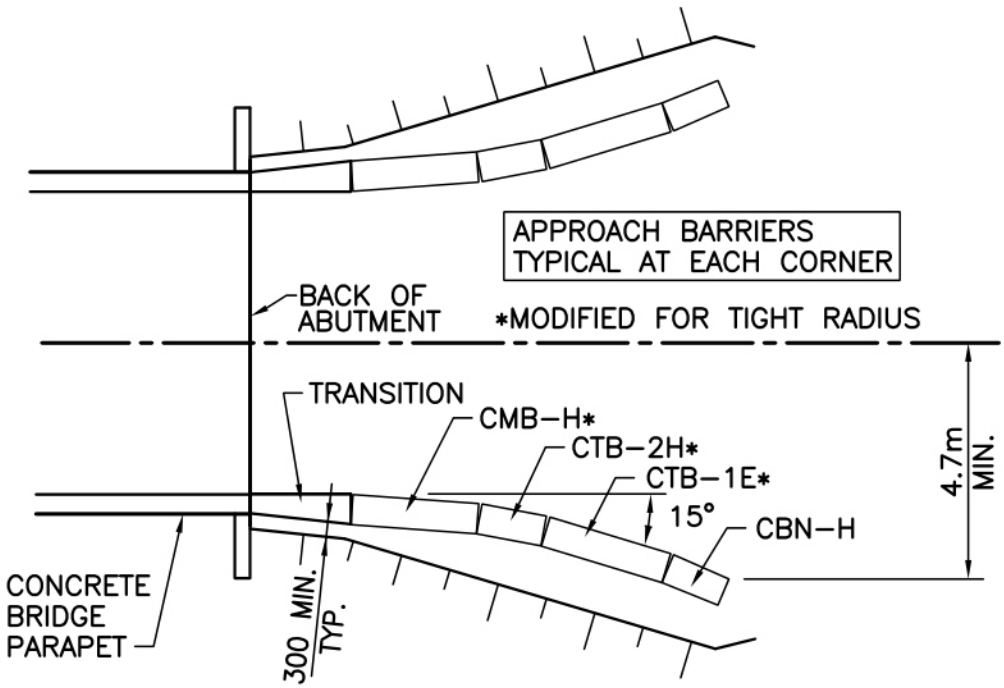


PLAN
SCALE 1:150

REVISIONS

A	
B	

BRITISH COLUMBIA
Ministry of
Transportation

PEACE HIGHWAY DISTRICT
TRIAD BRIDGE PROJECT

TYPICAL LAYOUT FOR CONCRETE APPROACH BARRIERS

DRAWN BY	WHK	05/04	APPROVED:	SKETCH No.
CHECKED BY				

CANCEL PRINTS BEARING EARLIER LETTER

Bridge/Culvert Design and Construction Criteria

1) Design Personnel

The structure design shall be performed by a Professional Engineer(s) with previous bridge design experience. The applicant shall notify the Ministry regarding the chosen design engineers prior to starting work.

Geotechnical and hydraulic reports required for the project will be prepared by Professional Engineers with previous experience in foundation and hydraulic design for bridges and culverts.

2) Codes

The structure will be designed in accordance with CAN/CSA-S6-06 – Canadian Highway Bridge Design Code (CHBDC)

3) Standards

The use of MoT design and construction standards shall be followed including;

i) Manual of Bridge Standards and Procedures for Bridge Design

ii) Standard Specifications for Highway Construction

iii) Guidelines for Design and Construction of Bridges on Low-Volume Roads (when applicable)

4) Loads

The structure shall be designed for a BCL-625 live load.

The dead load shall include 1.2 kN/m2 allowance for a future 50mm wearing surface

5) Design Service Life

The structure shall be designed for a 75 year service life.

6) Design Operating Speed

The structure shall be designed for a 50 km/h operating speed.

7) Deck Width

The structure shall be designed with a deck width of 5.4m clear (One 3.6m lane with 0.9m shoulders).

8) Sidewalk

No sidewalk is required on the bridge.

9) Wearing Surfaces

Bridge structures shall be designed with 75mm concrete cover over the top bar reinforcing. The asphalt wearing surfaces shall be 90mm thick over an approved Ministry waterproofing membrane.

