

**APPLICATION PROCEDURES AND PLACEMENT CONDITIONS
FOR ELECTRICAL LINES IN THE VICINITY OF PROVINCIAL HIGHWAYS
UNDER THE DIRECTION, CONTROL AND MANAGEMENT
OF ALBERTA TRANSPORTATION**

- 1.0 General Application Guidelines
- 2.0 General Construction Guidelines
- 3.0 General Conditions for Placement of Electrical Facilities within Provincial Highway Right-of-Way

September, 2013

Attention:

These Application Procedures:

- 1. Do not apply to highway lighting installations.
- 2. Apply only to work initiated by power companies, and not to work initiated by Alberta Transportation.
- 3. The term “Provincial Highway” includes one, two, and three digit provincial highways, including former “secondary” highways.

1.0 GENERAL APPLICATION GUIDELINES

In accordance with Section 7 of the *Highways Development and Protection Regulation* (which came in force in January 2010) a permit from Alberta Transportation is required for any utility work that is within the permit areas which vary depending on the classification of the highway

- Within the highway right-of-way, and
- In the case of a freeway: within 115 metres from the roadway centre-line or 30 metres beyond the limit of the freeway, whichever is greater;
- In the case of a multi-lane highway: within 60 metres from the roadway centre-line or 30 metres beyond the limit of the highway, whichever is greater;
- In the case of a major two-lane highway: within 60 metres from the roadway centre-line or 30 metres beyond the limit of the highway, whichever is greater;
- In the case of a minor two-lane highway: within 50 metres from the roadway centre-line or 30 metres beyond the limit of the highway, whichever is greater.

Since the department may have plans to upgrade the provincial highway system from time to time, it is recommended that the applicant consult with Alberta Transportation for advice.

Application for any work related to construction and/or modification of existing and planned electrical transmission/distribution lines paralleling or crossing provincial highways under the jurisdiction of Alberta Transportation shall be submitted to the appropriate Transportation District Office (map and contact list: <http://www.transportation.alberta.ca/4450.htm>). The department at its discretion may waive the application requirements for minor work such as routine and minor repairs.

The applicant shall allow up to 30 working days for application processing.

NOTE: For power lines that parallel an existing provincial highway, within the highway right-of-way, an agreement for electrical installations within the provincial highway right-of-way is required in addition to the application for permit. (This requirement does not apply to electrical distribution line that is less than 1.6 km long).

Incomplete applications, without proper documentation, will be returned without review.

1.1 APPLICATION REQUIREMENTS

- 1.1.1 The application shall clearly state the **purpose** of the application and the **type** of facility. It shall provide highway number(s), legal description(s) and particulars of the contact person responsible for the application.
- 1.1.2 Copy of the permit issued shall be provided to the contractor and made available for verification at the construction site at all times.
- 1.1.3 No construction may be undertaken without the necessary approval.
- 1.1.4 Approval for any additional work, not covered by the original permit but required due to site specific conditions, shall be obtained from the appropriate Operations Manager or Development and Planning Technologist.
- 1.1.5 Each of the drawings submitted with the application shall have a number for reference purposes.
- 1.1.6 Traffic Accommodation Strategy shall be in accordance with the latest edition of the *Traffic Accommodation in Work Zones* manual published by Alberta Transportation (www.transportation.alberta.ca/3815.htm).

1.2 OVERHEAD ELECTRICAL LINE APPLICATIONS

Applications shall be supported by an overall plan or a vicinity map of the facility, in minimum scale of 1:20,000, showing the extent of proposed line including the location of both starting and end points and:

a) IN CASES OF LINES PARALLELING PROVINCIAL HIGHWAYS

Two (2) copies of engineering plans or township diagrams, with a minimum scale of 1:10,000, showing all the areas where the proposed facility parallels the highway. These plans must indicate legal description(s), the offset(s) between the highway right-of-way boundary and the proposed electrical line.

b) IN CASES OF LINES CROSSING PROVINCIAL HIGHWAYS

Two (2) copies of engineering plans, in the minimum scale 1:5,000, for each highway crossing showing legal description(s), a precise crossing location in relation to a known point, towers, and all pole and guy wire locations in the crossing area.

Contract and/or contractor drawings will also be acceptable.

The offset between the right-of-way boundary and the line shall be indicated on the plans.

