

Niagara Mohawk Power Corporation

ENVIRONMENTAL MANAGEMENT AND

CONSTRUCTION PLAN

NINE MILE 2-VOLNEY 345KV

TRANSMISSION FACILITY

CASE 70068

SEPTEMBER 1983

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PSC ORDER

1. Except as here modified, the recommended decision of Administrative Law Judge Thomas R. Matias is adopted and, together with this Opinion and Order, constitutes the decision of the Commission in this proceeding. Except as here granted, all exceptions to the recommended decision and pending motions are denied.

NMPC RESPONSE

Niagara Mohawk acknowledges and accepts Order number 1, above.

PSC ORDER

2. The "Proposed Findings of Fact and Stipulations" set forth as Appendix A to this Opinion and Order are approved, to the extent they are not inconsistent with this Opinion and Order.

NMPC RESPONSE

Niagara Mohawk acknowledges and accepts Order number 2, above.



PSC ORDER

3. (a) Subject to the conditions set forth in this Opinion and Order, Niagara Mohawk Power Corporation (the applicant) is granted a certificate of environmental compatibility and public need authorizing (i) the construction and operation of a 345 kV transmission line extending approximately 9.4 miles, along the applicant's present right-of-way, from the Nine Mile Point Nuclear Generating Station Unit No. 2 through the Scriba Substation and terminating at the Volney Substation, all as shown in the map attached as Appendix C, and (ii) the associated substation modifications.

NMPC RESPONSE

Niagara Mohawk acknowledges and accepts Order number 3.(a), above.

PSC ORDER

3. (b) The applicant shall, in general, install for the transmission line, two-pole, wood, H-frame structures except at the locations where it has been determined that tubular steel poles are required.

NMPC RESPONSE

Niagara Mohawk shall comply with Order number 3.(b), above.



PSC ORDER

3. (c) The applicant shall specify that the steel poles in the Volney Substation area be painted tan while the steel poles near the Scriba Substation shall be painted gray. Illustrations and technical directions for use of the paint system numbers of the exact colors to be specified shall be provided with the Environmental Management and Construction Plan (EM&CP).

NMPC RESPONSE

Niagara Mohawk has complied with Order number 3.(c), above. Paint system identification numbers and color designations are indicated on enclosed aerial mosaic drawing C-30640-C (sheet 1A).

PSC ORDER

3. (d) The applicant shall specify brown, glazed porcelain suspension insulators for the wood poles; brown insulators for the tan steel poles; and gray insulators for the grey steel poles.

NMPC RESPONSE

Niagara Mohawk has complied with Order number 3.(d), above. Insulator specifications are indicated on the enclosed aerial mosaic drawing #C-30640-C (sheet 1A).



PSC ORDER

3.(e) The applicant shall use non-specular conductor for the entire length of the transmission facility.

NMPC RESPONSE

Applicant shall comply with Order number 3.(e), above. Use of non-specular conductor is specified on the enclosed aerial mosaic drawing #C-30640-C (sheet 1A).

PSC ORDER

3.(f) The applicant shall, when replacing existing lattice structures in the vicinity of the transmission facility, use pole structures. Wood poles shall be used to the extent possible, but steel poles may be used where engineering or environmental considerations require.

NMPC RESPONSE

Niagara Mohawk shall comply with Order number 3.(f), above.





PSC ORDER

4. The applicant shall not commence any proceeding under the Eminent Domain Procedure Law (except for the right to survey and inspect the property) or begin site preparation or construction (except for surveying, boring and such other related activities as are necessary to prepare final design plans), before it has submitted to the Commission, and the Commission has approved, a final revised EM&CP generally consistent with the requirements set forth in Appendix B. For purposes of computing the three-year period for acquisition of property pursuant to the Eminent Domain Procedure Law §401(A), the date of approval of the EM&CP covering the affected parcel shall be regarded as the date on which this Article VII proceeding was completed.

NMPC RESPONSE

Niagara Mohawk shall comply with Order number 4 above.



PSC ORDER

5. (a) The applicant shall submit three copies of the EM&CP to the Commission, serve at least one copy on any New York State agency which requests the document, serve one copy on active parties on the service list who request the document, and place one copy in the office of the Oswego County Planning Board for public review. Contemporaneously with the submission and service of the EM&CP, the applicant shall notify the public, in the manner specified below, that the EM&CP has been filed. The applicant shall serve written notice on each person on the Commission's service list and all statutory parties to this proceeding. The applicant also shall attempt to serve written notice on each person from whom rights-of-way are required and on each person currently leasing a portion of an applicant-owned right-of-way to be used for the certified facility. Further, the applicant shall publish the notice in a newspaper or newspapers of general circulation in the vicinity of the certified facility. The written notice and the newspaper notice shall contain, at a minimum, the following: a statement that an EM&CP has been filed and a general description of the documents; where the EM&CP is available for public inspection; a statement that any person desiring additional information about a specific geographical location or specific subject may request it from the applicant; the name, address, and telephone number of the applicant's representative; the address of the Commission; and a statement that any person may comment on the EM&CP by filing written comments with the Commission and the applicant within thirty days of the filing date of the EM&CP with the Commission or within thirty days of the date of newspaper notice, whichever is later.

NMPC RESPONSE

Niagara Mohawk has complied with Order number 5.(a), above.



PSC ORDER

5.(b) The applicant shall report any proposed changes in an approved EM&CP to the Commission staff. Staff shall refer to the Secretary of the Commission reports of proposed changes that do not cause substantial change in the environmental impact or are not related to issues contested during the proceeding. All other proposed changes in the EM&CP shall be referred by staff to the Commission for approval. Upon referral to the Commission, the applicant shall notify all statutory parties and attempt to notify all affected property owners and applicant's lessees. The notice shall describe the requested change, state that documents supporting the request are available for inspection at specified locations, and state that persons may comment by writing to the Commission within ten days of the notification date.

NMPC RESPONSE

Niagara Mohawk shall comply with Order number 5.(b), above.

PSC ORDER

6. (a) In preparing the EM&CP, the applicant shall consult with each local department or agency normally having jurisdiction over the roads in the project vicinity that would be crossed by the certified transmission line or used for direct access to the right-of-way. At least thirty days before the applicant begins construction within the right-of-way limits of such roads or takes direct access therefrom, the applicant shall notify each such department or agency of the approximate date work will begin.

(b) All work within State highway rights-of-way shall be performed according to the traffic and safety standards and other requirements contained in 17 NYCRR Part



PSC ORDER (cont'd)

131, entitled "Accommodation of Utilities within State Highway Right-of-Way." The detailed manner of State highway crossings shall be developed by the applicant in consultation with DOT, and the information responding to the requirements of 17 NYCRR Part 131 shall be included by the applicant in the EM&CP. If the applicant and DOT cannot agree on the details of work within a State highway right-of-way or if DOT fails to act in a timely fashion, the applicant shall notify the Commission in its EM&CP filing and describe fully the disagreements. Nothing in this paragraph alters the Commission's jurisdiction as the ultimate decisionmaking authority with respect to the siting of major utility transmission facilities.

NMPC RESPONSE

In preparing the EM&CP, Niagara Mohawk consulted with the New York State Department of Transportation (Mr. Carl Skelly, Mexico, NY), the Oswego County Department of Public Works (Mr. Arthur Ospelt, Oswego, NY), the Town of Scriba Highway Department (Mr. Clyde Upcraft) and the Town of Volney Highway Department (Mr. Joseph Vant).

Niagara Mohawk also has a policy of discussing highway impacts of company construction activities through the mechanism of obtaining highway permits from the appropriate level of government prior to construction. Contact for the permit(s) will be made by Niagara Mohawk's Right-of-Way Department. Concerns of these agencies will be accomplished through the conditions of the permit(s) (including timely notification of the approximate date work will begin) and will be incorporated as conditions in the contract for the construction of the facility. These conditions will be carefully enforced by Niagara Mohawk's Environmental Forester and Construction Superintendent.





PSC ORDER

7. Before or at the time the applicant or its representatives next contact property owners in the project area to obtain permission to conduct engineering surveys or environmental studies on their land or to negotiate for the purchase of rights to their land or to notify them of the filing of the EM&CP, the applicant shall provide them with a letter describing the surveys and studies to be undertaken and fully disclosing the property owner's rights to comment on the EM&CP. The letter shall include, at a minimum: background information on the proceeding; a statement that the Commission has issued a certificate of environmental compatibility and public need; an explanation of why engineering surveys and environmental studies are needed; a listing of the precautions and protective measures to be used during the surveys and studies which will minimize damage to the owner's property; an explanation of the EM&CP process; a statement that property owners will receive notice of the filing of the EM&CP and will have the right to comment upon it; and the name and telephone number of an employee or agent of the applicant who will answer questions or complaints. Before the letter is provided to property owners, the applicant shall confer with the Commission staff concerning its contents. A copy of the letter and a list of the names and addresses of persons to whom it is sent shall be submitted with the EM&CP.

NMPC RESPONSE

With the exception of state, county and town highway rights-of-way, all lands to be affected by the proposed transmission line (including lands associated with environmental studies and engineering surveys) are owned entirely by Niagara Mohawk. Appropriate highway jurisdictions were consulted during the preparation of the EM&CP in accordance with preceding Order number 6.(a) and (b). Notification of EM&CP filing was provided to these highway jurisdictions and to Mr. Fred Strano (the only person currently leasing a portion of the company-owned right-of-way) in accordance with preceding Order number 5.(a).



PSC ORDER

8. Except where this Opinion and Order requires otherwise, the environmental protection measures contained in the application and in related statements and stipulations made by the applicant shall be applied during preparation of the EM&CP and during construction, operation, and maintenance of the certified facility.

NMPC RESPONSE

The environmental protection measures contained in Exhibit 4 of the application and in related statements and stipulations made by Niagara Mohawk during the proceeding have been applied during the preparation of the EM&CP and will continue to be applied during construction, operation and maintenance of the certified facility.

PSC ORDER

9. The applicant shall obtain, preferably before completion of the EM&CP, an archaeological survey of those portions of the right-of-way and associated sites which will be disturbed significantly by construction. Such disturbed areas include, but are not limited to, transmission structure locations, lay down and fabrication sites, storage sites, wire pulling sites, access road locations, and substation locations. The archaeologist may use professional judgment to limit the areas to be physically surveyed and to decide which sections of the right-of-way should receive particular attention. In exercising professional judgment, the archaeologist shall give due regard to any area likely to contain archaeological resources, as identified in the literature or by means of predictive modeling techniques, and the archaeologist may decide not to physically survey areas which have been disturbed previously by construction



PSC ORDER (cont'd)

or other activities. The archaeologist shall describe the basis for decisions concerning the design and extent of the survey, along with any findings, in a report, copies of which shall be submitted to the Commission and the State Archaeologist by the applicant as soon as practicable.

The survey may be conducted by a qualified archaeologist on the applicant's staff or by an outside contractor. If the applicant intends to use a contractor, the contractor shall be chosen on the basis of a proposal setting forth at least the following:

- (a) the qualifications of the supervising archaeologist;
- (b) unit and total cost data;
- (c) the scope of a literature search update;
- (d) the proposed extent of the survey and the methods to be employed, including the number and general location of proposed samples; and
- (e) work schedules.

All proposals received by the applicant in response to its solicitations shall be made available to the Commission or its staff upon request. The applicant shall immediately advise the Commission if it cannot obtain a survey at a reasonable cost or on reasonable terms.

The applicant shall not begin preparation or construction at any site until the archaeologist has completed the survey of the site. If the survey uncovers significant archaeological resources, the applicant, preferably in the EM&CP, shall report the discovery to the Commission and propose a course of action to protect the archaeological resource. No site preparation or construction may then take place at that location until the Commission acts. The



PSC ORDER (cont'd)

Commission may require the applicant to modify the facility to avoid any archaeological resources or to salvage any such resource. Any salvage operation shall be performed by competent persons, and the applicant may be required to bear all or part of its costs.

NMPC RESPONSE

Pratt & Pratt Archaeological Consultants, Inc. were retained to conduct an archaeological survey of those portions of the right-of-way and associated sites which will be disturbed significantly by constructions. Three copies of the archaeological report have been submitted to the Commission concurrently with this EM&CP filing. One copy of the report has also been submitted to the State Archaeologist. No significant archaeological resources were discovered during the survey.

PSC ORDER

10. If, during construction, the applicant or its contractors discover what may be an archaeological resource, the applicant shall immediately cease work at the site and notify staff and the State Archaeologist. The applicant and the State Archaeologist shall attempt to develop a mutually acceptable plan to salvage or protect the archaeological resource. Any differences between the applicant and the State Archaeologist shall be resolved by the Commission. The financial responsibilities of the applicant for salvaging or otherwise protecting archaeological resources shall be specified by the Commission and shall be based on conditions peculiar to each case.

NMPC RESPONSE

Niagara Mohawk shall comply with Order number 10, above.





PSC ORDER

11. A matching grant program for recreational or educational purposes shall be established as follows:

(a) The applicant shall allocate an amount equal to 2% of the estimated total cost of the certified transmission line for a program of matching grants affording eligible sponsors an opportunity to develop and administer portions of the right-of-way for public outdoor recreational or educational use. Eligible sponsors are defined in Commission Opinion No. 72-2 and include: (i) municipalities and special local districts traversed by any part of the right-of-way; (ii) other governmental bodies of the kind referred to in Opinion No. 72-2; and (iii) subject to the approval of the Commission, quasi-public non-profit organizations. For purposes of the program provided for in this paragraph, the total amount of the matching grant fund shall be \$97,480 (which is 2% of the total \$4,873,900 approximate cost of the certified 9.4 mile transmission line, exclusive of substation or other terminal facilities and exclusive of the 2%). A sponsor shall be required to provide matching funds (which it may obtain from public or private sources) in an amount at least equal to the amount provided by the applicant. A prospective sponsor must demonstrate to the Commission that there is not significant opposition from abutting property owners to the proposed recreational or educational use. Furthermore, a sponsor shall be required to protect the applicant against liability for harm to persons and loss or harm to property as a consequence of the proposed recreational or educational activity, provided that the applicant shall not be relieved of liability due to its own wanton or malicious conduct.

(b) If a matching grant program may affect the location of a transmission line or the manner in which the transmission line is constructed, the prospective sponsor of such a program must file with the Commission and serve on



PSC ORDER (cont'd.)

the applicant, not later than thirty days after the issuance of this Opinion and Order, a notice of its intention to submit a recreational or educational proposal. Such proposal, containing the information called for in Opinion No. 72-2, must be submitted to the Commission with a copy to the applicant not later than sixty days after issuance of this Opinion and Order.

(c) Recreational or educational proposals filed under this program will not be acted upon by the Commission until the research program specified in Opinion No. 78-13, issued June 17, 1978 in Cases 26529 and 26559, the Common Record Hearings on the Health and Safety of High Voltage Transmission Lines, has been completed. Such proposals which do not affect the location or manner of construction of the transmission line must contain the information specified in Opinion No. 72-2 and may be filed at any time during this period of program suspension and up to two years after final action on the biological effects research program.

(d) All other matters pertaining to a matching grant program (including the Commission's disposition of recreational or educational proposals, the availability and use of funds, the nature of permissible recreational or educational uses, and their maintenance and administration) shall be subject to and governed by the provisions of Opinion No. 72-2, rules or regulations which the Commission may from time to time adopt, and other applicable laws and regulations.

NMPC RESPONSE

Niagara Mohawk has a program of matching grants for recreation in accordance with PSC Order and Opinion No. 72-2, "Matching Grants for Recreation". No recreation proposals are presently known to Niagara Mohawk.



PSC ORDER

12. The applicant shall confine clearing of vegetation to the minimum necessary for construction, operation, and maintenance of the certified facility.

NMPC RESPONSE

Niagara Mohawk shall confine clearing of vegetation to the minimum necessary for construction, operation and maintenance of the certified facility. In determining clearing types, consideration was given to removing all tall-growing plant species which, at maturity, have the ability to grow or fall into the wire security zone. This zone has been determined to be 20 feet from conductors, measured on the basis of a 30° conductor blowout.



PSC ORDER

13. All trees over two inches dbh or shrubs over four feet in height damaged or destroyed by the applicant's activities during construction, operation, or maintenance, regardless of where located, shall be replaced by the applicant with equivalent trees or shrubs, except where:

- (a) permitted by an approved EM&CP;
- (b) equivalent replacement trees or shrubs would interfere with the proper clearing, construction, operation, or maintenance of the certified facility;
- (c) replacement would be contrary to sound right-of-way management practices; or
- (d) a property owner (other than an applicant) on whose land the damaged or destroyed trees or shrubs were located declines replacement:

NMPC RESPONSE

Niagara Mohawk intends to insure replacement of all trees over 2 inches dbh or shrubs over 4 feet in height which are negligently damaged or destroyed during construction, operation or maintenance, unless such replacement would interfere with the operation or maintenance of the facility.

The species listed on the following pages are those trees and shrubs considered desirable right-of-way species and should be retained.





LIST OF SMALL TREES AND SHRUBS TO BE PRESERVEDSHRUBS

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>AVERAGE HEIGHT</u>
1. <u>Alnus rugosa</u>	Speckled alder	25'
2. <u>Amelanchier Bartramiana</u>	Oblong-fruited juneberry	7'
3. <u>A stolonifera</u>	Running shadbush	6'
4. <u>Cephalanthus occidentalis</u>	Buttonbush	15'
5. <u>Comptonia peregrina</u>	Sweetfern	3'
6. <u>Cornus alternifolia</u>	Pagoda dogwood (alternate leaf)	30
7. <u>C. amomun</u>	Silky dogwood	15'
8. <u>C. racemosa</u>	Gray dogwood	15'
9. <u>C. stolonifera</u>	Redosier dogwood	10'
10. <u>Corylus americana</u>	American hazlenut	15'
11. <u>C. cornuta</u>	Beaked hazlenut	15'
12. <u>Diervilla lonicera</u>	Bush honeysuckle	3'
13. <u>Gaylussacia spp.</u>	Huckleberry	3'
14. <u>Hamamelis virginiana</u>	Witch-hazel	25'
15. <u>Ilex verticillata</u>	Common winterberry	15'
16. <u>Kalmia spp.</u>	Mountain laurel	10'
17. <u>Lindera benzoin</u>	Spicebush	15'
18. <u>Lonicera canadensis</u>	Fly honeysuckle	4 1/2'
19. <u>L. tatarica</u>	Tartarian honeysuckle	10'
20. <u>Rhododendron spp.</u>	Rhododendron	20'
21. <u>Rosa spp.</u>	Wild rose	10'
22. <u>Rubus spp.</u>	Brambles	6'
23. <u>Salix spp.</u>	Low willow	25'



SHRUBS

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>AVERAGE HEIGHT</u>
24. <u>Sambucus</u> spp.	Elderberry	12-24'
25. <u>Smilax</u> spp.	Greenbriar	
26. <u>Spiraea alba</u>	Narrow-leaf meadow sweet	5'
27. <u>S. latifolia</u>	Broad-leaf meadow sweet	5'
28. <u>S. tomentosa</u>	Steeplebush	5'
29. <u>Vaccinium</u> spp.	Blueberry	15'
30. <u>Viburnum acerifolium</u>	Maple-leaf viburnum	6'
31. <u>V. alnifolium</u>	Witch-hobble	10'
32. <u>V. Cassinoides</u>	Witherod	12'
33. <u>V. lentago</u>	Nannyberry	30'
34. <u>V. recognitum</u>	Arrowwood	15'

SMALL TREES

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
1. <u>Acer pennsylvanicum</u>	Striped maple
2. <u>Amelanchier arborea</u>	Shadbush
3. <u>Betula populifolia</u>	Gray birch
4. <u>Carpinus caroliniana</u>	American hornbeam
5. <u>Cornus florida</u>	Flowering dogwood
6. <u>Crateagus</u> spp.	Hawthorne
7. <u>Morus rubra</u>	Red Mulberry
8. <u>Ostrya virginiana</u>	Hop hornbeam
9. <u>Prunus pennsylvanica</u>	Pin Cherry
10. <u>Pyrus Malus</u>	Wild apple



SMALL TREESSCIENTIFIC NAMECOMMON NAME

- |                               |                            |
|-------------------------------|----------------------------|
| 11. <u>Rhamnus cathartica</u> | Common Buckthorn           |
| 12. <u>Rhamnus Frnagula</u>   | Glossy buckthorn           |
| 13. <u>Rhus vernix</u>        | Poison sumac               |
| 14. <u>Prunus americana</u>   | Wild plum                  |
| 15. <u>Rhus</u> spp.          | Sumac, except poison sumac |

Scientific nomenclature according to Gray's Manual of Botany, 8th Edition  
(M. L. Fernald)



PSC ORDER

14. The applicant shall not wash equipment or machinery in any watercourse along the construction corridor and shall not permit run-off resulting from washing operations to directly enter any watercourse. The applicant shall not store petroleum products or refuel equipment in the near vicinity of a watercourse or desirable vegetation.

NMPC RESPONSE

Niagara Mohawk shall comply with Order number 11 above. Enclosed aerial mosaics #C-39195-C (sheets 1-10) and #C-39202-C (sheet 1) identify restricted activities areas adjacent to streams, drainage and wetlands. The activities which are restricted include equipment washing and refueling and are listed in their entirety on aerial mosaics #C-30640-C (sheet 1A).

PSC ORDER

15. The applicant shall exercise all necessary and reasonable precautions to prevent or minimize stream sedimentation and water- and wind-caused erosion in work areas and on the right-of-way and shall take prompt and effective action at all times to control such erosion.

NMPC RESPONSE

Niagara Mohawk shall comply with Order number 15, above. See NMPC response to Order number 16 (p. 21) for elaboration.





PSC ORDER

16. All disturbed soils subject to erosion, especially in cut and fill areas associated with access road construction, shall be graded and stabilized within eight days after initial disruption of the site. Where construction activity is likely to continue or when permanent cover cannot be readily established because of seasonal changes, the applicant may use temporary stabilization measures, such as mulching or mulching with seed and fertilizer.

NMPC RESPONSE

Where soil has been disturbed and an erosion potential exists, the Applicant proposes to grade to preconstruction or stable contours, seed with a seed mix as directed by the Environmental Forester (based on time of year and site conditions and USDA Soil Conservation Service recommendations), and install necessary erosion control devices within 8 days of the initial disruption of the site. At laydown zones and wire pulling equipment areas where scarified soil exists and substantial runoff can be expected to cross the site, diversion ditches shall be installed to carry water around the site rather than over it. In areas where construction activity is likely to stop and start again, or when permanent cover cannot be readily established because of seasonal changes, temporary stabilization measures, such as straw mulching or straw mulching with seed, shall be employed within 8 days of the initial disturbance.

Temporary and permanent stabilization measures, seed mixtures, fertilizers and mulch for site specific conditions will be determined by the Environmental Forester and be based on USDA Soil Conservation Service Office recommendations.

Where initial disturbance is done in snow or frozen soil conditions, temporary erosion control measures will be installed, i.e., cross ditches and mulching if necessary, and seeding accomplished as soon as soil conditions are conducive to seeding and germination.



PSC ORDER

17. All disturbed areas shall be restored to original grades and conditions, except where different grades or conditions will improve an area. Disturbed pavement, curbs, and sidewalks shall be restored to at least the condition required by State and local published regulations.

NMPC RESPONSE

Niagara Mohawk shall comply with Order number 17, above. For descriptions of the applicant's program for right-of-way restoration, see NMPC's Response to Order number II.B in the "Requirements for Environmental Management and Construction Plan" (p. 127) section of this filing.

PSC ORDER

18. If a dwelling unit must be removed from the right-of-way, the applicant shall notify its owners, in writing prior to any initial or further negotiation for the dwelling unit, that they may, instead of selling the dwelling unit, request that it be moved to another site. The notice also shall state that the applicant will pay the cost of such move to the extent it does not exceed the appraised market value of the dwelling unit or (if higher) such other value as may be agreed between the parties. At least one week before a dwelling unit is demolished or moved, the applicant shall submit to the Commission a copy of such notice and a verified list of the persons to whom it was sent.

NMPC RESPONSE

No dwelling units exist within the right-of-way for the proposed facility.



PSC ORDER

19. Within ten days after the facility's in-service date, the applicant shall notify the Commission that the facility has been placed in commercial service.

NMPC RESPONSE

Niagara Mohawk shall comply with Order number 19, above.

PSC ORDER

20. Within ten days of the completion of final restoration, the applicant shall notify the Commission that all restoration has been completed in compliance with the EM&CP.

NMPC RESPONSE

Applicant shall comply with Order number 20, above.



PSC ORDER

21. The applicant shall (a) submit an EM&CP complying with this Order not later than six months from the date of this Opinion and Order (for segmented EM&CP filings, the final submission shall be submitted not later than one year from the date of this Opinion and Order); (b) schedule construction so that the facility will be completed and in service by June 1, 1986; and (c) if at any time it becomes apparent that the dates for filing the EM&CP and for completion of construction cannot or should not be met, notify the Commission's staff, explain and justify the slippage, and propose alternate dates.

NMPC RESPONSE

Niagara Mohawk has complied, and will continue to comply, with Order number 21, above.

PSC ORDER

22. The applicant shall acquire sufficient rights throughout the project area to insure that no dwelling unit may be installed or continue to occupy any area where the electric field strength from the new facility would normally exceed 1.6 kV/meter measured at one meter above ground.

NMPC RESPONSE

Areas where the electric field strength of the new facility would normally exceed 1.6kV/meter (measured at one meter above ground) will be limited to the existing, company-owned right-of-way. No dwelling units presently occupy this area and installation of any such units within the right-of-way shall be prohibited.





PSC ORDER

23. The applicant shall take all measures necessary to resolve expeditiously any and all induced shock, radio and television, or audible noise problems caused by the transmission and substation facilities.

NMPC RESPONSE

Niagara Mohawk shall comply with Order number 23, above.

PSC ORDER

24. A right-of-way management plan shall be submitted to the Commission prior to the first major treatment of the vegetation following initial clearing. The plan shall contain the following:

- (a) Specific goals and objectives.
- (b) Important factors influencing right-of-way management.
- (c) A vegetation and land use inventory.
- (d) Updated information on right-of-way restoration and vegetation treatment results.
- (e) Provisions for reporting to the Commission results of future major right-of-way maintenance activities, including summaries of treatment types and area, cost units, inventories, herbicide amounts and treatment effectiveness.

