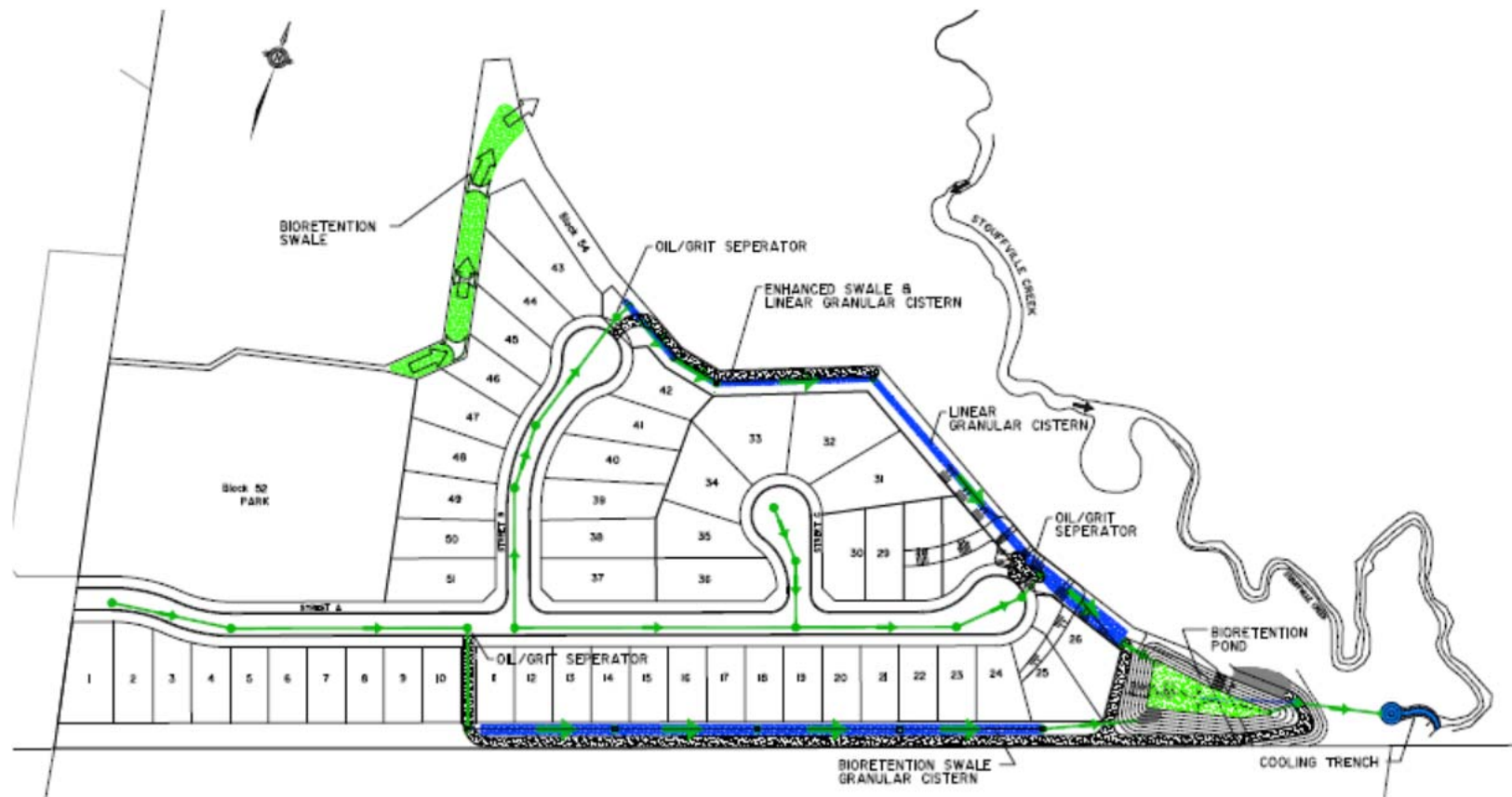


LID Residential Subdivision Prairiewood Phase 1



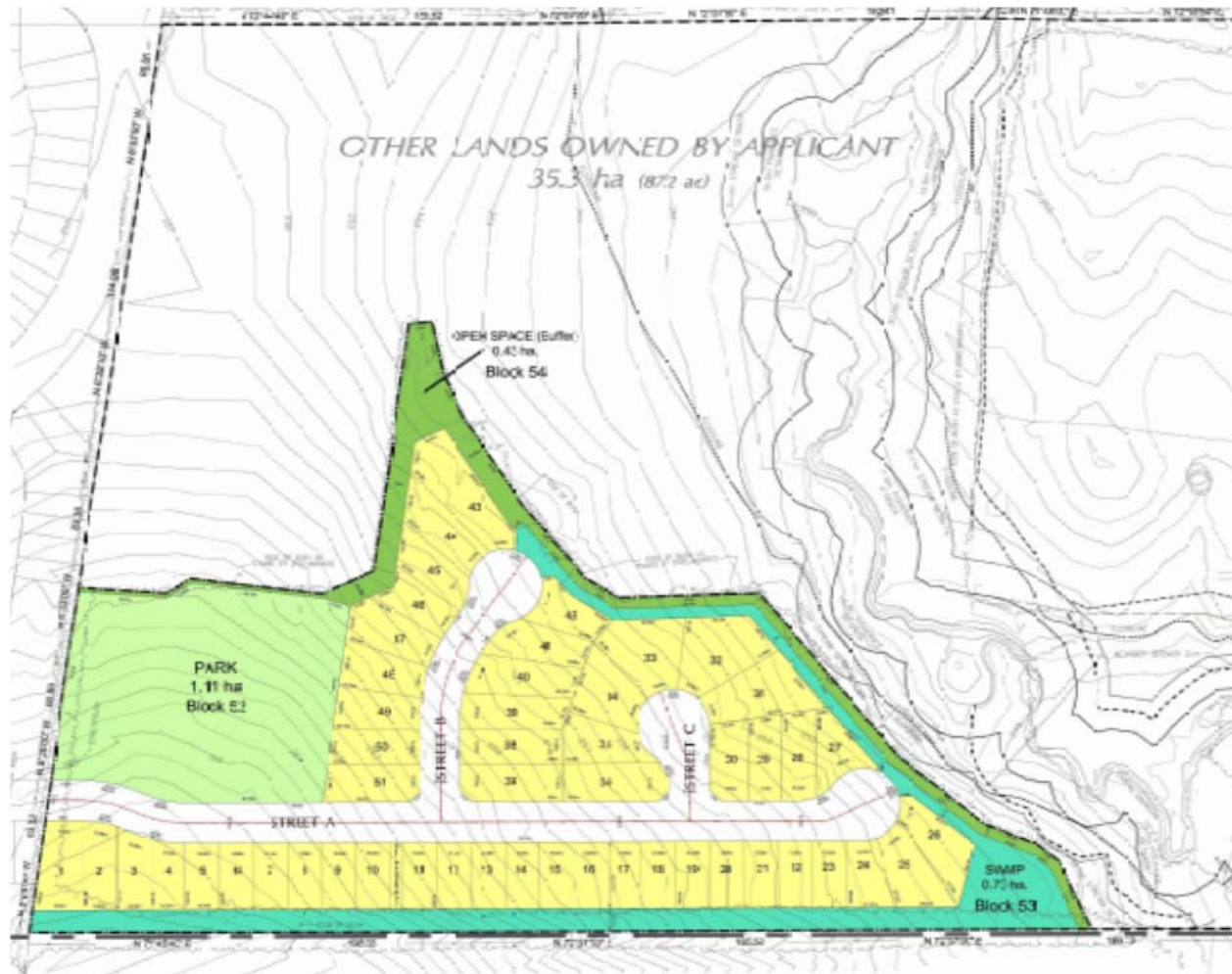
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Site Location and Context