1.3 UNDERGROUND POWER LINE APPLICATION

Applications shall be supported by an overall plan or a vicinity map of the facility, using a minimum scale 1:20,000, showing the extent of the proposed facility including location of starting and end points and:

a) IN CASES OF LINES PARALLELING PROVINCIAL HIGHWAYS

Two (2) copies of engineering plans, with minimum scale of 1:5,000, showing all the areas where the proposed facility parallels the highway. These plans shall indicate legal location(s), offset(s) between highway right-of-way boundary and the proposed facility, and any manhole locations.

b) IN CASES OF LINES CROSSING PROVINCIAL HIGHWAYS

Two (2) copies of engineering plans for each highway crossing showing legal location(s), a precise crossing location in relation to a known point, a highway cross-section at the crossing and highway profile for minimum 400 metres in each direction of the crossing. A minimum scale of 1:5,000 horizontal and 1:200 vertical shall be used for the profile drawing. The cross-section shall be drawn in the minimum horizontal scale of 1:2,500 and vertical scale of 1:200. The cross-section drawing shall contain legal crossing description(s), depth of cover, extent of casing/conduit, cable profile through the crossing and roadway right-of-way boundaries.

1.4 APPLICATIONS FOR POWER POLE REPLACEMENT, RELOCATION AND/OR REMOVAL

Applications shall be supported by an overall plan or a vicinity map, with a minimum scale 1:20,000, showing the extent of the proposed work. Also, two (2) copies of engineering plans are required, using a minimum scale of 1:5,000, showing all the areas where the proposed pole replacement/pole relocation is to occur and offsets from the right-of-way boundary.

1.5 EXCEPTIONS

Formal application is not required for the following cases:

- Pole for pole replacement where the replacement pole is in the existing alignment or no closer to the road surface; or
- Routine maintenance activities, e.g. insulator or conductor repairs, damaged single pole replacement.

The appropriate Operations Manager or Development and Planning Technologist shall be notified in writing at least two working days prior to any work commencing within an existing provincial highway right-of-way. A Traffic Accommodation Strategy in accordance with the latest edition of the *Traffic Accommodation in Work Zones* manual published by Alberta Transportation (www.transportation.alberta.ca/3815.htm) shall be submitted for review and acceptance prior to work commencement.

- Emergency repairs: The work can be carried out and the appropriate Operations Manager or Development and Planning Technologist shall be notified as soon as reasonably practical.

Notwithstanding the above, the department reserves the right to request additional information if necessary, including the full application.

2.0 GENERAL CONSTRUCTION GUIDELINES

2.1 CONSTRUCTION COMMENCEMENT AND COMPLETION

The applicant shall contact the appropriate Operations Manager or the Development and Planning Technologist at least two (2) working days prior to commencement of construction to review the project.

The applicant shall contact the appropriate Operations Manager or the Development and Planning Technologist at least two (2) working days prior to construction completion to allow for site inspection if required.

2.2 CONSTRUCTION SAFETY

All reasonable precautions shall be undertaken during construction to protect and safeguard the lives and property of the travelling public and adjacent property owners. This includes barricading, signing and flagperson(s) as required. At no time shall the highway or public roadway be closed to traffic. Where normal traffic patterns are to be interrupted due to ditching or other operations, prior approval must be obtained. Except in an emergency situation, suitable signs shall be erected and if required a certified flagperson(s) shall be used to direct traffic through the disrupted area as approved by the appropriate Operations Manager.

Unless in an emergency situation, no work is to be conducted during darkness or during times of reduced visibility.

2.3 CONSTRUCTION SIGNING

Contractors are to meet the requirements of the latest edition of the *Traffic Accommodation in Work Zones* manual published by Alberta Transportation. The manual is available on the internet at www.transportation.alberta.ca/3815.htm .

All signs related to speed reduction should be removed or covered whenever there is no work being conducted (i.e. at night).

If the signing requirements are not met, the Operations Manager or his representative have the right to halt all construction until proper signing is erected. The signs are to be removed immediately following construction completion.

2.4 OVERHEAD ELECTRICAL LINES - GENERAL CONSTRUCTION GUIDELINES

2.4.1 Transmission Tower Location

[For the purposes of this application procedure, the term transmission tower is defined as a steel structure which supports a transmission line.]

Transmission towers shall be located at such a distance from the highway right-of-way boundary so as to eliminate interference with future highway upgrading. The height of the transmission tower should also be taken into account when determining the appropriate setback distance to ensure the highway operations would not be impacted in the event of a collapse. Any departure from this standard must be indicated on the plans submitted with the application.

2.4.2 Pole Location within the Highway Right-of-Way

The poles or guy wires of any overhead electrical line should be placed as close to the edge of highway right-of-way as possible.

No poles and/or guy wires shall be placed between the highway shoulder and the top of the ditch backslope, unless prior approval is obtained from the appropriate Operations Manager.

2.4.3 Rider Poles

If the use of rider poles is required inside the right-of-way, adequate protection shall be provided to minimize danger to the travelling public.

Rider poles shall be removed as soon as possible following line placement.

