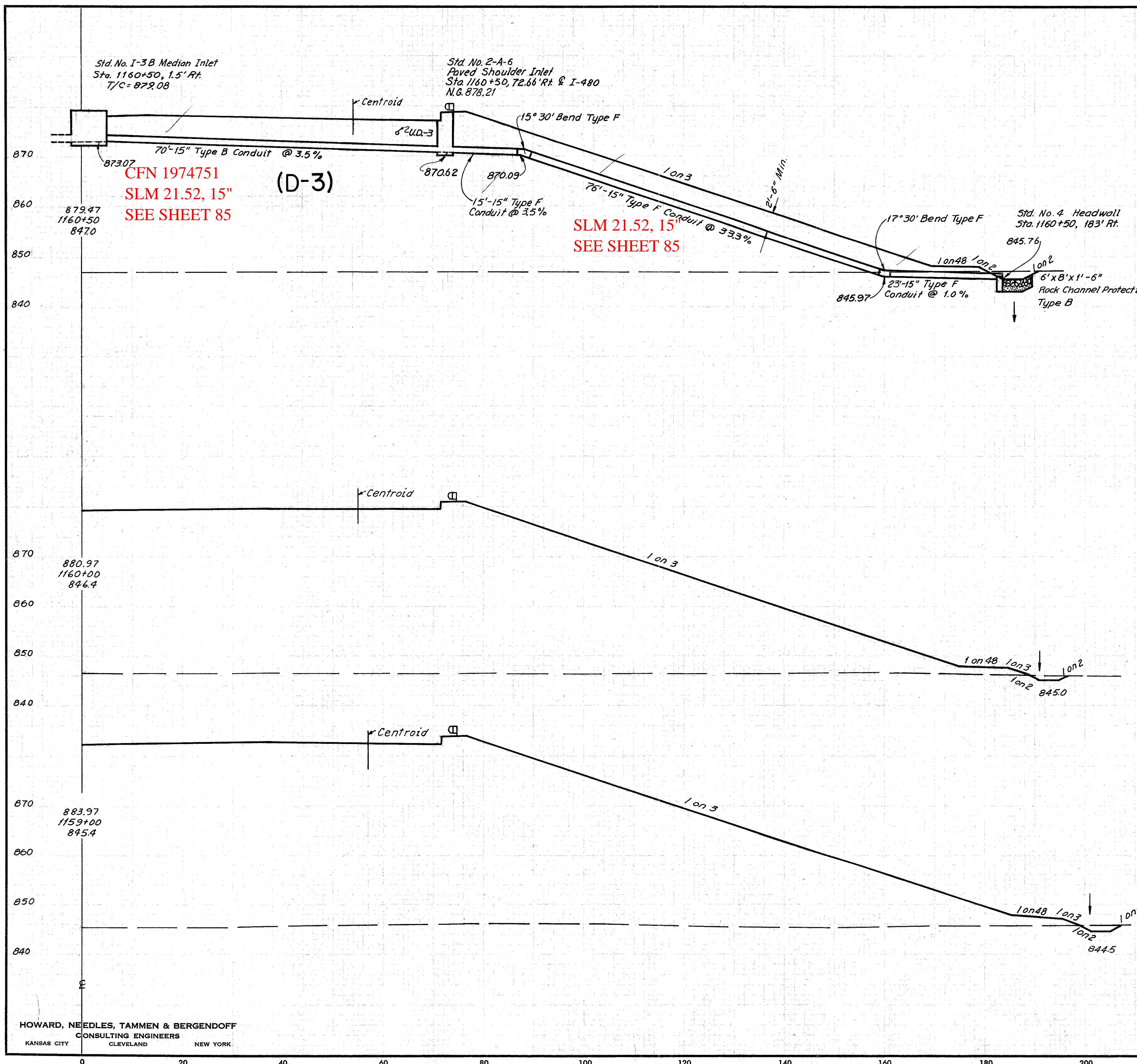


Quantity Calculations
 Made By JEN Date 6-72
 Checked By JM Date 6-72

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

127
390

CUYAHOGA COUNTY
 CUY 480 - 21.40



CFN 1974751
 SLM 21.52, 15"
 SEE SHEET 85

SLM 21.52, 15"
 SEE SHEET 85

SPILL QUANTITY FOR AREA "E"

STA.	DIST.	END AREA EMB.	END AREA TOTAL	VOLUME CY
Cone	-	-	-	1878
1160+50	40	3902	7804	5781
1160+90		3902	-	-
1160+90 (76' Wide)	40	672	-	1892
1161+30		-	-	-
Total				9,556

Volume of Cone
 $= \frac{1}{4} \times \frac{1}{3} \times \pi \times 31 (62^2 + 93^2) / 2 \times 27$
 $= 1878$

SPILL QUANTITY FOR AREA "C"

STA.	DIST.	END AREA EMB.	END AREA TOTAL	VOLUME CY
Cone	-	-	-	4917
1158+16	(76' Wide)	$\frac{1}{2} (1098 + 1337)$ See Sheet 65B	2435	3427
1158+16	39'	$\frac{1}{2} \times 76 \times (20 + 50.5)$ Area at Pavt. Level	-	3870
1158+66.5	(Ave. Ht.)	5047	-	-
1158+66.5	33.5'	5047	10,094	6262
1159+00		5047	-	-
Total				18,476

Volume of Cone
 $V = \frac{1}{4} \times \frac{1}{3} \times \pi \times H (R_1^2 + R_2^2) / 2 \times 27$
 $= \frac{1}{4} \times \frac{1}{3} \times \pi \times 39.0 (111^2 + 117^2) / 2 \times 27 = 4917.29$

END STA.	AREA		VOLUME	
	EXC.	EMB.	EXC.	EMB.
870				
860			0	9556
860	10	3902		
850				
840				
870				
860	6	4322		
850				
840				
840			30	17350
870				
860				
850				
840				
870				
860	10	5047		
850				
840				
840			54	18,476

All Earthwork Quantities
 in Participation Limit III