



**Public Works Department, Engineering Division**

121 5th Ave N  
Edmonds, WA 98020

## **Checklist 15: Perforated Stub-Out Connections**

Per ECDC 18.30, all Category 1 projects must comply with Minimum Requirements No. 1 through No. 5, and all Category 2 projects must comply with Minimum Requirements No. 1 through No. 9. Perforated stub-out connections may be used to help meet Minimum Requirement Nos. 5, provided that the following requirements are met. See also Addendum Checklists 1 through 3 for submittal requirements, and Addendum Appendix A for infeasibility criteria that apply to Minimum Requirement No. 5 specifically.

Perforated stub-out connections shall be designed in accordance with the Department of Ecology's Stormwater Management Manual for Western Washington (SWMMWW), ECDC 18.30, and the requirements in the Addendum. The City of Edmonds developed the following checklist to aid project proponents and plan reviewers in complying with the applicable SWMMWW requirements for this BMP. In addition, City-specific requirements (i.e., requirements presented in ECDC 18.30, the Addendum, or other City requirements that are not included in the SWMMWW) are also included in the checklist.

This checklist reflects most, but not necessarily all, of the items that shall be documented by the project proponent, for review by the Engineering Division. It is intended to be used as an aid for developers and plan reviewers by providing a foundation for clear and consistent BMP design in the City of Edmonds. However, all items may not be applicable to every project, and all items of concern to this office may not be covered on this checklist.

**Applicant:**

**Application #:**

<b>Within each blank cell, enter comment codes as follows:</b>	
C = Complete	R = Revise (i.e., make corrections)
N/A = Not Applicable	M = Missing (i.e., please include)
IC = Incomplete	
<b>MODELING AND SIZING</b> (SWMMWW Volume III, Section 3.1.3)	
1	Any flow reduction is variable and unpredictable. No computer modeling credits are used.
<b>SETBACKS</b> (Addendum Appendix A)	
2*	Perforated stub-out system is not located within the North Edmonds Earth Subsidence and Landslide Hazard Area (ESLHA).
3*	Perforated stub-out system is not located within the buffer of the ESLHA (minimum buffer equal to the height of the steep slope or 50 feet, whichever is greater) unless a geotechnical assessment and soils report is prepared addressing the potential impact of the proposed system.
4*	Perforated stub-out system is not located within 50 feet of the top of slopes greater than 15 percent (unless a geotechnical assessment and soils report is prepared addressing the potential impact of the proposed system).
5*	The perforated pipe portion of the system is not located under impervious or heavily compacted soils (e.g., driveways and parking areas).
6*	Perforated stub-out system is not within the buffer of a Category 1 or Category 2 wetland.
7*	Perforated stub-out system is not within the buffer of a Category 3 or Category 4 wetland, except for the outer 25 percent of the buffer.
8	There is at least 1 foot of permeable soil from the proposed bottom (final grade) of the perforated stub-out connection trench to the highest estimated groundwater table or other impermeable layer.
9*	For sites with on-site or adjacent septic systems, the discharge point is at least 30 feet upgradient, or 10 feet downgradient, of the drainfield primary and reserve areas (per WAC 246-272A-0210). This requirement can be modified by the City if site topography will clearly prohibit flows from intersecting the drainfield or where site conditions (soil permeability, distance between systems, etc.) indicate that this is unnecessary.
<b>DESIGN CRITERIA</b> (SWMMWW Volume III, Section 3.1.3 and Section 3.1.1, City of Edmonds Standard Detail for Perforated Stub-Out Connections)	
10*	The location of the connection allows the maximum amount of runoff to infiltrate into the ground (ideally a dry, relatively well-drained location).
11*	At least 10 feet of perforated pipe per 5,000 square feet of roof area is provided.
12*	Trench is at least 2 feet wide and 18 inches deep.
13*	Trench is backfilled with a minimum of 12 inches of washed drain rock conforming to WSDOT Spec. 9-03.12(5) Gravel Backfill for Dry Wells.
14*	Perforated pipe is 4 inches in diameter and level.
15*	At least 8 inches of washed drain rock is provided below the pipe invert. Drain rock conforms to WSDOT Spec. 9-03.12(5) Gravel Backfill for Dry Wells.
16*	Filter fabric is installed around the tops and sides of trench drain rock prior to backfilling.
17*	The drain rock is backfilled with 6 inches of random fill material.

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<b>CONSTRUCTION CRITERIA INCLUDED IN THE SWPPP</b> (Addendum, Section 6.1)	
18*	The infiltration area is clearly identified (e.g., using flagging or high-visibility fencing) and protected prior to construction.
19	A soil and vegetation management plan is provided showing areas to be protected and restoration methods for disturbed areas.
20*	Construction SWPPP sheets outline construction sequencing that will protect the infiltration area during construction.
21*	General (i.e., non-BMP-specific) construction SWPPP BMPs and protection techniques are implemented as applicable. The upslope areas of construction areas are stabilized, and overland flow distances are minimized.
22*	Machinery is operated outside of infiltration area during construction.
23*	Construction site flow directed away from the dispersion area using applicable Construction SWPPP BMPs (e.g., temporary diversion swales).
24*	Excavation of infiltration areas does not occur during wet or saturated conditions.
25*	The bottom of the infiltration area is raked or scarified to a minimum depth of 3 inches after final excavation to restore infiltration rates.
26*	Infiltration area excavated to final grade only after all disturbed areas in the upgradient project drainage area have been permanently stabilized. If infiltration areas must be excavated before permanent site stabilization, initial excavation is conducted to no less than 6 inches of the final elevation of the facility floor.
<b>INSPECTION CRITERIA</b>	
27	The perforated stub-out system meets applicable siting, design, and construction criteria (see * notations in applicable rows).

Reviewer: \_\_\_\_\_

Review Date: \_\_\_\_\_

Reviewer Phone #: \_\_\_\_\_

Reviewer Comments: