



**Diamond Shamrock**  
Coal Company

September 25, 1985

RECEIVED

SEP 30 1985

DIVISION OF OIL  
GAS & MINING

John Whitehead  
Division of Oil, Gas and Mining  
3 Triad Center/Suite 350  
Salt Lake City, Utah 84130-1203

Dear John;

Enclosed is a drawing showing how we intend to tie the curb and gutter into the culvert sections on the Trail Mountain Coal Company drainage system.

I hope this information is sufficient to gain your approval on this project. Your consideration and response to this matter is greatly appreciated.

If you have any questions or need further information pertaining to this matter, please feel free to call me at (801) 748-2140.

Sincerely;

TRAIL MOUNTAIN COAL COMPANY

Allen P. Childs  
Engineer

APC/gg

$$\text{Area} = (4 \text{ ft})(12/12 \text{ ft})(\frac{1}{2}) = 2.00 \text{ ft.}^2$$

$$\text{Wetted Perimeter} = 4 + 12/12 = 5.00 \text{ ft.}$$

$$\text{Hyd. Radius} = \frac{A}{P} = \frac{2.00}{5.00} = 0.40 \text{ ft.}$$

$$\text{Min. Slope} = 10/200 = 0.05$$

$$\text{Ave. Slope} = 55/820 = 0.067$$

$$\text{Roughness (Concrete)} = 0.015$$

$$Q = \frac{1.49}{n} A R^{2/3} S^{1/2}$$

$$Q \text{ Min.} = \frac{1.49}{0.015} (2.00)(0.40)^{2/3} (0.05)^{1/2} = 24.1 \text{ cfs}$$

$$Q \text{ Ave.} = \frac{1.49}{0.015} (2.00)(0.40)^{2/3} (0.067)^{1/2} = 29.9 \text{ cfs}$$

