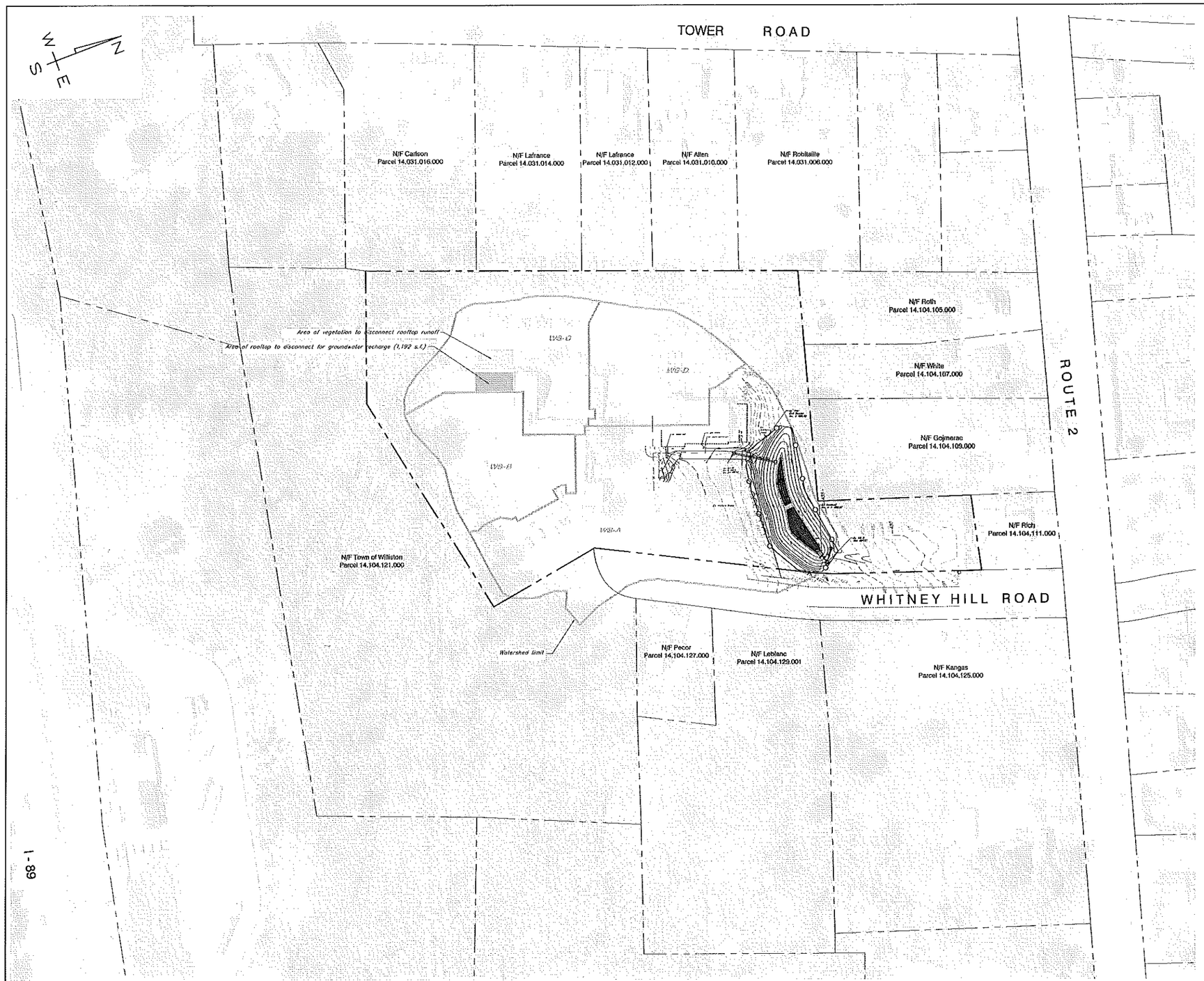


LOCATION
NTS

FINAL PLANS

Upon finding that the final plans complied with all requirements of the *Williston Development Bylaw* and all conditions imposed on the approval of Discretionary Permit 16-30, the Williston Zoning Administrator approved the final plans for DP 16-30 on the 18 day of April, 2018

Feb. 13, 2017	Williston Final Plans	WHN/DMR	2/13/2017
Date revised	Description	Checked	Date

Design WHN
Drawn SLM/TJB
Checked WHN/DMR
Scale N/S
Date 4/25/16
Project 06229/14111

Overall Site Plan

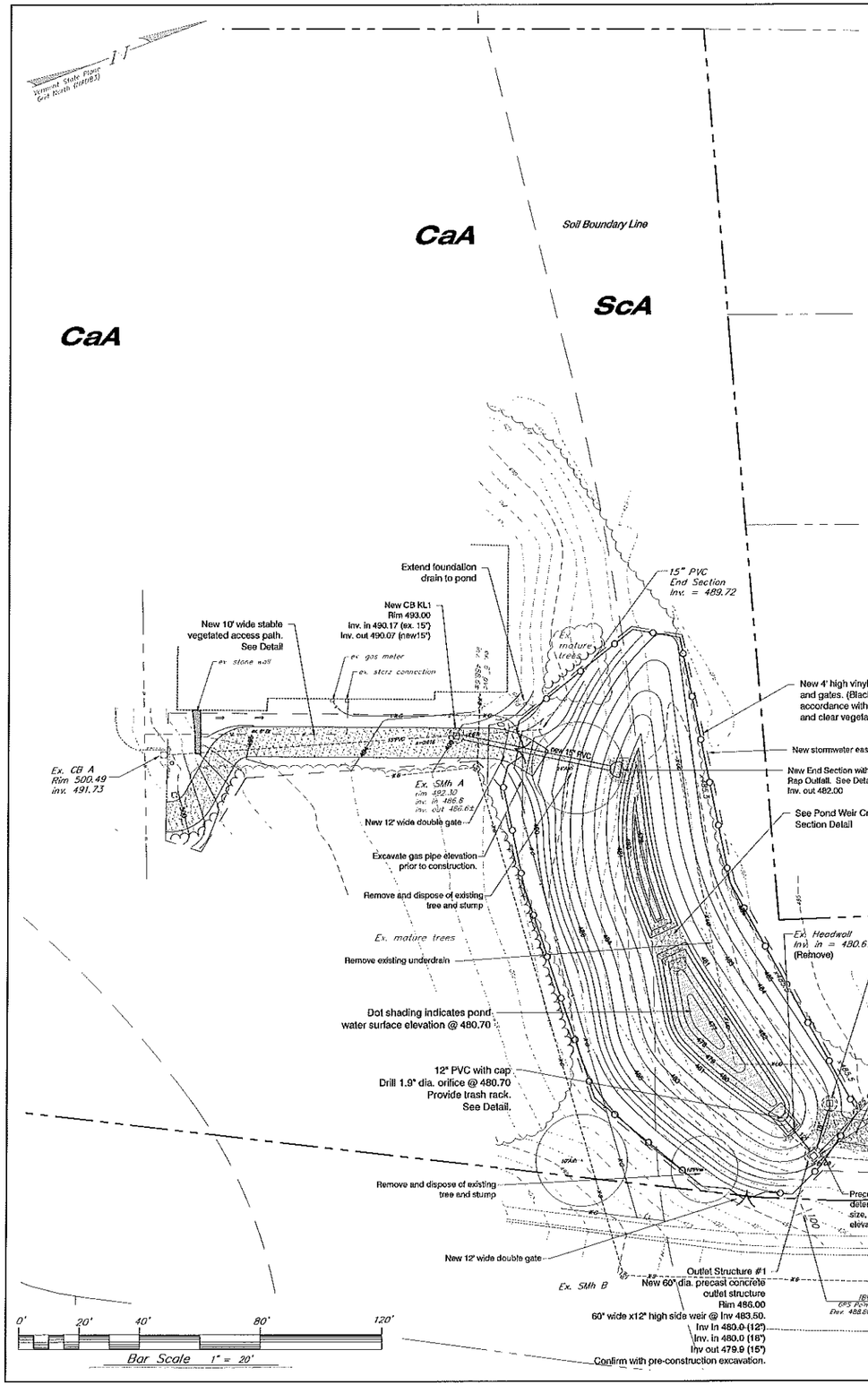
Whitney Hill

Whitney Hill Road — Williston, Vermont

KREBS & LANSING Consulting Engineers, Inc.
164 Main Street, Colchester, Vermont 05446

OV-1

DP 16-30



LEGEND

- Existing Soil Type Limit
- Existing Approximate Property Li
- Existing Contour
- Existing Storm Inlet and Pipe
- New Storm Inlet and Pipe
- Existing Gas Main
- Existing Underdrain
- Existing Roof Drain
- Existing Sanitary Sewer
- Easement line
- x480.25 — Finish Grade Spot Grade Elevation
- Finish Grade Direction of Flow
- 153 — Finish Grade Contour
- Existing Storm Line/Catch Basin/manhole
- Existing Woods
- New 4' High Chain Link Fence
- Water Surface
- New Rip Rap
- New stable vegetated access path.

