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 Steven J. Smith & Associates, Inc.
 Surveying, Engineering, Land Planning
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Design of Disposal System
 Peter W. Howard
 No. 850
 Supply & Piping
 Water

SEAL BY: PWH
 PROJ MGR: C M SHUNWAY
 TECH DEPT MGR: PWH
 ENGR CHK: PWH

NOT VALID FOR CONSTRUCTION
 BY ANY OTHER STATE
 AS AN AUTHORIZED ENGINEER
 OR ARCHITECT IN ANY STATE
 UNLESS THE SEALS AND STAMPS
 INCLUDING ELECTRONICALLY IN
 THE STATE OF NEW HAMPSHIRE
 ARE USED IN ACCORDANCE WITH THE
 PROFESSIONAL SEAL ACT AND
 RULES GOVERNING THE PRACTICE
 OF PROFESSIONAL ENGINEERING, P.E.
 AND ARCHITECTURE, A.A.

RECEIVED
 ADVISE YOUR CONTRACTOR
 OF REQUIRED CHANGES IN
 PLANS AS INDICATED ON THESE
 CONDITIONAL APPROVALS
 1999 015664
 REVIEWED AND APPROVED
 IN ACCORDANCE WITH THE
 REQUIREMENTS OF THE
 NH DEPT OF ENVIRONMENTAL SERVICES
 WATER DIVISION
 Date: 3/1/99

UNIVERSITY OF NEW HAMPSHIRE
 GROUNDWINDS PROJECT BARTLETT, NH
 SUBSURFACE DISPOSAL SYSTEM

SCALE: 1"=20'
 DATE: 2/18/99
 PROJECT NO: 98-4081-01
 CADD FILE NO: 4081-C2
 DRAWING NO: C2
 SHEET 2 OF 9

CONSTRUCTION NOTES

- ALL TREES, BUSHES, BOULDERS, DEBRIS AND TOPSOIL MUST BE REMOVED PRIOR TO PLACING ACCEPTABLE FILL THROUGHOUT THE LEACH FIELD AREA, WHICH INCLUDES THE AREA BELOW THE LEACH FIELD, THE EXTENSIONS, AND THE SLOPED EMBANKMENTS.
- PROPERTY LINES ARE APPROXIMATE ON THIS PLAN.
- SYSTEM MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE APPROVED PLANS. ANY CHANGES MUST BE APPROVED BY THE DESIGNER & NHDES PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES IN THE APPROVED PLANS & THE ACTUAL SITE CONDITIONS MUST BE REPORTED BY THE INSTALLER TO THE DESIGNER AND TO THE NHDES PRIOR TO CONSTRUCTION.
- NO RESPONSIBILITY FOR THE PROPER OPERATION OF THIS SYSTEM IS ASSUMED UNLESS CONSTRUCTION HAS BEEN SUPERVISED BY STEVEN J. SMITH & ASSOC., INC.
- THE CONSTRUCTION APPROVAL IS GOOD FOR FOUR YEARS FROM THE DATE OF APPROVAL.

OPERATING REQUIREMENTS

- SEPTIC TANKS SHALL BE INSPECTED FOR ACCUMULATION OF SLUDGE AND SCUM AT LEAST ONCE EVERY YEAR.
- GREASE, BULKY WASTE, TOXIC OR HAZARDOUS WASTES SHALL NOT BE INTRODUCED INTO THE SEPTIC SYSTEM.
- IF AFTER THIS SYSTEM IS CONSTRUCTED IT APPEARS TO BE IN FAILURE, ACTION SHALL BE TAKEN TO CORRECT THE PROBLEM.

CONSTRUCTION MATERIALS

Septic Tank & Pump Chamber:
 Item # 1500H2, H-20 1,320 Gallon Concrete Septic Tank with 240 Gallon Pump Chamber by Andrew J. Foss Co. Concrete Products, Farmington, NH 755-2515.

Distribution Box:
 Item # 5B5, Small Box - 5 Outlet Concrete Distribution Box by Andrew J. Foss Co., Farmington, NH 755-2515.

Flow Equalizers:
 SSI Inc. Flow Equalizers, (2 required) for outlet pipes from D-Box. Available from Huber Design Assoc., PO Box 401, Hancock, NH 03449, 525-4320.