10) Rails and Flares

Bridge rails and transitions to bridge flares will typically be designed in accordance with the requirements of CAN/CSA-S6-06 to the appropriate PL category. Bridge flare geometry will be in accordance with the "Highway Engineering Design Manual" except that low volume road flares may be designed in accordance with the drawing attached titled, "Typical Layout for Concrete Approach Barriers"

11) Reinforcing Steel

Reinforcing steel on the inside face of parapets and in the top mats of slabs is to be epoxy coated.

12) Structural Steel

Where structural steel is used for superstructure elements, main structural members shall be 350AT. Bracing members may be 350A. Superstructure members shall be coated locally at joints and at bridge ends for increased corrosion resistance. All weathering steel in contact with galvanizing steel shall be coated. Drip bars shall be incorporated on bottom flanges. Technical Bulletin TB – 307 'Uncoated Weathering Steel Structures' by Bethlehem Steel shall be followed.

13) Additional Provisions for Culverts

If the culvert spans 6 meters or more, the Ministry's Technical Circular T-7-90 shall apply. In addition, soil-steel structures shall be designed using the "Duncan's Method" as outlined in "Design Procedures for Buried Flexible Metal Culvert Structures". Backfill shall meet chemical limitation set by the Ministry. The Proprietor's Engineer shall be responsible for ensuring that all materials shall meet the design specifications as indicated in the Design Criteria and in the Designer's Specifications. The engineer will also be responsible for ensuring the foundation, bedding, field assembly, and backfilling to subgrade elevation of the structural steel pipe and binwalls meet the Designer's Specifications.

14) Utilities

The structure shall be designed to accommodate existing or proposed services in accordance with the Ministry's Utility Policy Manual, Chapter 14.

15) Drawings

Drawings shall be prepared in AutoCAD in accordance with Ministry Standards. Drawing numbers shall commence with xxxx-01, where xxxx is the bridge/culvert number provided by the Ministry. No structure number is required for culverts less than 3m in diameter.

16) Design and Construction Submissions

The applicant shall submit to the ministry for review and approval:

-conceptual design
-70% complete drawings
-100% complete drawings
-Construction Specifications

A hydraulic and geotechnical report shall be prepared indicating hydraulic and geotechnical project requirements for inclusion in the above structure design and construction submissions. The hydraulic report shall address any navigable water clearance requirements in addition to the structure hydraulic issues.

Prior to Construction the applicant shall advise the Ministry of the name of the contractor secured by the applicant to build the structure, along with his construction schedule, and the name of the sub-contractors supplying the superstructure elements.

Upon completion of construction, the applicant shall provide a letter from the design engineer stating that the bridge has been constructed in conformance with the design and with the Ministry's requirements.

Within three months of completing the bridge construction, the applicant shall supply the Ministry with a set of full size bridge drawings sealed by the design engineer indicating any "as-built" changes marked.

17) Environmental Approvals

The applicant shall be responsible for submitting the design to the relevant environmental agencies for environmental approval of the proposed works.

Technical Circular T-7-90
December 24, 1990

TO: ASSISTANT CHIEF HIGHWAY ENGINEER
ALL H.Q. DIRECTORS: Prof. Services, Planning & Major Projects
ALL REGIONAL MANAGERS: Prof. Services, Planning & Operations
ALL DISTRICT HIGHWAYS MANAGERS

SUBJECT: PROPRIETARY STRUCTURES/PRODUCTS CONSTRUCTION INSPECTION

PURPOSE:

To ensure that structures and products are built and used according to the supplier's specifications in those cases where construction and application methods are critical to the successful performance of those structures and products.

BACKGROUND:

Construction supervision and inspection is used to ensure that design plans and specifications are adhered to. Construction methods and material properties must be compatible with design assumptions.

For some structures, the construction method is particularly critical if the structure is to perform as intended by the designer. Construction methods can be specified but if such specifications are unusual or are too detailed, normal inspection procedures are often inadequate. Yet, the ultimate safety of such structures, as well as the validity of any explicit or implied warranties can only be protected if special care is taken during construction. Therefore, extra inspection and construction supervision is required for certain structures.