NMPC RESPONSE

Niagara Mohawk shall submit a long-range right-of-way management plan to the Commission in accordance with Order number 24, above.



PSC ORDER

25. Screening plans for the vicinity of County Route 29 shall be included at the time the EM&CP is submitted for approval.

NMPC RESPONSE

Screening plans for the vicinity of County Route 29 are described in NMPC's Response to Order number I.H. (p. 88) in the "Requirements for Environmental Management and Construction Plan" section of this filing.



REQUIREMENTS FOR  
ENVIRONMENTAL MANAGEMENT & CONSTRUCTION PLAN

CASE NO. 70068



PSC REQUIREMENT

I. A Line Profile<sup>1/</sup> (at an appropriate scale), and Photo-strip Map or Plan drawings (scale 1 inch equals 200 feet minimum)<sup>2/</sup> showing:

A. The boundaries of any new, existing, and/or expanded right-of-way<sup>3/</sup> to be used; the locations\* of any areas contiguous to the right-of-way within which the Applicant will obtain additional rights and their respective purposes.\*

NMPC RESPONSE

See the enclosed aerial mosaic drawings #C-39195-C (sheets 1-10) and #C-39202-C (sheet 1).

1/The lowest conductor should be shown in relation to ground at the maximum permissible conductor temperature for which the line is designed to operate, i.e., normally the short-term emergency loading temperature specified by the New York Power Pool. If a lesser conductor temperature is used for the Line Profile, the maximum sag increase between that conductor temperature and the maximum conductor temperature shall be indicated\* for each ruling span.

2/Contour lines (preferably at five-foot intervals) are desirable on the Photo-strip Map or Plan drawing if they can be added without obscuring the required information.

3/The term "right-of-way" in these requirements includes property to be used for substations and other associated facilities.

\*Items with asterisks may be indicated by charts, forms, drawings, and/or text as appropriate.





PSC REQUIREMENT

B. The location of:

1. each structure (showing its size\* and type\*), down-guy anchor, and any counterpoise\* (typical counterpoise drawings will suffice) required for the proposed facility. (Discuss\* generally the rationale for the final major structure configurations chosen.);

NMPC RESPONSE

See enclosed aerial mosaic drawings #C-306040-C (sheet 1A), #C-39195-C (sheets 1-10) and #C-39202-C (sheet 1).

In accordance with Order number 3(b), the 345kV line shall be constructed on two-pole, wood, H-frame structures except at locations where tubular steel poles are required due to environmental and/or engineering considerations.

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\*Items with asterisks may be indicated by charts, forms, drawings, and/or text as appropriate.



PSC REQUIREMENT

2. existing utility or nonutility structures on the right-of-way, and indicate those to be removed or relocated (include circuit arrangements\* where new structures will accommodate existing circuits and indicate\* methods of removal of existing facilities; and

NMPC RESPONSE

See the enclosed aerial mosaic drawings #C-39195-C (sheets 1-10) and #C-39202-C (sheet 1).

PSC REQUIREMENT

3. any relocated or undergrounded facility.

(Show the relationship of each facility to nearby fence lines, roads, property lines, hedgerows, water bodies, associated facilities, airfields, railroads, flowing water springs, nearby structures and major antennas, oil or gas wells, and pipelines or blowdown valves.) (Explain\* how the integrity of fences or walls in active use will be maintained.) (State\* any objections raised by Federal, State, or local highway officials to the use or manner of crossing of any roads under their respective jurisdictions.)

NMPC RESPONSE

See the enclosed aerial mosaic drawings #C-39195-C (sheets 1-10) and #C-39202-C (sheet 1).

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\*Ibid.



PSC REQUIREMENT

- C. The location of any proposed new or expanded switching station, substation, or other terminal facility (attach plan--plot, grading, and electrical--and elevation views at an appropriate scale).

NMPC RESPONSE

The location of the proposed Scriba Station is shown on the enclosed aerial mosaic drawing #C-39195-C (sheet 1) and #C-39202-C (sheet 1).

The following drawings for the proposed Scriba Station were submitted to the Commission for separate EM&CP approval of this station by letter dated August 25, 1983.

- (a) Grading Plan & Details, #C-38206-C (sheets 1-3);
- (b) Electrical Arrangement, Plan View, #C-38580-C (sheet 1);
- (c) Electrical Arrangement, Elevation, #C-38581-C (sheets 1-3); and
- (d) Plot Plan entitled "Nine Mile 2-Volney 345kV Transmission Facility, Case No. 70068", Figure 2-1.

The location of the southern terminus at the existing Volney Station is shown on the enclosed aerial mosaic drawing #C-39195-C (sheet 10). A 345kV line position currently exists at Volney Station. Some work within the existing fence will be required, including installation of a breaker and some slight bus modification work. No expansion of the existing fence line will be necessary to accommodate the new line termination.

The location of the northern terminus at the Nine Mile 2 Nuclear Generating Station is shown on the enclosed aerial mosaic drawing #C-39195-C (sheet 1) and #C-39202-C (sheet 1). A new 345kV line position is proposed at this station. Work within the fence will include installation of a generator step-up bank and some bus connection work. No expansion of the existing fence line will be necessary to accommodate the new line connection.



PSC REQUIREMENT

- D. The locations of sites requiring trimming, topping, or clearing of vegetation and the geographic limits of such trimming or clearing. Indicate\* the specific method, including the type and manner of cutting, and the disposition of cut vegetation for each site. [The basis for these locations and site prescriptions shall be an initial (generalized) right-of-way resource inventory and analysis conducted prior to clearing and access road construction.]

NMPC RESPONSE

The locations and geographic limits of sites requiring clearing of vegetation and indications as to the specific method of cutting and disposition of slash are shown on the enclosed aerial mosaic drawings #C-39195-C (sheets 1-10) and #C-39202-C (sheet 1). These locations and site descriptions are based upon the information obtained during the initial right-of-way inventory and analysis. Descriptions of "Clearing and Slash Disposal Methods", and "Site-by-Site Analysis of Clearing and Slash Disposal" forms are exhibited on the pages following this response.





Niagara Mohawk Power Corporation

CLEARING AND SLASH DISPOSAL METHODS

FOR

NINE MILE 2-VOLNEY 345kV

TRANSMISSION LINE



Description of Clearing Methods

- Type I: clearing consists of cutting all woody plants, including low growing shrubs. This type is used on access roads, structure laydown areas, and wire pulling sites.
- Type II: clearing consists of selectively removing tall growing tree species while retaining woody shrub species.
- Type III: clearing consists of selectively cutting only tall growing species presently in or having the potential of reaching the wire security zone within five years.
- Type IV: clearing consists of selectively removing and/or trimming tall growing species presently in or having potential of reaching the wire security zone within five years. Trees with more than 25 percent of their crown within zone shall be cut unless otherwise directed. Trees with less than 25 percent of their crown within zone may be trimmed if directed.



Description of Slash Disposal Methods.

- Type A: This type consists of separating merchantable timber from other logs and skidding to designated yarding areas along the right-of-way. To avoid damage to the site, bucking timber into logs may be directed.
- Type B: Slash disposal consists of collecting and piling unmerchantable wood less than 6 inches in diameter in designated areas along the right-of-way. Included are tops, limbwood, and saplings. Where slash volumes will result in piles higher than 10 to 12 feet, piles shall be crushed and compacted as developed.
- Type C: Slash disposal consists of collecting and piling unmerchantable wood larger than 6 inches in diameter in designated areas along the right-of-way.
- Type D: Slash disposal consists of lopping all downed material so it lays as close to the ground as possible.
- Type E: Slash disposal consists of burning woody material less than 6 inches in diameter within designated areas on the right-of-way. Slash larger than 6 inches in diameter shall be piled in designated areas along the right-of-way.
- Type F: Slash disposal consists of chipping slash on site in designated areas.
- Type G: Slash disposal consists of removing slash which is less than 6 inches in diameter from the site. Included are tops, limbwood, and saplings. This slash is normally moved to a nearby site on the right-of-way where the slash disposal method is other than Types G or H. Wood over 6 inches in diameter may be scattered or piled on the site.
- Type H: Slash disposal consists of removing all slash from the right-of-way. Normally, this material is moved to a nearby site where slash disposal method is other than Types G or H.



Niagara Mohawk Power Corporation

ANALYSIS OF SLASH DISPOSAL TECHNIQUES

FOR

NINE MILE 2-VOLNEY 345KV TRANSMISSION LINE





### Analysis of Slash Disposal Techniques

NMPC recognizes and considers the use of 7 methods of slash disposal. A descriptive analysis of each is presented below, including parameters justifying selection and site effect of each technique. Justification statements are randomly listed and are independent of any others on the list.

#### Type A

This type consists of separating merchantable timber from other logs and skidding to designated yarding areas along the right-of-way. To avoid damage to the site, bucking timber into logs may be directed.

Parameters justifying selection of Type A are:

- (a) Soil and terrain conditions will allow mechanized collection and skidding, without creating severe rutting or seriously increasing the erosion potential;
- (b) sufficient merchantable volume exists on a site to make economic utilization practical; and
- (c) adequate log-hauling access roads exist between the highway and the yarding area on the right-of-way or yarding directly to a highway is desirable and economically feasible. The load-bearing capacity of the access road and/or potential restoration costs may become limiting factors on merchantability.



ANALYSIS OF TYPE A SLASH DISPOSAL

<u>FACTOR</u>	<u>EFFECT</u>
Air Quality	None
Aesthetics	Low
Noise	Low
Revegetation	Low or none, due to very low stem count of desirable species in merchantable timber stands, few of which can survive release to full sunlight.
Soil Scarification	Moderate to severe; method not selected if soil and/or slope conditions could lead to severe rutting and/or erosion.
Humus	Disturbed, but not destroyed.
Stream Pollution Potential	Low; method not selected for sites with stream polluting potential or for stream buffer zones.
Erosion Risk	Low; application limited to non-erosible sites and/or where erosion preventative measures are implemented in conjunction with construction.
Slash Volume	Potentially large, but removed from site.
Slash Placement	Yarding areas as designated on drawing or directed by Right-of-Way Clearing Supervisor.
Wildlife Hazard	Low
Cost	\$450/acre*



Type B

Slash disposal consists of collecting and piling unmerchantable wood less than 6 inches in diameter in designated areas along the right-of-way. Included are tops, limbwood and saplings. Where slash volumes will result in piles higher than 10 to 12 feet, the piles shall be crushed and compacted as developed.

Type C

Slash disposal consists of collecting and piling unmerchantable wood larger than 6 inches in diameter in designated areas along the right-of-way.

Parameters justifying selection of type B and C are:

- (a) the accumulation of slash is sufficiently removed from public view so as to minimize visual impacts;
- (b) slash accumulations of the drop and lop technique would be greater than 1 foot, thereby hindering construction and/or future maintenance operations; and
- (c) soil and terrain conditions are such that mechanical collection could occur without creating a serious erosion potential.



SITE EFFECTS OF TYPES B AND CFACTOREFFECT

Air Quality

None

Aesthetics

Low, due to selection of method for low impact sites only.

Noise

Low

Revegetation

Retards revegetation on Type B pile sites; little or no adverse effect elsewhere.

Soil Scarification

Moderate; methods not selected if soil and/or slop conditions would result in severe rutting and/or erosion.

Humus

Disturbed, but not destroyed.

Stream Pollution Potential

Low; methods not selected for sites with stream polluting potential or for stream buffer zone.

Erosion Risk

Low; application limited to non-erosible sites and/or where adequate erosion control measures will be implemented in conjunction with construction.

Slash Volume

Type B piles mechanically crushed if necessary to maintain heights of 10 to 12 feet or less; if large volumes accumulate, wind rows will be avoided by leaving frequent gaps in the piles to allow unimpeded wildlife movement.

Slash Placement

Type B material, along edge of right-of-way or as directed by the Right-of-Way Clearing Supervisor; Type C material, along access road for potential firewood usage.

Wildfire Hazard

Low; placement of Type B slash piles concentrates potential fuel and compaction insures high moisture retention.

Cost

Type B: \$500/acre\*  
Type C: \$400/acre\*





Type D

Slash disposal consists of lopping all downed material so it lays as close to the ground as possible.

The parameters justifying selection of Type D are:

- (a) Brush densities are such that the drop and lop method would generate less than 1 foot of slash accumulation over a significant area of the right-of-way, and this accumulation of slash is sufficiently removed from public view so as to minimize visual impact.
- (b) Mechanized attempt to collect or remove slash would seriously damage or destroy large numbers of desirable species, and this accumulation of slash is sufficiently removed from public view so as to minimize visual impact.
- (c) Soil and terrain conditions are such that removal of the slash would create a serious rutting and/or erosion potential, and this accumulation of slash is sufficiently removed from public view so as to minimize visual impact.
- (d) Portions of a coniferous plantation must be clearcut, and this accumulation of slash is sufficiently removed from public view so as to minimize visual impact.



)



SITE EFFECT OF TYPE D

<u>FACTOR</u>	<u>EFFECT</u>
Air Quality	None
Aesthetics	Low, due to selection of method for low impact sites.
Noise	Low
Revegetation	None to low adverse effect; method insures minimal site disturbance.
Soil scarification	None
Humus	None
Stream pollution from run-off	None; application of method requires no vehicle access.
Erosion Risk	None
Volume of Slash	One foot or less of slash accumulation except 3 to 4 feet on sites where method was selected to minimize adverse effects on desirable species, streams and soils; 3 to 4 feet in coniferous stands where method is selected to minimize wildlife hazard.
Placement of Slash	Lopped in place or moved by hand or winch line to corduroy access road.
Wildfire Hazard	Low to moderate; slash accumulations of 1 foot or less present a low hazard at worst; accumulations of up to 3 or 4 feet may present a temporary moderate fire hazard in periods of drought before wood decomposition has started; however, the small areas where such accumulations are expected to occur alleviate the hazard considerably.
Cost	\$600/acre*



Type E

Slash disposal consists of burning woody material less than 6 inches in diameter within designated areas on the right-of-way. Slash larger than 6 inches shall be piled in designated areas along the right-of-way.

The parameters justifying selection of Type E are:

- (a) Slash accumulations of "pile and leave" would become so large that the pile would create an impediment to construction and/or future maintenance, thereby escalating those costs beyond the initial cost of burning, and terrain conditions would permit mechanical collection without creating severe ruts or a serious erosion risk;
- (b) Slash piles would tend to form a continuous, 10-12 foot wall, or wind row of brush along a considerable length of the right-of-way, becoming a potential detriment to wildlife movement, and terrain conditions would permit mechanical collection without creating severe ruts or a serious erosion risk;
- (c) A significant fire hazard would exist as a result of selecting "pile and leave" or "drop and lop" methods, and terrain conditions would permit mechanical collection without creating severe ruts or a serious erosion risk;
- (d) When slash accumulations, adjacent to a high-use recreational area are such that removal for aesthetic reasons is a necessity and the impact of burning on potential receptors can be minimized by timing the burn to coincide with low-use or non-use periods, and terrain conditions would permit mechanical collection without creating severe ruts or a severe erosion risk.



- (e) In wooded or bushy areas utilized by livestock where wild black cherry is a prevalent species. Amount of slash accumulation would make chipping or hauling economically unfeasible.
- (f) In agricultural areas where woodland protrudes into or is surrounded by fields making disposal of slash necessary. The amount of slash accumulation would make chipping or hauling economically unfeasible.
- (g) When the terms of the right-of-way agreements prescribe disposal of slash and amount of slash accumulation would make chipping or hauling economically unfeasible.





SITE EFFECTS OF TYPE EFACTOREFFECT

Air Quality

Locally and temporarily adversely affected by wood smoke; potential receptors will be avoided by carefully selecting days with appropriate wind direction and velocity; smoke plume will be reduced by maintaining a hot fire to insure complete and rapid combustion.

Aesthetics

Moderate, temporary impact in localized areas.

Noise

Low

Revegetation

Burn sites will quickly revegetate with typical pioneer plant species; little or no adverse effect elsewhere due to limitation of application to low impact sites.

Soil Scarification

Moderate; method not selected if soil and/or slope conditions would lead to severe rutting or erosion.

Humus

Destroyed at burn sites; disturbed but not destroyed elsewhere.

Stream Pollution Potential

Low; method not selected for sites with stream polluting potential or for stream buffer zones.

Erosion Risk

Low; application limited to non-erosible sites and/or where adequate erosion control measures will be implemented in conjunction with construction.

Slash Volume

Type B material to be burned; Type C material to be left stacked. (See Method 2)

Slash Placement

Burn piles to be placed so as to facilitate ease of loading but away from desirable vegetation and the right-of-way edge; logs to be stacked along access road for firewood utilization.

Wildfire Hazard

Low, due to concentration of fuel; combustion under controlled conditions.

Cost

.\$550/acre\*



Type F

Slash disposal consists of chipping slash on site in designated areas.

The parameters justifying the selection of Type F are:

- (a) For aesthetic reasons, any slash accumulation would create a negative visual impact upon residents and/or travelers.
- (b) The volume of slash to be disposed of is small and construction, environmental or aesthetic constraints are limiting as to on-site disposal.
- (c) Chipping will cost less than hauling and disposal at off right-of-way locations.

SITE EFFECTS OF TYPE F

<u>FACTOR</u>	<u>EFFECT</u>
Air Quality	None
Aesthetics	Very low impact, especially where slash volumes are small.
Noise	Moderate
Revegetation	Moderate to high. Fresh chips while decaying deplete some nitrogen from the soil. Two to 3 inches depth would prohibit germination of seeds until the decaying process is complete.
Soil Scarification	None
Stream Pollution	None
Erosion Risk	None
Slash Volume	Very low; less than 4" of chips spread evenly over site.
Slash Placement	Scattered on-site.
Wildfire Hazard	None
Cost	\$2250/acre*



Type G

Slash disposal consists of removing slash which is less than 6 inches in diameter from the site. Included are tops, limbwood, and saplings. This slash is normally moved to a nearby site where slash disposal method is other than Type G or H. Wood over 6 inches in diameter may be scattered or piled on the site.

Type H

Slash disposal consists of removing all slash from the right-of-way. Normally, this material is moved to a nearby site where the slash disposal method is other than Types G or H.

The parameters justifying the selection of Types G or H:

- (a) Aesthetical considerations suggest that any slash left on the site would create a negative impact.
- (b) If the slash were chipped, more than 4 inches of chips would result over much of the site.
- (c) On-site disposal would adversely impact existing agricultural uses.
- (d) Species toxic to livestock must be removed from pastures in use.



SITE EFFECTS OF TYPE G AND H

<u>FACTOR</u>	<u>EFFECT</u>
Air Quality	None
Aesthetics	Positive
Noise	Low; moderate if slash is chipped and hauled.
Revegetation	None
Soil Scarification	None
Humus	None
Stream Pollution Potential	None
Erosion Risk	None
Slash Volume	None
Slash Placement	To be removed.
Wildfire Hazard	None
Cost	Type G: \$2000/acre* Type H: \$2500/acre*

\*Costs based on extra work unit price schedule for successful bidder on Homer City-Stolle Rd. #37, Section II.





SYMBOL INDEX  
FOR THE  
SITE-BY-SITE ANALYSIS OF CLEARING AND SLASH DISPOSAL

**Area Number:** Each area is numbered sequentially and corresponds to area numbers on aerial mosaics.

**Location:** Location is identified by structure numbers and is divided to nearest quarter span.

**Estimated Acreage:** Estimated acreage is for each area.

Site Conditions

<b>Land Use:</b>	W	Woodlands
	Ab	Abandon Agriculture
	AA	Active Agriculture
<b>Cover Type:</b>	H	Hardwoods
	C	Coniferous
<b>Age Class:</b>	S	Sapling
	P	Pole size
	M	Mature sawlog
<b>Undesirable Species Density:</b>	S	Sparse or scattered
	L	Light
	M	Moderate
	D	Dense
<b>Desirable Species Density:</b>	S	Sparse or scattered
	L	Light
	M	Moderate
	D	Dense
<b>Merchantability:</b>	M	Merchantable
	NM	Not Merchantable



Road Crossings:	TOH	Town Highway
	COH	County Highway
	StH	State Highway
	IsH	Interstate Highway
Others:	Rec	Recreational Area (active)
	Sce	Scenic Area
	Des	Deer Shelter or Wintering Area
	WiN	Rare or Endangered Species - Nesting or Den Area
	ErS	Potentially Erodable Soils
	Pond	Pond

Proposed Management: Refer to the "Description of Clearing Methods and Slash Disposal Techniques" for a definition of the appropriate clearing and slash disposal type. Refer to the "Analysis of Slash Disposal Techniques", under the appropriate disposal method, for the parameter(s) which justifies a particular disposal method on a particular site.



SYMBOL  
DESIGNATION

"KEY TO VEGETATION NAME ABBREVIATIONS"

S H R U B S

ALD	Alder- <u>Alnus</u> <u>spp.</u>
AMY	American Yew- <u>Taxus</u> <u>canadensis</u>
ARR	Arrow-wood- <u>Viburnum</u> <u>recoenitum</u>
BAR	Barberry- <u>Berberis</u> <u>spp.</u>
BCB	Black Chokeberry- <u>Pyrus</u> <u>melanocarpa</u>
BLA	Blackberry- <u>Rubus</u> <u>spp.</u>
BLV	Black-Viburnum- <u>Viburnum</u> <u>prunifolium</u>
BLU	Blueberry- <u>Vaccinium</u> <u>spp.</u>
BUC	Buckthorn- <u>Rhamnus</u> <u>spp.</u>
BUT	Buttonbush- <u>Cephalanthus</u> <u>occidentalis</u>
CHC	Choke-Cherry- <u>Prunus</u> <u>virginiana</u>
CLB	Climbing Bittersweet- <u>Celastrus</u> <u>scandens</u>
ALD	Common Alder- <u>Alnus</u> <u>serrulata</u>
DEW	Dewberry- <u>Rubus</u> <u>spp.</u>
DOG	Dogwood- <u>Cornus</u> <u>spp.</u>
ELD	Elderberry- <u>Sambucus</u> <u>canadensis</u>
FLH	Fly-Honeysuckle- <u>Lonicera</u> <u>canadensis</u>
GRA	Grape- <u>Vitis</u> <u>spp.</u>
GRD	Gray Dogwood- <u>Cornus</u> <u>racemosa</u>
GRJ	Ground Juniper- <u>Juniperus</u> <u>communis</u> (var. depressa)
HAW	Hawthorn spp.- <u>Crataegus</u> <u>spp.</u>
HAZ	Hazelnut- <u>Corvulus</u> <u>spp.</u>
HBC	Highbush Cranberry- <u>Viburnum</u> <u>trilobum</u>
HUC	Huckleberry- <u>Gaylussacia</u> <u>spp.</u>
HOV	Hobblebush Viburnum- <u>Viburnum</u> <u>alnifolium</u>
MAV	Maple-leaved Viburnum- <u>Viburnum</u> <u>acerifolium</u>
MOH	Mountain-Holly- <u>Nemopanthis</u> <u>mucronata</u>
MOL	Mountain-Laurel- <u>Kalmia</u> <u>latifolia</u>
MOM	Mountain-Maple- <u>Acer</u> <u>spicatum</u>
MUR	Multiflora- Rose- <u>Rosa</u> <u>multiflora</u>
NAN	Nannyberry- <u>Viburnum</u> <u>Lentago</u>
NJT	New Jersey Tea- <u>Ceanothus</u> <u>americanus</u>
NPA	Northern Prickly Ash- <u>Xanthoxylum</u> <u>americanum</u>
PIF	Pinxter-flower- <u>Rhododendron</u> <u>nudiflorum</u>
POI	Poison Ivy- <u>Rhus</u> <u>radicans</u>
POS	Poison Sumac- <u>Rhus</u> <u>vernix</u>
PRI	Privet- <u>Ligustrum</u> <u>spp.</u>
RIB	Ribes- <u>Ribes</u> <u>spp.</u>
ROS	Rose- <u>Rosa</u> <u>spp.</u>
ROD	Red-Osier Dogwood- <u>Cornus</u> <u>stolonifera</u>
SMC	Sumac- <u>Rhus</u> <u>spp.</u>
SPA	Speckled Alder- <u>Alnus</u> <u>rugosa</u>
SPB	Spicebush- <u>Lindera</u> <u>Benzoin</u>
SPI	Spiraea- <u>Spiraea</u> <u>spp.</u>
SMS	Smooth Sumac- <u>Rhus</u> <u>glabra</u>
STM	Striped Maple- <u>Acer</u> <u>pennsylvanicum</u>
STS	Staghorn-Sumac- <u>Rhus</u> <u>typhina</u>
SWF	Sweet-Fern- <u>Comptonia</u> <u>peregrina</u>
TAH	Tartarian Honeysuckle- <u>Lonicera</u> <u>tatarica</u>
WIH	Witch-hazel- <u>Hamamelis</u> <u>virginiana</u>
WIL	Willow spp.- <u>Salix</u> <u>spp.</u>
WIN	Winterberry- <u>Ilex</u> <u>verticillata</u>
WIR	Wild-Raisin- <u>Viburnum</u> <u>cassinoides</u>



SYMBOL  
DESIGNATION

"KEY TO VEGETATION NAME ABBREVIATIONS"

T R E E S

ALT	Alternate-leaved Dogwood- <u>Cornus alternifolia</u>
ELM	American Elm- <u>Ulmus americana</u>
HOR	American Hornbeam- <u>Carpinus caroliniana</u>
APP	Apple- <u>Pyrus malus</u>
BAF	Balsam-Fir- <u>Abies Balsamea</u>
BAW	Basswood- <u>Tilia americana</u>
BEE	Beech- <u>Fagus grandifolia</u>
BIH	Bitternut Hickory- <u>Carva cordiformis</u>
BLC	Black Cherry- <u>Prunus serotina</u>
BLL	Black Locust- <u>Robinia Pseudo-Acacia</u>
BLW	Black Walnut- <u>Juclans nigra</u>
BUT	Butternut- <u>Juclans cinerea</u>
CHE	Chestnut- <u>Castanea dentata</u>
CHO	Chestnut-Oak- <u>Quercus prinus</u>
COT	Cottonwood- <u>Populus deltoides</u>
FLD	Flowering Dogwood- <u>Cornus florida</u>
GRB	Gray Birch- <u>Betula populifolia</u>
HEM	Hemlock- <u>Tsuga canadensis</u>
HOP	American Hop-Hornbeam- <u>Ostrya virginiana</u>
ASP	Large-toothed Aspen- <u>Populus grandidentata</u>
LAR	American Larch- <u>Larix laricina</u>
PIC	Pin-Cherry- <u>Prunus pensylvanica</u>
PIH	Pignut Hickory- <u>Carva glabra</u>
PIP	Pitch-Pine- <u>Pinus rigida</u>
NOS	Norway spruce- <u>Picea abies</u>
ASP	Quaking Aspen- <u>Populus tremuloides</u>
ERC	Red Cedar- <u>Juniperus virginiana</u>
REO	Red Oak- <u>Quercus rubra</u>
REM	Red Maple- <u>Acer rubrum</u>
RES	Red Spruce- <u>Picea rubens</u>
SAS	White Sassafras- <u>Sassafras albidum</u>
SCO	Scrub-Oak- <u>Quercus ilicifolia</u>
SCP	Scotch Pine- <u>Pinus Sylvestris</u>
SER	Serviceberry- <u>Amelanchier</u> <u>sub.</u>
SHH	Shagbark-Hickory- <u>Carva ovata</u>
SRP	Scrub-Pine- <u>Pinus virginiana</u>
STM	Striped Maple- <u>Acer pensylvanicum</u>
SUM	Sugar-Maple- <u>Acer saccharum</u>
SWB	Sweet Birch- <u>Betula lenta</u>
TRH	Tree-of-heaven- <u>Ailanthus altissima</u>
TUP	Tulip-Poplar- <u>Liriodendron tulipifera</u> (was Yellow Poplar- YEP)
WHA	White Ash- <u>Fraxinus americana</u>
WHB	White Birch- <u>Betula papyrifera</u>
NWC	White Cedar- <u>Thuja occidentalis</u>
WHO	White Oak- <u>Quercus alba</u>
WHP	White Pine- <u>Pinus Strobus</u>
YES	Yellow Birch- <u>Betula lutea</u>





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AREA NUMBER	LOCATION	ESTIMATED ACREAGE	LAND USE	COVER TYPE	AGE CLASS	UNDESIRABLE SPECIES	DENSITY	DESIRABLE SPECIES	DENSITY	MERCHANTABILITY	SENSITIVE AREAS	CLEARING TYPE	SLASH DISPOSAL	JUSTIFICATION	REMARKS
1	NM2 Sub- Str 2 1/2	5.0	Constr. area	-	-	-	-	-	-	NM	PRH	NCR	-	-	Existing parking/storage areas for NMP2. Lake Road (Private Road) Utilize existing access/existing gates.
2	2 1/2 - 2 3/4	1.0	W	H	SPM	REM ASP GRB	L	HAW STS APP	H	NM	WS	II	D	ABC	Restricted activities and no equip- ment access in shrub wetland. Danger trees.
3	2 3/4 - 3 1/2	1.0	W	H	SPM	REM ASP GRB	L	HAW STS APP	H	NM	-	I	BC	ABC	Wire-pulling area. Danger trees.
4	3 1/2 - 3 1/2	.2	R/R	-	-	-	-	-	-	NM	Drainage Ditch	NCR	-	-	Railroad spur. Restricted activities in drainage ditch.
5	3 1/2	.2	W	H	S	BLC WHA ASP	S-L	HAW ARW SID	M-H	NM	-	II	D	ABC	Danger trees.
6	3 1/2 - Scriba Sub	.4	Constr. area	-	-	-	-	-	-	NM	-	NCR	-	-	Construction site for Scriba substation.
7	Scriba Sub- str 1 lay- down	.3	Constr. area	-	-	-	-	-	-	NM	-	NCR	-	-	Construction site for Scriba substation.



