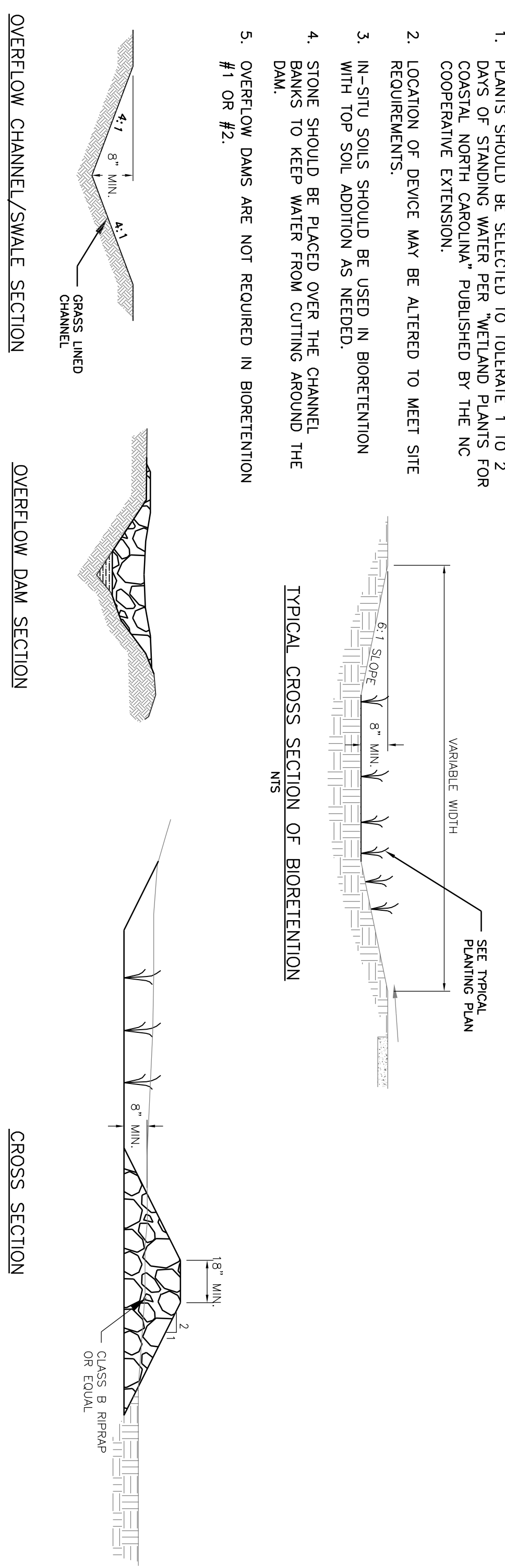


**SITE PLAN**  
1" = 50'

- NOTES:**
1. PLANTS SHOULD BE SELECTED TO TOLERATE 1 TO 2 DAYS OF STANDING WATER PER WETLAND PLANTS FOR COASTAL NORTH CAROLINA. PUBLISHED BY THE NC COOPERATIVE EXTENSION.
  2. LOCATION OF DEVICE MAY BE ALTERED TO MEET SITE REQUIREMENTS.
  3. IN-SITU SOILS SHOULD BE USED IN BIORETENTION WITH TOP SOIL ADDITION AS NEEDED.
  4. STONE SHOULD BE PLACED OVER THE CHANNEL BANKS TO KEEP WATER FROM CUTTING AROUND THE DAM.
  5. OVERFLOW DAMS ARE NOT REQUIRED IN BIORETENTION #1 OR #2.

