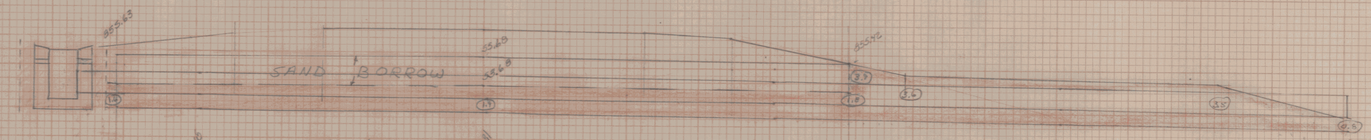
EAST MONTPELIER
RSEGC-RS-0246(1)
DRAINAGE SHEET #5
SCALE = 1" = 5'

658.03

657.56 (Rev W.O. #155)



Auth 12" undercut
See W.O. #127

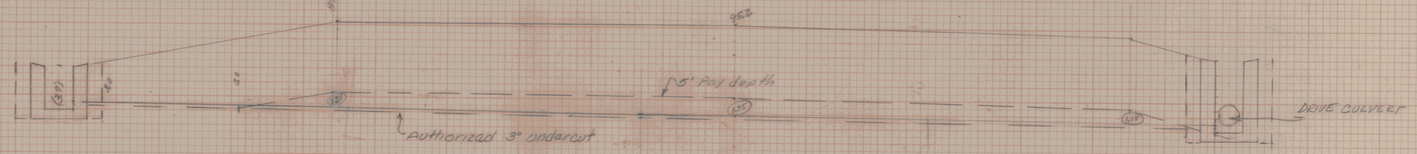
133+45
18"x80 PCCSP .064
RCDI @ INLET w/ Type B Grate
@ 30° Rt
BE #2A PG 30

TRENCH EXCAVATION EARTH
DROP INLET pay - 42" deep
(6)(6)(4.2)(1/27) = 56 cy
PIPE
[(1.75)(26.25)+(1.33)(25.5)+(3.75)(1/4)+(3.05)(21.75)+(2.13)(1/2)](3.6)(1/27) = 27.3 cy
32.9 cy
R. Lomi 2-15-94
cf. 2-24-94

SAND BORROW
[(1.75)(26.25)+(1.75)(25.5)+(1)(3.475)](3.6)(1/27) = 16.7 cy
16.9 cy
R. Lomi 2-15-94
cf. 2-24-94

OUTLET 60.25' Rt
Skew 652.00

897.10



INLET OFF 46.0'
889.50

This culvert was designed and installed after sand borrow was in place. Pay excavation to subgrade - as shown
R. Lomi

146+46
18"x*80' PCCSP (.064)
RCDI @ INLET w/ TYPE "B" GRATE
51°20' Lt

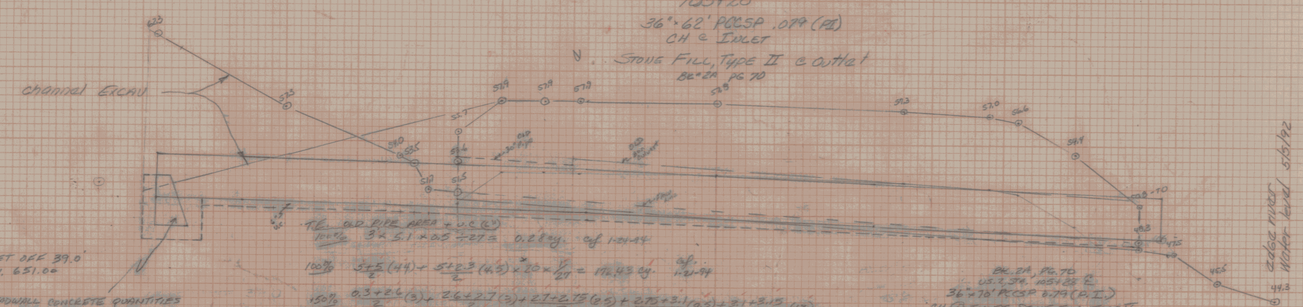
* culvert will not scale - 80' needed to accommodate skew

TRENCH EXCAVATION EARTH
(INLET) DROP INLET (6)(6)(3.7)(1/27) = 4.9 cy
PIPE [(1.0)(25)+(5)(65.5)+(1.0)(28)+(1.33)(27.5)](3.6)(1/27) = 64.7 cy
69.6 cy
69.7 R. Lomi
cf. 3/14/94

