

**Drainage - Chapter 7 Revision Review  
Standards Committee  
Date: 10/03/2017**

Comment No.	Page/Section	Reviewer	Reviewer's Comment	Response	Response By
1	7-1 / 7.1 General (A)	DPT	Specify the year of the King County Surface Water Design Manual. (2016 King County Surface Water Design Manual)	Replace with Surface Water Design Manual and define in chapter one to include 2016 KCSWDM with SeaTac addendum	JMM
2	7.1 A	Stakeholders	Remove second sentence, it is out of place.	Will remove second sentence	JMM
3	7-1 / 7.1 General (B)	DPT	Specify the year of the Standard Specifications. (2014 WSDOT/APWA Standard Plans & Specification)	Will add "current edition"	JMM
4	7-1 / 7.1 General (C)	DPT	Specify the year of the King County Surface Water Design Manual. (2016 King County Surface Water Design Manual)	Replace with Surface Water Design Manual	JMM
5	7-1 / 7.2 Road Ditches	DPT	Specify the year of the King County Surface Water Design Manual. (2016 King County Surface Water Design Manual)	Replace with Surface Water Design Manual	JMM
6	7-1 / 7.2 Road Ditches (B.1)	DPT	Specify the year of the King County Surface Water Design Manual and the Standard Specifications. (2016 King County Surface Water Design Manual & 2014 WSDOT/APWA Standard Plans & Specification)	Replace with Surface Water Design Manual	JMM
7	7.2C	EP	Need to specify geotextile. Suggest WSDOT 9-33.2(1) nonwoven for soil stabilization	A standard drawing for rock lined ditch will be added and will include callout for geotextile (specific type).	JMM
8	7-2/7.2D	CIL	Mix does not add up to 100%, use this mix: 30% Colonial Bentgrass 30% Kentucky Bluegrass 20% Tall Fescue 15% Perennial Rye grass 5% White or Red Clover-	Will specify two types of mixes - winter and all other season. Colum will investigate mix. Specific dates for use will be included.	JMM
9	7-2/7.2D	CIL	include mulching and tackifier requirements from KCSWDM Appendix C C3.10. Add wet season requirements/restrictions such as RECP	Will incorporate, see previous comment.	JMM
10	7-2 / 7.2 Road Ditches (D)	DPT	Confirm with Maintenance.	Need to confirm seed mix used by maintenance.	JMM

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11	7.3A	SD	Remove second sentence "Eight-inch...."	Remove all sub-sections of 7.3. All information will be included in standard drawings. Add sentence to make reference to standard drawing. Add with director approval, remove length reference.	JMM
12	7-2 / 7.3 Storm Sewers and Culverts (A)	DPT	Specify the year of the Standard Specifications. (2014 WSDOT/APWA Standard Plans & Specification)	Information will be included in standard drawing.	JMM
13	7.3B	SD	Exclude PVC from minimum 1' of cover due to low tensile strength (last sentence)	Will use WSDOT pipe cover table from Hydraulics manual (with city revisions)	JMM
14	7-2/7.3B	CIL	Add pipe bedding requirements or mention here	Standard drawing will address.	JMM
15	7.3B	EP	delete 2nd sentence. Possibly insert WSDOT pipe cover requirements.	Section will be removed	JMM
16	7-2 / 7.3 Storm Sewers and Culverts (B)	DPT	Wording should correspond to the SeaTac Standard Plan Notes. SeaTac Standard Plan Notes states the following:  FOR COVER FROM 1 FT. TO 2 FT. USE REINFORCED CONCRETE PIPE.  FOR COVER LESS THAN 1 FT. DUCTILE IRON PIPE IS USED.  PVC PIPE REQUIRES 3 FT. COVER.	Will use WSDOT pipe cover table from Hydraulics manual (with city revisions)	JMM
17	7-2/7.3C	CIL	add" Trash rack required at the entrance to piped storm drain system" Add a removable trash rack detail similar to KCSWDM 4.2.1E	Confer with maintenance. 18" and over pipes, required by KCSWDM to have trash racks, check with maintenance about 12" culverts (not driveway culverts).	JMM
18	7-2 / 7.3 Storm Sewers and Culverts (D)	DPT	Specify the year of the Standard Specifications. (2014 WSDOT/APWA Standard Plans & Specification)	Section will be removed	JMM

