

ISSUED FOR PERMIT - NOT CONSTRUCTION

NOTES:

A. SPECIFICATIONS

- REPLICATION AREA SHALL BE STAKED PRIOR TO CONSTRUCTION. NOTIFY THE LITTLETON CONSERVATION COMMISSION FOR INSPECTION AFTER STAKING AND PRIOR TO CONSTRUCTION.
- ALL CONSTRUCTION AND EXCAVATED MATERIAL SHALL BE STORED OUTSIDE OF THE RESOURCE AREA.
- PRIOR TO CONSTRUCTION CONTRACTOR SHALL PLACE SIGN CONTAINING DEP FILE NUMBER WHERE IT CAN BE SEEN FROM THE STREET.
- CONTRACTOR SHALL PLACE EROSION AND SEDIMENTATION CONTROL BARRIER AS SHOWN HEREON PRIOR TO CONSTRUCTION. NOTIFY LITTLETON CONSERVATION COMMISSION FOR INSPECTION AFTER INSTALLATION AND PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOTIFY WETLAND SPECIALIST AFTER TO STAKING AND PLACEMENT OF EROSION CONTROL BARRIERS. WETLAND SPECIALIST TO ESTABLISH PHOTOMETRIC REFERENCE POINTS AT THIS TIME.
- CONTRACTOR TO EXCAVATE ALL REPLICATION AREAS PRIOR TO EXCAVATING WITHIN THE EXISTING WETLAND FILL AREAS. EXCAVATE ALL REPLICATION AREA TO 12" BELOW FINAL FINISHED GRADES AS SHOWN HEREON. DE-WATER EXCAVATIONS AS REQUIRED.
- WETLAND SOIL SHALL BE TRANSPORTED WHEN POSSIBLE. SOILS TO BE USED AT THE REPLICATION SITE SHOULD BE USED IMMEDIATELY IF POSSIBLE OR STOCKPILED FOR AS LITTLE TIME AS POSSIBLE. WHILE STOCKPILED, THE SOILS SHOULD BE KEPT WET AND NOT BE ALLOWED TO DRY OUT. THE METHOD FOR MAINTAINING THE APPROPRIATE MOISTURE LEVEL SHOULD BE DOCUMENTED BY CONTRACTOR AND SUBMITTED TO THE PROJECT ENGINEER. CONTAMINATION OF THESE SOILS SHOULD BE PREVENTED. TRUCKS THAT HAVE PREVIOUSLY BEEN ON OTHER SITES SHOULD BE WASHED PRIOR TO INTRODUCTION TO THE REPLICATION SITE SO THAT MUD/DIRT WITH EXOTIC/INVASIVE SEEDS IS NOT INADVERTENTLY BROUGHT TO THE REPLICATION SITE.
- PLACE TRANSPORTED SOIL TO 12" DEPTH IN NEW REPLICATION AREAS TO FINAL FINISHED GRADES AS SHOWN HEREON.
- CONTRACTOR TO PROVIDE ADDITIONAL WETLAND SOIL AS REQUIRED TO ACHIEVE THE 12" MINIMUM DEPTH IN THE REPLICATION AREAS. SUPPLEMENTAL SOIL SHALL CONSIST OF EQUAL VOLUMES OF A GOOD QUALITY LOAM AND WELL COMPOSTED ORGANIC MATERIAL. THE LOAM AND COMPOST SHOULD BE FREE OF LARGE STONES AND DEBRIS. CONTRACTOR TO FURNISH CONSERVATION COMMISSION WITH THE SOURCE OF OFF SITE SOIL ADDITIVES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE WETLAND SPECIALIST TO INSPECT THE WETLAND AREAS FOR THE PRESENCE OF INVASIVE SPECIES. INVASIVE SPECIES SHALL BE REMOVED PRIOR TO CONSTRUCTION.
- CONTRACTOR TO PLACE TRANSPORTED SOIL WITH SIMILAR DENSITY AS OBSERVED WITHIN THE EXISTING WETLAND AREA.
- ALL PLANTING SHOULD OCCUR AT THE BEGINNING OR END OF THE GROWING SEASON UNLESS A WATERING PLAN IS SUBMITTED AND APPROVED BY THE COMMISSION. FALL PLANTINGS SHOULD BE DONE BEFORE THE FIRST FROST. SHRUBS SHALL BE PLANTED IN ACCORDANCE WITH PLANTINGS SHOWN ON PLAN. REFER TO PLANTING DETAIL FOR TREES AND SHRUBS. SEED MIXTURES SHALL BE SOWN IN ACCORDANCE WITH NURSERY SPECIFICATIONS. EXISTING TREES SHALL BE EXCAVATED AROUND IN A MANOR TO MINIMIZE ROOT DAMAGE WHERE APPLICABLE. STABILIZED CANOPY FROM EXISTING TREES WILL FURTHER ENHANCE THE SUCCESS OF NEW PLANTINGS. NEW ENGLAND WETMIX SHALL BE SPREAD THROUGHOUT THE REPLICATION AREAS IN ACCORDANCE WITH NURSERY SPECIFICATIONS. UPON COMPLETION OF PLANTINGS REPLICATION AREAS SHALL BE COVERED WITH CLEAN STRAW HAY AND WATERED..

B. OVERSIGHT/MONITORING

THE PROJECT SUPERVISOR OR MONITOR SHOULD BE PRESENT DURING THE MOST IMPORTANT TASKS IN REPLICATION CONSTRUCTION AS DESCRIBED BELOW.

