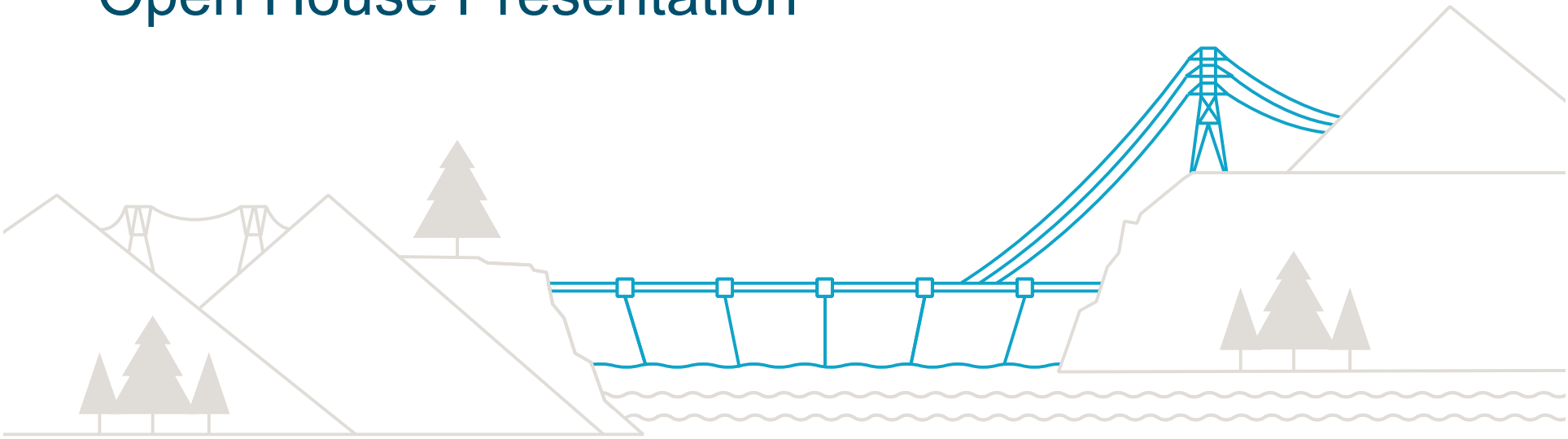
Fernie Substation Upgrade Project

Open House Presentation

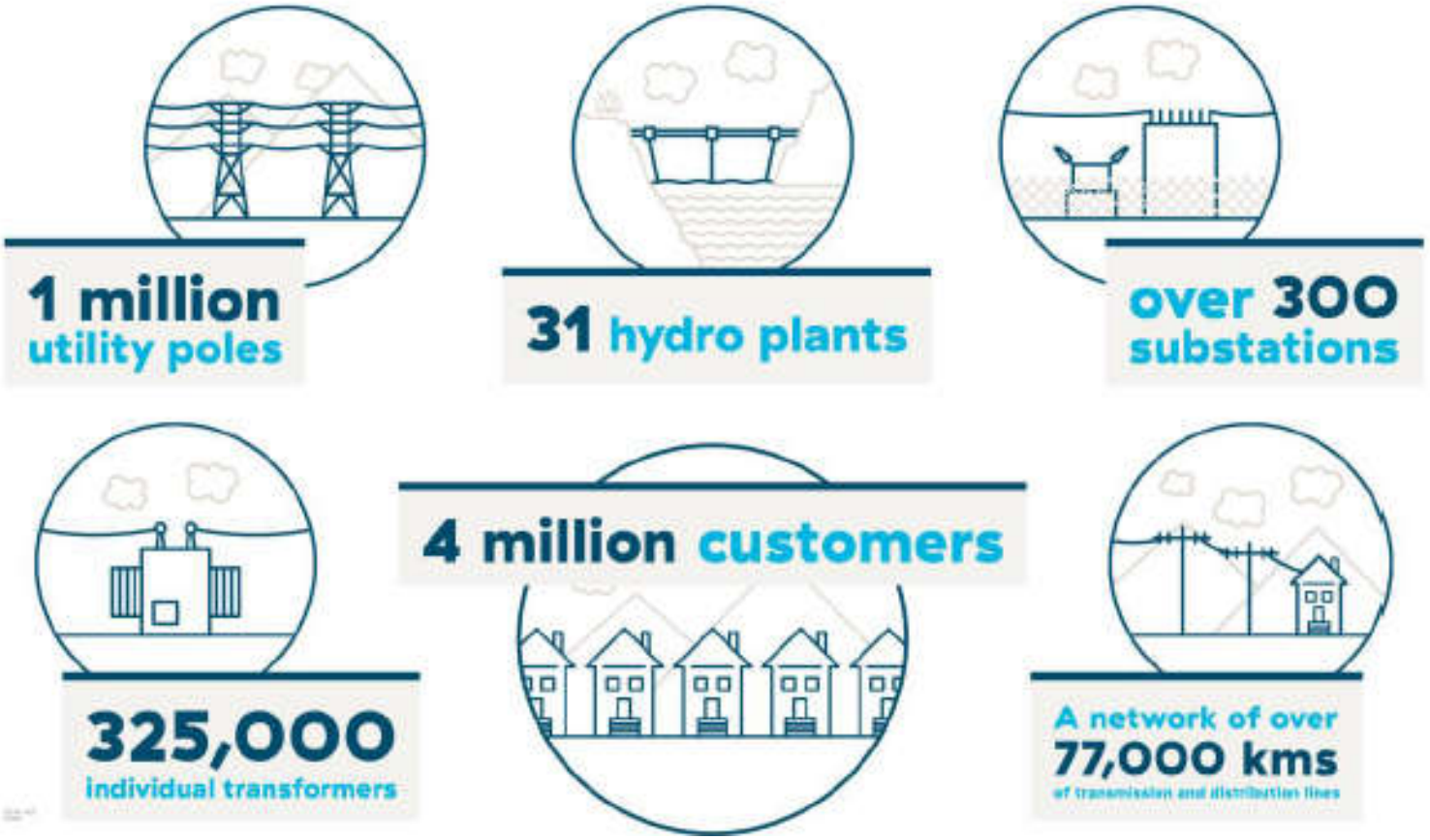


April 19, 2016

BC Hydro
Power smart

BC Hydro's system

We have a large and complex system serving 95% of the province's population and 4 million customers.



Capital project investment

- Much of our system was built in the 1960s, ‘70s and ‘80s.
- The average age of our hydroelectric generating facilities is 45 years.
- Over the next 10 years, we’re spending an average of $2.4 billion a year which will create 123,000 person years of employment and contribute $13 billion to B.C.’s GDP.
- This includes projects large and small throughout B.C. - from seismic upgrades to increased transmission.