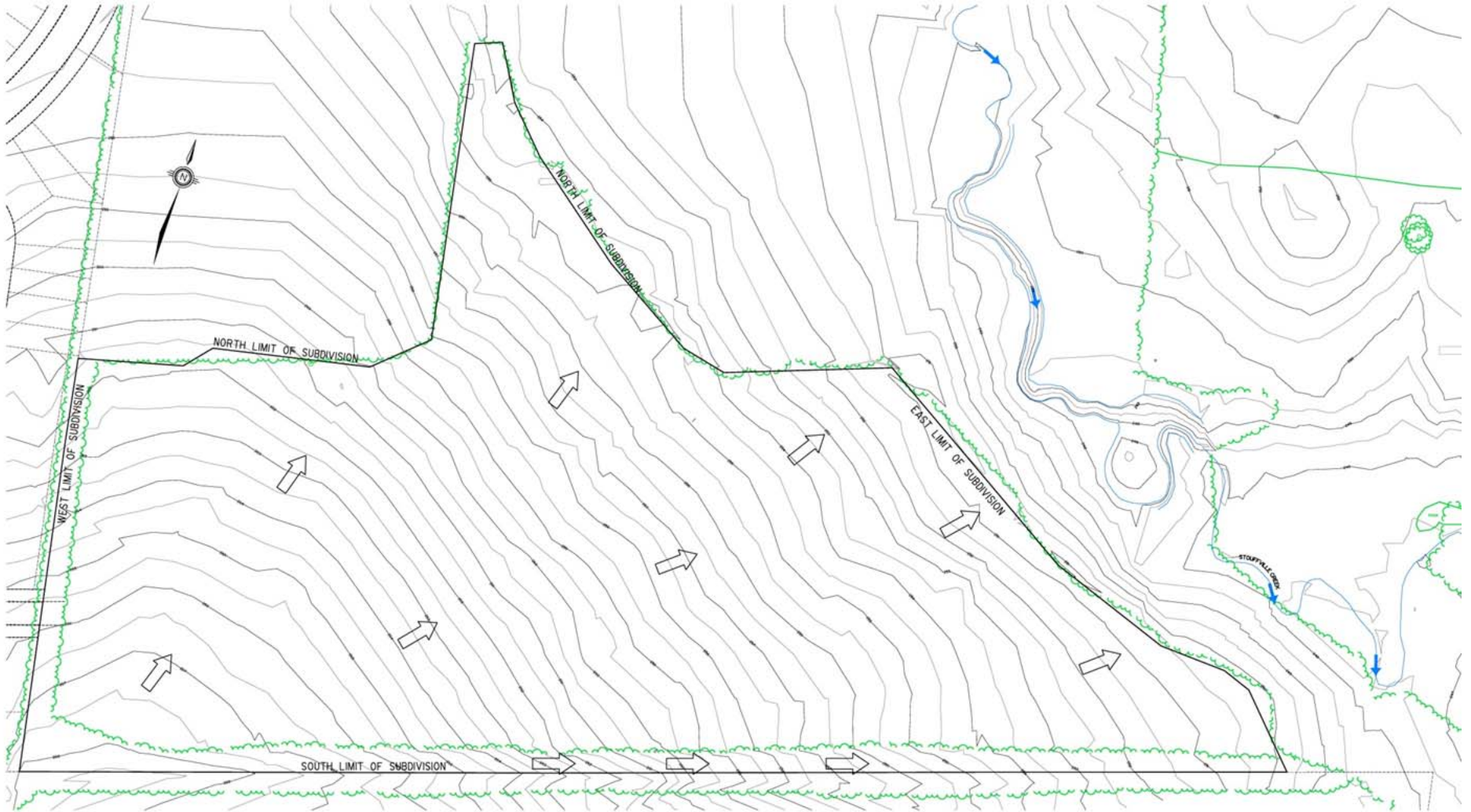
- South limit of Whitchurch Stouffville, west of Tenth Line.
- Existing development to the north and west.
- Developable area bounded by woodlot/wetland and Stouffville Creek valley corridor.
- Original MESP SWM proposal to discharge to SWM pond north of site.



Draft Plan of Subdivision



Existing Grades



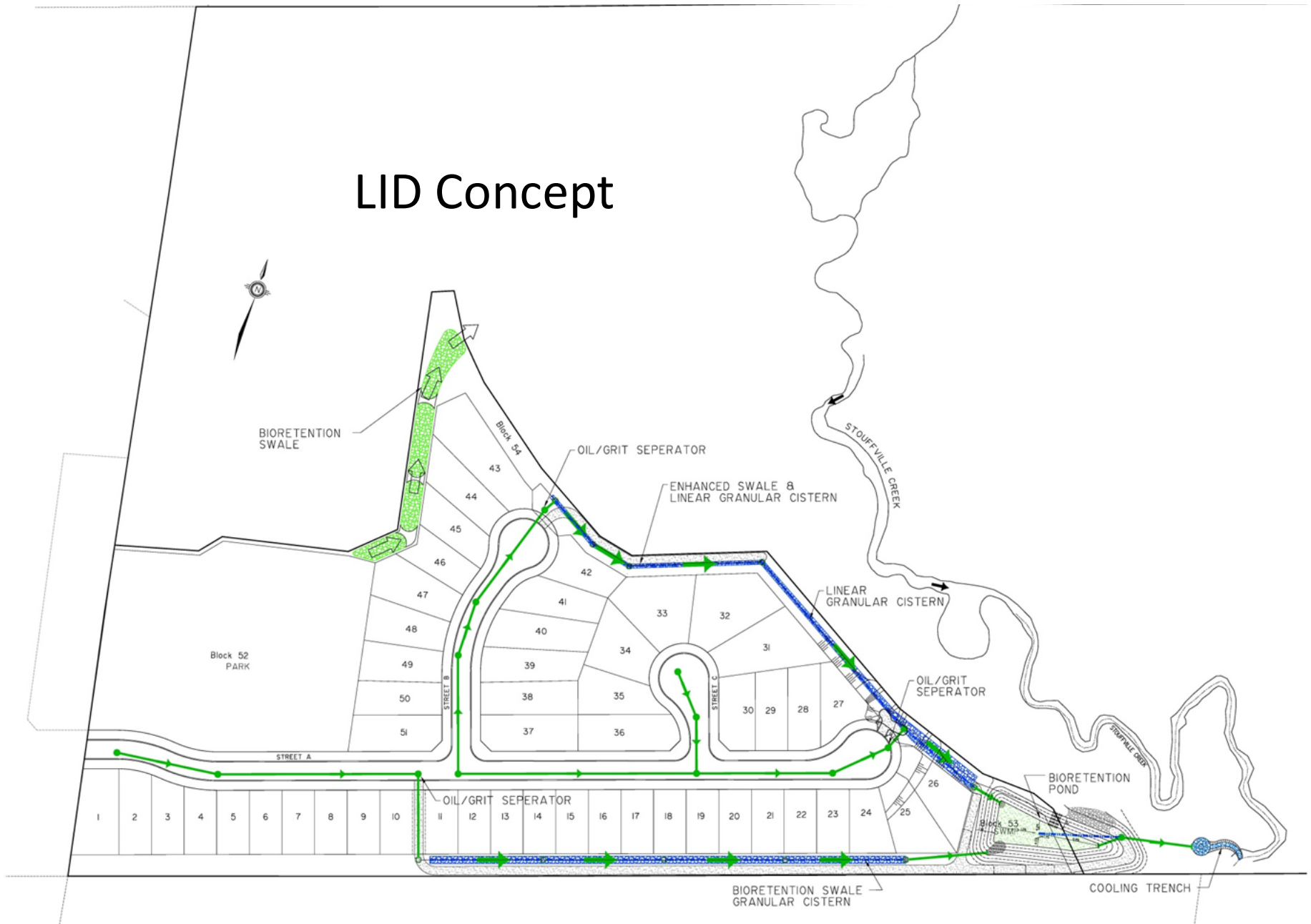
Stormwater Management Criteria

- **Water Quality Control** – satisfy the MOE Enhanced Protection Guidelines.
- **Erosion Control** – detention of the runoff from a 25 mm storm released over 97.2 hours.
- **Water Quantity Control** – Post development to Pre-development controls for the 2 year through 100 year storm as per the unit flow relationships from the overall Duffin Creek watershed model.