- INSPECT SITE FLAGGING BEFORE EXCAVATION OR EROSION CONTROL INSTALLATION BEGINS.
- DURING EXCAVATION OF THE ALTERED AREA IF VEGETATION IS TO BE TRANSPORTED TO THE REPLICATION AREA TO ENSURE SURVIVAL OF THE PLANTINGS.
- BEFORE SOIL TRANSPORTATION OR ADDITION INTO THE REPLICATION AREA TO INSPECT EXCAVATED ELEVATIONS AND LIKELY LOSS CONSTRUCTION GROUND WATER ELEVATIONS FOR THE REPLICATION AREA.
- AFTER EACH STAGE OF GRADING WORK IS COMPLETED TO INSPECT FINISHED ELEVATIONS.
- DURING PLANTING AND SEEDING AND AFTER THE FIRST MONTH OF THE GROWING SEASON TO INSPECT PROPAGATION TECHNIQUES.
- AFTER ONE GROWING SEASON TO OBSERVE VEGETATION DEVELOPMENT AND REGULATORY COMPLIANCE.
- AFTER TWO GROWING SEASONS TO DETERMINE VEGETATION DEVELOPMENT AND REGULATORY COMPLIANCE.
- AFTER SUBSEQUENT GROWING SEASONS IF A GREATER THAN 2-YEAR MONITORING PROGRAM IS REQUIRED.
- MONITORING SHALL BE PERFORMED IN ACCORDANCE WITH THE LITTLETON WETLAND REGULATIONS.
- PLANTS SHALL BE REPLACED AS NECESSARY TO ENSURE A 75% SURVIVAL RATE.
- EROSION CONTROLS SHALL BE REMOVED PRIOR TO ISSUANCE OF A CERTIFICATE OF COMPLIANCE.

C. EROSION CONTROL SPECIFICATIONS

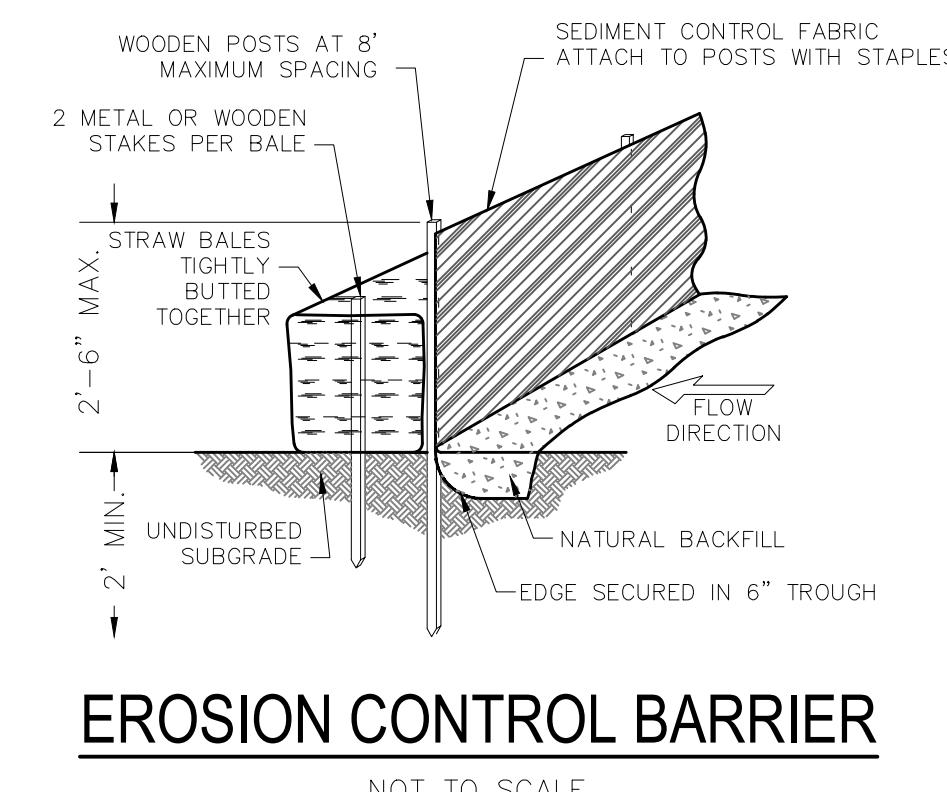
- WORK SHALL BE PERFORMED DURING A DRY PERIOD TO THE MAX EXTENT POSSIBLE
- PLACE EROSION CONTROL BARRIER (SLT FENCE ONLY AROUND REPLICATION AREAS) PRIOR TO CONSTRUCTION. NOTIFY THE BOLTON CONSERVATION COMMISSION AFTER INSTALLATION FOR INSPECTION.

WETLAND PLANTING SCHEDULE

SYMBOL:	COMMON NAME:	BOTANICAL NAME:	SIZE:	SPACING:	QUANTITY:
+	AR	RED MAPLE	B&B 6'-8' HEIGHT	AS SHOWN	3
+	VC	Highbush Blueberry	#3 CONTAINER 18"-24" HEIGHT	AS SHOWN	6
*	OC	CINNAMON FERN	#1 CONTAINER	AS SHOWN	20
CS	CS	RED OSIER DOGWOOD	#3 CONTAINER 18"-24" HEIGHT	AS SHOWN	5

