROM THE GROUNDWATER TABLE, MUST BE APPROVED BY THE WETLAND SCIENTIST (IN THE FIELD) AND REPORTED TO THE CONSERVATION COMMISSION IN THE WEEKLY REPORT.
- G. THE OUTER EDGES OF THE REPLICATION AREAS SHALL BE BERMED TO PREVENT WATER DRAINING FROM THE REPLICATION AREAS.
- H. UPON COMPLETION OF THE REPLICATION AREAS, SILTATION FENCE SHALL BE PLACED AROUND THE ENTIRE PERIMETER (OF THE REPLICATION AREAS) TO PROTECT THE REPLICATION AREAS DURING THE REMOVAL OF CONSTRUCTION.
- I. AFTER REPLICATION CONSTRUCTION IS COMPLETED, NO FERTILIZER, LIMESTONE, SUPERPHOSPHATE, MULCH OR OTHER AMENDMENTS SHALL BE ADDED TO THE WETLAND SOILS.

### PART 3 REMOVING, STORING, AND REPLANTING OF EXISTING WETLAND TREES AND SHRUBS

- A. IN ANY DISTURBED WETLAND (WHERE PRACTICAL), THE APPLICANT MAY, AT HIS OPTION, DIG UP, STORE AND MAINTAIN EXISTING WETLAND TREES AND SHRUBS FOR USE IN THE REPLICATION AREAS. TREES SHALL BE A MINIMUM OF ONE INCH CALIPER AND SHRUBS SHALL BE THIRTY-SIX INCHES IN SPREAD OR HEIGHT. ALL PLANTS SHALL BE VIGOROUS AND WELL FORMED SPECIMENS. ALL PLANT MATERIALS DUG FOR THIS PURPOSE SHALL BE DUG BY HAND, HYDRAULIC TREE SPADE SPECIFICALLY DESIGNED FOR THIS PURPOSE OR OTHER SUITABLE EQUIPMENT OF SUFFICIENT SIZE TO REMOVE THE ROOTBALL. ROOTBALL SIZE SHALL BE THE MINIMUM SPECIFIED BY THE AMERICAN ASSOCIATION OF NURSERYMEN FOR EACH SPECIES. FOR HAND SOD PLANTS, A SUITABLE BURLAP OR OTHER WOOD OR CONTAINER SHALL BE PROVIDED TO KEEP THE ROOTBALL INTACT.
- A.1. ALL PLANTS DUG FOR REUSE SHALL BE IMMEDIATELY MOVED TO A PROTECTIVE STORAGE AREA. THE WETLAND SCIENTIST SHALL SET PLUMB ON GRADE OR IN PREPARED HOLES AND GUYED AS NECESSARY. THE AREA OR HOLES SHALL BE BACKFILLED WITH SUITABLE TOPSOIL TO COVER THE ROOTBALLS ENTIRELY. MULCHED TO PREVENT EROSION. ALL STORED VEGETATION SHALL BE MAINTAINED IN A DAMP CONDITION BY REGULAR WATERING. ALL HORTICULTURAL MEASURES REQUIRED FOR THE SURVIVAL OF COLLECTED PLANTINGS SHALL BE UTILIZED BY THE APPLICANT.
- A.2. AFTER THE REPLICATION AREAS HAVE BEEN CONSTRUCTED, STOCKPILED PLANTS SHALL BE REPLANTED IN LOCATIONS SPECIFIED AND APPROVED BY THE WETLAND SCIENTIST.