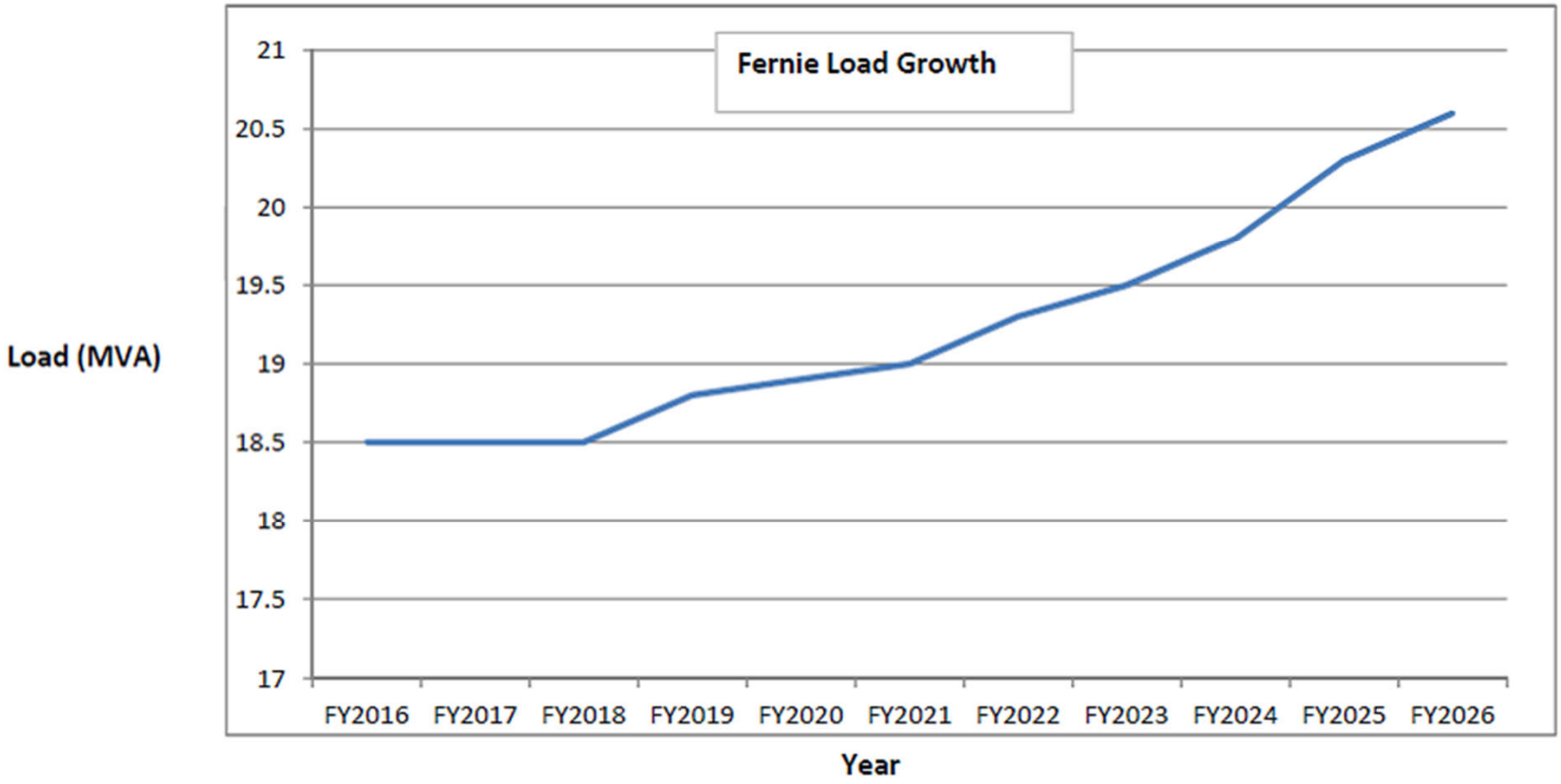
Meeting the need for electricity in Fernie

We're upgrading our substation, built in the early 1970s, to meet current needs and future growth so we can:

- Continue providing clean reliable power to about 5,000 homes and businesses in Fernie and the surrounding area
- Replace equipment that is aging and reaching capacity
- Enhance reliability by reducing community-wide outages and restoration times

