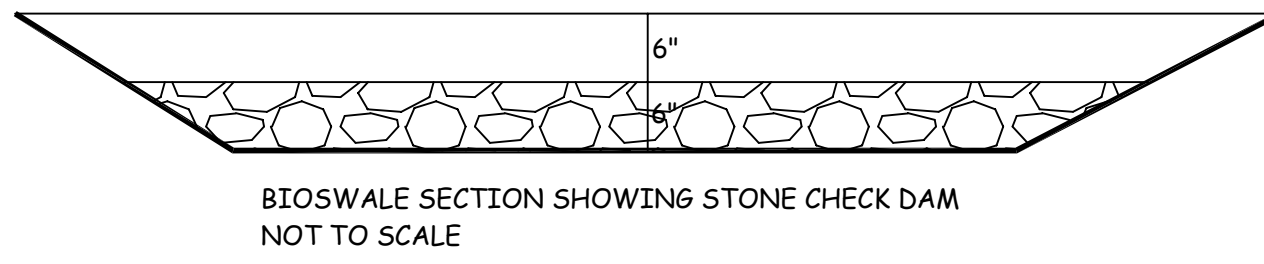
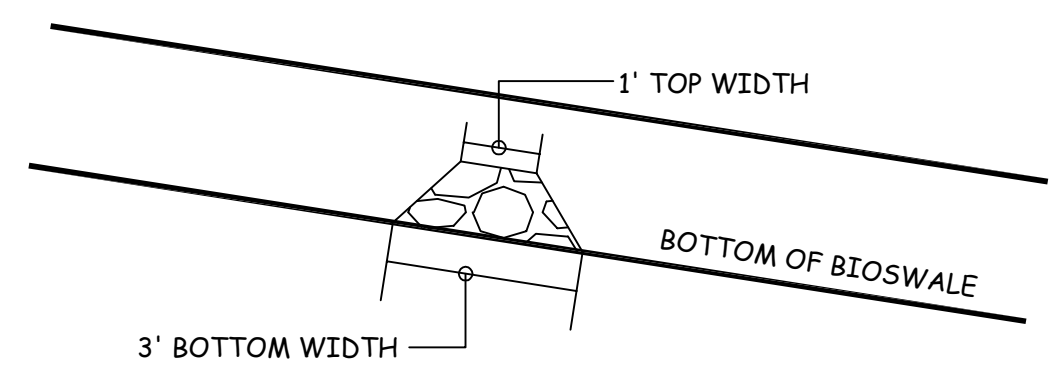


TYPICAL CROSS SECTION OF BIOSWALE
Not to scale



BIOSWALE SECTION SHOWING STONE CHECK DAM
NOT TO SCALE



STONE CHECK DAM (4-6" DIAMETER STONE)
FOR CHECK DAMS #1 - #5 (6-12" DIAMETER
STONE) FOR CHECK DAMS #6 - #9

COMPOSITION OF SOIL MEDIA FOR BIOSWALE SYSTEM:

SOIL MEDIA FOR BIOSWALE SHALL CONSIST OF A 50/50 MIXTURE OF TOPSOIL (FROM SITE) AND SANDY LOAM (FROM SITE) APPLIED IN A 6" LIFT.

NOTE: BIOSWALE SHALL BE SEEDDED WITH NEW ENGLAND CONSERVATION MIX FROM NEW ENGLAND WETLANDS PLANTS.

MAINTENANCE REQUIREMENTS FOR BIOSWALE

1. The bioswale must be installed and fully vegetated prior to the introduction of stormwater.
2. The plants shall be watered as needed after seeding to fully establish themselves.
3. Swale shall be inspected twice a year and non-native plants and weeds shall be removed as needed.
4. The perennial vegetation shall be cut back in Late October and the cut vegetation removed from the bioswale system and disposed off in a proper manner.
5. Accumulated leaves shall be removed from the bioretention system in the fall and spring as needed.
6. The bioswale shall be inspected in the spring and fall for accumulated sediment, if more than 0.5" of sediment is observed in the bioswale, it shall be removed and disposed off. The soil surface shall be lightly raked to loosen the soil surface.

MAINTENANCE REQUIREMENTS FOR FOREBAYS

1. Forebay shall be inspected annually to observe the depth of accumulated sediment. For the southern forebay, if the depth of accumulated sediment is deeper than 12" it shall be removed. For the northern forebay, if the depth of accumulated sediment is deeper than 24" it shall be removed.
2. The procedure for removing sediment from the forebay is as follows:
 - a. Use a submersible pump to pump out the water in the forebay.
 - b. Install a siltation fence barrier in the upland area adjacent to the forebay in an arc or half a circle with the inside of the circle facing uphill.
 - c. Use a backhoe to remove accumulated sediment from the forebay and place the material above the installed siltation fence barrier and let the material dewater in this location.
 - d. When the material has dried out, it shall be removed from the site and disposed of properly. This material can be reused in other locations.

