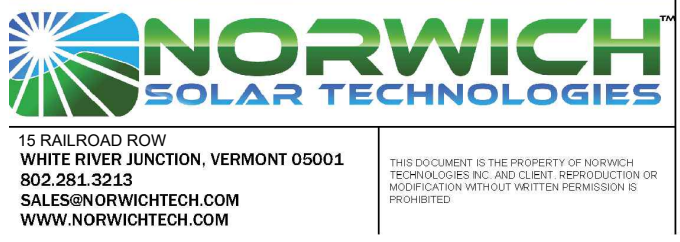


Randolph Davis Solar, LLC

Davis Road
Randolph, Vermont



ISSUED FOR PERMIT REVIEW
NOT FOR CONSTRUCTION

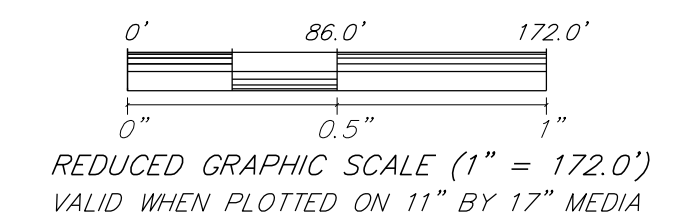
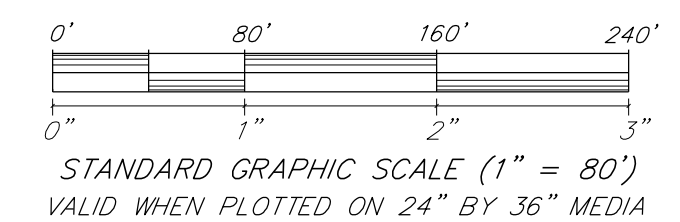
SOURCE DATA LEGEND

MAPPING SOURCE DATA USED FOR PLAN COMPIATION

Electrical Design:
Norwich Solar Technologies
15 Railroad Road
White River Junction, Vermont 05001

Civil Engineering:
Krebs and Lansing Consulting Engineers, Inc.
164 Main Street, Suite 201
Colchester, Vermont 05446

Environmental:
Arrowwood Environmental
950 Bert White Rd
Huntington, Vermont 05462



Proposed
Solar Array

REV	REVISIONS/COMMENTS	DATE
1	Revised array onto existing slopes less than 25%	2-22-22
2	Added areas within LOD of the access road with existing slopes greater than 25% based on LIDAR	4-18-22
3	Updated environmental buffers. Revised array & LOD on existing slopes less than 25%	6-17-22

Drawing Title:

PRELIMINARY
SITE PLAN

DATE of Issue: 8/04/2021

Drawn by: JBC Checked by: JBC

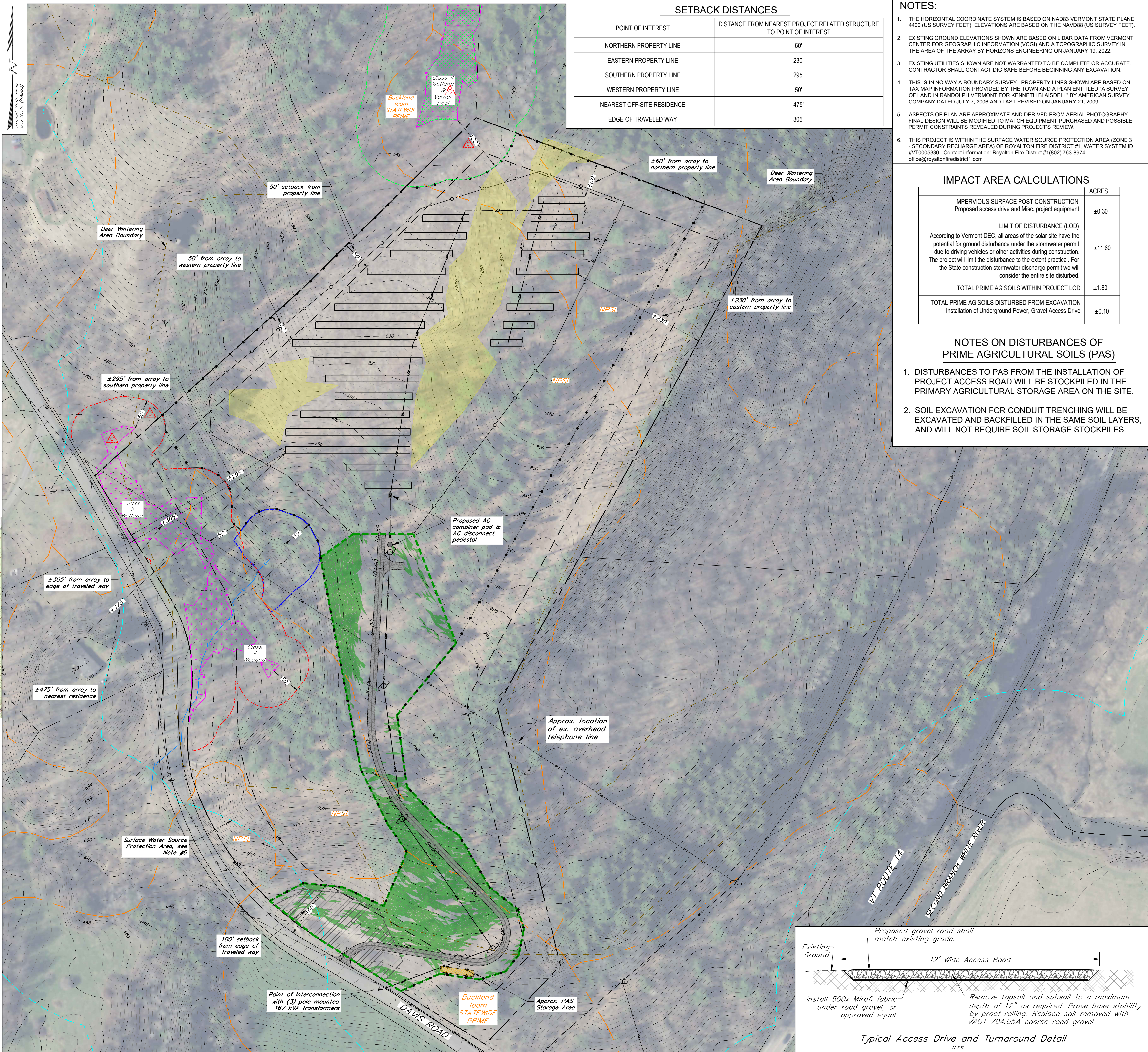
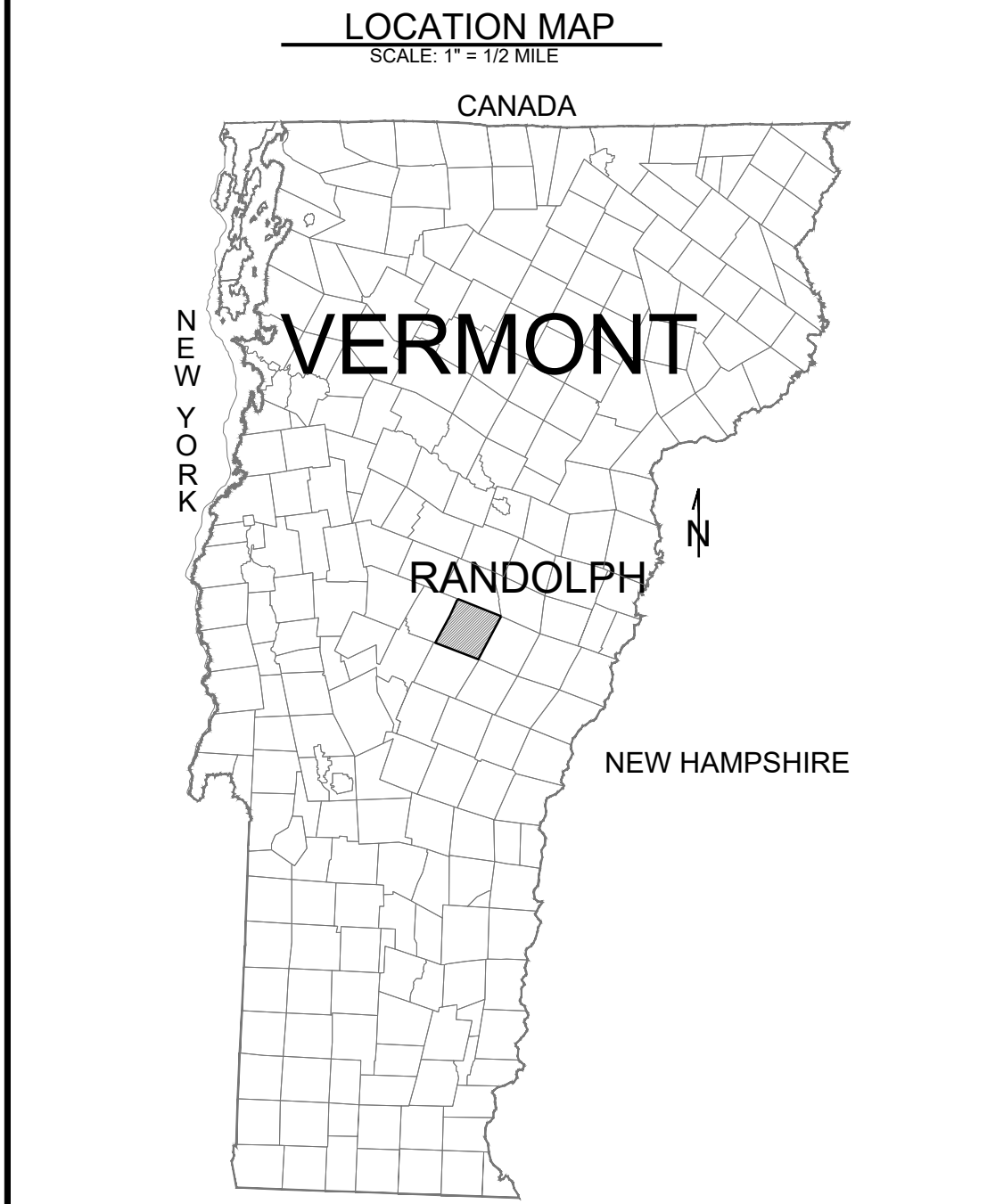
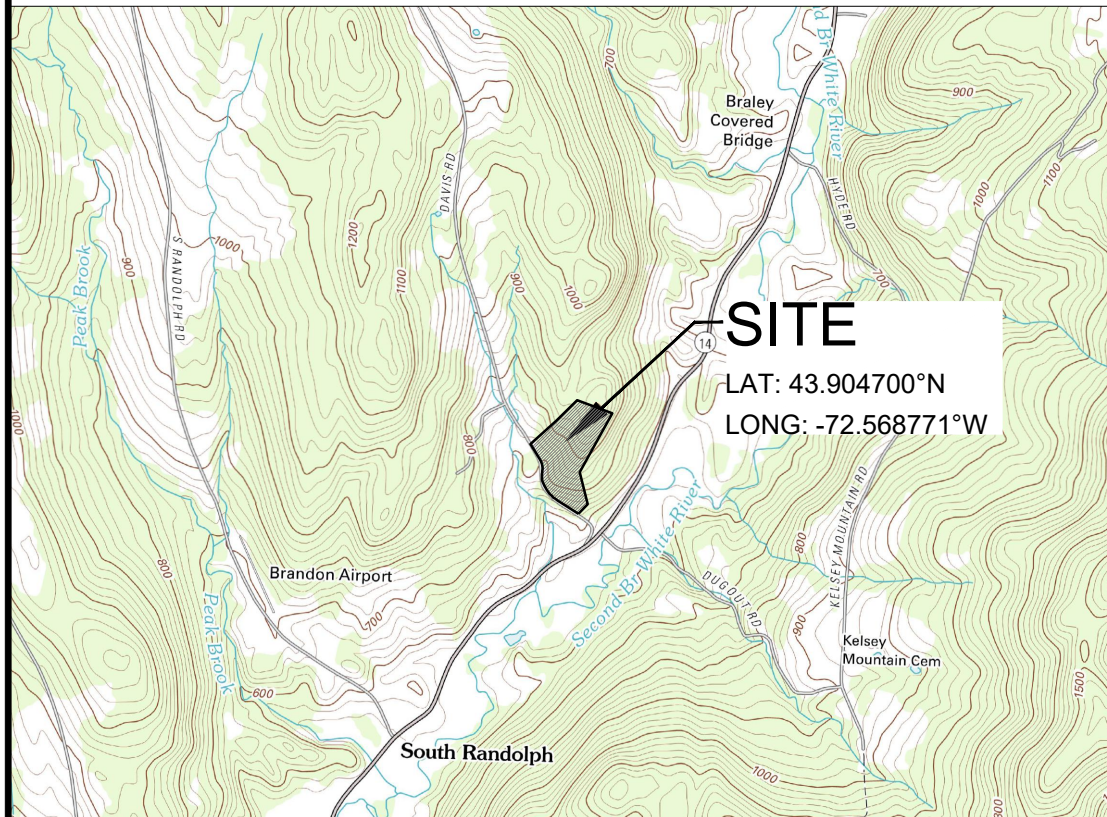
Project No.: 21294 Scale: 1" = 80'

