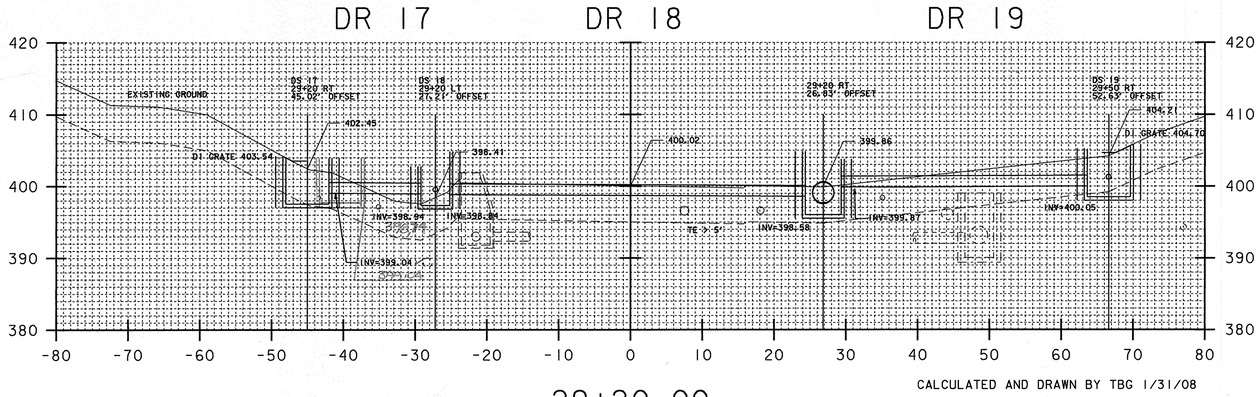


29+20.00

CALCULATED AND DRAWN BY TBG 1/31/08

DR #19

ITEM	QUANTITY	DATE PAID
601.2615	34LF	10/8 (ESTIMATED 10/3)
204.20	38.79CY	" RJT
204.30	2.59	"
604.20 (6")	.75	"

DR 17

PIPE T.E. < 5'
AREA (FROM CADD) = 6.48 SF * 3.75' =24.30 CF/27 = 0.9 CY

DS 17

STRUCTURE T.E. < 5'
5' * PI(4.50')² = ~~318.09~~ CF/27 = ~~11.78~~ CY

STRUCTURE T.E. > 5'
1.5[((2.69' + 0.41')/2) * PI(4.50')²] = 98.61 CF/27 = ~~3.65~~ CY
TOT= 15.43 CY

DR 19 GRANULAR BACKFILL
(3.75' * .88' * ~~12.0'~~ 8')-[((PI(.88')²/2) * ~~12.0'~~ 8')]= ~~25.00~~ CF/27 = ~~0.93~~ CY

DR 17

ITEM	QUANTITY	DATE PAID
601.2615	10LF	
204.20	3CY	ESTIMATED 03/09/09
204.30	1CY	ESTIMATED
604.20(0210)	.75EA	

02/25/08 CPH

DR 18

PIPE T.E. < 5'
AREA (FROM CADD) = 64.09 SF * 3.75' =240.34 CF/27 = 8.90 CY

DS 18

STRUCTURE T.E. < 5'
(.83+.66+2.35+4.07+3.81)/5 * PI(3.42')² = 86.13 CF/27 = 3.19 CY

DR 19 GRANULAR BACKFILL
(3.75' * .88' * 48.7')-[((PI(.88')²/2) * 48.7')]= 101.47 CF/27 = 3.76 CY

DR 18

ITEM	QUANTITY	DATE PAID
601.2615	20LF	10/3/08 RJT
209.20	6CY	" RJT
204.30	1 CY	" RJT
601.2615	30LF	10/27/08 "
TE 204.20	6.09	" "
DES 204.30	2.76	" "
604.20	.75	" "

CPH 02/25/08

DR 19

PIPE T.E. < 5'
AREA (FROM CADD) = 65.34 SF * 3.75' =245.03 CF/27 = 9.08 CY

DS 19

STRUCTURE T.E. < 5'
5' * PI(4.50')² = 318.09 CF/27 = 11.78 CY

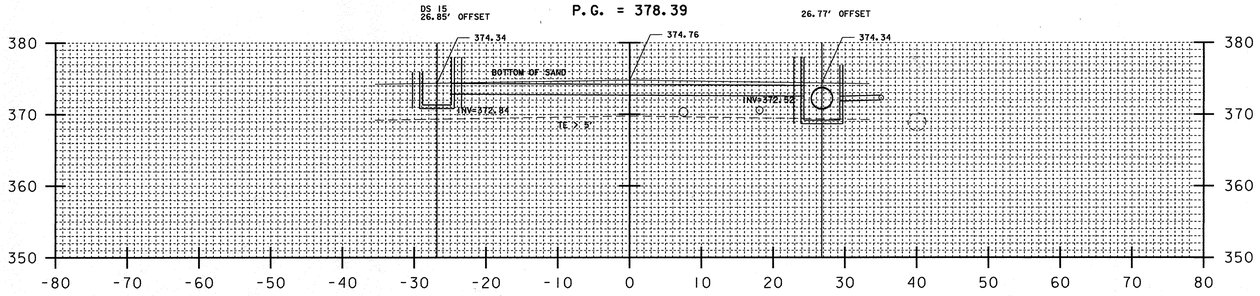
STRUCTURE T.E. > 5'
1.5[((0.72' + 1.21' +3.29')/3) * PI(4.50')²] = 166.04 CF/27 = 6.15 CY
TOT= 17.93 CY

DR 19 GRANULAR BACKFILL
(3.75' * .88' * 33.5')-[((PI(.88')²/2) * 33.5')]= 69.80 CF/27 = 2.59 CY

CPH 02/25/08

DR 15

P.G. = 378.39



26+70.00

CALCULATED AND DRAWN BY TBG 1/28/08

DR 15

ITEM	QUANTITY	DATE PAID
601.2615	20LF	10/7/08 RJT
204.20	6CY	10/7/08 RJT
204.30	1.5	10/7/08 RJT
601.2615	31LF	10/27/08 RJT
TE 204.20	11.18CY	" "
204.30	2.23	" "
604.20	.75	

DR 15

PIPE T.E. < 5'
AREA (FROM CADD) = 87.84 SF * 3.75' =329.40 CF/27 = 12.42 CY

DS 15

STRUCTURE T.E. < 5'
3.50' * PI(3.42')² = 128.61 CF/27 = 4.76 CY

DR 15 GRANULAR BACKFILL
(3.75' * .88' * 48.30')-[((PI(.88')²/2) * 48.30)]= 100.64CF/27 = 3.73 CY

CPH 02/25/08

SHEET #9

PROJECT NAME:	HARTFORD
PROJECT NUMBER:	RS 0113(40)
FILE NAME: $$$$FILENAME$$$	PLOT DATE: 01-FEB-2008
PROJECT LEADER: KEN UPMAL	DRAWN BY: E. ATKINS
DESIGNED BY: K. ISHIKURA	CHECKED BY: K. ISHIKURA
E. ATKINS	SHEET 220 OF 239