2.4.4 Pole Storage in the Right-of-Way

Storage of poles and other equipment on roadway shoulders, sideslopes and backslopes is not permitted.

Should pole storage within the right-of-way be required, storage method and duration must be approved by the appropriate Operations Manager.

2.5. UNDERGROUND ELECTRICAL LINES - GENERAL CONSTRUCTION GUIDELINES

2.5.1 Use of the Open Cut Method

Use of the open cut method for underground installation of an electrical line at any paved roadway under the jurisdiction of Alberta Transportation is **not** permitted. The proposed method of installation shall be shown on the plan of the crossing attached to the application.

2.5.2 Intersection Angle of Electrical Line Highway Crossing

The desirable angle of crossing is between 70 and 90 degrees, however, other angles may also be accepted in special circumstances if approved by the appropriate Operations Manager.

2.5.3 Minimum Depth of Cover within the Highway or Road Right-of-Way

The minimum depth of cover of an electrical line, where it crosses the right-of-way of a highway, shall be 1.4 metres measured from the lowest point in the cross-section unless prior approval is obtained from the appropriate Operations Manager.

2.5.4 Use of Conduit/Casing in Underground Crossings

All lines crossing provincial highways shall be placed in casing or conduit.

2.5.4.1 Cased Crossing – Casing/Conduit Installation

Casing/Conduit shall be inserted by boring or jacking or other approved method.

Casing/Conduit shall be fitted into a bored or augered hole in such a way so as to provide a snug fit.

2.5.4.2 Extent of Casing/Conduit

Casing/Conduit shall extend under the road surface between riser poles or between the highway right-of-way boundaries if no riser poles are employed.

2.5.5 Underground Line Marking

All underground electrical line crossings shall be marked by visible markers located near the right-of-way boundaries on both sides of the crossing.

Underground electrical lines paralleling an existing provincial highway shall be adequately marked by visible markers located near the right-of-way boundary along the whole parallel section.

A **red** plastic warning tape shall be spread above the underground electrical cable within the highway right-of-way at a depth of 0.6 metres from the ground surface.

2.5.6 Drainage Structure

An underground power line shall not be placed in a culvert or drainage structure or within 10 metres of such structure.

2.5.7 Open Excavation, Material and Equipment Storage

No open excavation shall be constructed, nor shall any material or equipment be deposited or stored any closer than:

- in the case of provincial highways: the toe of the sideslope or 4 metres from the shoulder break of a highway, whichever distance is greater;
- in the case of other provincial roads: the toe of sideslope.

2.5.8 Backfilling of Trenches

The backfilling of all trenches, in the highway right-of-way or within 6 metres of a bridge pier or earth retaining structure, shall be undertaken immediately after the installation has been placed and passed any necessary inspection. Backfill materials shall be thoroughly compacted with mechanical compactors and the owner of the electrical line will be held responsible for any settling in backfill for a period of one year after the completion of the work.

2.5.9 Disturbed Area

All waste material shall be removed and all disturbed areas shall be leveled and trimmed in an approved manner and reseeded to restore the right-of-way to as good as original or better condition.

2.5.10 Excavation in Central Median

No excavation or any other type of work is permitted in the central median of the highway without the approval of the appropriate Operations Manager.

2.5.11 Manholes

If manholes are employed and located within the highway right-of-way, they shall be placed "flush" with the adjacent ground.

No manholes shall be placed in the sideslopes unless special approval is obtained from the appropriate Operations Manager.