SAND BORROW
(0.25)(3.6)(25.5)(1/27) = 2.5 cy
R. Lomi
cf. 3/14/94

OUTLET OFF 33.5
888.50

US #2
125+28
36"x62' PCCSP .079 (PE)
CH @ INLET
w/ STONE FILL, TYPE II @ OUTLET
BE #2A PG 70



T.E. H.W. AREA
$\frac{3.9+4.5}{2}(4.167)\times 9 \div 27 = 5.49$ cy.
cf. 1-24-94
R. Lomi 2-7-94

INLET OFF 39.0'
ELEV. 651.00

HEADWALL CONCRETE QUANTITIES
FROM STAND. SHEET D-2
= 1.4 cy. for 36" Pipe
cf. 1-24-94

T.E. OLD PIPE AREA + U.C.(6")
100% $\frac{3.4+5.1}{2}\times 0.5 \div 27 = 0.28$ cy. cf. 1-24-94

100% $\frac{3+5}{2}(4.4) + \frac{5+2.3}{2}(4.3) \times 20 \times \frac{1}{27} = 172.43$ cy. cf. 1-24-94

150% $\frac{0.3+2.6}{2}(3) + \frac{2.6+2.7}{2}(3) + \frac{2.7+2.75}{2}(2.5) + \frac{2.75+3.1}{2}(9.5) + \frac{3.1+3.15}{2}(15)$
$+ \frac{3.15+2.9}{2}(6) + \frac{2.9+2.7}{2}(5) + \frac{2.7+0.65}{2}(4) + \frac{0.65+0}{2}(1.0) \times 20 \times 1.5 \times \frac{1}{27} = 131.44$ cy
cf. 1-24-94

T.E. (6" O.C.) = $\frac{4.4+5.1}{2} \times 5.1 \times 0.5 \times 1.5 \div 27 = 6.3$ cy. cf. 1-24-94

BE #2A, PG. 70
US #2, STA. 125+28 ℄
36"x78' PCCSP .079 (P.E.)
CH. @ INLET, STONE FILL TYPE II
@ OUTLET

TE. (NEW PIPE AREAS) + (H.W. + CHANNEL)
100% $\frac{1.6+3.0}{2}(5) + \frac{3+4.5}{2}(5.6) + \frac{4.5+3.5}{2}(3.2) + \frac{3.5+3}{2}(1) + \frac{3+1.2}{2}(1) + \frac{1.2+1.1}{2}(2) \times 20 \div 27 = 39.22$ cy. cf. 1-24-94

6" O.C. $17.8 \times 3.1 \times 0.5 \div 27 = 1.68$ cy. cf. 1-24-94

T.E.
100% $\frac{1.2+1.0}{2}(1.0) + \frac{0.1+0}{2}(1.0) + \frac{0.1+0.2}{2}(2) + \frac{0.2+0.3}{2}(4) + \frac{0.3+0}{2}(1.75) + \frac{0+0}{2}(2.25) + \frac{0+1.5}{2}(0.5) \times 4 \times \frac{1}{27} = 2.56$ cy. cf. 1-24-94

150% $\frac{2.5+3}{2}(10) + \frac{3+3.3}{2}(10) + \frac{3.3+3.5}{2}(6) + \frac{3.5+3.2}{2}(2) + \frac{3.2+1.3}{2}(4) + \frac{1.3+0}{2}(1.75) \times 4 \times 1.5 \times \frac{1}{27} = 23.91$ cy. cf. 1-24-94

Total T.E. = 5.49 + 0.28 + 172.43 + 131.44 + 6.3 + 39.22 + 1.68 = 356.34 cy. cf. 1-25-94
Total Fill = 27.47 cy.
Est. Total TE = 329.87 cy. cf. 1-25-94
R. Lomi 2-7-94

OUTLET OFF 31.0
ELEV. 648.50

SAND BORROW
(U.C.-6") 65.25 × 5.1 × 0.5 × 1/27 = 6.16 cy
(Pipe Area) 65.25 × 20 × 1.5 × 1/27 = 72.5 cy
(Pipe itself) $\frac{65.25}{27} \times (1.8^2 \times \frac{\pi}{4}) = 6.54$ cy.
TOTAL = 70.12 cy. cf. 1-24-94
R. Lomi 2-7-94

*Authorized additional width to permit use of vibratory compactor.
R. Lomi

Keuffel & Esser Company PLATE 3. CROSS SECTION 4870-50 Made in U.S.A.

142 FDS