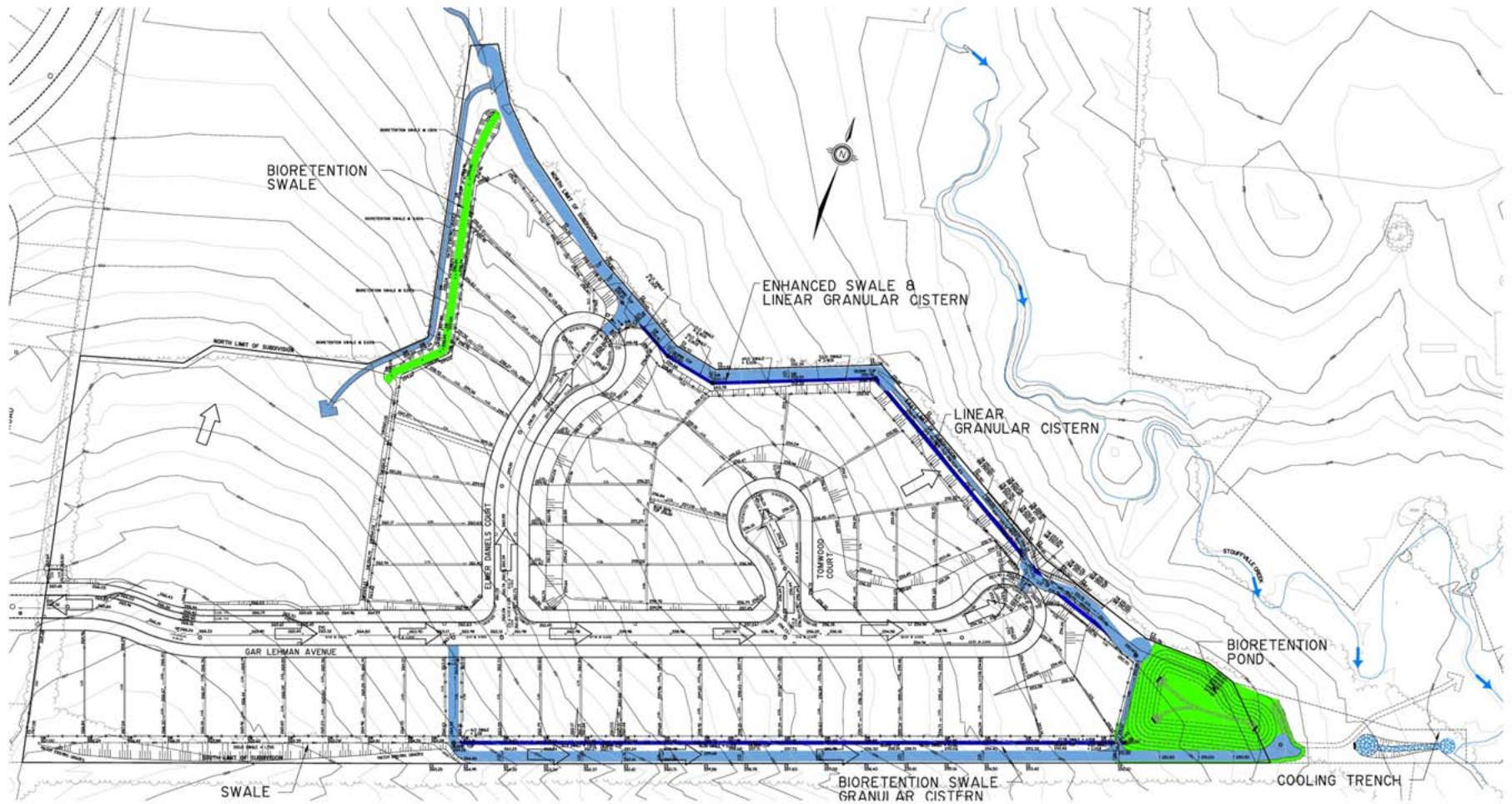
LID Concept

- Implementation of Low Impact Development facilities distributed throughout the site including;
 1. Extra topsoil depths on the lots,
 2. Bioretention swales,
 3. Enhanced swales,
 4. Oil/grit Separators,
 5. Granular cisterns,
 6. Bioretention/dry quantity pond,
 7. Outlet cooling trench.

LID Concept



Grading Plan



Water Quality and Erosion Controls

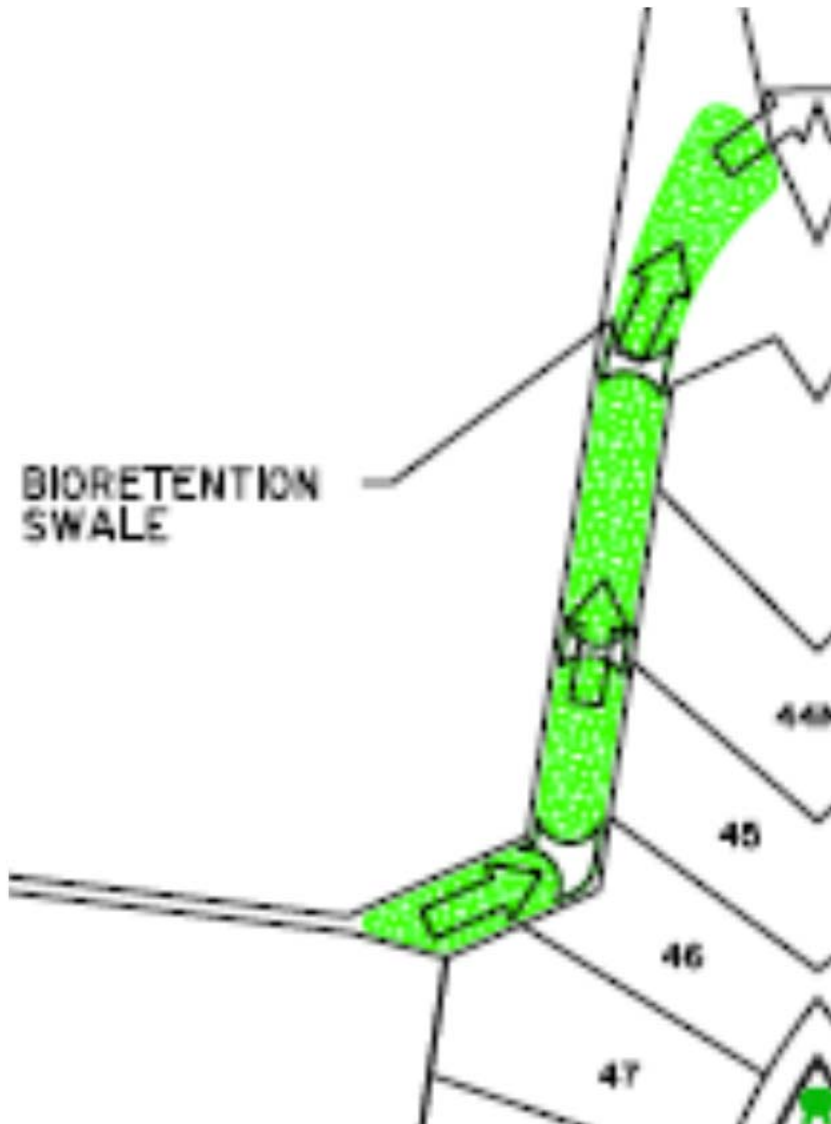
- Water Quality – Enhanced Protection Guidelines:

1. Oil Grit separators for the storm sewers (roads and contributing lots),
2. 0.3 metre deep clear stone gallery below the perforated pipe invert for contributing lots.