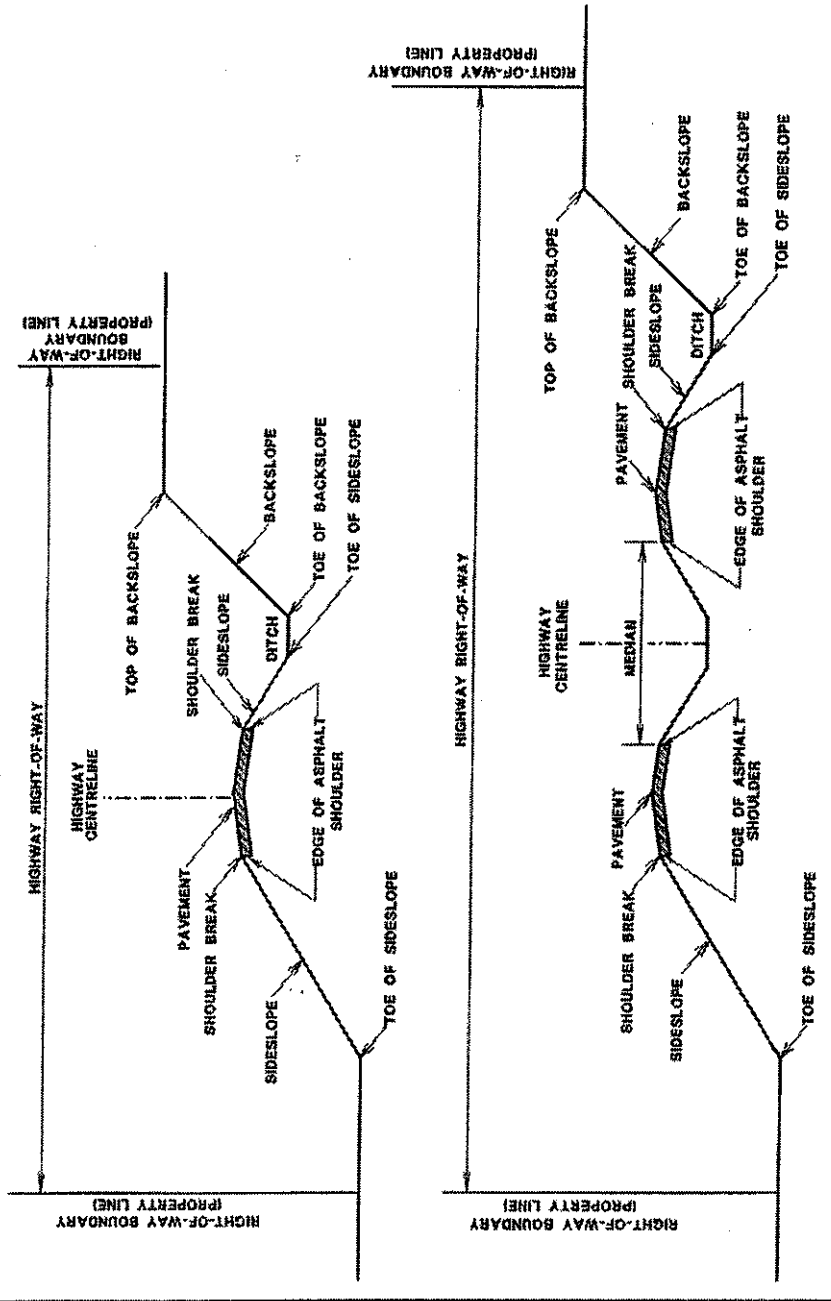
No manholes shall be located within the centre median of multi-lane highways unless a special permit is obtained from the appropriate Operations Manager.

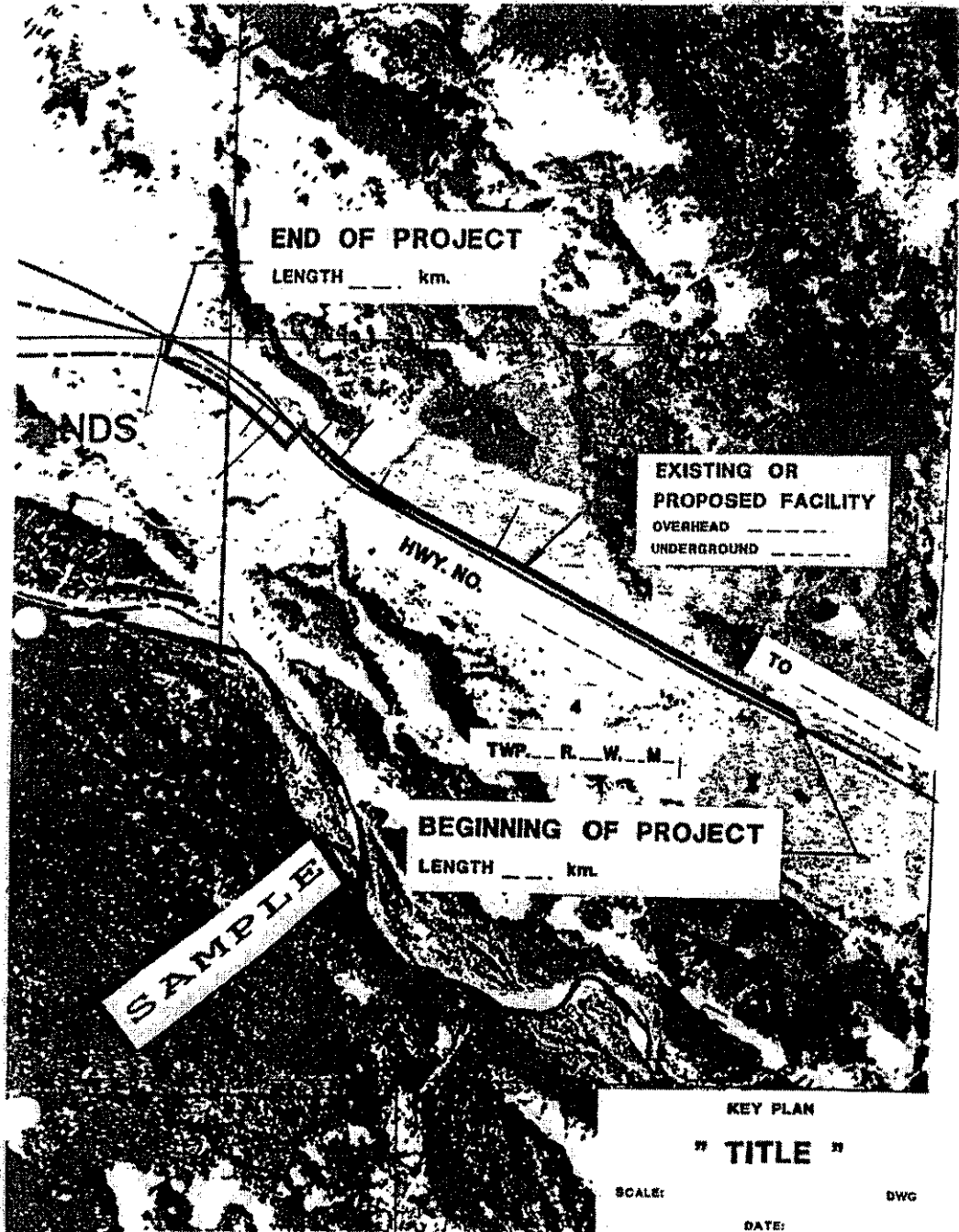
3.0 GENERAL CONDITIONS FOR PLACEMENT OF ELECTRICAL FACILITIES WITHIN PROVINCIAL HIGHWAY RIGHT-OF-WAY