NOTES

1. See Sheet EX-1 for notes related to Existing Conditions.
2. See Sheet C-2 for additional notes related to erosion prevention and sediment control.
3. The Contractor shall be responsible for repairing all disturbed areas back to original or better condition, including but not limited to curbing, sidewalks, road, parking areas, landscaping, site lighting, electrical, and etc. All asphalt shall be sawcut prior to paving.
4. All stumps, rock, and other non-approved trench backfill material discovered during construction is the exclusive property of the Contractor and shall be removed from the site and disposed of in a State approved disposal location.
5. Contractor shall be responsible for providing a passing sieve of the representative gravel delivered to the site for the construction of the gravel access aprons.
6. The Contractor shall comply with the procedures outlined in the Low Risk Site Handbook for Erosion Prevention and Sediment Control. The Contractor shall be responsible for installing, maintaining and removing all erosion and sediment control devices shown on the plans or details and, to the maximum extent practical, to minimize potential contamination of stormwater runoff from the construction activities.
7. Contractor shall be responsible for all "As-built" measurements, testing and drafting as required in the Town of Williston Public Works Standards. Contractor shall meet with Public Work prior to construction to verify full scope of work required.
8. The Contractor shall be responsible for all construction barrier/safety fencing required for the project
9. Contractor shall be responsible for importing topsoil as required to complete the project. Contractor shall test topsoil for approval.
10. The Contractor shall be responsible for all signage and fencing necessary to providing safe vehicular and pedestrian access through or around the site during construction.
11. All storm pipes shall be PVC SDR 35 unless otherwise noted. PVC pipe shall contain no recycled content.
12. Temporary groundwater dewatering and stormwater by-pass pumping and/or diversion is the responsibility of the Contractor. The Contractor is responsible for providing all necessary pumps and equipment to perform the work. Overnight pumping is not allowed.
13. Dewatering shall be accomplished by creating a sump pit filled with crushed stone and pumping to a sediment filter bag placed downslope of the disturbed soils. The pumpout water shall be monitored to ensure visibly discolored water does leave the project site.
14. This project is subject to all erosion prevention and sediment control measures including the monitoring and inspection.
15. Removal of all erosion control matting and inlet protection is the responsibility of the Contractor at the end of the job, when the site is stabilized.
16. Contractor shall use select soil for the construction of the pond earth embankment. Remove topsoil & organics. Place fill in 6" lifts. Permeability testing shall be performed on a minimum two stockpile soil samples prior to placing soil on earth embankment. Soil permeability shall be less than 0.003 mm/sec. and shall be approved by the Engineer. Soil shall be placed and compacted to 95% of the Standard Proctor. Topsoil, seed, and properly secure mulch at all portions of the earth embankment above the proposed water surface elevation.
17. Pre-construction Excavation areas shown on the plan shall be completed prior to beginning site utility work and prior to ordering structures. The Contractor shall provide the Engineer with utility cross section information (pipe type, size, duct bank width height, etc.) and shall provide horizontal location (minimum 2 swing ties) accurate to 1 ft. and vertical elevations accurate to 0.1'. After the information is provided the Engineer shall be allowed one week to provide design decisions based on information obtained from the Pre-construction Excavation. The Contractor shall contact the Engineer at least 24 hours in advance of performing the excavation. In addition to the designated Pre-construction Excavations, the Contractor shall verify all utility intersections and contact Engineer and Owner with conflicts.

N/F Gojmerac
Parcel 14.104.109.000

Upon finding that the final plans complied with all requirements of the *Williston Development Bylaw* and all conditions imposed on the approval of Discretionary Permit 16-30, the Williston Zoning Administrator approved the final plans for DP-[illegible] on the 17 day of MAY 20[illegible]

ROUTE 2

ScA

N/F Rich
Parcel 14.104.111.000

Feb. 13, 2017 5/21/16	Williston Final Plans Erase CB B Note	WHN/DMR WHN	2/13/2017 5/21/16
Date revised	Description	Checked	Date

Design	WHN
Drawn	SLM/TJB/DMR
Checked	WHN/DMR
Scale	1" = 20'
Date	4/27/16
Project	06228/14111

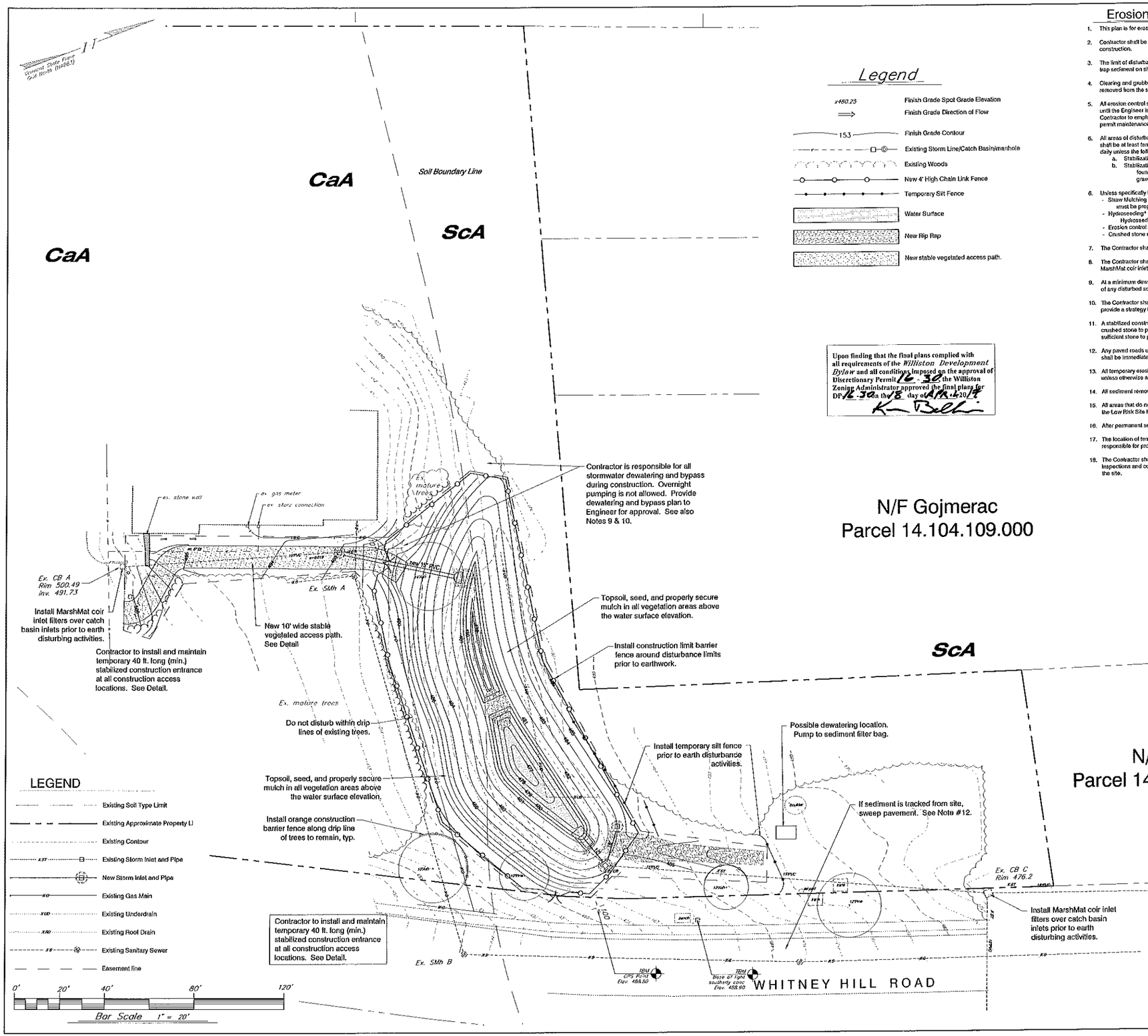
Site Plan

Whitney Hill

Whitney Hill Road — Williston, Vermont

KREBS & LANSING Consulting Engineers, Inc.
164 Main Street, Colchester, Vermont 05446

C-1



Legend

x480.25	Finish Grade Spot Grade Elevation
⟹	Finish Grade Direction of Flow
153	Finish Grade Contour
	Existing Storm Line/Catch Basin/manhole
	Existing Woods
	New 4' High Chain Link Fence
	Temporary Silt Fence
	Water Surface
	New Rip Rap
	New stable vegetated access path.

