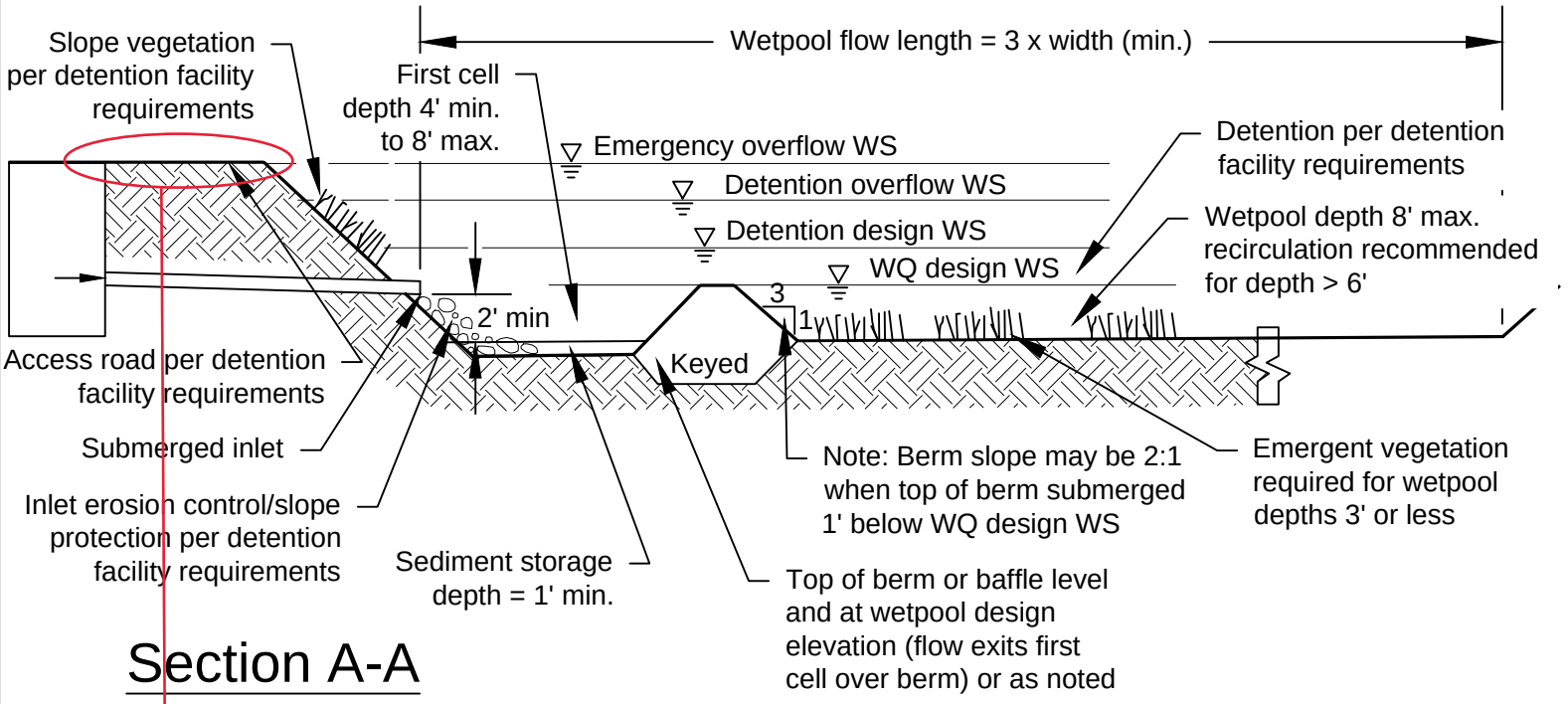
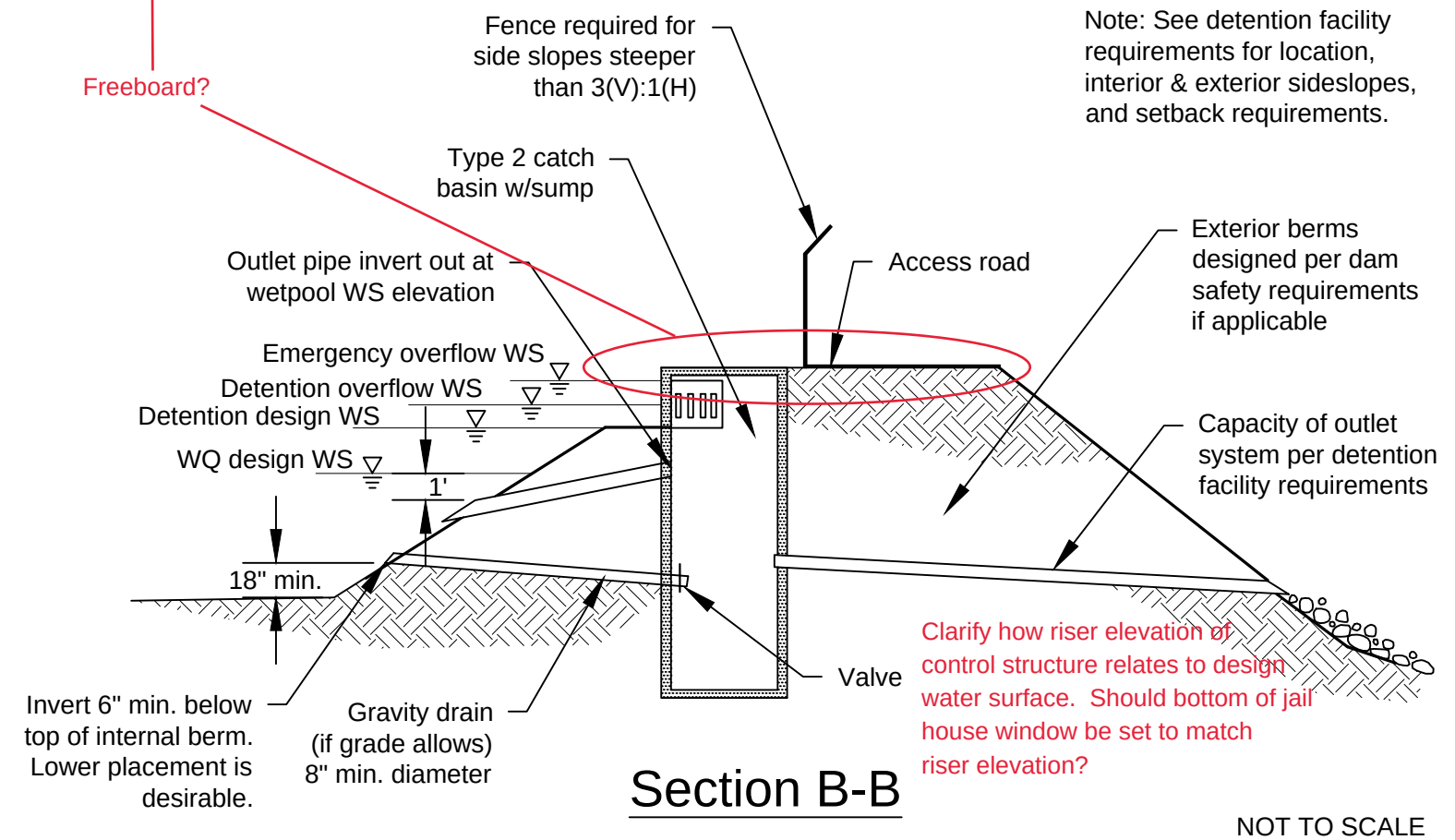
Comments on the Draft 2019 SWMMWW		
Draft 2019 SWMMWW Section (select from drop down)	**Comment**	**Comment Made By**
BMP T10.40: Combined Detention and Wetpool Facilities	Please label freeboard on Firgure V-8.11 Combined Detention and Wetpond (Section View)	Kelly Uhacz and Marit Ernst
BMP D.1: Detention Ponds	In Figure V-12.10 Typical Detention Pond Sections, please clarify distance from the design WS to the top of the berm in Section B-B. Please add text in Section C-C to show that the 100-year water surface elevation is equal to the overflow WS elevation	Kelly Uhacz and Marit Ernst
BMP D.1: Detention Ponds	In Figure V-12.13 Weir Section for Emergency Overflow Spillway, Please clarify the distance from the "emergency overflow water surface" to the top of berm is 1.0' rather than 0.5'. Per Section III-3.2.1, Detention Ponds, Emergency Overflow Spillway #5, Minimum 1.0' Freeboard. Per definition – Freeboard = Vertical distance between the emergency overflow water surface and the top of the pond embankment. Please consider adding a detail to show the relationship between a birdcage structure, the 100-year water surface elevation, the overflow water surface elevation, the riser elevation and the pond design water surface elevation. (See City of Battle Ground Standard Detail ST-9.01 for reference.)	Kelly Uhacz and Marit Ernst
BMP D.1: Detention Ponds	Under Emergency Overflow Spillway, bullet 5. please clarify what elevation the 1.0' for freeboard should start from.	Kelly Uhacz and Marit Ernst



