

DRAINAGE AREA
SCALE: 1" = 500'

AREA CAPACITY TABLE

ELEVATION (ft)	AREA (ac)	AVG. AREA (ac)	CAPACITY (ac-ft)	
			INCR.	ACCUM.
3598.0	0.74			0.00
3600.0	0.84	0.79	1.58	1.58
3602.0	0.95	0.90	1.80	3.38
3604.0	1.06	1.01	2.02	5.40
3606.0	1.18	1.12	2.24	7.64
3608.0	1.31	1.25	2.50	10.14
3610.0	1.45	1.38	2.76	12.90
3612.0	1.59	1.52	3.04	15.94

LEGEND

- COUNTY ROAD
- PROPOSED PRIMARY ACCESS ROAD
- ==== PROPOSED SECONDARY ACCESS ROAD
- ++++ RAILROAD
- PROPOSED ROAD DITCH
- ORE BODY
- FACILITY POND

RESERVOIR DESIGN INFORMATION

DRAINAGE AREA = 0.37 mi²
 SURFACE AREA AT HWL = 1.59 ac
 MAXIMUM CAPACITY = 15.94 ac-ft

EMERGENCY SPILLWAY HYDRAULICS

NOTE: THIS STRUCTURE IS ENTIRELY INCISED AND HAS NO EMBANKMENT TO PROTECT. THEREFORE, NO SPILLWAY HYDRAULICS ARE REQUIRED.

SEDIMENT YIELD CALCULATIONS

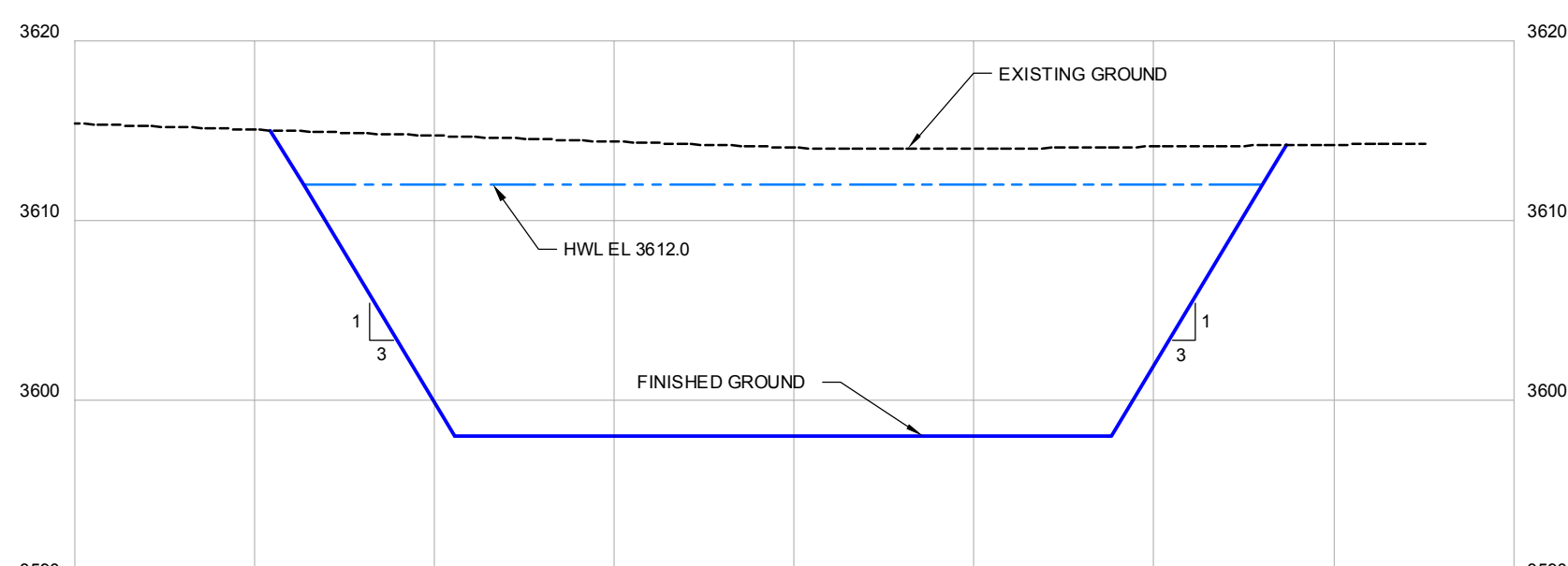
SOURCE AREA (ac)	RAINFALL FACTOR (R)	SOIL ERODIBILITY (K)	TOPOGRAPHIC FACTOR (LS)	COVER MANAGEMENT (C)	SUPPORT PRACTICE (P)	SOIL LOSS (t/ac/yr)	DELIVERY RATIO	ANNUAL SEDIMENT YIELD (ac-ft)
237.6	50	0.32	1.26	0.07	1	1.41	0.36	0.07

NOTES: 1. SEDIMENT CAPACITY WAS DETERMINED BY THE APPLICATION OF THE REVISED UNIVERSAL SOIL LOSS EQUATION (RUSLE) TO SEDIMENT SOURCE AREA(S).
 2. FOR THESE CALCULATIONS SEDIMENT DENSITY WAS ASSUMED TO EQUAL 80 lb/cu ft.

