ITEM DETAIL AND DRAINAGE SHEET

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE STRUCTURES

LABEL	STA.	STA.	POSITION	TYPE IN/OUT	DITCH IN	DITCH OUT	PIPE ARCH S IN	PIPE ARCH R IN	PIPE ARCH L FT	PIPE D IN	PIPE L FT	ALLOWABLE OPTIONS PCCSP TH	CAAP TH	RCP CL	CPEP TH	CPEP SL	~~PCCSP PI~~ ~~TH~~	PIPE ELBOW NO-DEG	PIPE ELBOW EA	ES	CB	DEPTH CB/MH	CONC CL B CY	REIN STEEL LBS	CB/DI GRATE TYPE	CHAN ELEV	CRM CY	TR EXCAV EARTH CY	TR EXCAV ROCK CY	COMM EXC CY	UNC CHAN EXC CY	STRUC EXCAV CY	GRAN BKF STRUC CY	GRAN BORR CY	EROS MATT SY	STONE FILL CY	STONE FILL TYPE	MRKR POSTS LT	MRKR POSTS RT	MANHOLE COVER
(31)	36+74.5	36+27.4	RT-RT	CB/CB						36	~~42~~	41	0.075				RELAY PIPE				1	8.4			E		46.4	~~45.0~~					~~11.0~~	6.27						
(32)	5+61.6	5+53.6	RT-LT	CB/CB						18	~~22~~	23			~~III~~	X					1	6.1			D		8.5	~~24.5~~					~~3.5~~	1.6						
(33)	5+53.6	5+52.6	LT-LT	CB/~~MH~~						18	~~4~~	6.5			~~III~~	X					1	7.3			D		7.8	~~13.7~~					~~1.2~~	0.3						
(34)	5+52.6	36+74.5	LT-RT	MH/CB						18	~~136~~	138			III	X					-	9.5					62.1	~~132.8~~	1.00		1.91		~~18.3~~	9.4					1	
(35)	37+95.0	36+74.5	RT-RT	CB/CB						36	~~118~~	120.4			III	X					1	11.7			D		22.1	~~155.8~~					~~29.2~~	20.7						
(36)	3+20.6	3+20.6	RT-LT	CB/CB						18	30				III	X					1	6.2			D		20.4	~~29.9~~					~~4.6~~	2.2						
(37)	3+20.6	37+95.0	LT-RT	CB/CB						18	36				III	X					1	6.3			D		14.7	~~34.0~~					~~5.3~~	2.6						
(38)	15+74.0	15+74.0	RT-LT	CB/CB						18	18				III	X					1	6.4			D		10.7	~~22.6~~					~~3.0~~	1.2						
(39)	15+74.0	15+29.9	LT-LT	CB/CB						18	46				III	X					1	6.7			D		18.9	~~41.9~~					~~6.6~~	3.4						
(40)	15+29.9	11+16.9	LT-LT	CB/~~MH~~						18	78				III	X					1	6.1			D		28.8	~~61.4~~					~~10.8~~	5.8						
40A	15+43.5	15+29.9	LT-LT	CB/CB						18	13					X					1	6.0			D			12.5					1.1							
(41)	15+~~42.5~~ 34.0	11+16.9	RT-LT	MH/~~MH~~						12	~~74~~ 72	~~RELAY EXISTING~~ 12" PVC PIPE @ NEW INVERTS									-	6.9					18.0	~~51.1~~					~~7.8~~	2.9					1	
(42)	13+~~76.0~~ 59.0	11+16.9	~~RT~~ LT	MH/MH						15	216 238	~~RELAY EXISTING~~ 15" PVC PIPE @ NEW INVERTS									-	-					54.3	~~159.7~~					~~27.7~~	12.3						
(43)	11+16.9	10+65.6	LT-LT	MH/CB						24	~~42~~	44			III	X					-	7.2					26.4	~~51.1~~					~~7.8~~	4.4					1	
(44)	10+~~42.8~~ 49.0	10+65.6	RT-LT	CB/CB						18	~~78~~	80			III	X	42				1	6.0			D		68.9	~~63.4~~					~~10.8~~	14.4						
(45)	10+65.6	37+95.0	LT-RT	CB/CB						24	~~72~~	74			III	X					1	6.7			D		21.7	~~41.5~~					~~12.5~~	7.7						
