

Appendix C - Cost Estimate

FEATURE:

**BATTLE CREEK DAMS
SOUTH POWERHOUSE**

**RECONNAISSANCE ESTIMATE
TAILRACE BYPASS TUNNEL**

PROJECT:

BATTLE CREEK RESTORATION

DIVISION:

UNIT:

PLANT ACCT.	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	1	Mobilization and preparatory work, Site Access	D8130	1	LS	\$200,000.00	\$200,000.00
	2	Construct site access road (12' wide, 2000' long, incl. access bridge consisting of four steel flatcars)	D8130	1	LS	\$133,000.00	\$133,000.00
	3	Excavation, common, open-cut for structures	D8130	1,000	yd3	\$8.00	\$8,000.00
	4	Excavation, rock, open-cut for structures	D8140	2,500	yd3	\$20.00	\$50,000.00
	5	Tunnel excavation, drill and blast (10' by 9.5'), 1050	D8140	3,700	yd3	\$300.00	\$1,110,000.00
	6	Water treatment for tunnel construction	D8140	1	LS	\$100,000.00	\$100,000.00
	7	Shotcrete for tunnel support (3" crown and sidewalls)	D8130	270	yd3	\$400.00	\$108,000.00
	8	Construct dike and temporary cofferdam in tailrace (incl. geomembrane water barrier; site materials)	D8140	2,000	yd3	\$20.00	\$40,000.00
	9	Backfill for structures (site materials)	D8130	300	yd3	\$10.00	\$3,000.00
	10	Riprap for channel slope protection (from quarry)	D8130	600	yd3	\$40.00	\$24,000.00
	11	Concrete in double-box culvert (2-7' by 6'), 70 ft (with upstream stoplog slots) for diversion to creek	D8130	140	yd3	\$600.00	\$84,000.00
	12	Concrete in tunnel headworks structure (with upstream stoplog slots and provision for radial gate and hoist)	D8130	40	yd3	\$600.00	\$24,000.00
	13	Concrete in tunnel outlet portal structure	D8140	150	yd3	\$600.00	\$90,000.00
	14	Concrete in canal wasteway structure, to creek	D8130	20	yd3	\$600.00	\$12,000.00
	15	Radial gate (10' by 7') and hoist, for tunnel headwork	D8130	3,000	lbs	\$6.00	\$18,000.00
	16	Slide gates (2-6' by 6') and hoists, for canal wasteway	D8130	3,000	lbs	\$4.00	\$12,000.00

QUANTITIES

PRICES

BY T. Hepler	APPROVED	BY DLMaag	CHECKED FILE: RKC 10/20/98
DATE PREPARED 11/20/98	DATE	DATE 11/20/98	PRICE LEVEL