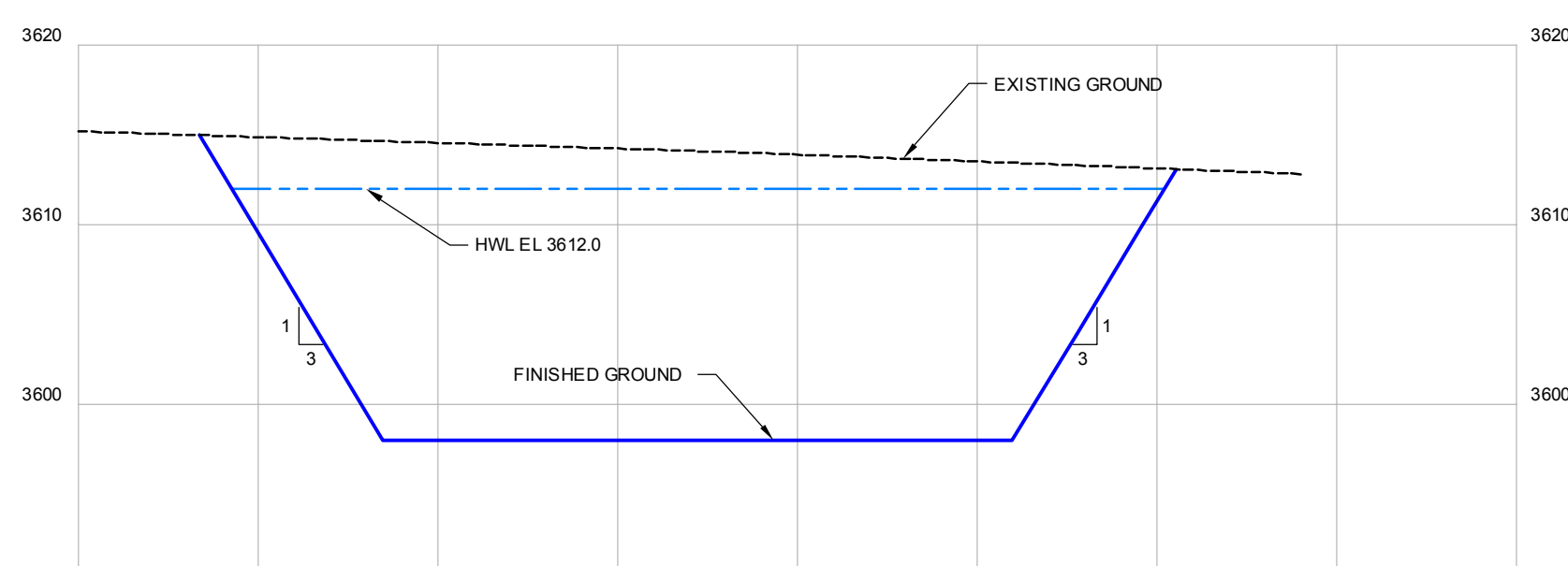
HYDROLOGIC DESIGN STORM CALCULATIONS¹

DRAINAGE BASIN PARAMETERS					5-YR, 24-HR STORM		
DRAINAGE AREA (sq-mi)	WATERCOURSE LENGTH (mi)	ELEVATION DIFFERENCE (ft)	CURVE NO. (CN)	INFILTRATION LOSS (iph)	5-YR, 24-HR PRECIP. (in)	PEAK INFLOW (cfs)	RUNOFF VOLUME (ac-ft)
0.37	1.26	118	78	0	2.50	125.7	15.6