Section A-A



Section B-B

NOT TO SCALE

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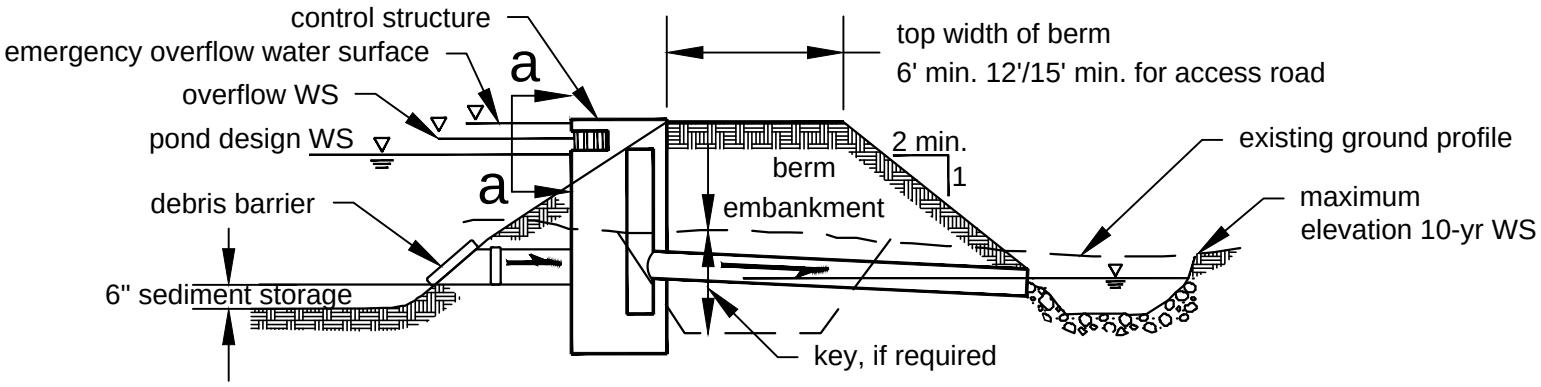
State of Washington

