



**Table 1**  
**Construction Cost Estimates Summary**

Major Basin	Basin 6		
Alternative	Conveyance	Detention	Local
Item	Total Cost (\$)	Total Cost (\$)	Total Cost (\$)
Channels	705,675	409,317	-
Culverts	1,798,030	703,000	2,243,070
Drop Structures	157,100	127,600	-
Detention Facilities	-	1,931,231	-
Bridges	-	-	-
Leaves	-	-	-
<b>Sub-Total (Rounded)</b>	<b>\$2,661,000</b>	<b>\$3,171,000</b>	<b>\$2,243,000</b>
<b>30% Construction Contingency</b>	<b>\$798,300</b>	<b>\$951,300</b>	<b>\$672,900</b>
<b>15% Engineering Contingency</b>	<b>\$399,150</b>	<b>\$475,650</b>	<b>\$336,450</b>
<b>Total (Rounded)</b>	<b>\$3,858,000</b>	<b>\$4,598,000</b>	<b>\$3,252,000</b>



**Table 7-1-CH**  
**Channel Cost Estimates**  
**Major Basin 6 Alternative - Conveyance**

Channel and Reach	Existing 100-yr Flow (cfs)	Proposed 100-yr Flow (cfs)	Design Flow (cfs)	Channel Length	Channel Type	Material	Excavation (CY)	Unit Cost (\$)	Total Cost (\$)
Antelope Butte Creek (Upstream limit to Lee Ave.)	1568	1,568	1,700	750	Steep Channel Design	Grass	7,729	107	80,571
Antelope Butte Creek (Lee Ave. to DP 6-219)	1554		1,700	1,230	Flat Channel Design	Grass	16,947	139	171,223
Antelope Butte Creek (DP 6-219 to S. Douglas Hwy)	1966	1,966	2,000	4,450	Steep Channel Design	Grass	63,165	102	453,881

**Sub-Total      \$705,675**

**Table 7-2-CH**  
**Channel Cost Estimates**  
**Major Basin 6 Alternative - Detention**

Channel and Reach	Existing 100-yr Flow (cfs)	Proposed 100-yr Flow (cfs)	Design Flow (cfs)	Channel Length	Channel Type	Material	Excavation (CY)	Unit Cost (\$)	Total Cost (\$)
Antelope Butte Creek (Upstream limit to Lee Ave.)	1,568	357	500	750	Steep Channel Design	Grass	3,333	52	38,724
Antelope Butte Creek Channel Capacity (DP 6-219 to S. Douglas Hwy)	1966	954	1,000	4,450	Steep Channel Design	Grass	34,611	83	370,593

**Sub-Total      \$409,317**



**Table 7-1-CU  
Culvert Cost Estimate  
Major Basin 6 Alternative - Conveyance**

Design Point	Road Crossing	Channel and Reach	Existing Size	Future 100-yr Flow (cfs)	Necessary Facility for Future 100-year Flow	Number of Culverts	Culvert Length (ft) <sup>1</sup>	Unit Cost (\$)	End Section Unit Cost (\$)	Total Cost (\$)
6-210	Lee	Antelope Butte Creek	2-8.7'x6' arch	1568	4- 10'x6' CBC	4	50	850	40,000	210,000
6-218	Railroad	Antelope Butte Creek	3- 8'x3' CBC, FES	2044	9- 12'x4' CBC	9	125	1,300	40,000	1,502,500
6-294	I-90	Tributary 609	36" RCP	141	54" RCP	1	415	182	10,000	85,530

**Sub-Total \$1,798,030**

**Table 7-2-CU  
Culvert Cost Estimate  
Major Basin 6 Alternative - Detention**

Facility Number	Road Crossing	Channel and Reach	Existing Size	Future 100-yr Flow (cfs)	Necessary Facility for Future 100-year Flow	Number of Culverts	Culvert Length (ft) <sup>1</sup>	Unit Cost (\$)	End Section Unit Cost (\$)	Total Cost (\$)
6-218	Railroad	Antelope Butte Creek	3- 8'x3' CBC, FES	1111	6- 10'x4' CBC	6	130	850	40,000	703,000