Drawing No.: Rev No.:

C-100

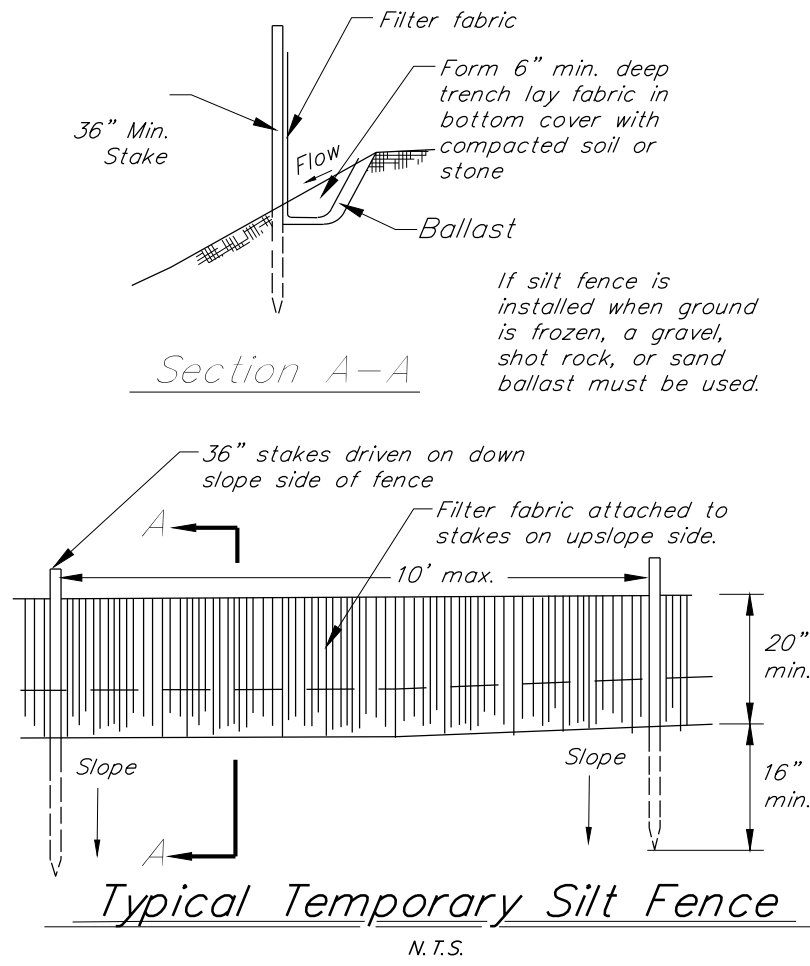
LEGEND:

- EXISTING / PROPOSED POWER POLE
- EXISTING GRADE 10-FT CONTOUR LINES (BASED ON VCGI DATA)
- EXISTING GRADE 2-FT CONTOUR LINES (BASED ON VCGI DATA)
- EXISTING OVERHEAD POWER LINES
- APPROXIMATE PROPERTY LINES
- APPROXIMATE PROJECT PROPERTY LINES
- SETBACKS TO SOLAR PANEL RACKING
- WETLANDS (LOCATED BY AE)
- WETLAND BUFFER
- STREAM (LOCATED BY AE)
- STREAM TOP OF BANK (LOCATED BY AE)
- RIPARIAN BUFFER
- MAPPED SOIL BOUNDARY (VCGI)
- PROPOSED 12' GRAVEL ACCESS ROAD
- PROPOSED UNDERGROUND POWER
- PROPOSED OVERHEAD POWER
- PROPOSED UPGRADED OVERHEAD POWER
- PROPOSED PERIMETER FENCE
- PROPOSED FIXED SOLAR PANEL RACKING
- PROPOSED STAGING AREA
- PROPOSED CLEARING AND LIMIT OF DISTURBANCE (LOD)
- SURFACE WATER SOURCE PROTECTION AREA (VCGI)
- DEER WINTERING AREA (VCGI)
- PAS STORAGE AREA
- EXISTING GRADE AREAS GREATER THAN 25% SLOPE BASED ON ON-SITE TOPOGRAPHIC SURVEY
- EXISTING GRADE AREAS GREATER THAN 25% SLOPE BASED ON LIDAR DATA FROM VCGI
- VERNAL POOL (LOCATED BY AE)
- VERNAL POOL BUFFER



NOTES:

1. Acceptable EPSC Measure details are provided above.
2. At a minimum, EPSC measures meet VT DEC Standards and Specifications for Erosion Prevention and Sediment Control or previously approved interchangeable practices.
3. Perimeter controls shall be utilized in small areas ≤ 1 acre. In areas > 1 acre, temporary sediment traps or temporary sediment basins are to be utilized.
4. Perimeter controls shall be installed on downslope side of planned earth disturbance.
5. Perimeter controls shall be installed prior to any earth disturbing activities within upslope contributing area.
6. Silt fence shall not be used as construction demarcation.



CONSTRUCTION STORMWATER DISCHARGE PERMIT INFORMATION

1. This Project proposes greater than 1 acre of soil disturbance on site. The Project will apply for a Construction General Permit 3-9020.
2. The proposed Project has been scored using the State of Vermont Appendix-A Risk Evaluation. The Project is scored "Low Risk" based on the evaluations criteria.
3. The maximum area of earth disturbance at any one time shall not exceed 5 acres.
4. All areas of earth disturbance associated with this project must be stabilized within 14-days of initial disturbance. After this initial 14-day period, all earth disturbance areas associated must be stabilized on a daily basis, with the following exceptions:
a. Stabilization is not required if work is to continue within the area within the next 24 hours and there is no precipitation forecast for the next 24 hours.
b. Stabilization is not required if the work is occurring in a self-contained excavation (i.e., no outlet for stormwater) with a depth of 2 feet or greater (e.g., underground line installation).
5. Project does not propose winter construction.
6. All temporary EPSC measures shall be removed within 30 days after final site stabilization or after the temporary EPSC measures are no longer needed, unless otherwise authorized and approved in writing by the Owner.
7. Soil stabilization shall be achieved by seed and mulch, hydroseeding, with mulch tackifier, sod, stone, and/or rolled erosion control products (e.g., erosion control blanket). Mulch shall be comprised of straw, hay, compost, woodchips, wood stump grindings, and/or erosion control mix.
8. Appropriate seed mix shall be applied to designated areas per this EPSC Plan and seed specifications.

EPSC GENERAL NOTES

1. Erosion prevention and sediment control (EPSC) practices shall be implemented in all areas where there is an increased risk of erosion, and where there is potential for discharge of stormwater runoff (either direct or indirect) to a water body.
2. EPSC measures shall be installed prior to any earth disturbing activities within a given drainage area with the exception of land disturbance that may result from accessing the area(s) with equipment in which EPSC measures are to be installed. This exception includes land disturbance that may result from access of equipment that is needed for: logging (See note #5), exploration and/or EPSC measure installation phases of the project. Temporary sediment basins, temporary sediment traps, perimeter dikes, temporary sediment barriers, and other temporary measures intended to trap sediment shall be constructed as a first step in any land disturbing activity and shall be made functional before upslope land disturbance takes place with the exception of those activities stated above. Earth disturbance includes stumping and grubbing of cleared areas.
3. Where applicable, EPSC measures shall be installed pursuant to the construction phase stormwater discharge permit for the project, this EPSC Plan, the Vermont Standards and Specifications for Erosion Prevention and Sediment Control (2020), and/or any other relevant project permits.
4. Where applicable, all proposed changes shall be approved by the On-Site Plan Coordinator (OSPC) or his/her designee prior to implementation.
5. Permission must be granted by VT DEC prior to use of any support activities occurring outside of the approved project boundaries.
6. All parties associated with construction activities who meet either of the following two criteria of "Principal Operator" must obtain coverage under the construction stormwater discharge permit for the project prior to commencement of construction activities by that operator:
a. The party has operational control over construction plans and specification, including but not limited to the ability to make modifications to those plans and specifications; or
b. The party has continuous day-to-day operational control of those activities at the project that are necessary to ensure compliance with an EPSC Plan for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the EPSC Plan or comply with other permit conditions).

