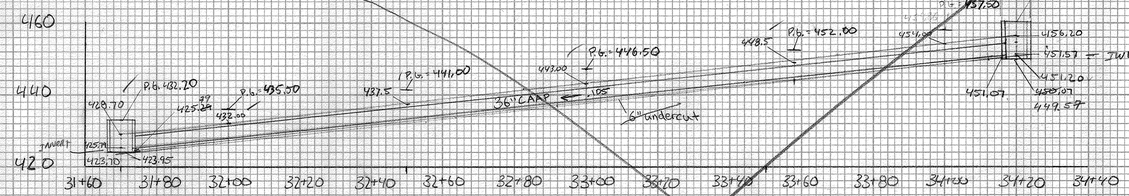
206.8

DR # 24 34+20 RT ~ 31+70 RT 36" CAAP 245'



VOID

SEE SHEET #3

Pipe trench exc. @ outlet

Area = (3.41 x 5.5) = 17.39
Area = (5 x 5.5) = 25.5

vol = ((17.39 + 25.5)/2) x 237.17 x 1/27 = 188.37 cy
vol = ((.13 + 0)/2) x 58 x 1.5 x 1/27 = .21 cy
total for Pipe 188.58 cy + 11.97 cy = 200.55 cy RD 6/13/07

DI @ 34+20

Area = (3.14 x 3.975²) = 50.24

vol = ((48.25 x 5) 1/27) = 8.94 cy
((48.25 x 3.975 x 1.5) 1/27) = 4.19 cy
total for DI = 13.13 cy RD 6/13/07

TBG 1-23-08

Granular Backfill

5.5 1.7 = 235.2.35
244.4 x 5.5 x 2.05 = 2555.20 ft³
244.4 x 3.14 x 1.75² / 2 = 1175.10 ft³
1633.34/27 = 60.49 cy RD 6/20/07
43.60

CPH 12/10/07
TBG 1/22/08

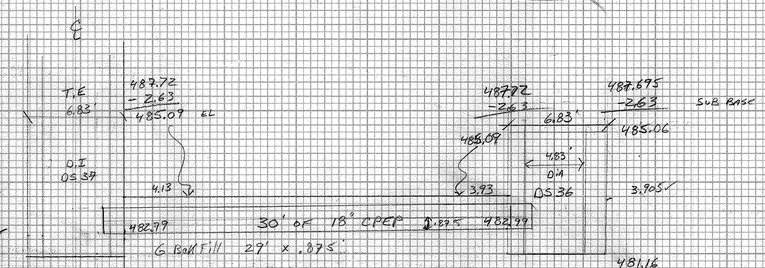
DS 36

DS 37

DR 24	DEPTH	AVG DEPTH	
STA 31+70	2.9	3.505	3.505 x 30 = 105.15
32+00	4.1	4.3	4.3 x 100 = 430.0
33+00	4.5	4.6 / 4.25	4.25 x 100 = 425
34+00	4.0 / 4.7	4.6 / 4.25	4.25 x 20 = 85
34+20	4.5		

1045.15 x 5.5/27 = 212.90 cy (width 221.46)
+ 13.49 cy
226.39 cy

CPH 12/10/07



3 + 20.6 RT 16.5 FT

50 scale

204.20 T.E DI (3.93 + 3.905)/2 x π 3.415² = 143.45/27 = 5.31 cy
T.E Pipe 27 FT x ((4.13 + 3.93)/2) x 3.95' x 1/27 = 15.11 cy
20.42 cy

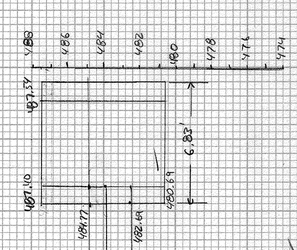
CPH 8/23/07

204.30 GRAN BCK FILL .875 x 29' x 3.75 = 95.16/27 = 3.52 cy

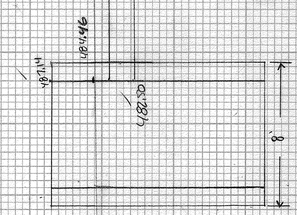
— Pipe (0.8 / 1.75)
AREA π r² .875² / 2 = 2.40 / 2 = 1.20 x 29 = 34.8/27 = 1.29 cy
2.23 cy

TBG 12-6-07

40 scale



18" CPEP 36' ← .00528



Trench Exc for CB 37 (4.00 + 3.86)/2 x (π x 3.42²) = 144.41 ft³/27 = 5.35 cy

Trench Exc for pipe (1.96 + 2.08)/2 x 3.75 x 32.17 = 278.69 ft³/27 = 9.03 cy
Total Trench 14.38 cy

Granular Backfill (1.75/12) x 3.75 x 34.17 = 112.76 ft³/27 = 4.18 cy
(.875/12 x 3.14)/2 x 34.17 = 4.154 ft³/27 = 1.54 cy
2.64 cy
27.00 cy

RCD 8/27/07
CPH 12/4/07
TBG 1/23/08

FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK NO., BY, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK NO., BY, DATE