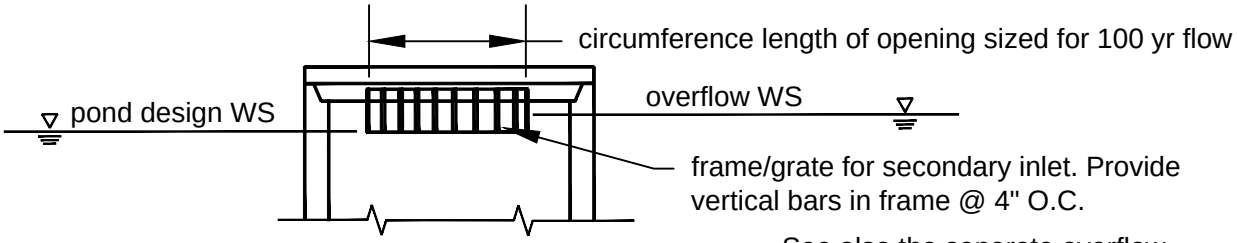
Figure V-8.11

Combined Detention and Wetpond (Section View)

Revised June 2016

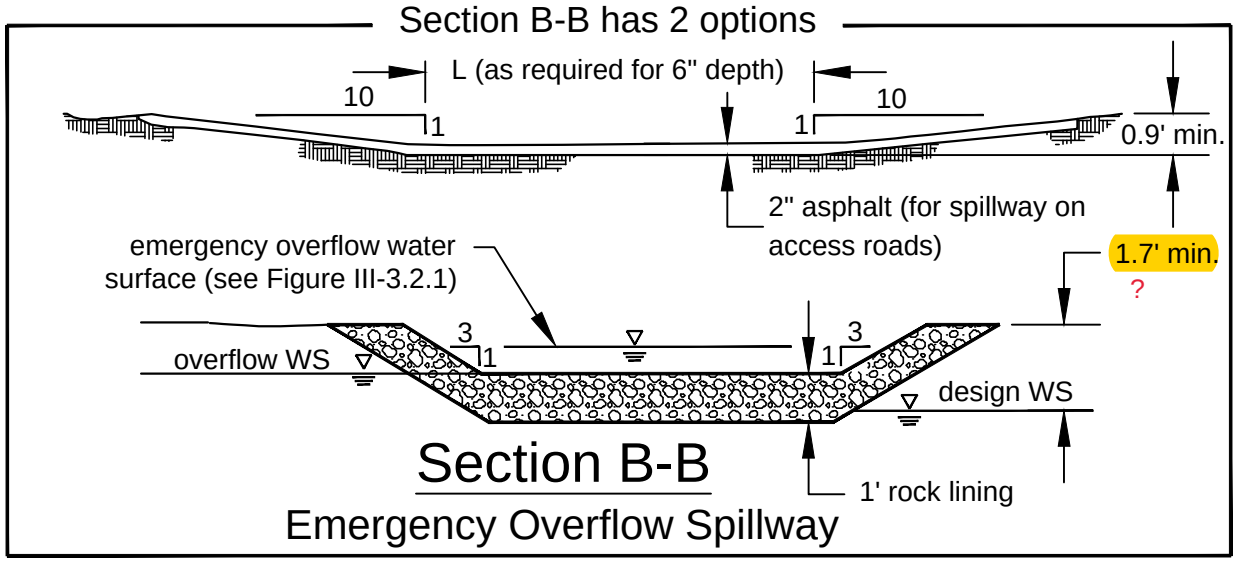


Section A-A



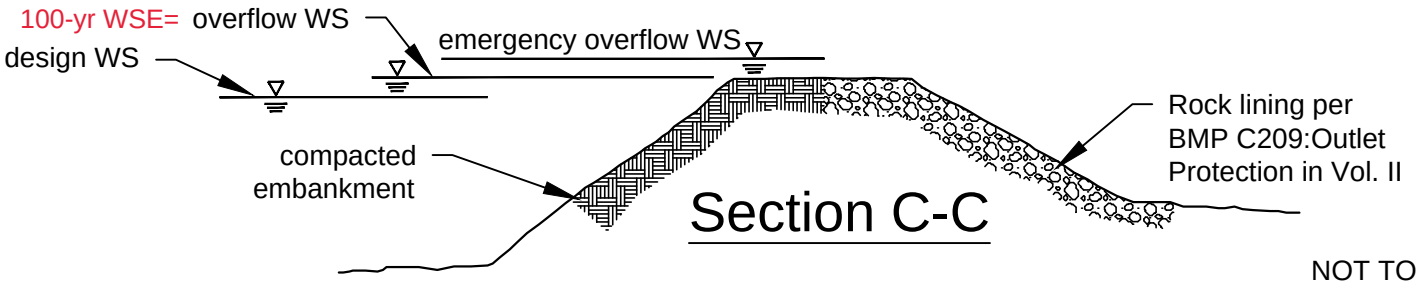
Section a-a

See also the separate overflow structure shown in Figure III-3.2.3



Section B-B

Emergency Overflow Spillway



