Third Parties/Crossing

Presentation by Bill Scheers
Canadian Association of Petroleum Land Administration
Surface Land Administration Advisory Committee
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Agenda

• EAPUOC “Guide for Working Near Buried Facilities”
• ERCB Directive 066
• Alberta Pipeline Act
EAPUOC

“Guidelines for Working Near Buried Facilities”
Overview

1) WORKING NEAR BURIED FACILITIES
   - The Hazards of Poorly Planned Ground Disturbances

2) CHECKING FOR BURIED FACILITIES
   - Alberta One-Call

3) THE CROSSING AGREEMENT (MASTER, PROXIMITY, RECIPROCAL)
   - Processing The Crossing Agreement
   - Information Normally Found In the Agreement
   - Guidelines For Facility Drawings Attached To The Crossing Agreement
   - Guidelines for Issuing Safe Work Or Ground Disturbance Permits
What Is Working Near Buried Facilities?

Any activity that disturbs the ground in the control zone of a buried facility (1 metre on either side of most facilities except pipeline, high voltage power cables and direct bury toll/trunk fiber optic cables where the control zone is 5 metres)
Working Near Buried Facilities Include:

- Blasting
- Digging
- Ditch Shaping
- Drilling
- Driving Bars Posts or Anchors
- Driving Over a Parking on Row’s
- Excavation
- Fire Fighters Cutting Fire Breaks
- Grading
- Land Leveling

- Logging
- Pipe Pushing
- Plowing Pipe or Cable
- Removing Buried Facilities or Any Other Activity Which Disturbs
- Rock Picking
- Subsoil Aeration
- Topsoil Stripping
- Tree Planting
- Trenching
- Tunneling or boring
- Vertical & Horizontal Auguring
- Vibrosis
What Are Buried Facilities?

Any item located below the surface of the ground!

These facilities may be privately (landowner) or publicly owned

They include:

- Cables
- Catch Basins
- Conduits
- Culverts
- Fiber Optics
- Lines

- Manholes
- Pipes
- Tanks
- Value Chambers (underground storage facilities)
- Wires
- All attachments to these items as well
What Are Buried Facilities?

These facilities are used for the transmission, distribution, storage or collection of:

• Cablevision
• Chemicals
• Communications
• Electrical Energy
• Natural Gas
• Oil
• Petroleum Products
• Sewage
• Steam
• Storm Water
• Water
Where Buried Facilities May Be Found

An extensive network of buried facilities may be found at depths, ranging from just below the surface to very deep.

- This makes all these facilities susceptible to damage by ground disturbance activities.
Where Buried Facilities May Be Found

These facilities may be found on public or private property, rights of way or easements (buried facilities can be found anywhere at any depth)
Where Buried Facilities May Be Found

In urban areas and on private property, many facilities are within 300mm of the ground surface

- Street light wires are often just below the sidewalk
- Communication and electrical duct banks in downtown cores may be just under the asphalt
Where Buried Facilities May Be Found

The depth of initial cover over buried facilities may be substantially reduced where they have floated in wet areas or due to landscaping, soil erosion or agricultural activity.
How Can Buried Facilities Be Damaged?

• Even minor nicks and gouges on pipelines and other buried facilities are serious

• Corrosion could occur rapidly causing leaks, possible emergency situations, and the interruption of utility and communication services
How Can Buried Facilities Be Damaged?

Negligence, sloppy workmanship, lack of awareness, poor planning, or thoughtlessness, may result in severe penalties to those responsible.

Photo 4: Poor Planning
Possible consequences of damaging a buried facility include:

- Contractor Down Time & Loss of Production
- Costs to Rehabilitate Injured Workers
- Damage to Construction Equipment
- Disruption of Essential Services
- Environmental Contamination
- Evacuation of Residential Areas
- Explosion, Fire, Flood or Toxic Gas Escape
- Inconvenience to the Public
- **Loss of life**
- Loss of Product and Revenue
- Personal Injury
- Third party property damage
Possible consequences of damaging a buried facility include:

- Administration Costs
- Ambulance, Police, Fire, Costs
- Costs to Repair Damaged Facility
- Costs to Rehabilitate Environment
- Costs to Repair/Replace Construction Equipment
- Increased Insurance Premiums
- Increased WCB Assessments
- Fines and/or Jail Terms
- Lawsuits and Legal Costs
- Medical Costs
- Reduced Credibility With the Public
- Reduction in Contractors Ability to be Competitive
Who Risks Damaging Buried Facilities?

