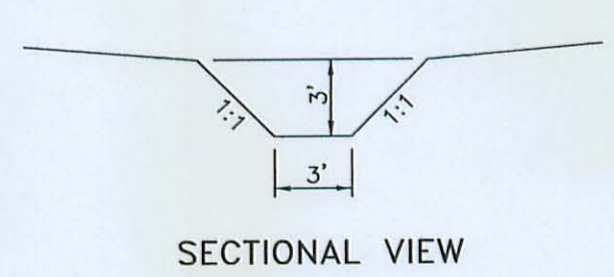
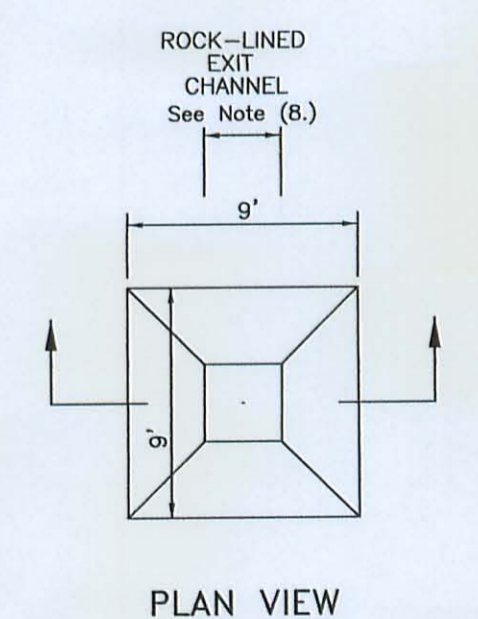