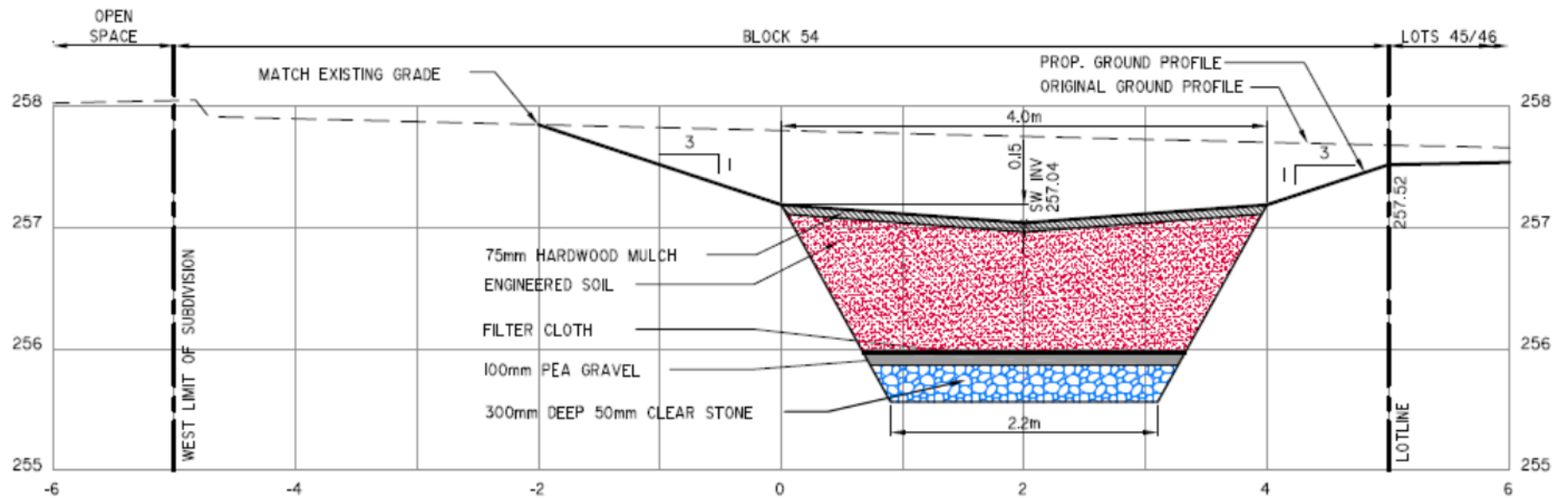
- Erosion Controls – runoff from 25mm storm