Upon finding that the final plans complied with all requirements of the *Williston Development Bylaw* and all conditions imposed on the approval of Discretionary Permit 16-30, the Williston Zoning Administrator approved the final plans for DP 16-30 on the 18 day of April 2017.

Erosion Prevention and Sediment Control Notes

1. This plan is for erosion prevention and sediment control design only. See Site Plans for all other site related design.
2. Contractor shall be responsible for complying with all State and Local erosion prevention and sediment control standards and permit requirements during construction.
3. The limit of disturbance shall be clearly defined by Contractor's surveyor prior to clearing. Erosion and sediment control devices shall be established to trap sediment on site.
4. Clearing and grubbing shall not begin until disturbance limits and sediment controls are in place. All roots, stumps and deleterious materials shall be removed from the site. The Contractor shall minimize the amount of disturbed land at any given time.
5. All erosion control shall be placed as shown on the drawings or as ordered by the Engineer. The Contractor shall maintain the erosion control measures until the Engineer is satisfied that permanent ground cover is established and that further measures are not required. It shall be the responsibility of the Contractor to employ appropriate erosion control as shown on these drawings and any other measures as necessary to trap sediment on site. Refer to permit maintenance and inspection requirements.
6. All areas of disturbance shall be permanently or temporarily stabilized as soon as possible and within 48 hours of final grading. All areas of disturbance shall be at least temporarily stabilized within 14 days of initial disturbance. Any disturbance after 14 consecutive days of exposed soil shall be stabilized daily unless the following exceptions apply:
   a. Stabilization is not required if earthwork is to continue in the area in the next 24 hours and there is no precipitation forecast in the next 24 hours.
   b. Stabilization is not required if the work is occuring in a self-contained excavation (i.e. no outlet) with a depth of 2 ft. or greater (e.g. house foundation excavation, utility trenches). Stabilization measures shall include mulch and netting, erosion control matting, crushed stone, gravel, or pavement.
6. Unless specifically indicated on the plans acceptable methods of stabilization shall include:
   - Straw Mulching - 2 tons per acre. Approximately 1" uniform thickness. Only allowed on relatively flat areas with minimum upslope watershed. Mulch must be properly anchored to prevent material from being blown away by wind (windthrow).
   - Hydroseeding* - Applied at the manufacturer's recommended application rate. Contractor shall provide evidence of proper application rate. Hydroseeding is not allowed in areas of concentrated flow.
   - Erosion control matting - S75BN rolled matting must be applied to all slopes 3:1 (H:V) or greater (unless otherwise indicated).
   - Crushed stone or crushed gravel - Typically used for temporary access roads and construction staging areas.
7. The Contractor shall use water for dust control.
8. The Contractor shall provide inlet protection around all catch basins (existing or new) that collect construction site stormwater runoff. At a minimum, MarshMat coir inlet filters shall be installed over the inlet of any catch basin with the potential to collect runoff from construction disturbance areas.
9. At a minimum dewatering shall be accomplished by creating a sump pit filled with crushed stone and pumping to a sediment filter bag placed downslope of any disturbed soils. The pumpout water shall be monitored to ensure visibly discolored water does leave the project site.
10. The Contractor shall be responsible for providing a dewatering/stormwater bypass plan for approval by the Engineer. The objective of the plan is to provide a strategy that, when implemented, the pumped water is not visibly discolored when it leaves the project site.
11. A stabilized construction entrance shall be installed and maintained at ALL construction access locations. Contractor shall be responsible for installing crushed stone to provide stable areas for construction vehicle traffic, staging, and storage. The Contractor is responsible for providing and maintaining sufficient stone to prevent rutting and sediment tracking offsite.
12. Any paved roads used by construction vehicles shall be swept daily, or at a greater frequency, if dirt or gravel is tracked from the site. The swept debris shall be immediately removed from face of curb if applicable. Greater sweeping frequency shall be required during precipitation events.
13. All temporary erosion and sediment control measures shall be removed within 30 days after final stabilization or after the measures are no longer needed, unless otherwise authorized.
14. All sediment removed from sediment control practices shall be placed in an approved soil disposal area.
15. All areas that do not have established vegetation by October 15th must be stabilized in accordance with the Winter Stabilization requirements outlined in the Low Risk Site Handbook. See Details.
16. After permanent seeding the Contractor shall be responsible for watering, if necessary, to ensure adequate vegetative growth.
17. The location of temporary construction fencing and temporary access roads shown on the plan are for schematic purposes only. The Contractor shall be responsible for providing all necessary temporary construction fencing, temporary roads, staging areas, etc., necessary to complete the work.
18. The Contractor shall be responsible for all inspection and maintenance of the erosion prevention and sediment control practices for the project. Inspections and corresponding reports shall be performed at a minimum, once a week and after every precipitation event that results in a discharge from the site.

Date revised	Description	Checked	Date
Feb. 13, 2017	Williston Final Plans	WHN/DMR	2/13/2017

Design	WHN
Drawn	DMR
Checked	WHN/DMR
Scale	1" = 20'
Date	4/27/16
Project	06229/14111

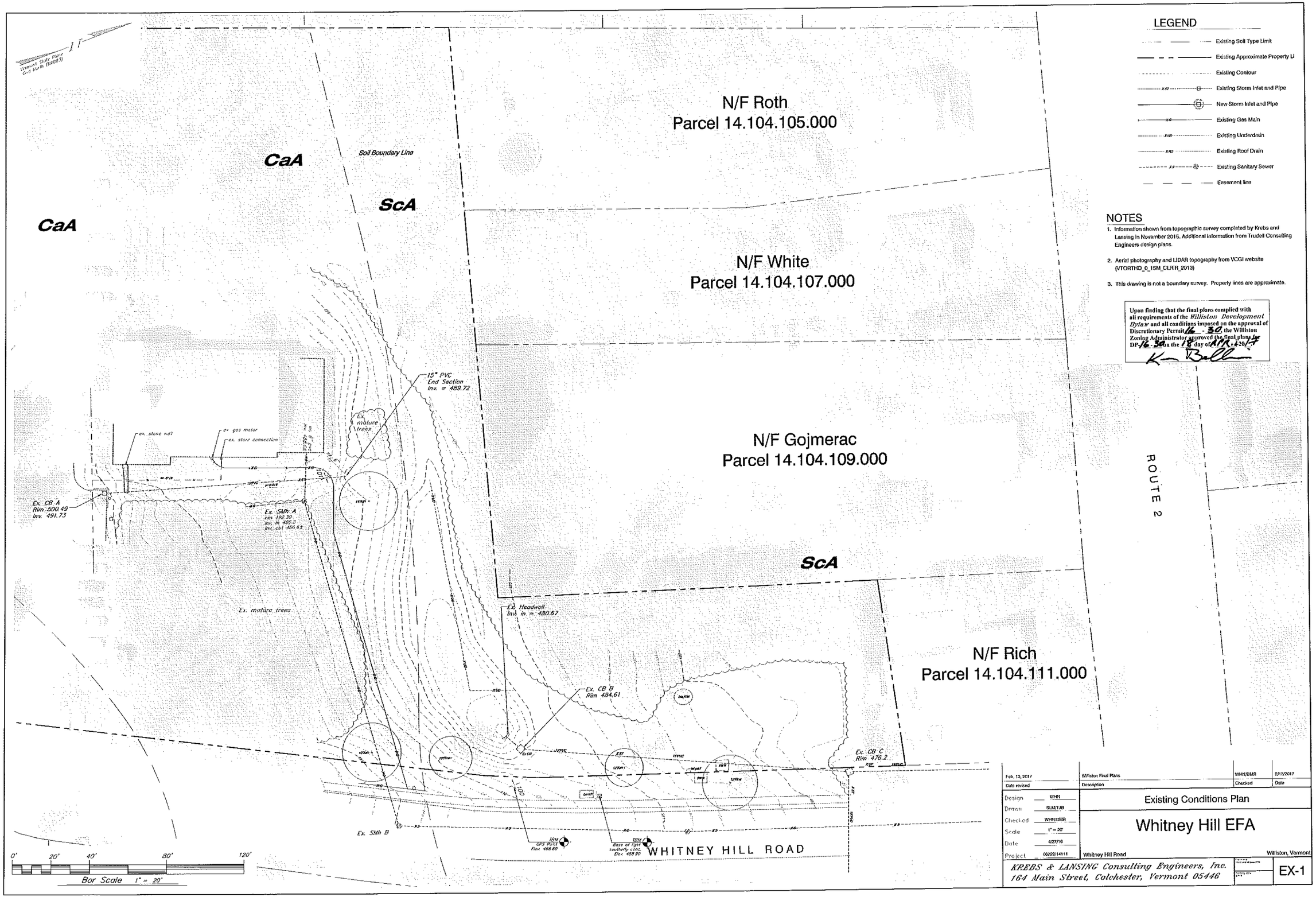
Erosion Prevention & Sediment Control Plan