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8	Str 1 laydown	2.4	W	H	SPM	SUM REM BEE	M-H	WIH HAW ARW	L	NM	-	I	BC	ABC	Fabrication area for (2) 3-pole structures.
9	Str 1 1/2 - 3 3/4	5.0	W/ ROW	H	SPM	SUM REM BEE	H	WIH HAW ARW	L	NM	INC	II	BC	ABC	Danger trees, wire-pulling and equipment area. Install (1)-18" culvert & restricted activities at intermittent creek.
10	3 3/4	.41	W/ ROW	H	SP	WHA REM BAW	L	ARW WIL NAN	M	NM	WW	II	D	ABC	Restricted activities.
11	4-6	5.2	W/ ROW	H	SPM	SUM REM REO	H	STM WIH	S	M	INC	II	ABC	ABC	Danger trees, Install (1)-12" culvert & restricted activities at intermittent creek.
12	6 - 6 3/4	1.6	W/ ROW	H	SP	WHA REM ASP	L	ARW NAB WIL	M	NM	WW STR	II	D	ABC	No equipment access and restricted activities in stream & wetland area. Existing double 48" culverts at Ont. 62.
13	6 3/4 - 7 1/4	1.7	W/ ROW	HC	SPM	REM WHA HEM	M	ARW SID	L	NM	-	II	BC	ABC	Danger trees.
14	7 1/4 - 7 3/4	.9	W/ ROW	H	SP	WHA REM REO	L	ARW APP NAB	M	NM	WW	II	D	ABC	Restricted activities and no equipment access.

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15	7 3A-8	1.1	W/ ROW	HC	SP	HEM REM WHA	M	ARW SID WIL	L	NM	-	II	BC	ABC	Danger trees.
16	8	.3	W/ ROW	H	SP	SUM ASP PIC	L-M	ARW STS ALD	M	NM	INC	II	D	ABC	Restricted activities at intermittent creek.
17	8	.2	W/ ROAD ROW	H	SP	REM BLC WHA	L-M	WIL STS ARW	M	NM	TOH	II	H	A	Minor Road (move slash to area #19). Retain all shrubs for roadside screen. Existing 24" culvert.
18	8 - 9	.7	W/ ROW	H	S	WHA REM ELM	L	WIL ROD ALD	M-H	NM	WS STR	II	D	ABC	Restricted activities.
19	9 - 9	1.3	W/ ROW	H	SP	WHA REM BLC	L-M	ARW APP GRJ	L	NM	-	II	BC	ABC	Danger trees. Abandoned railroad.
20	9	.2	W/ ROW	H	S	ASP	L	WIL APP ARW	H	NM	WS	II	D	ABC	Restricted activities in wetland area.
21	9 - 11	3.8	W/ ROW	HC	SPM	SUM BLC HEM	H	WIL HAW APP	L	NM	-	II	BC	ABC	Danger trees.



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22	11 $\frac{1}{4}$	.5	W/ ROW	HC	SP	WHA YEB HEM	M-H	WIIH ARW	L	NM	STR	II	D	ABC	Install (1)-42" culvert at existing road crossing of stream. Restricted activities and no equipment access.
23	11 $\frac{1}{4}$ - 12 $\frac{1}{4}$	2.1	W/ ROW	H	SPM	ASP SUM REM	H	WIIH APP	L	M	INC	II	ABC	ABC	Danger trees. Restricted activities at intermittent streams.
24	12 $\frac{1}{4}$ - 13 $\frac{1}{4}$	2.4	W/ ROW	H	SP	SUM REM WHA	M-H	ARW WIIH SID	L	NM	-	II	BC	ABC	Danger trees.
25	13 $\frac{1}{4}$ - 13 $\frac{3}{4}$	1.1	W/ ROW	H	S	ASP WIL	L	WIL ARW SID	M-H	NM	WS	II	D	ABC	Restricted activities. Install (1)-18" culvert at existing road crossing to improve equalization.
26	13 $\frac{3}{4}$ - 14 $\frac{1}{4}$	1.5	W/ ROW	H	SP	SUM WHA ASP	M-H	ARW SID ELD	L	NM	Wet area on ROW	II	BC	ABC	Danger trees. ROW used for horse grazing by adjacent landowner. Install (1)-18" culvert at existing road crossing to improve equalization. Restricted activities at wet area on ROW.
27	14 $\frac{1}{4}$ - 14 $\frac{3}{4}$	.4	W/ ROAD/ ROW	H	SP	SUM REM ELM	L	STS APP SID	L	NM	COH	II	H	A	County Route 1. Move slash to area #26 (keep out of wet area). Retain all shrubs for roadside screen.
28	14 $\frac{3}{4}$ - 16 $\frac{1}{4}$	3.6	AB/ ROW	H	S	WHA BIH	L	ROD STS ARW	H	NM	-	II	D	ABC	Abandoned orchard.





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29	16 1/2 - 18 1/2	5.0	W/ ROW	H	SP	WHA ASP SUM	M	ARW BCB APP	L	NM	INC	II	BC	ABC	Danger trees. Restricted activities at intermittent creek.
30	18 1/2 - 20	4.5	W/ ROW	H	SPM	SUM WHA BIH	H	ARW ALT BCB	L	M	INC	II	ABC	ABC	Danger trees. Install (1)-18" culvert and restricted activities at intermittent creek.
31	20 - 20 1/2	.6	W/ ROAD/ ROW	H	SP	BLC REM	M	STS BLB	L	NM	TOH STR	II	H	A	Middle Road. Move slash to areas #30 & 32. Retain all shrubs for roadside screen. Install (1)-18" culvert in stream at existing road crossing. Restricted activities at stream. Existing 16" culvert at south side of Middle Road.
32	20 1/2 - 21 1/2	2.2	W/ ROW	H	SP	BLC ASP	M	WIL ALD APP	L-M	NM	-	II	BC	ABC	Danger trees.
33	21 1/2 - 23 1/2	4.8	W/ ROW	CH	SP	HEM ASP WHA	M-H	MLV ALD WHH	L	NM	INC	II	BC	ABC	Danger trees. Restricted activities and install (1)-18" culvert at intermittent creek.
34	23 1/2 - 24 1/2	2.4	W/ ROW	H	S	ASP BIH WHA	M	WIH SID GRJ	L	NM	INC	II	BC	ABC	Danger trees. Restricted activities and install (1)-18" culvert at intermittent stream.
35	24 1/2 - 25 1/2	2.8	AB/ ROW	H	S	REM ELM WHA	L	SID ARW ROD	M	NM	-	II	D	ABC	



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36	25 $\frac{1}{2}$ - 26 $\frac{1}{2}$	1.1	AA/ ROW ROAD	-	-	-	-	-	-	NM	USH	NCR	-	-	U.S. Route 104. Hayfield.
37	26 $\frac{1}{2}$	.2	ROAD/ W/ ROW	H	S	WHA BLC ELM	L	ARW SID WIL	L-M	NM	USH WS	II	H	A	U.S. Route 104. Move slash to area #38 (keep out of wet area). Restricted activities in wet area.
38	26 $\frac{1}{2}$ - 26 $\frac{3}{4}$	1.2	W/ ROW	H	S	WHA ELM ASP	L	WIL SID ALD	H	NM	WS	II	D	ABC	Restricted activities in wetland.
39	26 $\frac{3}{4}$ - 27	.8	W/ ROW	H	SP	ASP WHA	M	SID WIL SPI	L-M	NM	-	II	BC	ABC	Danger trees.
40	27 - 27 $\frac{1}{2}$	1.1	W/ ROW	H	S	ASP REM WHA	L	WIL ALD SID	H	NM	WS	II	D	ABC	Restricted activities.
41	27 $\frac{1}{2}$	.5	W/ ROAD/ ROW	H	S	SIM ASP REM	M-H	ARW SPI WIL	L-M	NM	COH	II	H	A	County Route 3 (Lily Margh Road). Move slash to areas #40 and 42 (keep out of wet areas).
42	27 $\frac{1}{2}$ - 30 $\frac{1}{2}$	5.3	W/ ROW	H	S	BLC REM WHA	L	STS ARW ROD	M-H	NM	(2) INC. WS	II	D	ABC	Restricted activities and install (1)-18" culvert in each intermittent creek. Restricted activities in wetland area.

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43	30 $\frac{1}{2}$ - 32	3.1	W/ ROW	H	SPM	WHA REM BLC	M-H	GRD ARW STS	L	NM	(2) INC.	II	BC	ABC	Wire-stringing and equipment site. Install (1)-18" culvert and restricted activities at each intermittent creek. Danger trees.
44	32	.3	W/ ROW	H	SP	REM	L	ROD WIL ARW	M	NM	WW	II	D	ABC	Restricted activities.
45	32 - 34 $\frac{1}{2}$	5.1	W/ ROW	H	SP	ASP WHA SUM	M	APP ARW STS	L-M	NM	(4) INC.	II	BC	ABC	Danger trees. Restricted activities and install (1)-18" culvert at each intermittent creek.
46	34 $\frac{1}{2}$ - 35 $\frac{1}{2}$	2.1	W/ ROW	CH	SPM	HEM YEB SUM	H	ARW	L	M	INC.	II	ABC	ABC	Danger trees. Install (1)-18" culvert and restricted activities at intermittent creek.
47	35 $\frac{1}{2}$ - 36	2.0	W/ ROW	H	SP	YEB SUM WHA	M-H	WIL ARW	L	NM	STR	II	D	ABC	Restricted activities 25 feet south of stream.
48	36 - 39 $\frac{1}{2}$	7.4	W/ ROW	HC	SP	SUM WHA NWC	L-M	WIL ARW APP	L	NM	INC WS	II	BC	ABC	Danger trees. Install (1)-18" culvert at intermittent creek. Restricted activities at creek and wetland.
49	39 $\frac{1}{2}$ - 40 $\frac{3}{4}$	2.3	W/ ROW	H	SP	ASP ELM REM	L	ALD ARW GRD	M-H	NM	INC	II	D	ABC	Restricted activities at intermittent creek.

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50	40 <sup>3</sup> / <sub>4</sub> - 41	.7	AB/ ROAD	H	S	REM ASP WHA	L	ARW APP ALD	L	NM	COH	II	H	A	County Route #29. Move slash to areas #49 and 51. Retain all shrubs for roadside screen.
51	41 - 41 <sup>1</sup> / <sub>2</sub>	7.0	W/ ROW	H	S	REM ASP	L	WIL ARW ALD	H	NM	INC	II	D	ABC	No equipment access and restricted activities at intermittent creek. Install (1)-12" culvert at drainage ditch on existing access road.
52	41 <sup>1</sup> / <sub>2</sub> - 42	1.1	W/ ROW	CH	SP	ASP NWC GRB	M-H	WIH APP GRJ	L	NM	-	II	BC	ABC	Danger trees.
53	42 - 43 <sup>1</sup> / <sub>4</sub>	2.5	W/ ROW	HC	SP	ASP REM WHP	M-H	ARW WIH SPI	L	NM	(2) INC	II	BC	ABC	Danger trees. Restricted activities and install (1)-18" culvert at each intermittent creek.
54	43 <sup>1</sup> / <sub>4</sub> - 43 <sup>3</sup> / <sub>4</sub>	1.1	W/ ROW	CH	SP	WHP REM ASP	H	ARW WIH SPI	L	M	-	II	ABC	ABC	Danger trees. White pine plantation.
55	43 <sup>3</sup> / <sub>4</sub> - 45 <sup>1</sup> / <sub>2</sub>	2.8	W/ ROW	HC	SPM	REM WHA NWC	L-M	ARW WIH SPI	L-M	NM	Drainage Ditch	II	BC	ABC	Danger trees. Divert drainage ditch to south of structure #45 laydown and install (2)-18" culverts. Restricted activities at ditch. Utilize existing access from O'Connor Road (clearing and gravel improvement required).





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AREA NUMBER	LOCATION	ESTIMATED ACREAGE	LAND USE	COVER TYPE	AGE CLASS	UNDESIRABLE SPECIES	DENSITY	DESIRABLE SPECIES	DENSITY	MERCHANTABILITY	SENSITIVE AREAS	CLEARING TYPE	SLASH DISPOSAL	JUSTIFICATION	REMARKS
56	451	.5	W/ ROW	H	SP	REM SIM	M	STS ELD GRD	L-M	NM	STR	II	D	ABC	No equipment access and restricted activities 50 feet each side of Black Creek. Keep all slash out of stream.
57	451 - 461	2.8	W/ ROW	H	SPM	BLC WHA SUM	M-H	ARW BCB	L	NM	INC	II	BC	ABC	Danger trees. Restricted activities and install (1)-18" culvert at intermittent creek.
58	461 - 46 <sup>3</sup> / <sub>4</sub>	.8	W/ ROW	H	SP	SIM REM WHA	M-H	ARW SID	L	NM	Drainage Ditch	II	D	ABC	No equipment access and restricted activities.
59	46 <sup>3</sup> / <sub>4</sub> - 47	.5	W/ ROAD/ ROW	HC	SP	SUM GRB REP	L	ALD ARW RIB	H	NM	TOH	II	H	A	O'Connor Road. Danger trees (Norway Spruces). Move slash to area #60. Retain all shrubs for road side screen. Install (1)-18" culvert (30 foot pipe) at road ditch on south side. Restricted activities at drainage ditch.
60	47 - 49	4.6	W/ ROW	H	SP	REM ASP BLC	L-M	ARW HAW WHH	L-M	NM	-	II	BC	ABC	Danger trees.
61	49 - 54	11.3	W/ ROW	H	SP	ASP WHA REM	M	ARW WIL ROD	L	NM	(2) INC.	II	BC	ABC	Danger trees. Restricted activities and install (1)-18" culvert at each intermittent creek wire-pulling site.



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62	54 - 54 $\frac{1}{2}$	1.3	AB/ROW	H	S	WHA ELM	L	STS ALD	M	NM	INC	II	D	ABC	Restricted activities at intermittent creek.
63	54 $\frac{1}{2}$ - 55	.9	ROAD/W/ROW	H	S	REM WHA ELM	S-L	ALD WIL	L	NM	COH	II	H	A	County Route #4 (Hall Road) and O'Connor Road. Move slash to area #64. Retain all shrubs for roadside screen.
64	55 - 56 $\frac{3}{4}$	3.4	W/AB/ROW	H	S	REM WHA ELM	L	ALD WIL ARW	L	NM	WW	II	BC	ABC	No stump treatment in this area until after crops are harvested from nearby muck fields. Restricted activities in wetland area. No structure
65	56 $\frac{3}{4}$ - 59 $\frac{3}{4}$	6.4	AA/ROW	-	-	-	-	-	-	-	(2) Drainage Ditches - Muck Soils	NCR	-	-	Install. until after crops are harvested. Use tracked digger. Restricted activities at each drainage ditch and install (1)-18" culvert in ditch to str. #59.
66	59 $\frac{3}{4}$ - 63	7.0	W/ROW	H	SP	WHA REM BLC	M	ELD ARW	L	NM	Muck Soils (2) INC.	II	D	ABC	No stump treatment for first 750 feet south of muck fields until crops are harvested. Restricted activities and install (1)-18" culvert at each intermittent creek. Gravel pit on ROW.
67	63 - 64	2.3	W/ROW	HC	SPM	SUM REM HEM	M-H	SPB STM	L	M	INC.	II	ABC	ABC	Danger trees. Restricted activities and install (1)-18" culvert at intermittent creek.
68	64 - 64 $\frac{1}{2}$	.8	W/ROW	H	SP	REM ASP WHA	L-M	WIL ELD	L-M	NM	WW INC.	II	D	ABC	Restricted activities. Install (1)-18" culvert at intermittent creek.



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69	64 $\frac{1}{4}$ - 65 $\frac{3}{4}$	2.8	W/ ROW	HC	SPM	REM WHA HEM	M-H	WIH STM HOB	L	M	INC.	II	ABC	ABC	Danger trees. Install (1)-18" culvert and restricted activities at intermittent creek.
70	65 $\frac{3}{4}$ - 67	2.6	W/ ROW	H	SP	WHA ASP YEB	M	WIH ARW WIL	L-M	NM	(3) INC. WW	II	D	ABC	Restricted activities and no equipment access. Install (1)-18" culvert at each intermittent creek crossing of existing road.
71	67 - 68	2.5	W/ ROW	HC	SP	ASP WHA ERC	M-H	WIH SEB ARW	L	NM	-	II	BC	ABC	Danger trees.
72	68 - 69	1.8	W/ ROW	H	SP	ASP WHA SUM	M-H	WIH SEB ARW	L-M	NM	-	II	BC	ABC	Danger trees. Gas line crosses ROW
73	69 - 70 $\frac{1}{2}$	4.2	W/ ROW	H	SP	REM WHA ASP	M	ARW APP WIL	M	NM	-	II	D	AB	Wire-stringing/pulling site at structure #70.
74	70 $\frac{1}{2}$	.4	W/ ROAD/ ROW	H	S	REM WHA ELM	L-M	WIH WIL ARW	L-M	NM	COH	II	H	A	MacDougal Road. Move slash to areas #73 and 75. Retain all shrubs for roadside screen.
75	70 $\frac{1}{2}$ - Volney Sub	4.3	AB/ W	H	S	WHA ASP REM	L	APP STS WIL	M	NM	-	II	D	AB	Terminates at Volney Substation. Wire-stringing/pulling site at structure #71.

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PSC REQUIREMENT.

3. The location of sites where herbicides or any other pesticides are expected to be applied with a general discussion\* of the relationship between species information contained in the initial resource inventory and the choice of chemicals and application methods to be employed. (Include information\* on the type, formulation, carrier, equipment, season of treatment, and method along with measures to protect streams, wetlands, water sources, nearby sensitive vegetation and land uses from adverse effects.)

NMPC RESPONSE

In the initial clearing operation, Niagara Mohawk will be conducting field research of the prespray method on the proposed right-of-way between the Scriba Station and Burt Minor Road in accordance with Stipulation #11. This section of right-of-way is shown on aerial mosaic drawings #C-39195-C (sheets 1 and 2). Niagara Mohawk shall prespray, cut and apply a second herbicide treatment by the end of the first growing season on this section of right-of-way. Pre-spray treatment will be initiated at the beginning of the clearing project and will be applied in accordance with the procedure described in the Exhibit 70 response to NM Interrogatory No. 5. This procedure is provided below and on the pages following this response.

The herbicide mixture to be used in the prespray application shall be 2 gallons Garlon 4 in 98 gallons of oil. The mixture for the second herbicide treatment depends on the method of application the contractor chooses to use;<sup>1/</sup> if a basal application is used, the mixture shall be 2 gallons Garlon 4 to 98 gallons of oil, if a stem foliar application is used, the mixture shall be 1½ quarts Garlon 4 plus 2 quarts Tordon 101 plus 1 quart Surfel to 99 gallons water.

<sup>1/</sup> Stipulation #11, Appendix A, Opinion No. '83-15 directs that the methods of basal and/or stem foliar is to be determined by the contractor.





NMPC RESPONSE (cont'd)

Initial herbicide applications on the remainder of the proposed right-of-way will be conducted in accordance with the Company's normal operating procedures. During construction, while clearing operations are progressing, a stump herbicide treatment and/or basal treatment prior to cutting will be applied. All hardwood stumps and as much stubble as practical shall be treated with Tordon RTU or equivalent, approved by the Right-of-Way Management Supervisor. Tordon RTU shall be applied to the stumps immediately after cutting and as a guideline not more than 10 trees shall be cut before treating the stumps.

If basal treatment prior to cutting is applied, the herbicide shall be Garlon 4 or equivalent approved by the Right-of-Way Management Supervisor. Tordon RTU is applied utilizing handheld or backpack type containers. Basal treating prior to cutting may be done with backpack sprayers or power driven equipment. Applications will comply with label instructions and will be directed at individual targets, avoiding a blanket coverage of the ground.

At areas 64 and 66 (C-39195-C, sheet 8), no stump treatment will be conducted until after the crops are harvested from area 65.

Streams, wetlands, water sources, and other nearby sensitive sites are protected from adverse effects by designating these areas as "restricted activities areas". Storage and use of herbicides in these areas is restricted as noted on container label instructions. Aerial mosaics #C-39202-C (sheet 1) and #C-39195-C (sheets 1-10) identify these areas. Applicant will comply with all federal and state regulations pertaining to the use of herbicides. Herbicide application will be supervised along with ongoing supervision.

For the initial treatment that is conducted at the time of clearing, the relationship between species information contained in the initial resource inventory and the choice of chemicals and application method to be employed is irrelevant; the reason being that previous experience has shown that Tordon RTU stump application is comparatively cost effective on a broad spectrum of species and its selective characteristics allows its utilization in almost all areas of the



NMPC RESPONSE (cont'd)

right-of-way. Furthermore, the alternatives for initial treatment are limited.

During initial clearing operations the ROW Management Supervisor may choose to basal treat prior to cutting. This method has previously been employed where saplings exist in very light densities, i.e., abandoned agriculture fields, and when on-site operating conditions make this method feasible. This determination is not made from the species inventory but is based on the judgement of the Right-of-Way Management Supervisor while on site during construction operations.

The choice of herbicides and application methods during the second major herbicide application are more dependent upon the right-of-way conditions. A right-of-way inventory will be conducted before the second application is applied. This inventory will be included in the right-of-way management plan to be submitted to the Commission prior to the first major treatment of vegetation following initial clearing as directed in Opinion No. 83-15, paragraph 24, on page 21.



NM Interrogatory No. 5

Q. Describe the step by step prespraying procedure.

A. Proceed as follows:

A. Prespray Treatment

1. Except for conifers and trees selected for retention, all trees in the areas to be cleared will be chemically treated prior to cutting to prevent sprouting.
2. The chemical solution will be applied to the bottom 18 inches of the trunk, root crown, and exposed roots of the tree. A greater volume of solution is required to penetrate the thick bark of large trees than is required by the smoother bark of young trees. The application will be made in sufficient volume to cause rundown and thorough wetting of the root crown. Particular attention will be given to a complete encircling application of chemical at the ground line, especially to trees of irregular growth and shape.
3. The trees will be treated at least 48 hours before cutting.



NM Interrogatory No. 5 (continued)

B. Chemical Application

1. All woody plants in the right-of-way except conifers, species designated to remain, and species in areas noted in Item C of this response will be treated with the chemical solution.
2. The chemical solution will be thoroughly agitated prior to and during application to ensure uniform dispersion of chemical through the oil carrier.
3. Extreme care will be exercised in chemical application near crops, shrubs, and trees to be retained, and whenever wind is blowing sufficiently to cause a drift of the chemical.
4. All chemical solution will be applied through a hand-held nozzle by persons walking the right-of-way. The source of material may be either power-driven equipment or knapsack spray tanks. Spray nozzles will be adjusted to produce a coarse spray of large droplets at the lowest pressure necessary to provide adequate coverage.
5. The chemical application will be supervised by an on site certified pesticide applicator who is registered with the New York State Department of Environmental Conservation. All chemical applications will be performed according to the registration of the particular product label and appropriate Federal and State restrictions.