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19	7-2/7.3C	CIL	allow DI, RCP and PVC C900 culverts only, reference WSDOT spec 7-03 & Ch3.1 of these standards	Yes, types of pipe allowed will be addressed by WSDOT pipe cover table from Hydraulics manual (with city revisions)	JMM
20	7-2/7.3D	CIL	Do not allow plain concrete pipe, corrugated metal pipe(aluminum or steel). Allow reinforced concrete , ductile iron, solid wall PVC, profile wall PVC, corrugated polyethylene pipe, high density polyethylene pipe, corrugated polypropylene , corrugated polyethylene pipe (service drains outside roadway	Yes, types of pipe allowed will be addressed by WSDOT pipe cover table from Hydraulics manual (with city revisions)	JMM
21	7.3D	EP	Can we exclude CMP?	Yes, and unreinforced concrete pipe	JMM
22	7.3E	EP	SWPE should only be used for underdrains outside the travelled way	We will not include SWPE as an allowable pipe material in pipe cover table.	JMM
23	7-2/7.3E	CIL	does this refer to mandrel test? update WSDOT reference to 7-17.3(2)G ?	Yes, need to change reference	JMM
24	7-2 / 7.3 Storm Sewers and Culverts (F)	DPT	Specify the year of the Standard Specifications. (2014 WSDOT/APWA Standard Plans & Specification)	Section will be removed	JMM
25	7-2/7.3F	CIL	Remove first sentence or refer to WSDOT specs. Require leak testing per WSDOT.7-043(1)E/7-04.3(1)F	Standard drawing will address.	JMM
26	7.3F	EP	Delete 2nd sentence. Possibly reference WSDOT 7-04.3(1)A	Standard drawing will address.	JMM
27	7.3G	SD	Question. If ductile iron used, why not expose bell end and forego the bevel so that pipe extensions can be made in the future?	Current practice will ensure consistency.	JMM
28	7-4/7.4 A	CIL	replace catch basins with "catch basins or inlets"	Yes	JMM
29	7-4/7.4 B	CIL	Allow WSDOT B-25.60-01 (concrete inlet) and B-25.20-01 (combination inlet) for laterals	Need to clarify that type 1 CB's are standard, curb inlets allowed with Director approval.	JMM
30	7-4/7.4B	CIL	refer to WSDOT plans B-5.20-02 (CB type 1) B-5.4-02 (CB type 1L), Include B-10.70-00 (PVC CB)?	Yes	JMM

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31	7.4C	SD	Remove entire section C.	Yes	JMM
32	7.4C	EP	Add item #6 Approval of Director or designee	Section c will be removed	JMM
33	7-4/7.4C.1	CIL	remove 48" pipe size requirement, require permit/ approval by the city	Section c will be removed	JMM
34	7-4/7.4D	CIL	reference WSDOT B-10.20-01 (CB type 2) & B-30.90-02 Misc. details)	Will incorporate.	JMM
35	7-3 / 7.4 Catch Basin Locations and Junctions (E)	DPT	Change ft to feet to be consistent with chapter.	Will incorporate.	JMM
36	7-4 / 7.5 Frames, Grates, and Covers (D)	DPT	Specify the year of the Standard Specifications. (2014 WSDOT/APWA Standard Plans & Specification)	Will add "current edition"	JMM
37	7-4 / 7.5 Frames, Grates, and Covers (E)	DPT	Specify the year of the Standard Specifications. (2014 WSDOT/APWA Standard Plans & Specification)	Will add "current edition"	JMM
38	7-4/7.4E	CIL	reference WSDOT B-15.20-01 (MH type 1), B-15.40-01 (MH type 2), B-15.60-02 (MH type 3)	Will incorporate	JMM
39	7-4/7.4F	CIL	explicitly address curb discharges/ sidewalk drains , are they allowed, what are the guidelines?	No, they are not allowed. Language will remain general to be more inclusive.	JMM
40	7-4 / 7.5 Frames, Grates, and Covers (G)	DPT	Specify the year of the Standard Specifications. (2014 WSDOT/APWA Standard Plans & Specification)	Will add "current edition"	JMM
41	7-4/7.4G	CIL	Remove this item, require rigid couplings or fernco coupling when joining dissimilar pipe materials	Keep sentence, add "for pipes 6 inches or greater"	JMM
42	7.4H	EP	not typically done for Type I cb's	Remove section H	JMM
43	7.5 A	SD	Need rust prohibitive coating	This issue will be investigated and discussed at next meeting	JMM
44	7.5 C	SD	And will be marked with "City of SeaTac".	Will not specify SeaTace, this would add cost.	JMM