Whitney Hill

Whitney Hill Road — Williston, Vermont

KREBS & LANSING Consulting Engineers, Inc.
164 Main Street, Colchester, Vermont 05446

C-2



LEGEND

- Existing Soil Type Limit
- Existing Approximate Property Li
- Existing Contour
- Existing Storm Inlet and Pipe
- New Storm Inlet and Pipe
- Existing Gas Main
- Existing Underdrain
- Existing Roof Drain
- Existing Sanitary Sewer
- Easement line

NOTES

1. Information shown from topographic survey completed by Krebs and Lansing in November 2015. Additional information from Trudell Consulting Engineers design plans.
2. Aerial photography and LIDAR topography from VCGI website (VTORTHO_0_15M_CLRIR_2013)
3. This drawing is not a boundary survey. Property lines are approximate.

Upon finding that the final plans complied with all requirements of the *Williston Development Bylaw* and all conditions imposed on the approval of Discretionary Permit 16 - 30, the Williston Zoning Administrator approved the final plans for DP-16-30 on the 18 day of April 2017.

Feb. 13, 2017	Williston Final Plans	WHN/DMR	2/13/2017
Date revised	Description	Checked	Date

Design	WHN
Drawn	SLM/TJB
Checked	WHN/DMR
Scale	1" = 20'
Date	4/27/16
Project	06229/14111

Existing Conditions Plan

Whitney Hill EFA

Whitney Hill Road — Williston, Vermont

KREBS & LANSING Consulting Engineers, Inc.
164 Main Street, Colchester, Vermont 05446

EX-1

Construction Notes

1. The methods and materials of construction shall conform to the latest standards of the Town of Williston and the State of Vermont. All work shall be in conformance with all permits and approvals issued for the project. In case of conflict, the more stringent specification shall apply as directed by Engineer. All work shall be done in a workmanlike manner and completed in the time specified by Owner.

2. The Contractor shall be responsible for all work and materials shown and required to make the job complete. These drawings do not show every fitting or appurtenance. Materials shall be as specified on the drawings. Manufacturer's product specifications shall be submitted for all materials to the Engineer for approval prior to installation.

3. The location and size of existing underground utilities is not warranted to be exact or complete. The Contractor shall field locate all utilities and shall contact the affected utility company, the Engineer and the Town of Williston prior to making any hook ups. The Contractor shall be solely responsible for all existing utilities and their uninterrupted services. All off-site backfill, sheeting and shoring, dewatering, clearing and grubbing, erosion control, dust control, traffic control, grading, and all incidentals shall be included as part of the required work.

4. Repair of all disturbed areas, grading, seeding, mulching, repair of roads and curbs, paving, and other incidentals are included as part of the required work. All disturbed areas shall be loamed and mulched until permanent ground cover is established.

5. The Contractor shall verify all horizontal control and temporary bench marks before use.

6. The workers and public shall be protected by the Contractor from any and all hazards connected with the construction work. Open trenches, materials, or equipment within the working limits are to be guarded by the use of adequate barricades or flaggers. All barricades left in position overnight are to be properly lighted. Kerosene pots are not acceptable. When work narrows the usable pavement, flaggers shall be employed to aid the flow of traffic so that there will be no undue delays. The Contractor shall be held responsible for the safety of all workers and the general public and all damages to property occurring from or upon the work occasioned by negligence or shall be held responsible for the safety of all workers and the general public and all damages to property occurring from or upon the work occasioned by negligence or day or night within the working area. All work shall be in conformance to OSHA regulations, Title 19, Parts 1926.651 and 1926.652, and applicable to VOSHA regulations.

7. Contractor shall contact Dig Safe prior to any excavation.

8. All new storm pipes extending from structures shall be laid with a pipe laser to elevation and slope as shown on the plans.

9. The Contractor shall sawcut all existing pavement to be removed. The Contractor shall minimize the pavement area disturbance. Contractor shall be responsible for all pavement repair and restoration necessary to complete the work.

10. The Contractor shall be responsible for all construction layout. See Construction Stakeout Notes.

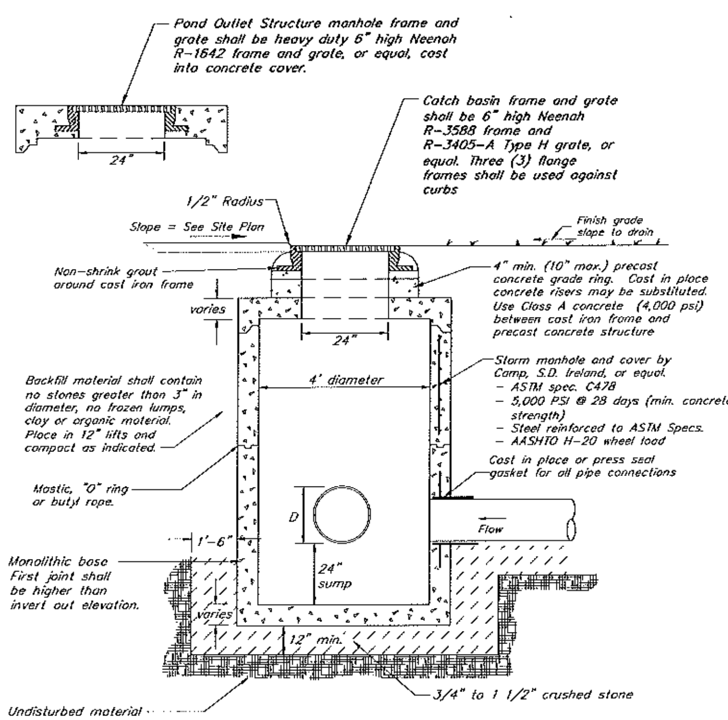
11. Temporary silt fence shall be erected prior to any clearing or construction. Fencing may be erected in phases, but in no case shall construction of clearing proceed fencing. Special areas may be designated by the Owner for preservation of existing trees. These areas shall be the Contractor's responsibility to insure no damage is done to designated trees.

12. Existing plantings are located in general areas as shown on the plans. Contractor shall protect plantings scheduled to remain so as not to damage these or their root systems.

13. Contractor shall comply with all permits and approvals issued for this project.

14. Contractor shall sign on as the Co-Permittee for the State of Vermont Erosion Prevention and Sediment Control permit for the project.

15. Slope stability upon unsaturated soil conditions. If during construction saturated soils are encountered, contact the Engineer immediately.



Typical Catch Basin/Storm Manhole Detail

N.T.S.

