SC #	TOTAL AREA (AC)
SC #1	10.64
SC #2	0.14
SC #3	1.73
SC #4	0.33
SC #5	0.52
SC #6	0.41
SC #7	0.65
SC #8	0.34
SC #9	0.53
SC #10	0.50
SC #11	1.39
SC #12	3.52
SC #20	0.89
SC #21	0.50
SC #22	0.59
SC #23	0.60
SC #24	0.55
SC #25	0.55
SC #26	1.10
SC #27	1.12
SC #28	0.46
SC #29	0.23
SC #30	0.18
SC #31	0.18

PLANNING BOARD
TOWN OF BETHLEHEM
ALBANY COUNTY NEW YORK
FINAL PLAT APPROVAL
WHEN SIGNED BY THE DULY AUTHORIZED OFFICER OF THE PLANNING BOARD, THIS ENDORSEMENT CONSTITUTES FINAL APPROVAL OF THIS PLAT.
SIGNED Stephen J. Matthews
TITLE Chairman
DATE 10-17-06
SEE ALSO CERTIFICATE OF APPROVAL OF FINAL PLAT NO. 164-05-M

NOTE:

1. NO BUILDINGS OR PORTIONS OF FOUNDATIONS SHALL BE LOCATED ON THE DOWNHILL SIDE OF THE "SL" LINE OR WITHIN 30 FEET OF THE "SL" LINE AS SHOWN ON THE SUBDIVISION MAP AND GRADING PLAN, UNLESS AN ACCEPTABLE SITE-SPECIFIC SOILS REPORT IS SUBMITTED PRIOR TO ISSUANCE OF THE BUILDING PERMIT FOR THAT LOT. LOTS IDENTIFIED AS LIKELY REQUIRING A SOILS REPORT: 12, 16, 26, 30, 34 HORSESHOE DRIVE; 47, 51, 88, 90 BRINDLE PATH; 10 MORGAN ROAD; 34, 42 TROTTER ROAD. LOTS 12 HORSESHOE DRIVE AND 24 TROTTER ROAD SHALL HAVE WALK-OUT BASEMENTS. PROPOSED BUILDING ENVELOPES AND DRIVEWAYS ARE CONCEPTUAL. FINAL LOCATIONS OF DRIVEWAYS AND BUILDINGS ARE TO BE DETERMINED BY SITE SUPERINTENDENT.

INCHES
Town of Bethlehem, NY

1 2 3 4 5 6 7 8 9 10 11 12

GENERAL NOTES

LEGEND

- PROPOSED MANHOLE
- PROPOSED INLET
- EROSION CONTROL AT CATCH BASIN
- WATER VALVE
- FIRE HYDRANT
- PROPERTY LINE
- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- PROPOSED END SECTION
- SEWER DISTRICT
- WATER DISTRICT
- ZONING DISTRICT
- LIMIT OF 100 YEAR FLOOD PLAIN
- 15% SLOPE LINE-SEE NOTE 22
- TEMPORARY SWALE
- SEDIMENT CONTROL DIKE
- WILLOW WATTLE
- DRAINAGE LIMITS
- SILT FENCE
- 167x5 PROPOSED ELEVATION
- FFC=200.0 PROPOSED FINISHED FLOOR GARAGE
- PROPOSED INLET WITH FOOTING DRAIN
- PROPOSED MANHOLE WITH FOOTING DRAIN
- FENCING
- EASEMENT LINE
- SETBACK LINE
- STREAM
- TREE LINE
- CLEARING LIMIT
- 150 CONTOUR (PRO)
- 150 CONTOUR LINE
- 156.7 SPOT ELEVATION
- TREE (DECIDUOUS)
- 2 LOT NUMBER
- SC #1 SUBCATCHMENT
- PRESERVED FEDERAL WETLANDS
- APPROXIMATE LOCATION BUILDING ENVELOPE
- TEMPORARY RIPRAP OUTLET SEDIMENT TRAP
- CHECK DAM
- EXISTING WETLAND BOUNDARY

