

EROSION & SEDIMENT CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
3. SEDIMENT BARRIERS (SILT FENCE, HAY BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST, THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
4. INSTALL SEDIMENT BARRIERS AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE DETAILS FOR PROPER INSTALLATION. SEDIMENT BARRIERS WILL REMAIN IN PLACE PER NOTE #5.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2 TO 1).
7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, FROST USE TEMPORARY MULCH (DOWNWARD SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
8. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
  - a) FOUR INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
  - b) APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF USING 10-20-20 OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SF).
  - c) FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% BENTLY, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS. SEEDING RATE IS 1.00 LB PER 1,000 SF LAWN QUALITY SOIL MAY BE SUBSTITUTED FOR SEED.
  - d) HAY MULCH AT THE RATE OF 70-90 LBS PER 1,000 SF. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS WILL BE USED ON HAY MULCH FOR WIND CONTROL.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED.
12. WETLANDS WILL BE PROTECTED W/HAYBALES AND/OR SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
13. ALL PAVED AREAS ON THE SITE ARE TO BE SWEEP SEMI-ANNUALLY. ADDITIONALLY, BOTTOMS OF ALL CATCH BASINS AND MANHOLES ARE TO BE CLEANED SEMI-ANNUALLY.

MULCH AND MULCH ANCHORING

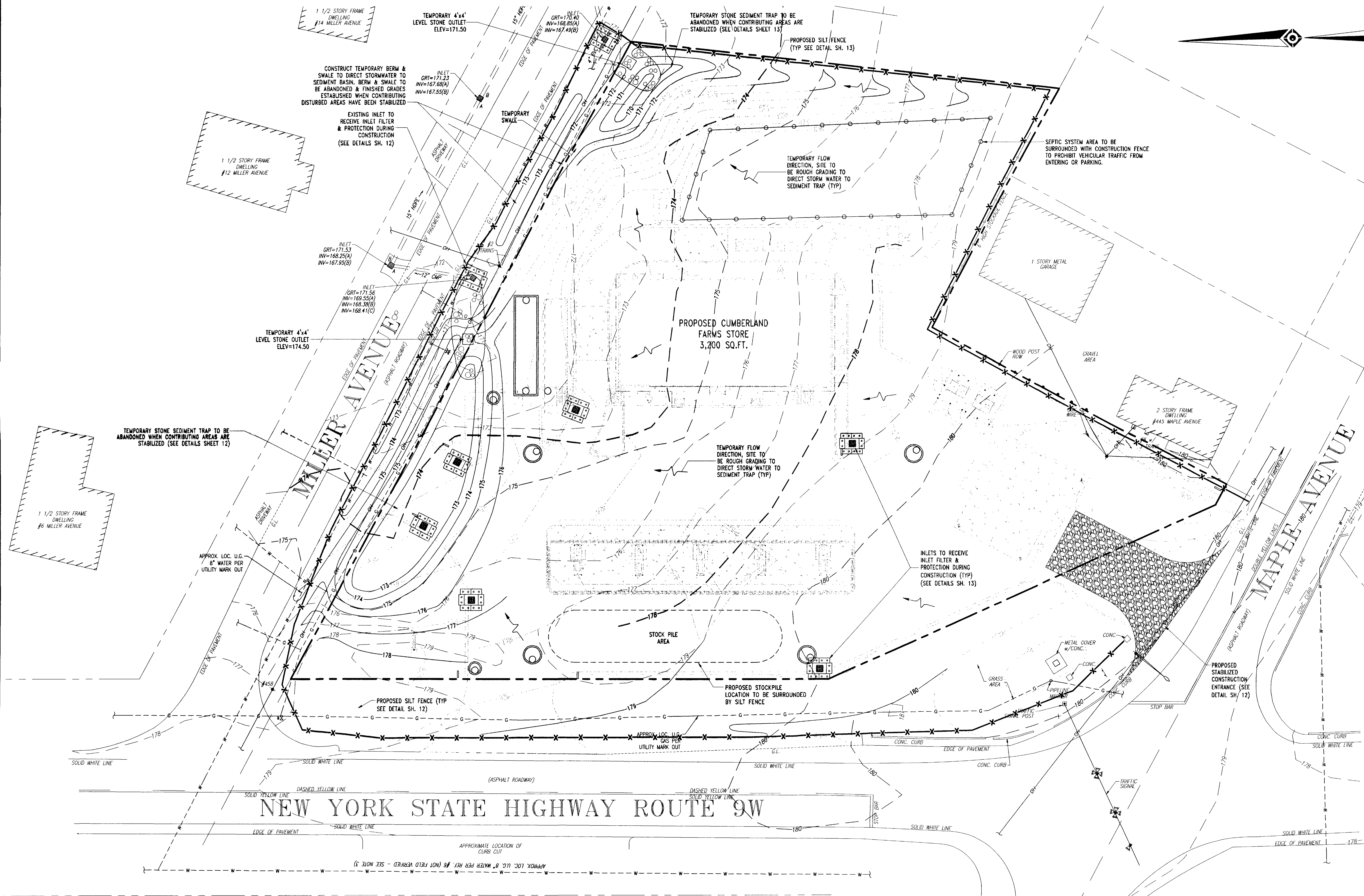
MULCH	LOCATION	MULCH	RATE (1000 SF)
PROTECT AREA	WINDY AREA	STRAW OR HAY	100 POUNDS
		SHREDDED OR CHOPPED	185-275 POUNDS
		CORNFESTALS	100 POUNDS
		STRAW OR HAY (ANCHORED)	100 POUNDS

MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER THAN 3:1

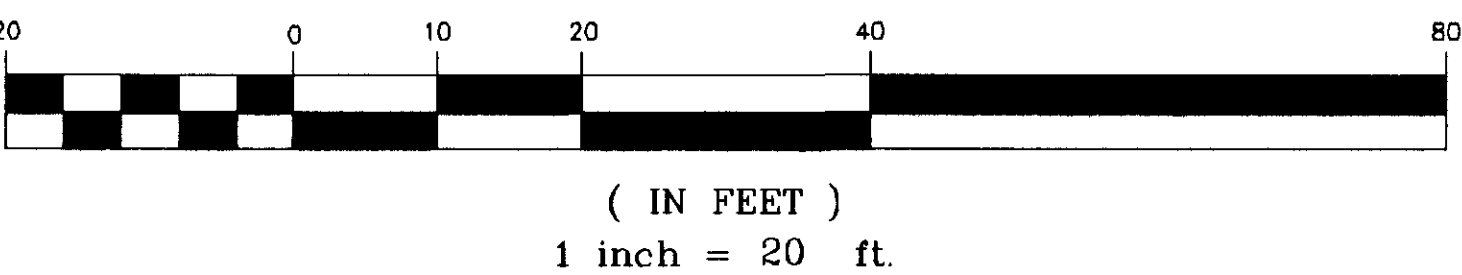
\* A HYDRO-APPLICATION OF WOOD, OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS SHALL BE USED ON HAY MULCH FOR WIND CONTROL.

MULCH ANCHORING

ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD/BLOCK): MULCH NETTING (AS PER MANUFACTURED); WOOD CELLULOSE FIBER (750 LBS/ACRE); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); USE OF A SEPARATED STRAIGHT DISK, MATTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.