Soil and Seeding Notes

1. Topsoil shall be screened and shall have a minimum 4" depth unless additional depth is specified on the plans (including Landscaping design). Topsoil shall be natural, fertile, friable soil representative of local productive soil and free of clay lumps, stones, subsoil or other foreign matter, not frozen or muddy. Acidity range PH 5-7 not less than three (3) percent humus. Samples will be required for approval. All testing costs will be paid by Contractor.

2. Commercial fertilizer shall be a complete plant food containing nitrogen (50% organic) phosphoric acid and potash. Soil tests will indicate composition required.

3. Hydro seeding is the preferred practice for turf establishment. Specifications are:

   Fertilizer: 19-19-19 75 lbs per 1,000 gallons of water
   Lime: 100 lbs. per 1,000 gallons of water
   Seed: 6 lbs per 1,000 square feet.

71.46% Min. Futura 3000 Per Rye Grass	Germ: 90%
14.81% Min. Dynasty Tall Fescue	Germ: 90%
9.74% Min. Creeping Red Fescue	Germ: 90%
2.32% Max. Crop	
1.61% Max. Inert	
0.06% Max. Weed	

   Mulch: 300 lbs. per 1,000 gallons of water.
   Tacifer: 5 lbs. per 1,000 gallons of water.

4. The grass seed may be applied by hand method at a rate of 6 lbs. per 1,000 sq. ft.

5. Areas having soil compaction as a result of construction shall be roto-tilled prior to seeding.

6. If hand seeding, only straw mulch is to be used and secured by netting either organic or inorganic. If inorganic is used, it must be removed before the first mowing.

7. Starter fertilizer shall be applied at the normal rate at the time of seeding. Fertilizer application will not be allowed in sensitive areas and adjacent to drainage ways as determined by the Engineer.

8. Watering is to be done by the Contractor to maintain proper growth. Contractor shall supply the water and all apparatus necessary to apply the water (i.e. hoses, sprinklers, etc.).

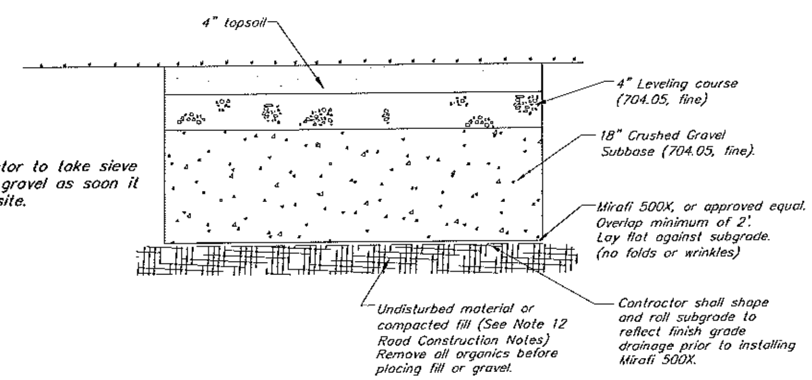
9. Staking of all topsoiled areas to control foot traffic will be required. Acceptable staking materials will be grade stakes and twine or string with flagging attached for visibility. Contractor is responsible to maintain stakes throughout the warranty period.

10. A guarantee through the first growing season is required with any sparse or bare areas larger than 1 sq. ft. to be redone.

11. The Contractor shall test topsoil to determine proper application rate of lime and fertilizer. Submit tests to Engineer for approval.

12. Seeding is permitted from May 15 – June 15, and August 15 – September 15. Other seeding is possible at other times with prior approval from the Engineer.

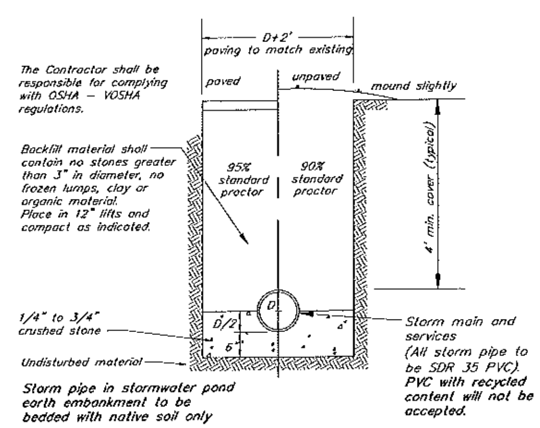
The contractor to take sieve analysis of gravel as soon it arrives on site.



New Stable Vegetated Access Path Detail

N.T.S.

PVC SDR 35 pipe shall not be installed when the temperature drops below 32° F or goes above 100° F unless prior approval is obtained from the Engineer. Extra care is required when handling PVC pipe during cold weather. PVC pipe shall not be stored outside and exposed to prolonged periods of sunlight as pipe discoloration and reduction in pipe impact strength will occur. If PVC pipe is to be stored on site for 1 month or longer it shall be covered with canvas or other opaque material.



Typical Storm Trench Detail

N.T.S.

Road Construction Notes

(All references to road shall also apply to Stable Vegetated Access Path.)

1. New road shall be constructed to the line and grade shown on the drawings. The road and utility locations shall be as typically detailed unless otherwise shown.

2. All road and parking construction shall be completed in accordance with the Vermont Agency of Transportation "Standard Specifications for Construction" 2011, hereafter called Vermont Highway Specifications, specifications found on these plans, and project specifications. In case of conflict, the more stringent specification shall apply as determined by the Engineer.

3. The Contractor shall follow Vermont Highway Specifications (2011) Section 203.11 for placing and spreading embankments.

4. Fill material for road embankment shall meet Note #13 below and be approved by the Engineer. Fill shall be placed in 12" lifts, wetted and compacted with satisfactory compaction equipment to 95% of maximum density (Standard Proctor).

5. Road in fill sections shall be placed and compacted a minimum of 3 feet above top of any utility to be installed before trench is excavated for pipe placement. In trenches and cut sections, the Contractor shall provide all necessary sheeting, shoring and bracing to maintain compliance with all OSHA/VOSHA regulations.

6. Methods for construction of subgrade shall conform to Vermont Highway Specifications (2011) 203.12 or as determined by the Engineer.

7. Any subgrade or subbase disturbed by Contractor, or rendered unsuitable by construction machinery, shall be removed and replaced with approved granular backfill at the Contractor's expense. The subgrade shall be compacted to attain at least 95% of the maximum density (Standard Proctor) before placing road or embankment materials.

8. Sand borrow and cushion shall conform to Vermont Highway Specifications (2011) 703.03. Granular borrow shall conform to the Vermont Highway Specifications 703.04.

9. Gravel subbase for pavement shall conform to Vermont Highway Specifications (2011) 704.05, coarse unless otherwise noted.

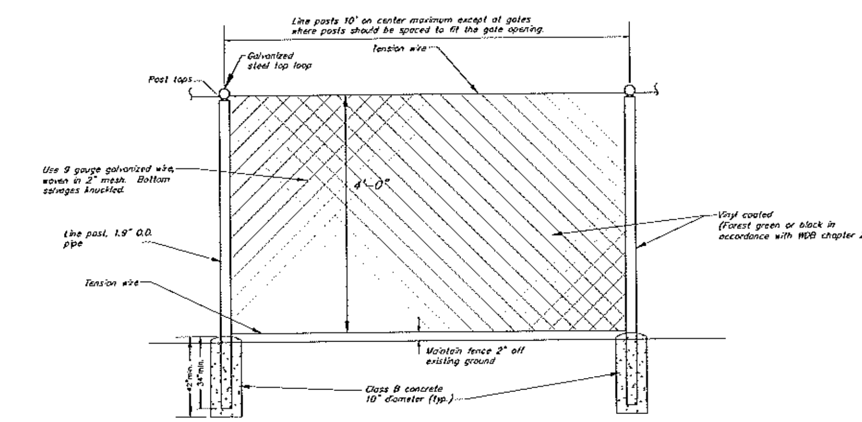
10. Leveling course shall conform to Vermont Highway Specifications (2011) 704.05, fine grading. Shoulders shall conform to Section 704.12, Aggregate for Shoulders.

11. Bituminous concrete pavement shall conform to Vermont Highway Specifications (2011) Section 404 and 406. Binder course shall be Type I + II, and finish wearing course shall be Type III, IV, or as detailed.