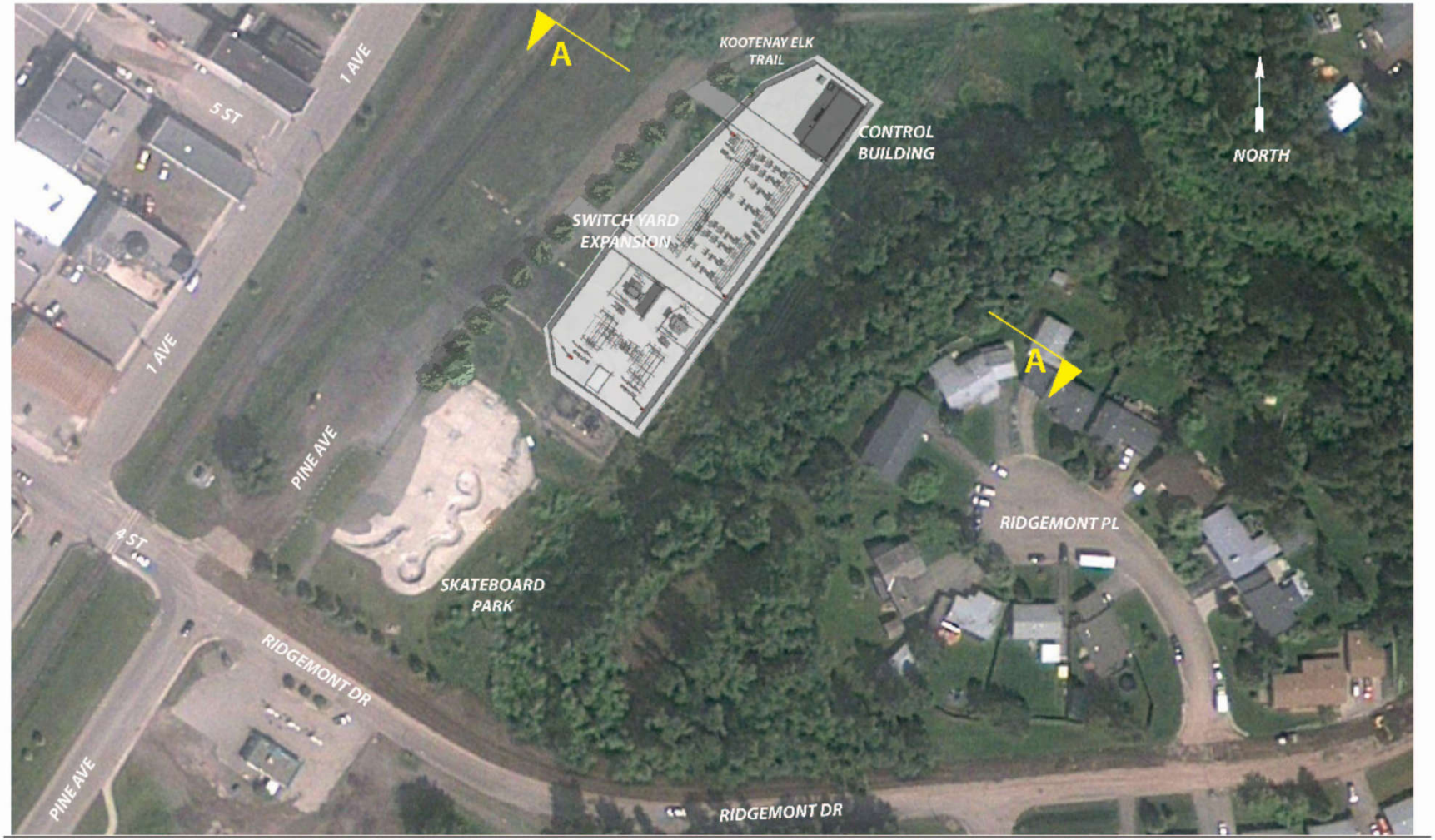
Growing electrical demand

Demand for electricity in the Fernie area is forecasted to increase by approximately 11% in the next 10 years.



Existing Fernie Substation

Substation site plan



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FERNIE SUBSTATION: SITE PLAN

