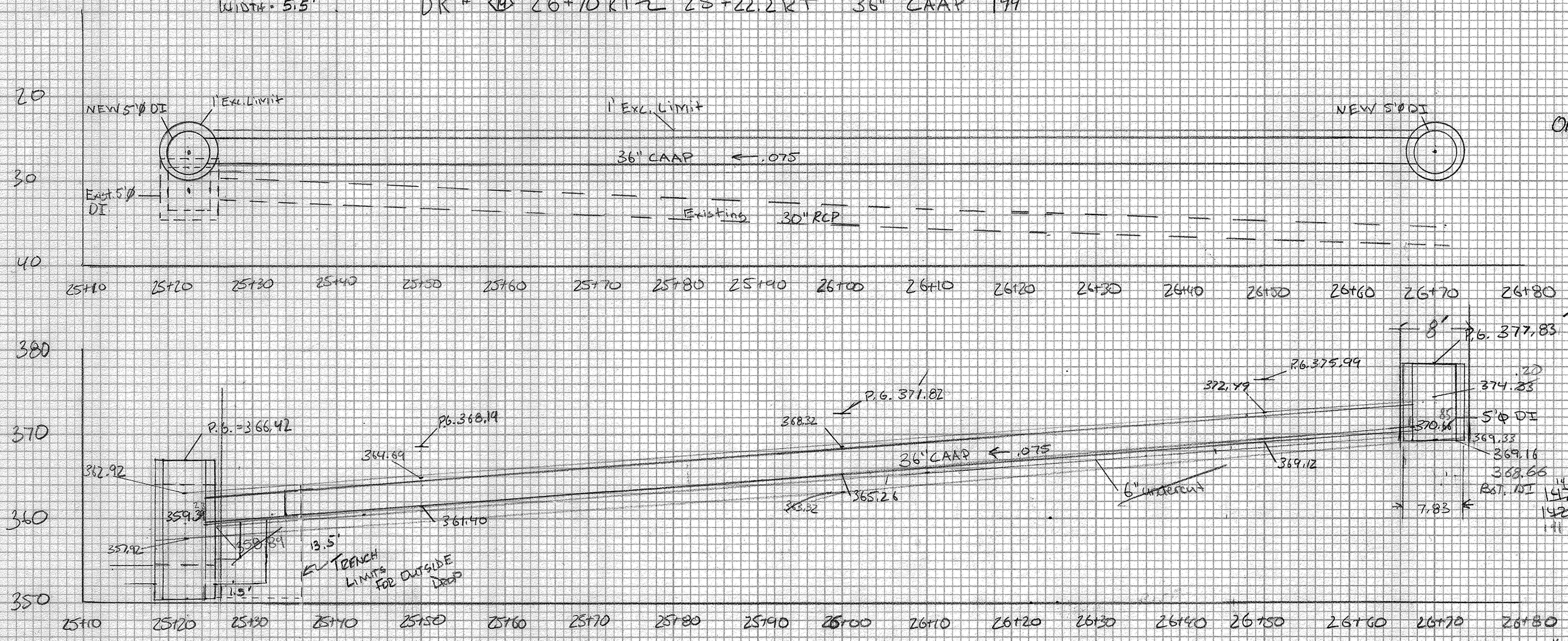
Concrete Class B to fill in Bottom Hole of Outside Drop = $\frac{4' \times 4' \times 2'}{27}$ = 1.19 cy 09/06/07

Trench Rock to Remove Concrete = 1.19 cy 07/17/07

Trench Earth to Install Outside Drop = Vol: $\frac{(5\times10\times5.5) + (8.25\times10\times5.5\times1.5)}{27}$ = $\frac{955.63}{27}$ = 35.39 - 1.19 = 34.2 cy CUB 02/08/10

Avg Depth = 13.25'
Length = 10'
Width = 5.5'

DR # ⑭ 26+70 RT ~ 25+22.2 RT 36" CAAP 144'



