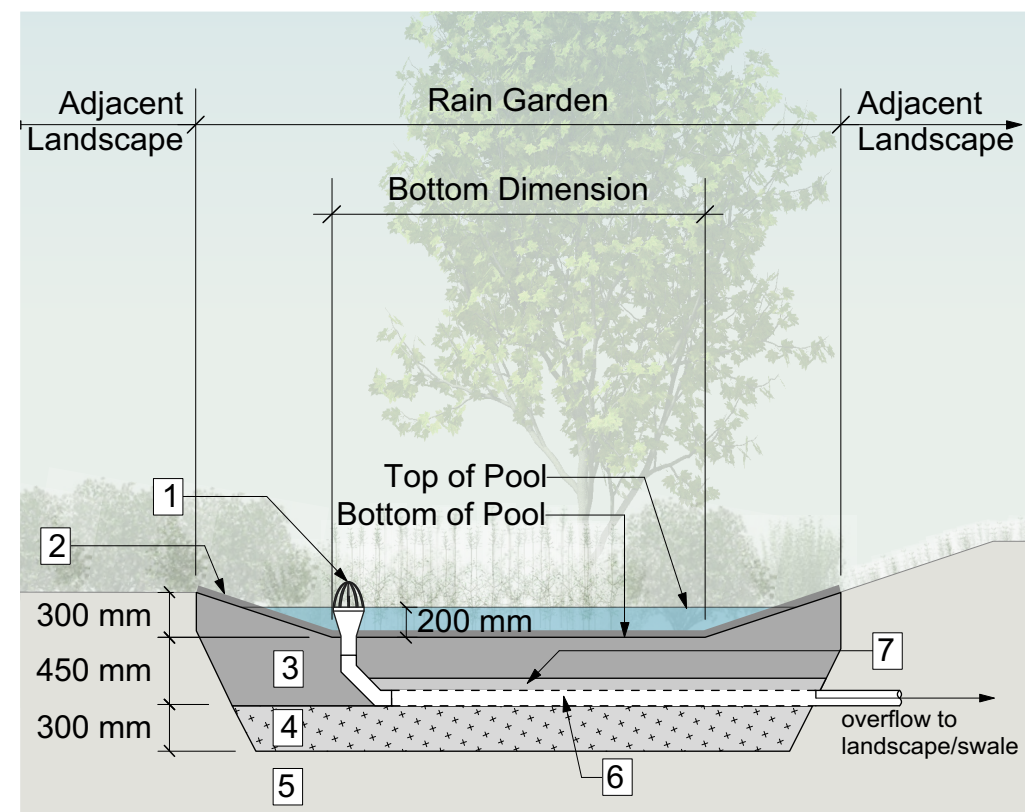


DL 114 AFFORDABLE HOUSING

STORMWATER MANAGEMENT STRATEGIES

1 RAIN GARDENS

Rain gardens are constructed landscape depressions that use permeable soil and plants to slow, cleanse and infiltrate stormwater runoff. Rain gardens are both functional and aesthetic elements in the landscape.