JULY 2015

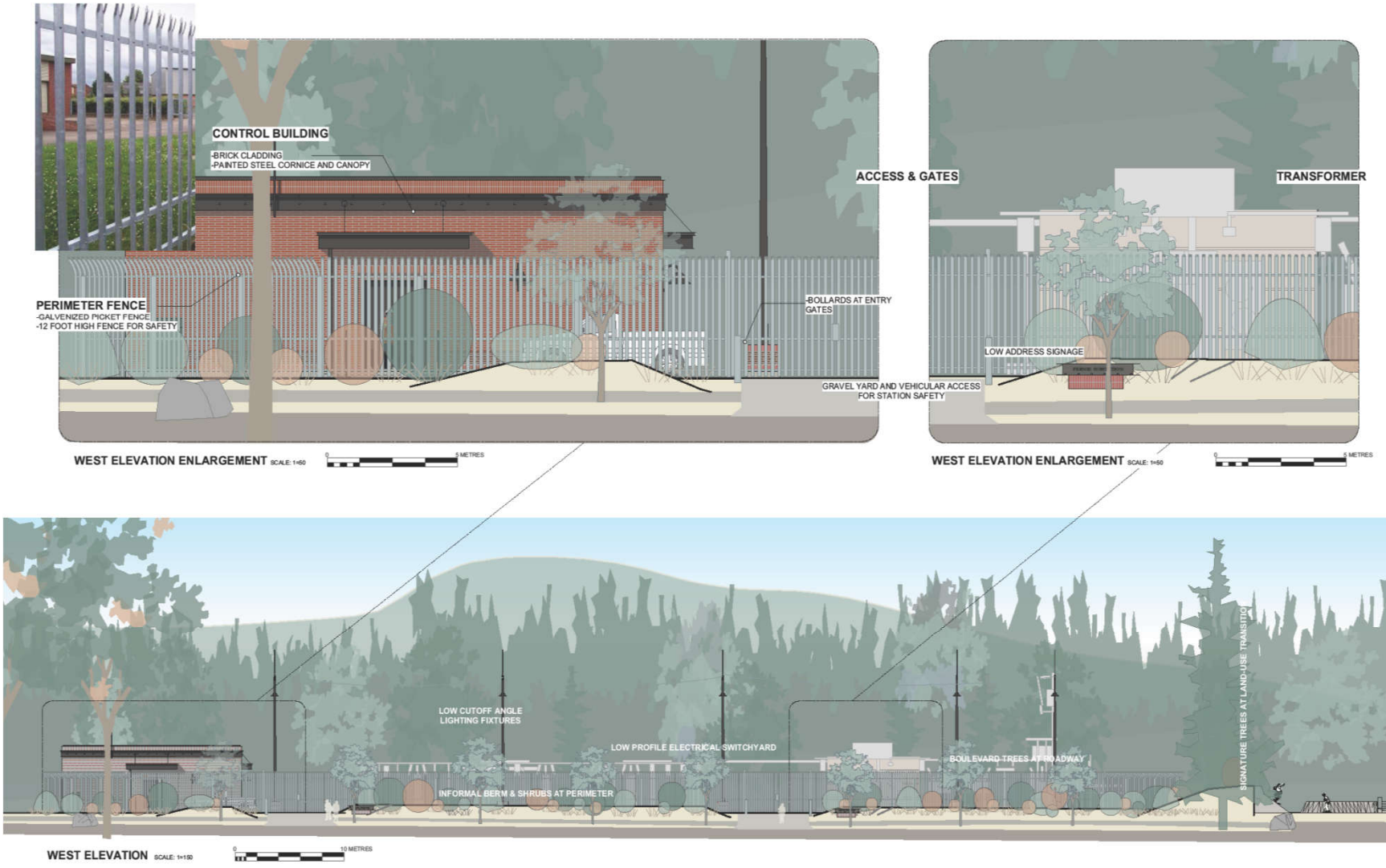
A-01

What's happening

As part of the Fernie Substation upgrade, we'll:

- Identify through discussions with the City the best location for a construction laydown area
- Expand the substation on the north-west side
- Build a new control building and take down the old one
- Bring in a mobile transformer during construction
- Replace one of the old transformers with a new larger one
- Add new equipment and improved technology
- Install new metal fencing around the substation
- Change out the substation's old wood poles with new steel ones
- Add extensive landscaping around the substation

