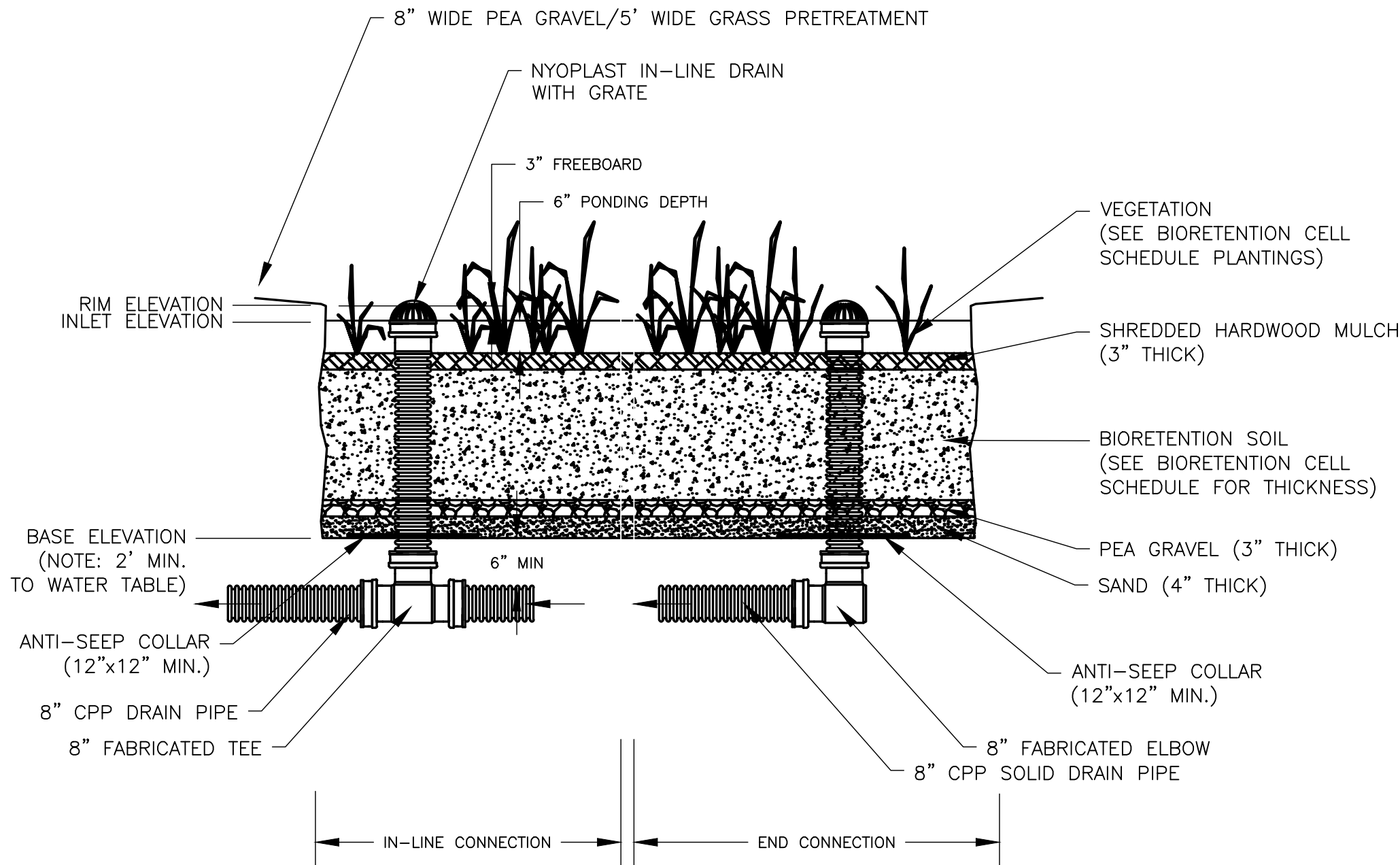


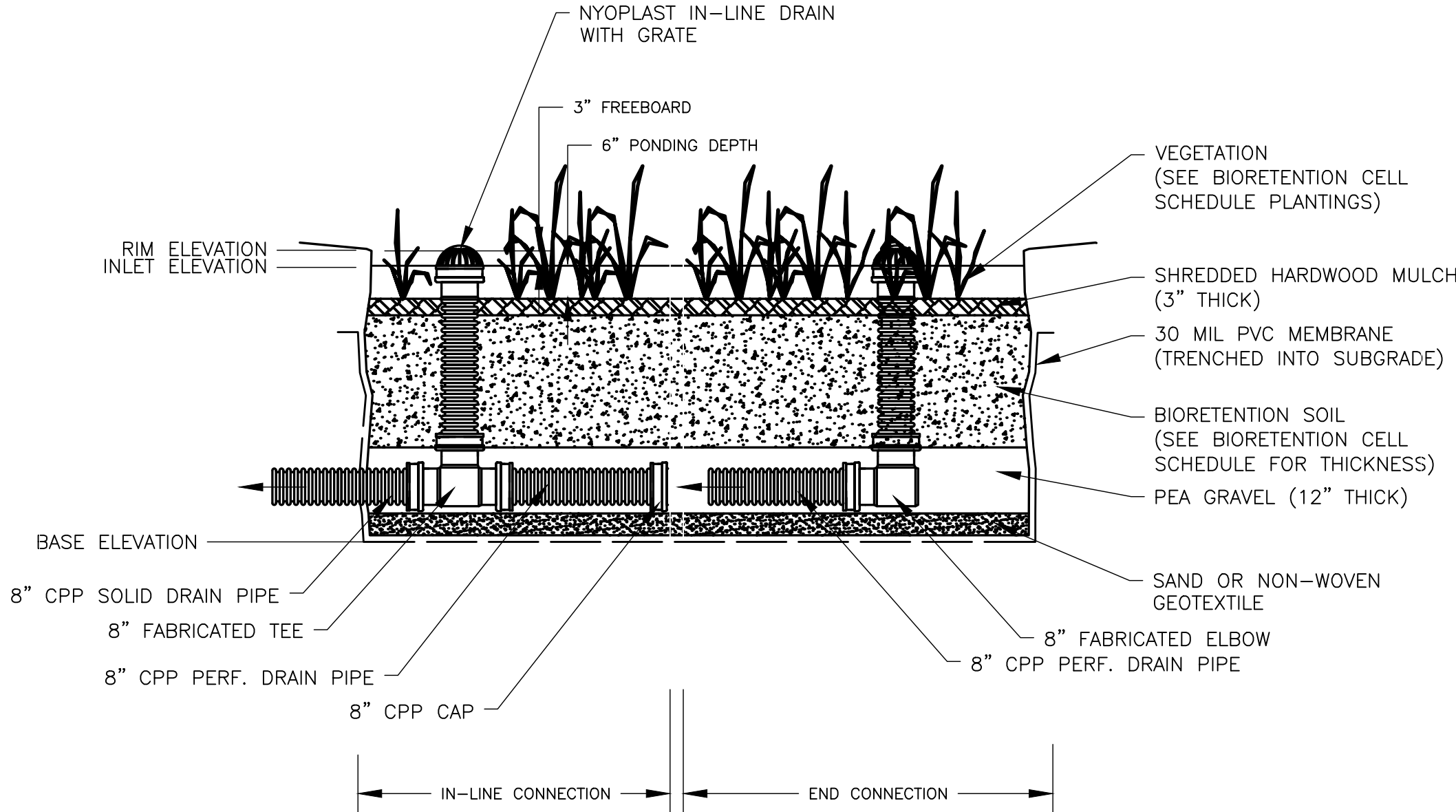
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A
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