



Navigation Protection Program (NPP)  
820-800 Burrard Street  
Vancouver, BC, V6Z 2J8

**Our File: 2014-500336**

August 24, 2020

BC Hydro  
9 Floor - 1111 W Georgia St  
Vancouver, BC, V6E 4G2

### APPROVAL

**APPLICANT:** BC Hydro  
9<sup>th</sup> Floor - 1111 Georgia St West  
Vancouver, BC, V6E 4G2

**WORK:** Scour Protection

**SITE LOCATION:** located at Peace River, at approximately 56°11'30.37"N, - 120°53'49.20"W, located on unsurveyed foreshore or land covered by water being part of the bed of Peace River, Site C Dam fronting Sec 14, TP 83, Range 19, West of the 6th Meridian Peace River District, City of Fort St. John, in the Province of British Columbia.

As per the application (detailed above) to the Minister of Transport, submitted pursuant to the *Canadian Navigable Waters Act*, for an approval of the work per the attached one (1) plan, the Minister hereby approves the work pursuant to subsection 7(6) for the construction of the above mentioned work, in accordance with the following terms and conditions:

1. The CNWA Approval and its Terms and Conditions shall be posted at an easily accessible place at the worksite
2. In the event that the operation of the above works is terminated, it will be the proponent's responsibility to remove the works and associated equipment in its entirety including any anchors and pilings.
3. Install warning signs at locations approximately 100 meters upstream and downstream of the construction site advising of the work in progress. Signs are to be emplaced prior to and for the duration of construction. The owner is exempt from installing warning signage if the warning signs from other associated works are in place within 500 meters of the site of the bridge construction. Signs shall be a minimum of 72" x 48", a white background with black lettering, with text as outlined below.

#### WARNING CONSTRUCTION HAZARDS AHEAD

4. The proponent may use the Canadian Dam Association Sign Standards with regard to the shape, colour, and size of signs. Locations and wording are to be as per the Terms and Conditions of the permit of the approval.
5. Construction machinery left in the water during darkness or limited visibility shall be marked with a flashing yellow light, visible to upstream and downstream traffic.



- Any construction equipment anchored or left in or on the waterway shall be marked with a yellow flashing light placed on the outermost extremity if left overnight.
- The navigation channel span, found between piers 7 and 8, shall be marked on the bridge using day marks on the upstream and downstream sides. An example, including dimensions is below:

GENERAL USE PORT AND STARBOARD MARKS

System: General Use.  
Function: Laterally significant port and starboard marks.  
Nominal Range: 1 nm.  
Additional Data: For three numerals on a 3SG, use 8-inch characters at a height of 14 inches from the base. For three numerals on a 4TR, use 8-inch characters at a height of 12 inches.

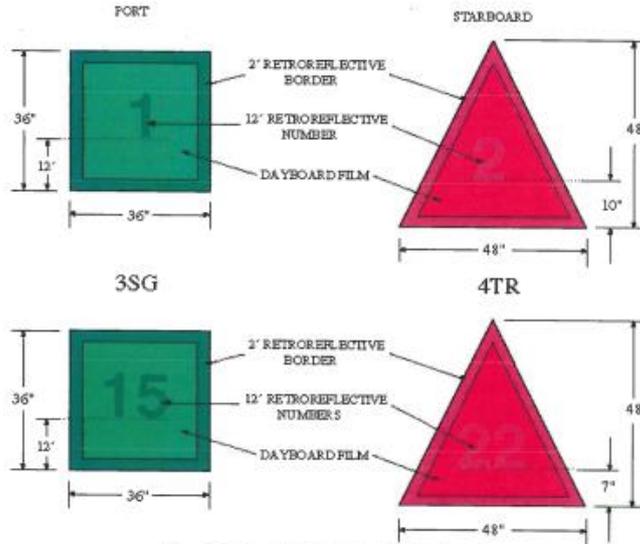


Figure 5-4. General Use port and starboard marks.