NM Interrogatory No. 5 (continued)

C. Spraying Limitations

1. There will be no mixing or preparing of chemicals, or parking of the spraying equipment within 100 feet of any watercourse.
2. The following areas within the right-of-way limits will not be sprayed:
  - a. Within 25 feet of any stream or watercourse during basal spraying.
  - b. Areas specified by the supervising forester or shown as a "No Herbicide Treatment Area" on EM&CP drawings.
3. No application will be made when snow or ice is 2 inches or more in depth around the target to be treated, or when fog or precipitation causes wetting of the target. A target treated one hour or less prior to rain will be sprayed again but not until one hour after runoff has stopped. Spray nozzles will be adjusted to produce a coarse spray of large droplets at the lowest pressure necessary to provide adequate coverage.
4. Conifers designated to be removed will be cut, not sprayed.



NM Interrogatory No. 5 (continued)

5. In pastures, all vegetative growth, such as various species of Cherry, that may become toxic as a result of clearing, thereby presenting a hazard to livestock, will be cut and immediately removed from the pasture.

D. Chemical Solution

The chemical prespray treatment will be performed with the following chemical formulation:

Triclopyr

The chemical concentrate shall contain not less than 6 pounds of 3, 5, 6-trichloro-2 pyridinyloxyacetic acid equivalent (triclopyr). The chemical concentrate shall be a low volatile butoxyethyl ester. This quantity of material shall be mixed with sufficient diesel or No. 2 fuel oil to form a total solution of 100 gallons.



PSC REQUIREMENT

- F. The name, if any, and course of all rivers and streams (both perennial and intermittent) within or crossed by the proposed right-of-way or any off-right-of-way access road constructed, improved or maintained for this facility. Indicate\* the procedures that were followed to inventory such resources and attach\* a sample copy of any resulting data collection sheets used. Describe\* the measures to be taken in each instance to protect stream habitat and water quality including, but not limited to, fording or crossing technique and structure type. Show to the nearest 20 feet the designated streamside "protective or buffer zone" in which construction activities will be restricted to the extent necessary to protect rivers and streams. (Indicate\* the construction activities to be restricted in such zones.)

NMPC RESPONSE

Refer to the enclosed aerial mosaic drawings #C-39202-C (sheet 1) and #C-39195-C (sheets 1-10) for all streams crossed by the proposed right-of-way. Niagara Mohawk's "Protection Measures for Crossing Streams" (includes sample data collection sheets) and the details for a typical culvert installation are exhibited on the pages following this response.

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\*Ibid.



Site-by-Site Analysis Survey

During the field site analysis survey, determinations to cross or not to cross streams are made. Perennial and intermittent streams are surveyed. Where perennial streams are proposed to be crossed by access roads, data is entered on the "Stream Crossing Data: field forms (see p. 73). Information includes channel characteristics, gradient and flow, bottom material, vegetation, land use, and resource value. Type of crossing devices are determined and are indicated on field maps. Also noted on field maps are "Restricted Activities Areas", "No Equipment Access Areas", and clearing and slash disposal methods. Information on field maps is later transferred to aerial mosaics and becomes part of the construction specifications. Protection measures for all perennial and intermittent streams are identified on the "Site-by-Site Analysis" tabular forms under "Site Recommendations" (see p. 75 ) Protection measures for high resource streams are entered on "Trout and Water Supply Streams" forms (see p. 78 )





## PROTECTION MEASURES

Protection measures taken into account when streams and other bodies of water are encountered include: (1) no equipment access areas, (2) restricted activities areas, (3) stream crossing data, (4) clearing and slash disposal methods, (5) stream crossing devices, (6) erosion control and restoration, (7) Resource value of streams, (8) Consultations with Department of Environmental Conservation. The following is an explanation of each.

### No Equipment Access Areas

The first consideration is to avoid crossing streams or other water bodies by surveying potential alternate access. If available and practical, alternate access is used and the stream channel or water body is designated "No Equipment Access", whereby mobilized equipment is prohibited. These areas are delineated on aerial mosaics and are identified on site-by-site analysis tabular forms.

### Restricted Activities Area

A buffer zone is established where the transmission line right-of-way traverses streams and other bodies of water and is referred to as "Restricted Activities Area". These areas are delineated on aerial mosaics, and are identified on site-by-site analysis tabular forms. Restrictions are as follows:

- (a) no deposition of slash within stream channel;
- (b) no accumulation of construction debris within restricted area;
- (c) herbicide restrictions in stream area as noted on container label instructions;
- (d) no degradation of stream banks;
- (e) no equipment washing or refueling within restricted area; and
- (f) no storage of any petroleum or chemical material.

### Clearing and Slash Disposal Methods

Clearing methods are chosen so as to leave a buffer zone of existing vegetation along streams. The objective is to protect streams by minimizing their disturbance. This is accomplished by choosing clearing methods that retain certain vegetative species to provide shading and stabilization of existing soils and choosing slash disposal methods that



minimize disturbance of stream banks and existing vegetation. Type III clearing is generally chosen and consists of selectively cutting only tall growing species presently in or having the potential of reaching the wire security zone within five years. In areas where sufficient desirable shrub type vegetation exists to maintain an adequate screen, Type II clearing may be designated. This consists of removing tall growing tree species while retaining woody shrub species. Depending on slash volume, terrain and/or soil stability, slash may be lopped up on site to minimize scarification, or may be removed to prevent potential channel blockage or washing downstream.

#### Stream Crossing Data

Stream characteristics are surveyed on site as an initial step in protecting perennial streams that must be crossed. When it is decided that equipment will cross the stream, the following data is collected and entered on the field "Stream Crossing Data Form".

- (a) Channel characteristics: width, water depth, stream cross section, slope steepness, bank height;
- (b) stream gradient and flow: gradient/slope, velocity, flow;
- (c) channel bottom material;
- (d) stream bank vegetation;
- (e) surrounding land use; and
- (f) resource value.

Consideration of the above data is necessary in choosing the proper stream crossing devices, methods of clearing and slash disposal, location of access routes, and any special restoration measures. This data also serves as a documentation of stream characteristics which justifies the selection of stream protection measures.

#### Stream Crossing Devices

Proper stream crossing devices are necessary in providing protection of streams to be crossed. In choosing proper stream crossing devices, consideration is given to:

- (a) type of equipment that will be using the device and anticipated number of crossings (intensity of use)



- (b) device which will give least stream disruption during installation and use;
- (c) permanence of the device; and
- (d) the capability of the device to maintain the flow capacity of the existing channel. (Stream crossing data is necessary in making above judgements.)

Culverts are generally used in streams of well contained flow channels and high, steep sloped banks. Under these conditions, a culvert installation usually minimizes stream bank disruption. Culverts are also used to equalize drainage in wet areas where construction roads are built up by gravel and/or gravel and corduroy. Culvert sizes are arrived at through field observations, type of culverts presently being used in the vicinity on a particular stream, channel characteristics, containment of flow, volume of flow, velocity of stream. Fords are generally used to cross streams where there is a solid approach and exit, slight grade on either side, low banks, and stable channel bottom. Fords without sills are normally selected for streams of low velocity, stable channel bottom and low resource value. Fords with sills are normally selected for streams of high velocity, stable or unstable channel bottom, and high resource value. Fords and culverts used by Niagara Mohawk are exhibited on drawing #C-31245-C, sheets 1 and 2.

Locations of fords and culverts to be installed are indicated on the aerial mosaics.

#### Erosion Control and Restoration

Access routes on downgrade approaches to streams are located in a manner to minimize erosion, thereby minimizing potential turbidity and sedimentation effects. On long downgrade approaches slight turns are designed in the route to eliminate channeling of surface water towards the stream. Water bars and other water diversion devices are installed during construction to divert surface drainage into filter strips prior to reaching the stream. Access routes are designed to cross stream channels perpendicularly which reduces the amount of stream bank disturbance.



Erosion Control and restoration measures are initiated in each phase of construction activity which includes road construction operations, installation of stream crossing devices, right-of-way clearing operations, and line construction operation. Exposed soil areas are regraded, seeded, fertilized, and mulched where appropriate. Necessary erosion control devices are installed within eight work days of initial disruption.

#### Resource Value of Streams

Resource value of streams are initially determined by referring to the New York State Department of Conservation Classification of Streams. High resource streams such as trout and water supply streams traversed by the transmission line right-of-way are identified on "Trout and Water Supply Streams" forms (see p. 78). Listed are stream location and stream classification. Protection measures are described on the forms, such as clearing type; slash disposal type, restricted activities areas, equipment or no equipment access, type crossing installation, and other protection measures.

#### Consultation with Department of Environmental Conservation

A personal contact is made with appropriate DEC personnel to review streams being traversed by the Transmission facility. The resource value of the streams and protection measures to be taken are reviewed.





STREAM CROSSING DATA FORM

Project: \_\_\_\_\_ Segment: \_\_\_\_\_  
Observer: \_\_\_\_\_ Date: \_\_\_\_\_  
Stream Name: \_\_\_\_\_  
Crossing No. \_\_\_\_\_ DEC Class. \_\_\_\_\_  
Between \_\_\_\_\_ and \_\_\_\_\_  
Approximate date of crossing installation: \_\_\_\_\_

I. FIELD WORK

A. Channel Characteristics

1. Width, approx. \_\_\_\_\_ ft.
2. Water depth, approx. \_\_\_\_\_ ft.
3. Typical cross section (sketch)

4. Slope Steepness (both sides of stream)

\_\_\_\_\_ % slope  
\_\_\_\_\_ % slope

5. Bank height (both sides of stream),

\_\_\_\_\_ ft.  
\_\_\_\_\_ ft.

B. Stream Gradient and Flow

1. Gradient/Slope \_\_\_\_\_
2. Velocity:  
Low \_\_\_\_\_ Med \_\_\_\_\_ High \_\_\_\_\_
3. Flow:  
Small \_\_\_\_\_ Med \_\_\_\_\_ Large \_\_\_\_\_

C. Channel Bottom Material

1. Bedrock \_\_\_\_\_
2. Boulder & rubble \_\_\_\_\_
3. Gravel \_\_\_\_\_
4. Sand \_\_\_\_\_
5. Silt \_\_\_\_\_
6. Soil \_\_\_\_\_

D. Stream Bank Vegetation

(Within 50' of either side of stream)

1. Hardwoods, approx. \_\_\_\_\_ %
2. Softwoods, approx. \_\_\_\_\_ %
3. Mixed, approx. \_\_\_\_\_ %
4. Shrubs, approx. \_\_\_\_\_ %
5. Crop farming \_\_\_\_\_ %
6. Open field \_\_\_\_\_ %
7. Impervious \_\_\_\_\_ %

E. Downstream Drainage Basin Data

1. Land Use \_\_\_\_\_
2. Water bodies \_\_\_\_\_
3. Sensitive areas \_\_\_\_\_

F. Surrounding Land Use

1. Types \_\_\_\_\_
2. Aesthetics/Visibility \_\_\_\_\_

G. Resource Value

1. Recreation:  
Fishing: \_\_\_\_\_  
Swimming: \_\_\_\_\_  
Canoeing: \_\_\_\_\_
2. Drinking water \_\_\_\_\_



SITE ANALYSIS

Project \_\_\_\_\_ Segment \_\_\_\_\_

Date \_\_\_\_\_

Observer \_\_\_\_\_

Area No. \_\_\_\_\_

Area Width \_\_\_\_\_ Length \_\_\_\_\_ Acres \_\_\_\_\_

Site Characteristics

Slope 0-5 _____	Soil Texture _____	Topo-Location _____	Water _____	Drainage _____	Land Use _____
5-15 _____	Sand _____	Ridge top _____	Stream _____	Free _____	
15-35 _____	Silt _____	Upper slope _____	Pond _____	Impeded _____	
35-55 _____	Clay _____	Middle slope _____	Swamp _____	Excessive _____	
55-75 _____	Rock _____	Lower slope _____	Marsh _____		
75-95 _____	Peat _____	Bottom _____	Bog _____		
	Other _____	Other _____	Other _____		

Vegetation

Overstory

Cover Type \_\_\_\_\_

Canopy Cover 10 \_\_\_\_\_ 25 \_\_\_\_\_ 50 \_\_\_\_\_ 75 \_\_\_\_\_ 100 \_\_\_\_\_

Age Class Classy--Sapling ( 5 in.) \_\_\_\_\_ Polelimber (5-12 in.) \_\_\_\_\_ Sawtimber (over 12 in.) \_\_\_\_\_ Stand Density \_\_\_\_\_

Most Abundant Species \_\_\_\_\_

Danger Trees (off R/M estimate) \_\_\_\_\_

Less Abundant Species \_\_\_\_\_

Estimated Slashes Light \_\_\_\_\_ Medium \_\_\_\_\_ Heavy \_\_\_\_\_

Depth \_\_\_\_\_ Depth \_\_\_\_\_ Depth \_\_\_\_\_

Understory Shrub Layer

Cover 10 \_\_\_\_\_ 25 \_\_\_\_\_ 50 \_\_\_\_\_ 75 \_\_\_\_\_ 100 \_\_\_\_\_

Merchantable Timber Yes \_\_\_\_\_ No \_\_\_\_\_

Most Abundant Shrub Species \_\_\_\_\_

Recommendations

Clearing type \_\_\_\_\_ Justification \_\_\_\_\_

Slash disposal type \_\_\_\_\_ Justification \_\_\_\_\_

Less Abundant Shrub Species \_\_\_\_\_

Brush Treatment \_\_\_\_\_

Desirable Species Density \_\_\_\_\_

Restoration \_\_\_\_\_

Undesirable Trees in Shrub Layer  
Species A. 100-1500-2500-4000-4000 \_\_\_\_\_

Sensitive Areas

Most Abundant Tree Species \_\_\_\_\_

Treatment of Sensitive Areas

Less Abundant Tree Species \_\_\_\_\_

Remarks



Niagara Mohawk Power Corporation

TABULAR FORMS:  
SITE-BY-SITE ANALYSIS FOR  
TROUT AND WATER SUPPLY STREAMS

NINE MILE 2-VOLNEY 345kv TRANSMISSION LINE



SYMBOL INDEX FOR  
TROUT AND WATER SUPPLY STREAMS FORM

Stream: Stream is identified by name.

Location: Location is identified by structure number and is divided to nearest quarter span.

Classification: N --- Natural unpolluted conditions, all uses - drinking, cooking, recreation.

AA --- All uses, requires only chlorination.

A --- All uses, requires chlorination and full treatment.

B --- Fishing and swimming.

C --- Fishing

(T) --- Trout

D --- Agriculture and industrial but is suitable for fish survival.

Clearing Type: Description by symbol is found in "Clearing and Slash Disposal Methods", page 41 .

Slash Disposal: Description by symbol is found in "Clearing and Slash Disposal Methods", page 42 .

Restricted Activity: Description is found on cover sheet of aerial mosaics enclosed.

Equipment Access: Equipment is allowed or not allowed in stream areas.

Crossing Installation: Identifies type crossing that will be used.

Other Protection Measures: Describes other protection measures. Additional measures may be necessary depending on field conditions at the time of construction.





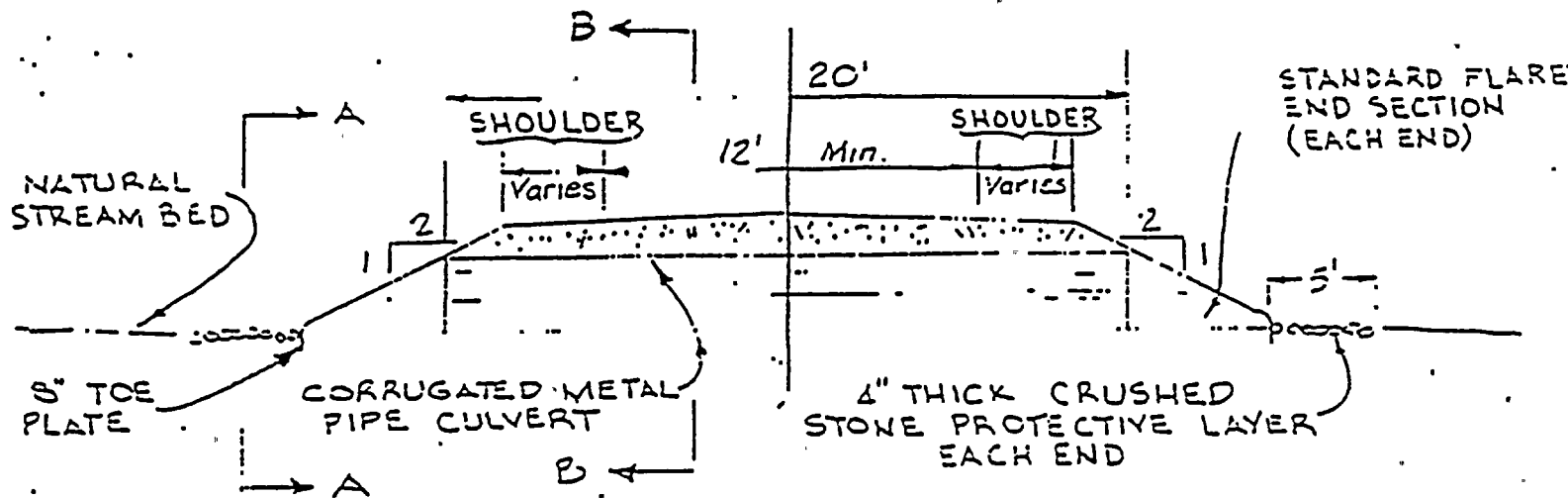
Niagara Mohawk Power Corporation

TROUT AND WATER SUPPLY STREAMS

STREAM	LOCATION	CLASSIFICATION	CLEARING TYPE	SLASH DISPOSAL	RESTRICTED ACTIVITY	EQUIPMENT ACCESS	CROSSING INSTALLATION	STREAM PROTECTION MEASURES
Ont. 62	Str 11½	D	II	D	yes	no (only via existing road)	Install (1) 42" cul- vert at existing road crossing.	Restricted activities 25 ft. each side of stream.
Black Creek	Str 45½	D	II	D	yes	no	None	50' buffer zone on each side of stream. Retain shrub cover. Keep <u>all</u> slash out of creek.

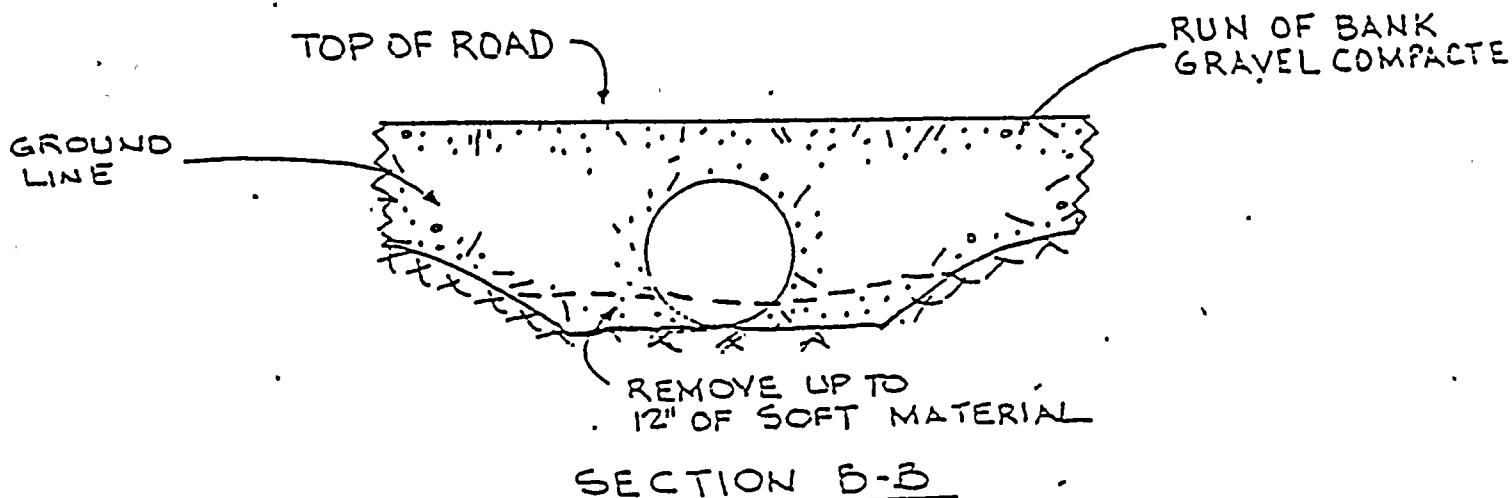
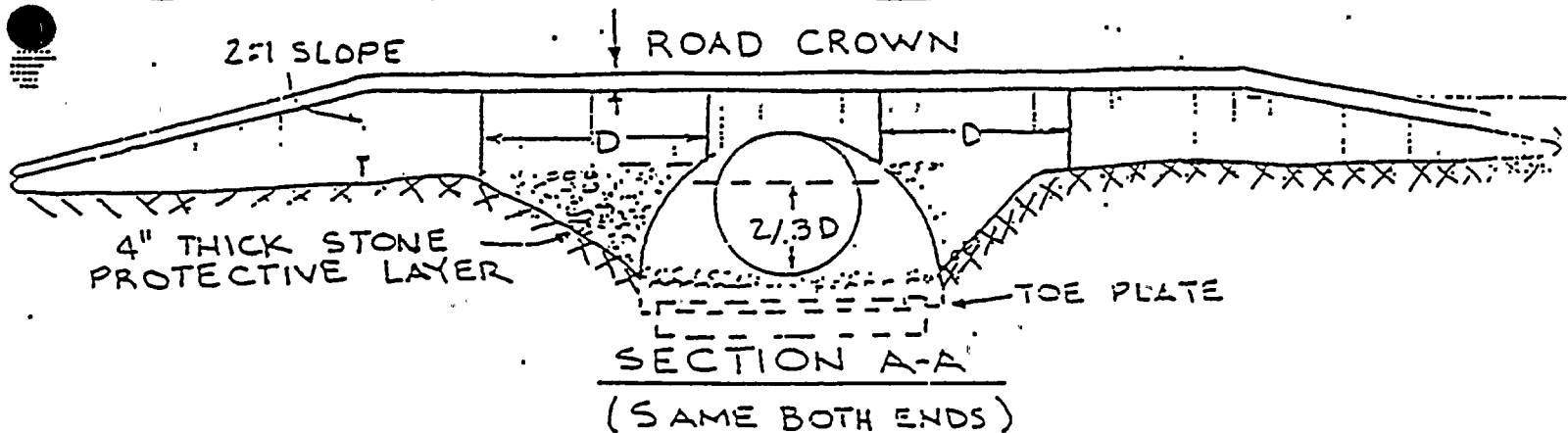


## Typical Culvert Installation



### CROSS SECTION

### TYPICAL STREAM-CROSSING WITH CULVERT





PSC REQUIREMENT

- G. The location and type\* of all wetlands (e.g.: marsh meadows, bogs, wooded swamps) one acre or larger on (or extending into) the right-of-way, indicating\* on a site-by-site basis the precautions or measures to be taken to protect such wetland drainage patterns, flora, and fauna.

NMPC RESPONSE

The location and type of all wetlands to be crossed by the line and associated site-by-site protection measures are shown on the enclosed aerial mosaic drawings #C-39195-C (sheets 1-10) and #C-39202-C (sheet 1). The "Protection Measures for Wetlands" and "Tabular Forms: Site-by-Site Analysis for Wetlands" follow this response.



Niagara Mohawk Power Corporation

PROTECTION MEASURES FOR WETLANDS

NINE MILE 2-VOLNEY 345KV TRANSMISSION LINE



J





Site-by-Site Analysis Survey

During the field site analysis survey, wetlands are analyzed as to land use, vegetative cover, age class, desirable species density, merchantability of timber, and type of wetland. Clearing and slash disposal methods are determined. Construction road types, layout and drainage procedures are determined for wetlands that must be crossed, and are indicated on field maps. Also shown on field maps are designated "Restricted Activities Areas", designated "No Equipment Access Areas", and clearing and slash disposal types. Field map information is later transferred to aerial mosaics and becomes part of construction specifications. The wetland analysis is summarized on "Site-by-Site Analysis, for Wetlands" forms (see page 83.)

Protection Measures

Protection measures taken into account when wetlands are encountered include: (1) no equipment access areas; (2) restricted activities areas; (3) clearing and slash disposal methods; (4) type of access through wetlands; and (5) consultation with the Department of Environmental Conservation. The following is an explanation of each.

(1) No Equipment Access Areas

The first consideration is to avoid crossing wetlands by surveying potential alternate access. If available and practical, alternate access is used and the wetland is designated "No Equipment Access". This designation prohibits motorized equipment from entering these areas. These areas are delineated on aerial mosaics and are identified on site-by-site analysis tabular forms.

(2) Restricted Activities Areas

Wetlands traversed by the right-of-way are identified and protection measures are initiated. Wetlands designated as "Restricted Activities Areas" are noted on aerial mosaics, and are identified on site-by-site analysis forms. Restrictions are as follows:

- (a) no deposition of slash within identifiable stream channels;
- (b) no accumulation of construction debris within restricted area;
- (c) herbicide restrictions at stream crossings as noted on container label instructions;



- (d) no degradation of stream banks;
- (e) no equipment washing or refueling within the restricted area; and
- (f) no storage of any petroleum or chemical materials.

(3) Clearing and Slash Disposal

Type II clearing is normally chosen in wetlands. This clearing type consists of selectively removing tall growing tree species while retaining woody shrub species. Type D slash disposal is generally recommended, which consists of manually lopping all downed material so it lays as close to the ground as possible. These procedures minimize disruption to the wetland and to numerous wetland shrub species.

Occasionally, Type B, C slash disposal, consisting of collecting and piling is utilized. This method is used when soil and terrain conditions are such that mechanical collection could occur without creating serious erosion and rutting and when slash accumulations of drop and lop technique would be greater than one foot.

