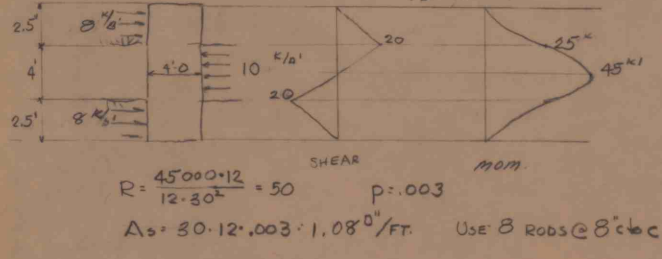
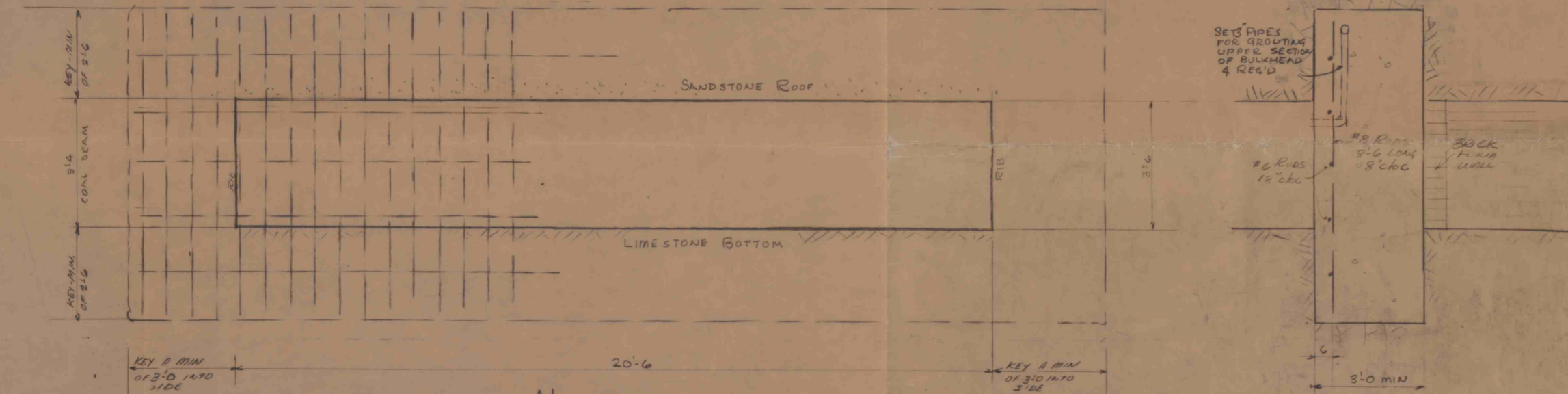