Similarly, the intended performance of some materials is critically dependent on how they are used and applied. The required extra care is normally assured by requiring skilled or certified applicators.

PROCEDURE:

Construction/installation of the following products or systems shall be supervised by the designer or supplier. This inspector will report all required changes and/or comments to the Project Supervisor. The purchase price of these products or systems shall include the cost of supervision and inspection.

All structural systems listed below require each design to be approved by a Professional Engineer.

PRODUCT LIST:

(1) Soil - Steel Structures with spans of 6 m or more.
(2) Tech Span (TM) Structures by Reinforced Earth Company
(3) Reinforced Earth retaining walls higher than 5 m.
(4) Reinforced Soil walls higher than 2 m.
(5) New or unique coating and painting projects (see also Sec. 216 of General Specifications).

The above list may be amended from time to time and does not limit the use of similar inspection requirements for nonlisted products.

CONTACT:
L. deBoer, P. Eng.
Assistant Chief Highway Engineer

E.A.Lund, P. Eng.
Chief Highway Engineer

c.c. A.D.M. Highways Operations
c.c. A.D.M. Planning & Major Projects
c.c. All Regional Directors

Province of
British Columbia

Ministry of
Transportation
and Highways
NORTH ISLAND DISTRICT

550 Comox Road
Courtenay, British Columbia
V9N 3P6
Telephone: (604) 334-6951
Fax: (604) 334-1291
Development Approvals
Fax: (604) 334-1390

File: 63-20-749

February 21, 1995

s. 22

RE: ACCESS TO YOUR PROPERTY; LOT A, PLAN 59275, BLOCK 29, COMOX DISTRICT VIA STURGESS ROAD

Approval is given for the construction and maintenance of a driveway standard trail, and a one lane bridge across Black Creek, using the Comox Logging Right of Way via Sturgess Road to access this property.

As a condition of this approval we require that you also construct and maintain a gate at the north end of the trail to close vehicular use of the trail to the public. We require that you allow use of the bridge to horseback riders, pedestrians, cyclists, etc., but only yourself and visitors to your property may use the bridge with a vehicle.

If you have any further questions, please feel free to contact me.

D.A. Olson
Area Manager

DAO/sp

Subd. File: 22446

BRITISH COLUMBIA

File: 20684

June 20, 2001

s. 22

Dear s. 22

Re: Driveway Access Works on Condensory Extension Road, Sturgess Road & Spike Road to serve the East 1/2 of Section 24, TP 7, Plan 552, Exc. that part in Plan 205 R/W; the Fractional SE 1/4 of Section 25, TP 7, Plan 552F lying to the East of Plan 205 R/W, that part of the NW ¼ of Section 19, TP 6, Plan 552E lying South & West of Plan 205 R/W, all in Comox District

Further to our on-site meeting of June 4th, 2001 and your application of May 23rd, 2001 to the above-noted. This office has reviewed your proposal and is prepared to grant a 180-day approval-in-principle prior to issuance of any formal permits, subject to the resolution of the following concerns:

1) Applicant to submit written proof of approval from Fisheries & Oceans Canada for the following:

   i) All proposed culvert road dedication crossings as identified during our June 4th, 2001 on-site meeting.
   ii) All proposed re-decking works for the Black Creek bridge structure.

   See attached information to contact the local Department of Fisheries & Oceans Officer.

2) Applicant to submit written acknowledgement that the portion of Condensory, Spike and Sturgess Roads will be constructed to driveway access only and that the Ministry of Transportation will not maintain, construct or spend public monies on those portions of Condensory, Spike and Sturgess Roads not constructed to a Ministry of Transportation built and approved road standard.

3) Applicant to erect a Type 2 Gate structure at the location on Condensory Road where the existing Timberwest logging access commences south of the subject property.

.../2

Ministry of Transportation and Highways
North Island District
Mailing Address: 550 Comox Road Courtenay BC V9N 3P6
Telephone: (250) 334-6951
Facsimile: (250) 334-1291
Development Approvals
Facsimile: (250) 334-1390

4) Applicant to erect a Type 2 Gate structure at the location where Sturgess Road intersects with Condensory Road.