Substation design



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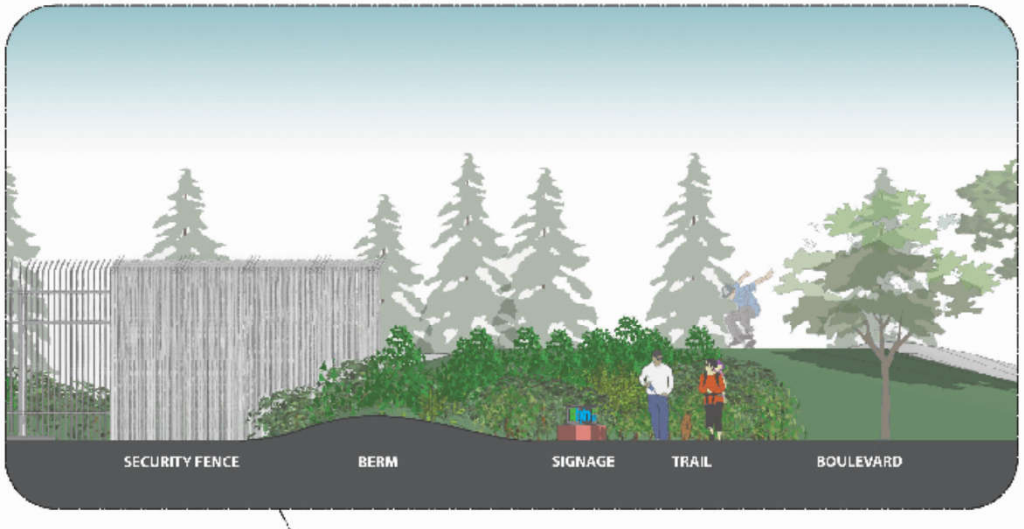
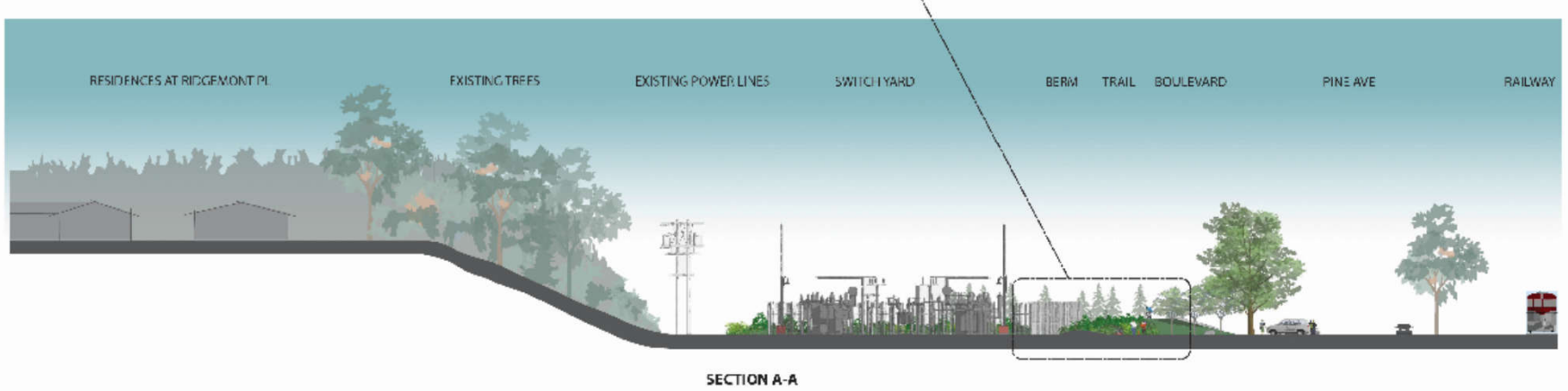
FERNIE SUBSTATION: SITE ELEVATION -WEST

JULY 2015
SCALE: AS SHOWN

A-03
R-01

Substation site section





SECTION A-A

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FERNIE SUBSTATION: SITE SECTION