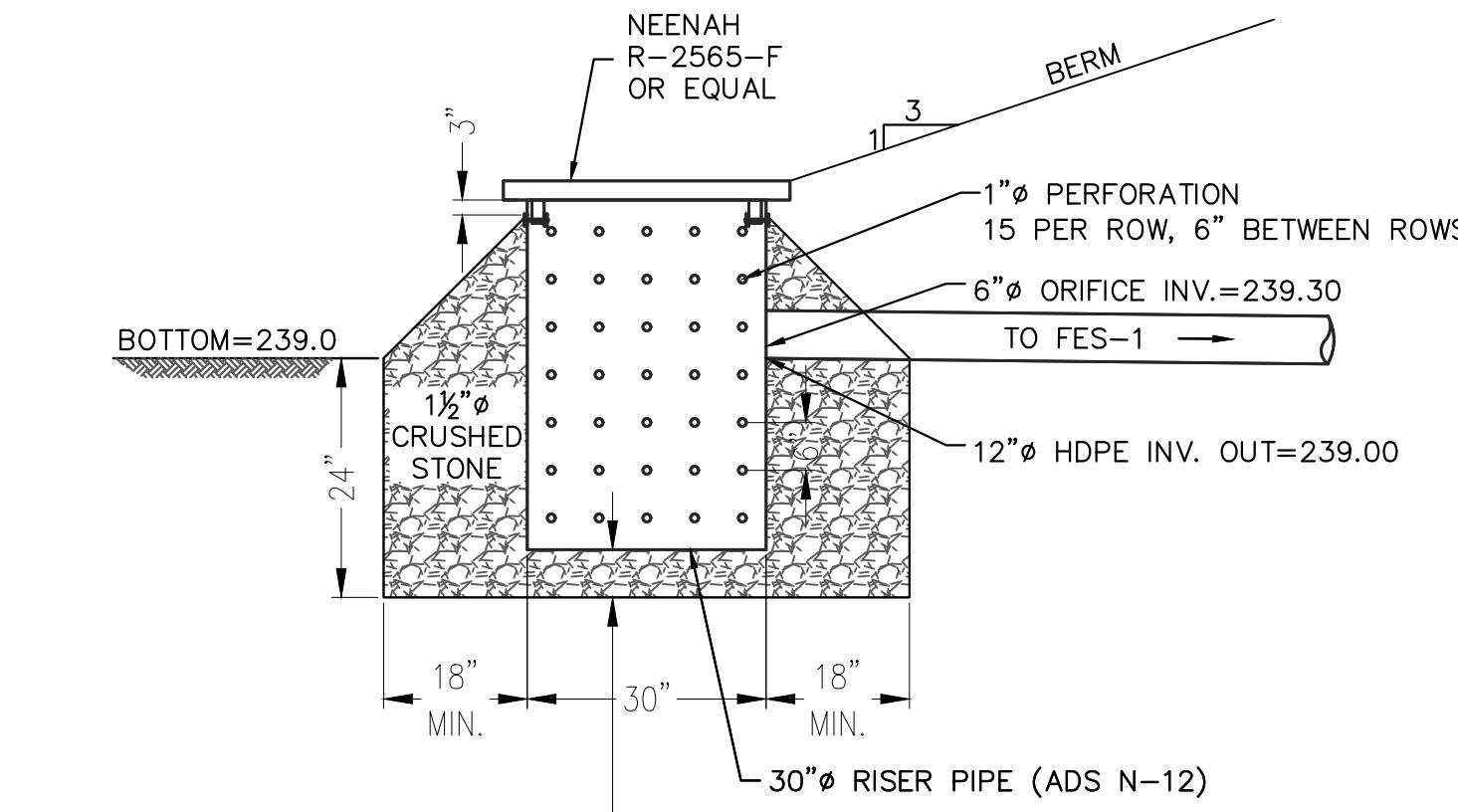
NOTE: THE ENTIRE REPLICATION AREA WILL BE SEADED WITH "NEW ENGLAND WET MIX" (WETLAND SEED MIX) AT AN APPLICATION RATE OF 1 LB/2500 SF.

SEEDING:
THE MIX MAY BE APPLIED BY MECHANICAL SPREADER, OR BY HAND. WHEN APPLYING ON BARE SOIL, RAKE THE SOIL TO CREATE GROOVES, APPLY SEED, THEN LIGHTLY RAKE OVER. IN NEW ENGLAND, THE BEST RESULTS ARE OBTAINED WITH AN EARLY SPRING SEEDING. SUMMER SEEDING CAN BE SUCCESSFUL WITH A LIGHT MULCHING OF WEED FREE STRAW TO CONSERVE MOISTURE. LATE FALL AND WINTER DORMANT SEEDING REQUIRE A SLIGHT INCREASE IN THE SEEING RATE. FERTILIZATION IS NOT REQUIRED UNLESS THE SOIL IS PARTICULARLY INFERTILE.



