



Ministry of
Transportation and
Communications

MINISTRY DIRECTIVE

Program: Provincial
Highways
Directive: B- 217

Issuing Authority: Executive Director, Highway Engineering Division

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TO: Executive Directors, Regional Directors, Directors, District Engineers, Regional Managers, Office Managers

SUBJECT: Private Piped Drains on the Highway Right-of-Way

ALTERNATIVE INDEX LISTING(S):

Agricultural Drainage
Subsurface Drains
Tile Drainage

REFERENCE: Provincial Highways Directive B-63, "Drainage Act: MTC Policy and Procedures."
Public Transportation and Highway Improvement Act, R.S.O. 1980, c. 421.
Drainage Act, R.S.O. 1980, c. 126.
MTC Drainage Manual - Chapter A, Part 1, "Legal Aspects of Highway Drainage."
MTC Corridor Control and Permit Procedures Manual - Chapter 3, Section 306, "Drainage".
MTC Forms PA-H-5, "Application for Encroachment Permit" and PA-H-7 "Encroachment Permit".
Drainage and Hydrology Section, Highway Design Office.
Memorandum DD-76-26/OD-76-45, "Privately Owned Piped Drain Outlets on the King's Highway" is hereby cancelled.

PURPOSE: To state Ministry policy concerning piped drains from agricultural lands and individual private residences which outlet onto or cross provincial highways.

BACKGROUND: Authority for the control of private piped drains, including cutting off or removal from the highway right-of-way, is given by the Public Transportation and Highway Improvement Act.

The "Application for Encroachment Permit" includes a clause which is intended to relieve the Ministry of any liabilities associated with the construction, maintenance, alteration or operation of the piped drain.

POLICY AND PROCEDURES:

1.0 General

- 1.1 All authorized private piped drains on highway rights-of-way must be documented by an encroachment permit issued by the District Engineer.

- 1.2 Piped drains carrying pollutants are prohibited from outletting onto provincial highway rights-of-way.
- 1.3 Although identification and abatement of pollution is in the mandate of the Ministry of Environment (MOE) and the Ministry of Health, Ministry of Transportation staff shall make a preliminary determination that a drain is polluted if obvious indicators are present, such as:
 - slime or algae growths at a piped drain outlet;
 - discharges of coloured, milky or turbid water, especially during dry weather periods;
 - chemical or unusual odour; or
 - visible evidence of sewage.
- 1.4 The Ministry of Transportation regional Environmental Unit must be advised that MOE has been contacted concerning a polluted piped drain.

2.0 Drains Encountered on Work Projects

2.1 Design Phase

2.1.1 Unpolluted Piped Drains

- 2.1.1.1 Where unpolluted piped drains are likely to be encountered on a work project, such as in flat agricultural areas, the Ministry will carry out a thorough investigation to determine their locations, elevations and other details necessary to ensure that the overall drainage system will be satisfactory to the Ministry, the owners and the municipality.
- 2.1.1.2 Where construction or reconstruction of a highway will affect an existing piped drainage system, an agreement with the owner, if required, will be prepared by the appropriate Regional Office. This will usually form part of the property agreement, and should specify the required modifications to the system. If the Ministry is the contractor, the property agreement should also include a clause limiting the Ministry's liability for maintenance and repair of piped drainage outlets to a maximum period of one year. In instances where property is not acquired, a separate agreement or Damage Claim Release form can be used.

An encroachment permit will be issued by the District Engineer, noting the terms of the property or other agreement on responsibility for District-related concerns such as operation and maintenance of the drain.

2.1.1.3 The design of the highway drainage system should allow for planned future piped drains that will outlet onto or cross the highway provided a plan showing the locations and elevations of such drains is available, and that authorizations, if required, from MOE and other agencies have been obtained. Inverts of new culverts and channels should be low enough to meet the requirements of the planned piped drains. On reconstruction projects, however, this applies only to culverts which are to be replaced to suit the Ministry's requirements.

Cost sharing of measures needed to accommodate a planned future drain should be sought from the drain owner.

2.1.2 Polluted Piped Drains

2.1.2.1 On provincial highway work projects which pass through settlements or other areas where polluted piped drains are likely to be encountered, the Project Manager will conduct a thorough investigation to determine drain locations by checking the files of the relevant authority (either MOE or the Public Health Unit) for permitted waste disposal systems, carrying out a field inspection of the area, and interviewing local residents.

This investigation should be carried out very early in the design phase so that adequate time will be available for remedial work.

2.1.2.2 If a problem is encountered during the investigation, the MOE District Officer should be contacted for assistance. All costs for inspections and related work will be absorbed by the respective Ministries and no branch transfer of costs will be made.

2.1.2.3 Modifications of sewage systems require inspection and the issuance of a Certificate of Approval by the relevant authority. Guidance on these procedures can be obtained from the MOE District Officer.