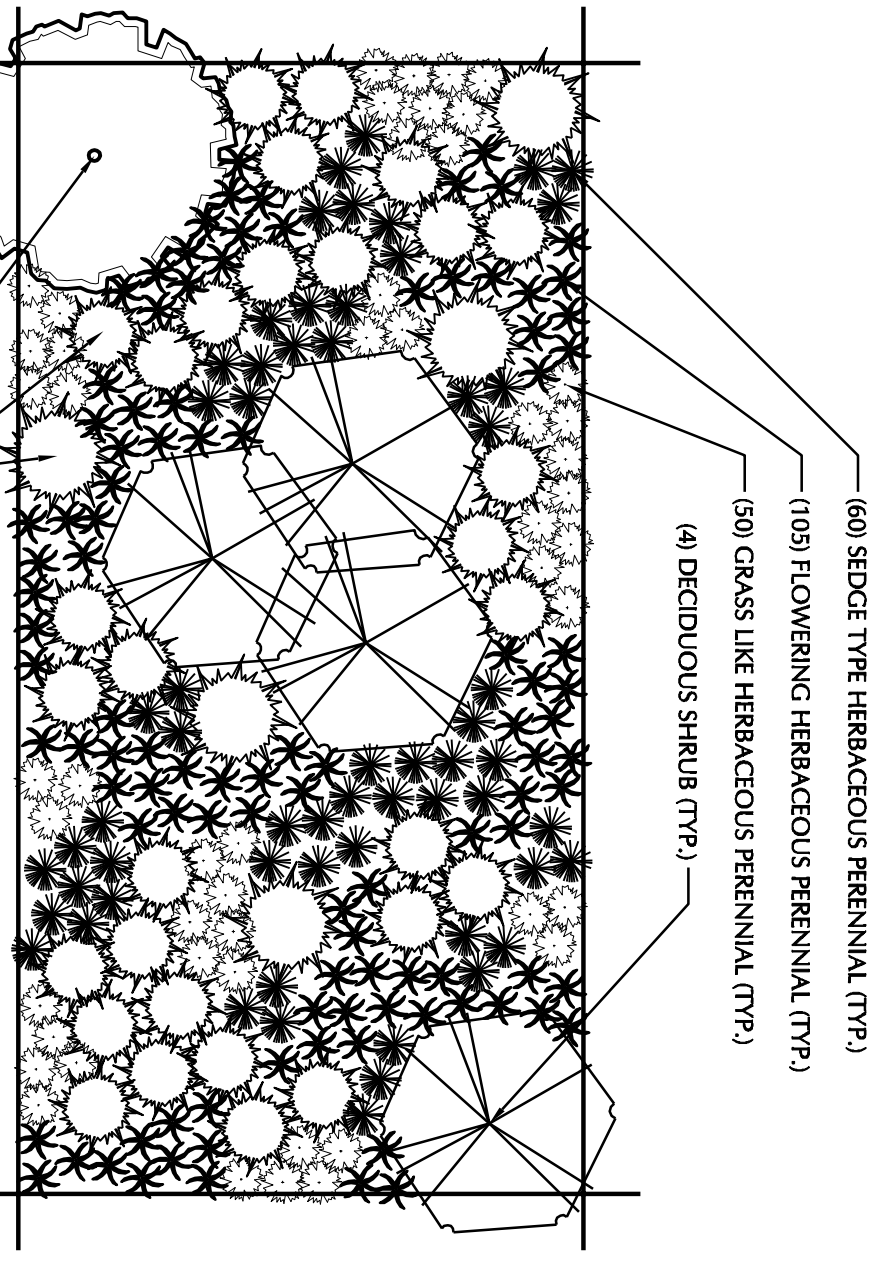


**BIORETENTION #1 WATERSHED INFORMATION:**  
 DRAINAGE AREA = 0.20 AC.  
 IMPERVIOUS AREA = 0.18 AC.  
 1.5" RAINFALL RUNOFF VOLUME = 931 CF  
 PROPOSED BIORETENTION DIMENSIONS = 15'x35'  
 PROPOSED STORAGE DEPTH = 8"  
 PROPOSED STORAGE VOLUME = ±300 CF  
 BMP SIZE = 525 SF

**BIORETENTION #2 WATERSHED INFORMATION:**  
 DRAINAGE AREA = 0.18 AC.  
 IMPERVIOUS AREA = 0.17 AC.  
 1.5" RAINFALL RUNOFF VOLUME = 882 CF  
 PROPOSED BIORETENTION DIMENSIONS = 15'x35'  
 PROPOSED STORAGE DEPTH = 8"  
 PROPOSED STORAGE VOLUME = ±350 CF  
 BMP SIZE = 525 SF

**BIORETENTION #3 WATERSHED INFORMATION:**  
 DRAINAGE AREA = 4.22 AC.  
 IMPERVIOUS AREA = 0.19 AC.  
 1.5" RAINFALL RUNOFF VOLUME = 991 CF  
 PROPOSED BIORETENTION DIMENSIONS = 15'x120'  
 PROPOSED STORAGE DEPTH = 8"  
 PROPOSED STORAGE VOLUME = ±1200 CF  
 BMP SIZE = 1800 SF