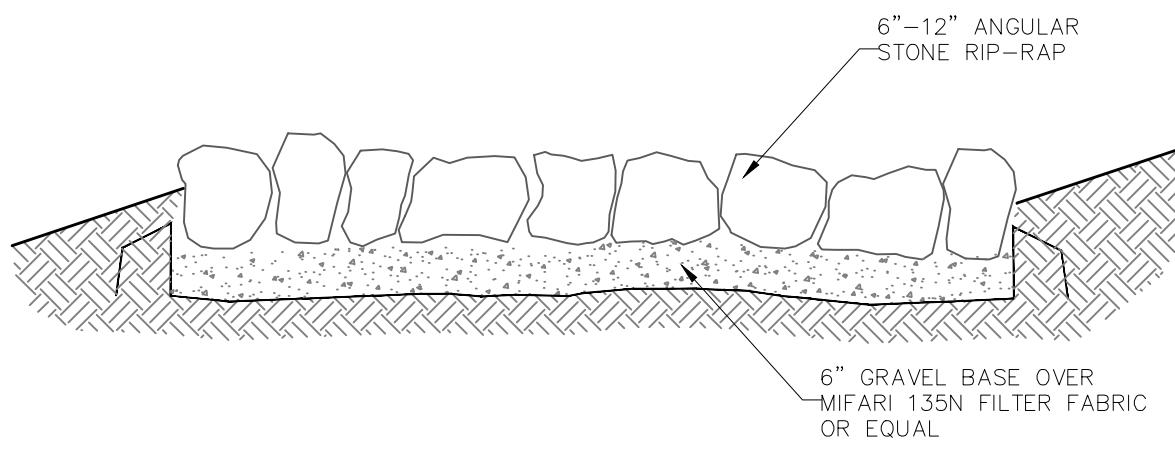
EROSION CONTROL BARRIER

NOT TO SCALE



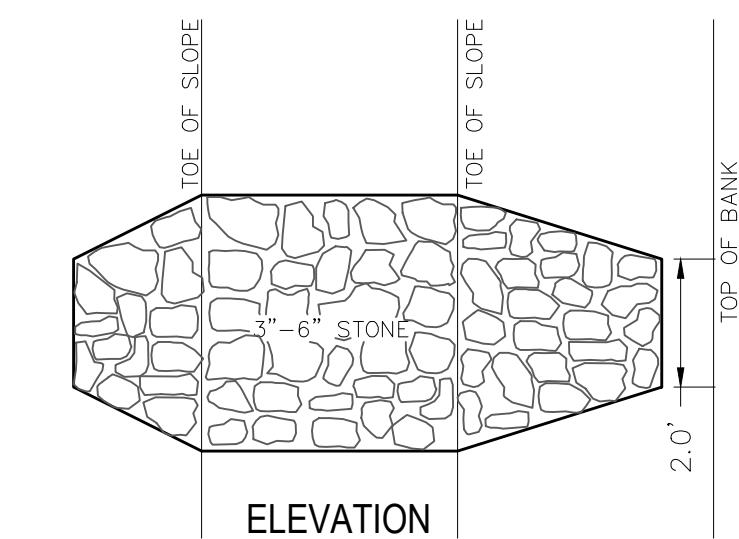
OUTLET CONTROL STRUCTURE DETAIL (OCS-1)

SCALE: 1" = 2'



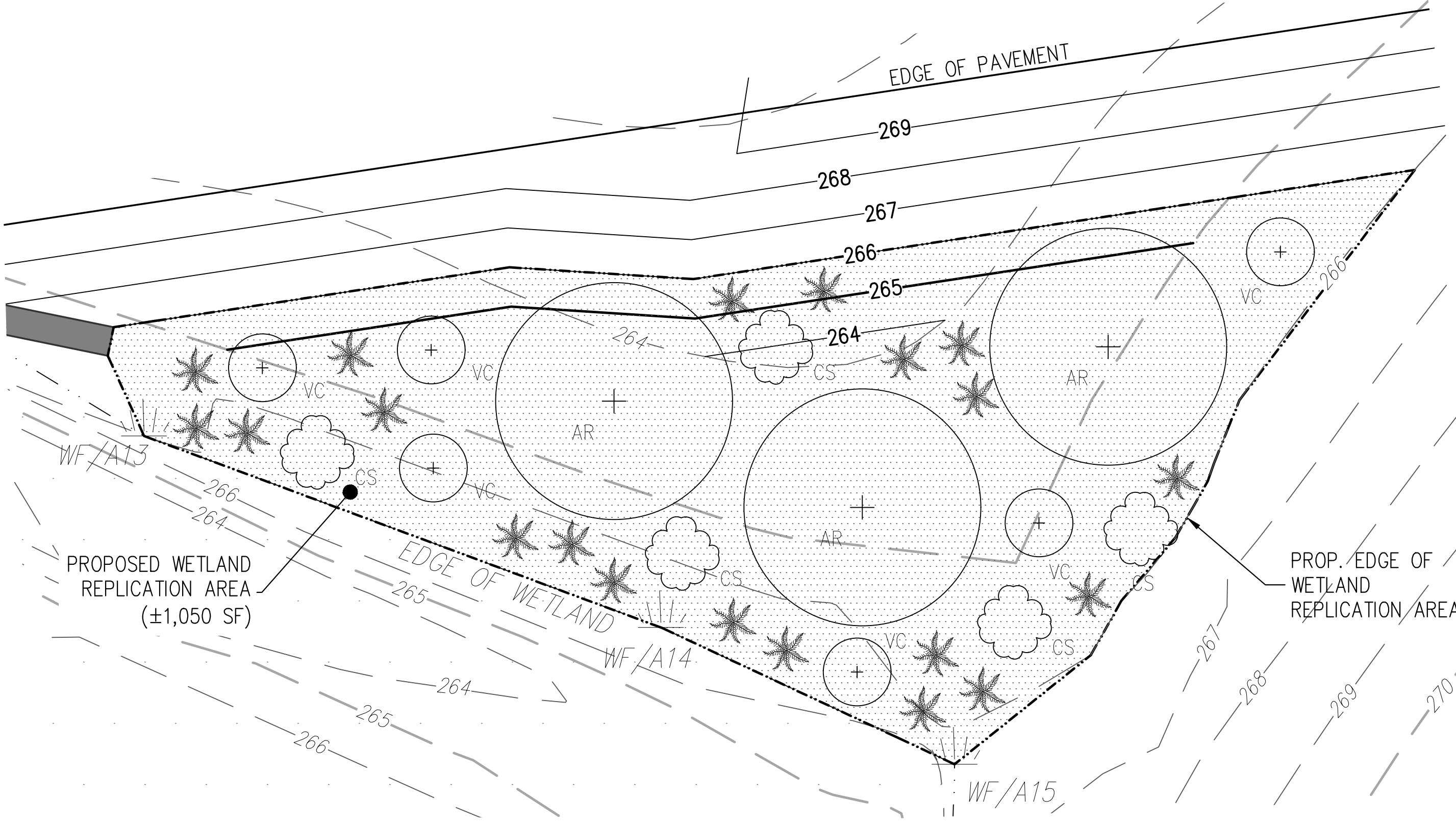
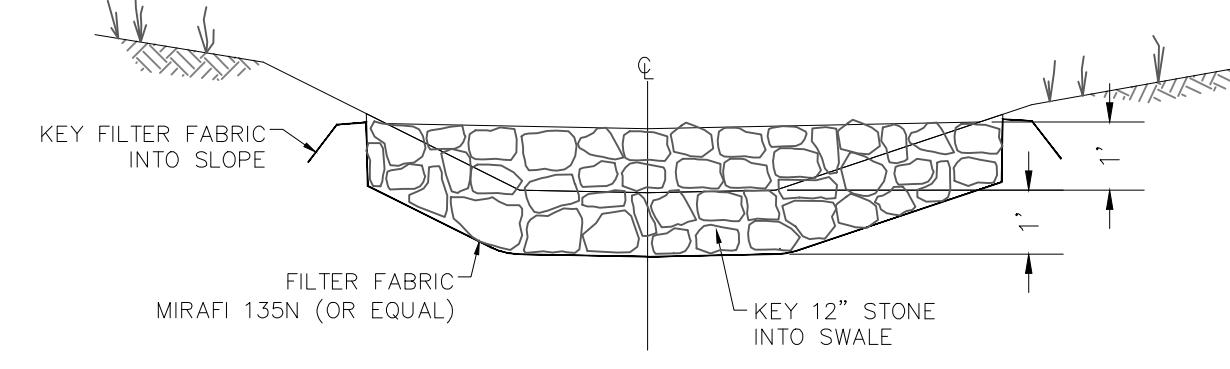
STONE RIP-RAP DETAIL