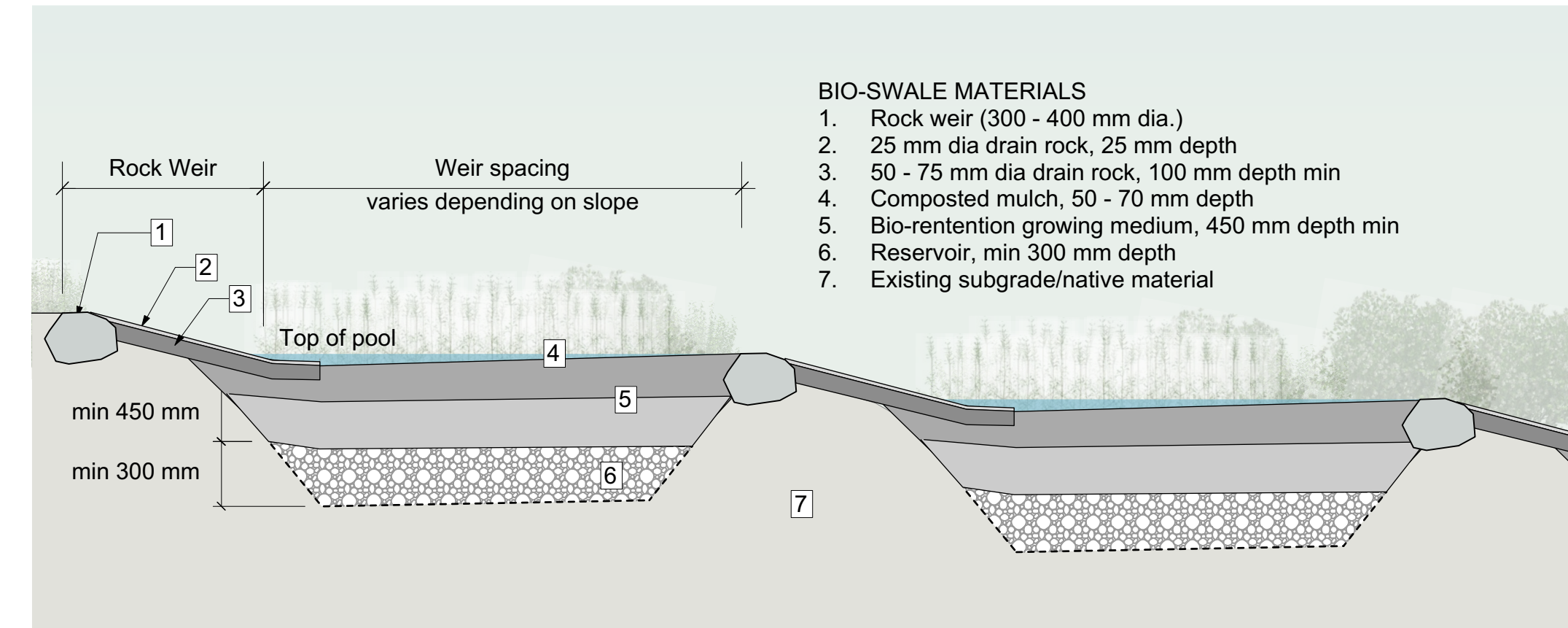


- RAIN GARDEN MATERIALS**
1. Overflow drain, 200 mm domed grate + adapter
 2. Composted mulch, 50 -70 mm depth
 3. Bio-retention growing medium, 450 mm depth
 4. Scarified/tilled subgrade, 300 mm depth
 5. Existing subgrade/native material
 6. 100 mm diameter (min) perforated pipe
 7. 25 mm diameter drain rock, 100 mm depth

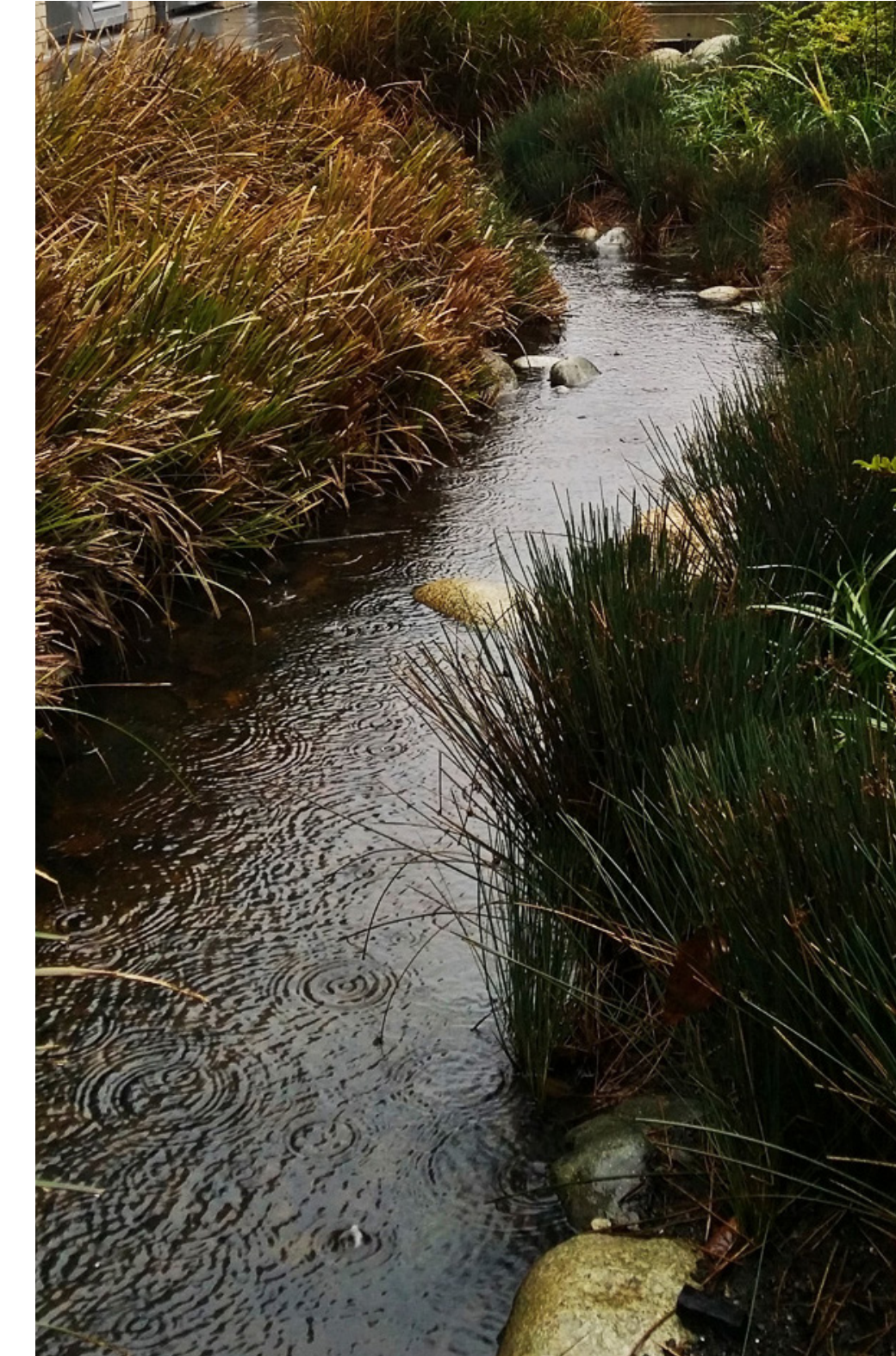


3 SWALES

Swales are planted channels that convey stormwater runoff. On sloped sites, swales are constructed using weirs that slow the flow of water and encourage some settling, slowing, and infiltration of runoff.