5) Applicant to install W-14 Checkerboard sign on each gate structure, (see attached).

6) All gate structures to be painted with a fluorescent yellow paint to the satisfaction of the Ministry Representative.

7) The application for permission to construct works on the Ministry of Transportation road right-of-ways will be covered under one permit.

8) The upgrading work on Condensory Road to be constructed to the Ministry of Transportation's Driveway Access Standards only. Driveway works to include the following:

   i) Driveway access surface to be constructed with 150mm (6") of select granular gravel material to the satisfaction of the Ministry of Transportation Representative.
   ii) Access width to be a minimum 3.0 - 4.0m, unless specified by the Ministry of Transportation.

9) The individual accesses to each lot will be covered by individual permits, (see attached application forms).

10) All gates to have locks and a copy key is to be given to the Ministry of Transportation and the emergency service groups.

Should you wish to discuss the above, please do not hesitate to contact me at (250) 334-6967.

Yours truly,

Cal Fradin
District Development Technician

CFM
enclosures

PRIVATE BRIDGE REHAB JULY 2010 STURGESS RD

From: s. 22
To: Carter, Kevin TRAN:EX
Subject: Re: Sturgess Road, Black Creek
Date: March 2, 2016 7:21:13 AM

Hi Kevin,

Could you please forward me copies of the documents you've mentioned in your previous email, I've highlighted them below.

Thank you,
s. 22

On Tue, Feb 16, 2016 at 5:24 PM, Carter, Kevin TRAN:EX <Kevin.Carter@gov.bc.ca> wrote:

> Hi s. 22
>
> Thanks for your email requesting information concerning Sturgess Road in Black Creek. The section of access you refer to as the south end of Sturgess Road is actually an extension of Condensory Road and exists as an unopened right of way from the end of Spike Road which is located off of Railway Avenue.
>
> You have asked for policy documents regarding your access and the bridge over Black Creek. The policy actually applies to accesses and Ministry held rights of way throughout the Province of British Columbia. The Ministry of Transportation and Infrastructure(MoTI) will not consider taking over maintenance of infrastructure unless it is constructed to "Ministry Standard". In this case Ministry Standard would include widening, establishment of drainage(culverts and ditches) and capping of the road with suitable material to provide a stable and free drained surface that could be maintained to the Provincial Specification. Another large part of the standard would be construction of a bridge over Black Creek that meets current MoTI standards for safety, loading, environmental and hydro technical design.
>
> Documentation of the history of Condensory Extension is somewhat vague, likely due to periods of very little use and development in the area. From our records it was originally the right of way of Comox Logging and Railway Company's railway, which was constructed to access timber within Block 29, which encompasses a large area between Courtenay and Campbell River. The railway was removed in the early 1950s and like many railway rights of way was acquired by the Transportation Financial Authority(TFA), which in essence is a provincial agency whom holds property in "fee simple" for future planning use. In June 1982 this corridor was "Gazetted" as public road. At this time, even though taken into public ownership, the corridor remained, as it currently is, unopened as defined by the Provincial Road Classification System. The local MoTI office has no documentation regarding the history of the bridge over the Black Creek prior to 2001 when application was made to complete driveway works, which included installation of culverts and re-decking works for the Black Creek bridge structure to satisfy Fisheries & Oceans Canada requirements. Another key point from this 2001 application is the following; *Applicant to submit written acknowledgement that the portion of Condensory, Spike and Sturgess Roads will be constructed to driveway access only and that the Ministry of Transportation will not maintain, construct or spend public monies on those portion of Condensory, Spike and Sturgess Roads not constructed to a Ministry of Transportation built and approved standard.* It is important to note

that in the same application it also states; *Individual accesses to each lot will be covered by individual permits,* which is consistent today, this can lead to disconnection through transfer of ownership as the permit is to the individual, not attached to the property.

The policy I briefly discussed with you regarding subdivisions and the MoTI requirement to hard surface a road is; the developer(not the Ministry), as a condition of subdivision, is required to hard surface a road when an individual subdivision is created of five(5) or more lots, with one lot being two(2) hectares or less.