NOT TO SCALE



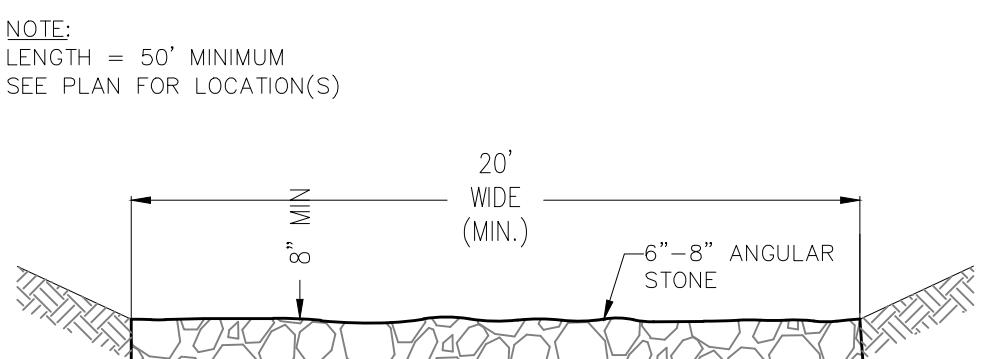
CROSS-SECTION
CHECK DAM DETAIL

SCALE: 1"=3'



WETLAND REPLICATION AREA

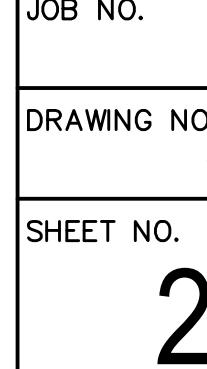
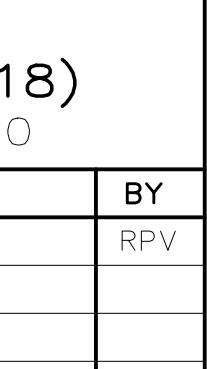
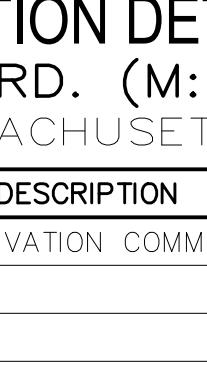
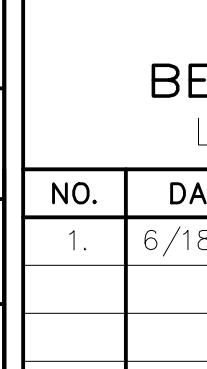
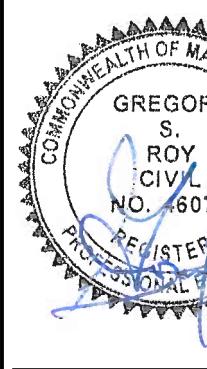
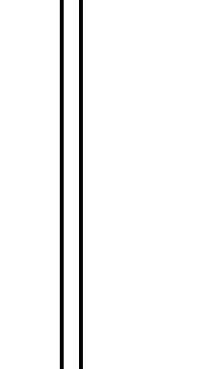
SCALE: 1"=5'