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45	7.5 G	SD	Add City of SeaTac	Will not specify SeaTace, this would add cost.	JMM
46	7.5 J	SD	Add locking	Will incorporate	JMM
47	7.5 M	SD	Add 4 bolt locking in travel lane, 2 bolt in gutter flow line.	Will add in standard drawing, 4 locking bolts	JMM
48	7-7/7.5N	CIL	with replaceable nut(EJ EONLOCK ) or similar	Will add in standard drawing	JMM
49	7-7/7.5O	CIL	why allow slit drain/ trench drain in ROW? If allowed require H-20 rated, heel resistant grate	Yes, slit drains will be allowed but minimum loading requirements will be specified, Colum will research	JMM
50	7-5 / 7.5 Frames, Grates, and Covers (O)	DPT	Do we want to use slit drains? They are easily plugged, easily damaged, difficult to maintain, requires catch basins every 50 feet and require specialized cleaning equipment.	Adding minimum requirements will eliminate some of the issues.	JMM
51	7-5 / 7.6 Erosion Control	DPT	Specify the year of the King County Surface Water Design Manual and the Standard Specifications. <b>(2016 King County Surface Water Design Manual &amp; 2014 WSDOT/APWA Standard Plans &amp; Specification)</b>	Will add "current edition" for Standard Specifications and Surface Water Design Manual for KCSWDM and city addendum	JMM
52	7.5?	EP	Maintenance preference is East Jordan Eonlk and East Jordan Ergo for MH covers	Will add in standard drawing	JMM
53	??	EP	Need language for exfiltration testing of detention vaults	Will incorporate, Eric Proctor provided language previously developed by Don R.	JMM
54	7-7/7.6	CIL	add Erosion control BMPs shall be implemented to the extent necessary to prevent contaminants from entering the drainage system or surface waters and in accordance with KCSWDM	Add, minus "and in accordance with KCSWDM"	JMM
55	7-7/7.6	CIL	Refer to WSDOT silt fence specs or remove. Add ditch erosion control measures such as RECP.	Delete 3rd paragraph	JMM
56	7-7/7.8	CIL	create subsections for pervious pavement & bioretention	Use language from City addendum to Road Standards	JMM
57		CIL	Bioretention BMPs shall be designed in accordance with SeaTac addendum to KCSWDM	Make separate section for bioretention	JMM

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58	7-7/7.8	CIL	Pervious pavement shall be designed in accordance with SeaTac addendum to KCSWDM	Make new section for pervious pavement	JMM
59	7-7/7.8b	CIL	remove last sentence and/or reconsider 5.10 requirements as they make many BMPs infeasible	In section 5/10, add vegetated LID to the exemption for placement in clear zone	JMM
60	7-7/7.8c	CIL	remove this section, bioretention cells should not be mowed.	Remove "and mowable by City maintenance" Also remove sentence "No plantings....."	JMM
61	7-7/7.8d	CIL	Does this include bioretention? Require LID BMPs within the ROW to be engineered instead?	Remove section D	JMM
62	7.8 e	SD	Add to current standards	Will incorporate	JMM
63		AS	Add infiltration requirements	Will discuss at next meeting	JMM