In summary you have asked for information regarding two separate issues, firstly requesting of hard surfacing of the existing opened and maintained Sturgess Road. Hard surfacing could occur if a new individual subdivision as described above was proposed and approved. Secondly, requesting information on the ownership of the bridge and roadway located on Condensory Extension and the potential for regular maintenance provided by MoTI. As stated, Condensory Extension remains as a publicly owned right of way, not constructed to MoTI standards for maintenance. It has been permitted in the past as a driveway access only, with clear acknowledgement that MoTI will not spend public monies to construct or maintain. This condition will remain until such time as an applicant agrees to construct the access, including bridges and drainage structures, to current MoTI standards.

I will contact you to discuss as there can be a large amount of information to try and condense, and added information available through Comox Valley Regional District.

Thanks,

Kevin Carter

A/Operations Manager

Ministry of Transportation and Infrastructure,

Vancouver Island District

SA03 North Island

250-334-6959 office

250-218-9133 cell

From: s. 22
Sent: Thursday, January 28, 2016 12:33 PM
To: Carter, Kevin TRAN:EX
Subject: Sturgess Road, Black Creek

Good afternoon Kevin,

Thank you for returning my call yesterday afternoon, I'm pleased to know that you are already well aware of the issues concerning Sturgess road and the residents. This will hopefully make a solution that much quicker to come to.

My first and foremost request is that i'd like to have a copy of the documents pertaining to the policy you mentioned regarding the bridge itself and the south end of Sturgess road.

I would also like a copy of all the background material you have on Sturgess road and the history of it. Such as it once being used as a railroad track, the transitional ownership of the bridge, and any property maps for the area.

I believe it would also be helpful to see the documents you spoke of regarding exact numbers of residents/ traffic/ subdivisions that are needed to have a road paved.

This way we can all be on the same page with the same information as we move forward with a solution.

Thank you,

s. 22

From: Sorensen, Jordie TRAN:EX
To: Fagervik, Kirsten TRAN:EX; Flynn, Andy TRAN:EX
Cc: Molony, Anne TRAN:EX; Carter, Kevin TRAN:EX
Subject: RE: Sturgess
Date: February 20, 2017 10:51:05 AM
Attachments: photo 1.jpg
photo 2.jpg
photo 3.jpg
photo 4.jpg

Hi Kirsten,

Thanks for the heads up on the incoming call

Just to let you know that this is not a MoTI bridge and was placed by a former resident (never to MoTI standards). s. 22

Any further communication regarding this area should be refer to Anne Molony and Kevin Carter as they are working with this group on resolving the issue.

Regards

Jordie Sorensen

-----Original Message-----
From: Fagervik, Kirsten TRAN:EX
Sent: Monday, February 20, 2017 10:22 AM
To: Flynn, Andy TRAN:EX; Sorensen, Jordie TRAN:EX
Subject: FW: Sturgess

Hi Andy and Jordie,

I had a gentleman s. 22 phone me this morning regarding a bridge on the Sturgess Rd right of way. I gave him your contact information and here are the pictures of the bridge.

Thanks
Kirsten

Kirsten A. Fagervik
Provincial Approving Officer
Vancouver Island District

-----Original Message-----
From: s. 22
Sent: Monday, February 20, 2017 10:13 AM
To: Fagervik, Kirsten TRAN:EX
Subject: Sturgess

Hello Kirsten .

Thank you for taking my call .

Here are a few photos of the subject bridge .

One area of concern to me is as to who's liability covers this bridge ? And the publics use of it ?
The bridge crosses the black creek .