1. Provided in the clear stone gallery above the perforated pipe invert.

Woodlot Bioretention Swale

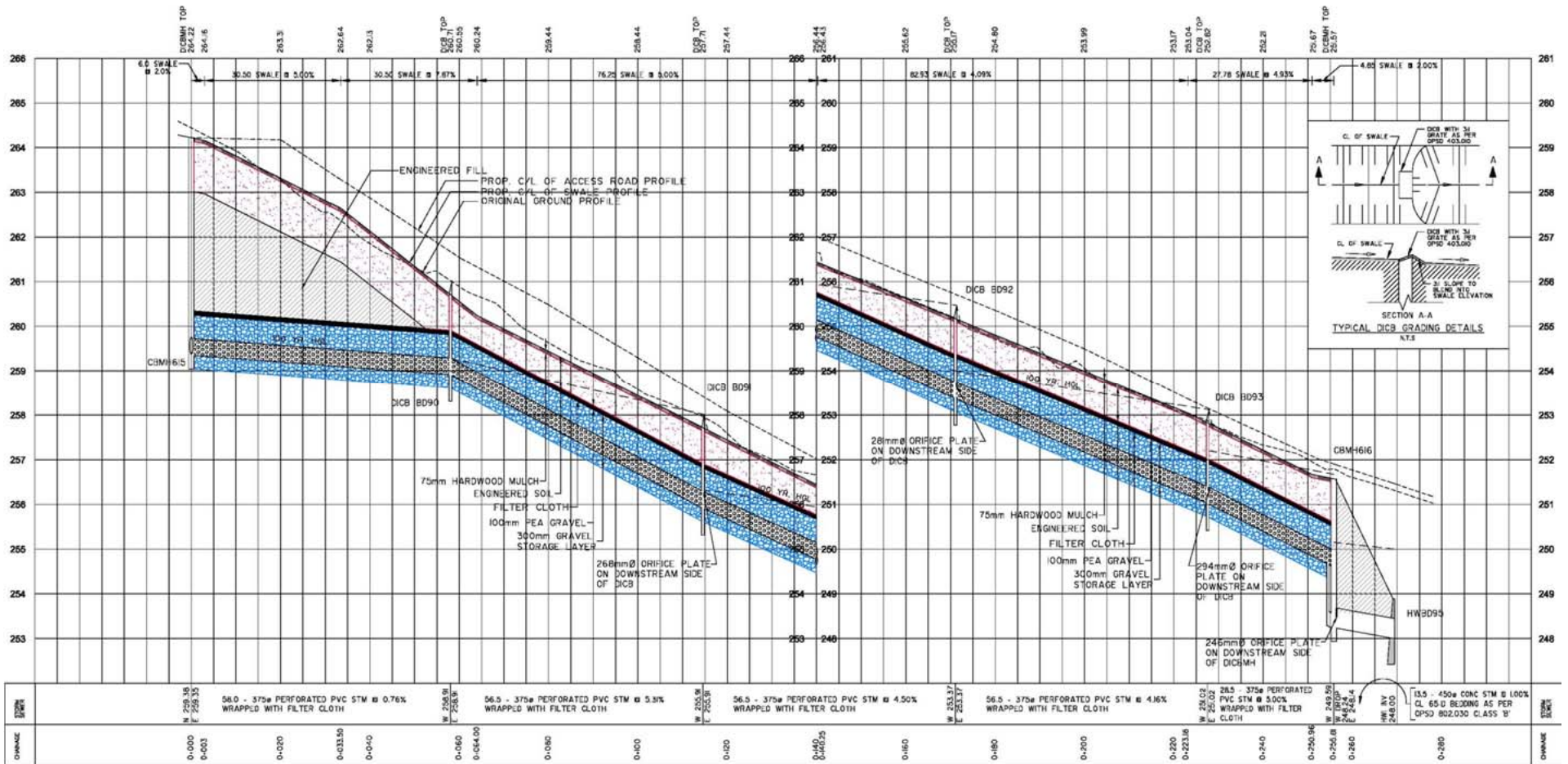


Woodlot Bioretention Swale

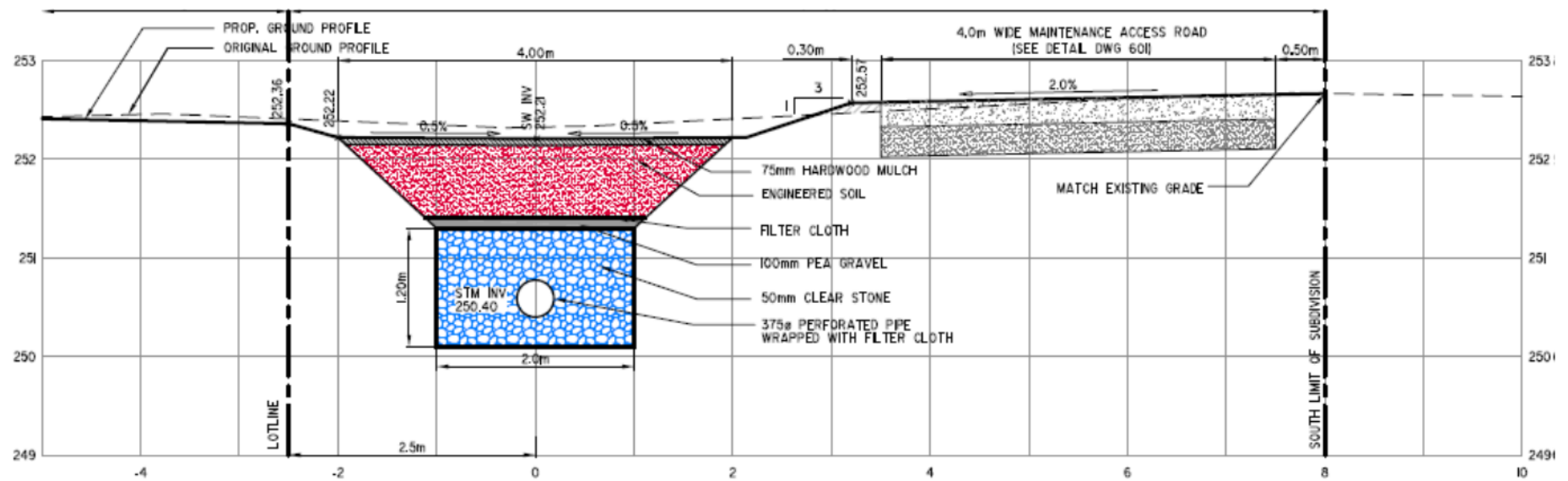




Bioretention Swale & Granular Cistern Profile