Section C-C

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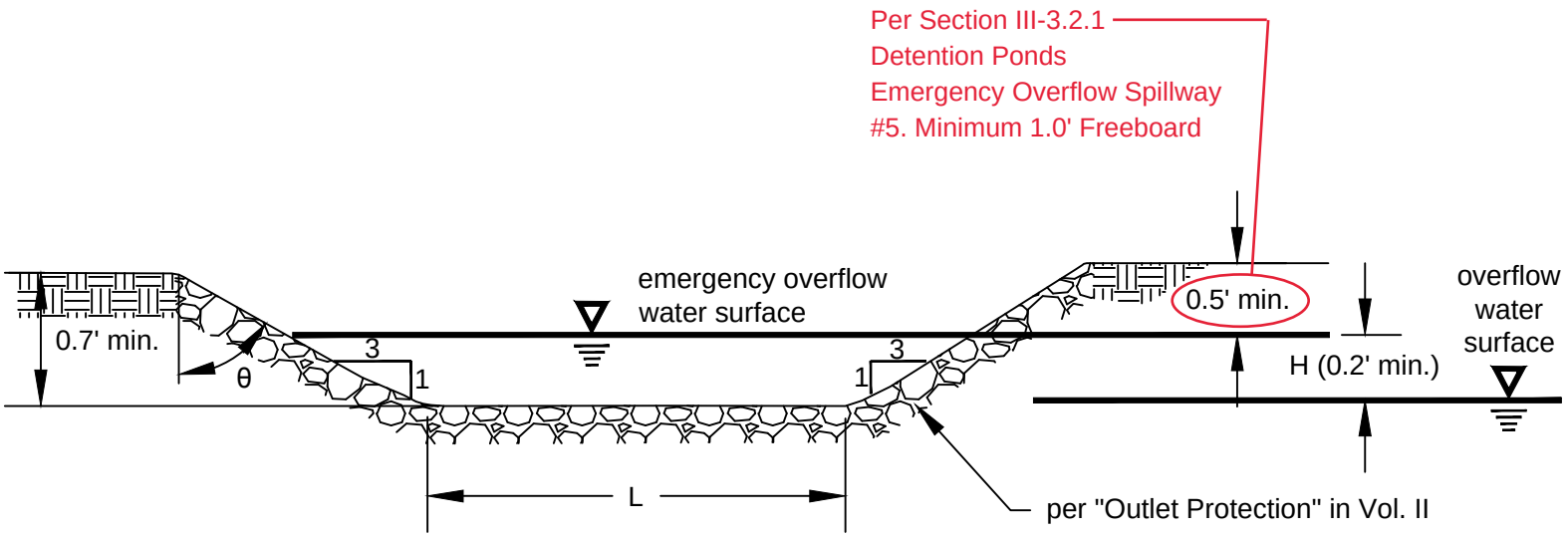
State of Washington

Figure V-12.10

Typical Detention Pond Sections

Revised June 2016



Per Definition - Freeboard = vertical distance between the Emergency Overflow Water Surface and the top of the pond embankment.