12. Embankment fill for all impervious areas, EXCLUDING BUILDINGS, shall be a sieve specification as follows:

Sieve	% Finer
4"	100
2"	85–100
#4	60–100
#200	30 maximum

13. Gravel Subbase or Leveling Course shall not be contaminated by work. Construction traffic shall not travel over exposed areas of this material.



Note:

1. All portions of chain link fence shall conform to 2011 Agency of Transportation specifications, including but not limited to Section 727.02.
2. Contractor shall provide 12' wide lockable double gates in locations indicated on Site Plans.

Typical Chain Link Fence to be Installed around Stormwater Pond

N.T.S.

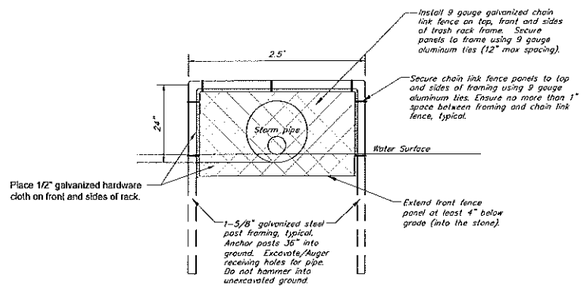
Upon finding that the final plans complied with all requirements of the *Williston Development Bylaw* and all conditions imposed on the approval of Discretionary Permit 16-30, the Williston Zoning Administrator approved the final plans for DP 16-30 on the 18 day of APR. 2017

Feb. 13, 2017	Williston Final Plans	WHN/DMR	2/13/2017
Date revised	Description	Checked	Date

Design	WHN	Civil Details
Drawn	DMR	
Checked	WHN/DMR	Whitney Hill
Scale	N.T.S.	
Date	4/27/16	
Project	06229/14111	Whitney Hill Road — Williston, Vermont

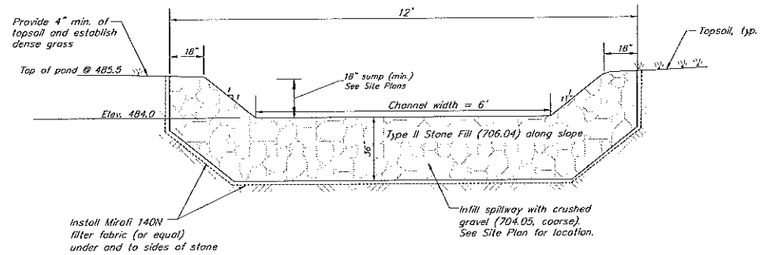
KREBS & LANSING Consulting Engineers, Inc.
164 Main Street, Colchester, Vermont 05446

CD-1



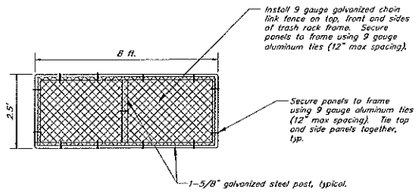
Trash Rack – Front View

N.T.S.



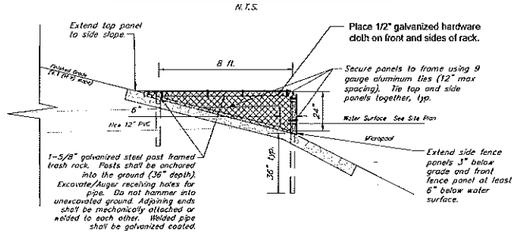
Emergency Spillway Cross Section Detail

N.T.S.



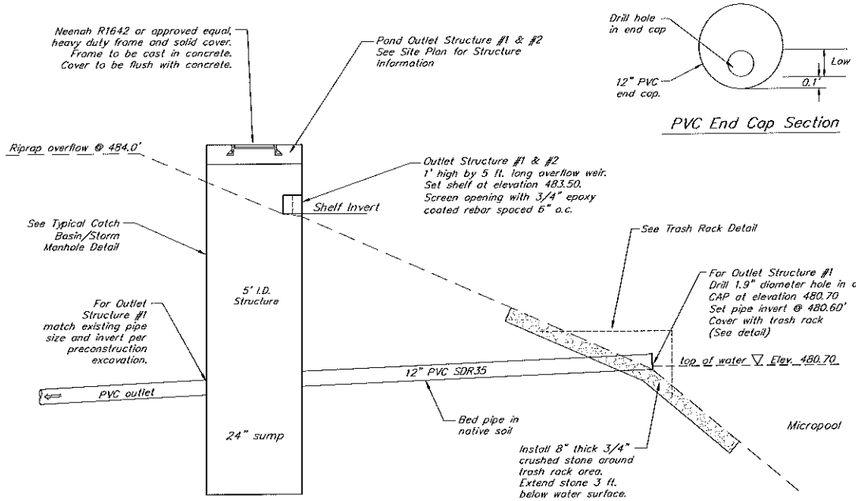
Trash Rack – Plan View

N.T.S.



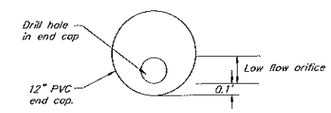
New Trash Rack – Section View

N.T.S.

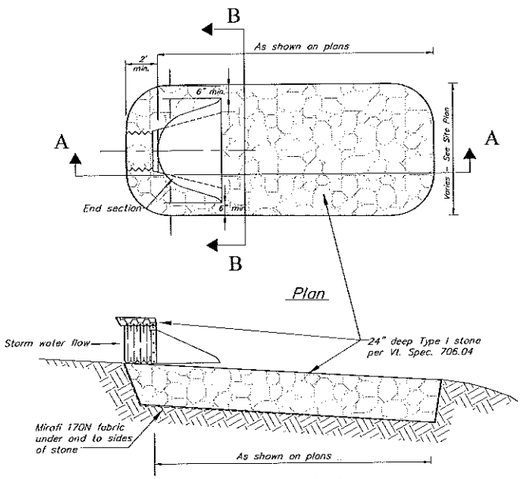


Pond Outlet Control Structure Details

N.T.S.

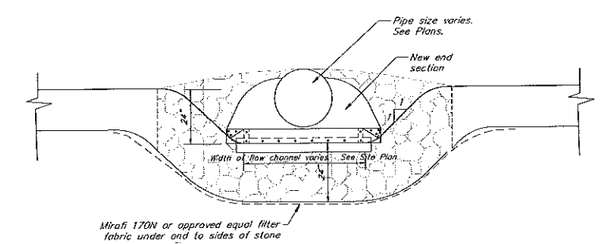


PVC End Cap Section



Plan

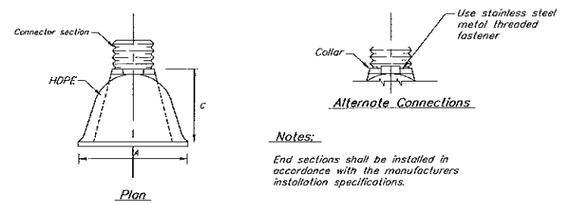
Section A–A



Section B–B

Typical End Section with Rip Rap Detail

N.T.S.

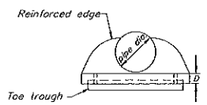


Plan

Alternate Connections

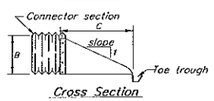
Notes:

End sections shall be installed in accordance with the manufacturers installation specifications.



Elevation

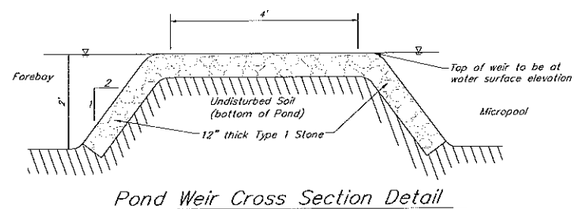
Pipe Diameter	Dimensions A 1"±	B Max.	C 1"±	D 1 1/2"±
10	42	14.5	33	6
12	42	14.5	33	6
15	41	19	34	6
18	49	22	43	6
24	59.5	28	48	6
30	88	36	63.5	6
36	89	43	66.5	6



Cross Section

HDPE End Section Detail

N.T.S.



Pond Weir Cross Section Detail

N.T.S.

Upon finding that the final plans complied with all requirements of the *Williston Development Bylaw* and all conditions imposed on the approval of Discretionary Permit 6-30, the Williston Zoning Administrator approved the final plans for DP 6-30 on the 8 day of April, 2017.