**BIORETENTION DETAIL**  
N.T.S.

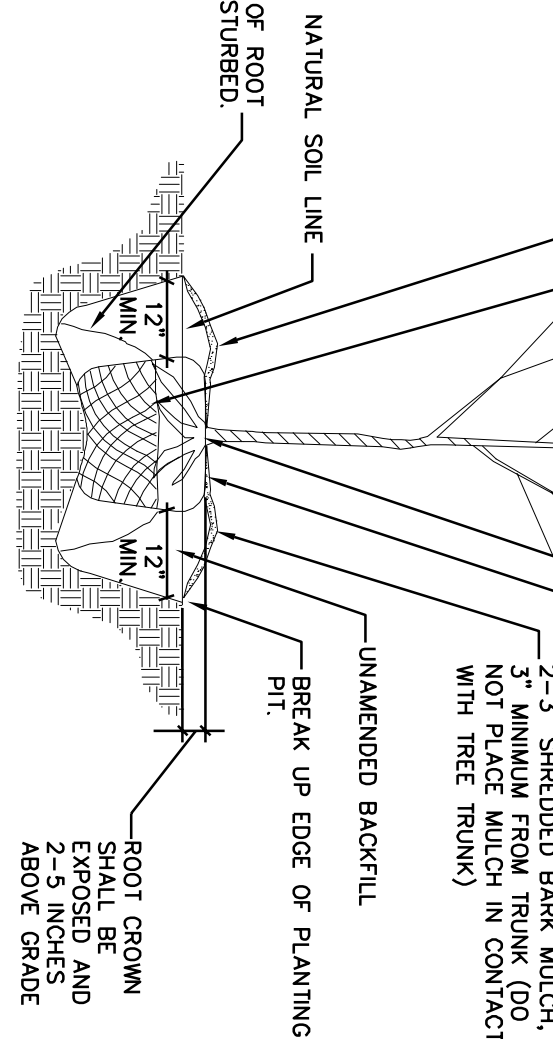


**TYPICAL 200 S.F. BIORETENTION WETLAND PLANTING DETAIL**

**TYPICAL RAIN GARDEN PLANT SCHEDULE**

PLANT TYPE	KEY	BOTANICAL NAME	COMMON NAME	ROOT CONT.	CULTURE HEIGHT
HERBACEOUS		<i>Acorus calamus</i> 'Variegatus'	Variegated Sweet Flag	CONT. 1	12" O.C.
		<i>Carex stricta</i>	Tussock Sedge	CONT. 1	4" POT
		<i>Hemerocallis sp.</i>	Daylily	CONT. 1	4" POT
		<i>Hemerocallis sp.</i>	Blair Flower	CONT. 1	12" O.C.
SHRUBS		<i>Lobelia cardinalis</i>	Cardinal Flower	CONT. 1	12" O.C.
		<i>Rudbeckia hirta</i>	Black-eyed Susan	CONT. 1	12" O.C.
		<i>Schinus molle</i>	Softstem Bulrush	CONT. 1	4" POT
		<i>Galatragrostis x scutellifera</i> 'Karl Foerster'	Karl Foerster Feather Reed Grass	CONT. 1	18" O.C.
		<i>Panicum virgatum</i> 'Shenandoah'	Shenandoah Grass	CONT. 1	18" O.C.
		<i>Panicum alopecuroides</i>	Foundation Grass	CONT. 1	18" O.C.
		<i>Axonaria abuducida</i>	Red Chickadee	CONT. 1	18" O.C.
		<i>Callitriche americana</i>	Blueberry	CONT. 1	18" O.C.
		<i>Cornus sericea</i> 'Flavonemal'	Yellow Twig Dogwood	CONT. 1	18" O.C.
		<i>Cornus sericea</i> 'Heart'	Red Twig Dogwood	CONT. 1	18" O.C.
ORNAAMENTAL GRASSES		<i>Stipa sp.</i>	Swampspike	CONT. 1	18" O.C.
		<i>Mlyria serotina</i>	Wax Myrtle	CONT. 1	18" O.C.
		<i>Rhodiola tomentosum</i>	Swamp Rhodiola	CONT. 1	18" O.C.
		<i>Solidago minor</i>	Dwarf Palmate	CONT. 1	18" O.C.
		<i>Viburnum dentatum</i>	Aronwood Viburnum	CONT. 1	18" O.C.

