STORM DRAINAGE CAPITAL IMPROVEMENT PROGRAM

9/30/97

CITY OF SWEET HOME, OREGON

Activity	general conditions	clearing & grubbing	channel excavation	pipe culverts	box culverts	road repair	RR boring	wall const.	weir const.	bridge const.	engineering & design	land/ease acquisition
	% const cost	$/acre	$/cu.yd.	$/in.dia.	$/cu. yd.	$/sq.ft.	$/lin. ft	$/cu. yd.	$/cu. yd.	$/lin. ft.	% constr. cost	
Est. cost/unit	10	6000	17	2.8	200	4	600	300	300	800	15	

Notes
1. Any physical or environmental changes have not significantly altered the 1978 Storm Drainage Master Plan.
2. All culvert pipe sizes are estimates based on one pipe, one diameter.
3. Road repair costs are based on asphalt concrete patching.
4. All culverts are estimated as complete replacement.
5. All culverts, excluding box type, are estimated with circular type as replacement.

10%/yr from 10/95 = 100%

Priority 1	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)
24th St. & RR																				
1. Implement 18th Ave. Improvements (Priority 13)																				251,558
2. Construct channel #538 for 45 cfs.	1,860	1.4	8,400	600	10,200													3,069		23,529
3. Enlarge channel #532 for 73 cfs. Tamarack & 18th	785	0.6	3,600	250	4,250													1,295		9,330
4. Construct more effective overflow regulator @ Willamette Ind. pond outflow.	900															30	9,000	1,485		11,385
5. Enlarge culvert between ponds @ Willamette Ind. Clear refuse from pipes	1,944					72	25	5,040				300	1,200	44	13,200			3,208		24,592
6. Enlarge channel #552 for 172 cfs.	3,400	1.7	10,200	1,400	23,800													5,610		43,010
Activity Subtotal	8,889		22,200		38,250			5,040			0		1,200		13,200		9,000	14,667	0	Items Total 363,404 / Activities Tot. 112,446

100% increase
69,828
9 077,64 (END)

Priority 2	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)
13th @ Quince & Poplar/Tamarack																				
1. Implement improvements @ 18th St. (Priority 13)																				251,558
2. Construct channel #504 for 40 cfs.	6,110	4.8	28,800	1,900	32,300													10,082		77,292
3. Enlarge channel #521 for 42 cfs.	2,260	1.5	9,000	800	13,600													3,729		28,589
4. Enlarge culvert #502 for 185 cfs.	2,069					72	30	6,048				360	1,440	44	13,200			3,414		26,170
5. Construct channel #501 for 185 cfs.	3,765	1.6	9,600	1,650	28,050													6,212		47,627
Activity Subtotal	14,204		47,400		73,950			6,048			0		1,440		13,200		0	23,436	0	Items Total 431,236 / Activities Tot. 179,678

249,838
32 479 (END)

Priority 3	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)
43rd Street & 45th Street																				
1. Enlarge channel #582 for 270 cfs.	3,450	1.5	9,000	1,500	25,500													5,693		43,643
2. Enlarge culvert #584 for 291 cfs.	4,800					78	196	42,800				1500	6,000					8,040		61,640
3. Enlarge channel #586 for 292 cfs.	14,800	7.1	42,600	6,200	105,400													24,420		187,220
4. Enlarge culvert #588 for 291 cfs.	2,965					84	40	9,408				560	2,240	60	18,000			4,892		37,505
5. Enlarge channel #594 to 97 cfs.	1,940			1,140	19,400													3,200		24,540
6. Enlarge channel #590 to 100 cfs.	680			400	6,800													1,120		8,600
7. Enlarge culvert #592	790					60	40	6,720				300	1,200					1,300		10,010
8. Enlarge culvert # 591	790					60	40	6,720				300	1,200					1,300		10,010
9. Enlarge channel #597 to 52 cfs.	1,560			920	15,640													2,580		19,780
Activity Subtotal	31,775		51,600		172,740			65,648			0		10,640		18,000		0	52,545	0	Items Total 402,948 / Activities Tot. 402,948