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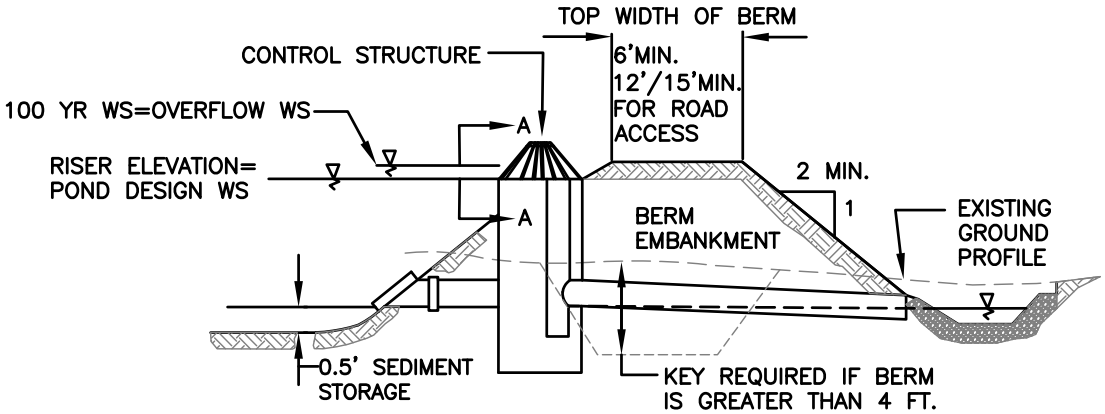
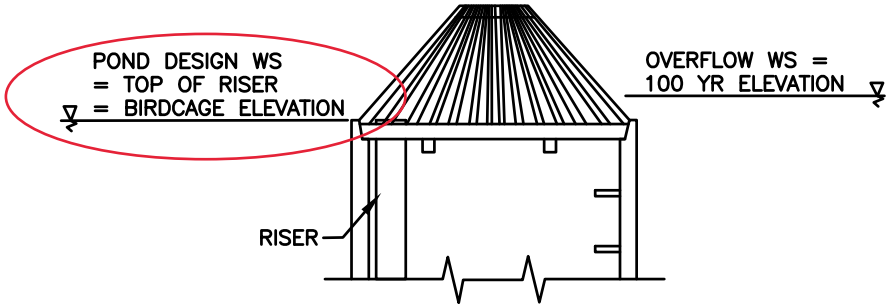
Figure V-12.13