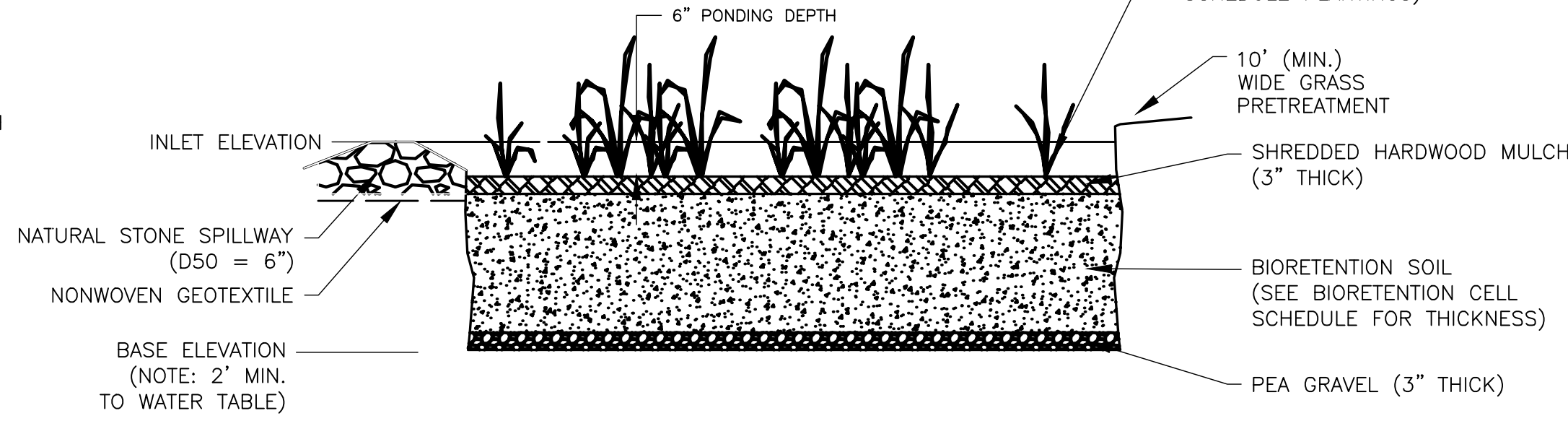
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1
—
DETAIL
RAINGARDEN TYPE A (WITH OVERFLOW)
SCALE: NTS