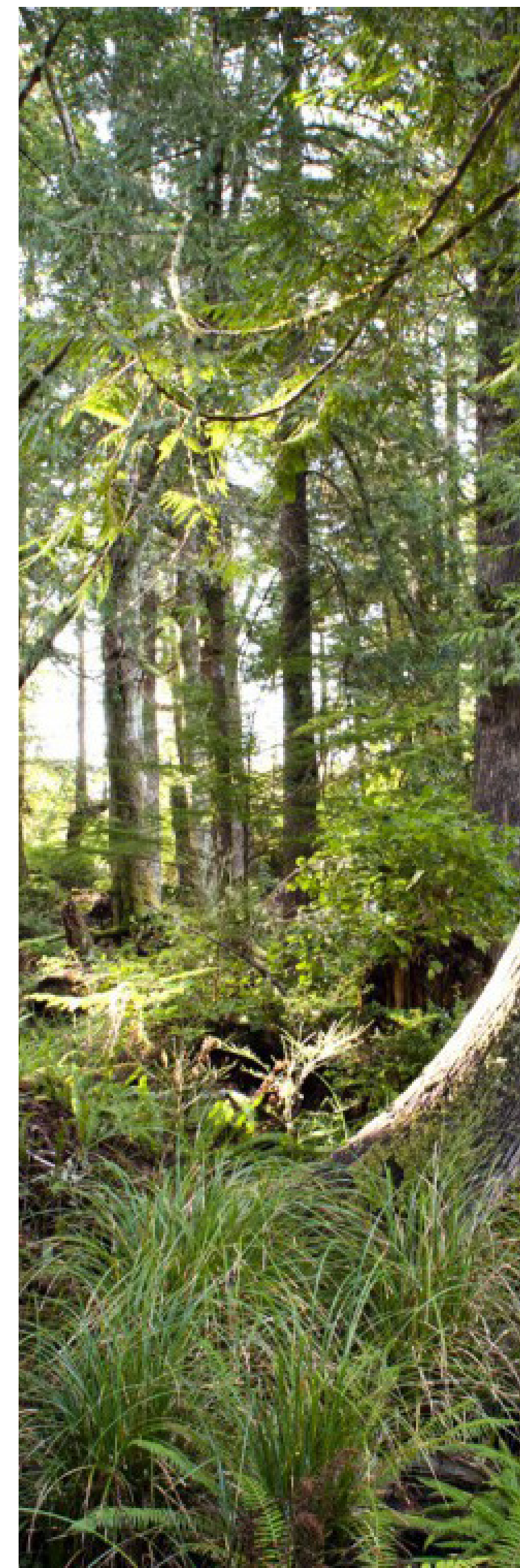
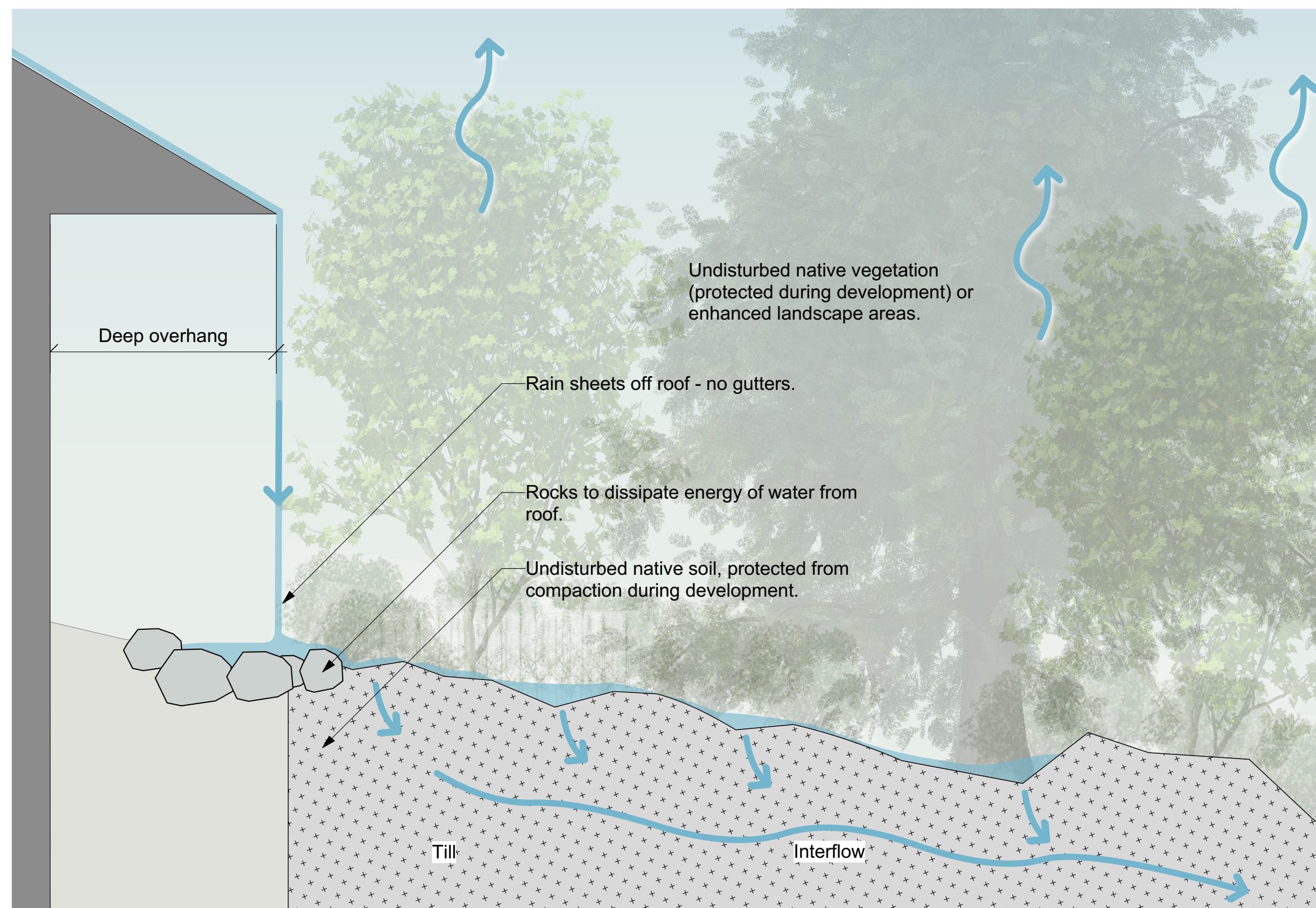
- BIO-SWALE MATERIALS**
1. Rock weir (300 - 400 mm dia.)
 2. 25 mm dia drain rock, 25 mm depth
 3. 50 - 75 mm dia drain rock, 100 mm depth min
 4. Composted mulch, 50 - 70 mm depth
 5. Bio-retention growing medium, 450 mm depth min
 6. Reservoir, min 300 mm depth
 7. Existing subgrade/native material