TEMP. CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

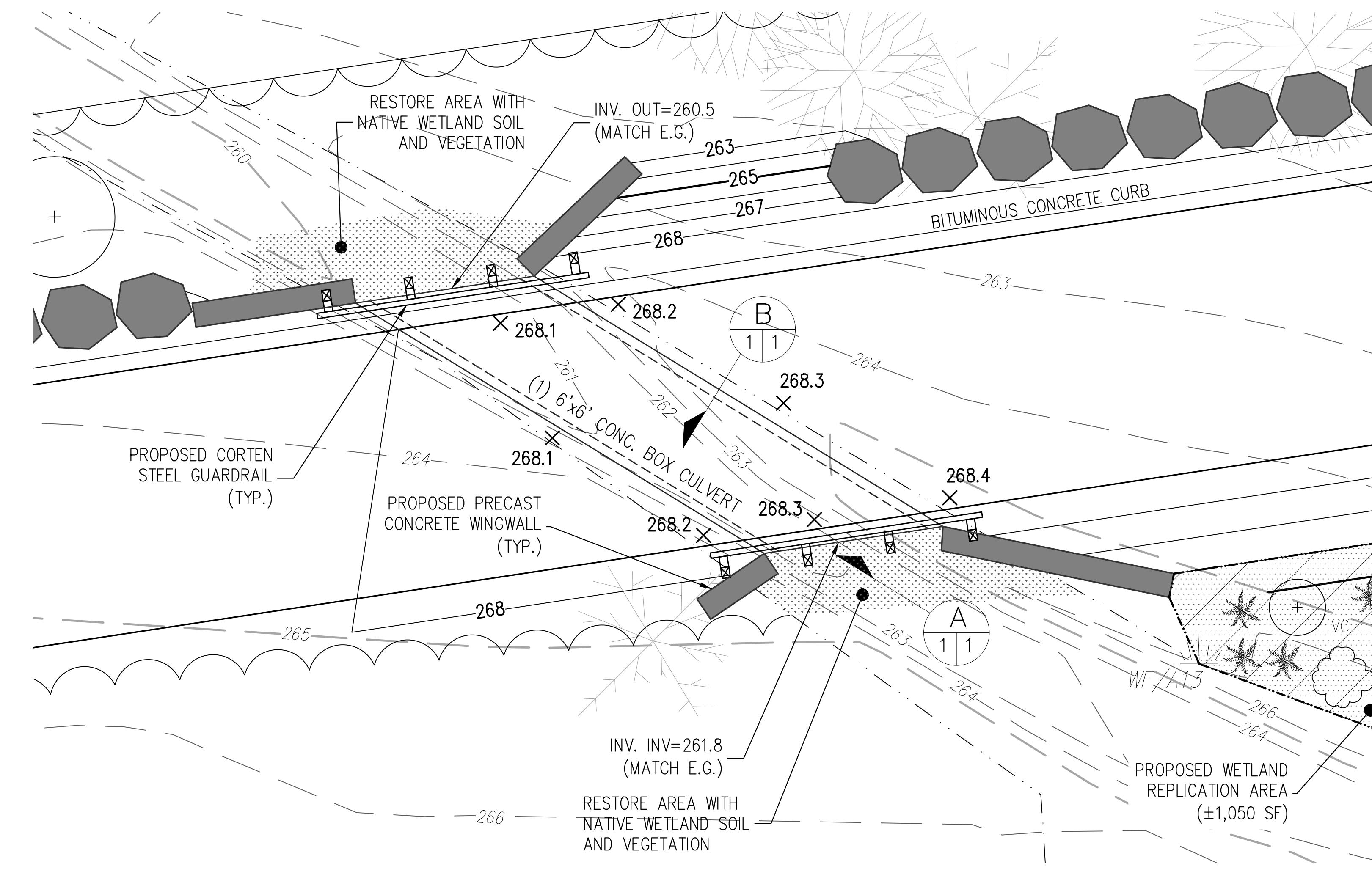
CONSTRUCTION DETAILS			
BEAVER BROOK RD. (M: R19 P: 18) LITTLETON, MASSACHUSETTS 01460			
PREPARED BY:	OWNER:	DATE:	CONSTRUCTION DETAILS
DILLIS & ROY CIVIL DESIGN GROUP	MICHAEL & HANNAH GRUAR 64 BEAVER BROOK ROAD LITTLETON, MASSACHUSETTS 01460	02/11/25	BEAVER BROOK RD. (M: R19 P: 18) LITTLETON, MASSACHUSETTS 01460
CIVIL ENGINEERS LAND SURVEYORS WETLAND CONSULTANTS	SCALE:	DESIGN BY:	CONSTRUCTION DETAILS
CORPORATE OFFICE: 1 MAIN STREET, SUITE 1 LUNENBURG, MA 01462	CONCORD OFFICE: 100 MAIN ST., SUITE 310 CONCORD, MA 01740	RPV	BEAVER BROOK RD. (M: R19 P: 18) LITTLETON, MASSACHUSETTS 01460
978-779-6091	www.dillisandroy.com	DRAWN BY:	CONSTRUCTION DETAILS
100	100	RPV	BEAVER BROOK RD. (M: R19 P: 18) LITTLETON, MASSACHUSETTS 01460
MAIN STREET, SUITE 1	MAIN ST., SUITE 310	CHECKED BY:	CONSTRUCTION DETAILS
LUNENBURG, MA 01462	CONCORD, MA 01740	CSR	BEAVER BROOK RD. (M: R19 P: 18) LITTLETON, MASSACHUSETTS 01460
STAMP DATE: 06/18/2025			
ISSUED FOR PERMIT - NOT CONSTRUCTION			
JOB NO. 7462			
DRAWING NO. 7462-SP			
SHEET NO. 2 OF 3			



