



OUTLET OFF 80.0' LT. SAND BORROW
ELEV 325.00
6" UNDER PIPE $(0.5)(5)(1.13)(1/27) = 10.74$
6" ABOVE P.L. $[(0.5)(5)(1)-(0.5)(1.6)](1.13)(1/27) = 7.34$
18.04 Sand Borrow

136+36.4
36" x 114' PCCSP (D19) PI
STONE PAD TYPE II @ OUTLET
CONSTRUCT DITCH w/ TYPE I STONE FILL BEYOND TYPE II
END SECTION @ INLET
GRADE 8.37% - w/ 3" CAMBER @ 65° RT
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TRENCH EXCAVATION
PIPE $[(1.75)(6)+(3.0)(4)+(2.0)(22)+(3.0)(12)+(4.0)(175)+(6.0)(41.25)+(4.75)(27)+(3.0)(19.6)](5.1)(1/27) = 33.2$
150% $[(6.0)(1.75)+(2.0)(3.0)](5.1)(1/27) = 10.5$
OUTLET DITCH (FIELD MEAS)
FOR STONE FILL TYPE I $(14.1)(22.48)(1/27) = 117.4$
STONE FILL TYPE II $(15)(20.98)(1/27) = 17.2$
228.34
R.L. Com. 11/21/93

129190 54.7' LT (58.6) ELEV 797.56
129165 11' RT (11.8) ELEV 806.65
129165 17' RT (18.2) ELEV 806.93
129165 11' RT (11.8) ELEV 806.51
129165 17' RT (18.2) ELEV 805.87
INLET OFF 47.0' RT ELEV 799.00
GRANULAR BACKFILL FOR STRUCTURES
UNDERCUT $[(1)(20)+(1.5)(20)+(2)(20)+(6)(1/27)] = 20.3$ R.L. Com. 8/3/92

OUTLET	0	20	40	60	80	100
797.85	797.85	797.85	797.85	797.85	797.85	797.85
-0.25	-0.09	-0.01	-0.01	-0.01	-0.01	-0.25
797.00	797.56	798.24	798.94	799.76	799.00	799.00

129169
48" x 100' PCCSP (109)
CH @ INLET & STONE PAD @ OUTLET
2% grade w/ 3" Camber
BL = 2 12.56

129150 49.5' RT (53.0) ELEV 792.47
OUTLET OFF 53.0' RT ELEV 797.00
TRENCH EXCAVATION
HEADWALL $(3.25)(4.33)(10)(1/27) = 5.21$
PIPE UNDERCUT $[(0.6)(67)+(4)(2)+(5.0)(34)+(1.75)(12)+(2.0)(9)+(3.0)(18)+(3.0)(6.6)+(2.4)(3.5)(6)(1/27)] = 77.54$
150% $[(0.35)(3)+(0.65)(20)+(1.0)(4)+(0.75)(2)](6.1)(1/27) = 9.33$
92.03 R.L. Com. 12/21/92

SAND BORROW
UNDERCUT $[(1.5)(5)+(1)(3.17)](6)(1/27) = 8.9$
PIPE $[(2.4)(13)+(4.35)(36)+(28.1)(31)+(19.9)(11.7)](1/27) = 123.14$
UNDERCUT BEHIND HEADWALL (ENDS w/ EXCAV)
 $[(2.5)(4.3)(10)+(1.5)(3.75)(10)](1/27) = 2.94$
DEDUCT PIPE OPENING $(4)(7.954)(6)(1/27) = 40.01$
134.7 R.L. Com. 8/16/92
94.94 of 117.74

60.8 HUB 801.69
INLET 32.0' LEFT ELEV 799.15
CAMBER CORR
OUTLET 0
20
40
60
80
84
60' installed on 5/21/92 from outlet
20' installed on 6/23/92
4' installed on 9/16/92
FLOWLINE UNDERCUT 12' - 60'
BALANCE UNDERCUT 5'
SAND BORROW UNDERCUT
 $[(6.0)(4)(10)+(2)(6)(4)(10)](1/27) = 11.6$ R.L. Com. 8/16/92

128+58
24" x 34' PCCSP .064
w/ES @ INLET & STONE PAD @ OUTLET
30' x 40' LEFT
5.06% Grade w/ 3" Camber
BL = 2 16.50

TRENCH EXCAVATION
END SECTION $(0.8)(3)(3.5)(1/27) = 0.34$
PIPE UNDERCUT $[(2.15)(3)+(2.5)(20.25)+(2.25)(2.79)+(1.4)(14)+(1.5)(14)+(0.63)(1)+(0.3)(2)+(1.05)(10.8)+(1.5)(4.5)](4)(1/27) = 21.34$
21.34 R.L. Com. 8/3/92
92.03 of 112.192