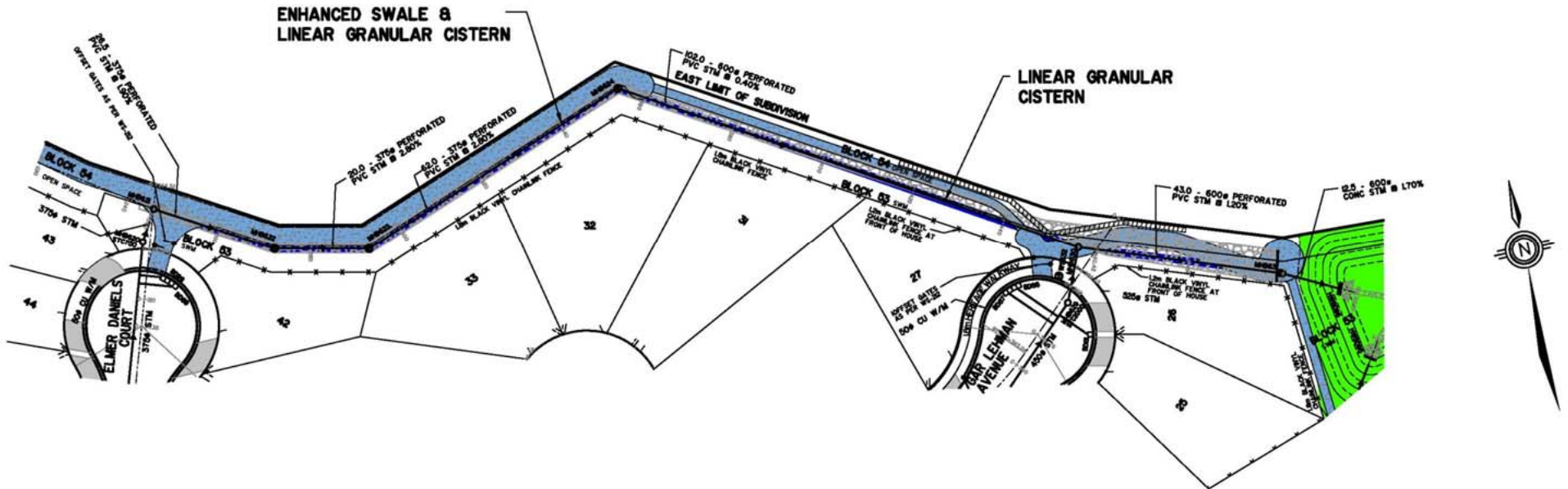


Bioretention Swale & Granular Cistern Section

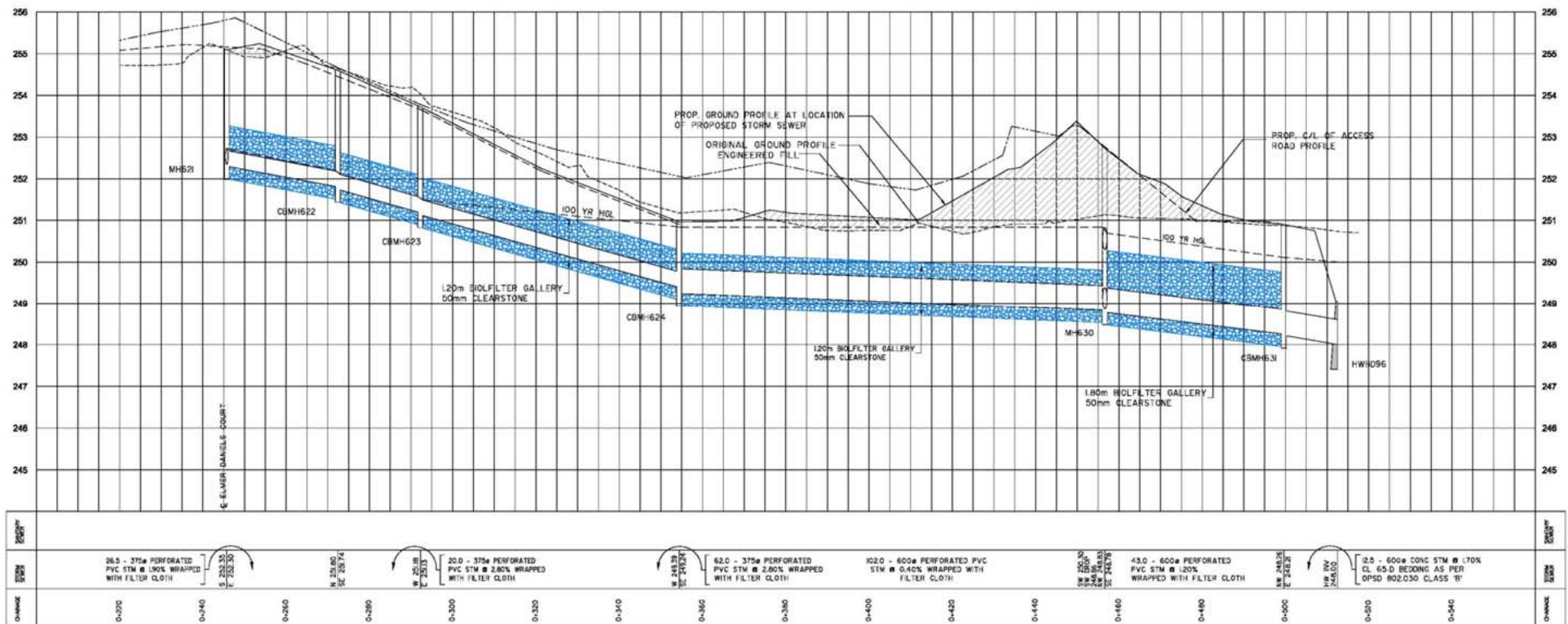




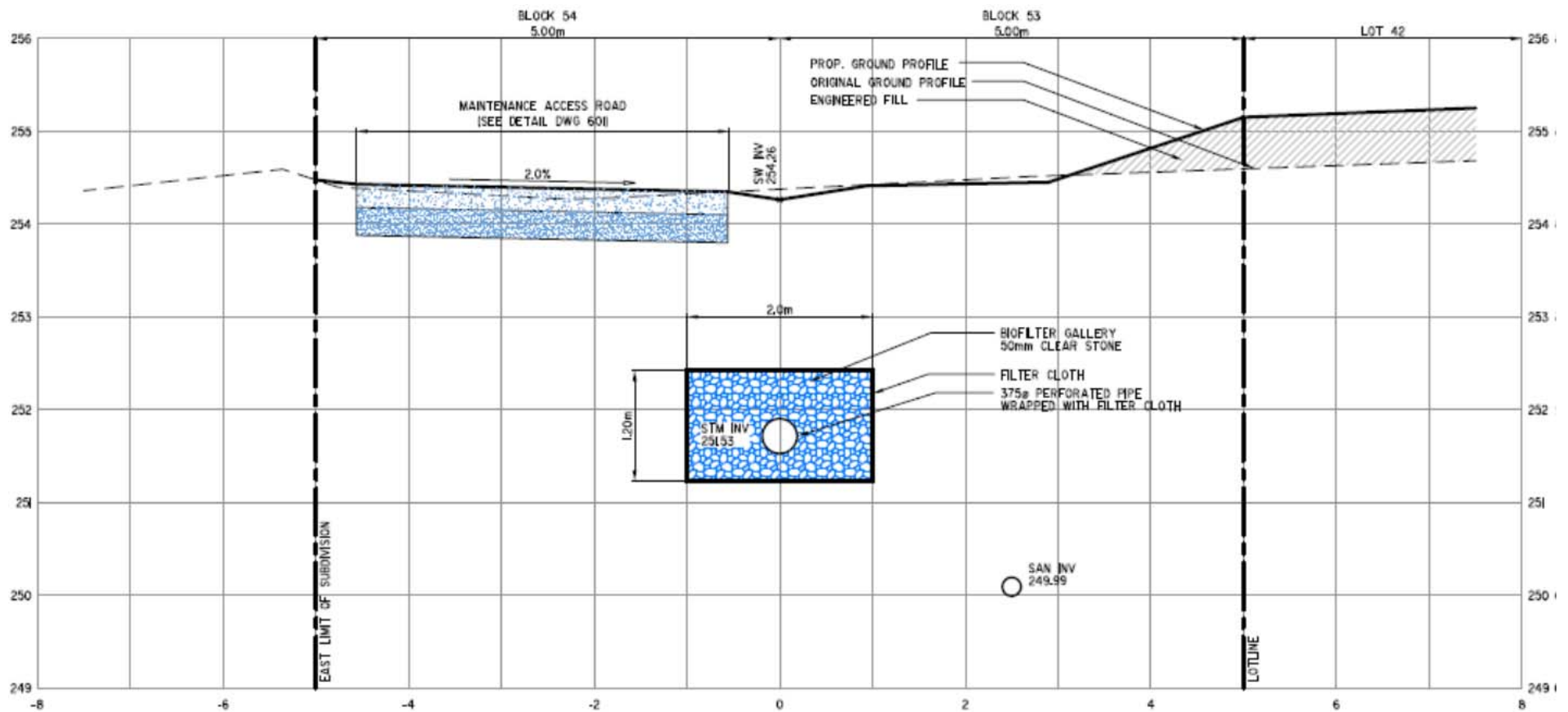
Enhanced Swale & Linear Granular Cistern Northeast Limit of Subdivision



