Appendix C Proposed Barrier Locations

Proposed Barrier Location Details

Drainage	Estimated Debris Volume Loss from 2013 Events (yd ³)	50% Debris Volume Loss (yd³)	Location	Distance from Road (ft)	Distance to Upstream Barrier (ft)	Height (ft)	Bottom width (ft)	Top width (ft)	Barrier Capacity (yd³)	Estimated System Retention Capacity (yd ³)		
С	8031	4015	1	50	70	16	13	26	356			
			2	120	90	16	13	26	352	1063		
			3	210	N/A	16	13	26	356			
D	16220	8110	1	320	180	20	13	33	1186			
			2	500	200	20	13	33	1190	4757		
			3	700	200	20	13	33	1190			
			4	900	N/A	20	13	33	1190			
F	4852	2426	1	160	120	20	13	26	721			
			2	280	150	20	13	26	753	2227		
			3	430	N/A	20	13	26	753			



Appendix D Barrier Cost Estimate

Barrier Cost Estimate Details

Drainage	Estimated System Retention Capacity (yd ³)	Barrier Style	Barrier Quantity in Drainage	Barrier Materials Unit Cost ³		System Materials Cost ³		Estimated System Installation Cost ³		System Cost with 30% Contingency ³	
С	1063	VX160-H6 ¹	3	\$	26,400	\$	79,200	\$	316,800	\$	514,800
D	4757	UX180-H6 ²	4	\$	37,200	\$	148,800	\$	669,600	\$	1,063,920
	670	Detention Basin & Concrete Headwall	1	\$	20,000	\$	20,000	\$	250,000	\$	325,000
F	2227	VX160-H6 ¹	3	\$	26,400	\$	79,200	\$	316,800	\$	514,800

 $^{^{\}mbox{\scriptsize 1}}$ Installation costs were estimated to be 4 times the material cost

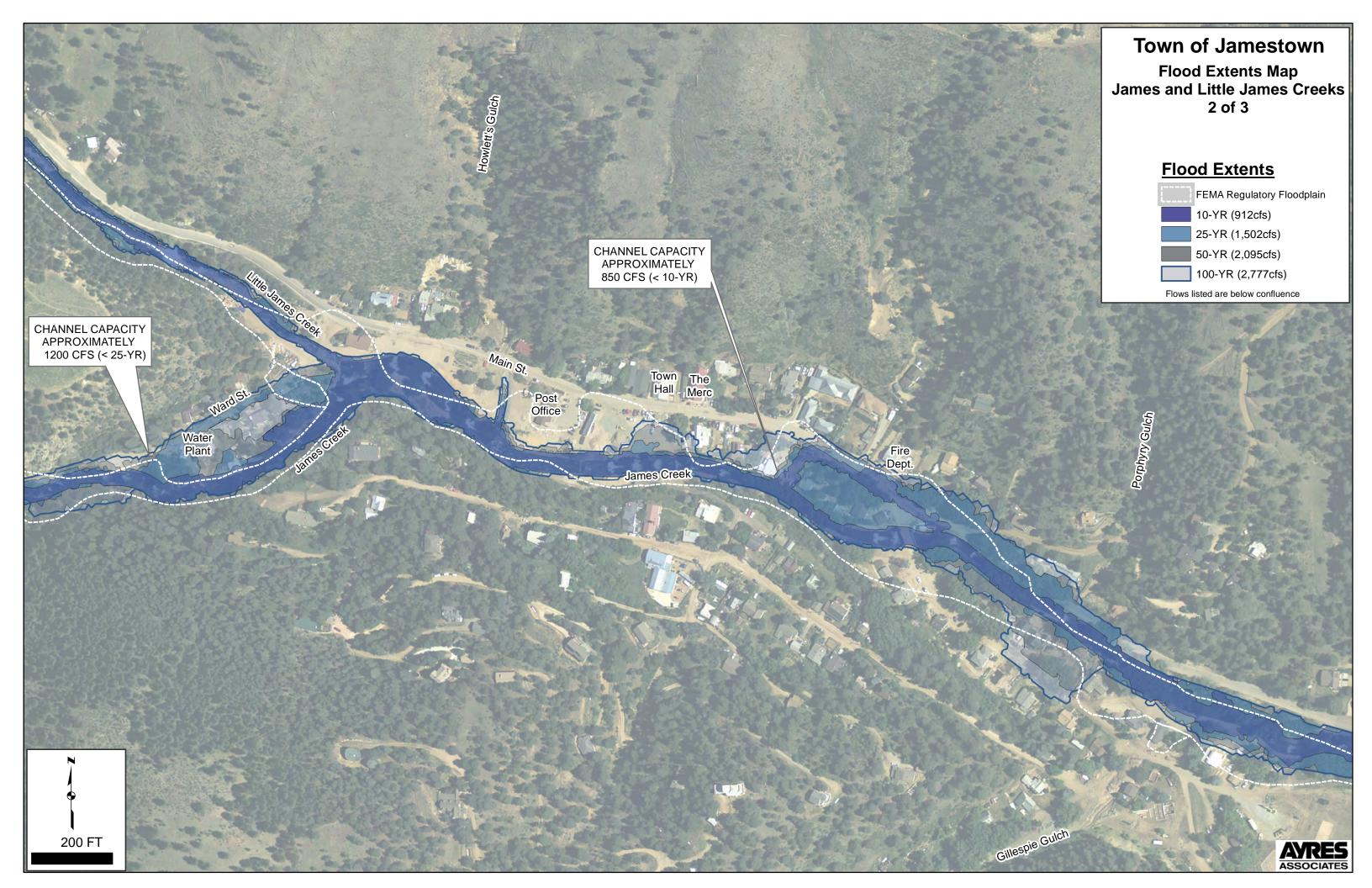


² Installation cost was estimated to be 4.5 times the materials cost due to the need for larger equipment and foundation posts.

³ Costs based on 2017 dollars

Appendix E Flood Inundation Maps







Appendix F Channel Stability Maps

