



Planning & Development
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Memo

Date: April 28, 2023

To: Planning Board

From: Michael G. Livingston, Town Engineer/Planner

Re: Perkins Pasture Subdivision - Stormwater Management and Design Review

Information Provided

- Design Plans by Oak Point Associates, Dated 3/30/23:
 - Pre-Development Watershed Plan, Sht. WS-1 dated 1/9/23
 - Post-Development Plan, Sht. WS-2 dated 1/9/23
- Stormwater Management Report/MDEP Permit Application dated January 6, 2023 by Jacques L. Gagnon, Jr. PE # 6237 of Oak Point Associates

Analysis

Methodology:

- HydroCAD model good
- Rainfall intensity rates good
- Water Quality approach good
- Analysis Points good, consistent pre vs post
- Total area pre vs post same - good

Pre-Development:

- Basin Limits good, depicting on and off site limits
- Flow paths good
- Areas good

Post-Development:

- Developed areas well graded to convey stormwater to detention and treatment measures
- Consistent analysis points with pre-development model
- Subcatchment areas well modelled
- Flow paths good.
- Ponds (25 year Event):
 - Treatment Area 1 (Pond 2) modelled well with peak elevation less than the berm and overflow, good
 - Treatment Area 2 (Pond 3) modelled well with peak elevation less than the berm and overflow, good
- All level spreaders and forested buffers well designed.

Results:

Quantity calculations indicate no significant increase in estimated peak flow rates for the 2, 10 and 25 year storm events for Design Points 1, 2 and 3, see Table in report, Part 1.

The use of level lip spreaders and forested buffers provides good stormwater treatment.

The stormwater management plan meets Town ordinances.

Operation and Maintenance Plan:

Included in stormwater management report in Part 2, Inspection and Maintenance Plan. The Plan consists of written narratives, inspection requirements and sample maintenance logs.
Good.

Erosion and Sedimentation Control Plan:

Erosion control barriers depicted on Sht. CG 101
Erosion control notes and details located on Sht.'s C-501 and C-502
Stabilized Exit at Quarry Road to be noted
Construction entrance/exit location at Quarry Road to be noted

The information provided on the plans meet BMP and Town standards and requirements.

Design:

Pond and Level Lip Spreader designs good.
Roadside swales and cross culverts good. Sheet CG 102 depicts driveway culverts at every lot. Lots 4, 10 and 13 are at high spots, culverts could be noted as optional.
Details on Sheets CG 103, C- 502 and C-503 good.

Lot 17: Plans indicate an existing cross culvert under Quarry Road which drains a significant upslope area, see sketch. Development of Lot 17 will affect the drainage from the Town road.

- A drainage easement is needed across Lot 17 to the existing wetland area
- The easement to be 20 feet in width and conveyed to the Town prior to an occupancy permit or prior to the conveyance of Lot 17
- See attached sketches A and B of possible locations
- Option A would require a swale to be constructed
- A small amount of wetland fill should be considered to accommodate development

Conclusions:

With the items in blue above addressed. The Plans and information submitted will meet the Town requirements.