PRUNE ONLY TO REMOVE ANY BROKEN, DEAD OR DISEASED WOOD WHILE PRESERVING FORM AND FUNCTION. PRUNING SHOULD BE DONE IN ORDER TO MAINTAIN CANOPY SIZE AND STRUCTURE. PRUNING SHOULD BE DONE FROM BASE OF TRUNK, IF NONDEGRADABLE WOOD IS USED, REMOVE TOTALLY.  
 4" BUILT-UP EARTH SAUCER AT EDGE OF ROOT BALL (OPTIONAL) IF PROVIDED, REMOVE PRIOR TO ONE YEAR.

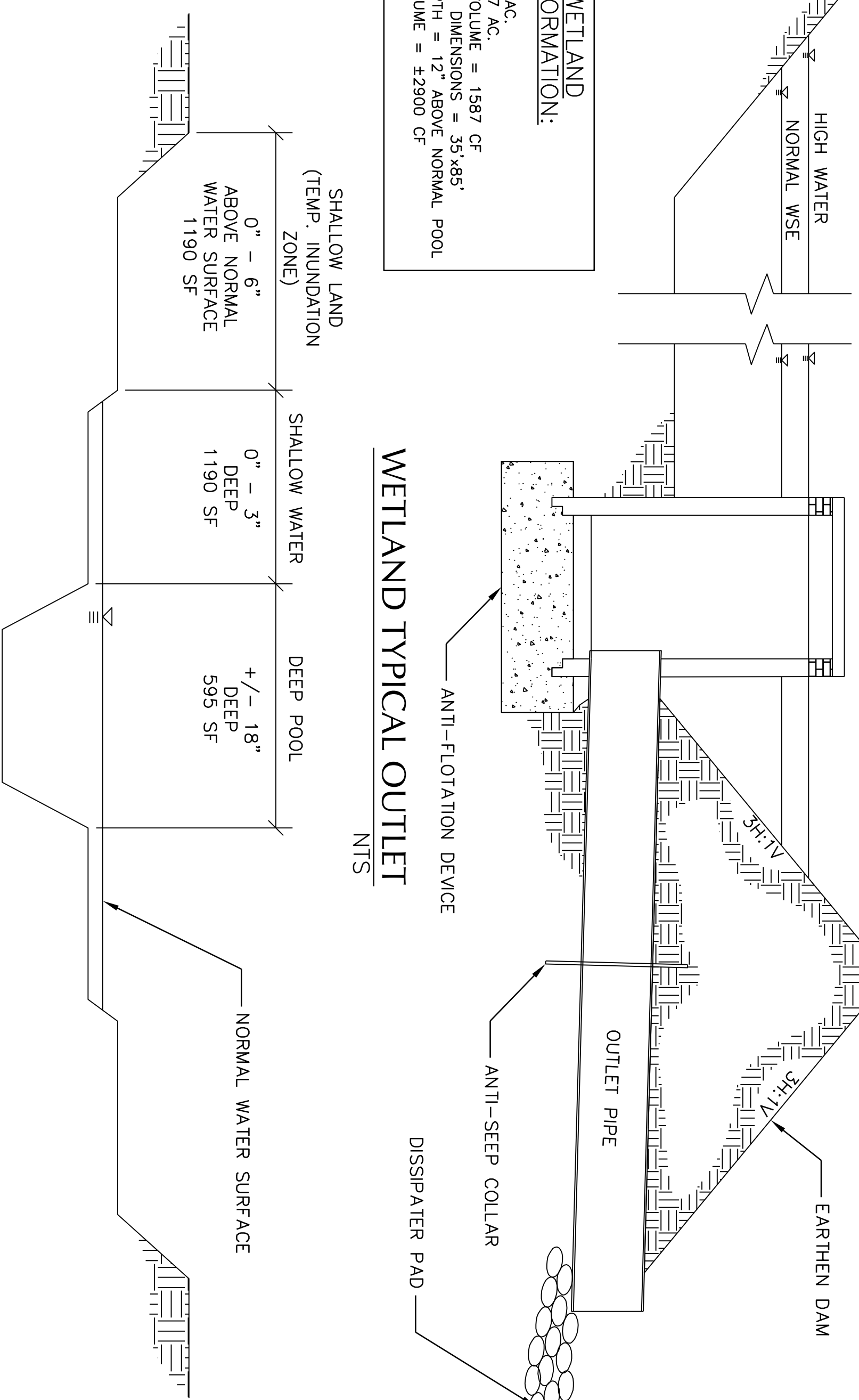


- NOTES:**
1. CONTRACTOR TO VERIFY THAT ADEQUATE DRAINAGE EXISTS PRIOR TO PLANTING.
  2. DO NOT WAP TRUNK OF TREE. EXCEPT ON WINDY SITES OR FOR LARGE EVERGREEN TREES IF STAKING IS DONE, FLEXIBLE STRAPS - NOT ROPE AND WIRE - SHOULD BE USED AND MUST BE REMOVED AT APPROPRIATE TIME. PROTECT TRUNK FROM DAMAGE BY TRUCKS, TRAILERS, AND OTHER EQUIPMENT.
  3. ALL TREES SHALL CONFORM TO THE STANDARDS SET FORTH IN THE MOST RECENT AMERICAN STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (A.A.N.S.).
  4. PRIOR TO INSTALLATION, ALL DISTURBED AREAS TO BE PROTECTED TO PREVENT EROSION AND TO MAINTAIN SOIL STRUCTURE AND FERTILITY.
  5. PRIOR TO INSTALLATION, ALL DISTURBED AREAS TO BE PROTECTED TO PREVENT EROSION AND TO MAINTAIN SOIL STRUCTURE AND FERTILITY.
  6. A ROOT COLLAR EXCAVATION FOR ALL TREES SPECIFIED WILL BE DONE BY THE TOWN ARBORIST TO ENSURE THAT TREES WERE NOT PLANTED/GROWN TOO DEEPLY AT THE LEVEL OF THE ABOVE FOOTBALL. THE STANDARDS SET FORTH IN THE MOST RECENT AMERICAN STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (A.A.N.S.). THESE TREES WILL BE REJECTED EXCESSIVE SOIL OVER ROOT CROWN. THESE TREES WILL BE REJECTED.

**TREE PLANTING**  
N.T.S.

**CONSTRUCTED WETLAND WATERSHED INFORMATION:**

DRAINAGE AREA = 7.77 AC.  
 IMPERVIOUS AREA = 0.17 AC.  