2 ABSORBENT LANDSCAPES

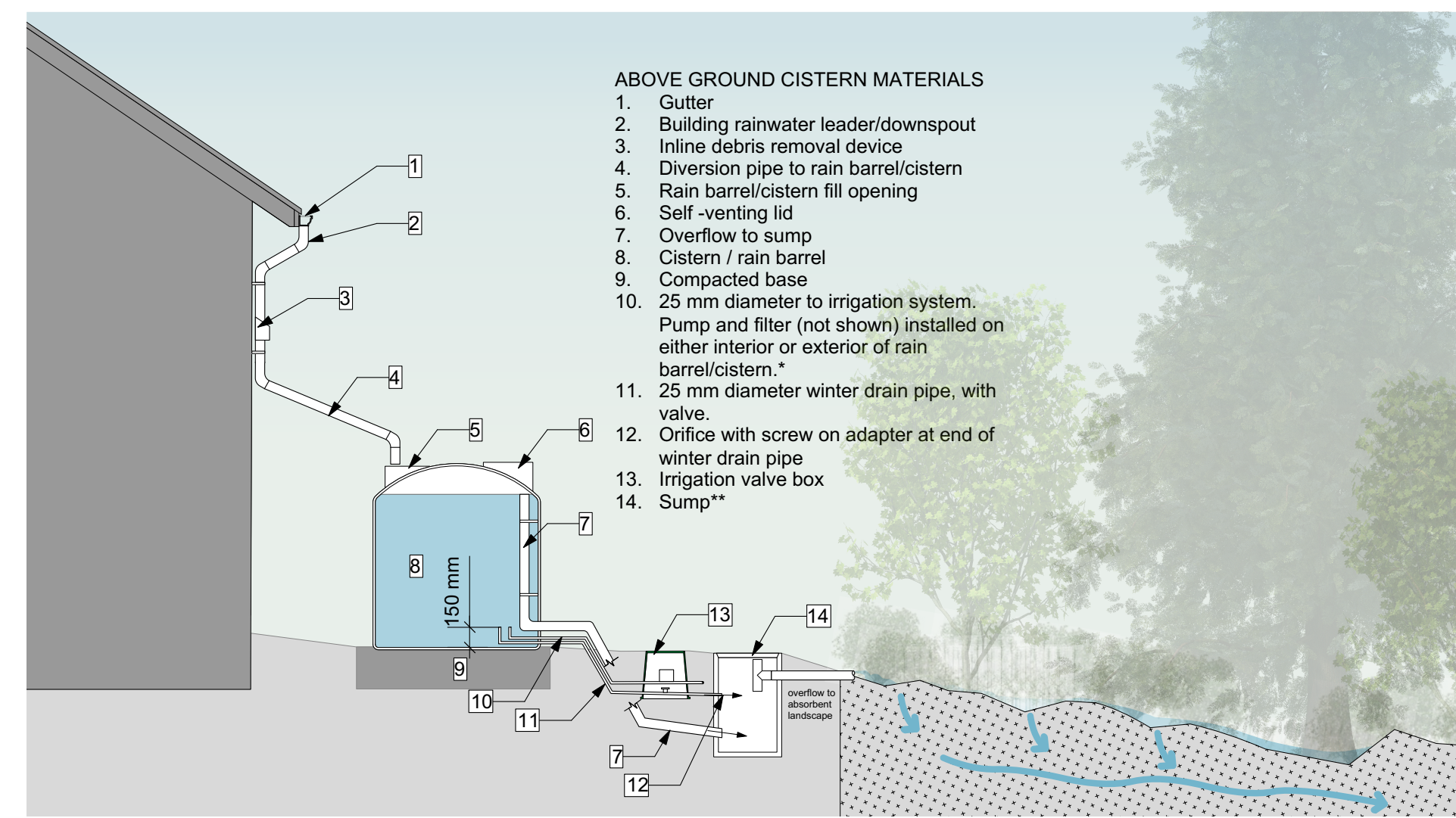
Our native forests have the capacity to slow, absorb, evaporate and transpire rainwater. We can use these absorbent landscapes to handle a portion of runoff generated by development. In order to do so, we must protect these absorbent landscapes from development activity, and disperse stormwater towards them via sheet flow.

