APPENDIX     III
POST-DRAINAGE DETENTION

STORMWATER CONTROL

WET DETENTION POND IN BASIN 7 MANAGES A PORTION OF REQ'D WATER QUALITY AND QUANTITY. ADDITIONAL BMP'S FOR REMAINING WATER QUALITY & QUANTITY MANAGEMENT FOUND IN OTHER BASINS AT A, C, D, E & F (SEE EXH. 3.1). WATER QUALITY IS TO BE DESIGNED PER THE LATEST BMP MANUAL.

DATA FOR PROPOSED WET DETENTION POND AT BASIN 7

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-YR, 6-HR VOLUME RUNOFF INCREASE REQUIRED FOR STORAGE</td>
<td>76,182 CF</td>
</tr>
<tr>
<td>WATER SURFACE AREA (AT RISER SPILLWAY)</td>
<td>18,387 SF</td>
</tr>
<tr>
<td>VOLUME STORED TO EMERGENCY SPILLWAY ABOVE PERMANENT POOL</td>
<td>92,840 CF</td>
</tr>
<tr>
<td>BARREL SIZE</td>
<td>24 INCH RCP</td>
</tr>
<tr>
<td>RISER PERIMETER (IF SQUARE, MIN 3' OPENING)</td>
<td>9.5 FT</td>
</tr>
<tr>
<td>TOP OF DAM</td>
<td>782.5 FT</td>
</tr>
<tr>
<td>TOP OF EMERGENCY SPILLWAY</td>
<td>781.5 FT</td>
</tr>
<tr>
<td>TO OF RISER ELEVATION (9.5' WEIR)</td>
<td>781.0 FT</td>
</tr>
<tr>
<td>WS PERMANENT POOL ELEV (FOR WATER QUALITY VOL 29,194 CF)</td>
<td>775.0 FT</td>
</tr>
<tr>
<td>BOTTOM OF POND</td>
<td>771.0 FT</td>
</tr>
<tr>
<td>ORIFICE (OPENINGS) FOR 24 HR, 1-YR EVENT (DISCHARGE APPROX 51 HR)</td>
<td>2.75 INCH (MIN)</td>
</tr>
<tr>
<td>ORIFICE FOR 6 HR, 25-YR EVENT (DISCHARGE APPROX 97 HR)</td>
<td>2.75 INCH ORIFICE &amp; 2.0 FT X 6 INCH WEIR</td>
</tr>
<tr>
<td>DAM FILL FACE SLOPE AT 3 VERT. TO 1 HOR. (3:1) SLOPE.</td>
<td>3:1</td>
</tr>
</tbody>
</table>

RESIDENTIAL DESIGN EXAMPLE

EXHIBIT 3.2
PRE-DRAINAGE MAP

STORM WATER CONTROL

DELINEATE WATERSHED/DRAINAGE BASINS
IDENTIFY STORM DRAIN STRUCTURES AND SYSTEMS DRAINING WATER FROM SITE
DETERMINE DOWNSTREAM LOCATION WHERE SITE IS 10% OF THE WATERSHED
IDENTIFY OFFSITE RUNOFF DRAINING TO SITE
DESIGN SITE GRADING TO UTILIZE BMP(S) TO COLLECT & MANAGE ON-SITE RUNOFF
UTILIZE BMP(S) TO MANAGE ON-SITE PEAK & VOLUME CONTROL AND WATER QUALITY
ANALYZE DOWNSTREAM RECEIVING STORM DRAIN STRUCTURE(S)

COMMERCIAL DESIGN EXAMPLE SITE
SUGGESTED SOLUTION:

1 UNDERGROUND DETENTION (PEAK AND VOLUME CONTROL)
MULTIPLE BIO-CELL AREAS (WQ CONTROL, 5 SHOWN, MORE MAY BE REQUIRED, OTHER BMP'S MAY BE UTILIZED)
ROUTE 2-YR AND GREATER OVERFLOW FROM BIO-CELLS TO UNDERGROUND DETENTION (PEAK & VOLUME CONTROL)
1 SMALL WET DETENTION POND (WQ CONTROL ONLY, OTHER BMP'S MAY BE UTILIZED)
REPLACE EXISTING 15" PIPE UNDER REYNOLDS PARK ROAD (EXISTING PIPE INVERT ABOVE BMP DISCHARGE OUTLETS)
ROUTE BYPASS OFFSITE DRAINAGE FROM THE WEST AROUND WEST DETENTION POND

BASIN 4A IS ADDED TO THE SITE (FORMERLY PART OF BASINS 3 & 6). WATERSHED BASINS ANALYZED ARE:
BASINS 1, 2, 4, 4A, 5A & 5B. OTHER BASINS NOT IMPACTED BY THE PROPOSED SITE DEVELOPMENT.
TRANSFERRED RUNOFF FROM BASINS 3 & 6 TO THE SITE INCREASES THE AMOUNT OF 25-YR VOLUME TO BE DETAINED.

ANALYSIS AT 10% LOCATION DOWNSTREAM IN BASIN 2 ANALYZED - NO STRUCTURAL IMPACTS FOUND

COMMERCIAL DESIGN EXAMPLE SITE
UNDERGROUND DETENTION SCHEMATIC

11 - 6.0' DIA PIPES W/HEADERS
ENCASED W/STONE WITH 30% VOIDS
18' OUTFLOW
78.0' @ 0.2% SLOPE

INFLOW FROM SITE

SCHEMATIC FOR PROPOSED UNDERGROUND DETENTION (N.T.S.)
MANAGES WATER QUANTITY REQUIREMENT FOR PROPOSED SITE WATER QUALITY IS MANAGED IN OTHER BMP'S

CALCULATED 25-YR QUANTITY VOLUME INCREASE
25-YR QUANTITY VOLUME IN UNDERGROUND PIPE STORAGE
MAX VOLUME USED FOR THE 25-YR EVENT
32,340 CF STORAGE REQUIRED
32,255 CF STORAGE
31,312 CF MAX. STORAGE

6.0' DIAMETER STORAGE PIPE WITH 6" IN BETWEEN PIPES & FILLED WITH GRAVEL
1/2-FOOT OF GRAVEL ABOVE AND BELOW 6.0' DIAMETER PIPES

COMMERCIAL DESIGN EXAMPLE