### PART 4 WETLAND REPLICATION PLANTING

- A. WETLAND PLANTING SHALL BE PERFORMED BETWEEN MARCH 1 AND OCTOBER 30 OR AS RECOMMENDED BY THE WETLAND SCIENTIST.
- B. WETLAND PLANTINGS TYPE AND QUANTITY SHALL BE PER PROVIDED PLANT LIST, TREES SHALL BE PLANTED NO FARTHER APART THAN TWENTY-FIVE FEET ON CENTER AND SHRUBS PLANTED NO FARTHER APART THAN EIGHT FEET ON CENTER.
- C. THE APPLICANT SHALL HAVE THE OPTION OF DIGGING, STORING AND REPLANTING EXISTING TREES AND SHRUBS PER PART 3 OF THIS SCHEDULE, OR ALTERNATIVELY, PROVIDING AND PLANTING NEW WETLAND SPECIES, PURCHASED BY THE APPLICANT FROM NURSERY STOCK, AND APPROVED BY THE WETLAND SCIENTIST.
- D. EXISTING FALLEN TREE SECTIONS/LARGE BRANCHES ON SITE MAY BE USED FOR WETLAND REPLICATION AREA AS APPROVED BY THE WETLAND SCIENTIST.
- E. WETLAND PLANTING, IN THE REPLICATION AREAS, WILL BE PERFORMED IN A MANNER WHICH REPRODUCES THE PLACEMENT AND PROPORTIONS OF THE PLANT SPECIES THAT WERE FOUND IN THE ORIGINAL LOST WETLAND AREAS.
- F. ALL WETLAND PLANTINGS WILL BE PERFORMED BY HAND. BURLAP WILL BE REMOVED FROM THE TOP THIRD OF THE ROOTBALLS AND ROPES, TWINE AND WIRE BASKETS WILL BE COMPLETELY REMOVED FROM THE ROOTBALLS. COMPLETELY REMOVE ALL PLASTIC BURLAP, ROPE, TWINE AND WIRE BASKETS FROM THE REPLICATION AREAS. COMPLETELY REMOVE THE CONTAINERS FROM THE POTTED PLANTS WHILE KEEPING THE SOIL AROUND THE ROOTS UNBROKEN.
- G. PRIOR TO THE START OF WETLAND CONSTRUCTION DETAILED MEASUREMENTS OF THE DEPTH OF THE SOIL O AND A HORIZONS WITHIN THE WETLAND TO BE LOST DURING CONSTRUCTION SHALL BE CONDUCTED. THE PROJECT SHALL USE THIS INFORMATION TO DETERMINE THE SUITABILITY OF THESE HORIZONS FOR REUSE IN THE REPLICATION AREAS AND TO CALCULATE THE NEED FOR ADDITIONAL SOIL MATERIALS. THE TOP 12 INCHES OF SOIL FROM THE ORIGINAL WETLAND MUST BE TRANSPORTED WITH SOIL STRUCTURE, ESPECIALLY LAMINATION AND DENSITY PROFILE INTACT TO THE REPLICATION AREA. THIS IS INTENDED TO PRESERVE PLANT, INVERTEBRATE AND PLANKTONIC COMMUNITIES OF THE WETLAND AND INHIBIT THE BLOSSOMING OF INVASIVE SPECIES.
- H. SOIL MATERIALS TO BE REUSED (FROM THE WETLAND TO BE LOST DURING CONSTRUCTION) SHALL BE PREPARED AND PLACED IN THE PREPARED REPLICATION AREA WITHIN ONE DAY. IF THIS IS NOT POSSIBLE, THESE SOILS SHALL BE STOCKPILED FOR THE MINIMUM AMOUNT OF TIME FEASIBLE AND KEPT LOOSELY COVERED AND MOIST AT ALL TIMES. EACH DAY ANY SOILS ARE STOCKPILED, THE PROJECT MANAGER SHALL NOTIFY THE COMMISSION IN WRITING OF THE STOCKPILING, THE VOLUME OF SOILS STOCKPILED, THE REASON THEREFORE, AND THE EXPECTED DURATION OF THE STOCKPILING. THE NOTIFICATION SHALL CONTAIN A CERTIFICATION SIGNED BY THE WETLAND SCIENTIST THAT HE/SHE HAS INSPECTED THE STOCKPILE THAT DAY AND THAT IT IS LOOSELY COVERED AND MOIST.
- I. THE PROPOSED REPLICATION AREA SHALL BE EXCAVATED TO A DEPTH OF ONE FOOT BELOW THE PROPOSED FINAL GRADE AND TO BE REFERRED TO IN THE