 1.5" RAINFALL RUNOFF VOLUME = 1587 CF  
 PROPOSED BIORETENTION DIMENSIONS = 35'x85'  
 PROPOSED STORAGE DEPTH = 12" ABOVE NORMAL POOL  
 PROPOSED STORAGE VOLUME = ±2900 CF  
 BMP SIZE = 2975 SF



**WETLAND TYPICAL SECTION**  
N.T.S.

- GENERAL NOTES:**
1. EXISTING CONDITIONS SHOWN ON DRAWING HAVE NOT BEEN FIELD SURVEYED. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND INFORM THE OWNER OF ALL DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION.
  2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES IN PROJECT AREA PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. ALL EXISTING UTILITIES SHALL BE PROTECTED FROM DISTURBANCE DURING CONSTRUCTION. SCHEDULING PRE-CONSTRUCTION SITE MEETING WITH OWNER AND ENGINEER AT LEAST 14 DAYS PRIOR TO CONSTRUCTION.
  3. MEETING WITH OWNER AND ENGINEER AT LEAST 14 DAYS PRIOR TO CONSTRUCTION. UNSUITABLE FOR STORM WATER INFILTRATION.
  4. OWNER SHALL PROVIDE SOIL TEST ANALYSIS FOR ALL BIORETENTION LOCATIONS PRIOR TO BIDDING CONTRACT. BIORETENTION LOCATIONS SUBJECT TO CHANGE IF SOIL IS UNSUITABLE FOR STORM WATER INFILTRATION.
  5. ALL DEVICES SHALL INCLUDE ADEQUATE OVERFLOW PROTECTION MEASURES TO PROTECT BUILDINGS FROM FLOODING.
  6. CONTRACTOR SHALL FLOODING ALL DISTURBED AREA TO DRAIN INTO DEVICES AND SHALL CONTRIBUTE ALL AREAS WITHIN 3 DAYS OF DISTURBANCE. FLOODING DISTURBED AREAS HAVE BEEN ADEQUATELY STABILIZED AND TOP SOIL LAYER OF BIORETENTION IS FREE OF SEEDMENT, DEBRIS, AND WEEDS.
  7. LANDSCAPING PLANS TO BE PREPARED BY LOCAL OFFICIAL.
  8. LANDSCAPING PLANS TO BE PREPARED BY LOCAL OFFICIAL.
  9. SEE NCDWM BMP MANUAL FOR SAMPLE PLANTING SPECS.

**PRELIMINARY**  
NOT APPROVED FOR CONSTRUCTION