Priority 4	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)	
Long St. 46th to 43rd																					
1. Implement Improvements @ 43rd St. (Priority 3)																				402,948	
2. Enlarge channel #590 for 100 cfs.	1,380	0.6	3,600	600	10,200													2,277		17,457	
3. Enlarge culvert #591 for 100 cfs.	1,578					54	41	6,199				369	1,476	27	8,100			2,603		19,956	
4. Enlarge channel #597 for 52 cfs.	1,800	1.3	7,800	600	10,200													2,970		22,770	
																				Items Total	Activities Tot.
Activity Subtotal	4,578		11,400		20,400			6,199			0		1,476		8,100		0	7,850	0	483,131	60,183

Priority 5	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)	
29th St. & Juniper, Fir Ct. & Harding																					
1. Enlarge channel #564 for 127 cfs.	9,210	6	36,000	3,300	56,100													15,197		116,507	
2. Enlarge culvert @ Juniper to 127 cfs.	790					60	40	6,720				300	1,200					1,300		10,010	
3. Enlarge culvert #35th to 127 cfs.	790					60	40	6,720				300	1,200					1,300		10,010	
4. Implement Improvements for Long St. & Clarkmill Rd, Excluding Step #2 (Priority 7)																				232,104	
																				Items Total	Activities Tot.
Activity Subtotal	10,790		36,000		56,100			13,440			0		2,400		0		0	17,797	0	368,631	136,527

Priority 6	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)	
1st St @ Hwy. 20, Nandina and Westwood St. area																					
1. Enlarge channel#102 for 309 cfs.	1,280	1	6,000	400	6,800													2,112		16,192	
2. Remove 42" culvert through private property which lies directly below culvert #103 @ Nandina St. Replace with open channel	315	0.1	600	150	2,550													520		3,985	7170
3. Enlarge culvert #103 for 281 cfs.	3,314					84	52	12,230				728	2,912	60	18,000			5,468		41,925	
4. Enlarge culvert @ Westwood St for 281cfs	3,256					84	50	11,760				700	2,800	60	18,000			5,372		41,188	
5. Enlarge channel #104 for 282 cfs.	990	0.8	4,800	300	5,100													1,634		12,524	
Activity Subtotal	9,155		11,400		14,450			23,990			0		5,712		36,000		0	15,106	0	115,814	115,814

Priority 7	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)	
Long St. @ Clarkmill Rd.																					
1. Enlarge culvert across from school under Clarkmill Rd.	9,284					60	480	80,640				800	3,200	30	9,000			15,319		117,443	
2. Implement Improvements for 24th St. (Priority #1)																				363,404	
3. Enlarge culvert #554 for 156 cfs	3,271					60	114	19,152				1140	4,560	30	9,000			5,397		41,381	
4. Construct channel #556 for 157 cfs.	4,030	1.9	11,400	1,700	28900													6,650		50,980	101960
5. Long St. between 37th & 38th, Enlarge culverts	1,760					30	210	17,640										2,900		22,300	
																				Items Total	Activities Tot.
Activity Subtotal	18,345		11,400		28,900			117,432			0		7,760		18,000		0	30,266	0	595,508	232,104