- The centre of the navigation channel span, found between piers 7 and 8, shall be marked on the bridge using a fixed white light facing upstream and downstream during times of darkness and limited visibility. The light shall have a minimum nominal range of 1 nautical mile.
- The marked navigation channel, found between piers 7 and 8, shall be inspected monthly to ensure that the channel is not hindered by shoaling or debris.
- The proponent shall move the marked navigation channel if it becomes blocked or unsafe to use. The proponent shall use the Boater Communication Protocol and post notice at the Peace Island Park boat launch of the change at the same time the channel markers are moved.

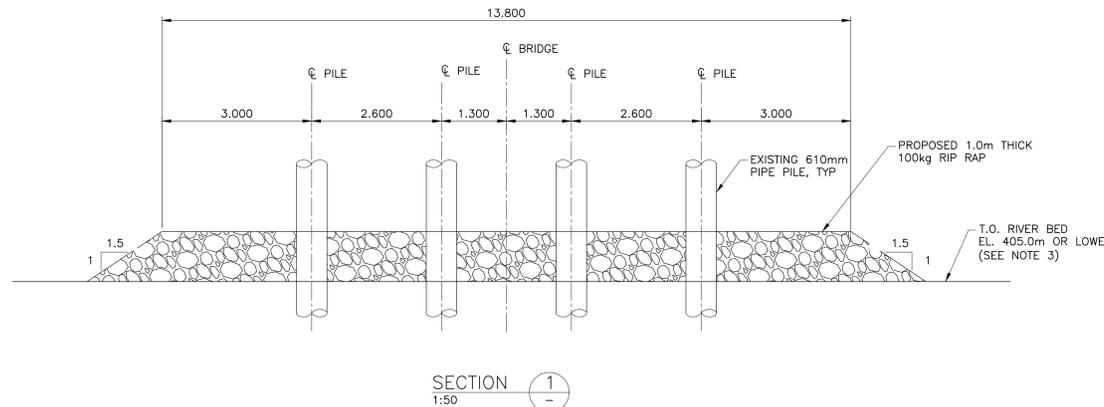
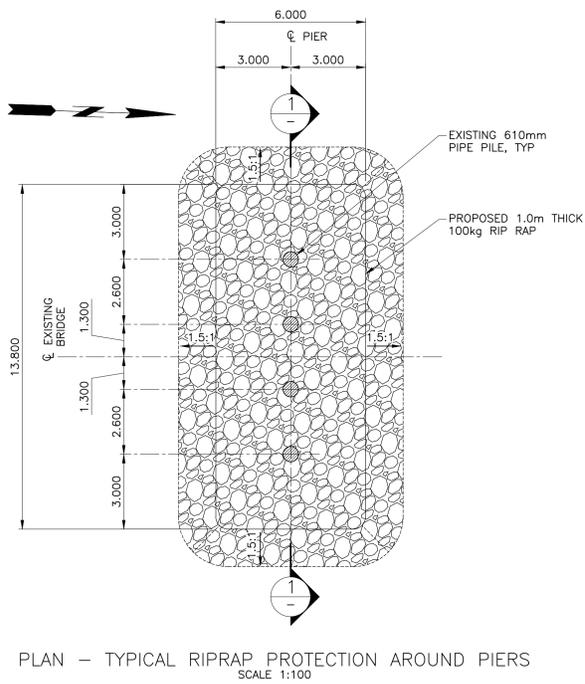
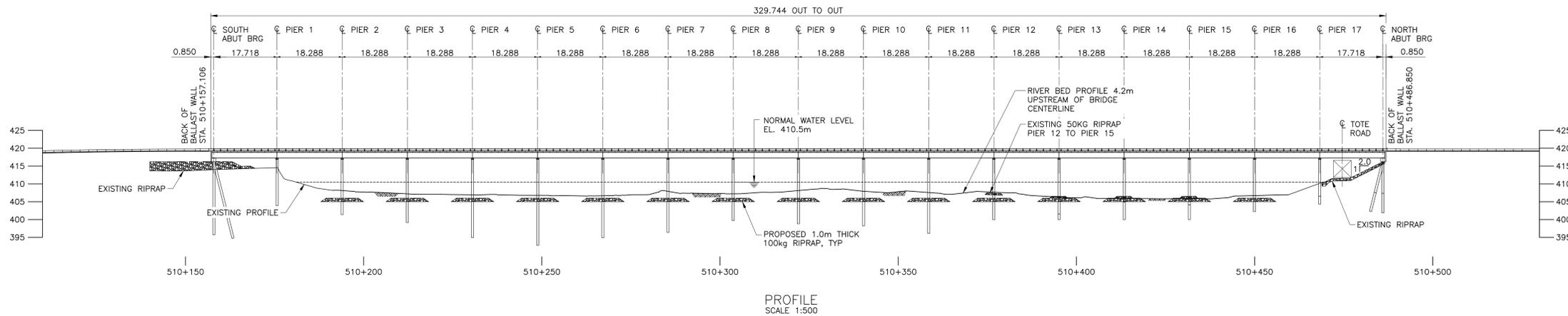
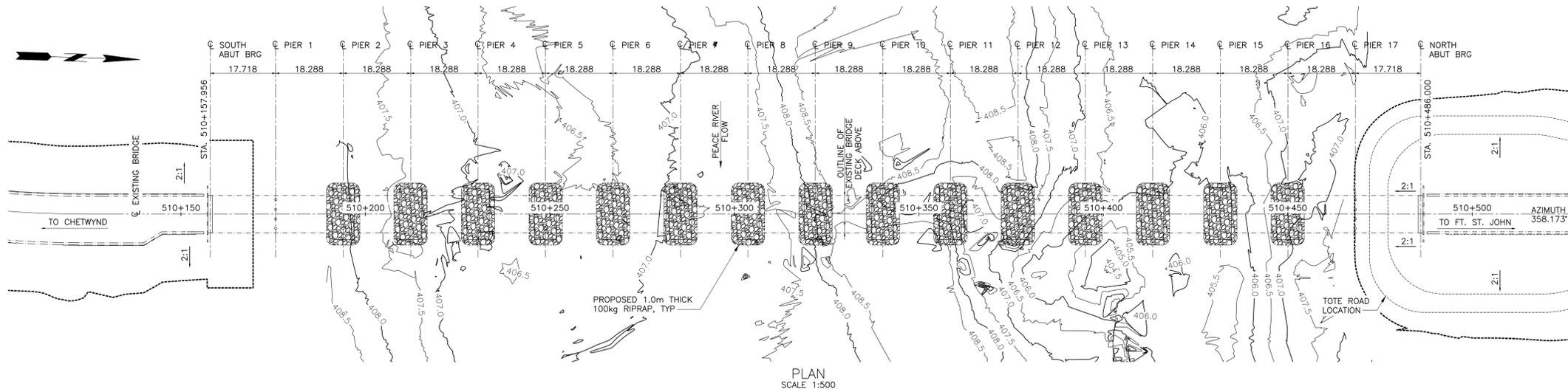