2
—
DETAIL
RAINGARDEN TYPE B (LINED)
SCALE: NTS



3
—
DETAIL
RAINGARDEN TYPE C (WITH SPILLWAY)
SCALE: NTS

RAINGARDEN SCHEDULE

Raingarden ID*	Designed to Exfiltrate (No = Lined) ¹	Standard Detail No. (Figure 5)	Drainage Area (Ft^2)	Drainage Area (ac)	Impervious Area (ac)	BMP Water Quality Volume (cf) ²	Storage Volume (cf) ³	Surface Area (sf)	Depth of Bioretention Soil (ft)	Pre-treatment Device ⁴	Rim Elev. (ft)	Base Elev. (ft)	High Groundwater Elevation (ft)	Existing Ground Surface Elevation (ft)
RG #3	YES	C	6534	0.150	0.070	254	635	423.0	0.50	V	311.00	309.50	301.50	304.00
RG #4	YES	A	1568.16	0.036	0.012	44	792	391.0	3.00	GV	307.00	302.42	299.50	302.00
RG #5	YES	A	2265.12	0.052	0.021	76	485	266.0	3.00	GV	307.00	302.42	298.50	301.00
RG #10	NO	B	2090.88	0.048	0.015	54	509	334.0	2.00	GV	306.00	301.67	301.50	304.00
RG #11	YES	A	1873.08	0.043	0.027	98	281	184.0	2.00	GV	307.10	303.50	301.50	304.00
RG #12	NO	B	9278.28	0.213	0.050	182	567	584.5	1.25	VS and GV	310.00	306.42	309.50	312.00
RG #13	NO	B	4312.44	0.099	0.053	192	428	415.3	2.33	VS and GV	307.00	302.34	303.50	306.00
RG #14	NO	B	2352.24	0.054	0.035	127	299	206.5	1.33	GV	305.00	301.34	301.50	304.00
RG #15	NO	B	44213.4	1.015	0.199	722	772	542.0	1.00	GV	301.00	297.67	301.50	304.00
RG #16	NO	B	10715.76	0.246	0.000	0	541	523.0	1.00	VS and GV	301.00	297.67	302.50	305.00
RG #19	YES	A	31232.52	0.717	0.168	305	1484	973.0	1.25	VS and V	294.00	290.00	287.50	290.00
RG #20	NO	B	11543.4	0.265	0.000	0	1226	672.0	1.50	-	292.00	288.17	291.50	294.00
RG #21	NO	B	9931.68	0.228	0.155	281	485	529.1	1.00	GV	290.00	286.67	288.50	291.00
RG #22	NO	B	6664.68	0.153	0.023	42	935	656.0	1.00	GV	257.00	253.67	255.50	258.00
RG #23	NO	B	1306.8	0.030	0.007	13	589	413.0	1.25	GV	257.00	253.42	254.50	257.00
Bus Station	NO	B	6882.48	0.158	0.024	44	1026	943.0	1.00	VS	257.00	253.67	254.50	257.00
Cul-de-sac	NO	B	10585.08	0.243	0.072	131	2754	2834.0	1.00	GV	300.00	297.00	297.50	300.00

Notes

*Bold and Italics Raingarden ID, indicates raingarden located in IWPA (required water quality volume = 1.0 inch).

1. Raingardens not designed to exfiltrate will be lined ensuring no infiltration

2. All BMPs are designed to provide storage for the Water Quality Volume, which is greater than the Recharge Volume for the Site

3. Storage Volume is calculated assuming 30% void space in mulch, bioretention soil, pea gravel and sand layers.

4. GV = 8-inches of pea gravel and 3 to 5-foot vegetated filter strip; V = 10' vegetated filter strip; VS = vegetated swale

4
—
DETAIL
RAINGARDEN SCHEDULE
SCALE: NTS

G	2018.01.23	REVISED GRADING PLAN	JHT	DB
E	5/10/11	REVISED PER NITSCH ENGINEERING COMMENTS 4/6/11	DHB	SR
D	3/16/11	REVISED PER NITSCH ENGINEERING COMMENTS 3/15/11	DHB	SR
C	3/9/11	REVISED PER NITSCH ENGINEERING COMMENTS 3/3/11	RFL	SR
B	2/22/11	REVISED PER NITSCH ENGINEERING COMMENTS 2/11/11	DHB	SR
A	1/25/11	REVISED PER NITSCH ENGINEERING COMMENTS 1/17/11	DHB	SR
REV	DATE	DESCRIPTION	DRN	APP

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PINE HILL VILLAGE LLC
4 CRICONES WAY
TYNGSBORO, MA 01879

TITLE:	STORMWATER MANAGEMENT PLAN DETAILS		
PROJECT:	PINE HILL VILLAGE HARVARD, MASSACHUSETTS		
THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED. SIGNATURE DATE	DESIGN BY:	RLF	DATE: FEBRUARY 22, 2011
	DRAWN BY:	RLF	PROJECT NO.: BW0118C
	CHECKED BY:	DHB	FILE: 1002(details).DWG
	REVIEWED BY:	SR	SHEET NO.: 15A
APPROVED BY:	DHB		