2.2 Construction Phase

2.2.1 Unpolluted Piped Drains

If an unpolluted piped drain is encountered during construction, its flow should be diverted to an existing ditch or manhole. If this is not feasible, then the Project Supervisor should contact the Regional Planning & Design Section for design changes to deal with the piped drain.

The drain owner must be advised of this action, and that if the drain and its outlet cannot be relocated off the highway right-of-way, an application for an encroachment permit must be submitted. The decisions to grant an encroachment permit and waive the permit fee rest with the District Engineer.

2.2.2 Polluted Piped Drains

- 2.2.2.1 If an apparently polluted drain is found on the highway right-of-way during construction, the Project Supervisor will promptly contact the MOE District Officer and request an early investigation of the drain.
- 2.2.2.2 If MOE or the local Health Unit is unable to respond to this request in a timely manner, the Project Supervisor will take remedial action as needed to proceed with construction. This action should be taken in consultation with MOE, the drain owner and any other involved parties.
- 2.2.2.3 If it is determined that the drain is polluted, the determining agency (either MOE or the Health Unit) will take appropriate action.
- 2.2.2.4 If the pollution is abated, or if it is determined that the drain is not polluted, the procedures in 2.2.1 should be followed.
- 2.2.2.5 If the pollution is not abated, the Project Supervisor will plug the drain or minimize the effects of the polluted effluent before proceeding with construction.

3.0 Drains Other Than on Work Projects

3.1 Existing Piped Drains

3.1.1 Unpolluted

- 3.1.1.1 The Ministry is not liable for maintenance or repair of existing private piped drains unless it is clearly specified in a property or other formal agreement.
- 3.1.1.2 Existing unpolluted piped drains may be allowed to continue outletting into the highway drainage system provided they are not causing, or likely to cause, any problem for the highway. When such an outlet is found, an encroachment permit with appropriate

conditions should be issued to the owner. The permit fee may be waived, at the discretion of the District Engineer.

- 3.1.1.3 If an outlet is causing or likely to cause a problem for the highway, such as ditch erosion or a surcharged sewer condition, the District Engineer will notify the owner that the outlet will be cut off permanently unless the owner rectifies the problem to the satisfaction of the Ministry.

If the owner(s) of such drains can not be identified, landowners who appear to benefit from the drain should be advised of the above policy, and that they could pursue rehabilitation of the drain using procedures under the Drainage Act.

3.1.2 Polluted

- 3.1.2.1 When apparently polluted effluent is found outletting from a piped drain onto a highway right-of-way, the District Engineer will, subject to 3.1.2.2, contact the MOE District Officer, who will investigate the occurrence and, if necessary, impose abatement requirements on the owner. The District Officer will contact the local Health Unit when the situation is deemed to be within the Health Unit's mandate.

- 3.1.2.2 Alternatively, in instances where the drain is obviously polluted and the owner identified, the District Engineer may advise the owner, in writing, of the Ministry's policy in dealing with polluted piped drain outlets. The letter should be hand delivered if possible, or otherwise sent by registered mail, and should state that the outlet will be removed and the drain plugged if corrective action is not taken within a reasonable period of time determined by the District Engineer.

A copy of the letter should be sent to the MOE District Officer. If the piped drain is part of a sewage system, this information should also be relayed to the MOE District Officer, to ensure that approved modifications to the system are carried out.

3. Proposed Private Piped Drains

- 3.2.1 Piped drains and drainage systems should outlet at the nearest watercourse without encroaching at any point on the highway right-of-way.

- 3.2.2 If option 3.2.1 is not possible or practical, the landowner should be advised to obtain outlet for the drain using procedures under the Drainage Act, provided that these procedures will not incur an unreasonable expense for the Ministry.
- 3.2.3 Notwithstanding items 3.2.1 and 3.2.2 above, the District Engineer may allow a drain to outlet into the highway drainage system, subject to the following conditions.
- 3.2.3.1 In all such cases, the piped drainage system should be designed to minimize the number of outlets onto highway property, with preferably one per applicant. Header drains and catch basins should be located outside the right-of-way and must be constructed and maintained at the applicant's expense.
- 3.2.3.2 If the piped drain is to discharge into a highway storm sewer, the outlet shall be connected directly into an existing catch basin or manhole.
- 3.2.3.3 The drain owner must obtain for the proposed drain all required authorizations from MOE and other agencies.
- 3.2.3.4 The drain owner must apply for an encroachment permit. If the application is acceptable, the District Engineer shall issue an encroachment permit which enumerates the responsibilities of the permit owner. In addition, the permit should include any site-specific requirements for the drain, such as freeboard (preferably 0.3 m vertical distance between ditch bottom and outlet pipe invert), catch basins, erosion protection and markers to prevent damage during routine highway maintenance operations. Future highway requirements such as widening and grade raises should be considered in determining the locations of piped drain outlets and the structural strengths of pipe crossings.
- 3.2.3.5 The District Engineer may require the drain owner to provide a letter of credit, bond or certified cheque to ensure that the work is carried out to the Ministry's satisfaction.

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