11. A safe navigation channel shall be maintained during construction. Changes to the location of the channel due to construction will be communicated 5 days in advance using the Boater Communication Protocol and post notice at the Peace Island Park boat launch.

**SIGNED on August 24, 2020 at Pacific**

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Eric Leung  
NPP Officer  
Programs Group  
Transport Canada  
Pacific Region  
For the Minister of Transport



**RIPRAP QUANTITY:**

RIPRAP AREA PER PIER.....	150m <sup>2</sup> APPROXIMATE
TOTAL AREA .....	2250m <sup>2</sup> APPROXIMATE
RIPRAP VOLUME PER PIER .....	115m <sup>3</sup> APPROXIMATE
TOTAL VOLUME .....	1725m <sup>3</sup> APPROXIMATE

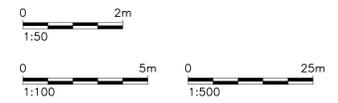
**NOTES:**

- DRAWING BASE FOR EXISTING BRIDGE: BC HYDRO/ALLNORTH 23 JUNE 2020, 1016-C09-06354-PEACE GENERAL ARRANGEMENT.DWG
- EXISTING RIVERBED BASED ON MAY 2020 BATHYMETRY.
- PLACE RIPRAP PROTECTION WHEN RIVER BED ELEVATION HAS DEGRADED TO ELEVATION 405.0m OR LOWER.
- TOP ELEVATION OF RIPRAP NOT TO EXCEED 406.5m.
- BRIDGE LAYOUT IS FOR PIER LOCATION ONLY. FOR STRUCTURAL DETAILS, REFER TO ALLNORTH DRAWINGS' 1016-C09-06351 TO 1016-C09-06362.