Feb. 13, 2017	Williston Final Plans	WHN/DMR	2/13/2017
Date revised	Description	Checked	Date

Design	WHN
Drawn	DMR
Checked	WHN/DMR
Scale	N.T.S.
Date	4/27/16
Project	06229/14111

Civil Details

Whitney Hill

Whitney Hill Road — Williston, Vermont

KREBS & LANSING Consulting Engineers, Inc.
164 Main Street, Colchester, Vermont 05446

File name: 14111 w'hill details
Plotting date

CD-2

Winter Construction Requirements (October 15th - April 15th)

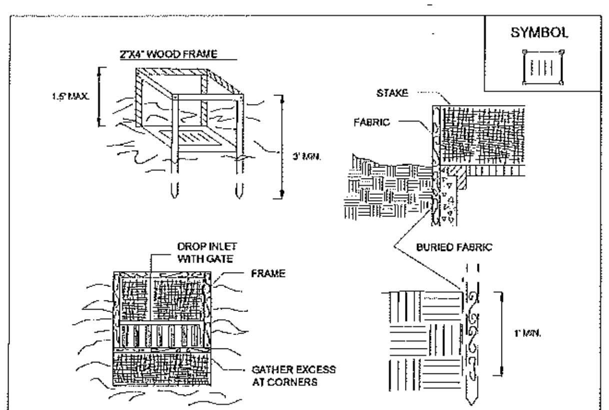
1. For areas to be stabilized with vegetative cover, seeding shall be completed no later than September 15th to ensure adequate growth and cover.
2. If seeding is not completed by September 15th, additional non-vegetative protection must be used to stabilize the site for the winter period. This includes the use of Erosion Control Matting or netting of a heavy mulch layer.
3. Where mulch is used for temporary stabilization it must be applied at double the standard rate, or a minimum of 3 inches with an 80%–90% cover.
4. Stabilized Construction Entrances shall be enlarged to provide for snow stockpiling.
5. Limits of disturbance shall be moved or replaced to reflect any revised boundaries of winter work.
6. The site shall be managed to provide adequate snow storage and control of meltwater. Cleared snow shall be stored down slope of all areas of disturbance and out of stormwater treatment structures.
7. A minimum 25 foot buffer shall be maintained from perimeter controls such as silt fence.
8. Drainage structures must be kept open and free of snow and ice dams.
9. Silt fence and other practices requiring earth disturbance must be installed ahead of frozen ground.
10. To ensure cover of disturbed soil in advance of a melt event, areas of disturbed soil must be stabilized at the end of each work day, with the following exceptions:
    – If no precipitation within 24 hours is forecast and work will resume in the same disturbed area within 24 hours, daily stabilization is not necessary.
    – Disturbed areas that collect and retain runoff, such as house foundation or open utility trenches.
11. Prior to stabilization, snow or ice must be removed to less than 1 inch thickness.
12. Use stone to stabilize areas under construction or where construction vehicle traffic is anticipated. Stone paths should be 10–20 feet wide to accommodate vehicular traffic.

CONSTRUCTION STAKEOUT NOTES

The Contractor shall be responsible for all construction stakeout for the project. The Engineer shall provide the Contractor an AutoCAD R2000 drawing of the site design. The drawing will include horizontal and vertical survey control. Additional survey control will be the responsibility of the Contractor.

1. The Contractor shall be responsible for using proper survey equipment and having properly trained personnel to use this information. Any Contractor that does not have proper equipment or personnel shall subcontract the work to a competent consultant.
2. The horizontal control datum may be based on a coordinate system that is unique for this project. Project north may not refer to astronomic or magnetic north.
3. The Contractor shall check the integrity of survey control points by occupying a control point checking distance to back sight and checking distance and angle to another control point prior to any construction stakeout. The contractor shall not proceed with stakeout if either measured distances or angles do not match calculated values.
4. Graphical images of infrastructure in the AutoCAD drawing may not be in an accurate representation of its size. It is the Contractor's responsibility to verify size and shape of all items to be staked out.
5. After completion of radial stakeout with the survey transit, the Contractor shall check each stakeout point as necessary to verify the horizontal and vertical position of the point and that it is correct in relationship to the rest of the project.
6. The Contractor shall complete all construction stakeout to an accuracy of 0.1 feet (excluding building stakeout).

SYMBOL



CONSTRUCTION SPECIFICATIONS

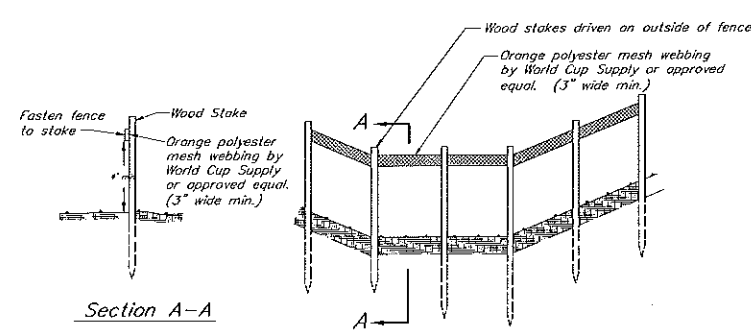
1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85, BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: NY STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	FILTER FABRIC DROP INLET PROTECTION

Figure 5.3b Storm Drain Inlet Protection: Filter Fabric

Vermont Standards and Specifications For Erosion Prevention & Sediment Control -2006- Page 5.17



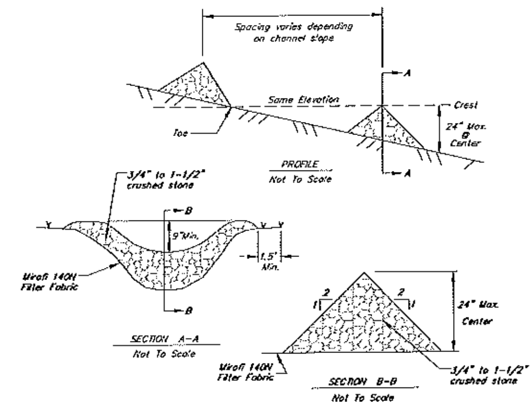
To be installed at clearing limits and open limits of the construction area. Not to be used for individual tree protection or to demarcate construction disturbance limits for riparian buffer areas. Snow fence shall be used in these areas. See Plans.

Construction Limit Barrier

N.T.S.

Construction Limit Barriers

- Temporary chain-linked construction fence shall be used to delineate construction limits where practical or where directed in the Contract Documents.
- Orange construction fence or snow fence shall be used to demarcate short-term construction activities as well as around the drip line of any existing trees to remain.
- 3" thick orange polyester mesh webbing may also be used to demarcate construction limits except within 50 feet of any stream, lake, pond or wetland. For this project, polyester mesh webbing should not be used in areas that are proximate to pedestrian or vehicular traffic.



CONSTRUCTION SPECIFICATIONS

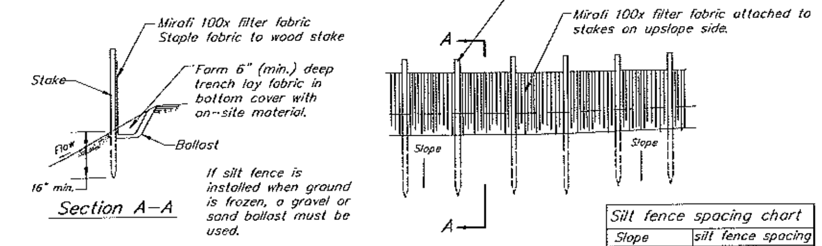
1. Stone will be placed on a filter fabric foundation to the lines, grades and locations shown on the plan.
2. Set spacing of check dams to assume that the elevations of the crest of the downstream dam is at the same elevation of the toe of the upstream dam.
3. Extend the stone a minimum of 1.5 feet beyond the ditch banks to prevent cutting around the dam.
4. Protect the channel downstream of the lowest check dam from scour and erosion with stone or liner as appropriate.
5. Ensure that channel appurtenances such as culvert entrances below check dams are not subject to damage or blockage from displaced stones.

Stone Check Dam

N.T.S.