Anyone who engages in, or is responsible for a ground disturbance including:

- homeowners
- owners of buried facilities
- farmers
- consultants
- ranchers
- developers
- contractors
- provincial departments
- home builders
- federal departments
- landscapers
- railways
- equipment operators
- municipalities
Who Risks Damaging Buried Facilities Continued

Ground disturbance activity by any of the above groups could result in damage to a buried facility

• the protection of buried facilities and the safety of workers and the general public, any disturbance of the earth must be considered to be a ground disturbance
Typical Pipeline Crossing Flow Chart

STAGES & RESPONSIBILITIES
IN A TYPICAL CROSSING
Prior to any work beginning, the ground disturber must establish if any buried facilities exist in the construction area and inform the facility owner(s).
CHECKING FOR BURIED FACILITIES

Use these sources of information:

- Pipeline License Register, Energy Resources Conservation Board (ERCB), National Energy Board (NEB)
- Alberta One-Call
- Facility Signage or other visible indicators
- Land Title Deeds
- Discussion with landowner
- Municipal Authorities
- Local utilities
- Alberta Environment Water Resources
- Line Locator Sweep/Search
- Survey, plot plans and any other available maps and references
Pipeline License Register

**Most** energy-related pipelines are registered with the Energy Resources Conservation Board (ERCB)

- Plans showing registered pipelines are available from the ERCB
  - Phone (403) 297-8311 Calgary
  - toll free 310-0000
Federal pipelines that cross provincial boundaries are governed by the National Energy Board (NEB) toll free 1-800-632-1663
Alberta One-Call

Alberta One-Call offers a free, computerized service to advise the ground disturber of any one-call member companies that have buried facilities in or near the work area.

Alberta One-Call will provide a listing of these member companies and will advise them of your inquiry.
You are still required to make direct contact with any facility owners who are not members of Alberta One-Call

It’s your responsibility as a ground disturber to ensure that all facility owners have responded to your locate request
Information that Alberta One-Call Requires:

- **TELEPHONE NUMBER:**
- **CALLER NAME:**
- **COMPANY NAME:**
- **ALTERNATE CONTACT NAME:**
- **ALTERNATE CONTACT PHONE:**

**EXCAVATION SITE INFORMATION**

- **CITY OR TOWN:**
- **LOCATION OF WORK:**
- **MAP:** LSD/SG:
- **RURAL:**
  - 1/4 SECTION: __ SEC: __ TWP: __ RGE: __ MERIDIAN: __
  - LSD: __ LOT: __ BLK: __ PLAN: __
- **PROPERTY OWNER’S NAME:**
- **SUBDIVISION NAME:**
- **ADDITIONAL INFORMATION:**

- **TYPE OF WORK BEING DONE:**
- **APPROXIMATE DEPTH:**
- **PUBLIC/PRIVATE PROPERTY:** STREET/LANE FRONT/REAR/SIDE
  (please circle selections in categories above)
- **OTHER:**
- **WORK BEING DONE FOR:**
- **LOCATE TO BE COMPLETED BY:**
- **TIME:**
- **DATE:**
- **MEMBERS NOTIFIED:**

**ASSIGNED TICKET NUMBER:**
(Record & Retain This Number)

- Please complete the above BEFORE you call Alberta One-Call
- Crossing agreements may be required PRIOR to excavating near pipelines/fibre optics
- Remember, you must call all non-member facility owners before you start to dig
- Please give a minimum of 2 full working days notice
- Please remove all stakes or flag markings upon completion of project

Photo 9: Form
THE CROSSING AGREEMENT
(MASTER, PROXIMITY, RECIPROCAL)

Crossing agreements are required by pipeline owners and may be required by other facility owners whose facilities are in a right of way on private land.
THE CROSSING AGREEMENT
(MASTER, PROXIMITY, RECIPROCAL)

Always contact the facility owner for information on whether or not a crossing agreement is required.