FLD MSE TBG
Old DI Removed

144 LF USED

Granular BackFill
142.4' × 2.05 × 5.1 = 1488.79 FT³ ~~1142.67~~ 1114.61
$\frac{142.4' \times 3.14}{2}$ × 1.55² = - 537.12 FT³ 531.84
951.67 / 27
582.77 ~~35.55~~
35.25 cy RD 6/14/07
OK → ~~21.60 cy~~
CUB 01/24/08
~~21.58 cy~~
~~TBG 1.16.08~~
Cpff 12/19/07

Pipe trench exc. @ outlet Area = (4.03 × 5.1) = 20.55
@ inlet Area = (4.17 × 5.1) = 21.27

vol = $\frac{(20.55 + 21.27)}{2}$ × 136.17 × 1/27 = 105.46 cy + 9.40 cy = 114.86 cy RD 6/12/07

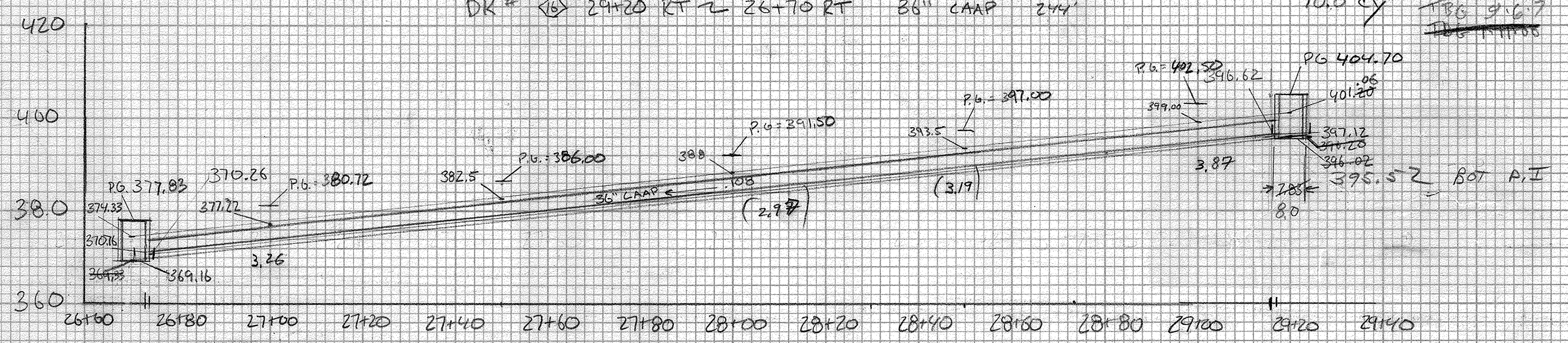
= 106.68 cy OK CUB 01/24/08

DI @ 26+70 Area = (3.14 × 3.92²) = 48.25 (50.24)

vol = 48.25 × 5 × 1/27 = 8.94 cy 9.30
48.25 × 17 × 1.5 × 1/27 = .46 ~~0.47~~ 1.51
total for DI = 9.40 ~~9.77~~
10.8 cy CUB 01/24/08 RD 6/12/07
~~TBG 9.6.7~~

10.8
106.68 cy
117.48 cy

DR # ⑯ 29+20 RT ~ 26+70 RT 36" CAAP 244'



Pipe trench exc. @ outlet Area = (4.07 × 5.1) = 20.76 19.38
@ inlet Area = (4.58 × 5.1) = 23.36 20.40

vol: $\frac{(20.76 + 23.36)}{2}$ × 236.17 × 1/27 = 192.96 cy + 9.42 cy = ~~202.38~~ cy RD 6/13/07
179.38 10.81 190.19 cy