Straw wattles may be used as as substitute for silt fence for areas pre-approved by the Engineer.

NOTE:
1. Contractor shall be responsible for the installation, maintenance, and removal of silt fence in all locations shown on the plans.
2. Maintenance shall be performed as needed and material removed when sediment reaches half of fabric height. Remove silt fence after successful establishment of vegetation.



If silt fence is installed when ground is frozen, a gravel or sand ballast must be used.

Silt fence spacing chart	
Slope	silt fence spacing
5% to 10%	50 ft. or less
10% to 20%	25 ft. or less
> 20%	15 ft. or less

Typical Temporary Silt Fence

N.T.S.

North American Green S75BN

Material Content

Straw	100% (.50 lbs/sq.yd.) (.27 kg/m2)
Netting	Leno woven, 100% biodegradable jute fiber
Weight	approximately 1.64 lbs/1000 s.f.
Thread	Biodegradable

Installed as per manufacturer's specifications.

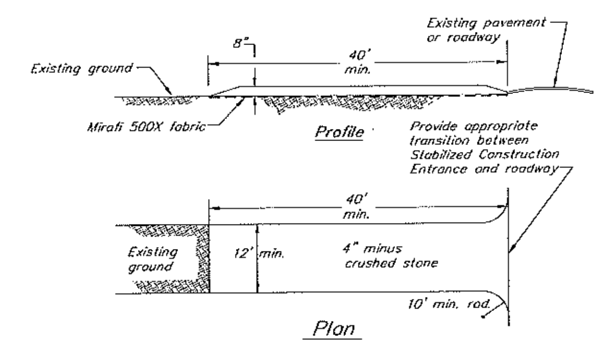
Material Specifications

Erosion control blanket shall be a machine-produced mat of 100% agricultural straw.

The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with natural fiber netting having an approximate 1/2" X 1/2" mesh and be sewn together with biodegradable thread.

Straw erosion control blanket shall be S75BN as manufactured by North American Green, Inc. (812–867–6632) or equivalent. Erosion control blanket shall have the following properties:

Erosion Control Matting



Note:

- Contractor shall be responsible for the installation, maintenance, and removal of a stabilized construction entrance at each construction entrance for the project. The Construction Stabilized Entrance and its continued maintenance shall be a minimum measure to prevent tracking of sediment off-site.
- Contractor to use Mirafi 500x under stone for temporary construction roads.
- Stabilized construction entrances shall be repaired when sediment is tracked offsite. Repair shall include adding additional 4" minus crushed stone and/or removal of contaminated stone.

THIS DETAIL TO BE USED FOR ALL TEMPORARY STONE STABILIZATION AREAS IDENTIFIED ON THE PLANS

Temporary Stabilized Construction Entrance & Staging Areas

N.T.S.

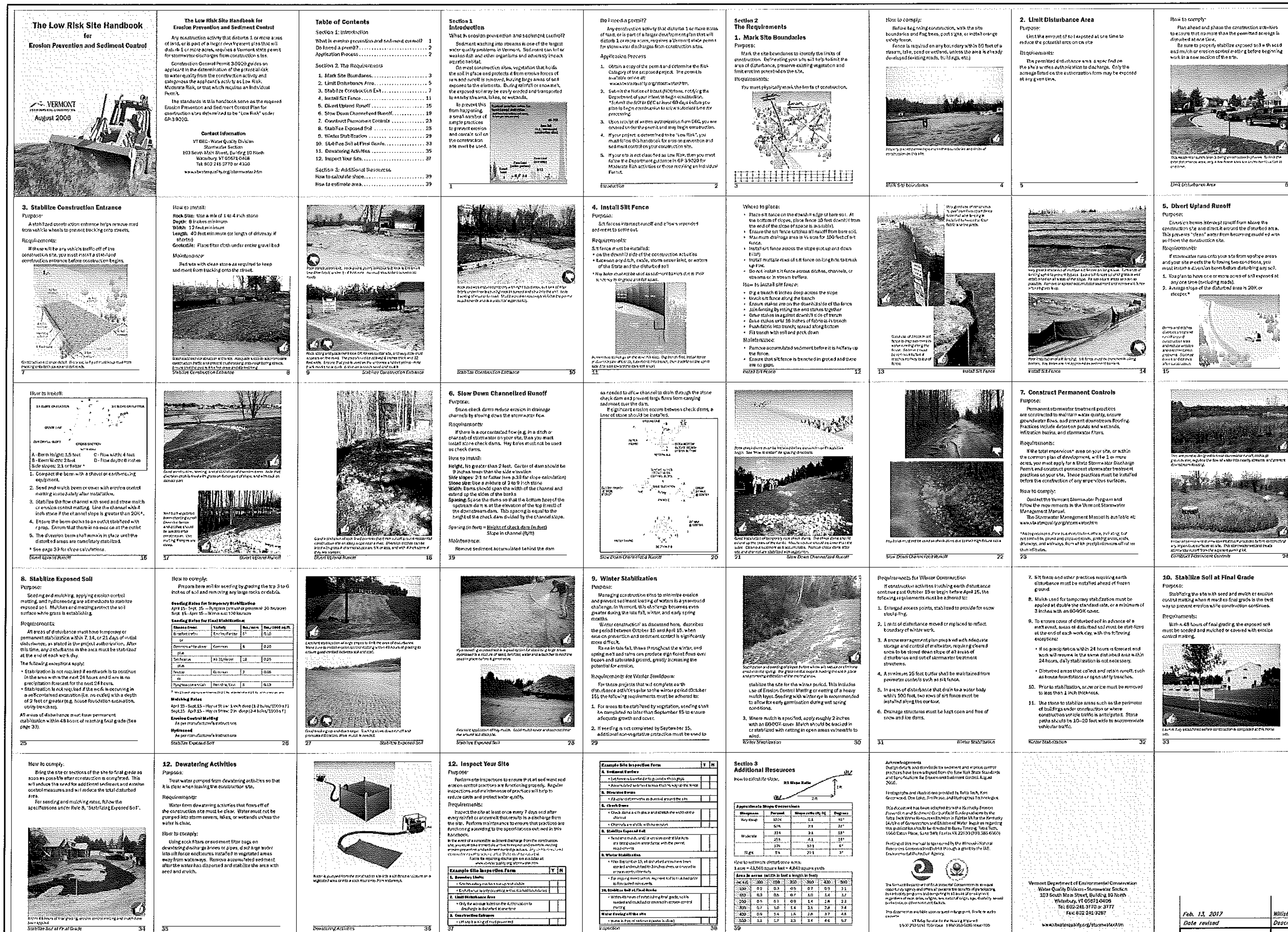
Upon finding that the final plans complied with all requirements of the *Williston Development Bylaw* and all conditions imposed on the approval of Discretionary Permit 16 - 30, the Williston Zoning Administrator approved the final plans for DP 16 - 30 on the 12 day of APRIL 2018

Feb. 13, 2017	Williston Final Plans	WHN/DMR	2/13/2017
Date revised	Description	Checked	Date

Design	WHN	Civil Details
Drawn	DMR	Whitney Hill
Checked	WHN/DMR	
Scale	N.T.S.	
Date	4/27/16	
Project	06229/14111	Whitney Hill Road — Williston, Vermont

KREBS & LANSING Consulting Engineers, Inc.
164 Main Street, Colchester, Vermont 05446

CD-3



Contractor shall employ as many of these best management practices to prevent soil from leaving the construction site. If evidence is found of eroded soil leaving the construction site, the Engineer may direct Site Contractor to implement additional best management practices at no additional cost to Owner.

Upon finding that the final plans complied with all requirements of the Williston Development Bylaw and all conditions imposed on the approval of Discretionary Permit 16-30, the Williston Zoning Administrator approved the final plans for DP 16-30 on the 18 day of APRIL 2018.

Date revised	Description	Checked	Date
Feb. 13, 2017	Williston Final Plans	WHN/DMR	2/13/2017

Design: WHN
Drawn: TJB
Checked: WHN/DMR
Scale: NTS
Date: 4/27/2016
Project: 06229/14111

Low Risk EPSC Handbook

Whitney Hill

Whitney Hill Road — Williston, Vermont

KREBS & LANSING Consulting Engineers, Inc.
164 Main Street, Colchester, Vermont 05446

14111 low risk

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