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

EPSC CONSTRUCTION NOTES

1. Existing vegetation shall be protected and maintained to the extent practicable.
2. A vegetated buffer shall be maintained for water bodies where feasible (e.g., wetlands and streams).
3. To the extent practicable, surface flow shall be diverted away from exposed soils via diversion berms, earth dikes, perimeter dikes/swales, temporary swales, water bars, and/or check dams.
4. Resource areas (e.g., wetlands, streams, RTE plant species) shall be flagged prior to any construction related activities occurring within close proximity to those areas.
5. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not violate water quality standards or contribute to erosion. Dewatering details shall be reviewed and approved by OSPC prior to use.
6. Concentrated runoff shall not flow down steep slopes unless contained within an adequate temporary or permanent channel (see details), flume, or slope drain structure.
7. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
a. No more than 500 linear feet of trench may be opened at one time.
b. Excavated material shall be placed on the uphill side of trenches, where feasible, but not in resource areas.
8. Where feasible, all sediment removed from sediment control practices as part of maintenance shall be disposed of in an area that is at least one of the following, with immediate stabilization following disposal of material:
a. Less than 5% slope
b. At least 100 feet from any downslope water body or conveyance to a water body, including a ditch
c. Vegetated
9. Disturbed areas bordering or draining to existing roads shall have an appropriate sediment barrier (e.g., silt fence) spanning the edge of the disturbance to prevent washing of sediment onto roadways or into road ditches.
10. In advance of predicted rainfall or snowmelt, all EPSC measures that are located in active areas of earth disturbance shall be inspected and repaired, as needed. If necessary, this shall include temporary stabilization of all disturbed soils on the site in advance of the anticipated runoff period.
11. Dust control shall be handled via water application to roadways and other areas where dust may be generated.

NOTES:

1. Acceptable EPSC Measure details are provided below.
2. At a minimum, EPSC measures meet VT DEC Standards and Specifications for Erosion Prevention and Sediment Control or previously approved interchangeable practices.
3. Limits of disturbance (or "construction demarcation") shall be installed prior to any earth disturbing activities.
4. Barrier Tape/Rape: for use where proposed disturbance borders non-wooded, vegetated areas more than 100 ft from the nearest water resource (stream, brook, lake, pond, wetland, etc.). Barrier tape is high visibility fiber-glass tape, minimum 3" in width commonly used in ski areas for demarcating closed areas. Barrier tape and rape should be attached to stakes, at a minimum height of 4 ft from the ground.
Orange polyester mesh webbing by World Cup Supply or approved equal (3" wide min.)
Wood stakes driven on outside of fence
Fasten fence to stake
To be installed at the limits of the construction area. See Plans.

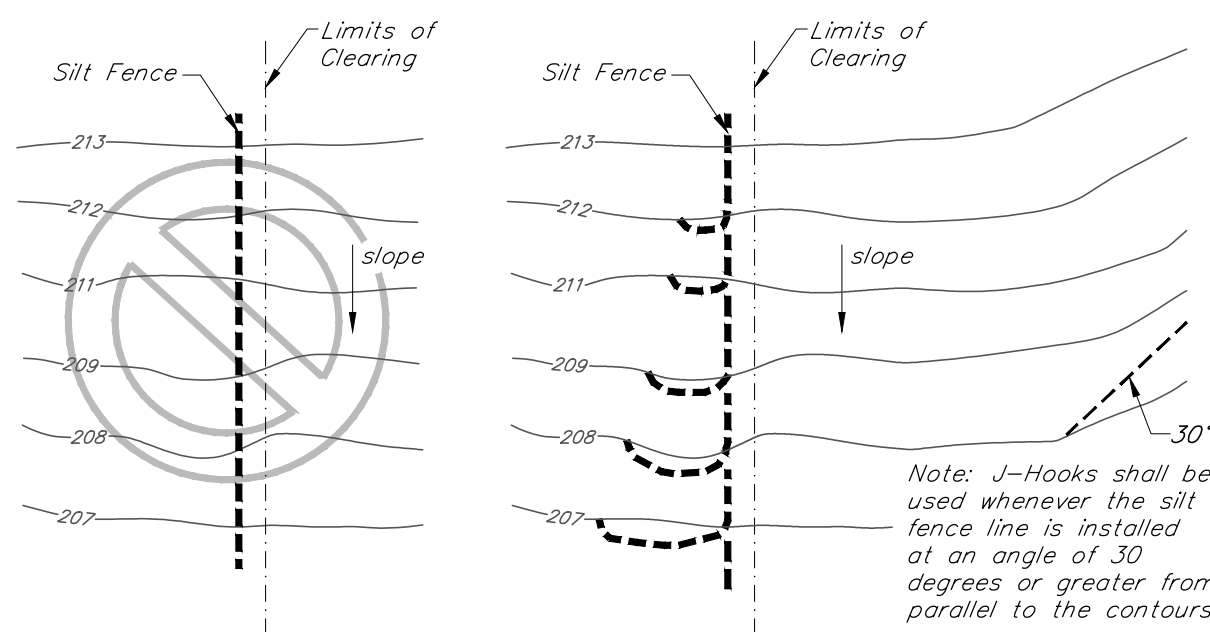
NOTES:

1. Minimum 1 to 2 rows of mesh barrier tape to be installed along construction perimeter.
2. Each row of barrier tape to be 3" wide minimum.
3. Barrier tape to be orange.
4. Secure barrier tape to stakes or existing tree trunks with bottom row at 4' distance from ground surface (minimum).
5. Maintain and replace as needed. Remove at completion of project per OSPC.
6. In event the OSPC determines barrier tape is not sufficient, replace with orange construction fence or snow fence.

Typical Construction Limit Barrier

NOTES:

1. Proper installation of J-Hooks provides silt fence the ability to temporarily pond runoff, allowing time for sediments to settle.
2. Long runs of silt fence between J-Hooks should be avoided refer to adjacent table for proper spacing of J-Hooks.
3. J-Hooks should be built along contour in a "smile" shape with a minimum width of 20 feet and minimum depth of 10 feet.
4. Along a narrow right of way, narrower J-Hooks can be used with a higher spacing frequency.