BUFFER ZONE CALCULATIONS

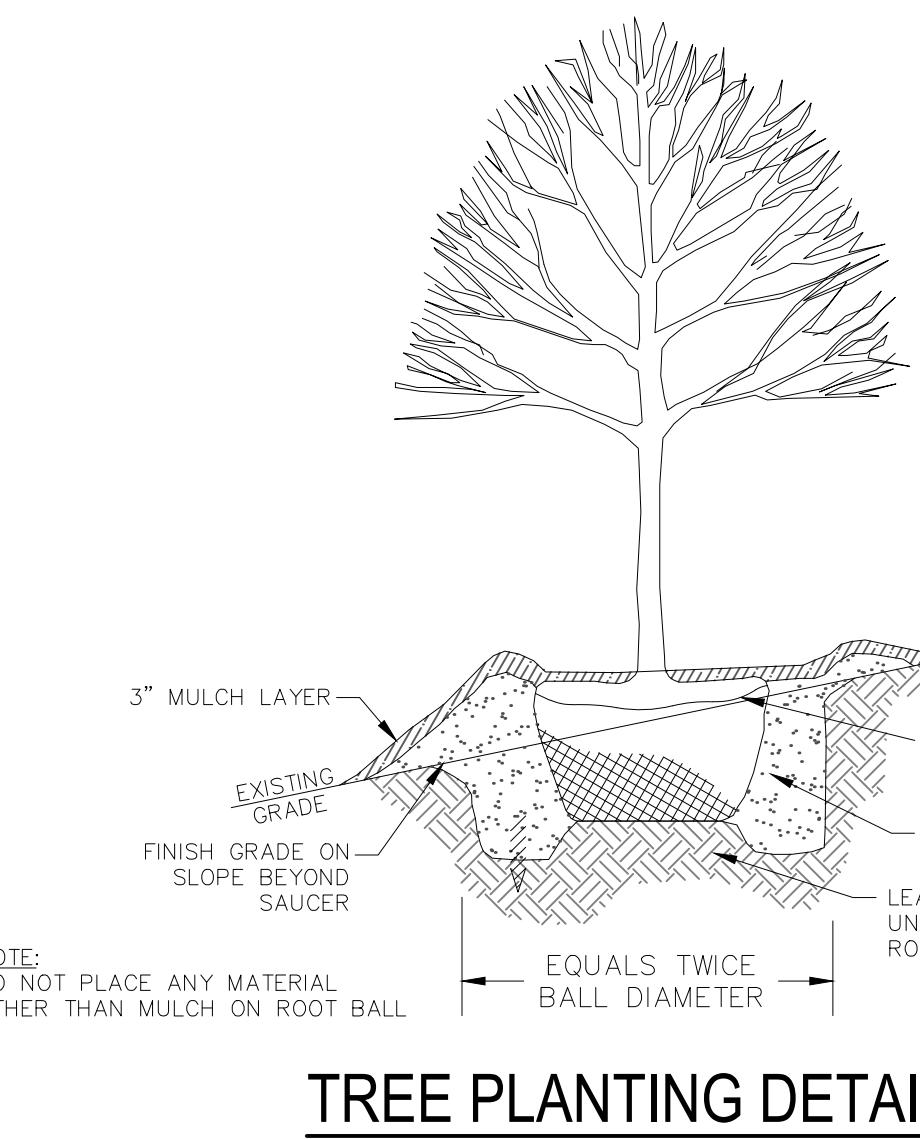
LOT 1	
DESCRIPTION	VALUE
100-FOOT BUFFER ZONE	5,540 SF OF DISTURBANCE
50-FOOT BUFFER ZONE	5,524 SF OF DISTURBANCE
BORDERING VEGETATED WETLAND	347 SF OF DISTURBANCE (NO FILL)
PROP. WETLAND REPLICATION	1,050 SF OF MITIGATION
*100-FOOT BUFFER ZONE INCLUDES 1,756 SF OF AREA DESIGNATED FOR STORMWATER MANAGEMENT	

LOT 3	
DESCRIPTION	VALUE
100-FOOT BUFFER ZONE	7,425 SF OF DISTURBANCE
50-FOOT BUFFER ZONE	0 SF OF DISTURBANCE
BORDERING VEGETATED WETLAND	0 SF OF DISTURBANCE
*100-FOOT BUFFER ZONE INCLUDES 5,526 SF OF AREA DESIGNATED FOR STORMWATER MANAGEMENT	



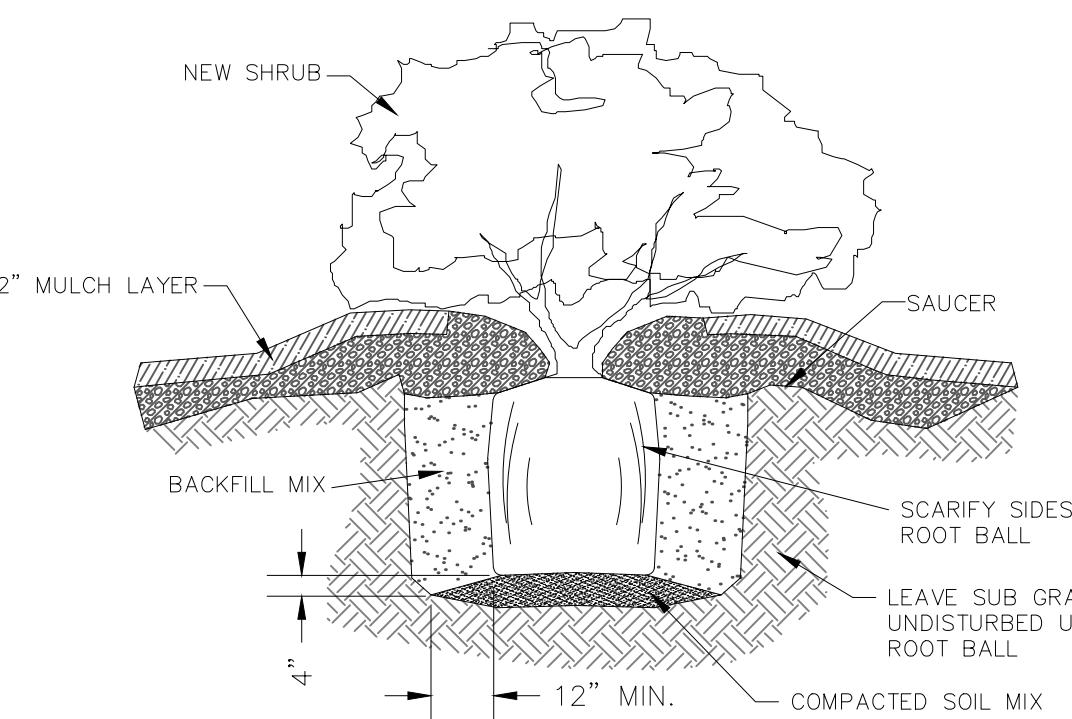
WETLAND CROSSING INSET "A"

SCALE: 1"=5'