MORE INFORMATION: District of Saanich "Stormwater Best Management Practices: Absorbent Landscapes"; GVRD "Stormwater Source Control Guidelines: Absorbent Landscapes" (2005).



4 CISTERNS

Cisterns can be designed to slowly release water during wet months, slowing the rate at which stormwater is released to swales, raingardens or absorbent landscape areas. During dryer months, the cistern stores water for irrigation or fire suppression.

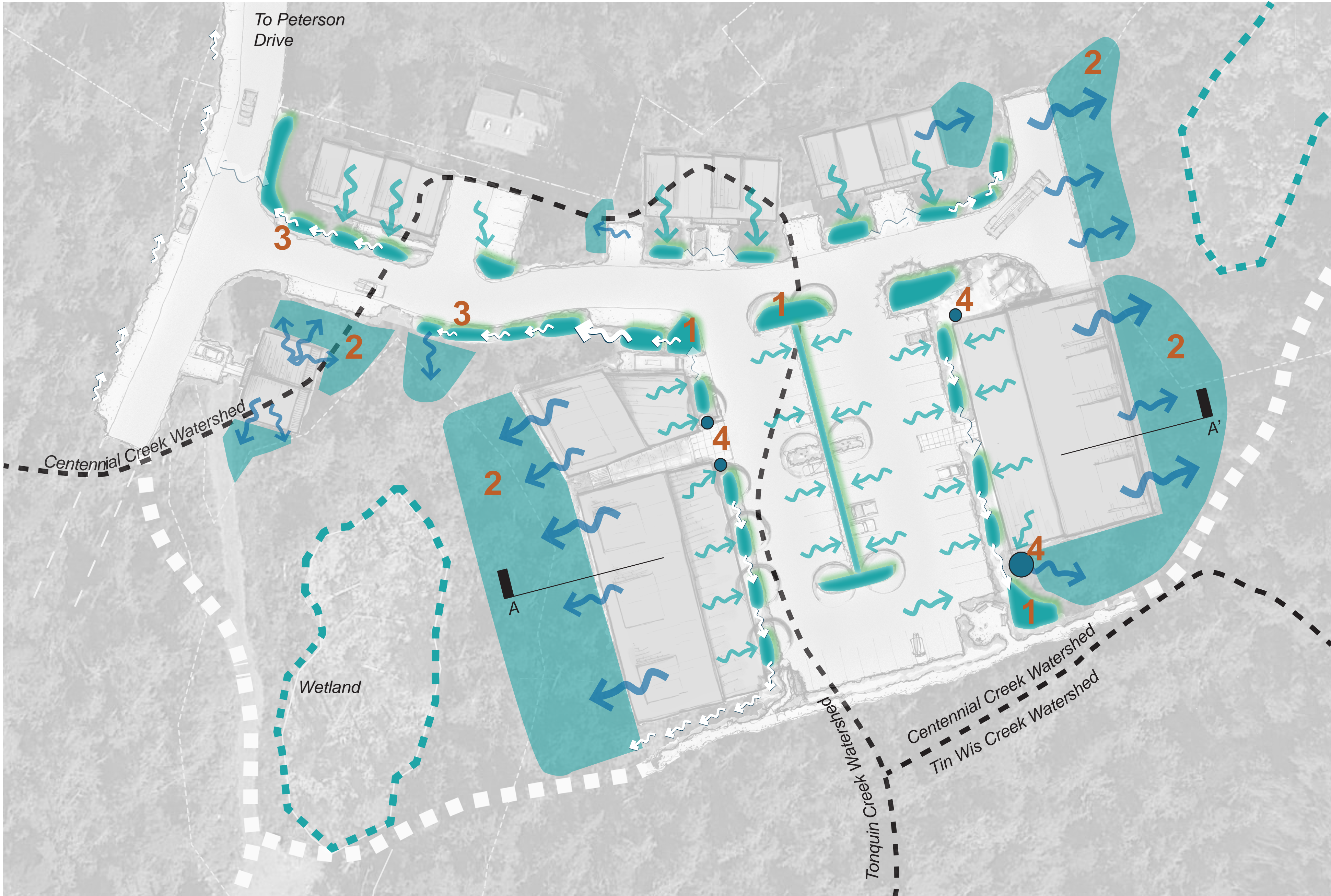


- ABOVE GROUND CISTERN MATERIALS**
1. Gutter
 2. Building rainwater leader/downspout
 3. In-line debris removal device
 4. Diversion pipe to rain barrel/cistern
 5. Rain barrel/cistern fill opening
 6. Self-venting lid
 7. Overflow to sump
 8. Cistern / rain barrel
 9. Compacted base
 10. 25 mm diameter to irrigation system. Pump and filter (not shown) installed on either interior or exterior of rain barrel/cistern.*
 11. 25 mm diameter winter drain pipe, with valve.
 12. Orifice with screw on adapter at end of winter drain pipe
 13. Irrigation valve box
 14. Sump**