ORDER OF CONDITIONS. THE SUBSOIL WITHIN THE REPLICATION AREA SHALL BE EXAMINED BY THE WETLAND SCIENTIST TO DETERMINE WHETHER IT IS FINE TEXTURED (FINE SANDY LOAM OR FINER, AS DEFINED BY NRCS STANDARDS). IF THE SUBSOIL IS COARSE-TEXTURED, IT SHALL BE REPLACED WITH FINE-TEXTURED MATERIAL TO ALLOW FOR THE DEVELOPMENT OF A CAPILLARY FRINGE BETWEEN THE GROUNDWATER AND THE SOIL SURFACE.

J. FOLLOWING REPLACEMENT OF TOP SOIL, A MINIMUM OF 48 HOURS SHALL PASS PRIOR TO PLANTING OF WETLAND VEGETATION TO ALLOW FOR REBOUND OF BURIED OR COMPACTED PEAT. THE FINAL GRADE SHALL BE ADJUSTED AS NECESSARY.

K. AFTER PLANTINGS ARE COMPLETED, THE REPLICATION AREAS SHALL BE HAND RAKED TO ELIMINATE ANY DEPRESSIONS, GREATER THAN FOUR INCHES IN DEPTH WHICH MAY BE CREATED DURING DIGGING AND TO ELIMINATE COMPACTION OF THE SOILS AS MUCH AS POSSIBLE.

K.1. ONCE PLANTING IS COMPLETED, LEAVES (COLLECTED FROM UPLAND AREAS OF THE PROPOSED SITE CONSTRUCTION) SHALL BE SPREAD THROUGHOUT THE REPLICATION AREAS.

L. THE INTENT OF THIS SCHEDULE IS TO INSURE THAT AT LEAST 75 PERCENT OF THE REPLICATION SURFACE AREA IS RE-ESTABLISHED WITH INDIGENOUS WETLAND PLANT SPECIES WITHIN THREE GROWING SEASONS OF THEIR PLANTING. IN ACCORDANCE WITH THE MASSACHUSETTS DEP WETLANDS PROTECTION ACT REGULATIONS, PURPLE LOOSESTROFE (LYTHRUM SALICARIA) AND EUROPEAN BUCKTHORN (RHAMNUS FRANGULA) SHALL NOT BE PLANTED IN THE REPLICATION AREAS. IF AFTER THREE GROWING SEASONS, IT IS EVIDENT IN THE OPINION OF THE BOTANIST THAT IT IS UNLIKELY THAT THE 75 PERCENT RE-ESTABLISHMENT REQUIREMENT WILL BE ACHIEVED, THE APPLICANT SHALL SUPPLEMENT THE PLANTINGS AS NECESSARY TO ACHIEVE THE REQUIRED COVERAGE. IF AFTER THE END OF THREE GROWING SEASONS, 75 PERCENT RE-ESTABLISHMENT HAS NOT BEEN ACHIEVED, THE APPLICANT SHALL PROVIDE AND PLANT HEALTHY WETLAND VEGETATION IN SUFFICIENT QUANTITIES TO ACHIEVE THE 75 PERCENT RE-ESTABLISHMENT.