I can be reached via email or at s. 22

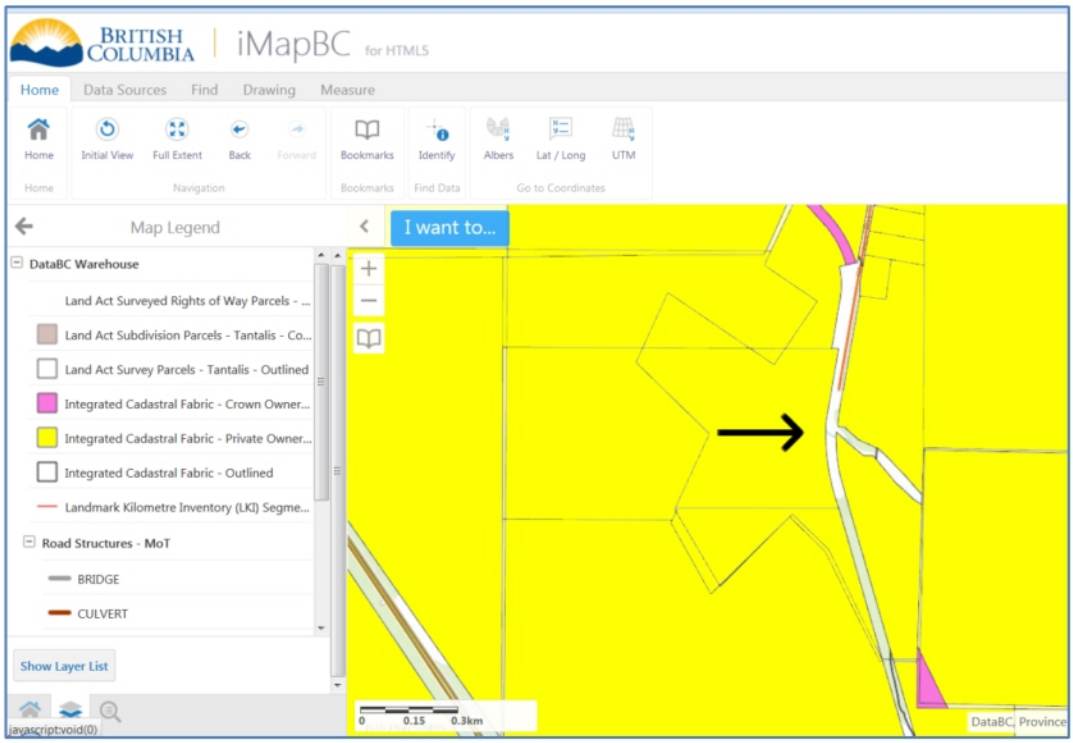
Thank you and best regards,

s. 22

The Sturgess Road Bridge Issue - Summary

The Road:

- Follows a former railway line.
- Acquired by the Province in the early 1950s.
- Gazetted as a public road in 1982.
- Included in the CVRD's planned "One Spot Trail Extension North."
- Displayed as a public road in iMapBC:



The Bridge:

- Built to Ministry of Forests standards using railcar construction with a wood decking (est. carrying capacity = 90 tons).
- Decking is deteriorating, creating a hazard to public safety.
- Quote from StoneCroft Project Engineering to re-deck the bridge: $22,000.
- MoTI local office states that their policy is that residents are obligated to pay for repairs.
- s. 22

  Nothing is attached to properties' Certificates of Title mandating this as a legal obligation.

From: Kelly, Brendan TRAN:EX
To: Molony, Anne TRAN:EX; Mochizuki, Rod K TRAN:EX
Subject: FW: Sturgess Road - Developers Design Criteria
Date: June 8, 2015 3:45:06 PM
Attachments: SK1.pdf
t07-90.pdf
Sturgess Rd Developers Design Criteria (2).doc

Rod,

Is it okay for Anne to send out the same design criteria we sent out for Sturgis Rd?

Thanks,

Brendan Kelly

Development Technician – Vancouver Island District

Ministry of Transportation & Infrastructure

(250) 334-6967

From: Mochizuki, Rod K TRAN:EX
Sent: Friday, December 14, 2012 3:46 PM
To: Kelly, Brendan TRAN:EX
Cc: Galambos, Allan R TRAN:EX; Park, Larry TRAN:EX
Subject: Sturgess Road - Developers Design Criteria

Brendan:

Here is the Developers Design Criteria for a bridge.

The enclosed information is specifically for Sturgess Rd and only Sturgess Rd.

THANKS
Rod K Mochizuki, AScT

Area Manager, Bridges

Courtenay Area Office

Office: 250-334-6962

Cel: 250-334-6874

Fax: 250-334-1291