GRAPHIC SCALE



DESIGNATED OPERATOR:

CUMBERLAND FARMS, INC. IS RESPONSIBLE FOR THE CONSTRUCTION PHASE AND THE POST DEVELOPMENT CONSTRUCTION INSPECTION AND MONITORING FOR THIS PROPERTY. CUMBERLAND FARMS, INC. SHALL DESIGNATE A QUALIFIED REPRESENTATIVE RESPONSIBLE FOR THE CONSTRUCTION PHASE OF THE PROJECT AND THE IMPLEMENTATION OF THE POLLUTION PREVENTION MEASURES SHOWN ON THIS PLAN AND IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). REQUIREMENT FOR THE QUALIFIED REPRESENTATIVE ARE SET FORTH IN THE NYSDEC SPECIAL GENERAL PERMIT OF 02-01 INCLUDED IN THE SWPPP. CUMBERLAND FARMS, INC. SHALL ALSO DESIGNATE A QUALIFIED REPRESENTATIVE FOR THE POST DEVELOPMENT INSPECTION AND MONITORING AS SET FORTH IN THE SWPPP. THE RESPONSIBILITIES SET FORTH IN THE SWPPP WILL CONTINUE FOR THE LIFE OF THE DEVELOPMENT AND SHALL TRANSFER WITH PROPERTY OWNERSHIP.

OPERATION / MAINTENANCE PLAN:

1. MAINTENANCE OF ALL PARKING LOTS AND ON-SITE DRAINAGE SYSTEMS ON THE PROPERTIES SHALL BE THE RESPONSIBILITY OF CUMBERLAND FARMS, INC. THE IMPLEMENTATION OF THE FOLLOWING MAINTENANCE PROGRAM IS INTENDED TO ADEQUATELY MANAGE SEDIMENT INFILTRATION TO THE STORM WATER DRAINAGE SYSTEM.
2. ALL PARKING LOTS SHALL BE SWEEP TWO (2) TIMES PER YEAR, BETWEEN THE DATES OF OCTOBER 1 AND JUNE 1 OF EACH YEAR, AND ALL SAND AND DEBRIS SHALL BE PROPERLY DISPOSED.
3. THE ON-SITE DRAINAGE SYSTEM INCLUDING STRUCTURES, SEDIMENT BASINS, SAND FILTERS & DETENTION STRUCTURES SHALL BE INSPECTED PER GUIDELINES SET FORTH IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
4. CLEANING OF STRUCTURES SHALL INCLUDE THE REMOVAL AND PROPER DISPOSAL OF ALL SAND AND DEBRIS FROM THE SUMPS. SPECIFIC GUIDANCE FOR INSPECTION AND MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM COMPONENTS ARE INCLUDED IN THE SWPPP.
5. CUMBERLAND FARMS, INC. SHALL MAINTAIN A MAINTENANCE LOG DOCUMENTING THE INSPECTION AND MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM. A COPY OF THE CONSTRUCTION INSPECTION AND OPERATIONS AND MAINTENANCE CHECK LISTS ARE INCLUDED IN THE SWPPP.