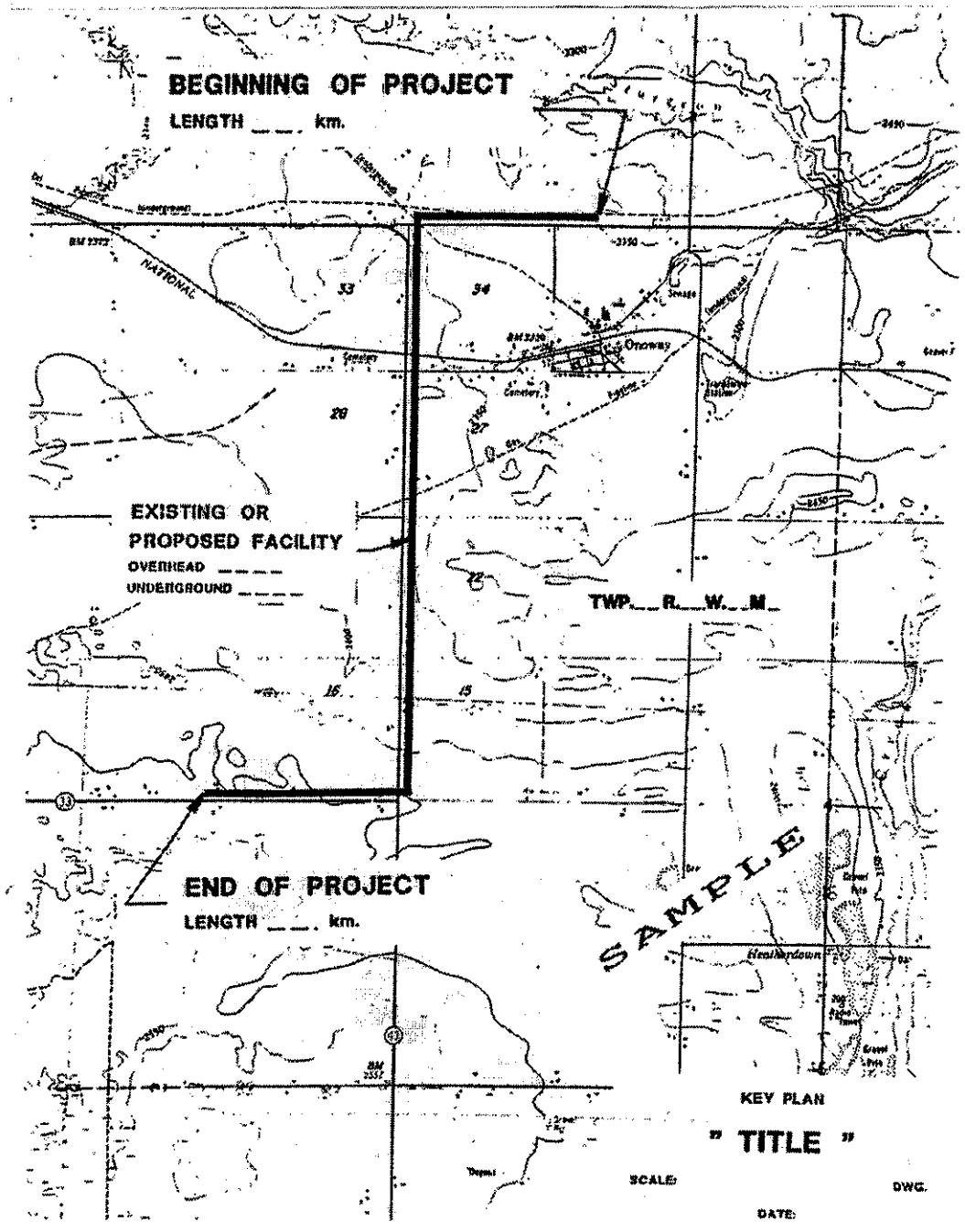
- 3.1 The electrical facility (the “Line(s)”) shall be placed in such a fashion so as not to interfere with the operation and maintenance of the highway facility, and where practical, the future upgrading of the highway facility.
- 3.2 The Applicant agrees that the Alberta Transportation (the “Minister”) may modify from time to time, as required, the *Application Procedures and Placement Conditions for Electrical Lines in the Vicinity of Provincial Highways under the Direction Control and Management of Alberta Transportation*, to better reflect current changes in technology, construction methods or safety requirements.
- 3.3 All work inside the highway right-of-way shall conform to current standards and regulations and be carried out in such a manner so as not to endanger public safety.
- 3.4 If the Applicant is required to perform Work within the highway right-of-way, the Applicant shall assume the role of a prime contractor as defined by the *Occupational Health and Safety Act*, RSA 2000, c.0-2 or latest version.
- 3.5 The Applicant shall indemnify and hold harmless the Minister, his employees and agents from any and all claims, demands, actions and cost whatsoever that may arise, directly or indirectly, from the construction, operation, and maintenance of the Line(s) in the highway right-of-way.
- 3.6 The Minister shall indemnify and hold harmless the Applicant, its employees, agents, and contractors from any and all claims, demands, actions and cost whatsoever that may arise, directly or indirectly, from the construction, operation and maintenance of the highway.
- 3.7 The Applicant shall be responsible for all of the costs to repair any damages to the highway resulting from the placement, maintenance and operation of the Line(s) in the highway right-of-way.
- 3.8 The presence of the Line(s) within the highway right-of-way shall under no circumstances increase the Minister’s costs for highway operation, construction or maintenance, and if so, the additional costs shall be borne by the Applicant with exception of the lines subject to special programs agreed to between the Minister and the Applicant, e.g. High Load Corridor clearance adjustment.