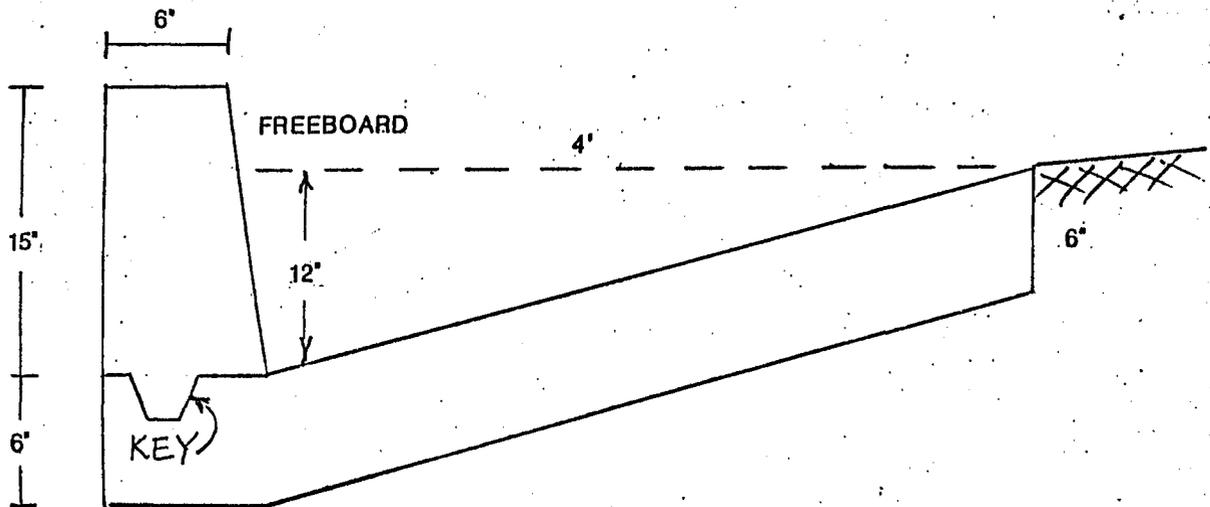
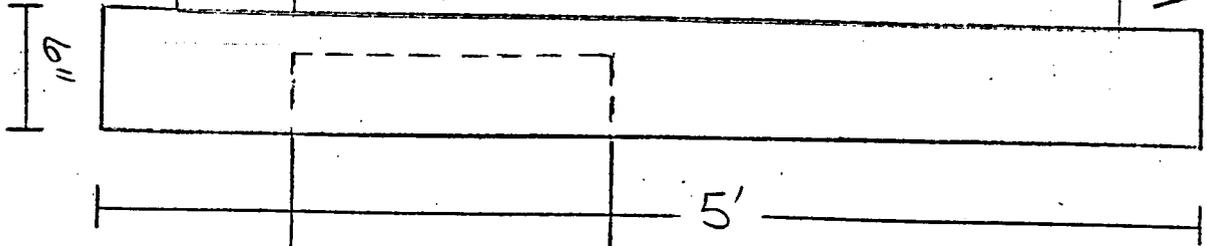
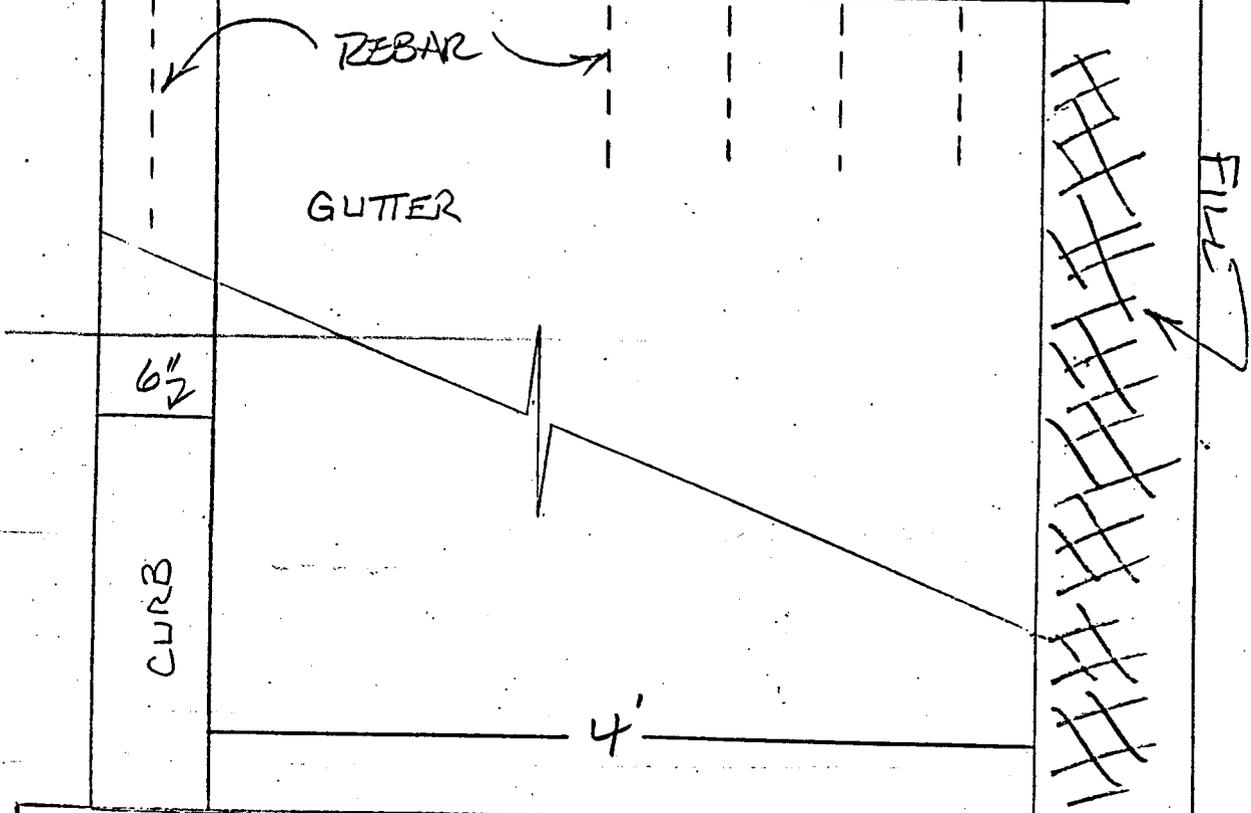
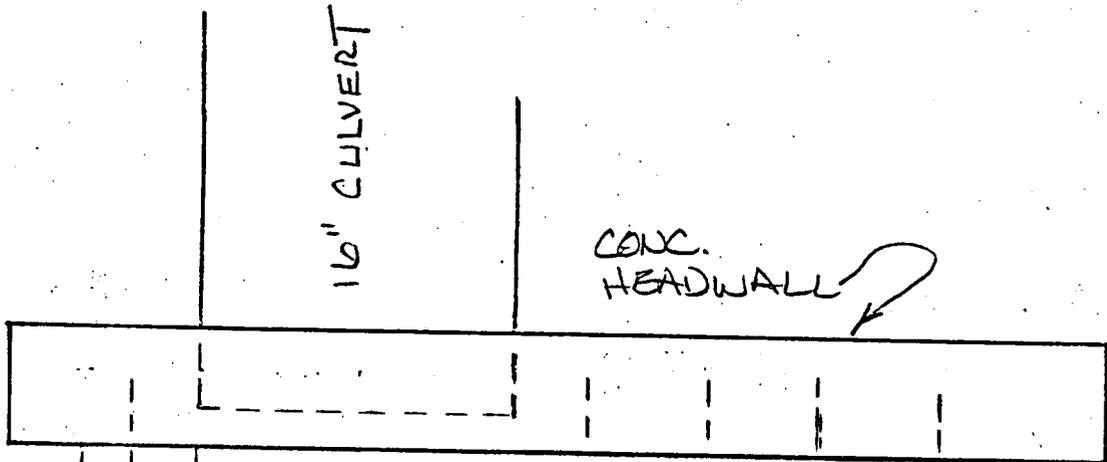