Weir Section for Emergency Overflow Spillway

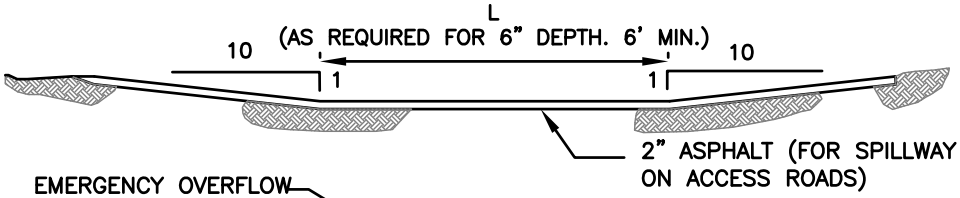
Revised June 2016

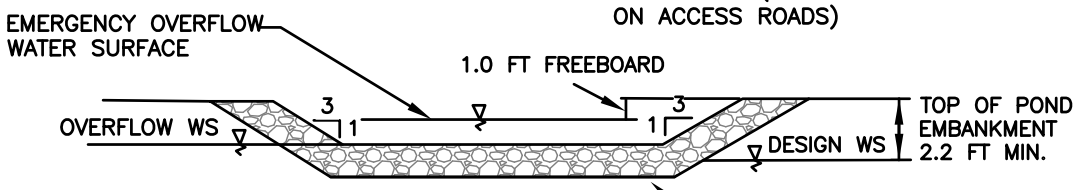




SECTION A–A
NTS

SECTION B–B HAS 2 OPTIONS

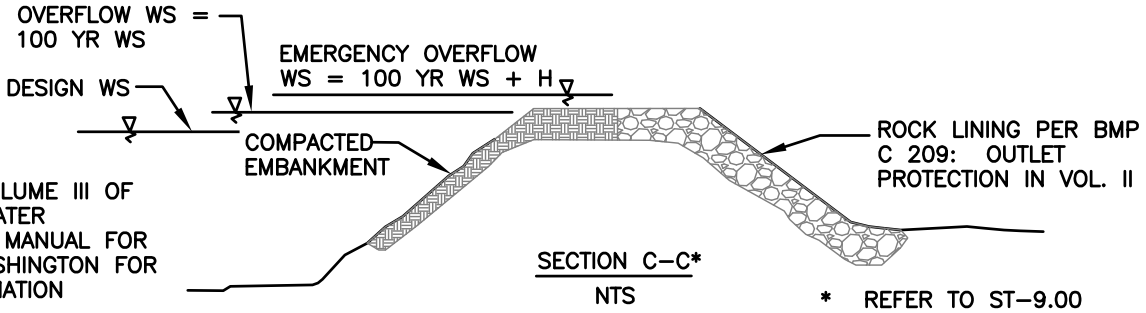




SECTION B–B*

EMERGENCY OVERFLOW SPILLWAY

NTS



SECTION C–C*

NTS

NOTES:

REFER TO VOLUME III OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON FOR MORE INFORMATION

* REFER TO ST–9.00

N.T.S.

TYPICAL DETENTION POND PROFILE

STANDARD DETAIL

CITY OF BATTLE GROUND
APPROVED

Mark Hennes 06/11/2018

CITY ENGINEER DATE

REVISIONS:	DATE:	DRAWN:	DESIGNED:
1	12/29/16	KDU	KDU
2	03/19/18	CAS	KDU

ST–9.01

Emergency Overflow Spillway

1. In addition to the primary overflow (described above), ponds must have an emergency overflow spillway. For impoundments of 10 acre-feet or greater, the emergency overflow spillway must meet the state's dam safety requirements (see Dam Safety for Detention BMPs above). For impoundments under 10 acre-feet, ponds must have an emergency overflow spillway that is sized to pass the 100 year developed peak flow in the event of total control structure failure (e.g., blockage of the control structure outlet pipe) or extreme inflows. Emergency overflow spillways are intended to control the location of pond overtopping and direct overflows back into the downstream conveyance system or other acceptable discharge point.

2. Provide emergency overflow spillways for ponds with constructed berms over 2 feet in height, or for ponds located on grades in excess of 5 percent. As an option for ponds with berms less than 2 feet in height and located at grades less than 5 percent, emergency overflow may be provided by an emergency overflow structure, such as a Type II manhole fitted with a birdcage as shown in Figure V-12.11: Overflow Structure. The emergency overflow structure must be designed to pass the 100 year developed peak flow, with a minimum 6 inches of freeboard, directly to the downstream conveyance system or another acceptable discharge point. Where an emergency overflow spillway would discharge to a slope steeper than 15%, consideration should be given to providing an emergency overflow structure in addition to the spillway.

3. Armour the emergency overflow spillway with riprap in conformance with BMP C209: Outlet Protection. The spillway must be armored full width, beginning at a point midway across the berm embankment and extending downstream to where emergency overflows re enter the conveyance system (see Figure V-12.10: Typical Detention Pond Sections).

4. Emergency overflow spillway designs must be analyzed as broad crested trapezoidal weirs as described in Methods of Analysis (below). Either one of the weir sections shown in Figure V-12.10: Typical Detention Pond Sections may be used.

5. Design the emergency overflow spillway to allow a minimum of 1 foot of freeboard above what elevation.