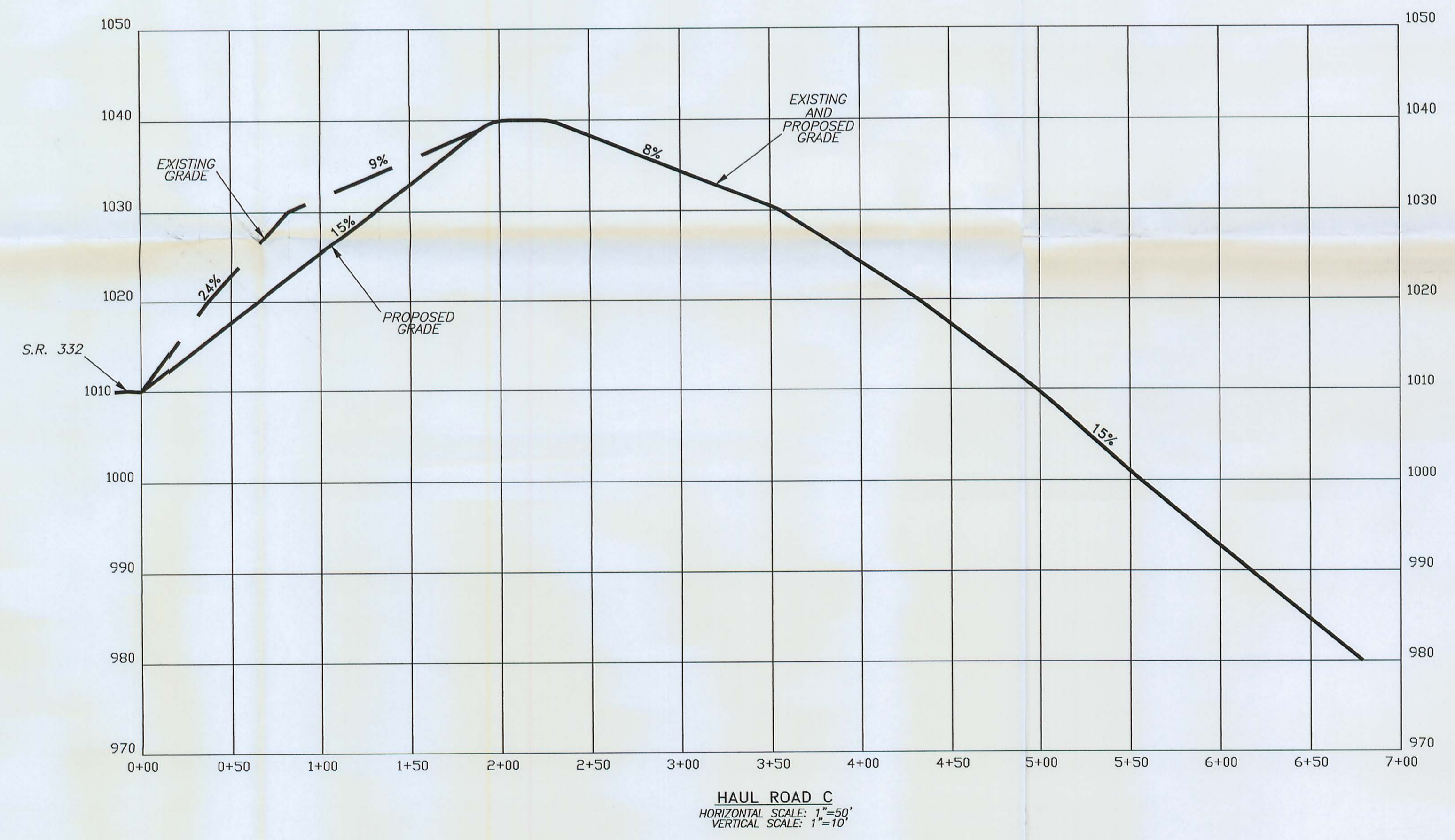
CULVERT DATA CHART

CULVERT	WATERSHED	CN	SCS 24 hr Q(10yr)	PROPOSED PIPE	REQ'D HEAD (MIN)	AVAILABLE HEAD	DEPTH OF COVER
A	16.8Ac	80	20.7cfs	40l.f.-24" CPP @ 1%	3.20ft	3.70ft	1.70ft
B	13.2Ac	85	28.2cfs	40l.f.-24" CPP @ 5%	4.70ft	4.70ft	2.70ft

CULVERT	WATERSHED	CN	SCS 6 hr Q(10yr)	PROPOSED PIPE	REQ'D HEAD (MIN)	AVAILABLE HEAD	DEPTH OF COVER
C	5309Ac	75	742.3cfs	2-200l.f.-72" CPP @ 1%	11.30ft	11.30ft	5.30ft



SUMP DETAIL
 N.T.S.



NOTES

- (1) Straw bale dikes and/or silt fence shall be installed as necessary to control erosion.
- (2) Minimum required head varies, see Culvert Data Chart for specifications.
- (3) Depth of cover varies, see Culvert Data Chart for specifications.
- (4) A rock apron energy dissipater shall be placed at the inlet and outlet of culvert "A". Dimensions: 40'L X 12'W X 1.5' - D50 = 12"
- (5) A rock apron energy dissipater shall be placed at the outlet of culvert "B". Dimensions: 25'L X 8'W X 1.5' - D50 = 9"
- (6) A rock apron energy dissipater shall be placed at the inlet and outlet of culverts "C" and "E". Dimensions: 30'L X 10'W X 1.5' - D50 = 12"
- (7) A rock apron energy dissipater shall be placed at the outlet of culverts "D", "F", and "G". Dimensions: 15'L X 5'W X 1.5' - D50 = 9"
- (8) All sump exit channels will be rock-lined with one(1) foot of D50=6".
- (9) Haul Road A, Haul Road B, and Haul Road C will remain permanent upon completion of mining activities.
- (10) Culvert C will remain permanent upon completion of mining activities. Culvert A and Culvert B are temporary and will be removed upon the removal of the diversions.

RECEIVED
 SEP 23 2009
 DIVISION OF MINERAL RESOURCES
 CAMBRIDGE



I hereby certify that this design meets the requirements of Rule 1501:13-9-04(G&H) of the Ohio Administrative Code.
 JOHN M. PELTZ, P.E. #63829 DATE 9/21/09

ADDENDUM PART 3 (I)

HAUL ROAD PROFILE AND DETAILS

PERMIT NO. (TEETER)
 ROSEBUD MINING, CO.

LOCATED IN
 SECTION 6, T-14-N, R-6-W
 SECTION 36, T-13-N, R-5-W
 UNION TOWNSHIP
 CARROLL COUNTY, OHIO

SCALE: AS NOTED
 DATE PREPARED: JUNE 5, 2009
 DATE REVISED:

PREPARED BY:
 BAIR, GOODIE AND ASSOCIATES, INC.
 153 NORTH BROADWAY
 NEW PHILADELPHIA, OHIO 44663
 PHONE (330) 343-3499