Enhanced Swale & Linear Granular Cistern Profile



Enhanced Swale & Linear Granular Cistern Section

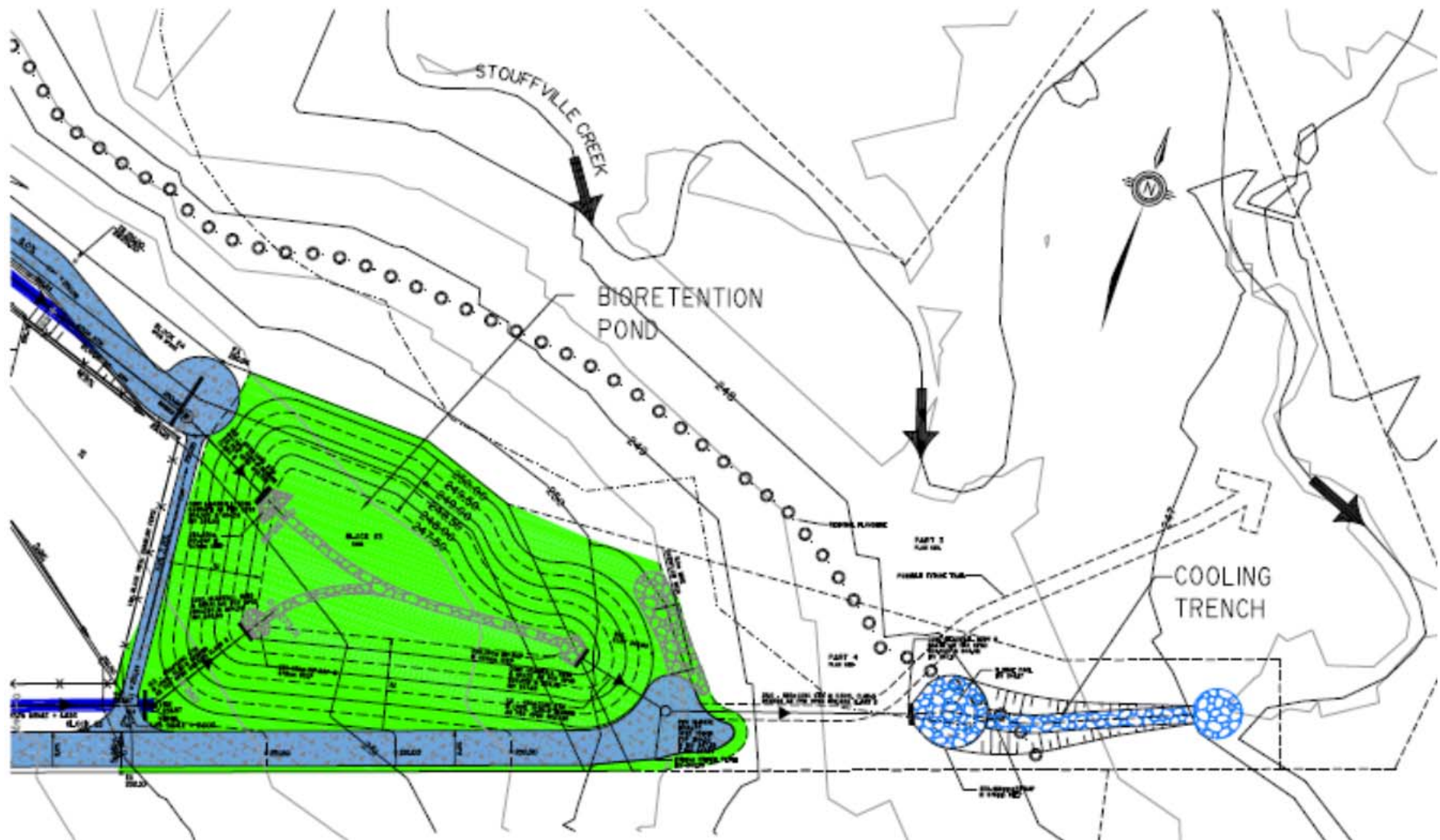




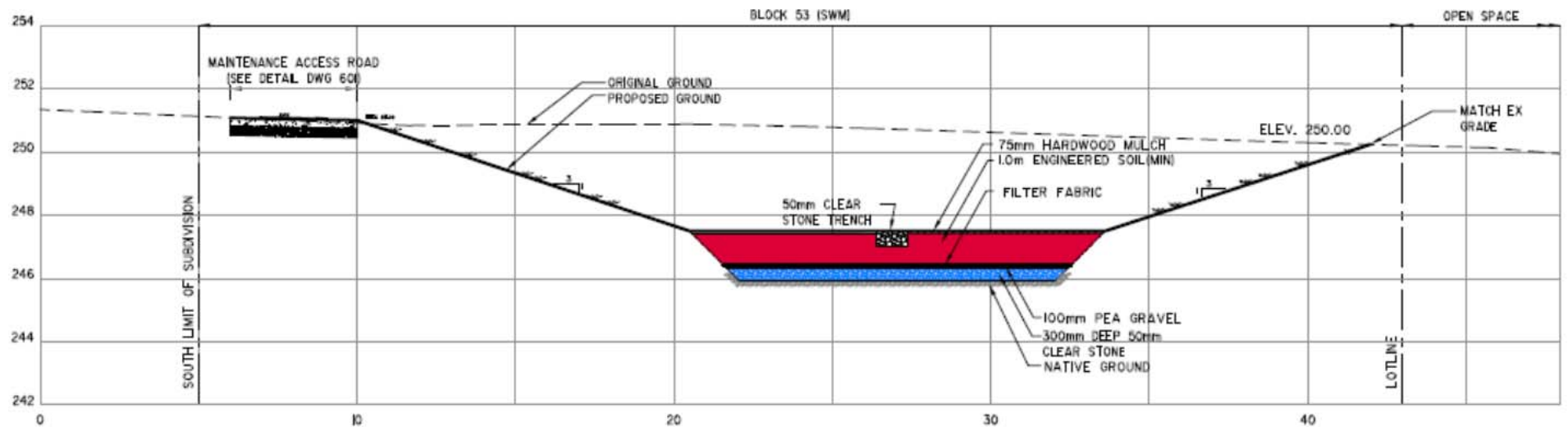
Water Quantity Control

- Water Quantity control – 2 through 100 year post development to pre-development levels.
1. Provided in the dry bioretention pond above a ponding depth of 0.25 metres.
 2. 0.25 metre depth and below utilized to provide polishing of low flows.