It may take up to 21 days for a facility owner to respond to a crossing agreement request.
The crossing agreement, signed by authorized representatives of both the facility owner and the cроссor, must be in effect and on site prior to any work commencing on the right of way.
The first three of the following four sections contain checklists which will assist facility owners with the preparation of the crossing agreement:

- Processing the crossing agreement
- Information normally found in a crossing agreement
- Guidelines for facility drawings attached to the crossing agreement
- Guidelines for issuing Work Permits
The guidelines are widely accepted as industry standards.

Engineering or other special considerations may require some changes in the figures quoted:

- The procedures outlined in these sections should be followed for any work considered by the facility owner to be of a major nature.
- Minor work or simple crossings that involve no excavation may at the discretion of the facility owner, be handled by other forms of agreement.
Processing The Crossing Agreement

A legal land description of the intended crossing must be provided by the crossor before the facility owner can process the crossing agreement.
Example Urban Lot
Easement/Right-of-Way;
Lot 22 Block 4

Lot 13
Lot 12
Lot 11
Lot 10

Lot 22
Lot 21

House
Garage

High Pressure Gas Line
Drainage Swale
Drainage Swale
Utilities (Gas, etc.)

Note: The red line marks the property boundary. RW Plan means Right-of-Way Plan.
Example: Rural Land Easement/Right-of-Way; Quarter Section
SE 1/4 Sec 32-53-23-4

This quarter section has five instruments registered on the title, two of which are utility rights-of-way. Any proposed development of the property could face severe restrictions. See the “Certificate of Title” for this quarter section on page 8.

Note: Shaded areas are rights-of-way.
Processing The Crossing Agreement

Each company has its own structure; however, the facility owner should prepare a routing slip that organizes input from the following (as appropriate):

- Recipient of the crossing request
- Crossing coordinator
- Drafting department
- Legal department
- Engineering
- Land department
- Secretarial assistance
- Final check
- Signature of crossor’s representative
- Signature of facility owner’s representative
- Final distribution
Guidelines For Facility Drawings Attached To The Crossing Agreement

The facility owner should check whether the crossing drawings require and contain the following information:

• Detail drawings or other suitable means to show facility location (property lines and descriptions, geographic and physical landmarks)
Guidelines For Facility Drawings Attached To The Crossing Agreement

The facility owner should check whether the crossing drawings require and contain the following information:

• Detailed drawing of exact area of crossing including measurements from fixed reference points
The facility owner should check whether the crossing drawings require and contain the following information:

- A transverse cross section showing the following:
  - diameter and material of existing facility(s)
  - profile of proposed disturbance
  - clearance required between existing facility(s) and foreign structures
Guidelines For Facility Drawings Attached To The Crossing Agreement

A longitudinal cross section to show:

- changes in elevation
- clarification of transverse cross section
Guidelines For Facility Drawings
Attached To The Crossing Agreement

A plan and profile view showing the following:

- direction of existing facility(s)
- direction of proposed crossing
- angle between crossing and existing facility. (as close as possible to 90° and not less than 45°)
- top of facility to top of road grade measurement
- location and color of coding of markers
- location and depth of ramps
- location of temporary fencing
- location of facility exposure points
- expiry date
Guidelines For Facility Drawings Attached To The Crossing Agreement

**NOTE:** The drawing should be clearly marked with a note stating that no ground disturbance is permitted within the controlled area or right of way until the facility is hand exposed and all markers, fences and ramps are in place.
ERCB Directive 066

- Requirements and Procedures for Pipelines
- Designed to ensure that ERCB Field Centre staff carry out pipeline project inspections in a consistent manner throughout Alberta
- Inform industry personnel about what is required to achieve a satisfactory ERCB inspection
- The directive is primarily addressed to Field Centre inspectors
28. Crossing Agreements

The operator has obtained approval in writing from the licensee of an existing pipeline prior to a ground disturbance taking place within the right-of-way of the existing pipeline or within 5 m of an existing pipeline if a right-of-way does not exist (Pipeline Regulation, Sections 20.1 and 22(1))
29. Existing Pipelines Marked

• The position and alignment of an existing pipeline are marked with clearly distinguishable warning signs at adequate intervals before a ground disturbance takes place in controlled areas (Pipeline Regulation, Section 21(2))