CONSTRUCTION SEQUENCE KEY

1. EXCAVATION WORK SHALL NOT BE CARRIED OUT DURING PERIODS OF INCLEMENT WEATHER.
2. CONSTRUCTION AND MAINTENANCE OF EROSION AND SILTATION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE NEW YORK STATE GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL.
3. INSTALL INLET FILTER FABRIC PROTECTION AROUND EXISTING DRAINAGE STRUCTURES
4. INSTALL SILTATION FENCE ALONG PROPERTY LINE AS SHOWN.
5. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES AS SHOWN.
6. CONSTRUCT TEMPORARY SEDIMENT TRAPS AS SHOWN HEREIN. GRADING IS TO TAKE PLACE IN SUCH A WAY THAT STORMWATER DISCHARGES FROM EXPOSED AREAS ARE DIRECTED TO THE SEDIMENT TRAPS. STOCK PILE AREAS ARE SHOWN ON THIS PLAN IN LOCATIONS THAT WILL ALLOW STORM WATER TO EASILY BE DIRECTED TO THE SEDIMENT TRAPS FROM THE PILES. THIS PLAN IS A GUIDE TO INSURE STORM WATER FROM EXPOSED AREAS IS DIRECTED TO THE TRAPS DURING THE EXCAVATION PROCESS. THE CONTRACTOR MAY HAVE TO IMPLEMENT ADDITIONAL MEASURES SUCH AS TEMPORARY BURNS, ADDITIONAL SILT FENCE, SWALES, CHECK DAMS ETC. TO INSURE ON-SITE SEDIMENT DISCHARGE DOES NOT OCCUR. THE TEMPORARY SEDIMENT TRAPS ABANDONED WHEN THE DRAINAGE SYSTEM INSTALLATION IS COMPLETE AND CONTRIBUTING DRAINAGE AREAS ARE STABILIZED.
7. INLET PROTECTION SHALL BE INSTALLED ON PROPOSED DRAINAGE STRUCTURES AS THEY ARE COMPLETED.
8. ALL EROSION CONTROL DEVICES SHALL BE INSPECTED AFTER EACH RAIN FALL OR WEEKLY IN THE EVENT RAIN DOES NOT OCCUR. OPERATOR SHALL INSPECT FOR SIGNS OF FAILURE, REPAIR OR REPLACEMENT OF ANY DEFICIENT DEVICES SHALL BE THE OPERATORS HIGHEST PRIORITY. EACH DAY THE OPERATOR SHALL:
  - a) INSPECT SECURITY OF SILTATION FENCE. CONTRACTOR SHALL RESECURE, REPLACE OR REPAIR ANY UNSTABLE, TORN OR BROKEN SECTIONS.
  - b) INSPECT INLET PROTECTION AND FABRIC TO INSURE ALL SEDIMENT IS EFFECTIVELY TRAPPED. REMOVE BUILDUP OF SEDIMENT AND CHECK DEVICES FOR DEFICIENCIES OR INSTABILITY.
  - c) INSPECT SWALES AND BURNS TO INSURE STORM WATER IS FOLLOWING THE INTENDED PATH WITHOUT CREATING UNNECESSARY EROSION OR BANK FAILURE. REPAIR, STABILIZE OR REPAIR UNSTABLE SLOPES.
  - d) INSPECT TEMPORARY STONE OUTLET SEDIMENT TRAPS. REPAIR, REPLACE AND/OR REPAIR ANY SLOPES, FABRIC OR STONE OUTLETS TO THEIR ORIGINAL INTENDED DESIGN PARAMETERS AS NEEDED. SEDIMENT SHALL BE REMOVED FROM TRAPS AND RESTORED TO THE ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH.
9. DISTURBED AREAS INTENDED AS GREEN SPACE SHALL BE FINE GRADED, TOPSOILED, SEEDING AND MULCHED AT THE EARLIEST POSSIBLE DATE IN THE CONSTRUCTION SEQUENCE.
10. WHEN THE UTILITY INSTALLATION IS COMPLETE, PROPOSED PAVEMENT AREAS SHALL BE STABILIZED BY COMPACTION AND GRAVEL SUBBASE SHALL BE PLACED. ALL EROSION CONTROL BARRIERS, SILT FENCE, SWALES, BURNS, PILES, STRUCTURES AND OUTLETS SHALL BE INSPECTED REGULARLY THROUGHOUT THE CONSTRUCTION PROCESS TO INSURE THEY ARE EFFECTIVELY TRAPPING SEDIMENT. ALL OF THE ABOVE SHALL BE CLEANED, REPAIRED OR REPLACED AS NEEDED.
11. EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE CONSTRUCTION PROCESS IS COMPLETE AND DISTURBED AREAS ARE STABILIZED.
12. EROSION CONTROL MEASURES SHOWN HEREON ARE MEASURES TO BE INSTALLED AT A MINIMUM. AS THE SITE IS MORE FINELY GRADED AND DRAINAGE STRUCTURES ARE INSTALLED, IT MAY BECOME DIFFICULT TO SHEET FLOW STORMWATER FROM DISTURBED AREAS TO THE TEMPORARY SEDIMENT TRAP. THE CONTRACTOR SHALL TAKE MEASURES ABOVE AND BEYOND WHAT IS SHOWN HEREON TO INSURE STORM WATER FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT TRAP. DEPENDING ON THE GRADING PROCESS AND THE CONSTRUCTION PHASING THESE METHODS MAY INCLUDE BUT ARE NOT LIMITED TO TEMPORARY BURNS AND SWALES, TEMPORARY OUTLET PIPES FROM STRUCTURES TO THE SEDIMENT TRAP OR A COMBINATION OF TEMPORARY PIPES, BURNS AND SWALES. CONTRIBUTING AREAS SHALL BE STABILIZED AND THE DRAINAGE PIPES AND STRUCTURES SHALL BE CLEANED AND SEDIMENT FREE PRIOR TO ESTABLISHING FINISHED GRADING, PLANTING, TOPSOILING AND SEEDING.