(4) Access Through Wetlands

The means of avoiding or crossing each wetland is noted in the remarks column of the "Site-by-Site Analysis for Wetlands" tabular forms. If access to a structure from off right-of-way or from the other direction along the right-of-way is not practical or available, the wetland is thoroughly checked for the best possible access layout. Skirting around edges, utilizing highest ground, and crossing the most narrow portion of wetland is considered. Use of corduroy and/or gravel is recommended where needed to stabilize the road surface, . . . . . Where the roadway is built up and impoundment of water is likely, equalization culverts are recommended to maintain the natural water levels on each side. Access road layout and drainage structures are located and identified on the enclosed aerial mosaics.

(5) Consultation with the Department of Environmental Conservation

A personal contact is made with appropriate DEC personnel to review wetlands being traversed by the transmission facility. It is determined if the facility crosses or is near any documented freshwater wetlands. If so, construction measures are reviewed and protection measures are discussed.



# SAMPLE FORM

TABULAR FORM

SITE-BY-SITE ANALYSIS FOR WETLANDS

SITE  
IDENTIFICATION

SITE ANALYSIS

SITE RECOMMENDATIONS

AREA NUMBER	LOCATION	ESTIMATED ACREAGE	LAND USE	COVER TYPE	AGE CLASS	UNDESIRABLE SPECIES DENSITY	DESIRABLE SPECIES DENSITY	MERCHANTABILITY	SENSITIVE AREAS	CLEARING TYPE	SLASH DISPOSAL	JUSTIFICATION	REMARKS



Niagara Mohawk Power Corporation

TABULAR FORMS:

SITE-BY-SITE ANALYSIS FOR WETLANDS





# SYMBOL INDEX FOR SITE-BY-SITE ANALYSIS FOR WETLANDS

**Area Number:** Area number in which wetland occurs also corresponds with area number on the aerial mosaics.

**Location:** Location of wetland is identified by structure numbers and is divided to nearest quarter span..

**Estimated Acreage:** Acreage shown is area of wetland within right-of-way boundaries.

## Site Conditions

<b>Land Use:</b>	W	Woodlands
	Ab	Abandon Agriculture
	AA	Active Agriculture
<b>Cover Type:</b>	H	Hardwoods
	C	Coniferous
<b>Age Class:</b>	S	Sapling
	P	Pole Size
	M	Mature Sawlog
<b>Undesirable Species Density:</b>	S	Sparse or Scattered
	L	Light
	M	Moderate
	D	Dense
<b>Desirable Species Density:</b>	S	Sparse or Scattered
	L	Light
	M	Moderate
	D	Dense
<b>Merchantability:</b>	M	Merchantable
	NM	Not Merchantable

## Sensitive Areas

<b>Streams:</b>	STR	Stream (year round flow)
	INC	Intermittent Creek (carries runoff at peak flow periods)
<b>Wetlands:</b>	WW	Wooded Wetland
	WS	Shrub Wetland
	WM	Bog or Marsh Wetland



Sensitive Areas (cont'd)

Road Crossings:	TOH	Town Highway
	COH	County Highway
	StH	State Highway
	IsH	Interstate Highway
Others:	Rec	Recreational Area (active)
	ScE	Scenic Area
	Des	Deer Shelter or Wintering Area
	WiN	Rare or Endangered Species - Nesting or Den Area
	ErS	Potentially Erodable Soils
	Pond	Pond
Clearing Types:	Description of clearing types by symbol is found in "Clearing and Slash Disposal Methods", p.	
Slash Disposal:	Description of slash disposal types by symbol is found in "Clearing and Slash Disposal Methods", p.	
Justification:	Justification for choosing each slash disposal method is described by Symbol in "Analysis of Slash Disposal Techniques", pp.	
Remarks:	Other protection measures are discussed.	



Niagara Mohawk Power Corporation

SITE-BY-SITE ANALYSIS OF CLEARING AND SLASH DISPOSAL

NINE MILE 2-VOLNEY 345kv TRANSMISSION LINE



TABULAR FORM  
SITE-BY-SITE ANALYSIS, FOR WETLANDS

SITE IDENTIFICATION		SITE ANALYSIS								SITE RECOMMENDATIONS			
AREA NUMBER	LOCATION	ESTIMATED ACREAGE	LAND USE	COVER TYPE	AGE CLASS	UNDESIRABLE SPECIES DENSITY	DESIRABLE SPECIES DENSITY	MERCHANTABILITY	SENSITIVE AREAS	CLEARING TYPE	SLASH DISPOSAL	JUSTIFICATION	REMARKS
2	21 - 23 (Hire Mck 2 - Scribb)	.9	WS/ ROW	H	SP	L	M-H	NM	WS	II	D	ABC	Shrub Wetland type. Restricted activities. No equipment access. Danger trees.
10	3 3/4	1.6	WW/ ROW	H	SP	L	M	NM	WW	II	D	ABC	Wooded Wetland type. Restricted activities.
12	6 - 6 3/4	1.6	WW/ ROW	H	SP	L	M	NM	WW STR	II	D	ABC	Wooded Wetland type. Restricted activities and no equipment access. Retain dead trees that will not violate the wire security zone nor interfere with construction activities. Existing culverts (2)-48".
14	71 - 7 3/4	.9	WW/ ROW	H	SP	L	M	NM	WW	II	D	ABC	Wooded Wetland type. Restricted activities and no equipment access. Retain dead trees as noted for area #12.
18	81 - 91	.7	WS/ ROW	H	S	L	M-H	NM	WS INC	II	D	ABC	Shrub wetland type. Restricted activities at intermittent creek. Retain dead trees as noted for area #12.
20	91	.2	WS/ ROW	H	S	L	H	NM	WS	II	D	ABC	Shrub Wetland type. Restricted activities.
25	131 - 13 3/4	1.1	WS/ ROW	H	S	L	M-H	NM	WS	II	D	ABC	Shrub Wetland type. Restricted activities. Install (1)-18" culvert at existing road crossing to improve equalization.





TABULAR FORM  
SITE-BY-SITE ANALYSIS, FOR WETLANDS

SITE IDENTIFICATION

SITE ANALYSIS

SITE RECOMMENDATIONS

AREA NUMBER	LOCATION	ESTIMATED ACREAGE	LAND USE	COVER TYPE	AGE CLASS	UNDESIRABLE SPECIES DENSITY	DESIRABLE SPECIES DENSITY	MERCHANTABILITY	SENSITIVE AREAS	CLEARING TYPE	SLASH DISPOSAL	JUSTIFICATION	REMARKS
37	261	.2	WS/ROW	H	S	L	L-M	NM	WS USH	II	H	A	Shrub wetland type. Restricted activities. Move slash to area #38 (keep out of wet areas).
38	261 <sup>3</sup> - 264 <sup>3</sup>	1.2	WS/ROW	H	S	L	H	NM	WS	II	D	ABC	Shrub wetland type. Restricted activities.
40	27 - 271	1.1	WS/ROW	H	S	L	H	NM	WS	II	D	ABC	Shrub wetland type. Restricted activities.
42	301	.5	WS/ROW	H	S	L	M-H	NM	WS	II	D	ABC	Shrub wetland type. Restricted activities.
44	32	.3	WW/ROW	H	SP	L	M	NM	WW	II	D	ABC	Wooded wetland type. Restricted activities.
48	36 - 391	7.4	WS/ROW	HC	SP	L-M	L	NM	WS INC	II	BC	ABC	Shrub wetland type. Restricted activities. Install (1)-18" culvert at intermittent creek.
64	55 - 564 <sup>3</sup>	.3	WW/ROW	H	S	L	L	NM	WW	II	BC	ABC	Wooded wetland type. Restricted activities.
68	64 - 641	.8	WW/ROW	H	SP	L-M	L-M	NM	WW INC	II	D	ABC	Wooded wetland type. Restricted activities. Install (1)-18" culvert at intermittent creek.
70	654 <sup>3</sup> - 67	2.6	WW/ROW	H	SP	M	L-M	NM	WW 3 (INC)	II	D	ABC	Restricted activities and no equipment access. Install (1)-18" culvert at each intermittent creek.



PSC REQUIREMENT

- 1/E. The locations and descriptions\* (including planting plans and specifications) of any proposed vegetative plantings to screen or landscape the transmission and substation facilities including removal or rearrangement of existing plantings.

NMPC RESPONSE

A conceptual plan for screening in the vicinity of County Route 29 is shown on the page following this response. Niagara Mohawk proposes to transplant plant materials from two areas to be cleared for structure laydown areas (and respective adjacent right-of-way edges) to the areas shown on the plan.

The majority of plant transplant stock could be made available from the laydown area to be cleared for structure number 41, as this area contains a high density of apple, pear and arrowwood. The laydown area for structure number 40 contains some specimens of arrowwood and staghorn sumac. Transplanted in a randomly spaced manner within the areas shown, this plant material would provide for an adequate screen of the transmission corridor from passers-by on Route 29. The natural development of existing plant material in the retained material areas shown on the plan will provide adequate screening.

Specifications for the transplanting proposal will be provided to PSC staff prior to implementation. If for any reason transplanting is not possible, purchased plant material will be installed in the same areas following construction. Specifications for any new plantings will be provided prior to implementation.

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\*This.

1/May be deferred until completion of construction if a preliminary conceptualized plan or discussion is provided.

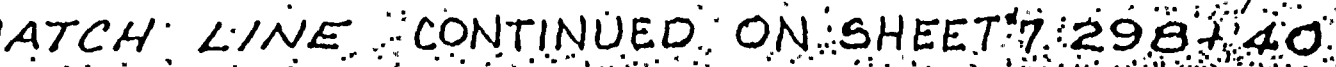


000.000 TRANSPLANTED MAT'L.

RETAINED MATL.



# TRANSPLANT STOCK



0 200



PSC REQUIREMENT

- I. The location and boundaries of any areas on or adjacent to the right-of-way proposed to be used for fabrication, designated equipment parking, staging, storage, lay down, and conductor-pulling. Indicate\* also any planned fencing or screening of storage and staging areas.

NMPC RESPONSE

The location and boundaries of all construction areas can be found on the enclosed aerial mosaic drawings #C-39202-C (sheet 1) and #C-39195-C (sheets 1-10).

Construction activities will be restricted to the right-of-way, off right-of-way access and areas of danger trees. Line construction work on the right-of-way will be restricted to designated access roads, structure assembly areas and wire stringing/pulling equipment access areas.





PSC REQUIREMENT

- J. The proposed location of all on- and off-right-of-way access, construction and permanent maintenance roads, and indicate measures\* to be taken to preserve existing drainage and properly dispose of water collected or diverted by construction of access roads or other portions of the facility. Indicate\* also whether roads are permanent or temporary. To the extent practicable, show where significant grading .. (i.e., cuts or fills) for roads will occur, and the extent and nature of any imported fill materials needed to reinforce the roadbed.

NMPC RESPONSE

See the enclosed aerial mosaic drawings #C-39202-C (sheet 1) and #C-39195-C (sheets 1-10) for the proposed locations of all access roads and drainage installations associated with this transmission line project.

Unless otherwise shown on the mosaics (for temporary bulldozer access), all access roads are to be considered permanent. Prescriptions for gravel placement on both new and existing access roads are shown on the mosaics.



PSC REQUIREMENT

\*K. The locations of any known ecologically and environmentally sensitive sites (including rare and endangered flora, fauna, or faunal habitat, deer softwood shelters, and archaeological sites) within the proposed right-of-way or within the certified corridor if a portion of such a site or habitat extends into the right-of-way or along the general alignment of any access roads constructed, improved, or maintained for this facility, and indicate\* the procedures that were (and will be during the clearing, construction and restoration phases) followed to identify such resources and measures\* that will be taken to protect or preserve them. Attach\* copies of any reports prepared to identify such sites.

NMPC RESPONSE

No ecologically or environmentally sensitive sites such as those described above are known to exist on or immediately adjacent to the proposed right-of-way. Prior to conducting the site-by-site analysis along this right-of-way, the NYS Department of Environmental Conservation and the NYS Museum and Science Service were consulted with regard to any updated information on known significant habitats or individuals and/or populations of rare or endangered floral and faunal species. Both agencies indicated that no findings of such habitats or species had been made in proximity to the proposed right-of-way since the Company's initial information request in 1981.

The NYS Museum and Science Service indicated that some rare plants are known to occur within the wetland area which surrounds Mud Pond. The Service felt that these plants will not be affected by the proposed transmission line as long as existing drainage patterns into this wetland are maintained. Culvert installations prescribed for new and existing access roads (refer to aerial mosaics #C-39195-C, sheets 7 and 8) will serve to maintain present drainage across the right-of-way and into this wetland complex.



NMPC RESPONSE (cont'd)

The Scriba Woods, located east of the existing right-of-way to County Route 29 and north of Burt Miner Road (refer to aerial mosaic #C-39195-C, sheets 1 and 2), have been identified as a climax forest by the Rice Creek Biological Field Station. Clearing in the vicinity of this forest will be limited to the cutting of vegetation within the existing right-of-way and to danger trees..

No habitats or individuals and/or populations of rare or endangered floral or faunal species, as designated by the NYS Department of Environmental Conservation and the NYS Museum and Science Service (such as the bog turtle, the Ram's-head Ladyslipper and Calypso), were discovered during the site-by-site analysis for this proposed facility. The following "Protection Measures for Rare and Endangered Floral and Faunal Species and Significant Habitat" describes Niagara Mohawk's procedures for identifying and protecting such resources.

Three copies of the archaeological report for this transmission line proposal have been submitted to the Commission concurrently with this EM&CP filing. One copy has been submitted to the State Archaeologist. No significant archaeological resources were discovered during the survey.



Niagara Mohawk Power Corporation

PROTECTION MEASURES FOR  
RARE AND ENDANGERED FLORAL AND FAUNAL SPECIES  
AND SIGNIFICANT WILDLIFE HABITAT





## INTRODUCTION

Throughout all phases of transmission line planning and construction, Niagara Mohawk Power Corporation recognizes the importance of rare and endangered species and significant wildlife habitat, and takes many measures to minimize impacts on them. Following are the considerations given.

### A. CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED (CEC&PN)

1. Contacts are made with the New York State Department of Environmental Conservation (NYSDEC) Regional offices, the NYSDEC Bureau of Wildlife (Wildlife Habitat Section), the NYSDEC Bureau of Forest Resource Management, and the NYS Museum and Science Service (State Botanist), for known or potential rare and endangered species and/or significant wildlife habitat of the project area. (See Attachments No. 1 and No. 2.)
2. The Federal Threatened and Endangered List is reviewed.
3. The State Endangered List and the U.S. Fish & Wildlife Service publication entitled "Rare and Endangered Vascular Plant Species in New York State" is reviewed.
4. Contacts are made with other agencies and/or institutions for available information concerning rare and endangered floral



- and faunal species and significant wildlife habitat.
5. Known areas of rare and endangered species and areas of significant wildlife habitat are noted on the Natural Resource map contained in Exhibit 4 of the CEC&PN.
  6. Selection of the prime route and alternate routes takes into consideration the occurrence of rare and endangered floral and faunal species and significant wildlife habitat.

B. ENVIRONMENTAL MANAGEMENT AND  
CONSTRUCTION PLAN (EM&CP)

1. Prior to conducting the field site-by-site analysis, our Environmental Analyst\* reviews information contained in the Environmental Report of the CEC&PN and checks with appropriate agencies and/or institutions for any updated information. The analyst becomes aware of potential occurrences or known sightings of rare and endangered species and their habitats and significant wildlife habitats.
2. Appropriate measures are taken to locate potential or known occurrences of rare and endangered floral and faunal species within the right-of-way boundaries. While performing the

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\*The Environmental Analyst has a background in forestry and/or wildlife, which qualifies him for recognizing and analyzing rare and endangered species and their habitat and significant wildlife habitats.



site-by-site detailed analysis of the right-of-way, the analyst documents any sightings or evidence of rare and endangered species and occurrence of any significant wildlife habitat.

3. EM&CP forms, which are utilized for documenting and emphasizing rare and endangered species and significant wildlife habitats are as follows:

- (a) Field Site Analysis Form

Any sighting or evidence of occurrence of rare and endangered species are noted under remarks.

Potentially significant wildlife habitat, such as ridge tops, streams, ponds, swamps, marshes, bogs, various forest types, areas of mature timber, areas of heavy shrub cover, deer wintering areas, springs, seeps, nests, dens, etc., are noted.

The significance of the habitats to the area is determined during the compiling, assessment, and review of collected data.

- (b) Tabular Forms - Site-by-Site Analysis

This form shows a compilation of the data taken from the Field Site Analysis Form, and includes site identification, site analysis, and site recommendations. Notes of particular



significance concerning protection measures during construction are included under remarks.

(c) Site-by-Site Analysis for Wetlands Form

The form shows a compilation of the wetland characteristics taken from the site-by-site analysis form. The information is pertinent to describing and assessing the significance of the wetland habitat.

(d) Field and Stream Crossing Data Form

The form shows stream characteristics, flow, bottom material, vegetation cover, resource value, etc., collected in the field during the site-by-site analysis. The information is useful in describing and assessing the significance of the water and riparian habitats.

(e) Trout and Water Supply Streams Form

The form is a compilation of data taken from the site-by-site assessment form, the stream crossing data form, and the NYSDEC classification of streams. The form is useful in describing, assessing, and exemplifying the significance of this water related habitat.

4. Consultation & Review by NYSDEC Prior to EM&CP Submittal

Prior to finalizing the EM&CP, the Regional office of the DEC reviews the field maps and field data with Niagara Mohawk.





Included in this review are Niagara Mohawk's recommended protection measures and considerations for wildlife habitats and sensitive areas.

5. Measures to Protect Rare and Endangered Floral and Faunal Species and Significant Wildlife Habitat

(a) Rare and Endangered Species

- (1) If the route crosses a known habitat of rare and endangered species, the NYSDEC or NYS Museum and Science Service is contacted for protection measures.
- (2) If any rare or endangered species are sighted during the field site-by-site analysis, the NYSDEC or NYS Museum and Science Service is contacted for protection measures.

(b) Significant Wildlife Habitat

Habitats that are significant, or have the potential for being significant, are offered the following protection measures:

- (1) Wetlands - (Includes wooded wetlands, shrub wetlands, marshes and bogs.)

- Wetlands are documented on EM&CP forms and are identifiable on the aerial mosaics
- No equipment access
- Restricted activities areas



(1) Wetlands (cont'd)

- Clearing and slash disposal methods
- Access through wetlands
- Consultation with the NYSDEC

(2) Streams (Includes streams, ponds, lakes, springs, etc., and their riparian habitats.)

- Streams and other water bodies are documented on EM&CP forms and are identifiable on the aerial mosaics
- No equipment access
- Restricted activities areas
- Clearing and slash disposal methods
- Stream crossing data
- Stream crossing devices
- Erosion control and restoration
- Resource value of streams
- Consultation with NYSDEC

(3) Fish Spawning Areas

- Identified on trout and water supply streams which include the NYSDEC classification.  
These streams are identifiable on the aerial mosaics.
- No equipment access



(3) Fish Spawning Areas (cont'd)

- Restricted activities areas
- Clearing and slash disposal methods
- Stream crossing data
- Stream crossing devices
- Erosion control and restoration
- Resource value of streams
- Consultation with NYSDEC

(4) Deer Wintering Areas

- These areas are documented on EM&CP forms and identifiable on the aerial mosaics.
- Clearing and slash disposal method. Type II clearing is proposed whereby undesirable species are cut and desirable vegetation is retained. Certain seedling to sapling size undesirable species are retained because they add to the enhancement of the habitat. Slash disposal consists of piling the slash which creates valuable cover to certain wildlife species of the area.
- Consultation with NYSDEC



(5) Tree Dens

- Dens are documented on EM&CP forms and are identified on the aerial mosaics.
- Clearing Method - Tree dens are preserved, if possible. The preservation measures depend on the location of the tree with respect to the transmission conductors. Many times the tree can be retained on the right-of-way by removing the top of the tree.

(6) Other Significant Wildlife Habitats

- Other significant wildlife habitats, if identified during the Environmental Report portion of the CEC&PN, and/or field site analysis, and/or identified in review of the EM&CP before or after filing with the Public Service Commission, are offered acceptable protection measures consistent with construction and the safe operation of the transmission facility.

C. CONSTRUCTION OF THE FACILITY

1. Areas of significant wildlife habitats and/or areas of rare and endangered floral and faunal species are clearly identifiable on the aerial mosaics.





C. CONSTRUCTION OF THE FACILITY (cont'd)

Construction sites and associated protection methods are indicated on the aerial mosaics, and include appropriate clearing and slash disposal methods, access road location, stream crossing devices, structure lay down areas, wire stringing areas, and notes of special significance.

All construction activities are closely supervised by Niagara Mohawk's Environmental Forester to assure that the environmental commitments are strictly adhered to. Work shall be halted in a given area if any active nest, den, concentration or individual of rare or uncommon or endangered wildlife is encountered. The Department of Environmental Conservation and/or the NYS Museum and Science Service will then be contacted to determine what if any mitigating action is required.



PSC REQUIREMENT

- \*L. The locations of noise sensitive areas, if any, along the proposed right-of-way and the procedures\* to be followed to minimize clearing and construction noise impacts. (State the definition of "noise sensitive areas" used for this project.)

NMPC RESPONSE

No schools, hospitals, or churches occur near the proposed right-of-way; however, reasonable judgement shall be exercised on the part of the individual in charge when construction is to be undertaken near homes, in order to minimize noise impacts.

Construction activities shall be restricted to the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday, except when extreme circumstances require a deviation from this schedule. Any need for overtime work (including Saturday, Sunday, and holidays) will remain within the discretion of Niagara Mohawk and every effort shall be made to modify construction schedules to mitigate noise impact on sensitive sites. Existing equipment mufflers and noise suppressors shall be maintained and any faulty noise suppressors shall be repaired or replaced. Equipment shall not be left running unnecessarily.



PSC REQUIREMENT

- M. The locations of any buildings which now exist on the proposed right-of-way or within 150 feet of the centerline of each new transmission facility.

NMPC RESPONSE

The locations of existing buildings within 150 feet of the proposed centerline are shown on the enclosed aerial mosaic drawings #C-39195-C (sheets 1-10). Below is a list of buildings and locations by sheet and station number.

<u>Sheet No.</u>	<u>Station No.</u>	<u>Building</u>
3	121+18	Barn
3	122+48	House
6	290+94	House Trailer

PSC REQUIREMENT

- \*N. Those locations on or adjacent to the proposed right-of-way where recreation plans proposed by appropriate sponsors, if known to the Applicant at the time of the submission of the Environmental Management and Construction Plan, would affect construction or other right-of-way preparation and how these recreational plans were (or can be) accommodated.

NMPC RESPONSE

No recreational proposals are presently known to Niagara Mohawk.



PSC REQUIREMENT

II. Statements or Documents:

- A. Describing the temporary or permanent measures to be taken during all construction phases to stabilize soils, control erosion, and preserve natural drainage patterns in areas where significant soil disturbances (including removal of vegetative cover) are expected to occur.

NMPC RESPONSE

Niagara Mohawk is committed to minimizing the erosion potential and will initiate whatever temporary and/or permanent measures are deemed necessary by the Environmental Forester (EF) to maintain soil stability during the various phases of construction. Functional runoff-erosion control devices shall be installed where they are necessary to minimize the erosion potential during clearing/construction, and these devices shall be restored on a daily basis if collapsed or damaged. The selection of the particular technique will be based upon site conditions and construction requirements.

Where soil has been disturbed and an erosion potential exists, the Applicant proposes to grade to preconstruction or stable contours, seed with an appropriate seed mix (based on time of year and site conditions and USDA Soil Conservation Service recommendations), and install necessary erosion control devices within 8 work days of the initial disruption of the site. At laydown zones and wire pulling equipment areas where scarified soil exists and substantial runoff can be expected to cross the site, diversion ditches shall be installed to carry water around the site rather than over it. In areas where construction activity is likely to stop and start again, or the seasonal timing is such that permanent cover cannot be readily established, temporary stabilization measures shall be used.

Temporary and permanent stabilization measures, seed mixtures, fertilizers and mulch for site specific conditions will be determined by the EF and be based upon USDA Soil Conservation Service Office recommendations.





NMPC RESPONSE (cont'd)

Where initial disturbance is done in snow or frozen soil conditions, temporary erosion control measures will be installed, i.e., cross ditches and mulching if necessary, and seeding accomplished as soon as soil conditions are conducive to seeding and germination.

The following pages describe the various erosion control, water diversion and equalization techniques and devices which will be utilized as determined by the EF.



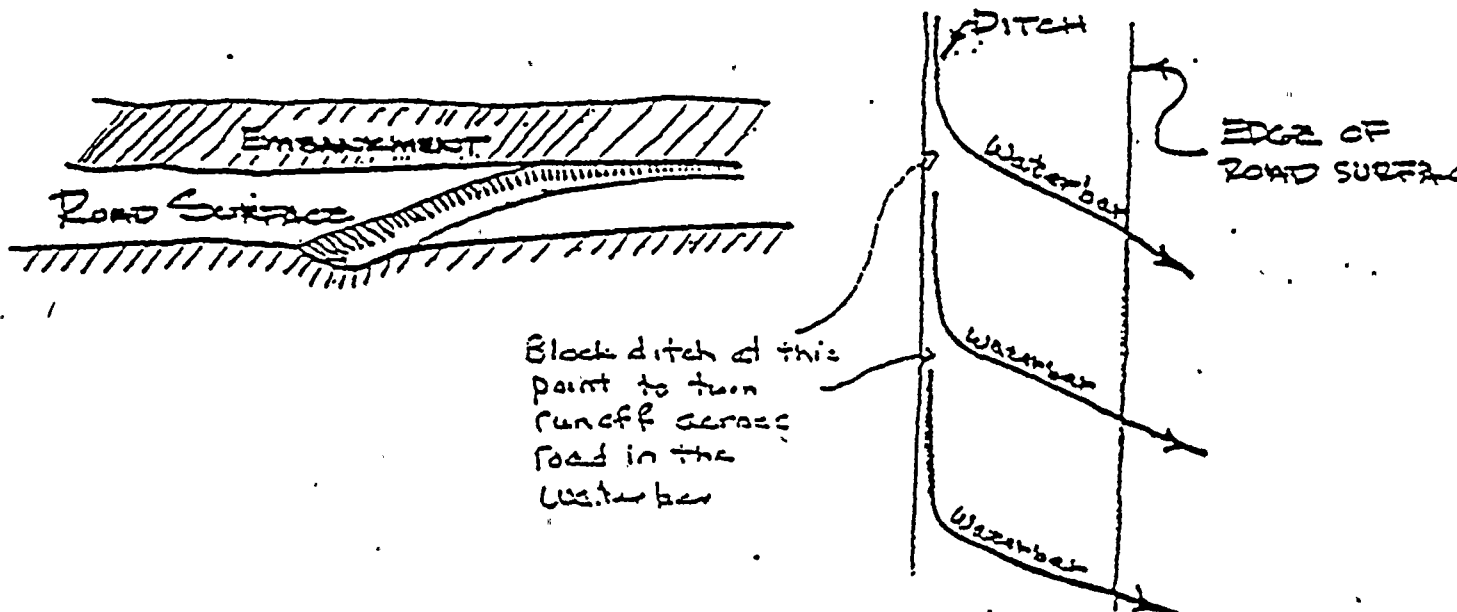
Erosion Control Techniques

Waterbars: While the placement of waterbars is a highly variable factor, influenced by such factors as height of surrounding embankments, natural topography, the presence of desirable vegetation, the road surface material and its tendency to erode, man-made features such as structure or tower locations, etc., the following table should serve as a guide to waterbar placement on various slopes.