System Modules:
 Standard In-Drain Type B Module, (10 required), Available from Huber Design Assoc., PO Box 401, Hancock, NH 03449, 525-4320. (Note Geo-textile (Mirafix 140N or equal) fabric to cover top & sides of modules provided with modules).

Sealants:
 All connections, joints, and pipes to be sealed with "Therm-O-Seal", Ploy-Lok Seals or equal.

Fill Materials:
Sand Bed around Modules: Medium to coarse sand with an effective size of 0.175 to 2.00 mm with no more than 5% passing the #20 sieve and no particles larger than 3/4".
Backfill: Clean, permeable soil, free of topsoil, humus, dredgings, frozen material or stones greater than 6" in any direction.
Loam: Clean loam capable of supporting vegetative cover over the leach field.

CONSTRUCTION MATERIALS (Con't)

Pump:
 Myers Simplex ME3F11 Effluent Pump (1#, 120V) capable of pumping 45 GPM at 17' TDH w/ SJE 20PMD115 switch. Install SJE Model 101H High Water Alarm in building. Available at Blake Equipment Co., Alton, NH 1-800-552-0389.

Effluent Filter:
 A-1800 Zobel Filter, (1 required) for outlet pipe inside septic tank. Available from Huber Design Assoc., PO Box 401, Hancock, NH 03449, 525-4320. Provide access cover for cleaning and maintenance.

DESIGN ELEVATIONS

og Uphill	= 546.00'
Depth to ESHWT	= 1.50'
ESHWT Elevation	= 544.50'
Distance up to BB	= 4.00'
Elevation BB	= 548.50'
Height of Modules	= 0.36'
Top of Modules	= 549.08'
Depth of Cover (Min.)	= 1.00'
FG (Min.)	= 550.08'