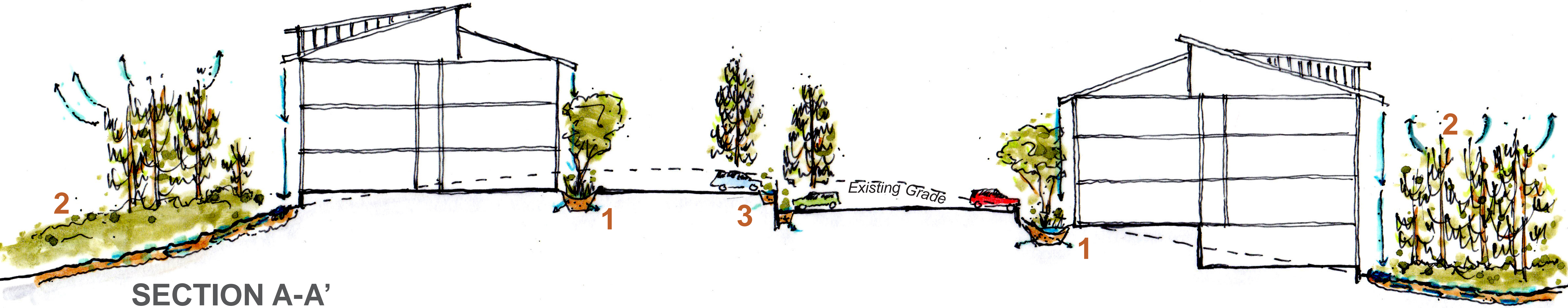


DL 114 AFFORDABLE HOUSING

STORMWATER MANAGEMENT SCHEMATIC PLAN



-  1 RAIN GARDENS
-  2 ABSORBENT LANDSCAPES
-  3 SWALES
-  4 CISTERNS

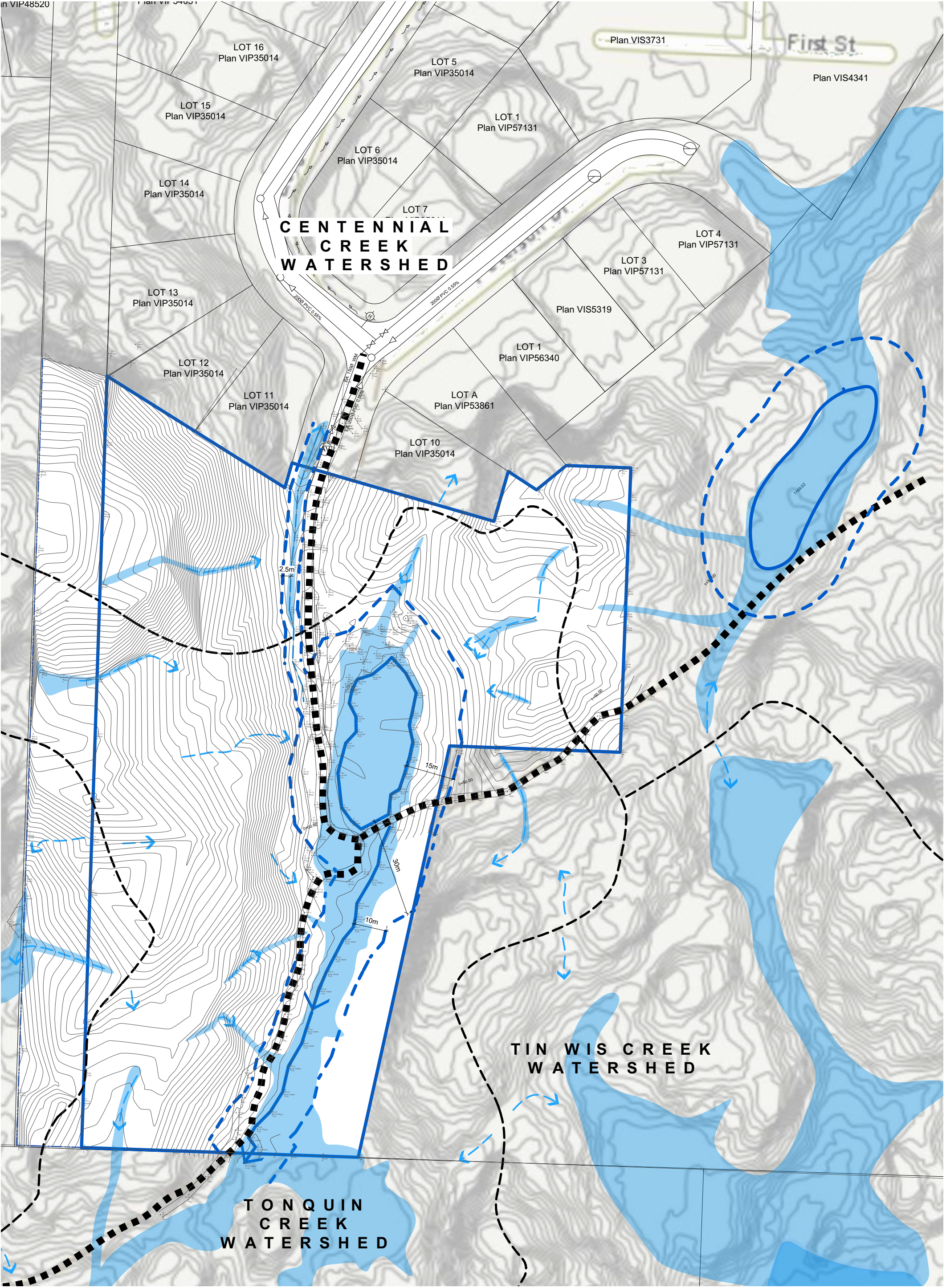


SECTION A-A'