WATERBAR SPACING

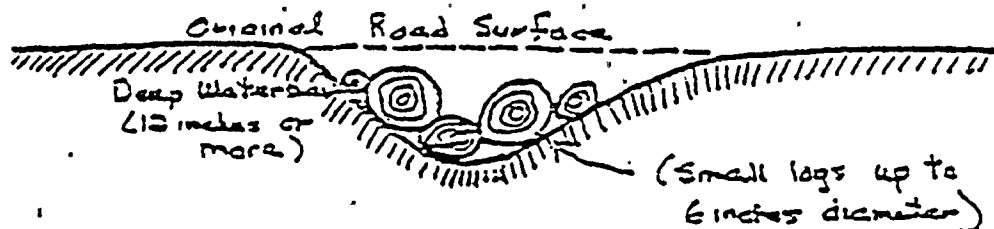
<u>Road Grade</u> (percent)	<u>Spacing</u> (feet)
2%	250'
5%	135'
10%	80'
15%	60'
20%	45'

Ideally, waterbars should be placed on a diagonal, across the road at about  $30^{\circ}$  to  $45^{\circ}$ , in order to gradually turn the water out of the ditch and across the road. However, this may vary due to certain conditions, and drainage requirements. The water bars should be excavated below the original road grade, blading the spoil to blend with surrounding contours beside the road.

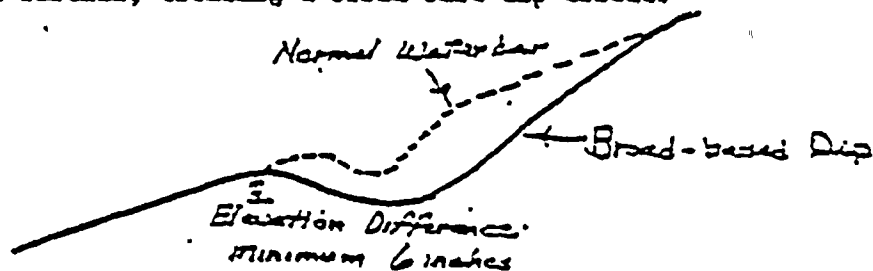




The waterbar should be excavated deep enough to provide drainage, and yet shallow enough to permit access, generally 6 to 12 inches. When access through the deeper waterbars is a problem, or break up of the waterbar is occurring, a few 3 to 6 inch logs may be laid in the waterbar to reinforce it and permit smoother access. As noted in the illustration below, the top of the logs should remain a few inches below the top of the waterbar to prevent overflow and failure. This technique can also be used to help stabilize waterbars, which tend to break up under construction traffic.



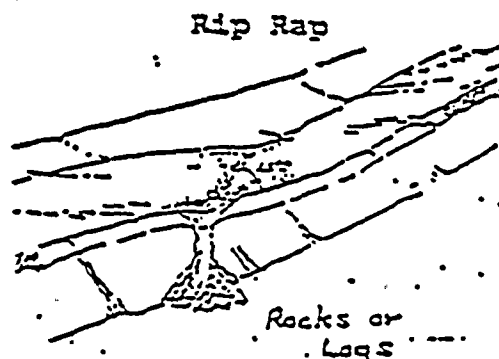
On steeper slopes, or where the access requirements of the equipment used for construction necessitate gentler waterbar, the "normal" waterbar can be excavated further, creating a broad base dip effect.



The outflow end of the waterbar should be carried into a vegetated area, where runoff can be filtered through established grasses where practical.

When this cannot be done, one of the following techniques might be employed.

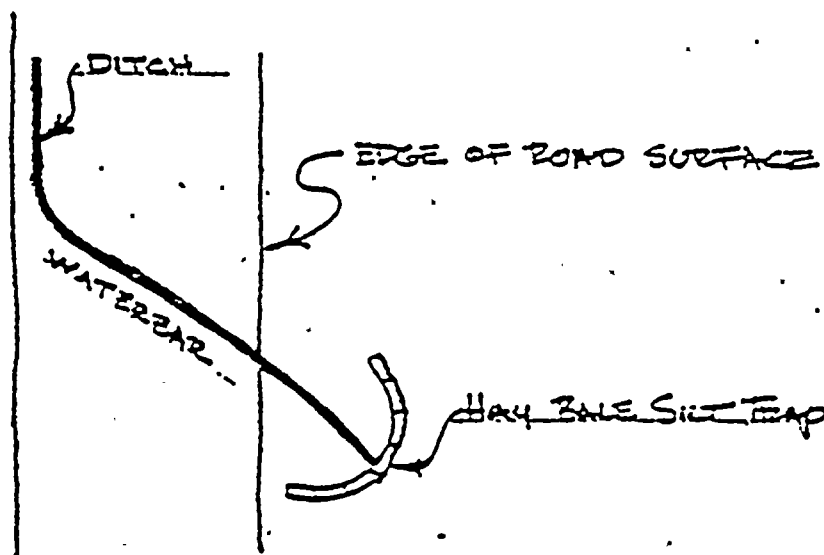
1. The waterbar can be directed so that it empties into a slash pile or an area of heavy drop and log slash.
2. The end of the waterbar may be rip-rapped with slash, logs, or stone as illustrated below, when the soil or road embankment is erodible.





A settling basin may be excavated at the end of the waterbar, to trap sediment carried by runoff before the runoff can enter sensitive stream areas. These may be particularly effective prior to the revegetation of the embankments, ditches, waterbars, etc. The low side of these settling basins may be lined with hay bales to further trap and filter out sediments.

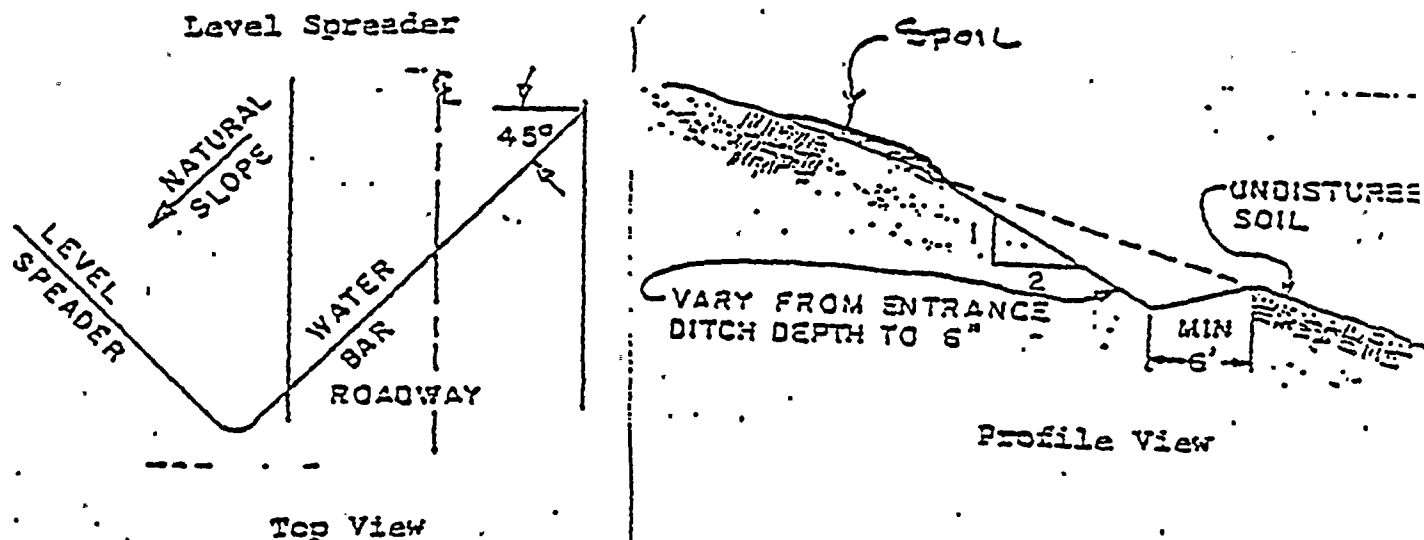
The use of haybales as illustrated below may be sufficient to filter out silt when near sensitive stream areas.







Level spreaders may be installed at the end of the waterbar, as illustrated below, to capture silt and spread the runoff waters over a larger area. The level spreader is installed by ditching parallel to the natural contour, and the spoil should be spread on the uphill side of the level spread so as to create an undisturbed outflow area.



While the length of a level spreader will vary with certain conditions, vegetative conditions, soil erodibility, etc., the following lengths are presented as a guide.

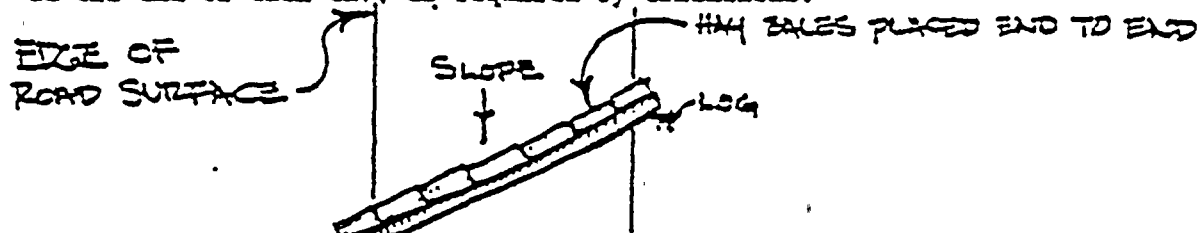
<u>Length of Spreader (feet)</u>	<u>Drainage Area (acres)</u>
15	1.5
20	1.5 to 4
26	4 to 6
34	6 to 9
44	9 to 14



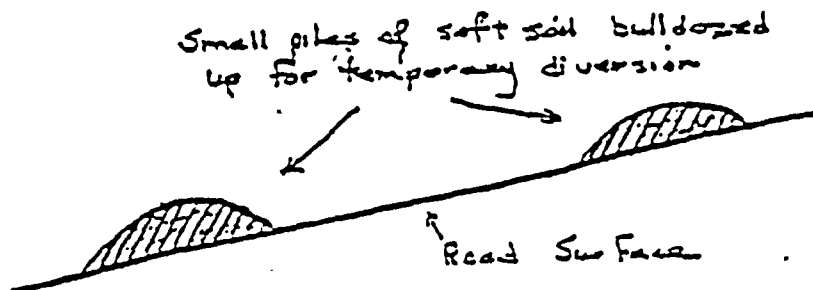
### Temporary Water Diversion

At certain times of the year, such as periods of deep frost, during spring break up and during periods of prolonged rain, it may be impossible or impractical to construct waterbars as the road is constructed or once it is completed. In order to maintain effective runoff control and prevent significant erosion, the following temporary techniques might be employed until such time as effective, stable waterbars might be installed.

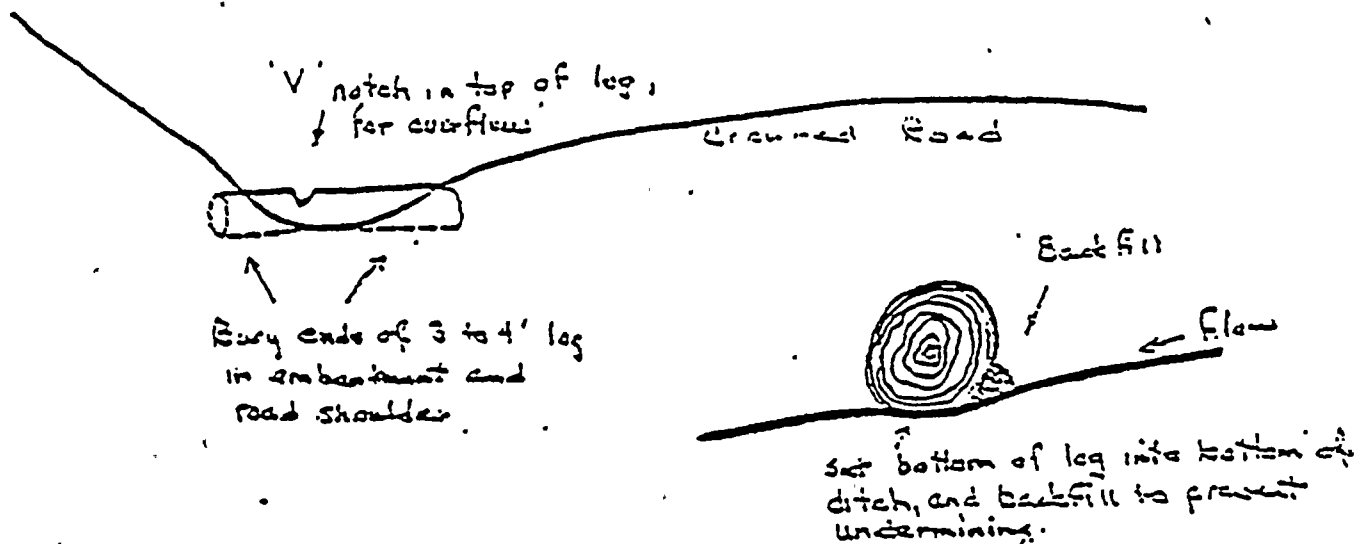
1. Hay bales and/or logs can be placed diagonally across the road to divert runoff. When logs alone are used, the upper side of the log should be backfilled with a few inches of soil to prevent undermining and failure. When bales of hay are used in combination with a log across the road, the hay bales should be placed end to end on the uphill side of the log to act as a trap for sediments as well as a water diversion. (See illustration). If regular access is required along the road, the log can be omitted, and the haybale diversion used by itself. The bales of hay can be set off to the side to permit traffic to pass, and returned as the vehicle goes through or at the end of each day, as required by conditions.



2. When regular use is not required along a section of road, particularly during the spring break up period or prolonged rainy periods, the softer surface soil can be pushed up into small berms in the road. While such soil may not be stable enough to support traffic, it will provide an adequate diversion which can be quickly installed with a small bulldozer.





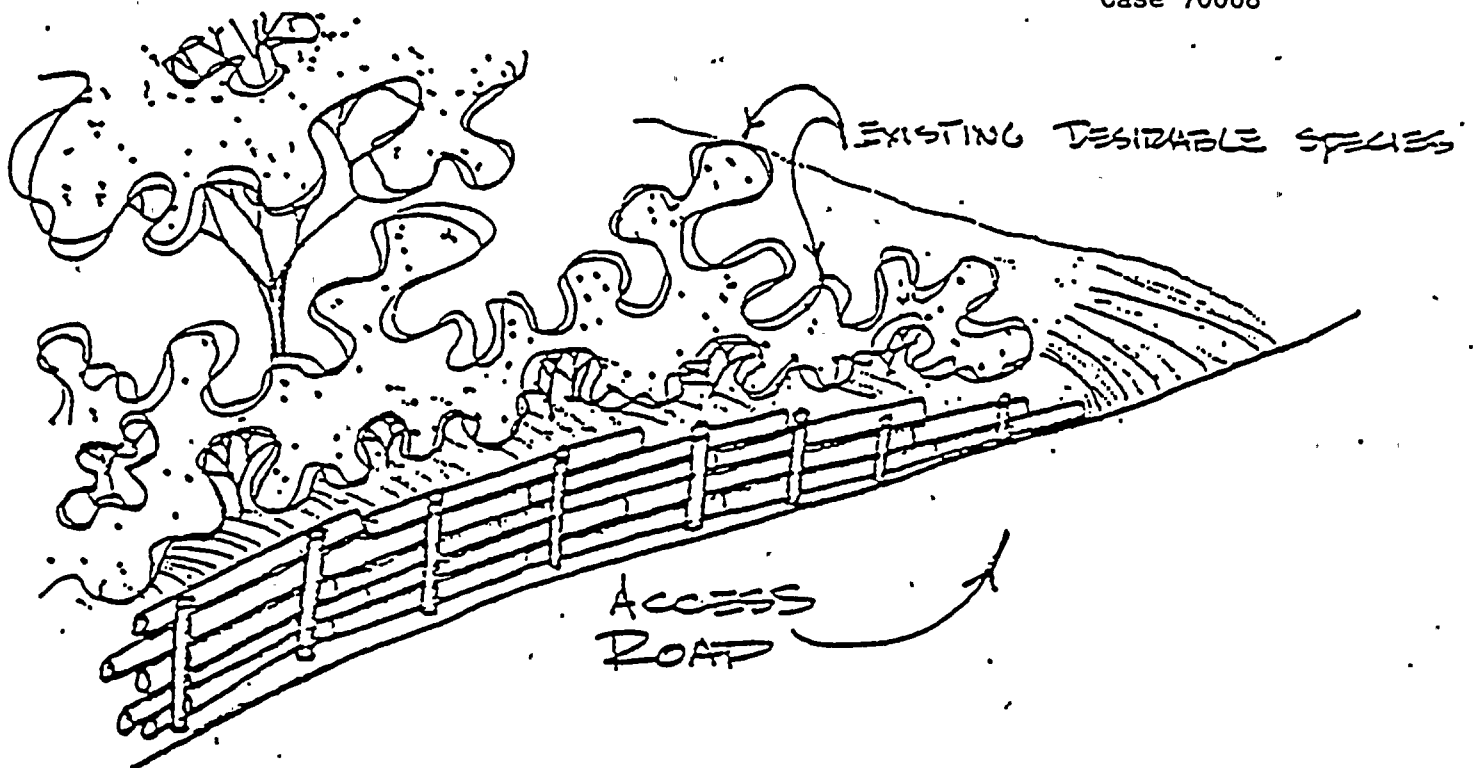
Flow Restrictions for Long Ditches

Due to terrain conditions it may not be possible to install waterbars for ditch relief at the recommended intervals. As a result, runoff waters may travel long, interrupted distances in the roadside ditches before being turned off the road, resulting in accelerated ditch erosion. In order to interrupt this flow and minimize ditch erosion, small, 4" to 8" diameter logs, 2 to 3 feet long may be placed across the ditch to act as flow restrictions. (See illustration). The short pieces should be anchored by burying the ends in the embankment and the shoulder of the road. The bottom of the log must set into the bottom of the ditch, and an inch or so of soil should be packed against the base of the upstream side of the log to prevent undermining and failure. A small 'V' shaped notch should be cut into the top of the log to provide overflow relief. The impoundment of water behind the log "dam" slows runoff waters, thereby minimizing ditch erosion until grasses can germinate and permanently stabilize the ditch.

Embankment Stabilization: Log Retaining Walls

A log retaining wall may be constructed, using available material, to stabilize extensive sidehill cut embankments, where backsliding the embankment to a 45° slope would cause extensive scarification and/or loss of desirable vegetation. Vertical posts, 12" or more in diameter and preferably of hemlock, should be set 3 to 4 feet into the ground at approximately 8 to 12 foot intervals, at the base of the cut embankment. Once the verticals have been set, available logs are placed between the posts and the embankment, filling the retaining wall to a height even with the top of the embankment.

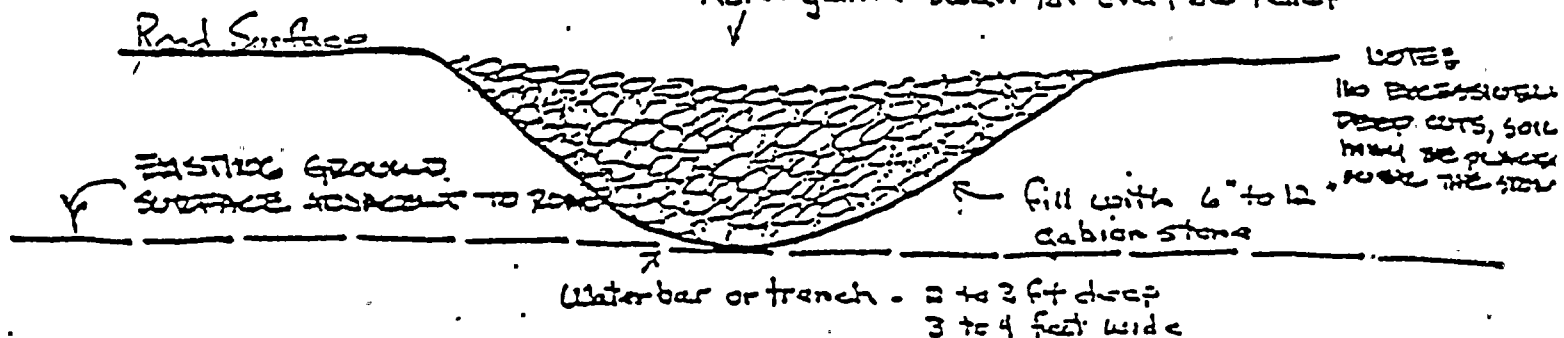




### Stream Crossing and Equalization Devices

French Drains: French drains can be successfully used for equalization of standing water levels across the access road when the road way is built up and extends into a wetland, or for the relief of moderate spring seepage across the access road in hilly terrain. To construct a french drain, a trench is excavated across the access road to a depth matching the existing ground surface on each side of the roadway. This deep trench is then filled with gabion stone (6" to 12" stone), leaving a gentle swale or depression across the road so as to contain possible overflow relief across the center of the stoned area. (See illustration)

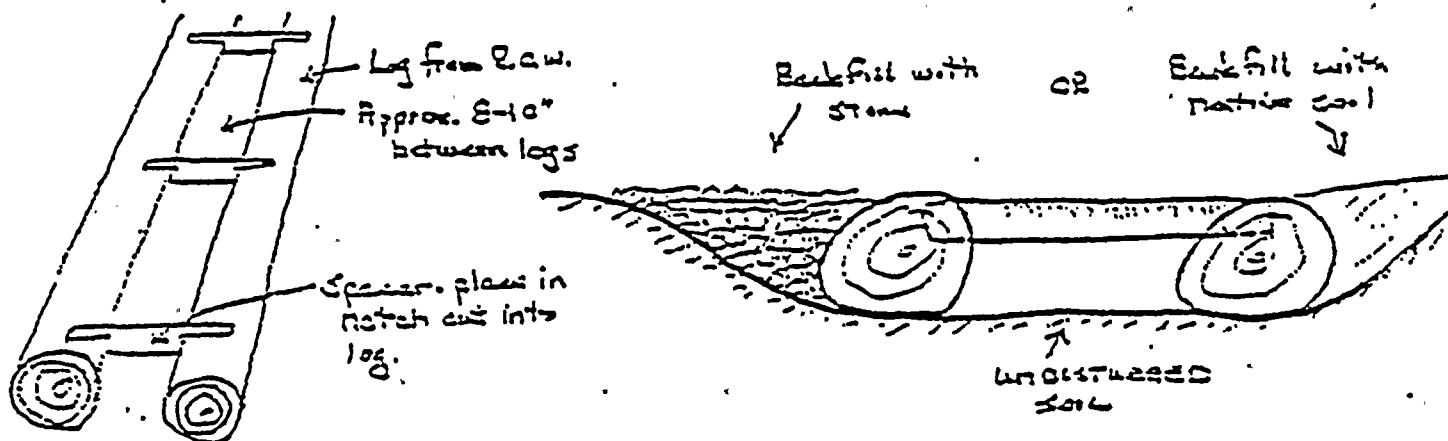
\*Note: gentle swale for overflow relief







Log Culverts The open top log culvert can be utilized for equalization of moderate flow, as well as for ditch relief when higher or continuous ditch flows might be expected. Log culverts should be installed across the road on an oblique angle, utilizing available 10" to 14" diameter logs. The logs should be set into the road so that the top of the log is even with or slightly below the road surface. The logs should be set about 8 to 10 inches apart, so as to provide easy traffic flow over the surface and yet allow for periodic cleaning with a shovel. The logs should be held apart by spacers of 2 x 4 dimension lumber or similar material (use pieces of small diameter, 3 to 4 inch slash if available.) The logs should be notched so that the spacer material sets approximately even with the top of the log culvert. The spacers should be anchored to the logs using large spikes, such as No. 20D



After the log culvert has been constructed, native soil and/or stone can be used to backfill around the outside of the culvert.

The log culvert may work best for construction during dry periods. During wetter times of the year the road surface approaches to the installation may rut and break up. When this road failure occurs the culvert may end up higher than the driving surface (i.e., the bottom of the ruts) becoming a barrier to access. A problem with this technique, for transmission construction purposes, is often the use of backfill soils which, once excavated, will not easily compact and support heavy construction equipment. This problem becomes readily apparent in clay soils where all season access is required. The log culvert might prove more successful in gravelled type soils.



### Corrugated Steel Culverts

Corrugated, galvanized steel pipes may be used to cross intermittent creeks and significant streams where through access is required and prior field review has determined that a culvert is the appropriate crossing technique.

(See Illustration.)

The crossing shall be made at a point where satisfactory approaches to the stream can be constructed so as to cause minimum stream and stream bank disturbance. The road shall cross the stream at a right angle to the direction of stream flow, where practicable, and the pipe shall be aligned so that water enters and exits the existing stream channel.

