PLATE 3-FULL CROSS SECTION/PROFILE LINE
NATIONAL PARKWAY
HIGHWAY RESERVE VID SHEET
PREPARED IN 1/84

ORIGINAL / SURVEY
NOTE BOOK NO.
STATE PLANE
SCALED
CALCULATED
CHECKED
DATE
BY

DS-31
STRUCTURE

cpff
8/24/07

482.76 − .50 = 482.26
3.63
478.63
482.76 − .50 = 482.26
3.63
478.51
8'
5.23
5.11
AVG. DEPTH 5.17
473.40

GRANULAR BACKFILL 175'

~~T.E. STRUCTURE 5.17 (π 4²) = 255.7/27 = 9.6 cy~~
~~TIME ½ .17 (π 4²) = 8.5/27 = .32~~
~~9.72 cy T.E~~

~~DS-35~~
~~T.E. PIPE 116' × 5.5' × (5.11 + 9.48)/2 = 4854.5/27 = 172.38 cy~~
~~TIME ½ (.5) 116 × 5.5 × 2.275 = 732.1/27 = 27.12 cy~~
~~199.50 cy T.E~~

DS-35
Pipe & STRUCTURE

487.65 − .48 = 487.17
− 2.63
484.54
487.65 − .65 = 487.00
− 2.63
484.37
8'
9.48
DS 35
7.31
AVG DEPTH 9.395 ft
.013 %
118 LF of 36" CPEP (SL)
473.06
TRENCH WIDTH 5.5 FT
118 LF of 36" CPEP SL ← 20 SCALE

T.E STRUCTURE (9.48 + 9.31)/2 (π 4²) = 472/27 = 17.48 cy
TIME ½ .5 (4.395) π (4²) = 110.7/27 = 4.09 cy
26.56 cy T.E
T.E. 11/25/08

Granular Bck Fill
5.5 5.5 × 1.75 × 116 = 1116.5/27 = 41.35 cy
− ½ pipe − π r² 3.14 (1.75²)/2 = 4.80 × 116 = 557.7/27 = −20.66 cy
20.69 cy
TBK 11/26/07
G.B

DS-57
STA 44+00 LT − 44+00 RT
NEW 18" × 34' of CPEP (SL)

F.6 489.28 − .36 − 2.63 = 486.29
% 17 × .021
F.6 489.28 − .33 − 2.63 = 486.32
% 16 × .021
DS-56 STRUCTURE EX
34' of 18" CPEP
INVERT 484.28
482.28
INVERT 484.09
6.83

T.E. STRUCTURE DS-57
486.29 − 482.28 = 4.01 × π r² = 3.14 (3.415²) = 146.8/27 = 5.44 cy

PIPE EX
486.29 − 484.28 = 2.01 +
486.32 − 484.09 = 2.23
(2.01 + 2.23)/2 = 2.12 × 30.5 × 3.83 = 247.65/27 = 9.172
14.612 cy T.E.

6.B 32.5 × (½ pipe depth) .92 × 3.83 = 114.5/27 = 4.24
− 6.B pipe 32.5 × 3.14 (.92)²/2 = −43.3/27 = −1.60
2.63 cy 6.B
TBK 11/26/07
cpff 12/05/07

DS-55
STA 43+50 LT − 43+50 RT
NEW 18" × 34' of CPEP (SL)

F.6 489.36 − 2.63 − .36 = 486.37
17 × .021
489.36 − .24 − 2.63 = 486.37
−16 × .021
END pipe
END STRUCTURE DS-52
484.36
484.17
6.93

T.E STRUCTURE 486.37 − 482.36 = 4.01 × (3.14)(3.46²) = 146.84/27 = 5.43 cy

T.E pipe
AVG depth 486.37 − 484.36 = 2.01 +
486.39 − 484.17 = 2.22
2.12 × 3.83 × 30.8 = 250.3/27 = 9.27 cy
14.70 cy T.E
TBK 12/26/07
cpff 12/05/07

G.B 32.5 × 3.83 × .92 (½ pipe) = 114.5/27 = 4.24 cy
− pipe G.B = 32.5 × 3.14 (.92)²/2 = 43.3/27 = 1.60 cy
G.B. 2.64 cy

DS 89
STA 45+35.2 RT − 45+37.3 LT
ADVENT LANE

487.11 F.6 − .03 % − 2.63 = 486.45
487.11 F.6 − 2.63 − .093 % Building = 486.387
10.5' of pipe
2017 % 12" of 18" CMP
484.11
483.88' END
482.11
6.83
0 π R²

T.E STRUCTURE 486.45 − 482.11 = (4.34') 3.14 (3.415)² = 158.93/27 = 5.88 cy

T.E PIPE
486.387 − 483.88 = 2.507 +
486.45 − 484.11 = 2.344
(2.507 + 2.344)/2 = (2.424 × 10.5 × 3.84) = 3.62 cy
9.5 cy T.E.

G.B 12.5 × 3.83 × (½ pipe depth .92) = 44.5/27 = 1.6 cy
− GB ½ pipe − 12.5 × π r²/2 = 16.6/27 = .61
1.02 cy G.B
TBK 12/26/07
cpff 12/05/07

HARTFORD R50113 (40)
DRAINAGE

SHEET #15