DL 114 AFFORDABLE HOUSING

SITE ANALYSIS

NATURAL DRAINAGE

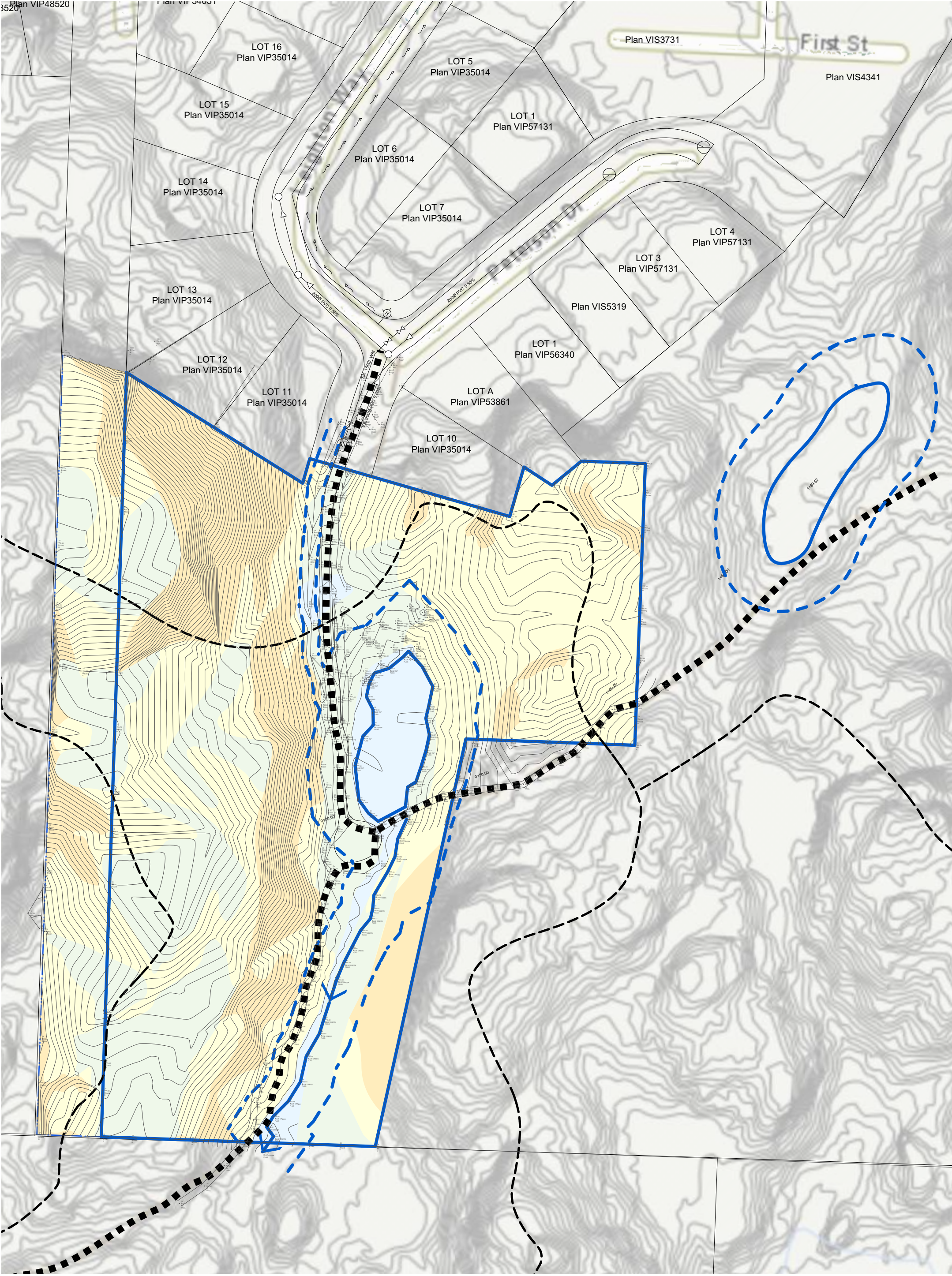


TOFIND HOUSING PHASE 1 NATURAL DRAINAGE PLAN 1:500

LEGEND

- DRAINAGE DIVIDE
- DIRECTION OF WATER FLOW
- WATER RECEIVING AREA
- MAPPED STREAM
- MAPPED WETLAND WITH SETBACK
- EXISTING TRAIL