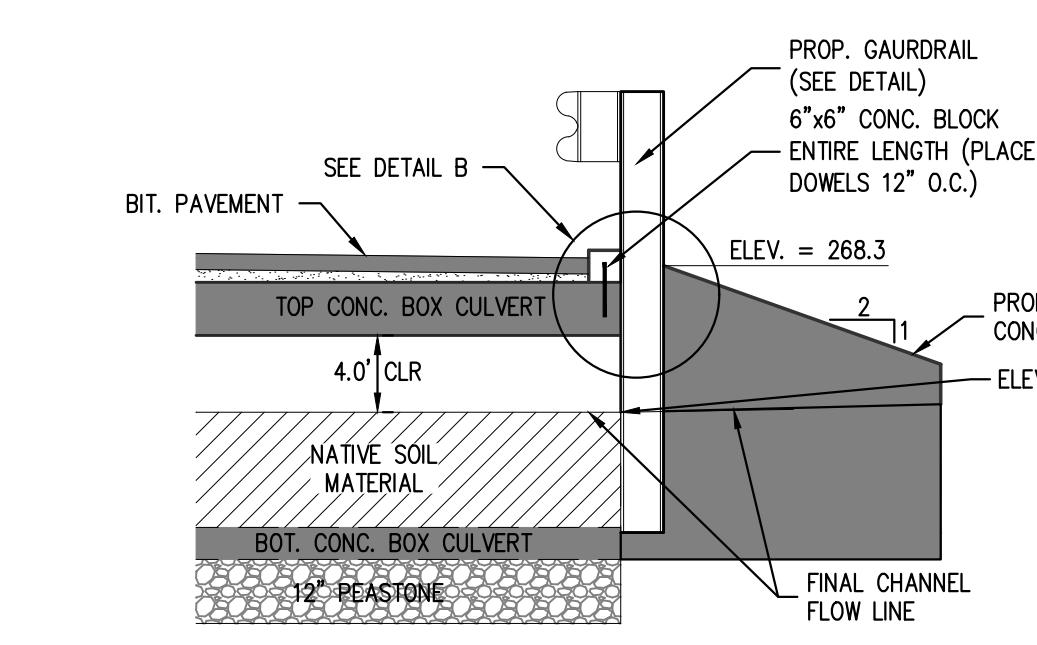
TREE PLANTING DETAIL

NOT TO SCALE



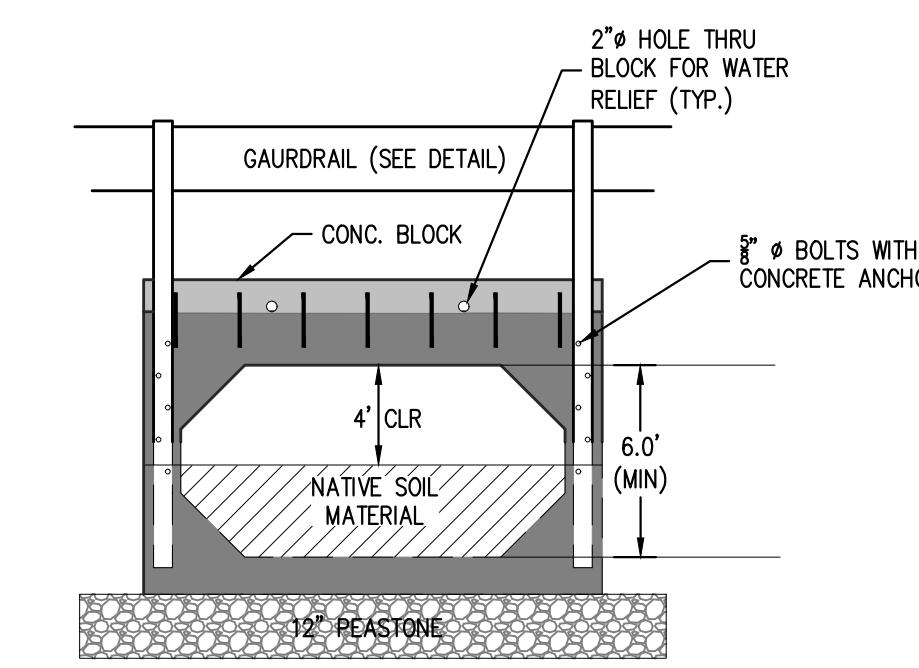
SHRUB PLANTING DETAIL

NOT TO SCALE



SECTION A

SCALE: 1"=3'



SECTION B

SCALE: 1"=3'

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PREPARED BY:

DILLIS & ROY
CIVIL DESIGN GROUP

CIVIL ENGINEERS LAND SURVEYORS WETLAND CONSULTANTS

CORPORATE OFFICE: 1 MAIN STREET, SUITE 1 LUNENBURG, MA 01462 978-779-6091 www.dillisandroy.com

CONCORD OFFICE: 100 MAIN ST., SUITE 310 CONCORD, MA 01740

OWNER: MICHAEL & HANNAH GRUAR
64 BEAVER BROOK ROAD LITTLETON, MASSACHUSETTS 01460

APPLICANT: MICHAEL & HANNAH GRUAR
64 BEAVER BROOK ROAD LITTLETON, MASSACHUSETTS 01460

SCALE:

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DATE: 02/11/25
DESIGN BY: RPV
DRAWN BY: RPV
CHECKED BY: CSR

STAMP DATE: 06/18/2025

CONSTRUCTION DETAILS
BEAVER BROOK RD. (M: R19 P: 18)
LITTLETON, MASSACHUSETTS 01460

NO.	DATE	DESCRIPTION	BY
1.	6/18/25	REVISED PER CONSERVATION COMMISSION & DEP	RPV

JOB NO. 7462
DRAWING NO. 7462-SP
SHEET NO. 3 OF 3