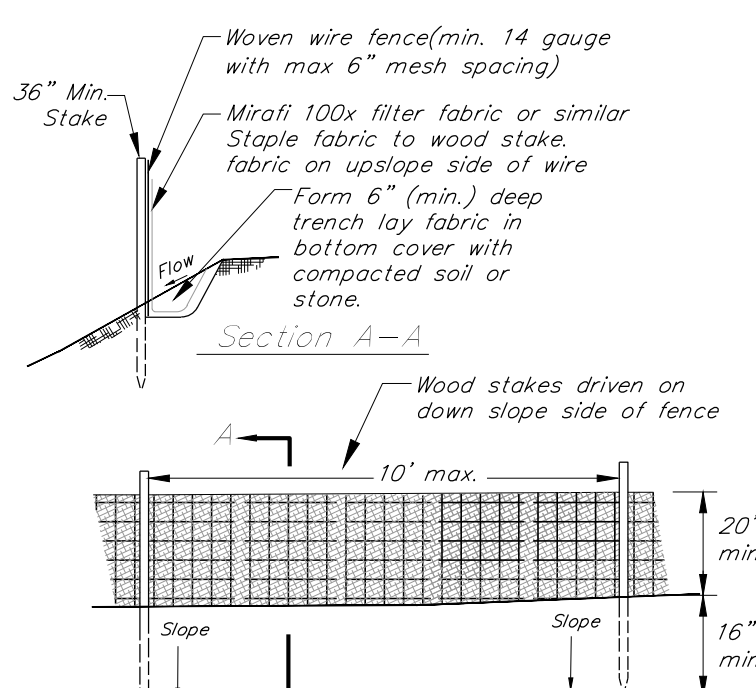


INCORRECT
Silt fence installed parallel to slope (perpendicular to contour) in one, long run

CORRECT
Silt fence installed in shorter runs with J-Hooks to avoid concentration of flows at one location by trapping runoff at multiple points along a slope.

Slope Steepness	Maximum spacing between silt fence J-Hooks (ft.)
2:1 Slope (50%)	25
3:1 Slope (33%)	50
4:1 Slope (25%)	75
5:1 Slope or Flatter (50%)	100

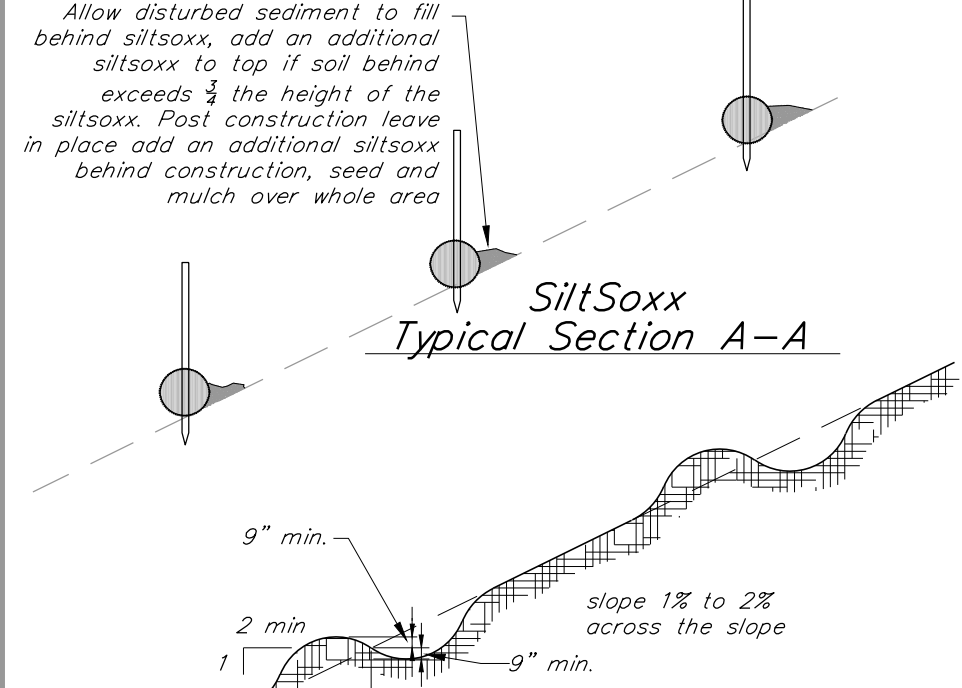
Typical Silt Fence "J-Hook" Construction



NOTES:

1. Woven wire fence to be fastened securely to fence posts with wire ties wire fence reinforcement required within 100 ft upslope of receiving waters.
2. Filter cloth to be fastened securely to woven wire fence with ties spaced 24" at the top and mid section.
3. When two sections of filter cloth adjoin each other they shall be overlapped by 6" and folded. Filter cloth shall be Mirafi 100X or approved equivalent.
4. Prefabricated units shall be Geofab, Envirofence or equivalent.
5. Contractor shall be responsible for the installation, maintenance, and removal of silt fence in all locations shown on the plans.
6. Maintenance shall be performed as needed and material removed when sediment reaches half of fabric height. Remove silt fence after successful establishment of vegetation.
7. If silt fence is installed when ground is frozen, a gravel or sand ballast must be used.
8. Contractor may use IV Wire Back Silt Fence (IV Product 940-3610-848-664) or equivalent.
9. Silt fence shall be installed along contours.
10. Silt fence shall not be located in areas of concentrated flow.
11. Drainage area shall be ≤ 1 acre per 100 linear feet of silt fence.