### ELEVATION DATUM

DATUM: NAVD 1988

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

ASSESSORS MAP 8, PARCEL 62.2

PROPERTY OWNER: WHEELER REALTY TRUST

198 AYER ROAD

HARVARD, MA 01451

### PART 5 WETLAND REPLICATION MONITORING

- A. THE WETLAND SCIENTIST SHALL VISIT THE REPLICATION AREA WEEKLY FOLLOWING PLANTING AND SEEDING FOR THE DURATION OF THE FIRST GROWING SEASON TO DETERMINE THE NEED FOR IRRIGATION AND ADDITIONAL FERTILIZATION AND TO INFORM THE SITE CONTRACTOR OF THESE REQUIREMENTS.
- B. THE WETLAND SCIENTIST SHALL INSPECT WETLAND REPLICATION AREA TWICE A YEAR DURING LATE SPRING AND DURING THE MID TO LATE SUMMER OF THE FIRST TWO FULL GROWING SEASONS. A WRITTEN REPORT SHALL BE SUBMITTED TO THE COMMISSION AT THE END OF EACH GROWING SEASON.
- C. A BOND SHALL BE POSTED THAT WILL ENABLE THE COMMISSION TO COMPLETE THE REPLICATION SHOULD THE APPLICANT FAIL TO FULFILL OBLIGATIONS SET FORTH IN THE ORDER OF CONDITIONS.

### REPLICATION NOTES:

1. SELECTION AND QUANTITY OF WETLAND REPLICATION PLANTS SHALL BE DETERMINED BY WETLAND SCIENTIST, AS APPROVED BY THE TOWN OF HARVARD CONSERVATION COMMISSION.
2. EXISTING TREES WITHIN WETLAND REPLICATION AREAS SHALL BE MAINTAINED TO THE MAXIMUM PRACTICABLE, AS DETERMINED BY THE WETLAND SCIENTIST.
3. NEW ENGLAND WETMIX SEED MIX SHALL BE SPREAD WITHIN THE LIMIT OF THE PROPOSED WETLAND REPLICATION AREA.

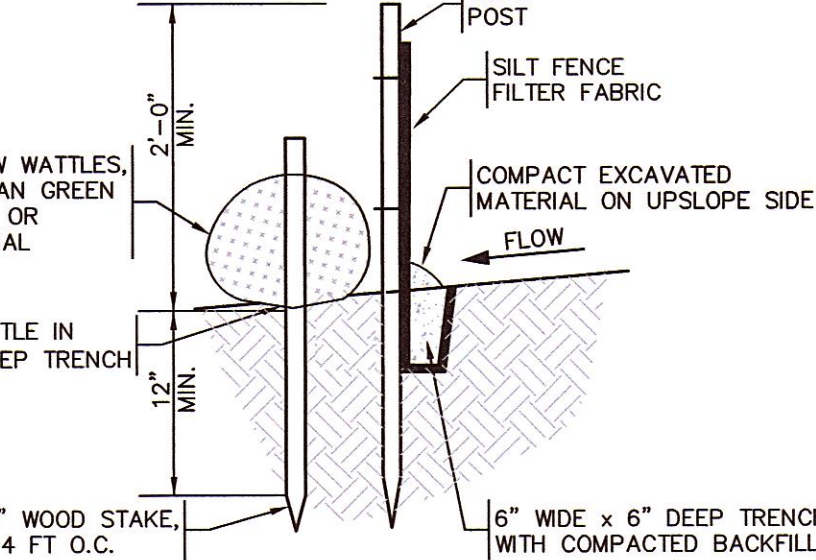
### WETLAND REPLICATION PLANT LIST

Symbol	Botanical Name	Common Name	Size	Quantity	Condition
<b>TREES</b>					
AR	ACER RUBRUM	RED MAPLE	6"-8" HT. 1.5'-2" CAL	12	B & B
FP	FRAXINUS PENNSYLVANICA	GREEN ASH	6"-8" HT. 1.5'-2" CAL	6	B & B
<b>SHRUBS</b>					
VC	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	2'-3" HT.	30	CONT. GROWN
IV	ILEX VERTICILLATA	WINTER BERRY	2'-3" HT.	45	CONT. GROWN
VO	VIORNUM DENTATUM	NORTHERN ARROWWOOD	3'-4" HT.	45	CONT. GROWN
LB	LYNDA BENZON	SPICEBUSH	3'-4" HT.	45	CONT. GROWN
<b>HERBACEOUS PLANTS</b>					
OC	OSMUNDA CINNAMOMEA	CINNAMON FERN	#1 POT	90	CONT. GROWN
OS	ONOCLEA SENSIBILIS	SENSITIVE FERN	#1 POT	60	CONT. GROWN
OR	OSMUNDA REGALIS	ROYAL FERN	#1 POT	30	CONT. GROWN