(46)	38+85.0	37+95.0	RT-RT	CB/CB						36	~~86~~	88			III	X					1	12.0			D		168.5	~~146.7~~					~~21.5~~	15.0						
(47)	40+10.0	38+85.0	RT-RT	CB/CB						36	~~122~~	125			III	X					1	12.3			D		243.9	~~207.3~~					~~30.1~~	21.4						
(48)	20+49.6	20+49.6	LT-RT	CB/CB						18	~~12~~	13.5			III	X					1	6.8			D		9.0	~~17.7~~					~~2.2~~	0.7						
(49)	20+49.6	40+10.0	RT-LT	CB/CB						18	~~22~~	23.5			III	X					1	9.3			D X2		37.3	~~42.9~~					~~3.7~~	1.6						
(50)	40+10.0	40+10.0	LT-RT	CB/CB						18	~~56~~	58			III	X					1	10.1			D		64.6	~~79.5~~	0.82		1.16		~~7.9~~	4.2						
(51)	41+16.4	40+10.0	RT-RT	~~MH~~ CB/MH						36	~~104~~	107			III	X					-	12.5			D		226.4	~~234.1~~	0.12		0.88		~~25.8~~	19.2					1	
51A	41+20	41+16.4	RT-RT							18	14					X																								
(52)	43+50.0	41+16.4	RT-RT	CB/~~MH~~ CB						36	232	236			III	X					1	11.2			D		442.3	~~483.6~~					~~56.4~~	40.5						
(53)	43+50.0	43+50.0	RT-RT	CB/CB						18	12				III	X					1	6.4			D		13.5	16.5					~~2.2~~	0.8					1	
(54)	43+56.1	43+50.0	LT-LT	CB/CB						18	14				III	X					1	5.9			D		11.5	~~20.7~~	2.94				~~2.7~~	1.0						
54A	41+90	43+56.1	LT-LT	CB/CB						1															D		71.90						4' DIA. PRC CB WITH 160' 12" PVC PIP ADDED WITH COD #12							
(55)	43+50.0	43+50.0	LT-RT	CB/CB						18	~~34~~	36			III	X					1	6.3			D		14.7	~~33.0~~					~~5.1~~	2.6						
(56)	44+00.0	43+50.0	RT-RT	CB/CB						36	46				III	X					1	11.0			D		111.3	~~105.9~~					~~11.9~~	7.5						
(57)	44+00.0	44+00.0	LT-RT	CB/CB						18	~~34~~	36			III	X					1	6.3			D		14.6	~~32.9~~					~~5.1~~	2.6						
(58)	45+10.0	44+00.0	RT-RT	CB/CB						30	~~106~~	108			III	X					1	10.3			D		146.7	189.5					~~22.4~~	25.5						
(59)	25+45.7	25+44.1	LT-LT	CB/CB						18	~~7~~	8			III	X					1	7.2			D		11.9	~~16.1~~	3.67				~~1.7~~	0.4						
(60)	25+44.1	25+44.1	LT-RT	CB/CB						18	20				III	X					1	6.3			D		12.4	~~24.0~~					~~3.3~~	1.6						
(61)	26+19.2	25+44.1	RT-RT	~~MH~~/CB						18	~~72~~	70			III	X					-	6.6					35.0	~~62.1~~					~~10.0~~	5.8					1	
(62)	25+44.1	45+10.0	RT-RT	CB/CB						18	~~58~~	60			III	X					1	7.7			D		41.0	~~65.1~~					~~8.2~~	4.4						
																					1	6' Ø																		
										18	789				III	X					8	5' Ø																		
										24	114				III	X					20	4' Ø																3	4' Ø
										30	106				III	X																						1	5' Ø
TOTALS										36	708				III	X																							
										36	42		0.075								26				26-D 1-E		2706.0						380.3					1	5