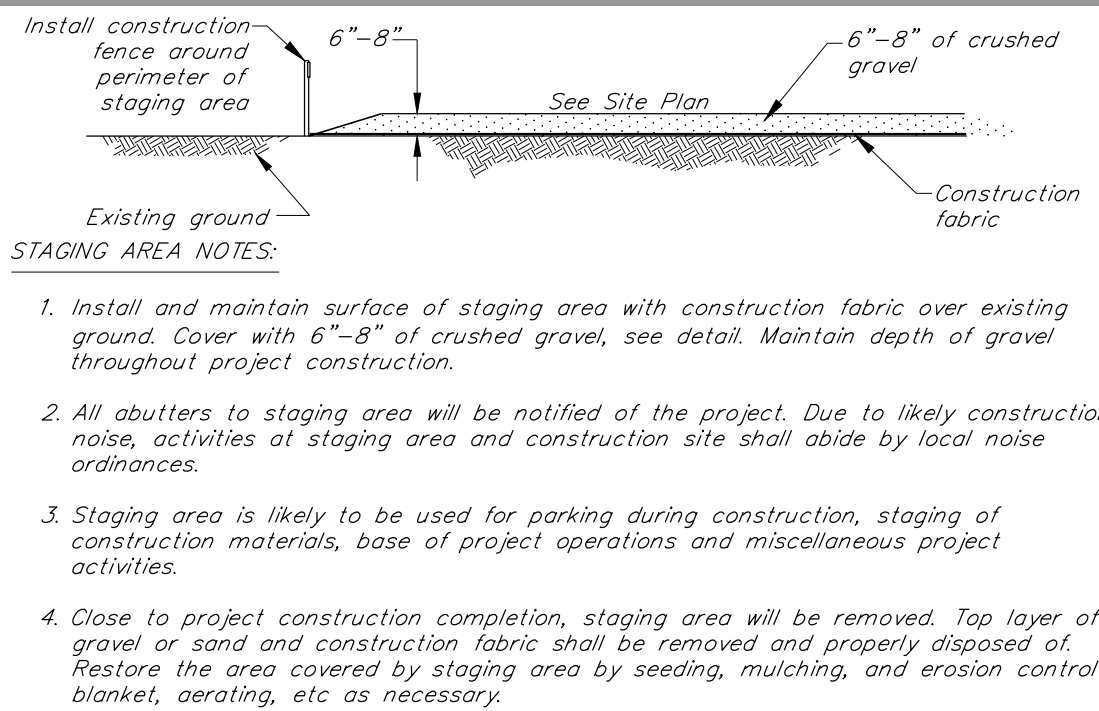
Typical Temporary Reinforced Silt Fence



NOTES:

1. Woven wire fence to be fastened securely to fence posts with wire ties wire fence reinforcement required within 100 ft upslope of receiving waters.
2. Filter cloth to be fastened securely to woven wire fence with ties spaced 24" at the top and mid section.
3. When two sections of filter cloth adjoin each other they shall be overlapped by 6" and folded. Filter cloth shall be Mirafi 100X or approved equivalent.
4. Prefabricated units shall be Geofab, Envirofence or equivalent.
5. Contractor shall be responsible for the installation, maintenance, and removal of silt fence in all locations shown on the plans.
6. Maintenance shall be performed as needed and material removed when sediment reaches half of fabric height. Remove silt fence after successful establishment of vegetation.
7. If silt fence is installed when ground is frozen, a gravel or sand ballast must be used.
8. Contractor may use IV Wire Back Silt Fence (IV Product 940-3610-848-664) or equivalent.
9. Silt fence shall be installed along contours.
10. Silt fence shall not be located in areas of concentrated flow.
11. Drainage area shall be ≤ 1 acre per 100 linear feet of silt fence.

Typical SiltSoxx or Constructed Water Bar Detail



Staging Area Plan and Details

Permanent Seed Mix shall be used as early as practicable between 5/15 and 9/15 and shall meet the following criteria:

Seed	% Weight
Red Fescue	50%
Sheep Fescue	25%
Red Top	5%
White Clover	10%
Annual Rye	10%