In hard bottom streams, the bottom of the culvert shall be set flush with the bottom of the stream with a minimum of excavation, so as to have no water impoundment above the culvert and no "waterfall" effect as the water exits the culvert. In soft bottom channels, the soft material shall be excavated and replaced with stone to the extent necessary to provide a firm bed for the culvert and stable access once constructed. The bottom of the culvert shall be set as noted above, so as to maintain natural stream elevation at the inlet and outlet of the culvert.

The culvert shall be backfilled with select borrow, approved by the Corporation, which is free of large rocks, hard lumps, frozen particles, sod, clinders, or earth with a high percentage of organic materials. Culverts 12" or less in diameter shall be filled to a depth of 12 inches, 18" to 24" culverts to a depth of 18 inches, and culverts 30" and greater to a depth of 24" of fill over the pipe.

At the intake and outlet sides of the culvert, the stream bed shall be lined with stone for a distance of up to 5 feet above and below the culvert, as required to maintain a stable channel. Additionally the soils around the intake and outlet of the pipe shall be lined with a protective layer of stone, to create stable head walls and minimize the potential of erosion at peak flow periods. Cobblestone, or large flat stones which are available on site should be used wherever practicable to minimize these costs.

Except where protected by stone, all embankments associated with the stream crossing and culvert installation shall be seeded and mulched at the



time of installation.

A copy of Niagara Mohawk's "Typical Stream Crossing with Culvert" sketch is attached.

Culverts twenty feet long are normally installed, as noted in the specification drawings. Due to the depth of fill associated with culverts of 30 inches and larger, it is often difficult to maintain stable road shoulders at an acceptable embankment grade and still maintain the minimum driving surface of 12 feet. In order to provide the necessary road width, without greatly escalating culvert costs, a log may be placed over each end of the pipe, in the shoulder of the road, to retain the embankment. These logs should be oriented parallel to the road, and they should be long enough that they can be anchored into the stream bank at each end.

#### Stream Fords

Stream fords shall be used to cross intermittent creeks and significant streams where through access is required for construction and prior field review has determined that a stream ford is appropriate.

The crossing shall be made at a point where satisfactory approaches to the stream can be constructed so as to minimize stream and streambank disturbances. Where practicable, existing crossings should be improved and utilized.

Dependent upon stream bottom conditions, one of the following types of streamfords shall be installed. (See Illustrations.)

#### Stream Bottom of Bedrock

When the streambottom at the point of the road crossing consists of bedrock, improvement of the streambottom to support construction equipment is not necessary. The only required improvement will involve streambank stabilization. (See Illustration.)

The streambanks shall be excavated to an acceptable grade, pushing the spoil up and away from the stream and blinding it beside the access road, outside the immediate stream area. Special attention should be given to the maintenance of streambank vegetation outside the road area, so as not to disturb vegetation compatible with construction activity. Depending upon soil stability, the approaches shall then be covered with 4 to 6 inches of No. 3 or 4 crushed stone or wire mesh and 4 to 6 inches of stone. This stone



approach should continue far enough to provide an effective "filter strip", to trap sediments. As a minimum the filter strip should extend 25 feet on either side of the stream.

A waterbar may be installed upslope of the stream crossing to additionally divert road runoff before it reaches the stream. The waterbar may empty into a settling pond or haybale silt trap if needed. Undisturbed vegetation between the outlet of the waterbar and the stream may be sufficient to trap sediments carried by runoff.

#### Streambottom of Firm Native Soil

When the streambottom consists of relatively firm, stable native soil, and/or cobble size rock, it will not be necessary to excavate the stream bottom material, however, a sill shall be installed and filled behind with No. 3 or 4 crushed stone. (See Illustration.)

The sill shall consist of a log, preferably hemlock, which is set into the streambed and anchored by burying the ends in either bank. The sill should be recessed into the stream bottom so as not to change the bottom elevation more than 6 inches, where practicable. After burying the ends of the sill in each embankment, the sill shall be further reinforced by driving 6' long, 5/8" steel reinforcing rods through the sill, into the stream bed at 2 foot intervals. The ends of the reinforcing rods shall be bent over towards the downstream side of the sill. When the backfill, which is placed over the buried ends of the sill may be subject to erosion during flood conditions, this material should be further stabilized by rip-rapping with a foot or more of gabion stone.

A wire mesh, approved by the Corporation, shall then be securely fastened to the sill as shown in the drawings. When more than one section of wire mesh is required, it shall be placed so as to overlap other sections approximately 12 to 18 inches. If required for approach stabilization the wire mesh should be run continuously across the stream and up the embankments. No. 3 or 4 crushed stone is then spread 4 to 6 inches thick through the stream ford and up the access approaches.

The approach filter strip should be long enough to effectively separate silt from runoff waters.





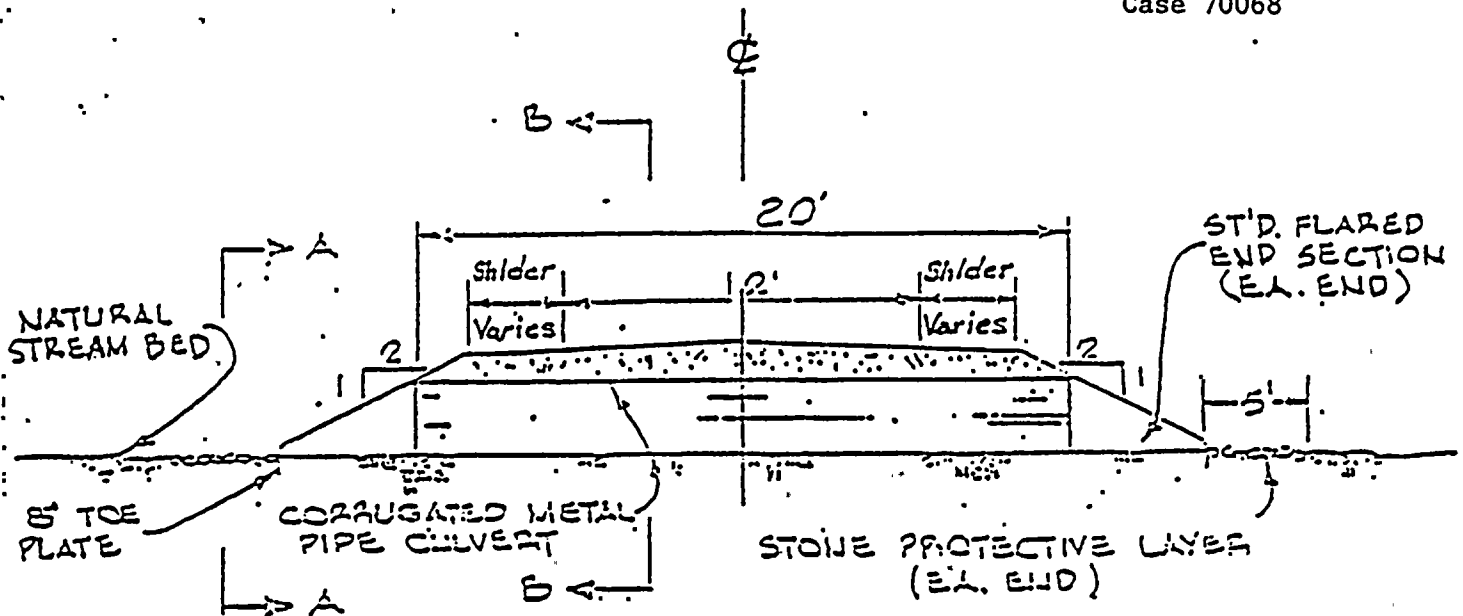
Where available, native stone may be substituted for No. 3 or No. 4 crush stone in fords with gravel or stony bottoms. This native stone should be placed so as to create a continuous layer of stone 4 to 6 inches deep in the traveled portion of the road.

The embankments outside the traveled portion shall be seeded and mulched at the time of ford construction.

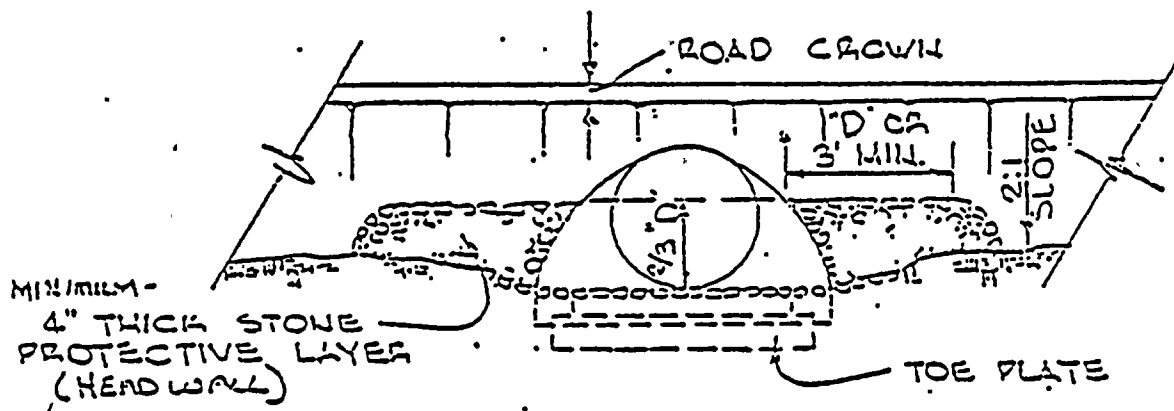
Streambottom with Soft, Unstable Soils

Where the streambottom consists of soft, unstable soils, this unstable soil shall be excavated to firm subsoils or to such a depth as to provide a stable bed once filled with stone. The spoil from this excavation shall be removed from the immediate stream area and spread beside the road. Once excavated, the streambottom shall be brought back to contour by filling with gabion stone (6 to 12" stone). The sill shall then be set and the wire mesh attached to the sill. A floatation or filter fiber shall then be spread through the stream and up the embankments, and the No. 3 and 4 crushed stone shall be spread through the stream and over the approaches. The filter strip in the approach should be long enough to provide effective separation of silt from runoff waters. (See illustrations.)

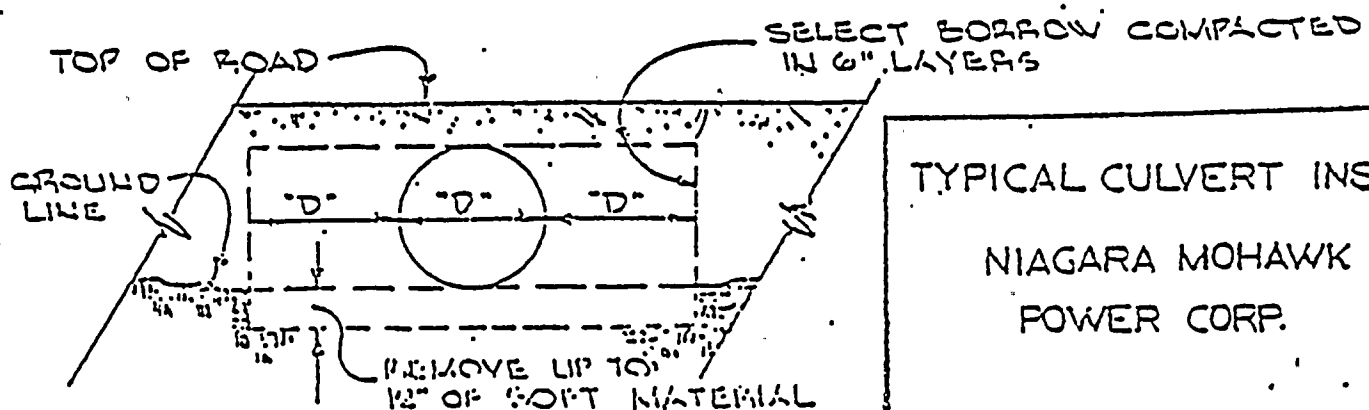




CROSS SECTION  
TYPICAL STREAM-CROSSING WITH CULVERT



SECTION A-A  
(SAME BOTH ENDS)

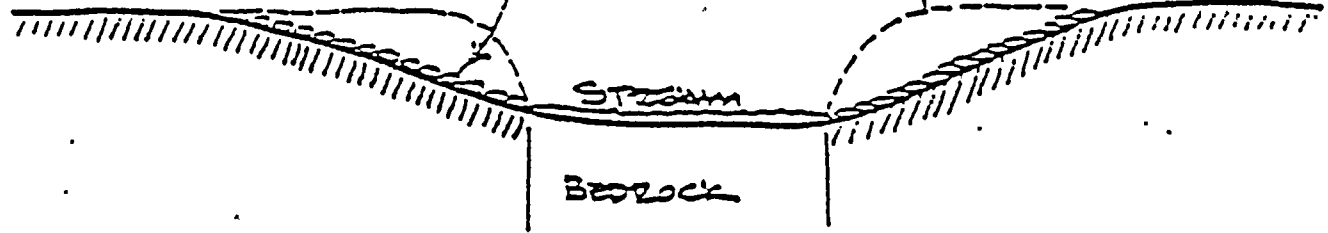


TYPICAL CULVERT INSTALL  
 NIAGARA MOHAWK  
 POWER CORP.



#302 1/4 Stone Approach

ORIGINAL GROUND-  
EXCAVATE SOIL  
WASH FROM STREAM



BLEND EMBANKMENTS  
TO EXISTING GRADE;  
SEED & MULCH

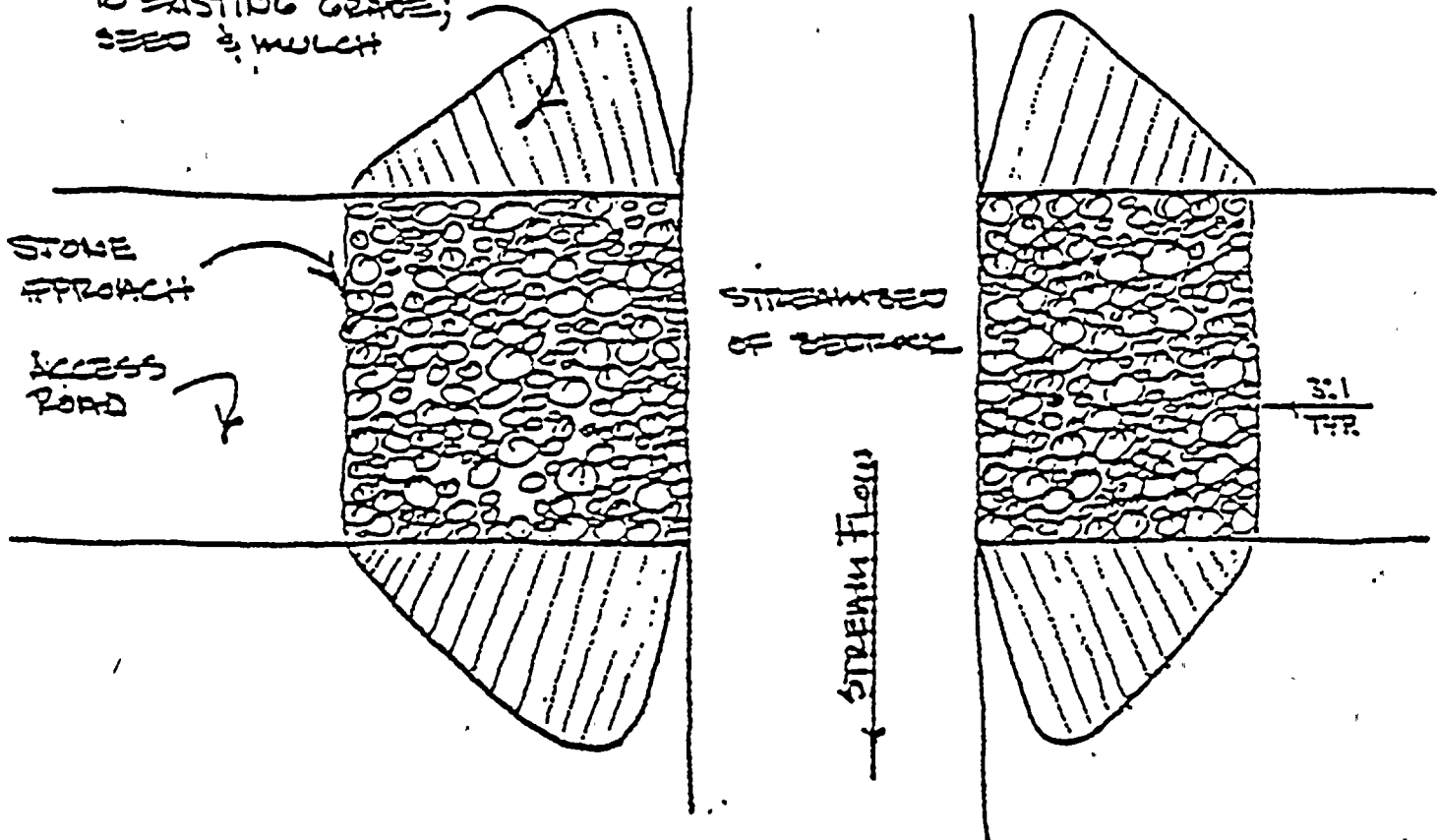
STONE  
APPROACH

ACCESS  
ROAD

STREAMBED  
OF BEDROCK

STREAM FLOW

3:1  
1/4 R



TYPICAL STREAMFORD WITHOUT SILL - NO SCALE

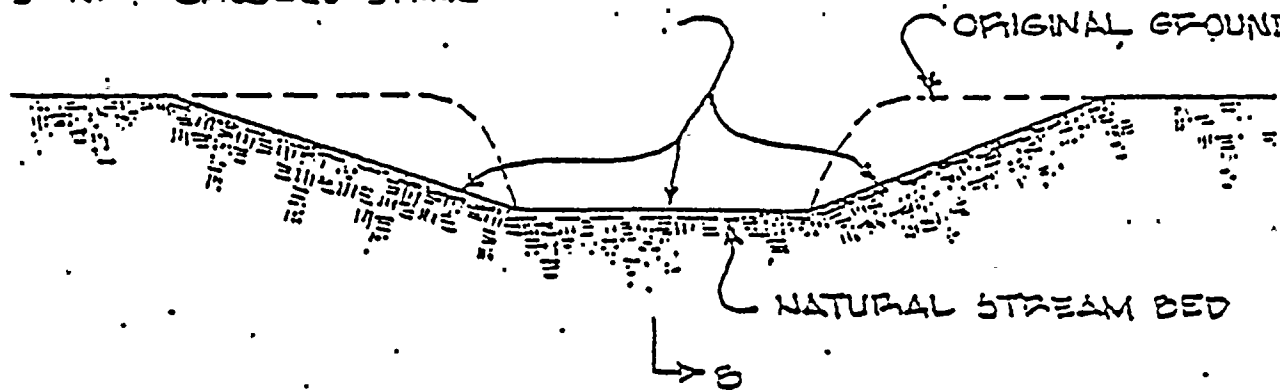


3 TO 4 CAULKED STONE

→ S (SK-56)

Case 70068

ORIGINAL GROUND

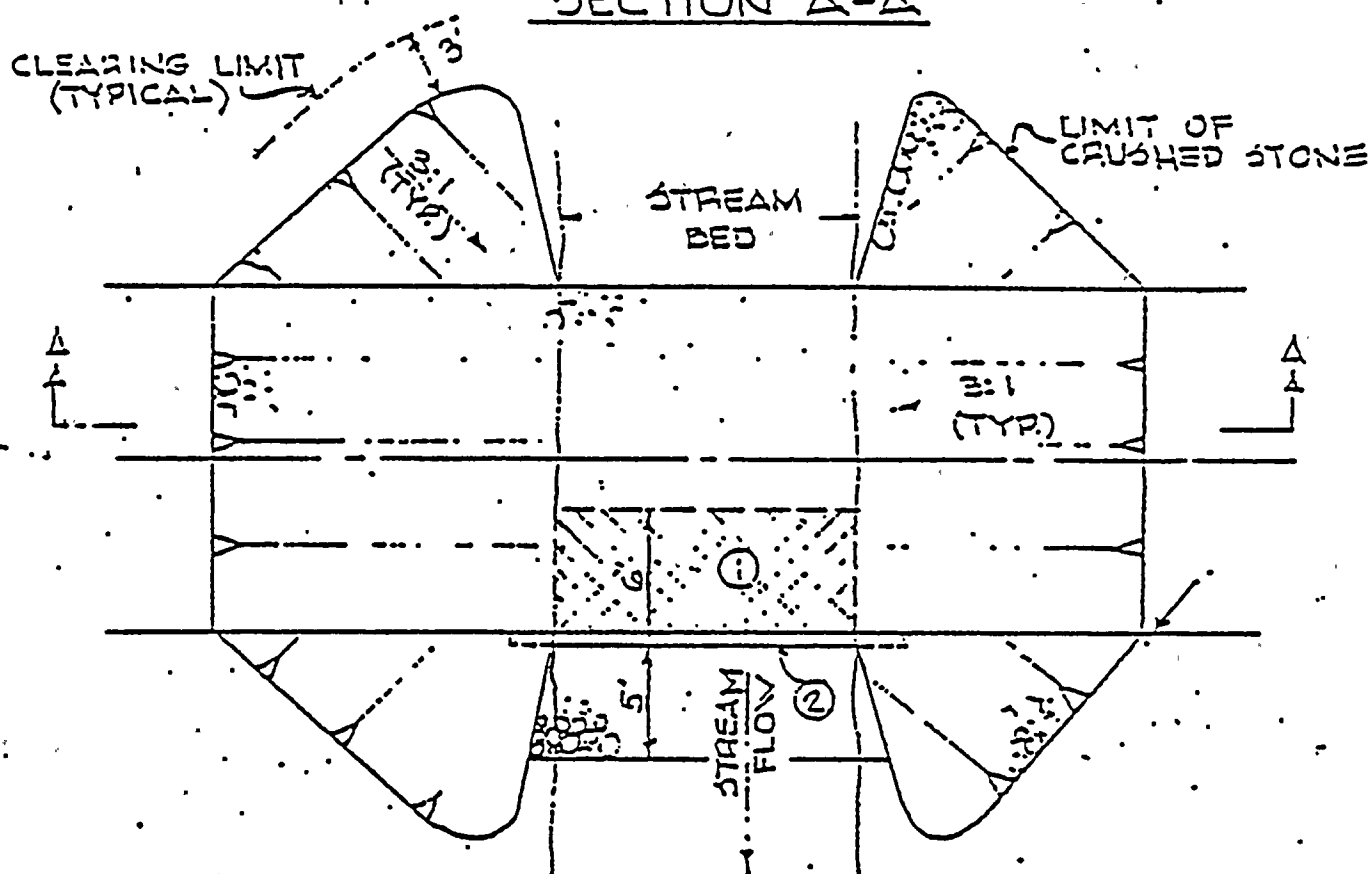


NATURAL STREAM BED

→ S

### SECTION A-A

CLEARING LIMIT  
(TYPICAL)



### PLAN - TYPICAL STREAM FORD - TYPE 1

WHERE LESS THAN 6" SOFT MATERIAL ON BED

NOTE: SEE SK-56 FOR NOTES

#### KEY

- ① GALV. STEEL, 14 GAUGE MESH, 1 1/2" MAX. OPENING
- ② SILL - CUT BACK INTO STREAM BANK EACH END 1/3 WIDTH OF STREAM BED

NIAGARA MOHAWK

NIAGARA MOHAWK POWER CORPORATION  
STRAUSS, N.Y.

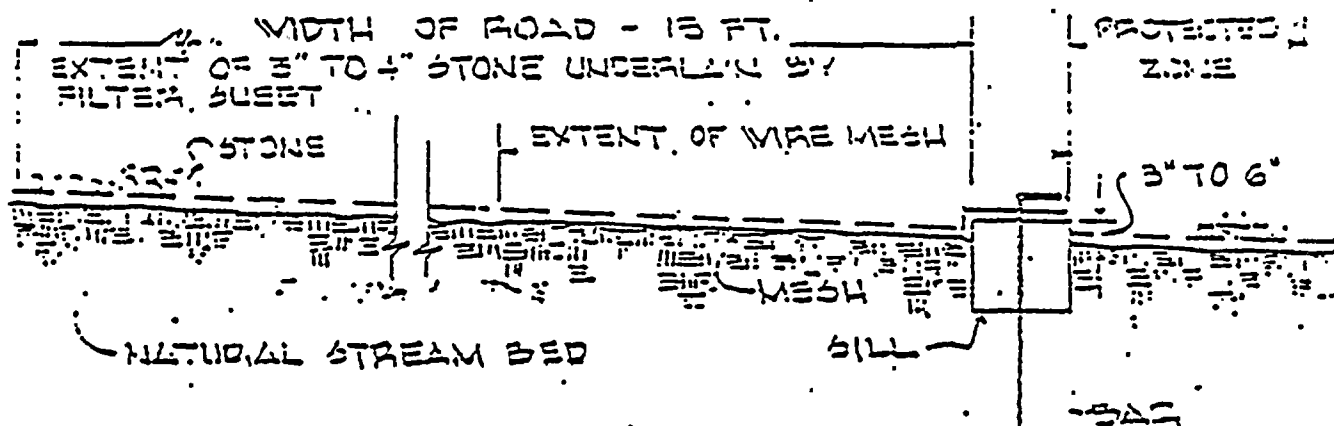
SK-5a

STREAM FORD-TYPE 1

SHEET 1 of 4








## SECTION B-B (SK-5a)

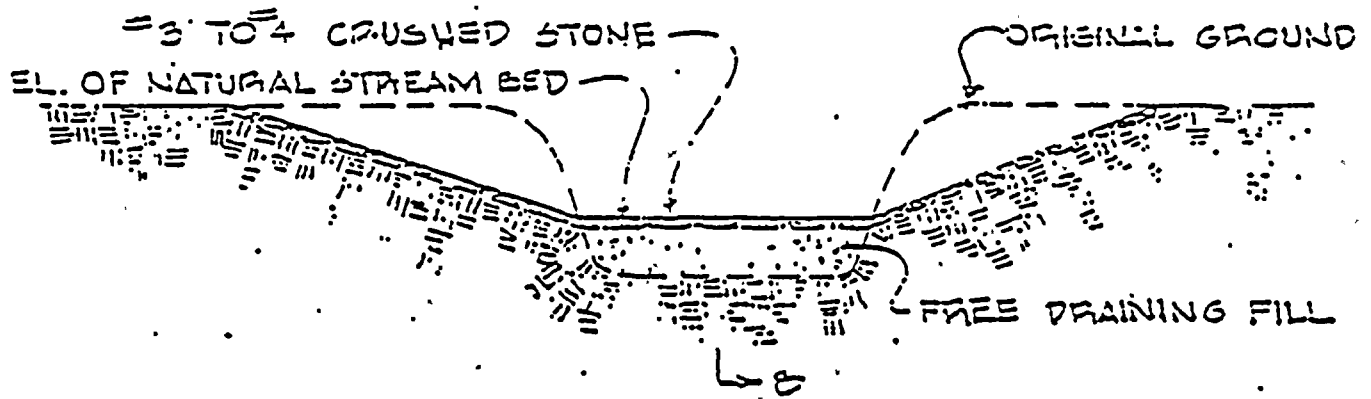
NOTES:

1. Sill to be 12 x 12 timber or equally substantial pole.  
Prior Corporation approval required for all sill material.
2. Bars to be new steel, 3/4" dia. driven to refusal or 6 ft. max. on 2 ft. centers, with tops bent downstream and offering positive support to sill.
3. Wire mesh must be securely fastened to sill. Where more than one section of wire mesh is required, individual sections shall be secured with a continuous 12 ga. galv. spiral wire.
4. Stone to be ASTM C-33, 3-1/2" to 1-1/2", from source approved by Corporation.
5. Filter sheet shall be cloth woven polypropylene monofilament yarn, not less than 18 mils thick, weighing not less than 7.35 ounces per square yd., positively secured with pins, staples, and/or rods, as obtainable from Carthage Mills, Inc., Cleveland, Ohio. Filter sheet not required where subsoil is coarse granular or rock.