REMARKS
(31) 5' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE EACH)
(32) 4' DIA. PRC CB - 4' DIA. PRC CB (1 GRATE EACH), REM. EXIST. DI RT WORCESTER AVENUE
(33) 4' DIA. PRC CB - 4' DIA. PRC MANHOLE (1 GRATE - 1 COVER) WORCESTER AVENUE
(34) 4' DIA. PRC MANHOLE - 5' DIA. PRC CB (1 COVER - 1 GRATE) WORCESTER AVENUE
(35) 5' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE EACH)
(36) 4' DIA. PRC CB - 4' DIA. PRC CB (1 GRATE EACH) RELOCATED WORCESTER AVENUE
(37) 4' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE EACH) RELOCATED WORCESTER AVENUE
(38) 4' DIA. PRC CB - 4' DIA. PRC CB (1 GRATE EACH) SCHOOL ENTRANCE
(39) 4' DIA. PRC CB - 4' DIA. PRC CB (1 GRATE EACH) SCHOOL ENTRANCE
(40) 4' DIA. PRC CB - 5' DIA. PRC MANHOLE (1 GRATE & 1 COVER), REM. EXIST. MH@ 11+16.9 LT
40A 4' DIA. PRC CB - 4' DIA. PRC CB (1 GRATE EACH)
(41) RELAY EXIST. 12" PVC PIPE FROM NEW 4' DIA. PRC MH TO 5' DIA. PRC MANHOLE (2 COVERS)
(42) RELAY EXIST. 15" PVC FROM 5' DIA. PRC MANHOLE TO EXIST. DRAIN MANHOLE @ 13+~~76.~~ 59 ORT
(43) 5' DIA. PRC MANHOLE - 4' DIA. PRC CB - (1 COVER & 1 GRATE) HIGHLAND AVENUE
(44) 4' DIA. PRC CB - 4' DIA. PRC CB (1 GRATE EACH) HIGHLAND AVENUE
(45) 4' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE EACH) HIGHLAND AVENUE
(46) 5' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE EACH)
(47) 5' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE EACH)
(48) 4' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE - 2 GRATES) HEBARD AVENUE
(49) 5' DIA. PRC CB - 4' DIA. PRC CB (2 GRATES - 1 GRATE) HEBARD AVENUE
(50) 4' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE EACH)
(51) 5' DIA. PRC ~~MH~~ LB - 5' DIA. PRC CB (~~1 COVER~~ & 1 GRATE) EACH
51A CONNECT TO EXISTING DIØ 41+20-39' RT
(52) 5' DIA. PRC CB - 5' DIA. PRC MH (1 GRATE & ~~1 COVER~~) EACH
(53) 4' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE EACH)
(54) 4' DIA. PRC CB - 4' DIA. PRC CB (1 GRATE EACH)
54A 4' DIA. PRC CB WITH 160' 12" PVC PIP ADDED WITH COD #12
(55) 4' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE EACH)
(56) 5' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE EACH)
(57) 4' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE EACH)
(58) 6' DIA. PRC CB - 5' DIA. PRC CB (1 GRATE EACH)
(59) 4' DIA. PRC CB - 4' DIA. PRC CB (1 GRATE EACH)
(60) 4' DIA. PRC CB - 4' DIA. PRC CB (1 GRATE EACH) SAUNDERS AVENUE
(61) 4' DIA. PRC MH - 4' DIA. PRC CB (1 COVER & 1 GRATE) INSTALL NEW MH OVER EXIST. PIPE (SEE CROSS SECTIONS)
(62) 4' DIA. PRC CB - 6' DIA. PRC CB (1 GRATE EACH) SAUNDERS AVENUE