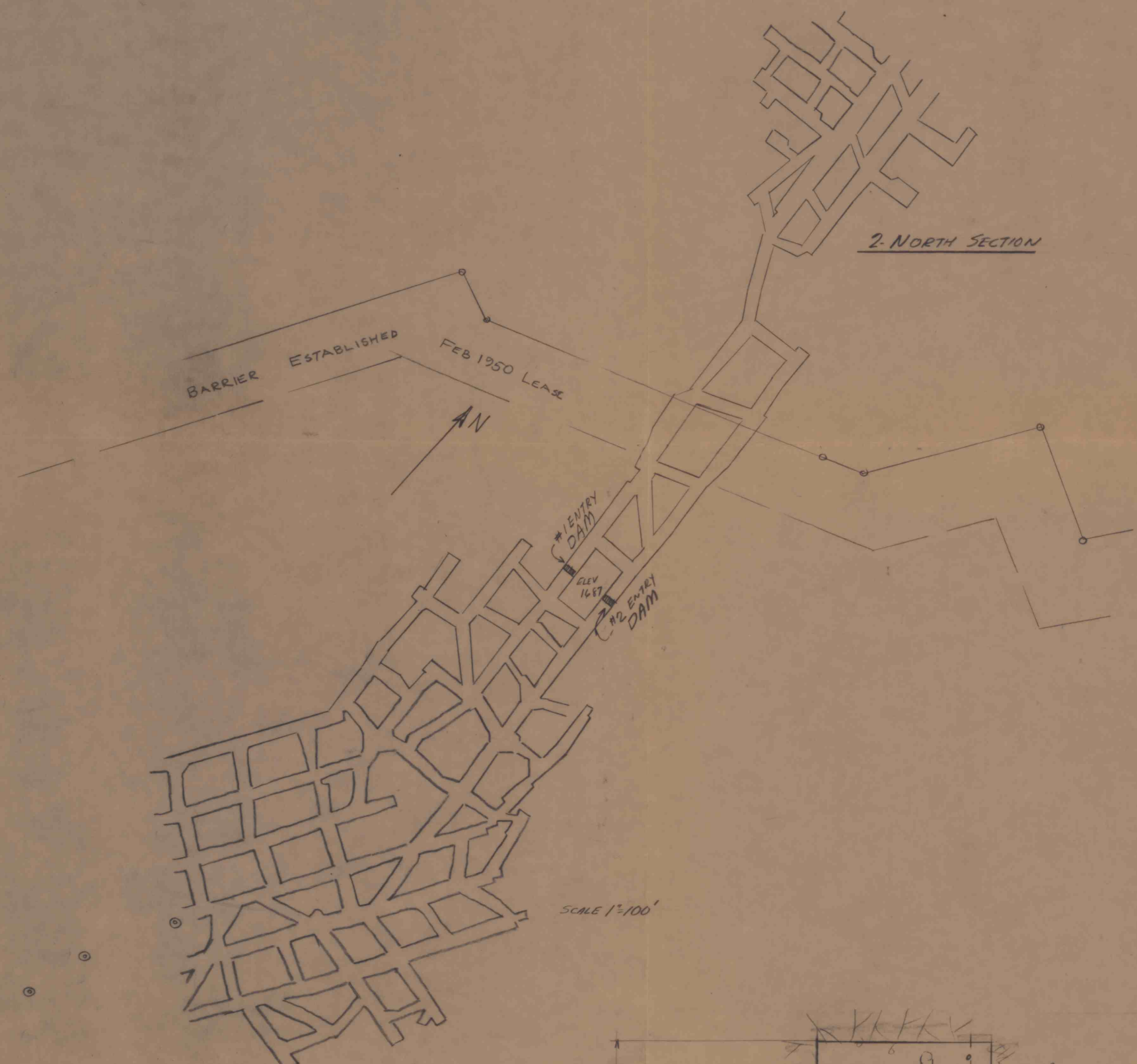