**Sub-Total \$703,000**

**Table 7-2-CU  
Culvert Cost Estimate  
Major Basin 6 Alternative - Local**

Facility Number	Road Crossing	Channel and Reach	Existing Size	Future 100-yr Flow (cfs)	Necessary Facility for Future 100-year Flow	Number of Culverts	Culvert Length (ft) <sup>1</sup>	Unit Cost (\$)	End Section Unit Cost (\$)	Total Cost (\$)
6-220	Schoonover Rd	Tributary 602	2 - 48" CMP FES	498	54" RCP	1	685	182	10,000	134,670
6-243	Douglas Hwy	Tributary 643	6'x4' CBC	596	2- 7'x6' CBC	2	130	700	40,000	222,000
6-245	Douglas Hwy	Tributary 645	2-36" RCP	711	8- 7'x3' CBC	8	100	700	40,000	600,000
6-246	Douglas Hwy	Tributary 604	2- 24" RCP	309	2- 7'x3' CBC	2	90	700	40,000	166,000
6-251	Gamer Lake Rd	Tributary 605	9.8'x1.6' CBC	82	3- 4'x2' CBC	3	204	350	40,000	254,200
6-252	Southern Dr	Tributary 605	18" RCP	280	3- 6'x3' CBC	3	104	350	40,000	149,200
6-253	Douglas Hwy	Tributary 605	No Culvert	138	3- 6'x3' CBC	3	104	350	40,000	149,200
6-293	Boxelder Rd.	Tributary 609	Silted-up size unknown	28	30" RCP	1	100	82	10,000	18,200
6-241	Potter Ave.	Tributary 645	2- 24" CMP	1878	2- 12'x9' CBC	2	182	1,400	40,000	549,600

**Sub-Total \$2,243,070**



**Table 7-2-D**  
**Detention Facility Construction Cost Estimates**  
**Major Basin 6 Alternative Detention**

Detention Name	Storage Volume (ac-ft)	Excavation (CY)	Excavation Cost (\$)	Embankment (CY)	Embankment Cost (\$)	Reveg. Area (SF)	Topsoil (CY)	Topsoil Cost at 4" Thick (\$)	Seeding Cost (\$)	Low Level Outlet Intake Structure/ EA (\$)	Low Level Outlet Conveyance Structure Type	Length of Low Level Outlet Conveyance Structure (ft)	Cost Low Level Outlet Conveyance Structure (\$)	Low Level Outlet Conveyance End Treatment Type	Low Level Outlet Conveyance End Treatment Cost (\$)	Spillway Flow Rate (cfs)	Spillway Cost (\$)	Total Cost (\$)
Unit costs		<10,000CY : >10,000CY :	8.00 5.00		22.00			20.00	2400	5800								
Antelope Butte Large	190	0	0	58,315	1,282,935	1799349.32	22,192	443,839	99,138	5,800	6X4' CBC	60	42,000	HW & WW	40,000	375	17,518	1,931,231
<b>Sub-Total</b>																		<b>\$1,931,231</b>

**Table X**  
**Drop Structure Cost Estimate**  
**Major Basin 6 Alternative - Conveyance**

Channel	Existing 100-yr Flow (cfs)	Proposed 100-yr Flow (cfs)	Design Flow (cfs)	Channel Length (ft)	Existing Slope	Proposed Slope	Elevation Change (ft)	No. of Drops	Unit Cost (\$)	Total Cost (\$)
Antelope Butte Creek (Upstream limit to Lee Ave.)	1,568	1,568	1,700	750	0.50%	0.17%	2.475	1	38,900	38,900
Antelope Butte Creek (DP 6-219 to S. Douglas Hwy)	1,966	1,966	2,000	4,450	0.40%	0.16%	10.68	3	39,400	118,200

**Sub-Total    \$157,100**

**Table X**  
**Drop Structure Cost Estimate**  
**Major Basin 6 Alternative - Detention**

Channel	Existing 100-yr Flow (cfs)	Proposed 100-yr Flow (cfs)	Design Flow (cfs)	Channel Length (ft)	Existing Slope	Proposed Slope	Elevation Change (ft)	No. of Drops	Unit Cost (\$)	Total Cost (\$)
Antelope Butte Creek (Upstream limit to Lee Ave.)	1,568	357	500	750	0.50%	0.18%	2.4	1	20,400	20,400
Antelope Butte Creek Channel Capacity (DP 6-219 to S. Douglas Hwy)	1966	954	1,000	4450	0.40%	0.10%	13.35	4	26,800	107,200

**Sub-Total    \$127,600**