A-02

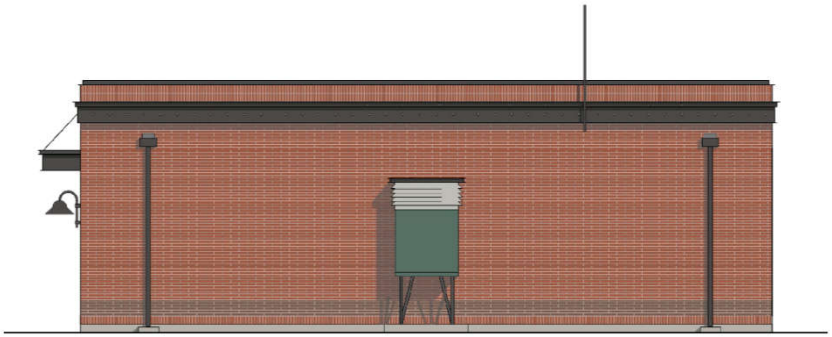
Design highlights

Design elements, consistent with Fernie's downtown heritage theme, for the upgraded substation include:

- Bricks and complementary trim and detail for new control building and other areas
- Symmetrical door openings, steel canopies and a flat roof with high parapets and steel cornice details for new control building
- Site and exterior building lighting that is dark sky friendly, with brackets similar to municipal street light fixtures
- Steel picket fence that provides a more traditional character and enhanced security

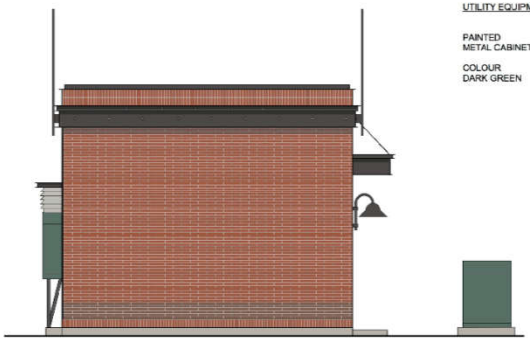
Building elevations

SOUTH ELEVATION



EAST ELEVATION

WEST ELEVATION



NORTH ELEVATION

MATERIAL LEGEND

PAINTED STEEL

CORNICE, CANOPIES AND MISCELANEOUS STEEL

STRUCTURAL SECTIONS:

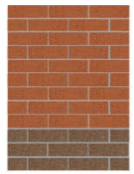
COLOUR DARK GREY

EXPOSED BOLTED CONNECTIONS

BRICKS

IXL METRIC MODULAR CLAY BRICKS

RED: 101 RED



GREY BROWN: AUTUMN LEAF

UTILITY EQUIPMENT

PAINTED METAL CABINETS

COLOUR DARK GREEN

0 5 METRES

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FERNIE SUBSTATION: BUILDING ELEVATIONS

OCTOBER 2014

SCALE 1=50

A-05

R-01

Schedule and activities

Key steps	Schedule (subject to change)
Announcement of project	Completed October 2013
Design of substation upgrade and project planning	Ongoing
Property purchase from City of Fernie for substation expansion	Completed July 2015
Community open house	April 2016
Site clearing and preparation	Fall 2016
Construction start	Winter 2016/2017
Upgraded substation in service	Spring 2018
Complete landscaping	Summer 2018

Completed environmental and archaeological studies

The following has been completed to date:

- Environmental review
- Archaeological overview assessment
  - Preliminary field reconnaissance
  - Low risk site
  - Results determined that no additional archaeological work is necessary
- Soil and initial groundwater sampling
  - Waste fill associated with historical coal coking identified

Upcoming environmental studies

Activities planned for spring 2016:

- Watercourse assessment
  - Setback and permitting requirements on Kootenay Elk Marsh
- Wildlife/Vegetation field assessment
  - Protected wildlife species
  - Protected plant species
- Groundwater sampling
  - To determine if groundwater management will be needed during construction

Protecting the environment

Environmental management and mitigation measures during construction will include:

- Project-specific mitigation measures based on results of field assessments
- Implementation of a site-specific Environmental Management Plan
- Site clearing outside of the bird nesting season
- Environmental monitoring