REQUIRED LIST									
NO.	NAME	MK.	NO. PLS.	DESCRIPTION	LOTH.	PC. MK.	REMARKS	WT.	

DESIGN DAM ENTRY #1  
 160 FT HEAD • 10,000 <sup>2</sup>/<sub>b</sub> PRESSURE  
 ASSUME DAM 4'-0" CLEAR HEIGHT  
 CONC MIN. STRENGTH 3750 <sup>2</sup>/<sub>b</sub>  
 ALLOW. DESIGN STRESSES  $f_c = 900 \frac{2}{b}$   $f_v = 60 \frac{2}{b}$   $f_s = 18000$   
 SHEAR =  $2 \times 10000 = 20000$   
 MIN THICKNESS OF DAM =  $\frac{20000}{12 \times 60} = 28"$  USE 36"

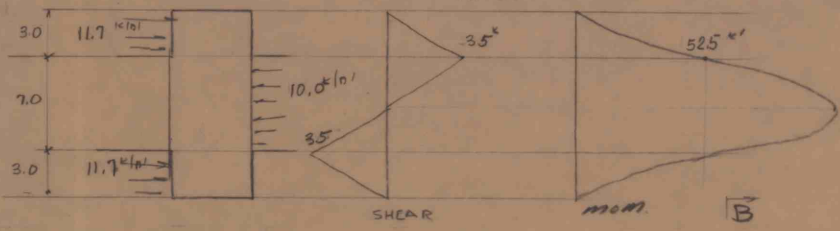


2-NORTH SECTION



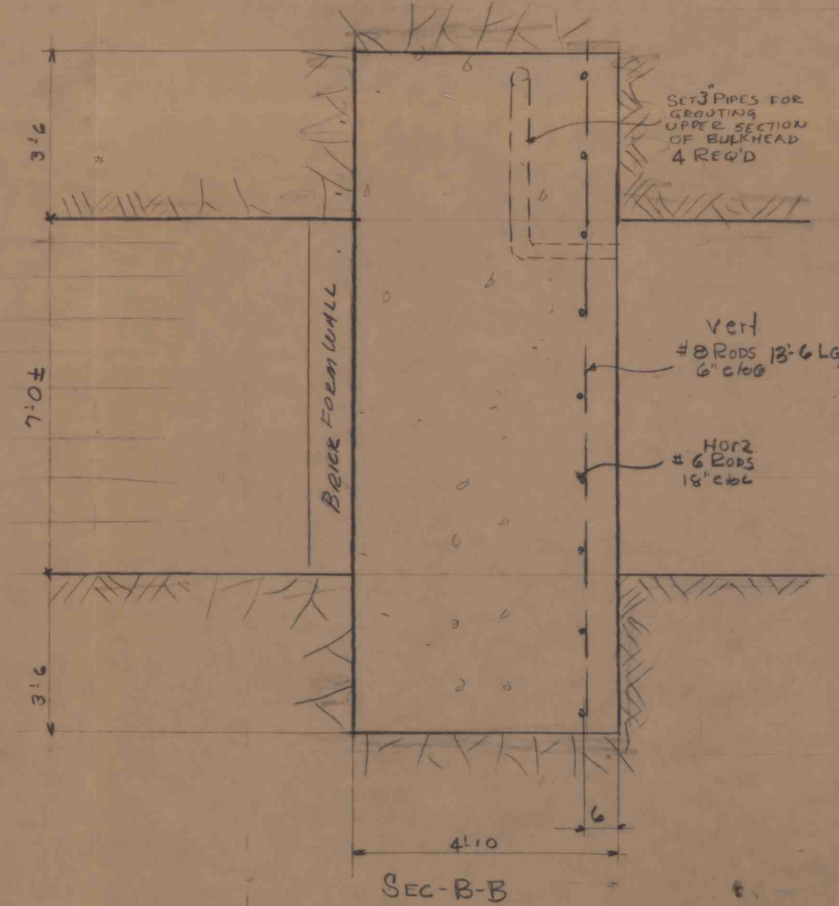
DAM AT ENTRY #1

DESIGN DAM ENTRY #2  
 160 FT HEAD • 10,000 <sup>2</sup>/<sub>b</sub> PRESSURE  
 ASSUME DAM 7'-0" CLEAR HEIGHT  
 CONC MIN. STRENGTH 3750 <sup>2</sup>/<sub>b</sub>  
 ALLOW. DESIGN STRESSES  $f_c = 900 \frac{2}{b}$   $f_v = 60 \frac{2}{b}$   $f_s = 18000$   
 SHEAR =  $5.5 \times 10000 = 55000$   
 MIN THICKNESS OF DAM =  $\frac{55000}{12 \times 60} = 49.5"$  USE 58"



$R = \frac{114000 \times 12}{12 \times 58^2} = 42.2$        $p = .0025$   
 $A_s = 52 \times 12 \times .0025 = 1.56 \text{ }^2/\text{ft}$       Use 8 Rebs 6" c/c

NOTES:-  
 CONCRETE SHALL BE 3750 PSI  
 ALL CUTS FOR DAMS IN ROOF, BOTTOM & REBS TO BE CHANNELLED, NO SHOOTING PERMITTED  
 NO MINE WATER TO BE USED IN CONSTRUCTION.  
 THE PORTION OF THE DAM ABOVE THE ROOF SHOULD BE MADE BY FORCING GROUT MIXTURE THROUGH CENTER PILES UNTIL IT OVERFLOWS FROM END VENT PILES. GROUTING MUST BE CONTINUOUS & DONE PRIOR TO SETTING OF LOWER CONCRETE



DAM AT ENTRY #2

DWG. NO.	REFERENCE	NO.	DATE	BY

BULKHEADS FOR SEALING OFF 2-NORTH SECTION - MINE #73

DIVISION JOHNSTOWN MINE NO. 73

BETHLEHEM MINES CORPORATION  
 ENGINEERING DEPARTMENT - JOHNSTOWN, PA.

DRAWN SMC      DATE 6-8-65      ORDER NO.      SCALE 1/2" = 10'  
 CHECKED      DATE      SCALE 1/2" = 10'  
 APPROVED      DATE      DWG. NO. 73H3-111