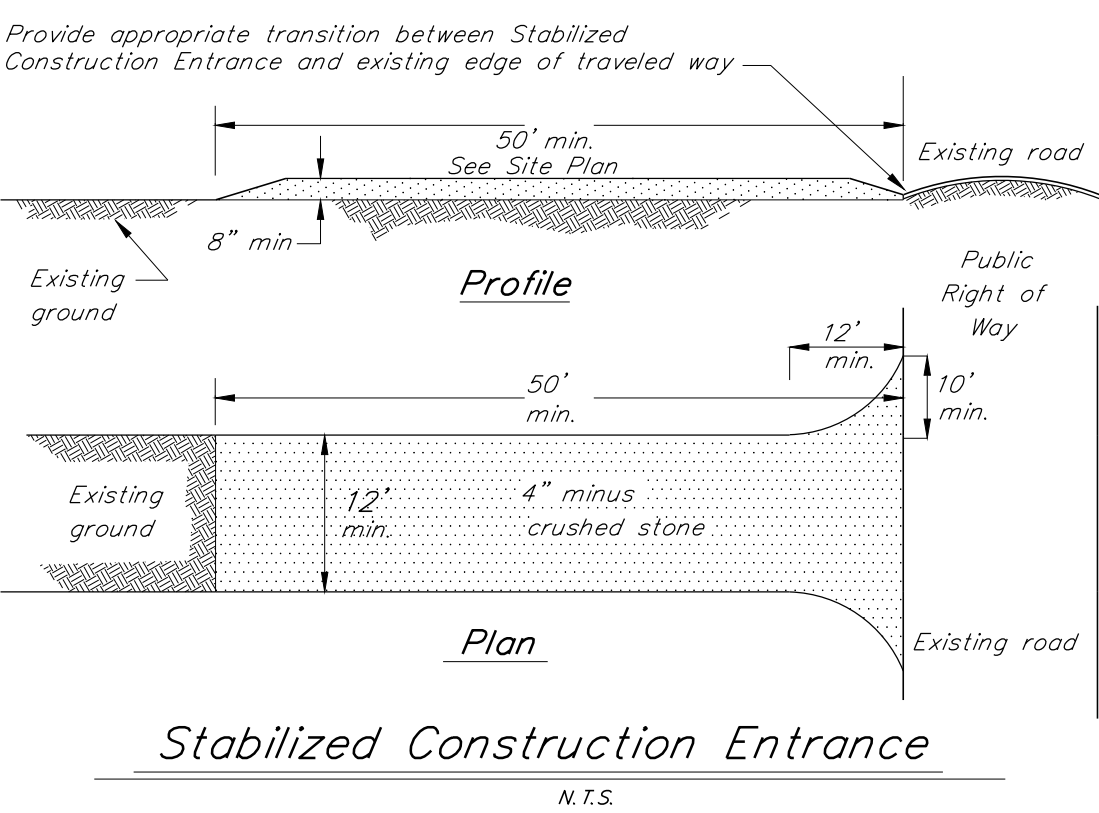
Temporary Seed Mix shall be used between 9/16 and 5/14 and shall meet the following criteria:

Seed	% Weight	% Germination
Winter Rye	80% Minimum	85 Min.
Red Fescue (Creeping)	4 Min.	90 Min.
Perennial Rye Grass	3 Min.	90 Min.
Red Clover	3 Min.	90 Min.
Other Crop Grass	0.5 Max.	
Noxious Weed Seed	0.5 Max.	
Inert Matter	1.0 Max.	

Seeding Specifications

Notes:

1. Contractor shall stabilized construction entrance as required to prevent tracking of sediment off-site.
2. Contractor to use Mirafi 500x under stone for temporary construction roads.
3. Crushed stone shall be added or replaced when 80% of the voids are filled with sediment.
4. Stone size shall be 1-4".
5. All surface water flowing or diverted toward construction entrance shall be piped beneath entrance. If piping is impractical, a mountable berm with 5:1 slopes is allowed.



Stabilized Construction Entrance

Guide to Mulch Materials, Rates, and Uses

	Quality Standards	Per 1000 sq. ft.	Per Acre	Depth of Application	Remarks
Wood chips or shavings	Air-dried. Free of objectionable coarse material	500-900 lbs	10-20 tons	2 - 7"	Used primarily around shrub and tree plantings and recreation trails to inhibit weed competition. Resistant to wind blowing. Decomposes slowly.
Wood fiber cellulose (partly digested wood fibers)	Made from natural wood usually with green dye and dispersing agent	50 lbs	2,000 lbs.	-	Apply with hydramulcher. No tie down required. Less erosion control provided than 2 tons of hay or straw.
Gravel, Crushed Stone or Slog	Washed. Size 2B or 3A - 1/2"	9 cu. yds.	405 cu. yds.	3"	Excellent mulch for short slopes and around plants and ornaments. Use 2B where subject to traffic. (Approximately 2,000 lbs./cu. yd.). Frequently used over filter fabric for better weed control.
Hay or Straw	Air-dried; free of undesirable seeds & coarse materials	90-100 lbs 2-3 bales	2 tons (100-120 bales)	Cover about 90% surface	Use small grain straw where mulch is maintained for more than three months. Subject to wind blowing unless anchored. Most commonly used mulching material. Provides the best micro-environmental for germinating seeds.
Compost	Up to 3" pieces, moderately to highly stable	3-9 cu. yds	134-402 cu. yds.	1 - 3"	Coarser textured mulches may be more effective in reducing weed growth and wind erosion.
Erosion Control Mix	Well-graded mixture of particle sizes. Organic content between 80-100%. Any weight. Particle size shall pass 6" screen (100%)				* Slopes 3:1(H:V) or flatter = 2 inch depth plus additional 1/2 inch depth per 20 ft. of slope up to 100 ft. ** Slopes between 3:1(H:V) and 2:1(H:V) = 4 inch depth plus additional 1/2 inch per 20 ft. of slope up to 100 ft. *** Slopes steeper than 2:1(H:V) applicability to specific site and mulch depth to be reviewed and approved prior to use by OSPC or EPSC Specialist

Randolph Davis Solar, LLC

Davis Road
Randolph, Vermont



P: (802) 878-0375
www.krebslansing.com

ISSUED FOR PERMIT REVIEW NOT FOR CONSTRUCTION

SOURCE DATA LEGEND

MAPPING SOURCE DATA USED FOR PLAN COMPILATION

Electrical Design:

Norwich Solar Technologies
15 Railroad Row
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Proposed Solar Array

REV	REVISIONS/COMMENTS	DATE
1		
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Drawing Title:

EROSION PREVENTION AND SEDIMENT CONTROL DETAILS

DATE of Issue: 8/04/2021

Drawn by: JBC Checked by: JBC

Project No.: 21294

Drawing No.:

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