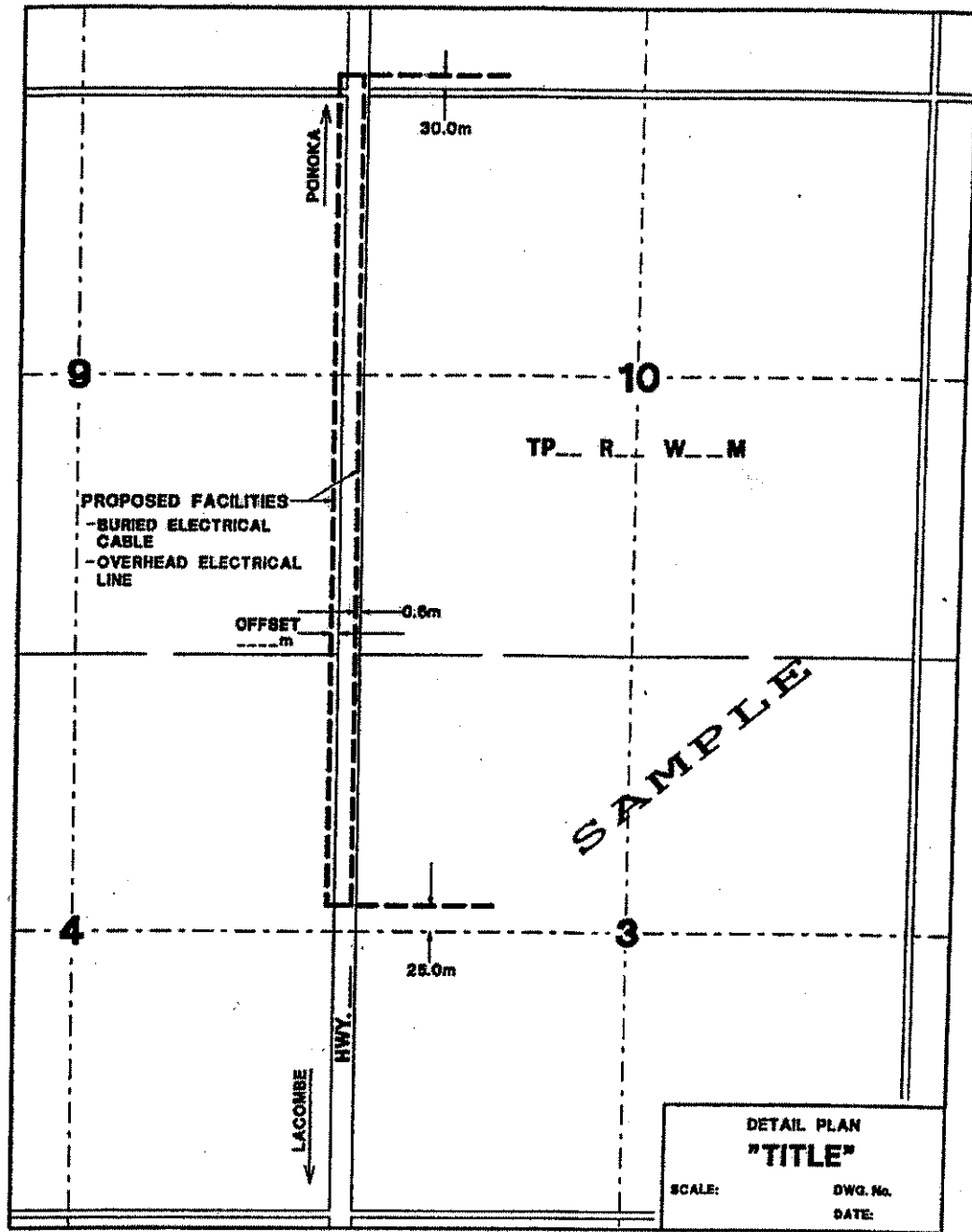
- 3.9 The Applicant places Line(s) in the highway right-of-way entirely at his own risk, and, except as provided in Clause 3.6, the Minister, his representative or agent, shall not be responsible or liable in any way to the Applicant, its contractors, agents or its customers for any damage or loss to the Line(s).
- 3.10 The Applicant agrees to relocate the Line(s) in a timely fashion to a location approved by the Minister if and when required by highway or highway related work approved by the Minister. The Applicant shall be solely responsible for all such line modification and/or relocation costs. Any additional costs due to delay in relocating the Line(s), caused directly by the actions or inactions of the Applicant, shall be borne by the Applicant.
- 3.11 The Minister will provide adequate notification to the Applicant if line modification and/or relocation is required due to highway or highway related work. A minimum of two (2) weeks notification will be provided.
- 3.12 Following any work done by the Applicant, his representatives or contractors, the Applicant shall restore the highway right-of-way, to the original or better condition.
- 3.13 The Applicant shall be responsible for proper and adequate line marking as well as maintenance of the line markers within the highway right-of-way.