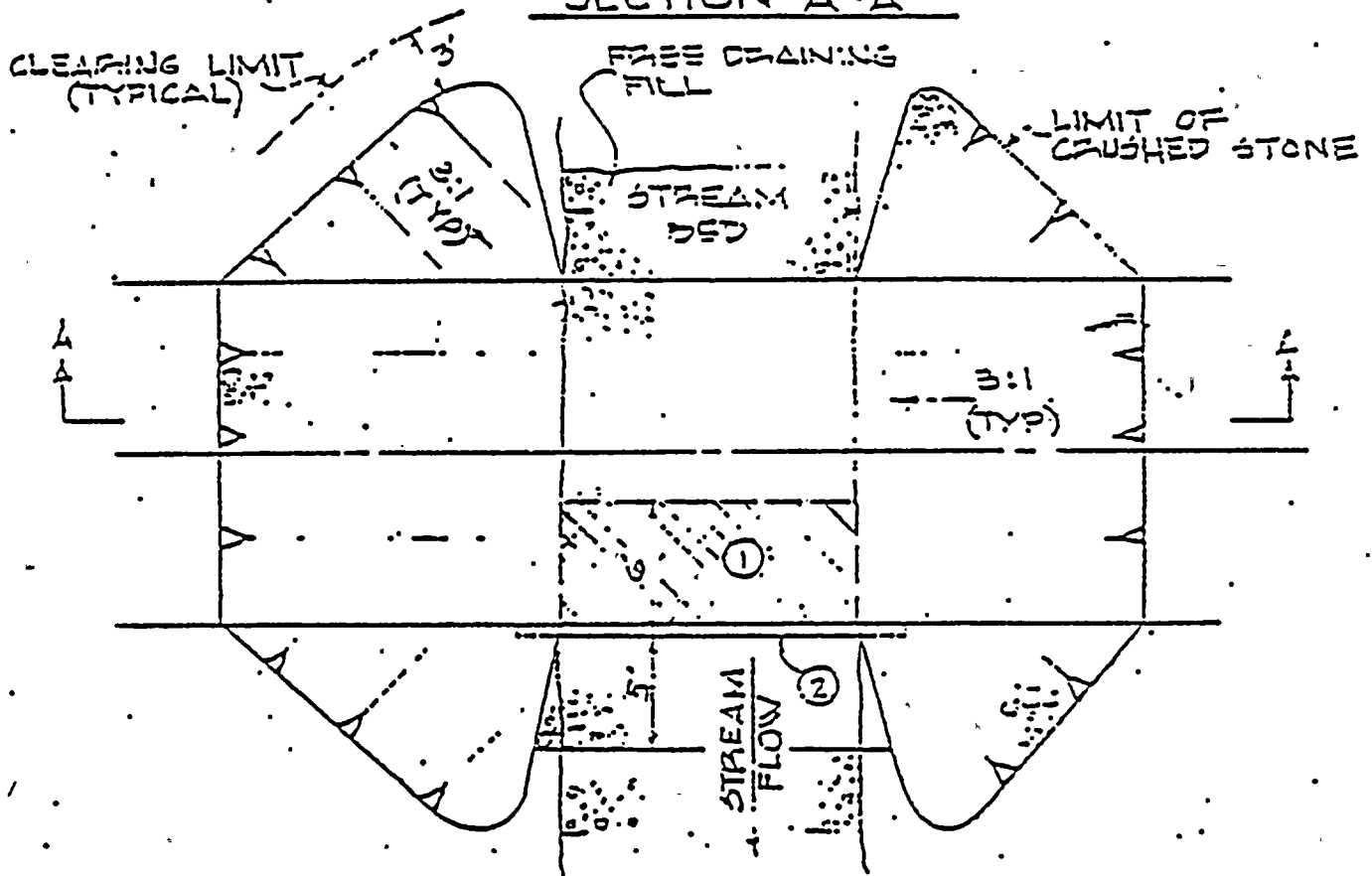
NIAGARA  MOHAWK	
NIAGARA MOHAWK POWER CORPORATION SYRACUSE, NY	
SK-5b	
STREAM FORD-TYPE 1	
SHEET 2 of 6	



SK-60



## SECTION A-A



## PLAN - TYPICAL STREAM FORD - TYPE 2

WHERE BETWEEN 6' AND 8' SOFT MATERIAL ON BED

NOTE: SEE SK-60 FOR NOTES

## KEY

① MESH - (SEE SK-58)

② SILL - (SEE SK-58)

NIAGARA MOHAWK

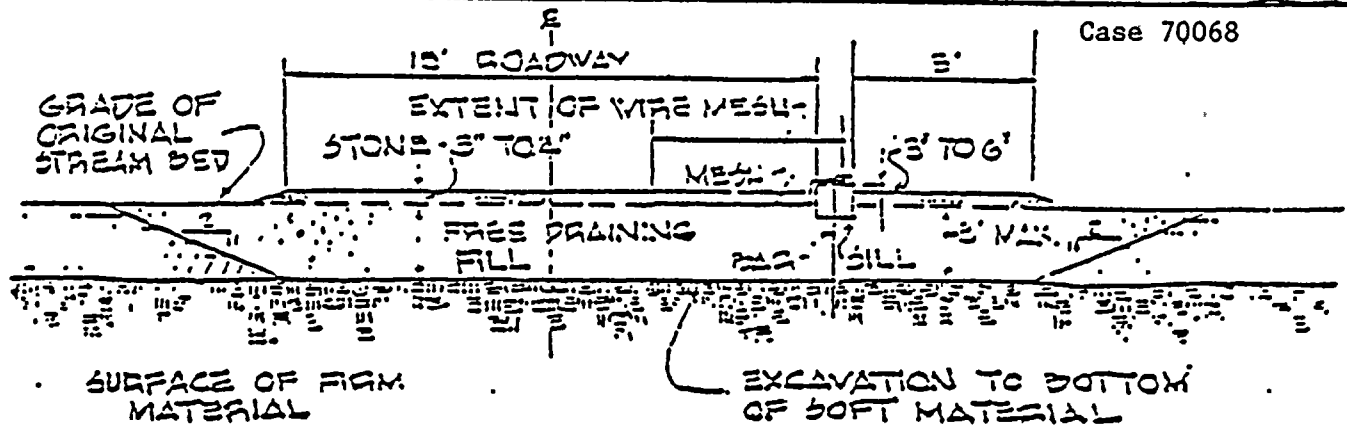
NIAGARA MOHAWK POWER CORPORATION  
SYRACUSE, NY

SK-6a

STREAM FORD - TYPE 2

SHEET 2 of 2





### SECTION B-B (SK-6B)

#### NOTES:

1. Sill - see Note 1. SK-5b
2. Bars - see Note 2. SK-5b
3. Mesh - see Note 3. SK-5b
4. Stone - see Note 4. SK-5b
5. Free draining fill to be any sand, sand-gravel mixture or crushed stone having less than seven percent passing 200 mesh sieve, from source approved by Corporation.
6. Roadway stone in riverbank cut shall be underlain by filter sheet if subsoil is soft. For filter sheet see Note 5-SK 5b.
7. Dispose of excavated soft material away from stream bed and beyond limits of protected slopes with minimum environmental disturbance and Corporation approval.

NIAGARA  MOHAWK

NIAGARA MOHAWK POWER CORPORATION  
STRAUS, N.Y.

SK-6b

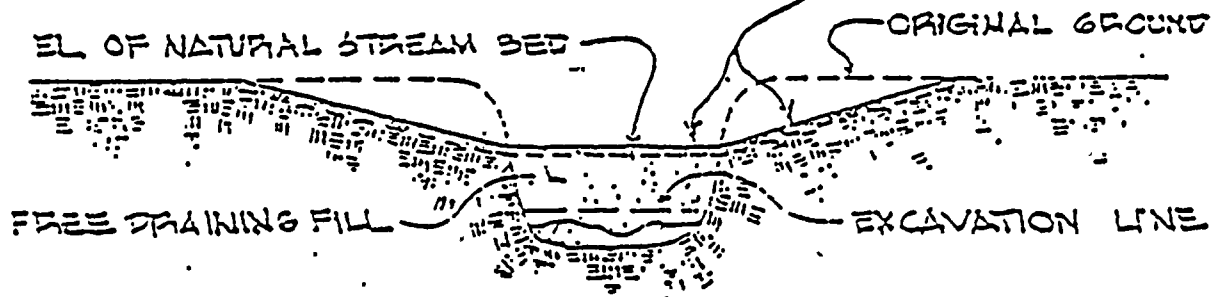
STREAM FORD - TYPE 2

SHEET 2 OF 2

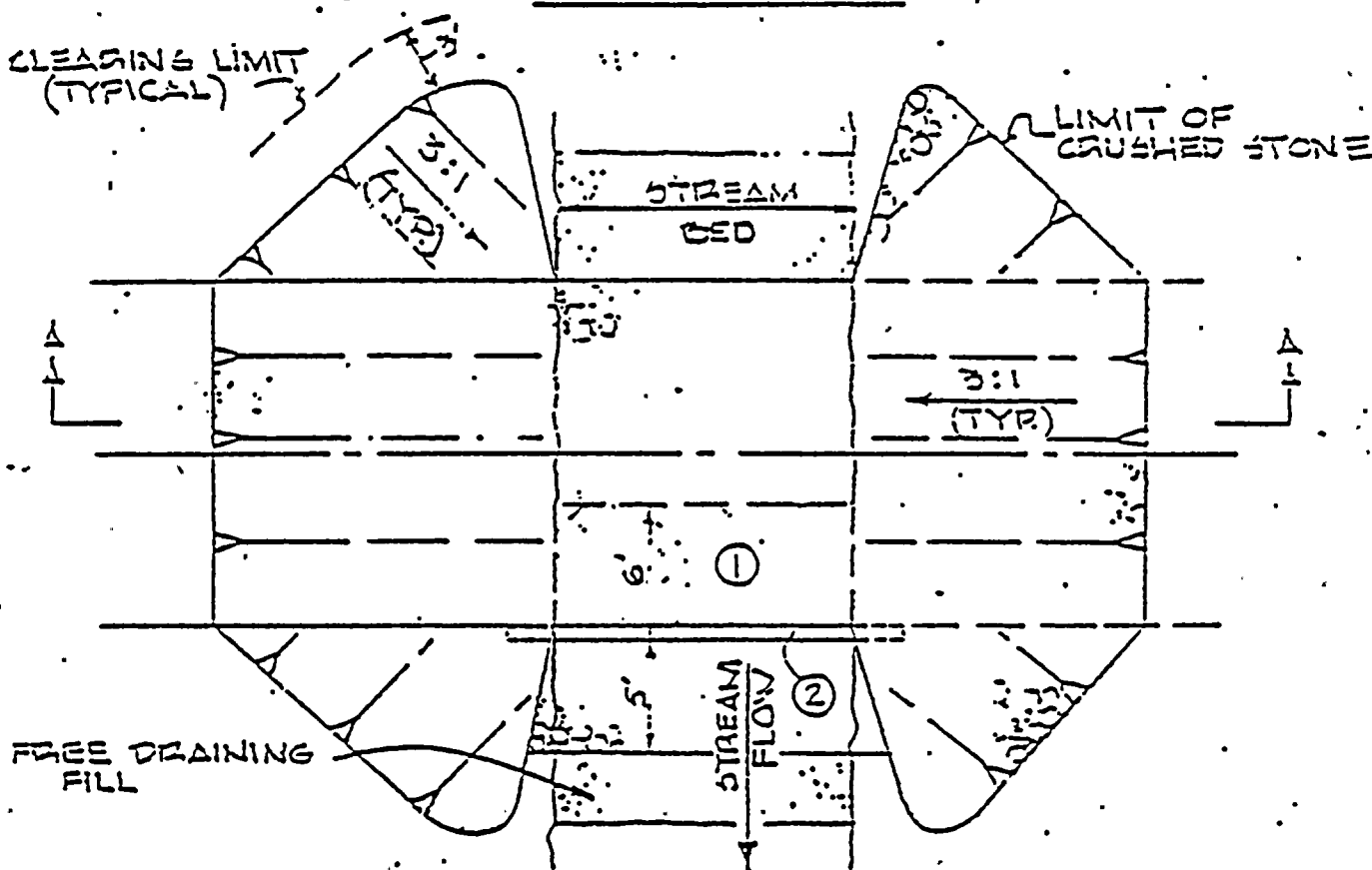


3 TO 4" CRUSHED STONE

Case 70068



### SECTION A-A



### PLAN - TYPICAL STREAM FORD - TYPE 3

WHERE MORE THAN 3' SOFT MATERIAL ON BED

NOTE: SEE SK-7b FOR NOTES

#### KEY

- ① MESH (SEE SK-5a)
- ② BILL (SEE SK-5a)

NIAGARA MOHAWK

NIAGARA MOHAWK POWER CORPORATION  
SYRACUSE, N.Y.

SK-7a

STREAM FORD - TYPE 3

SHEET 5 of 6





**NOTES:**

1. Sill - see Note 1. SX-5b
2. Bars - see Note 2. SX-5b
3. Wash - see Note 3. SX-5b
4. Stone - see Note 4. SX-5b
5. Free draining fill - see Note 5. SX-5b
6. Stone in cut - see Note 6. SX-5b
7. Disposal - see Note 7. SX-5b
8. Free draining fill must be placed and compacted to full width to full height progressively across stream and any soft material displaced or advancing toe of fill then excavation zone must be removed. Sufficient fill must be placed to provide firm base for sill, wash and roadway stone at grade of original stream bed.



PSC REQUIREMENT

- B. Describing the applicant's program for right-of-way restoration, including the removal of any temporary roads, the finish grading of any scarified or rutted areas, the removal of scrap materials or equipment used in construction, and the restoration of vegetative cover. The statement shall indicate the projected dates of any seedings and/or plantings.

NMPC RESPONSE

During right-of-way clearing operations, all vegetative matter is removed or disposed of in a manner described in the "Site-by-Site Analysis of Clearing and Slash Disposal" (see Response to Order D). Clearing and slash disposal methods are also shown on the enclosed aerial mosaics.

All construction debris shall be collected and disposed of at an approved landfill. All equipment used in construction will be removed from the right-of-way upon completion.

All access roads to be constructed for this construction project are to be permanent roads. Niagara Mohawk shall install the necessary ditching and restore the road embankment to a stable slope at the time of access road construction. Exposed embankments will be seeded and/or mulched to stabilize these embankments.

Weather conditions permitting, all other areas except where construction equipment will be active shall be graded, seeded and/or mulched within 8 days of scarification, as part of an ongoing restoration effort throughout construction.

Upon completion of the wire stringing activities, the applicant shall undertake a final restoration effort to restore any remaining seeding and/or mulching to follow immediately. This phase shall also include: final waterbar installation; restoration of disturbed areas to previously existing or stable contours and seeding; restoration of permanent access roads through seeding; and checking the integrity of the installed drainage and erosion control facilities to insure their proper functioning.



NMPC RESPONSE (cont'd)

The following seed mix has been selected for general use on disturbed sites due to its adaptability to both poorly drained and well drained sites. Under extraordinary site conditions, the Environmental Forester may direct the use of a different seed mix as recommended by the USDA Soil Conservation Service.

<u>Mixture</u>	<u>Lbs./Acre</u>
Creeping Red Fescue	20
Redtop	2
Tall Fescue	<u>20</u>
	42

\*Creeping Red Fescue - A cool season grass that spreads by underground root stalks. Adapted to a wide range of soil types. Tolerant of dry sites and valuable for its shade tolerance. A short grass used for mowed areas or general purpose turf.

\*Redtop - Tolerant of acid soils and droughty to poorly drained conditions. Emerges quickly to form protective cover. Is low growing and has a creeping habit of growth. Although vigorous in the seedling stages, redtop does not seriously compete with slower growing species. The strength and rhizomatous character of the roots make it a good plant for erosion control.

\*Tall Fescue - Tolerates poor drainage and can survive winter flooding. Will grow on alkaline or saline soils. Although considered a bunch grass, tall fescue spreads slowly by short rhizomes. Produces coarse, tough turf that resists traffic.

\*USDA Soil Conservation Service, Conservation Plantings on Critical Erosion Areas, 1975.



PSC REQUIREMENT

- C. Outlining precautions to be followed during clearing, construction, and site restoration:
1. to control the storage, handling, transporting and disposal of fuels, oils, chemicals, and other potentially harmful substances; and

NMPC RESPONSE

Applicant will take precautions during the storage, handling, and transporting of fuels, oils, chemicals and other potentially harmful substances to avoid spillage in the construction zone and not store these materials beneath trees or in the vicinity of any wetlands or river, stream, or other body of water. This shall be accomplished through imposition of the following restrictions on both contractors and company personnel:

- (1) extreme caution shall be exercised when handling fuel and while refueling to avoid spillage;
- (2) as much equipment as possible shall be fueled at the Maplevue Marshalling Yard;
- (3) any equipment which must be refueled in the field will be fueled from tanks carried to the work site by truck; and
- (4) no equipment refueling shall be done in the vicinity of streams or other sensitive areas, i.e., intermittent streams, wetlands, beneath trees.

Fuels, oil, chemicals, etc., will be stored at the Maplevue Marshalling Yard.

Should a heavy fuel or oil spill occur, the contaminated soil shall be removed from the worksite and disposed of in an appropriate landfill. Dry powder and any other material for use in oil spill cleanup shall be stored at the Maplevue Marshalling Yard.





PSC REQUIREMENT

2. to avoid their spillage or improper placement in the vicinity of any wetland, river, creek, stream, lake, reservoir, spring, well, or other ecologically sensitive site along the proposed right-of-way.

NMPC RESPONSE

See Response to II.C.1 (p. 129).

PSC REQUIREMENT

- D. Describing the applicant's plans for supervising demolition, clearing (including any use of herbicides), construction, and site restoration activities to ensure minimization of environmental impact and compliance with the environmental protection provisions specified by the Commission. The statement shall include the title(s) and qualifications of personnel proposed to be responsible for ensuring minimization of environmental impact throughout the clearing, construction and restoration phases, indicate the amount of time each is expected to devote to the project, and explain how all environmental protection provisions will be incorporated into contractual specifications or otherwise imparted to those engaged in demolition, clearing, construction, and restoration.

NMPC RESPONSE

Compliance with the environmental protection provisions specified by the Commission will be assured through supervision of construction activities by an Environmental Forester assigned to the job.

The Environmental Forester's responsibilities will be assigned to Mr. Ken Finch. Mr. Finch's qualifications are a matter of record.



NMPC RESPONSE (cont'd)

The Environmental Forester will be on site on a part-time basis, during the clearing and restoration phases of construction. An experienced clearing contractor foreman will be on site on a full time basis and will carry out the responsibilities of the Environmental Forester. This individual is trained in the basic concepts of proper tree care, trimming, and removal. He will also receive on-the-job training from the Environmental Forester, familiarizing them with environmental concerns. The Applicant does not propose that this individual will be making substantive decisions regarding environmental commitments, rather, this person shall be simply carrying out the directives of the Environmental Forester when he is absent from the job.

During the actual line construction, the Environmental Forester will visit the site once every 7 to 10 days. NMPC is committed to the concept of protecting environmental values during all phases of construction. It feels that concerns of this type can be adequately handled by periodic visits to the area by the Environmental Forester. In this way, he will be aware of any environmental problems which might arise and will be on site frequently enough to correct the same before it assumes major proportions. Additionally, there will be close liaison between the Environmental Forester and the Company's Environmental Affairs personnel responsible for EM&CP compliance during line construction. Should there be a need for deviation from the EM&CP commitments, the Environmental Forester shall advise Environmental Affairs personnel, who in turn will contact PSC staff in accordance with the established procedure for dealing with minor changes to approved EM&CP's.

Provisions have been made in the specifications to insure that environmental protection provisions of the Commission Order will be carried out. Each prospective bidder will be provided a copy of specifications at the time of a pre-bid meeting. At this meeting, which will be attended by all prospective bidders and key personnel who will represent the Applicant on this project, the System Forester, and the Manager of Environmental Projects-Transmission will explain and emphasize the importance of strict compliance with all environmental provisions. At this time all contractors will be notified



NMPC RESPONSE (cont'd)

that the Environmental Forester or his designated representative has the authority to shut down operations if such should become necessary in the environmental interest.

The Applicant agrees that the EM&CP and the Corporation's supplements, as submitted, shall take precedence over any contradicting portions of any contract specifications. The Corporation also agrees that the Commission Order and guidelines shall take precedence over any contract specifications.



PSC REQUIREMENT

- E. Describing the proposed construction schedule for the facility.

NMPC RESPONSE

Approval of EM&CP. . . . . Oct. 1983  
Start clearing and access road  
construction. . . . . Oct. 1983  
Install structures in Strano  
muckfield. . . . . Winter 1983/1984  
Start line construction. . . . April 1984  
Complete construction and  
in-service. . . . . June 1, 1986  
Complete restoration. . . . . Sept. 1986





PSC REQUIREMENT

- F. Describing the interim right-of-way management plan to be used for the proposed facility from the beginning of vegetative clearing until the comprehensive, site-specific, long-range right-of-way management plan is submitted. (The interim right-of-way management plan shall state the objectives of the overall right-of-way management program [including line maintenance] and outline the short-term policies and procedures to be applied toward achieving them, especially with respect to any clearing or herbicide application affecting various land uses along the right-of-way. Specific attention must be paid to the relationship of permitted multiple uses [e.g., agriculture, forestry, recreation, etc.] to the applicant's articulated future overall management program objectives.)

NMPC RESPONSE

A right-of-way management plan shall be submitted to the Commission prior to the first major treatment of the vegetation following initial clearing (tentatively scheduled for 1985) and shall include those items specified in Order number 24. This right-of-way management plan will include information on the field research of prespray method and subsequent treatment methods to be applied on the right-of-way between the Scriba Station and Burt Minor Road.

The overall goal of the Applicant's long range vegetation management plan on the right-of-way is the establishment of a tight, low-growing cover which should tend to be stable and self-perpetuating and not interfere with the security zone of the facility. To accomplish this goal, the applicant shall utilize stem or stem-foliar specific herbicide treatment methods dictated by right-of-way and vegetative conditions. Within sensitive screening areas, topping and/or mechanical removal to maintain site quality may be elected. The stumps of trees removed in these sensitive areas shall be stump treated to control undesirable resurgence. In striving towards the long range vegetative goal discussed above, removal of tall growing individuals in "sensitive" areas to foster the development of compatible vegetation may be desirable.



NMPC RESPONSE (cont'd)

The first major herbicide application (subsequent to initial clearing and stump treatment) is proposed during the second full growing season following clearing. Subsequently, at intervals of from 5 to 8 years, it is anticipated that additional applications will be necessary to maintain system reliability.

The materials selected for use shall be dependent upon the "state of the art" then current, appropriate for site conditions, and approved for use by governmental agencies having jurisdiction. They will be applied in conformance with NYSDEC Pesticide Regulations.

All herbicide operations will be under the direct control of a supervisor competent to distinguish between desirable and undesirable species, trained and experienced in right-of-way herbicide management techniques and fully aware of commitments within the scope of Article VII and of long range corporate right-of-way management objectives. Additionally, written specifications will be provided and adhered to. Actual application will be done using either backpack hand sprayers or hydraulic spray equipment. In either case, the material will be applied "low volume-low pressure" to prevent "off target" application.

Provisions for erosion control and maintenance of drainage installations shall include monitoring (through routine line patrols), and correction of conditions which do not conform to requirements of the Commission Orders. Initial monitoring shall occur every six months through the second growing season following completion of line construction. This period should be sufficient to accomplish stabilization of soil, control of surface water and establishment of interim vegetation pending natural regeneration. Where this does not occur, the Applicant shall take whatever actions are necessary to produce a stable condition.

Subsequent to the initial maintenance period described above, a routine right-of-way management program will be instituted with the goal of establishing a stable, low-growing cover of desirable plant species within the right-of-way through a selective use of herbicides and other cultural techniques. In areas currently in agriculture or



NMPC RESPONSE (cont'd)

other compatible uses, these activities will be encouraged to continue to the extent that they do not interfere with operation or maintenance programs of the facility.

Also included in the routine right-of-way management program will be the maintenance of existing erosion control and drainage structures, and slopes.

The Applicant shall comply with the Commission Orders regarding the accommodation of recreation or other multiple uses along the right-of-way. As a matter of policy, the Applicant shall, at that time, recognize the increased sensitivity of such a site and, if indicated, appropriately alter its management objectives on that site.



PSC REQUIREMENT

- G. Showing the Commission's Environmental Management and Construction Plan requirements and indicating the location in the plan of each required item. (Indicate which, if any, requirements are not applicable for this facility and what, if any, data will be submitted at a later time.)

NMPC RESPONSE

The preceding document complies with Order II.G, above.