DI @ 29+20 Area = (3.14 × 3.92²) = 48.25 50.24

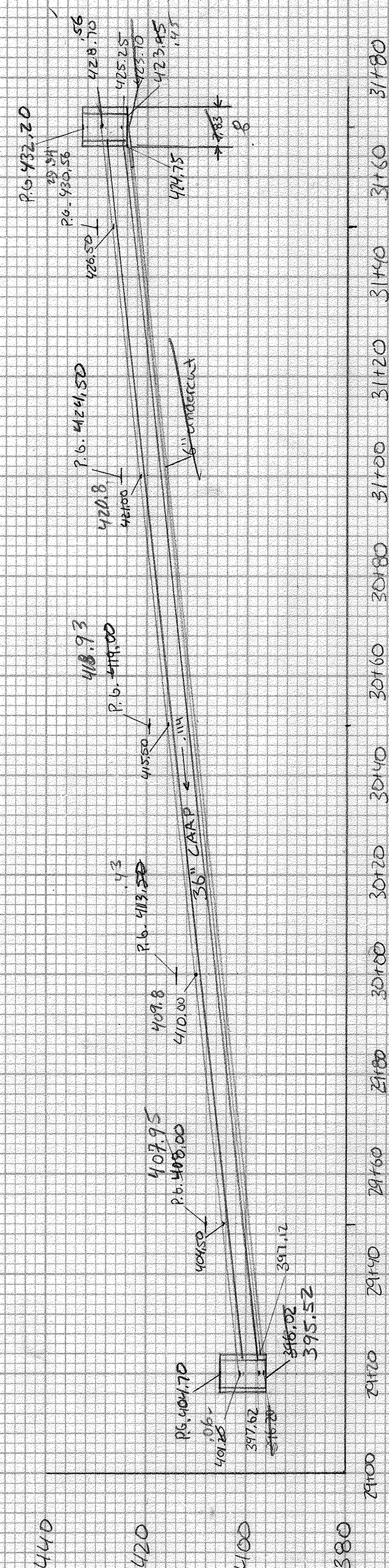
vol: 48.25 × 5 × 1/27 = 8.94 cy 9.30
48.25 × .18 × 1.5 × 1/27 = .48 cy 1.51
total for DI = 9.42 cy RD 6/13/07
10.81 cy
190.19
201.0 cy

Granular Backfill
244.0' × 5.1 × 2.05 = 2551.02 FT³ (1.6, 1991.04)
-244.0' × $\frac{3.14}{2}$ × 1.55² = -920.35 FT³
1630.67 FT³/27 = 60.40 cy RD 6/20/07
1010.36/27 = 37.42 cy 1.9.8

T.E

Cpff 12/21/07 1.9.8

DR # ⑳ 31+70 RT ~ 29+20 RT 36" CAAP 244'



428.56
423.45
5.11

-3.63' com EX Depth

Pipe trench exc. @ outlet Area = (4.08 × 5.1) = 20.81
@ inlet Area = (3.95 × 5.1) = 20.15

Vol. $\frac{(20.81 + 20.15)}{2}$ × 236.17 × 1/27 = 179.14 cy + ~~8.49~~ cy = ~~187.63~~ cy RD 6/13/07

DI @ 31+70 Area = (3.14 × 3.92²) = 48.25

50.24 × 5.1 = 256/27 = 9.5 cy
Vol. (48.25 × 4.75) 1/27 = ~~8.49~~ cy RD 6/13/07
.5 × 50.24 × .11 = .10 cy = 9.6 cy D.I

Cpff 1/04/08
TBG 1/23/08
246 LF pipe

Granular Backfill
244.0' × 5.1 × 2.05 = 2551.02 FT³ (1.51, 1879.0)
$\frac{244.0 \times 3.14}{2}$ × 1.58² = -920.35 FT³ -873.46
1630.67/27 = 60.40 cy RD 6/20/07
1005.54/27 = 37.24 cy

STA	Depth	Avg Depth	Dist	Width		
29+20	3.44					
		3.495	× 30	× 5.1	=	534.74 FT³
29+50	3.55					
		3.47	× 50	× 5.1	=	884.85 FT³
30+00	3.39					
		3.325	× 50	× 5.1	=	847.88 FT³
30+50	3.26					
		3.~~245~~ 195	× 50	× 5.1	=	~~827.48~~ 814.73 FT³
31+00	3.13					
		3.06	× 50	× 5.1	=	780.30 FT³
31+50	2.99					
		3.05	× 20	× 5.1	=	311.10 FT³
31+70	3.11					

~~4186.35~~ /27
4173.60

+ 9.6 cy DI
~~155.05~~ 154.58 cy pipe
164.65 cy
18

1/04/08 Cpff

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

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

SHEET #8