SCHEDULE "A" ELEMENTS OF HIGHWAY CROSS-SECTION









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TP_R_W_M

- PROPOSED FACILITIES**
- BURIED ELECTRICAL CABLE
 - OVERHEAD ELECTRICAL LINE

OFFSET
---m

POMOKA ↑

HWY.

LACOMBE ↓

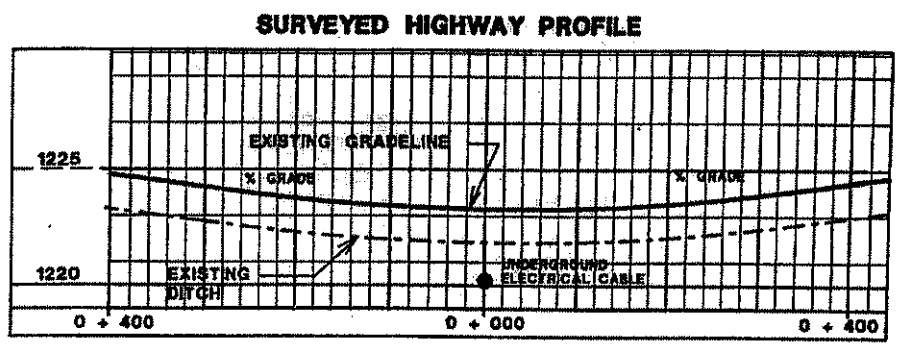
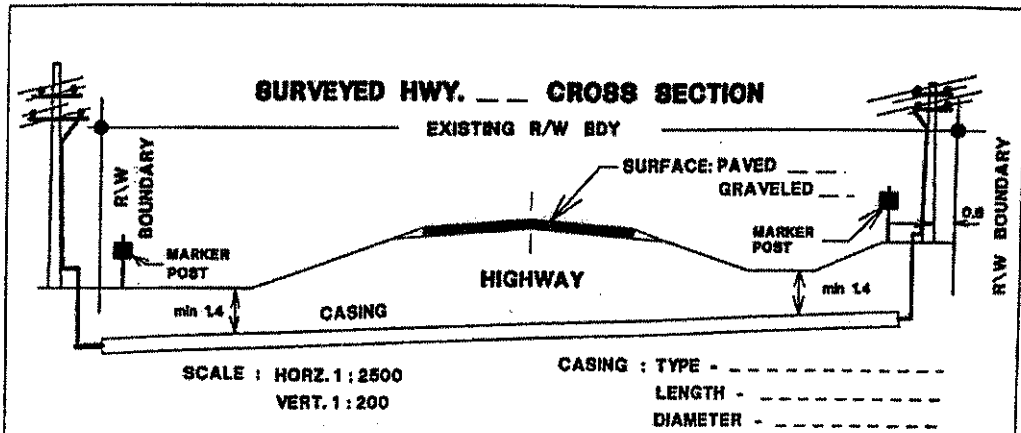
30.0m