Figure 7-12. Typical cross section of diversion system (curb and gutter) to be used in runoff control for the Trail Mountain Mine Site.

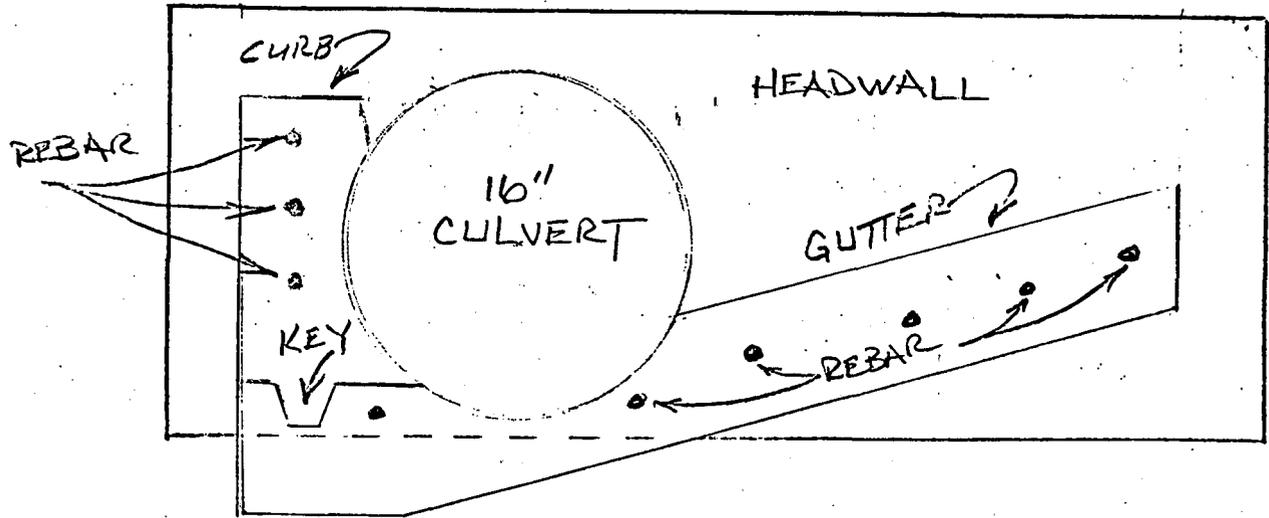
PLAN VIEW

7-55b



42.381 50 SHEETS 5 SQUARE  
42.382 100 SHEETS 5 SQUARE  
42.389 200 SHEETS 5 SQUARE  
MILWAUKEE, U.S.A.





42,381 30 SHEETS 3 SQUARE  
42,382 100 SHEETS 3 SQUARE  
42,383 200 SHEETS 3 SQUARE