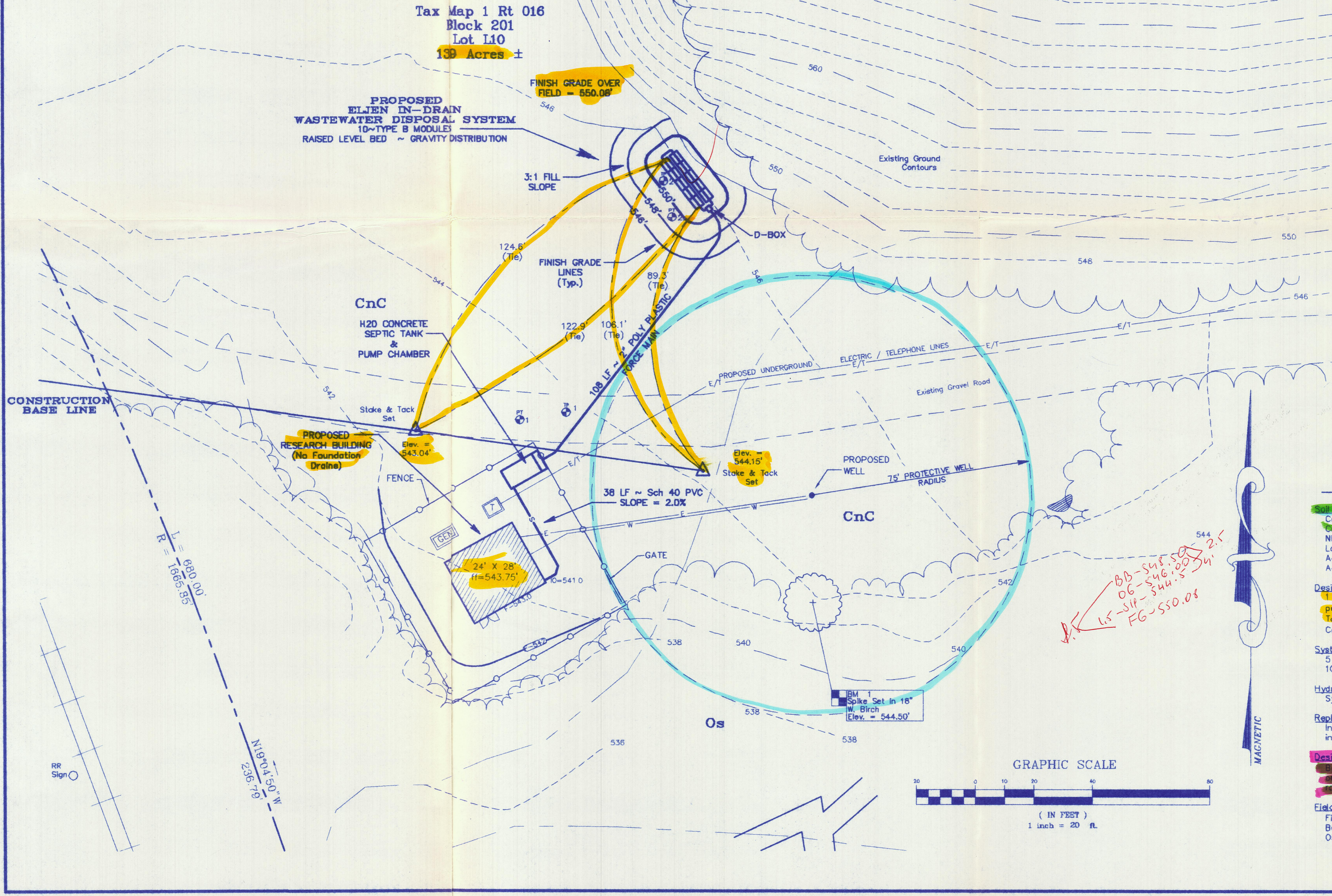
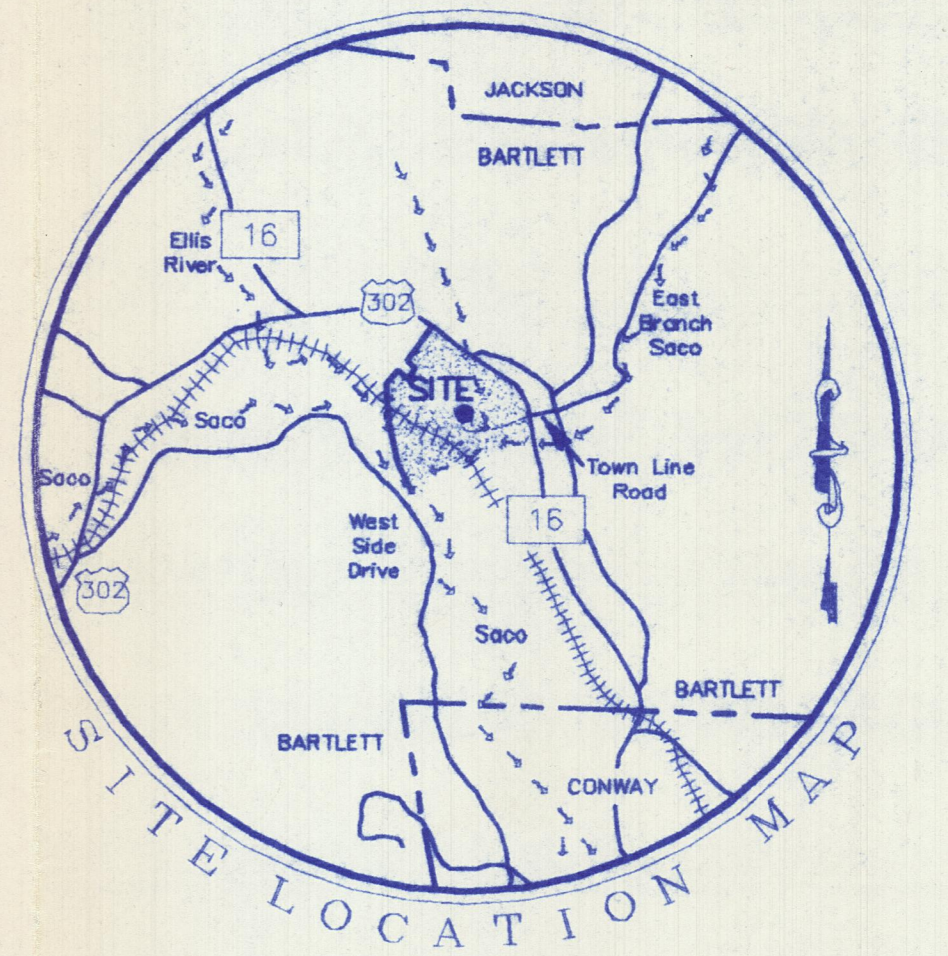
NOTE: The finish grade over the bed shall extend for a minimum of 5 feet beyond the bed before tapering of to a 3:1 slope.

