

CLIENT

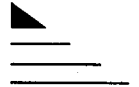
SCHRIEFER

PROJECT

4609 MISTY HILL DRIVE

THORNTON

ENGINEERING LLP



SUBJECT

STORMWATER MANAGEMENT

MADE

GFT

CHK

REV

JOB NO.

SHEET NO.

PROPOSED GROUND DISTURBANCE = 29,541 SF (INCLUDES R.O.W.)

PROPOSED IMPERVIOUS SURFACE = 5,238 SF (INCLUDES R.O.W.)

% IMPERVIOUS =  $5238 \text{ SF} / 29,541 \text{ SF} = 17.73\%$

WATER QUALITY VOLUME ( $WQ_v$ ) =  $PR_v A / 12$  (PER NYS SMDM)

$R_v = 0.05 + 0.009 I = 0.05 + (0.009)(17.73) = 0.21$

$P = 1.0 \text{ IN.}$

$A = 0.678 \text{ AC}$

$WQ_v = (1.0)(0.21)(0.678) / 12 = 0.012 \text{ ACRE FT}$   
 $= 523 \text{ CF REQ'D.}$

RAIN GARDEN DESIGN (HSG B SD14)

10' x 25' RAIN GARDEN = 250 SF PONDING DEPTH = 9 INCHES

DEPTH OF SOIL MEDIA = 1.5' POROSITY = 0.20

DEPTH OF DRAINAGE LAYER = 1.0' POROSITY = 0.40

$WQ_v = (250)(1.5)(0.20) + (250)(1.0)(0.40) + (250)(0.75)$

$= 362.5 \text{ CF PER EACH RAIN GARDEN} \times 2 \text{ RAIN GARDENS}$

$= 725 \text{ CF}$  OK