Priority 8	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)
Clarkmill Rd. & RR																				
1. Enlarge culvert to wetland channel # 572 for 522 cfs.	4,010					108	35	10,584				630	2,520	90	27,000			6,617		50,732
2. Enlarge channel #572 flowing West around log yard for 522 cfs.	1,870			1,100	18,700													3,086		23,656
3. Enlarge channel #572 flowing North through log yard for 522 cfs.	3,280	1.5	9,000	1,400	23,800													5,412		41,492
4. Enlarge culvert beneath gravel road to log yard for 522 cfs	4,946					108	60	18,144				1080	4,320	90	27,000			8,162		62,572
5. Enlarge sluice gate and culvert @ road to mill on channel #572 for 522 cfs.	4,448					108	40	12,096				720	2,880	90	27,000		2,500	7,339		56,262
6 Enlarge culvert @ RR tracks @ mill for 522 cfs.	4,505					108	20	6,048					12,000	90	27,000			7,433		56,986
7. Enlarge culvert beneath road circling mill for 522 cfs.	3,823					108	30	9,072				540	2,160	90	27,000			6,308		48,363
8. Enlarge culvert #574 for 530 cfs.	12,626					108	110	33,264					66,000	90	27,000			20,834		159,724
9. Enlarge channel #576 for 360 cfs.	6,260	2.5	15,000	2,800	47,600													10,329		79,189
10. Enlarge culvert #578 for 270 cfs.	3,480					90	50	12,600				750	3,000	64	19,200			5,742		44,022
11. Enlarge culvert beneath private drive on E. side Clarkmill Rd. for 270 cfs.	2,544					90	20	5,040				300	1,200	64	19,200			4,198		32,182
12. Replace culvert beneath gravel road on S. side RR tracks on W. side Clarkmill Rd. which drains to channel #576 for 100 cfs.	1,184					54	20	3,024				180	720	27	8,100			1,954		14,983
13. Enlarge culvert beneath Clarkmill Rd. for channel #580 for 100 cfs.	1,559					54	40	6,048				360	1,440	27	8,100			2,572		19,719
14. Enlarge culvert beneath RR tracks to channel #580 near Clarkmill Rd.	125					24	15	1,008				60	240					206		1,579
15. Construct channel #580 for 102 cfs.	11,840	5	30000	5,200	88400													19,536		149,776 299 552
																			Items Total	Activities Tot.
Activity Subtotal	68,500		54,000		178,500			116,928			0		96,480		216,600		2,500	109,728	0	841,237 841,237

Priority 9	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)
Ames Creek																				
(Sankey Park, H.S. Parking Lot 14th & Kalmia)																				
1. Construct channel # 702 for 2463 cfs. – ~~FOR~~ SSWSC	89,500	7.5	45,000	50,000	850,000													147,675		1,132,175
2. Enlarge culvert #304 for 2360 cfs. – STATE HWY	16,560								3.2	168	107,520	6720	26,880	104	31,200			27,324		209,484
3. Enlarge channel #704 for 2360 cfs. – DONE – Centerpiece	4,170	1	6,000	2,100	35,700													6,881		52,751
4. Enlarge channel #706 for 1970 cfs. – Behind Fire Hall	10,430	3.5	21,000	4,900	83,300													17,210		131,940
5. Enlarge culvert #308 for 2010 cfs. – 12th AVE Bridge	6,498					209	40	23,408				1393.333	5,573	120	36,000			10,722		82,201 ?
6. Enlarge channel #707 for 1970 cfs. – Between 14th & 12th	9,830	2.5	15,000	4,900	83,300													16,220		124,350
7. Enlarge culvert #309 for 2010 cfs – 14th AVE Bridge	7,820								3.2	49	31,360	1960	7,840	130	39,000			12,903		98,923
8. Enlarge channel #708 for 1970 cfs. DONE ✓	~~25,220~~	5.2	31,200	13,000	221,000													41,613		319,033
9. Enlarge culvert #312 for 1710 cfs. – MTN View Bridge	3,200															40	32,000	5,280		40,480
10. Enlarge channel #712 for 1657 cfs. → EAST MOUNTAIN Rd	13,880	3.3	19,800	7,000	119,000													22,902		175,582
11. Demolish culvert #310 (Existing Concrete Flume)	510			300	5,100													765		6,375
																			Items Total	Activities Tot.
Activity Subtotal	187,618		138,000		1,397,400			23,408			138,880		40,293		106,200		32,000	309,495	0	2,373,294 2,373,294

10% EACH 1/2 TIMES 10 1/2 = 100%

$177,894.00 TOTAL X.13 = $42,127 ENGINEERING @ 100% CHANGE $955 788 TOTAL = 124,253 ENGINEER

Priority 10	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)
23rd St. & Mountain View																				
1. Construct channel #516 to 30 cfs. NO	1,610	0.9	5,400	630	10,710													2,658		20,378
2. Construct culvert #525 to 30 cfs. ~~ENO~~ NO!	450					30	40	3,360				300	1,200					751		5,761
3. Construct channel #515 to 29 cfs. Chuck	1,960	0.5	3,000	980	16,660													3,243		24,863
4. Construct channel #514 to 44 cfs. ✓	2,740	0.6	3,600	1,400	23,800													4,521		34,661 100% 69 322
																			Items Total	Activities Tot.
Activity Subtotal	6,760		12,000		51,170			3,360			0		1,200		0		0	11,173	0	85,663 85,663