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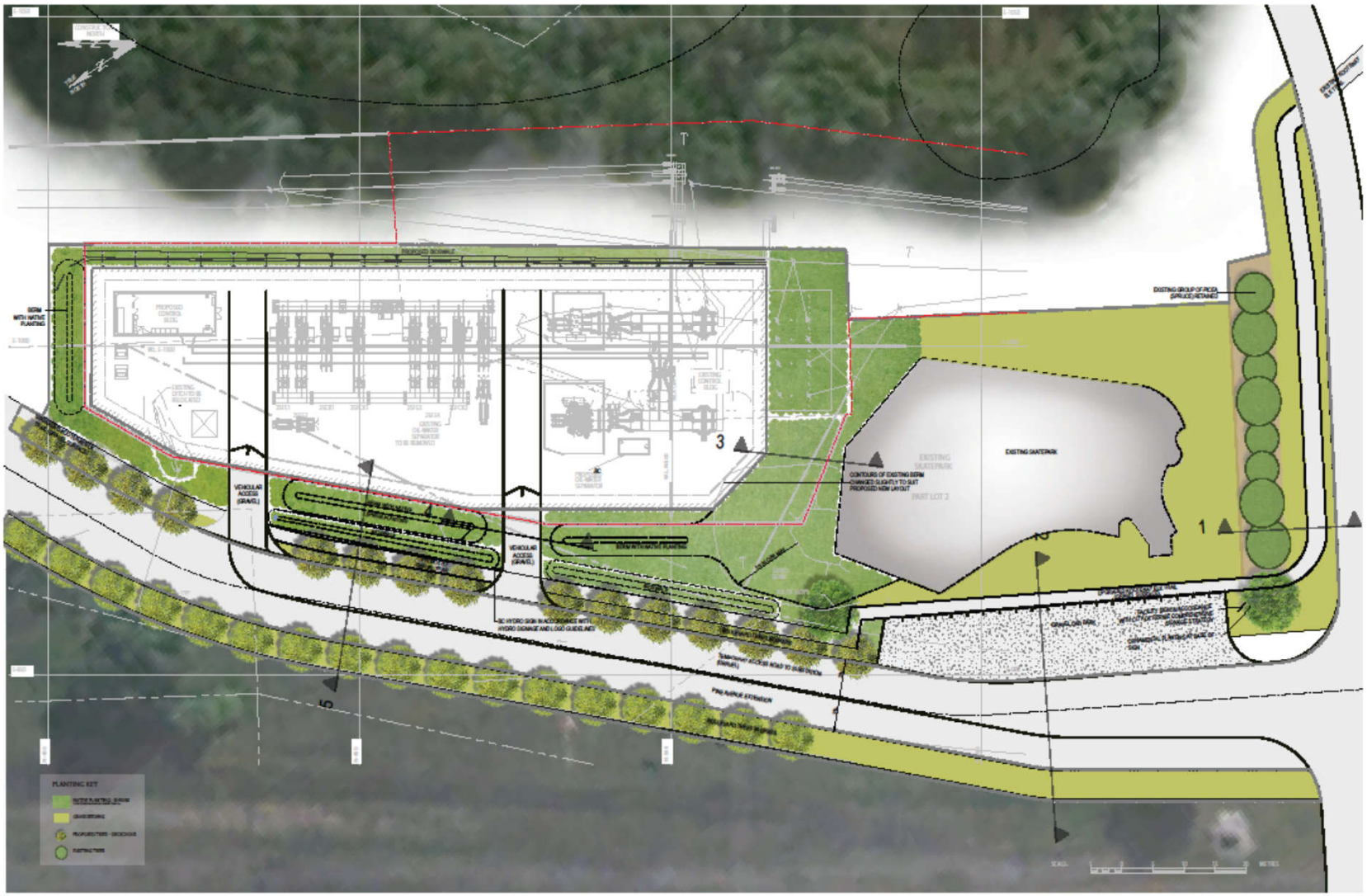
Design plan for final upgrade

VIEW FROM PINE AND RIDGEMONT

Landscaping plan



Involving the community

We'll continue to engage with the City of Fernie, local businesses and residents and keep the community informed through:

- Project notices and newspaper ads
- Presentations to business and community groups
- Project website: bchydro.com/ferniesub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