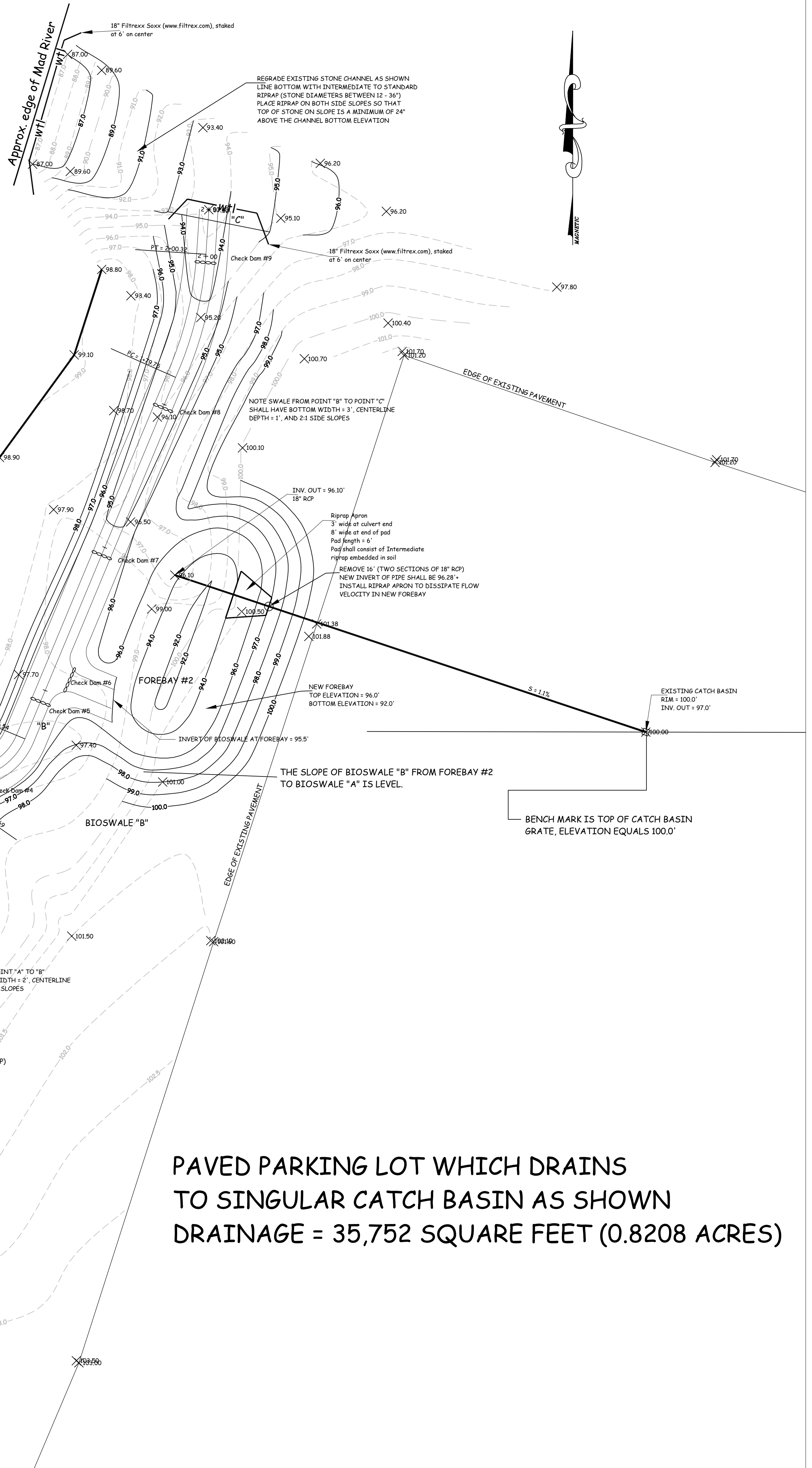
CONSTRUCTION SEQUENCE OF STORMWATER RETROFIT:

1. Install erosion control barrier along edge of Mad River and in accord with detail shown on the plan.
2. Regrade and replace riprap of varying sizes in area of existing swale outlet into the Mad River. Stone shall be pushed into the underlying soil by an excavator and any gaps between the large stones shall have smaller stones wedged into these gaps to the maximum extent practical.
3. Trees and brush shall be removed from the areas of the two forebays and bioswale to be installed.
4. An erosion control barrier as shown on the plan shall be placed at the end of the bioswale where it intersects the new riprap swale.
5. The two forebays shall be excavated per the plan, and the riprap apron shall be installed as shown on the plan.
6. The 18" RCP shall be shortened as shown on the plan and the removed pipe taken off site for disposal.
7. The bioswale shall be graded per the proposed plan and the required soil media shall be placed for the bioswale.
8. The surface of the bioswale shall be handraked to the final grade and lightly compacted.
9. The stone check dams shall be installed in those locations shown on the site plan and in accordance with the details shown on the plan.
10. The bioswale and side slopes shall be seeded with New England Conservation Seed Mixture, covered with straw mulch.
11. The seed mixture shall be watered as necessary to ensure the establishment of the plants.

WATER QUALITY VOLUME CALCULATIONS:

PAVED PARKING AREA:
AREA = 35,752 SQ. FT.
WQV = (1)(0.95)(0.8208)/12 = 0.0650 ACRE-FEET (2,830 CUBIC FEET)
SIZING OF FOREBAY:
PAVED PARKING AREA: 10% WQV = 283 CUBIC FEET
FOREBAY VOLUME = 1,209 CUBIC FEET (43%)

STILL RIVER



PAVED PARKING LOT WHICH DRAINS TO SINGULAR CATCH BASIN AS SHOWN
DRAINAGE = 35,752 SQUARE FEET (0.8208 ACRES)

SCIENCE BUILDING
NORTHWEST COMMUNITY COLLEGE
APPROXIMATE ROOF AREA = 20,412 SQUARE FEET (0.4686 ACRES)

PREPARED FOR
FARMINGTON RIVER WATERSHED
ASSOCIATION & NWCC
WINCHESTER - CONNECTICUT

STORMWATER RETROFIT
PROJECT #045-2013
SCALE: 1" = 10'
DATE: 12/14/13, Rev. 6/9/15



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