Priority 11	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)	
46th, 47th & 49th Streets																					
1. Enlarge channel # 806 for 117 cfs.	8,040	4.9	29,400	3,000	51,000													13,266		101,706	
2. Enlarge culvert # 808 for 110 cfs.	1,649					60	36	6,048				360	1,440	30	9,000			2,721		20,857	
3. Enlarge culvert # 809 for 110 cfs.	1,607					60	34	5,712				340	1,360	30	9,000			2,652		20,331	
																				Items Total	Activities Tot.
Activity Subtotal	11,296		29,400		51,000			11,760			0		2,800		18,000		0	18,639	0	142,894	142,894

Priority 12	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)	
Osage Street																					
1. Enlarge pipe beneath private lot & Osage St. for 30 cfs.	2,864					48	150	20,160				320	1,280	24	7,200			4,726		36,230	
2. Enlarge channel # 584 for 29 cfs.	580	0.4	2,400	200	3,400													957		7,337	
																				Items Total	Activities Tot.
Activity Subtotal	3,444		2,400		3,400			20,160			0		1,280		7,200		0	5,683	0	43,567	43,567

Priority 13	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)	
18 th Avenue to Santiam River																					
1. Install 48" pipe from culvert #531 to Santiam River.	19,436	0.1	600			48	1,150	154,560				13800	32,000	24	7,200			32,069		245,865	
2. Construct weir to direct flow from channel #532 into new 48" pipe.	450															15	4,500	743		5,693	
																				Items Total	Activities Tot.
Activity Subtotal	19,886		600		0			154,560			0		32,000		7,200		4,500	32,812	0	251,558	251,558

@ 100% increase
$503,116
$65,405 Eng.

Priority (Future)	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)	
8th @ Old Holley Rd.																					
1. Construct channel #336 above #378 for 28 cfs.	2,215	1	6,000	950	16,150													3,655		28,020	
																				Items Total	Activities Tot.
Activity Subtotal	2,215		6,000		16,150			0			0		0		0		0	3,655	0	28,020	28,020

Priority (Future)	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)	
44th Street																					
1. Implement Improvements @ Osage St. (Priority 12)																				43,567	
2. Enlarge channel #802 for 35 cfs.	3,725	3.8	22,800	850	14,450													6,146		47,121	
3. Enlarge culvert @ 44th St. @ channel #802 for 35 cfs.	1,386					48	40	5,376				320	1,280	24	7,200			2,286		17,528	
																				Items Total	Activities Tot.
Activity Subtotal	5,111		22,800		14,450			5,376			0		1,280		7,200		0	8,432	0	108,216	64,649

Priority (Future)	gen cond. cost $	Clearing/grubbing acres	Clearing/grubbing cost $	channel excavation cu. yd.	channel excavation cost $	pipe culverts in. dia.	pipe culverts lineal ft.	pipe culverts cost $	box culverts conc.(cu.yd.)	box culverts lineal ft.	box culverts cost $	road repair sq. ft	road repair cost $	wing/headwalls cu. yd.	wing/headwalls cost $	weirs/bridges/gates varied units	weirs/bridges/gates cost $	engineering cost $	land/ease. cost $	Item sub-totals ($)	
Pine Street Area																					
1. Install 48" dia. bypass pipe from culvert #105 to culvert @ Westwood St.	22,352					48	1,800	215,040				320	1,280	24	7,200			36,881		282,753	
2. Implement Nandina and Westwood Improvements (Priority 6)																				115,814	
3. Enlarge culvert #105 for 232 cfs.	2,917					72	64	12,902				768	3,072	44	13,200			4,814		36,906	
4. Enlarge channel #106 for 233 cfs.	3,805	2.8	16,800	1250	21,250													6,278		48,133	
5. Construct channel #112 for 108 cfs.	7,270	2.2	13,200	3500	59,500													11,996		91,966	
6. Construct channel #108 for 53 cfs.	3,060	1.7	10,200	1200	20,400													5,049		38,709	
																				Items Total	Activities Tot.
Activity Subtotal	39,404		40,200		101,150			227,942			0		4,352		20,400		0	65,018	0	614,281	498,466

EST. GRAND TOTAL 5,569,048