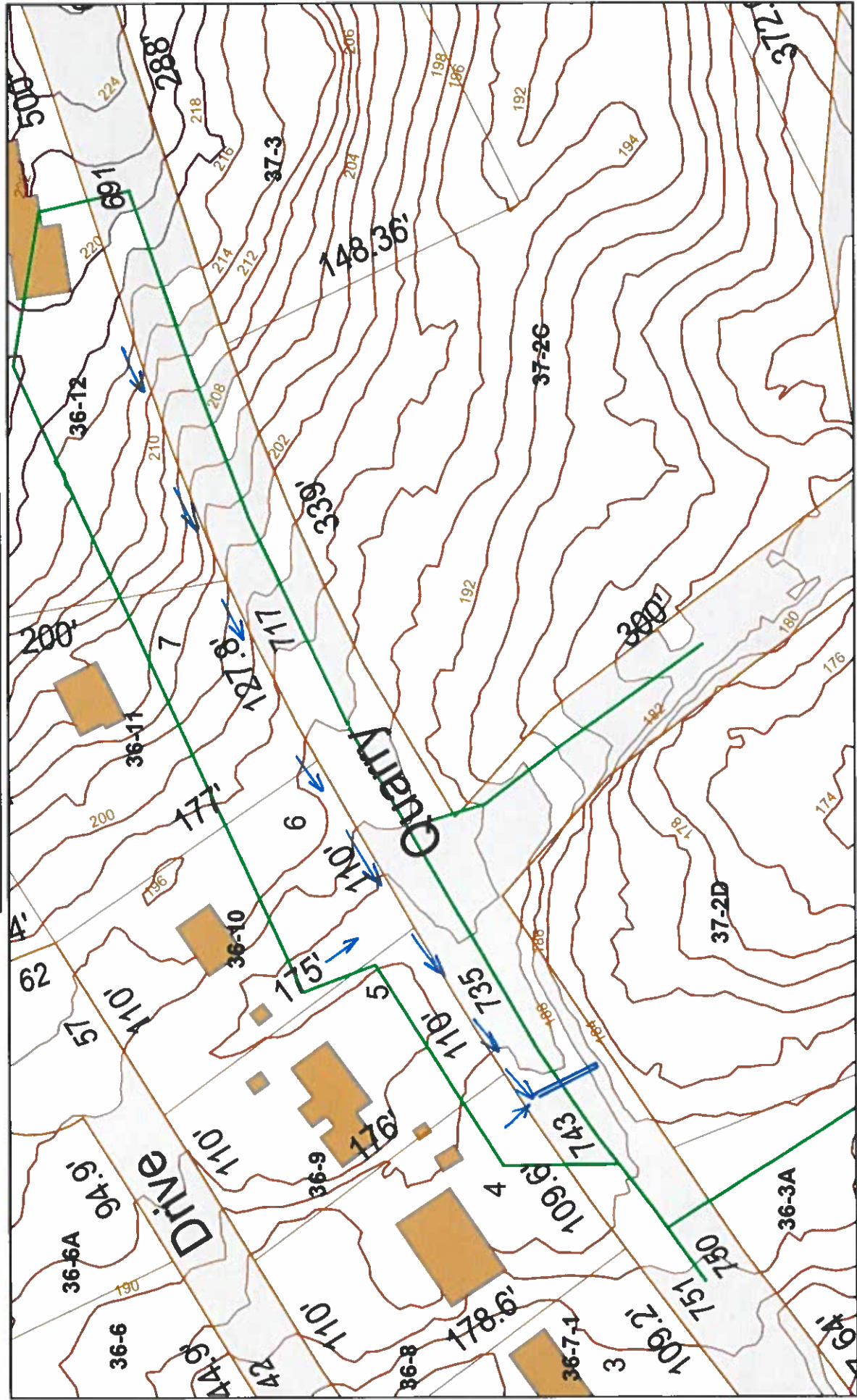
April 28, 2023

Wells, ME

1 inch = 80 Feet

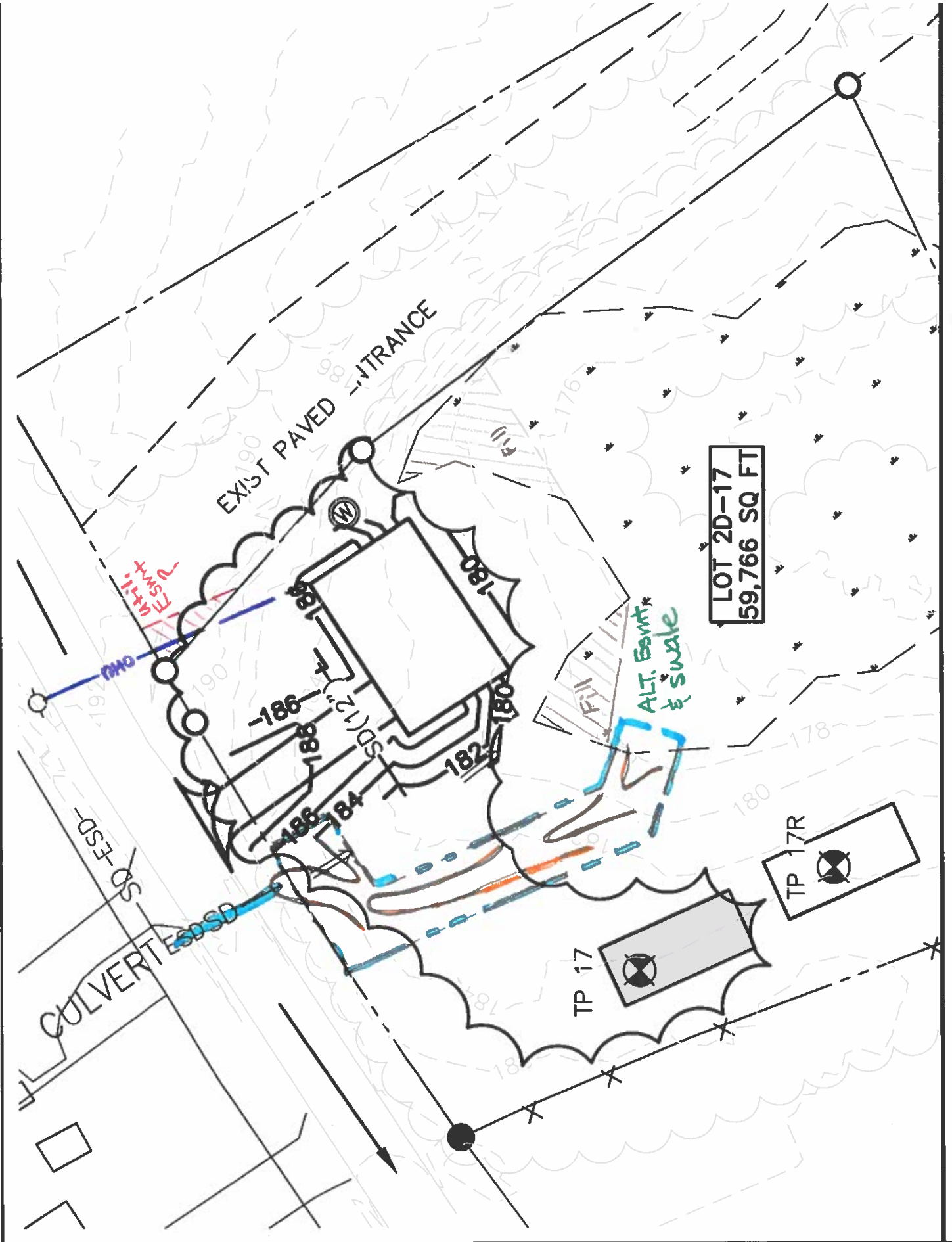


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A



LOT 2D-17
59,766 SQ FT

CULVERT
SD-ESD

EXIST PAVED DRIVEWAY
EXIST ALT. ESMT & SWALE

FILL
ALT. ESMT & SWALE

TP 17

TP 17R

186

188

188

184

SD (1/2) SD

182

180

180

176

178

180

180

180

180

180

180

180

180



B