• A controlled area extends 30 m on each side of an existing pipeline (Pipeline Regulation, Section 20)
29. Existing Pipelines Marked

A pipeline right of way may contain more than one pipeline. The safety zones on either side of the pipelines are 30 metres (100 feet) wide. The depth of cover over pipelines may vary.
55. Crossing Agreements

If a ground disturbance is to take place in the right-of-way of a pipeline or within 5 m of a pipeline where there is no right-of-way, the licensee has an approval in writing (Pipeline Regulation, Section 22(1))
Alberta Pipeline Act

A person proposing to undertake or undertaking a ground disturbance shall, before commencing any work, operation or activity,

(a) take all precautions reasonably necessary
   (i) to ascertain whether a pipeline exists within
      (A) the area in which the person proposes to undertake or undertakes the ground disturbance, and
      (B) the distance, prescribed in the regulations, from the area referred to in paragraph (A),
   (ii) to determine who is the licensee of a pipeline in existence within the area or distance referred to in clause (a)(i), and

(b) notify the licensee referred to in clause (a)(ii) of the nature of the proposed ground disturbance and the proposed schedule for the undertaking of that ground disturbance in accordance with the regulations
Ground Disturbance

32(1) A person proposing to undertake or undertaking a ground disturbance shall, before commencing any work, operation or activity,

(a) take all precautions reasonably necessary
– (i) to ascertain whether a pipeline exists within
  • (A) the area in which the person proposes to undertake or undertakes the ground disturbance, and
  • (B) the distance, prescribed in the regulations, from the area referred to in paragraph (A),
– (ii) to determine who is the licensee of a pipeline in existence within the area or distance referred to in clause (a)(i), and

(b) notify the licensee referred to in clause (a)(ii) of the nature of the proposed ground disturbance and the proposed schedule for the undertaking of that ground disturbance in accordance with the regulations.
A licensee shall, on the request of a person proposing to undertake or undertaking a ground disturbance, provide to that person any information respecting a pipeline in existence within the area or distance referred to in subsection (1)(a)(i) that is contained in the records of the licensee and is required by that person for the purpose of complying with subsection (1) and the regulations.
32(3) A licensee of a pipeline that may be or is affected by a ground disturbance shall provide to the person proposing to undertake or undertaking the ground disturbance any assistance that the person may reasonably require to enable the person to comply with this Act and the regulations.
Alteration or relocation

33(1) When in its opinion it would be in the public interest to do so, the Board may, on any terms and conditions it considers proper, direct a licensee

(a) to alter or relocate any part of the licensee’s pipeline,

(b) to install additional or other equipment on the licensee’s pipeline, or

(c) to erect permanent fencing on the right of way or provide any other protective measures within the controlled area that the Board considers necessary
Alteration or relocation

33(2) Where the Board directs the alteration or relocation of a pipeline, the installation of additional or other equipment on a pipeline, the erection of fences or the provision of other protective measures within the controlled area, it may order by whom and to whom payment of the cost of the work and material, or either, shall be made.
Alteration or relocation

33(3) If a dispute arises as to the amount to be paid pursuant to an order under subsection (2), it shall be referred to the Board and the Board’s decision is final.
Information Normally Found In the Agreement

The facility owner should check whether the crossing agreement requires, and contains, the following information:

- date of agreement
- owner’s name
- applicant’s name
- name of facility
- location of facility (legal land description)
- size (outside diameter) and material of pipe
- purpose of crossing facility
- drawing numbers
- name and phone number of crossing coordinator (crossor)
- name and phone number of construction supervisor (contractor)
- name and phone number of person to contact before construction (owner)
Information Normally Found In the Agreement

The facility owner should check whether the crossing agreement requires, and contains, the following information:

- expiry date of agreement
- notice required before work commences (at least 48 hrs.)
- notice required before backfilling (at least 24 hrs.)
- method of exposing facility
- liability for damage
- signature of applicant

**NOTE:** See “Guidelines For Facility Drawings Attached to the Crossing Agreement” in Section 3.3 for engineering specifications that may be included. The contractor must keep his copy of the agreement at the work site until work is completed