GEOTECHNICAL CRITERIA

1. Where regrading of the slopes within the Dowers Kill ravine is not planned, site vegetation should not be cleared from slopes or within about 20 feet of the crest of these slopes. Shallow erosion rilles will develop on the slopes if the vegetation is removed. These erosion rivulets may be stripped of vegetation and have a tendency to slough and deposit sediment in the ravine below the zone provided to us. The fill may consist of borrows sand or excavated site soils which are stripped into the cleared slope and compacted as recommended subsequently.
2. Where fills are constructed upon existing ravine slopes, they should be benched into the slope in steps no greater than three (3) feet in height which extend at least five (5) feet into the slope. A cut crest swale should be incorporated into the design to prevent surface water from entering the slope. All slopes should be vegetated or otherwise protected against erosion.
3. Excavated site soils may be reused as a source of fill to raise general site grades and infill shallow erosion ravines where their moisture content is established or brought to within two (2) percent of optimum moisture. Fill should be placed in uniform layers not exceeding 12 inches thick with each compacted to at least less than 95 percent of the soils maximum dry density established through the Standard Proctor Composition Test, ASTM D-698. It must be understood the indigenous soils are composed of a mixture of fine sand, silt and clay and, as such, moisture control, placement and compaction of these materials may be difficult, particularly during periods of wet weather. A synthetic fabric, such as Mirafi 500X, should be employed as necessary to reinforce unstable subgrades. The fabric should be lapped in accord with the manufacturer's recommendations.
4. If site grades about buildings are to be increased by filling to thicknesses greater than about five (5) feet, the lots should be filled and allowed to sit for a period of about eight (8) weeks to allow the underlying clays to compress prior to construction. Specific settlement evaluations were not performed for the planned fill areas.
5. Fills constructed using the excavated silt and clay soils which exceed about five (5) feet in thickness should also be allowed to stand for a period of at least eight (8) weeks before construction is completed upon them. The purpose of this waiting period is to allow the silt and clay fills themselves to compress over time.
6. Fill should not be placed within about 50 feet of the crest of any slope, except within the side slope fills currently shown on the plans, which will generally infill shallow erosion ravines.
7. Basement levels may be incorporated and thus render the structure presence as load neutral or as load relieving to the overall slope stratigraphy.
8. Saturated granular seams and seasonal perched groundwater levels may be encountered or rise, through seasonal variations, within the excavation depths planned across the site. French-Type drains should be constructed as required to intercept seepage exiting from cut slope faces and divert the water to the site storm system. In addition, foundation level drains, connected to the storm system, should encircle the planned buildings to enhance the dewatering of the site. Foundation and French drains should not be outlet to the slopes and runoff should not be allowed to traverse slopes.
9. Permanent excavated slopes in the indigenous silt and clay soils at this site should be no steeper than one (1) vertical on three (3) horizontal unless the excavated slope face is dry and no seepage is occurring. Where seepage is observed from the excavated slope faces, groundwater control measures, such as French-type drains, should be incorporated into the design to prevent the silt and clay soils from becoming saturated. Seepage should be intercepted at the toe of the slope and directed to a toe swale or other site drainage feature. The slopes should be vegetated or otherwise protected against erosion and a crest swale provided to divert runoff away from the slope face.
10. Permanent fill slopes composed of imported granular soil may be as steep as 1 vertical on 2 horizontal while fill slopes composed of the excavated site silty clay soils should not be steeper than about 1 vertical on 3 horizontal. Drainage should be provided beneath the planned shallow fills at their interface with the existing benched grades, as necessary, furnish a means of escape for excess water to prevent water from becoming trapped. A drainage blanket constructed using coarse aggregate with embedded perforated PVC pipe and filter fabric may be used to collect the seepage and outlet the water to a toe swale or other site drainage feature.
11. Granular fill soils used for constructing slopes should consist of an imported, well-graded sand and gravel soil which contains no cobbles and boulders greater than four (4) inches in size and less than 15 percent by weight finer than a U.S. Std. No. 200 sieve size. All slopes should also be protected against erosion.

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

REVISIONS

DATE	BY	DESCRIPTION	SYMBOL
6/99	CHJ	FINAL PLAN REVISIONS	1
10/99	CHJ	FINAL PLAN REVISIONS	2
5/00	CHJ	FINAL PLAN REVISIONS	3
12/00	CHJ	FINAL PLAN REVISIONS	4
1/29/01	CHJ	FINAL PLAN REVISIONS	5
10/04	CHJ	FINAL PLAN REVISIONS	6
5/05	CHJ	LOT LINE CHANGES	7
1/06	CHJ	MISCELLANEOUS REVISIONS	8
3/06	CHJ	MISCELLANEOUS REVISIONS	9
4/06	CHJ	MISCELLANEOUS REVISIONS	10
6/06	BDJ	REVISED PER DEC COMMENTS	11
6/28/06	CHJ	REVISED PER TOWN COMMENTS	12

EDWARD W. BOUTELLE AND SON
CIVIL ENGINEERS AND SURVEYORS
423 KENWOOD AVENUE
DELMAR, NEW YORK
TEL.(518) 439-9981 FAX.(518) 439-9982
A DIVISION OF J. KENNETH FRASER AND ASSOCIATES, PE, LS, LA, P.C.

FINAL PLAN
AMENDED

CARRIAGE HILL SUBDIVISION

MAP OF LANDS OF

CHARLEW CONSTRUCTION CORP.

SEP 1 5 2006

TOWN OF BETHLEHEM, COUNTY OF ALBANY
STATE OF NEW YORK

SCALE: 1" = 50'

STATE OF NEW YORK · JOHN KENNETH FRASER · 049880 · LICENSED PROFESSIONAL ENGINEER

PROJ. SURVEYOR: CHJ
DRAWN BY: TWK
ASSEMBLED BY: TWK
CHECKED BY: CHJ

PROJECT NO.: 99-020
CAD FILE NAME: 4103-004

SHEET TITLE: GRADING PLAN

DATE: NOVEMBER 14, 1995 | SHEET 4 OF 31

COPYRIGHT 1999 J. KENNETH FRASER AND ASSOCIATES, P.C.