ANY PERSON IS PROHIBITED FROM ALTERING ANYTHING ON THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATIONS, UNLESS IT IS UNDER THE WRITTEN DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OF THE FIRM. IN THE EVENT SUCH ALTERATIONS ARE MADE, THE PROFESSIONAL ENGINEER OF THE FIRM MUST SIGN, SEAL, DATE, AND DESCRIBE THE FULL EXTENT OF THE ALTERATION ON THE DRAWINGS AND/OR IN THE SPECIFICATIONS. (NYS EDUCATION LAW SECTION 2205-2)

REV.	DATE	BY	COMMENT
11	11/16/07		REVISED PER TOWN COMMENTS
10	10/29/07		REVISED PER TOWN COMMENTS
9	10/17/07		RESIDENTIAL LANDSCAPE BUFFER INCREASED
8	7/25/07		REVISED PER TOWN COMMENTS
7	6/20/07		BLOGS. CANOPY REMOVED / SITE REDESIGNED
6	4/27/07		TRUCK DELIVERY / MAPLE AVE ACCESS
5	4/18/07		REVISED PER DOT COMMENTS
4	2/28/07		REVISED PER TOWN COMMENTS
3	11/12/06		REVISED PER CLIENT COMMENTS
2	11/21/06		SITE LAYOUT REVISED - 80% SUBMITTAL
1	10/24/06		BLOG. FOOTPRINT REVISED
REV.	DATE	BY	COMMENT

**BOHLER ENGINEERING, P.C.**  
CIVIL & CONSULTING ENGINEERS ■ PROJECT MANAGERS ■ ENVIRONMENTAL & SITE PLANNERS ■ MUNICIPAL ENGINEERS

Other Office Locations:  
■ Chalfont, PA ■ Rankinville, NY ■ Sterling, VA ■ Warren, VA ■ Warren, NJ ■ Towson, MD ■ Albany, NY ■ Southborough, MA

PROJECT: CUMBERLAND FARMS, INC.  
PROP. CONVENIENCE STORE & GAS STATION  
LOTS 7, 8 & 12, BLOCK 1, SECTION 121.04  
NEW YORK STATE HIGHWAY ROUTE 9W  
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK

TITLE: EROSION CONTROL PLAN

SCALE: (H) 1"=20' (V) NONE DATE: 09/12/06 SHEET No: 9 OF 19

DRAWN BY: SMV PROJECT NO: B050649  
CHECKED BY: CEB CAD ID #: B050649ss0

PROFESSIONAL ENGINEER  
NEW YORK LICENSE No. 63409  
NEW JERSEY LICENSE No. 27410  
PENNSYLVANIA LICENSE No. 37184  
MASSACHUSETTS LICENSE No. 42644  
RHODE ISLAND LICENSE No. 7289

PROFESSIONAL ENGINEER  
NEW YORK LICENSE No. 071284  
NEW JERSEY LICENSE No. 27410  
PENNSYLVANIA LICENSE No. 37184  
MASSACHUSETTS LICENSE No. 42644  
RHODE ISLAND LICENSE No. 7289

CONSTRUCTION CHECK DATE