### SEED MIX

NEW ENGLAND WETMIX (WETLAND SEED MIX)  
APPLIED AT 18 LBS/ACRE : 2,500 SF/LB OR GREATER.

BOTANICAL NAME	COMMON NAME
CAREX VULPINODEA	FOX SEDGE
CAREX SCOPARIA	BLUNT BROOM SEDGE
CAREX LURIDA	LURID SEDGE
CAREX LUPULINA	HOP SEDGE
POA PALUSTRIS	FOWL BLUEGRASS
BIDENS FRONDOSA	BECKAM TICKS
SORBUS ATROVIRENS	GREEN BULRUSH
ASCLEPIAS INCARNATA	SWAMP MILKWEED
CAREX CRINITA	FRINGED SEDGE
VERNONIA NOVEBORACENSIS	NEW YORK IRONWEED
JUNCUS EFFUSUS	SOFT RUSH
ASTER LATERIFLORUS	STARVED / CALICO ASTER
IRIS VERSICOLOR	BLUE FLAG
GLYCERIA GRANDIS	AMERICAN MANNAGRASS
MINULUS RINGENS	SQUARE STEMMED MONKEY FLOWER
EUPATORIUM MACULATUM	SPOTTED JOE PYE WEED



- NOTES:
- [1] INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
- [2] TRAPPED SEDIMENT SHALL BE REMOVED TO A NON-SENSITIVE UPLAND AREA.

### SILT FENCE / STRAW WATTLE BARRIER

TYPICAL CROSS SECTION  
NOT TO SCALE

### PLOT PLAN

1" = 200'

### DRAWING ISSUED FOR:

- ☐ CONCEPT ☐ CONSTRUCTION
- ☒ PERMIT ☐ CONSTRUCTION RECORD

THIS DRAWING MAY NOT SHOW CONSTRUCTION DETAILS AND SPECIFICATIONS FOR ALL PROPOSED IMPROVEMENTS, AND MAY NOT IDENTIFY ALL CONSTRUCTION WORK ITEMS/AREAS OF CONTRACTOR JURISDICTION.

PER 250 CMR 5.03(13), THE FOLLOWING ARE EXCLUDED FROM THE PROFESSIONAL ENGINEER'S RESPONSIBILITY: ALL BOUNDARY INFORMATION; LOCATION OF EXISTING STRUCTURES, TREES, UTILITIES, TOPOGRAPHY OR SIMILAR FEATURES; DESIGN OF RETAINING WALLS, PROPRIETARY EQUIPMENT. SEE EXISTING CONDITION NOTES.

NO.	DATE	BY	APP.	REVISION DESCRIPTION

**GPR** Engineering Solutions for Land & Structures

**GOLDSMITH, PREST & RINGWALL, INC.**

39 MAIN STREET, SUITE 301, AYER, MA 01432

CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING

VOICE: 978.772.1590 FAX: 978.772.1591

www.gpr-inc.com

### COMMERCIAL DEVELOPMENT NOTICE OF INTENT

### WETLAND REPLICATION PLAN

203 AYER ROAD  
HARVARD, MA

PREPARED FOR:  
VYONNE CHERN  
7 GREEN WAY  
WAYLAND, MA 01778

WHEELER REALTY TRUST  
198 WHEELER TRUST  
HARVARD, MA 01451

DES. BY: LT  
CHK. BY: NMP

DATE: MARCH 2022

JOB 211009

1 OF 1