There shall be a minimum of a 4" layer of loam suitable for seeding and proper stabilization of the slope over the fill and system.

Approval of this plan allows for construction of this In-Drain design only. Construction of a conventional system requires a separate design drawing and NHDES approval.

CONSTRUCTION ELEVATIONS

ITEM	Elevation
INV OUT @ BUILDING	541.00'
SEPTIC TANK INVERT IN	540.20'
SEPTIC TANK INVERT OUT	540.03'
D-BOX INVERT IN	549.26'
D-BOX INVERT OUT	548.18'
TOP OF IN-DRAIN MODULES	548.08'
Existing Ground	546.00'
Uphill side of modules	546.00'
FINISH GRADE ABOVE MODULES (Minimum)	550.08'



TEST PIT & PERCOLATION TEST DATA

Test Pit 1	Test Pit 2
12/11/98	12/11/98
0-10" 10YR4/4 Dark Yellowish Brown Coarse Compact Sand	0-36" 10YR4/4 Dark Yellowish Brown Coarse Compact Sand & Gravel
10-22" 7.5Y6/6 Reddish Yellow Coarse Sand & Gravel Mottled	36-96" 10YR7/8 Yellow Medium to Fine Sand Mottled
22-40" 2.5Y6/2 Light Brownish Gray Firm Silt Mottled	
40-96" 5Y6/6 Olive Yellow Compact Silty Sand Mottled	
ESHWT = 18" No Seeps No Ledge to 96"	ESHWT = 18" No Seeps No Ledge to 96"
Percolation Test 1 12/11/98 Depth = 22" Rate < 2 Minutes per Inch	Percolation Test 2 12/11/98 Depth = 20" Rate < 2 Minutes per Inch

DESIGN & SOIL NOTES

Soil Type & Lot Loading Capacity:
 - Carroll County Soil Survey Sheet Number 11
 - CnG: Colton gravelly loamy fine sand, E-15% Slope
 - NHDES Soil Group 1, f = 1.1,
 Loading capacity = 1800 Gallons per Acre
 Acres required for 300 gallons per day = 0.17
 Acres available > 10.

Design Load:
 1 to 4 Part-time observers or maintenance personnel, without a cafeteria or showers, @ 15 GPD/P.
 Total Design Load = 60 GPD. Use 300 GPD. (Minimum Commercial System)

System Sizing:
 5 Type B Eljen In-Drain Modules per 150 GPD,
 10 Modules required for 300 GPD Design Load.

Hydric Setbacks:
 System exceeds Hydric Soils A & B setbacks.

Replacement System Statement:
 In the event of system failure, it shall be rebuilt in kind in the same location.

Design Intent:
 Location of Modules to be no less than 2.5' above original ground along the center line of the uphill flow of modules in this system.

Field Data:
 Field Book 517/55, Test Pit Book 16/71
 Base Map from plan by White Mountain Survey Co., Ossipee, NH 03864, 539-4118.

DESIGN & GENERAL NOTES

Owner of Record:
 Mount Washington Observatory Charitable Remainder Annuity Trust
 PO Box 2310
 North Conway, NH 03860-2310
 (603) 356-8645

Lot Location:
 NH Route 16 & US Route 302
 Bartlett, Carroll County, New Hampshire
 Lot of Record

Tax Map, Block & Lot Number:
 Map 1 Rt 016
 Block 201
 Lot L10

Deed:
 Carroll County Registry of Deeds
 Book 1726 Page 113

Commercial Subsurface Disposal System:
 Design Flow = 300 GPD
 Disposal Method: Raised Level Eljen In-Drain System

Env.:
 University of New Hampshire

System Designer:
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