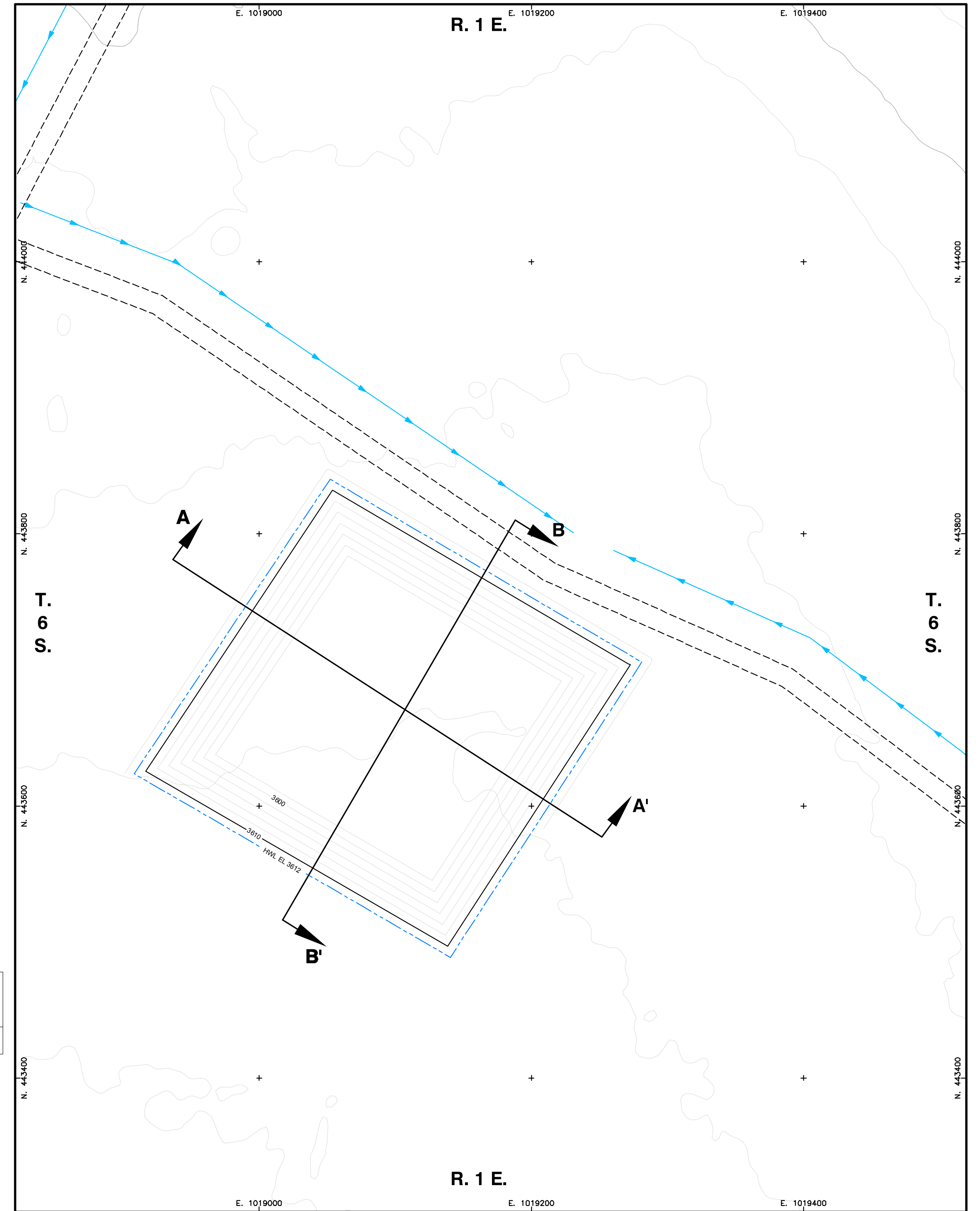
NOTES: 1. RUNOFF VOLUMES AND PEAK INFLOWS WERE COMPUTED BY THE RAINFALL/RUNOFF PROGRAM "TRHYDRQ" USING THE SCS TYPE II DISTRIBUTION.



CROSS SECTION A-A'
SCALE: HORZ. 1" = 50', VERT. 1" = 10'



CROSS SECTION B-B'
SCALE: HORZ. 1" = 50', VERT. 1" = 10'



SITE PLAN
SCALE: 1" = 50'

This plate is provided to fulfill the requirements of ARSD 74-29-02-11(9).



CONSULTANT WVC ENGINEERING	REVISIONS # DRAWN CHECKED APPROVED DATE				 Powertech (USA) Inc. Plate 5.3-12 Sediment Pond No. 1 Dewey-Burdock Project
	SIGNATURE OF PREPARED 				
CHECK SCALES If this bar does not measure 1 inch this map is not at its original scale	PLOT DATE: 28 September 2012 DRAWN: DAVE C. JOHNSON PREPARED: DALE E. BROWN	DATE: 28 September 2012 PDF FILE CAD FILE: K:\Powertech\11270.DWGS\SP-1_EXHBIT.dwg	COORDS: NAD 27, South Dakota State Plane South (feet)		