25.0m

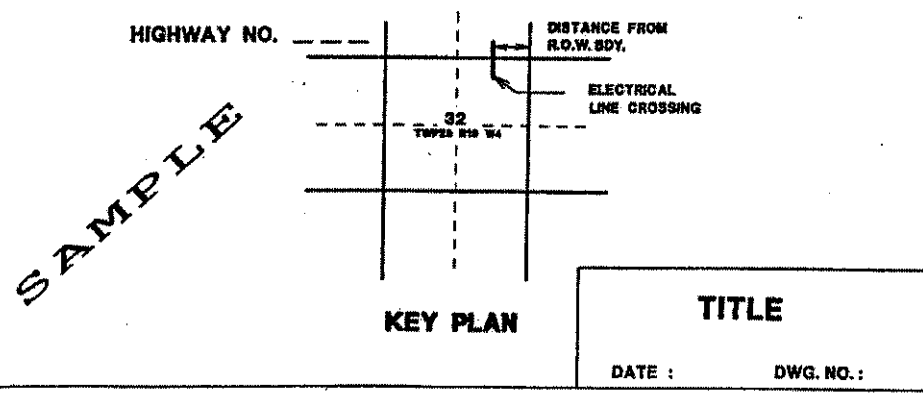
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SAMPLE

DETAIL PLAN
 "TITLE"
 SCALE: DWG. No.
 DATE:



SCALE : HORZ. 1 : 5000
VERT. 1 : 200



Alberta Transportation District Office Locations / Phone Numbers

ATHABASCA	Unit #2, Jewell Building, 3603 – 53rd Street T9S 1A9	(780) 675-2624	transdevelopmentathabasca@gov.ab.ca
CALGARY	2nd Floor, Willowglen Business Park, 803 Manning Road N.E. T2E 7M8	(403) 297-6311	transdevelopmentcalgary@gov.ab.ca
EDSON	Room 202, Provincial Building, 111 – 54th Street T7E 1T2	(780) 723-8250	transdevelopmentedson@gov.ab.ca
FORT MCMURRAY	6th Floor, West Tower, Provincial Building, 9915 Franklin Avenue T9H 2K4	(780) 743-7430	Application.Permit.FM@gov.ab.ca
GRANDE PRAIRIE	1401, Provincial Building, 10320 – 99th Street T8V 6J4	(780) 538-5310	transdevelopmentgrandeprairie@gov.ab.ca
HANNA	P.O. Box 1300, Provincial Building, 401 Centre Street T0J 1P0	(403) 854-5550	transdevelopmenthanna@gov.ab.ca
LETHBRIDGE	3rd Floor, Administration Building, 909 3rd Avenue N. T1H 0H5	(403) 381-5426	transdevelopmentlethbridge@gov.ab.ca
PEACE RIVER	3rd Floor, Provincial Building, Bag 900, Box 29, 9621 96 Avenue, T8S 1T4	(780) 624-6280	transdevelopmentpeaceriver@gov.ab.ca
RED DEER	#401, Provincial Building, 4920 - 51st Street T4N 6K8	(403) 340-5166	transdevelopmentreddeer@gov.ab.ca
STONY PLAIN	Room 223, Provincial Building, 4709 – 44th Avenue T7Z 1N6	(780) 963-5711	transdevelopmentstonyplain@gov.ab.ca
VERMILION	Box 28, Provincial Building, 4701 – 52nd Street T9X 1J9	(780) 853-8178	transdevelopmentvermilion@gov.ab.ca