Bioretention Pond

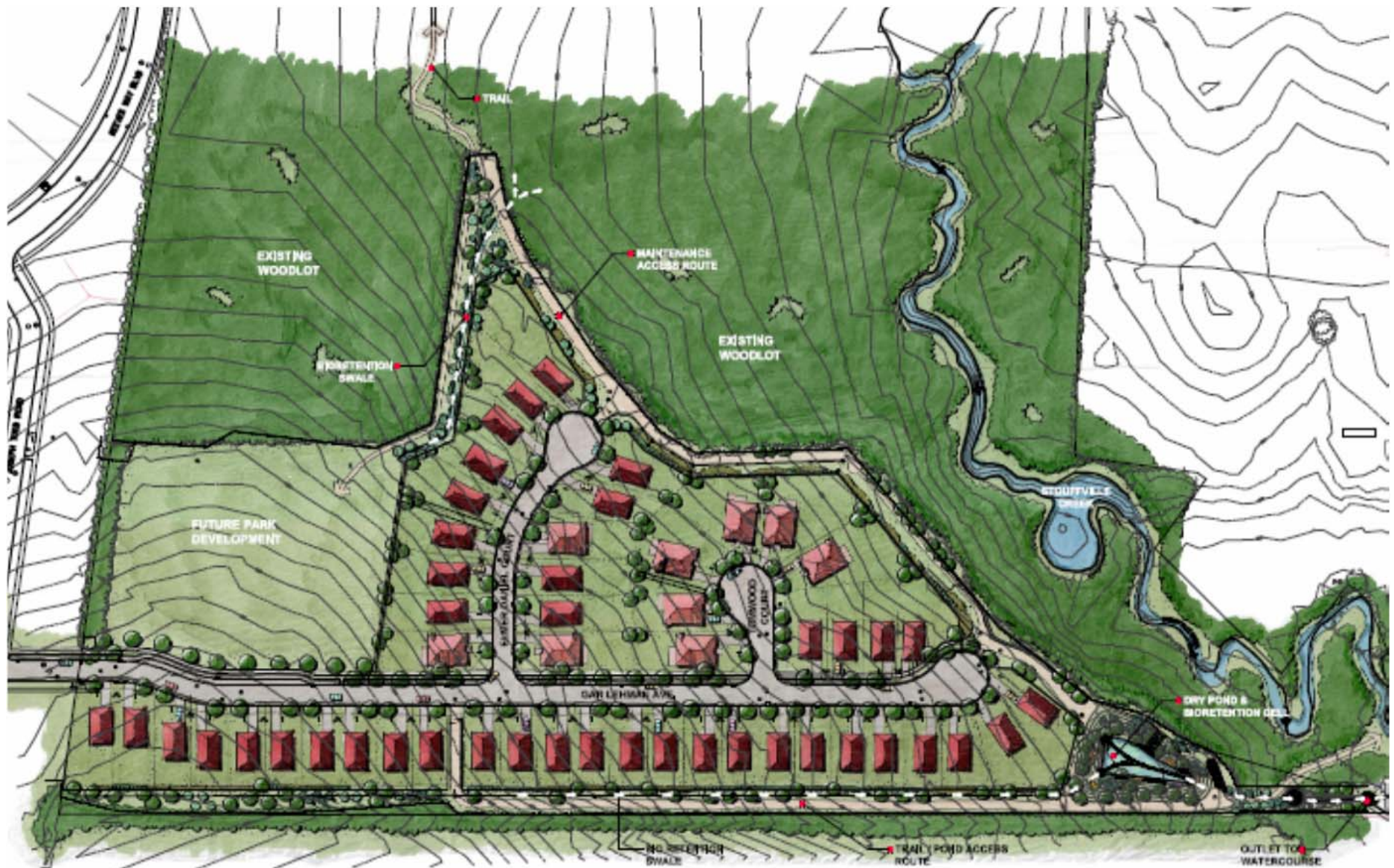


Bioretention Pond Section





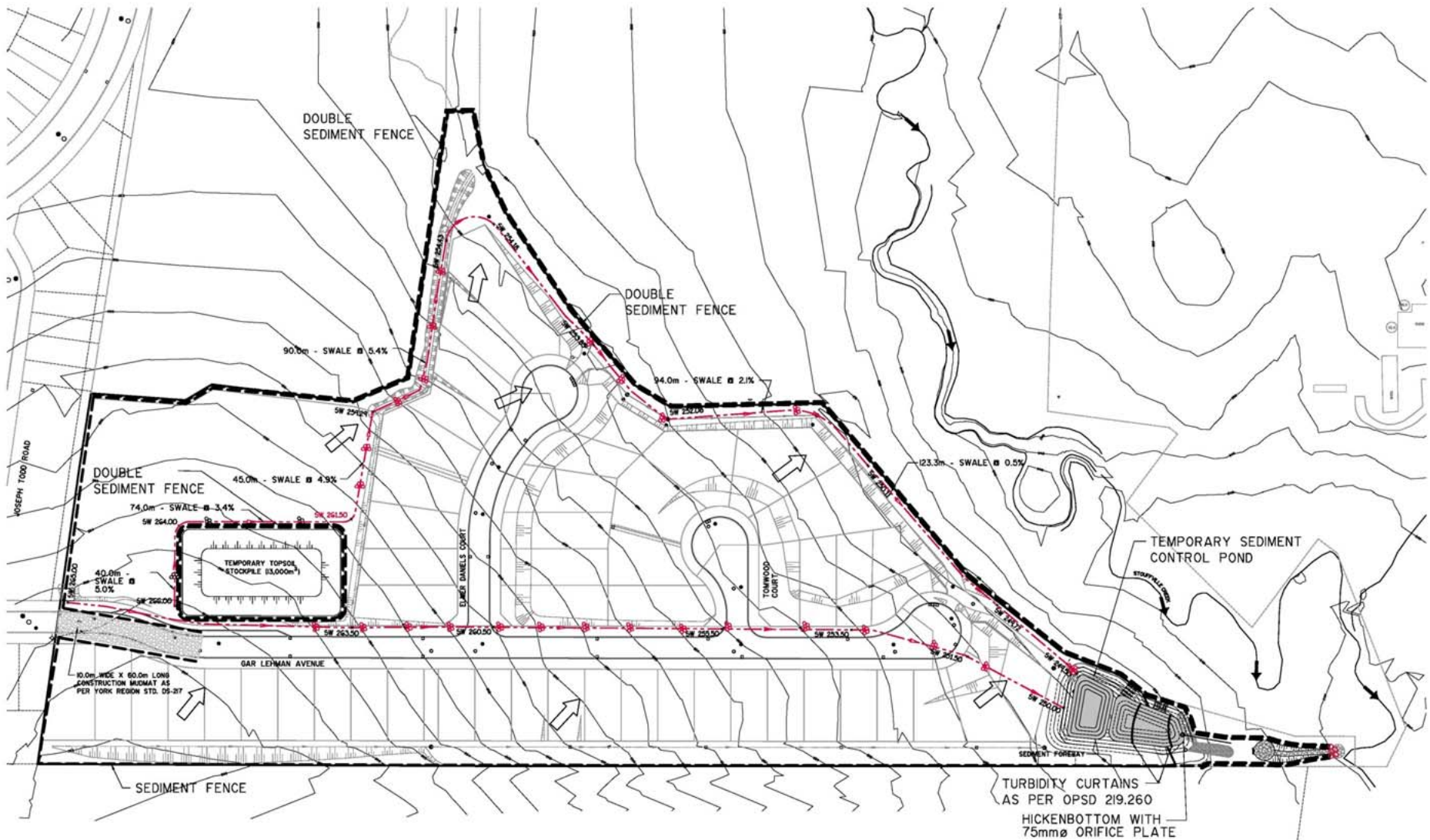
Proposed Overall Landscape Plan



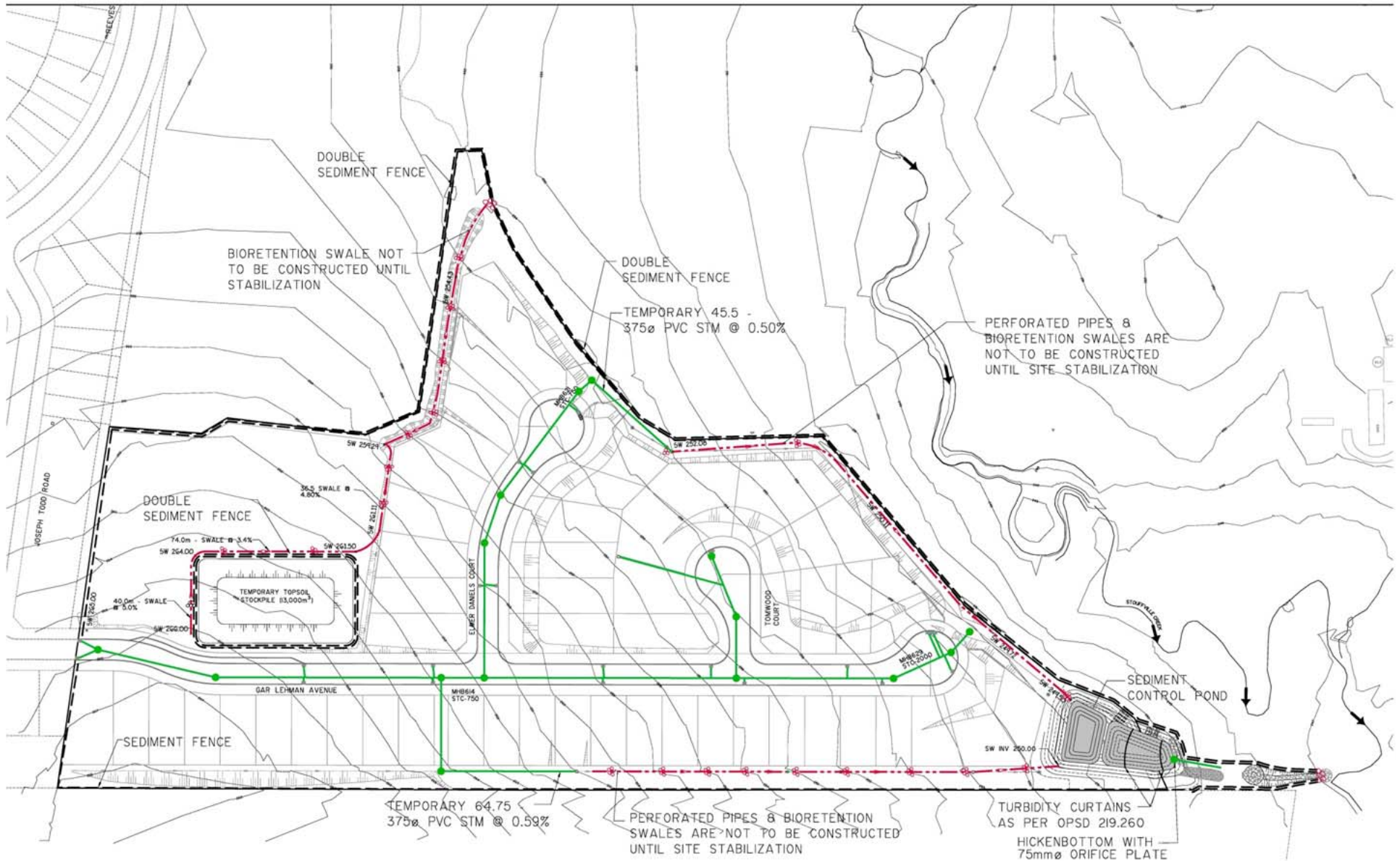
Construction Implementation Strategy

- **Fundamental approach** – avoid construction of all granular galleries and landscape features until after build-out and green up.
- Provide separate Erosion Sedimentation control plans for earthworks and underground servicing/house building.

Earthworks Sediment Control Plan



Underground Servicing Sediment Control Plan



Thank-you

- Questions?



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