SLOPE ANALYSIS

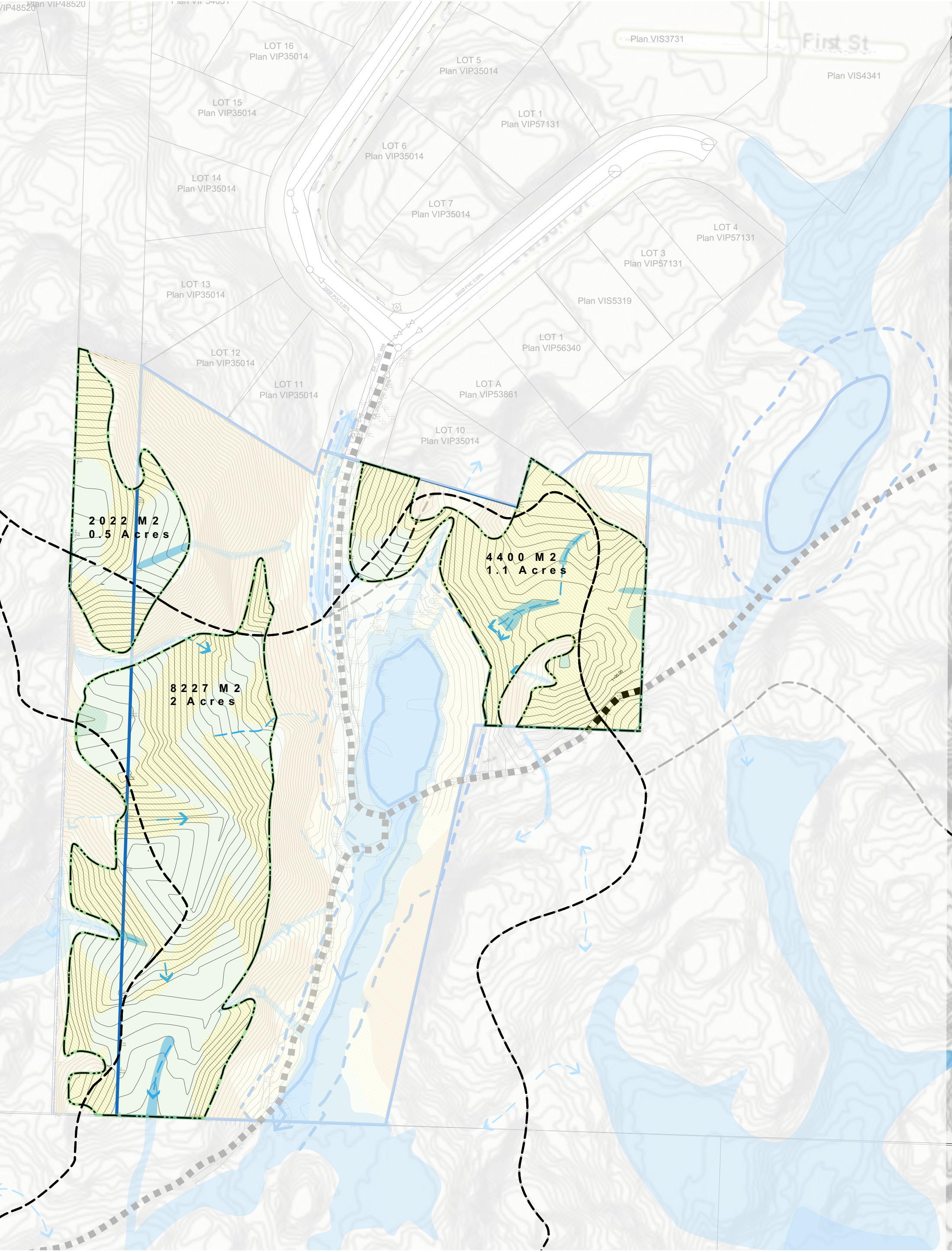


TOFIND HOUSING PHASE 1 SLOPE ANALYSIS 1:500

LEGEND

- DRAINAGE DIVIDE
- FLAT (0-5%)
- EASY TO DEVELOP (0-5%)
- MODERATE TO DEVELOP (5-10%)
- DIFFICULT TO DEVELOP (>10%)
- MAPPED WETLAND
- EXISTING TRAIL

PREFERRED DEVELOPMENT SITES



TOFIND HOUSING PHASE 1 GOOD DEVELOPMENT SITES 1:500

LEGEND

- DRAINAGE DIVIDE
- FLAT (0-5%)
- EASY TO DEVELOP (0-5%)
- MODERATE TO DEVELOP (5-10%)
- DIFFICULT TO DEVELOP (>10%)
- MAPPED WETLAND
- EXISTING TRAIL
- GOOD DEVELOPMENT SITE (Slope <math>< 5\%</math>, Overall of Wetland Setback (measured from the wetland) > 30m (98.4ft) and not in wetland boundary area)
- MAPPED WETLAND WITH SETBACK
- EXISTING TRAIL

DL 114 AFFORDABLE HOUSING SCHEMATIC SITE PLAN



ROAD RIGHT OF WAY

ACCESS TO FUTURE DEVELOPMENT

WETLAND

WETLAND

15m RIPARIAN BUFFER

15m RIPARIAN BUFFER

TRAILS

THC A

THC B

THC C

THC D

THC E

COMMUNITY CENTRE

TBF A

LOT 11
Plan VIP56340

LOT 10A
Plan VIP53864

LOT 9
Plan VIP25014