GUARD RAIL

STA.	STA.	LT.	RT.	END TREATMENT	
TOTALS					

UNDERDRAIN

STA.	STA.	TYPE	POS.	D	L	TRENCH E	TRENCH R	GRAN BKF	12" RISER LEN.	FB	MKR PST
31+75	34+24~~20~~	U	RT	8	~~248~~ 224	~~99.2~~	39.8		~~8~~	~~1~~	~~1~~
34+24	35+50	U	RT	8	126	~~50.7~~	73.6		~~8~~ 6	1	1
31+80	34+29~~05~~	U	LT	8	~~250~~ 252	~~84.2~~	30.02		~~6~~ 5	1	1
34+~~29~~36	~~36+38~~ 35+85	U	LT	8	~~208~~ 199	~~71.7~~	0		8 ~~6~~ 5	1	1
36+38	37+00	U	RT	8	62	~~24.9~~	16.6		~~8~~ 5	1	1
35+50	36+00	U	RT	8	50	~~20.1~~	28.9		~~8~~ 5	1	1
~~36+13~~	~~0+75~~	~~U~~	~~RT~~	~~6~~	~~48~~	~~-~~			~~6~~	~~1~~	~~1~~
~~36+77~~	~~38+10~~	~~U~~	~~RT~~	~~8~~	~~132~~	~~48.6~~			~~8~~	~~1~~	~~1~~
38+90	40+11	U	RT	8	124	66.7			8	1	1
~~39+04~~	~~39+57~~	~~U~~	~~LT~~	~~8~~	~~52~~	~~23.3~~			~~6~~	~~1~~	~~1~~
~~40+11~~	~~41+10~~	~~U~~	~~RT~~	~~8~~	~~100~~	~~54.0~~			~~8~~	~~1~~	~~1~~
40+50	42+00	U	LT	8	150	84.3			8	1	1
TOTAL 6"	UNDERDRAIN (MOD.)				48	0			88	12	12
TOTAL 8"	UNDERDRAIN (MOD.)				1502	527.7					
34+20	34+24	C	RT	8	8	~~2.2~~	3.6		-		
31+70	31+80	C	LT	8	12	~~4.8~~	0.4		~~6~~ 5	1	1
34+20	34+29~~36~~	C	LT	8	~~12~~ 9	~~3.3~~	0		5	1	
36+27	36+38	C	LT	8	12	~~3.4~~	0		5	1	1
~~36+75~~	~~36+77~~	~~C~~	~~RT~~	~~8~~	~~4~~	~~1.6~~			~~-~~		
~~38+85~~	~~38+90~~	~~C~~	~~RT~~	~~8~~	~~6~~	~~3.2~~			~~8~~	~~1~~	~~1~~
~~39+57~~	~~40+10~~	~~C~~	~~LT~~	~~8~~	~~50~~	~~17.5~~			~~6~~	~~1~~	~~1~~
~~40+10~~	~~40+11~~	~~C~~	~~RT~~	~~8~~	~~4~~	~~2.2~~			~~-~~		
~~40+10~~	~~40+50~~	~~C~~	~~LT~~	~~8~~	~~38~~	~~22.3~~			~~8~~	~~1~~	~~1~~
TOTAL 8"	CARRIER PIPE (MOD.)				146	60.5			28	4	4
TOTAL 12"	CARRIER PIPE (MOD.) FOR RISERS								116		
TOTALS											

PROJECT NAME: HARTFORD
PROJECT NUMBER: RS 0113(40)

FILE NAME: z86c027qty.DGN
PROJECT LEADER: KEN UPMAL
DESIGNED BY: E. ATKINS

PLOT DATE: 1/31/2007
DRAWN BY: A. DUMITRU
CHECKED BY: E. ATKINS
SHEET 13 OF 239