**CONSTRUCTION METHODOLOGY:**

- PRIOR TO INITIATING THE WORK, THE CONTRACTOR SHALL PREPARE AN ENVIRONMENTAL PROTECTION PLAN, A TRAFFIC MANAGEMENT PLAN (SPEAKING TO TRAFFIC CONTROL AT THE QUARRY AND BETWEEN THE QUARRY AND THE SITE, AND SPEAKING TO TRAFFIC CONTROL ON THE BRIDGE APPROACHES) AND A QUALITY MANAGEMENT PLAN, ALL OF WHICH WILL BE APPROVED BY BC HYDRO PRIOR TO CONSTRUCTION.
- CONTRACTOR TO IMPLEMENT TRAFFIC CONTROL ON APPROACHES TO AND/OR ON THE PEACE RIVER CONSTRUCTION BRIDGE.
- CONTRACTOR SHALL PLACE RIG MATS ON THE EXISTING BRIDGE DECK TO PROTECT AGAINST DAMAGING THE BRIDGE DECK.
- CONTRACTOR SHALL ARRANGE FOR 100kg RIPRAP TO BE SUPPLIED FROM WEST PINE QUARRY (NTD - OR WUTHRICH QUARRY. BC HYDRO TO CONFIRM). TRUCKS SHALL END-DUMP RIPRAP ON RIG MATS ON THE BRIDGE DECK CLOSE TO THE BRIDGE PIER TO RECEIVE THE RIPRAP, STOCKPILING NOT MORE THAN 16m<sup>3</sup> OF RIPRAP ON THE BRIDGE DECK AT ONE TIME.
- AN EXCAVATOR SHALL MOBILISE TO THE BRIDGE DECK AND BE POSITIONED ABOVE THE BRIDGE PIER TO RECEIVE THE RIPRAP. THE EXCAVATOR SHALL PLACE RIPRAP ON THE RIVER BED AT THE BRIDGE PIER, SELECTING RIPRAP FROM THE LOCAL PILE. EXCAVATION OF BED MATERIAL WILL NOT BE REQUIRED.
- RIPRAP SHALL BE PLACED CLOSE TO THE UPSTREAM NOSE, OR PILE, OF THE PIER, AND CONTRACTOR SHALL CONTINUE TO PLACE ALL UPSTREAM RIPRAP IN ACCORDANCE WITH THE SHAPE SPECIFIED ON THE DRAWING.
- CONTRACTOR SHALL THEN PLACE RIPRAP IN THE DOWNSTREAM DIRECTION ON EITHER SIDE OF THE PIER UNTIL ALL RIPRAP IS PLACED AS ILLUSTRATED ON THE DRAWING.
- ONCE ALL RIPRAP HAS BEEN PLACED, CONTRACTOR SHALL REMOVE THE RIG MATTING AND SWEEP THE DECK CLEAR OF RIPRAP MATERIAL: SWEEPING MATERIAL INTO THE RIVER WILL NOT BE PERMITTING.
- ONCE THE HYDRO REPRESENTATIVE HAS CONFIRMED THAT THE BRIDGE DECK IS SUFFICIENTLY FREE OF MATERIAL, CONTRACTOR SHALL OPEN THE BRIDGE DECK TO TRAFFIC, INCLUDING REMOVAL OF ANY SIGNS AND BARRICADES ERECTED AHEAD OF THE CLOSURE.
- CONTRACTOR SHALL ARRANGE FOR A SIDE-SCAN SONAR SURVEY OF THE BRIDGE PIER TO CONFIRM THAT ALL RIPRAP HAS BEEN PLACED IN ACCORDANCE WITH THE DRAWING. IF THE HYDRO REPRESENTATIVE DETERMINES THAT CONTRACTOR HAS NOT PLACED RIPRAP IN ACCORDANCE WITH THE DRAWING, BASED ON THE RESULTS OF THE SURVEY, CONTRACTOR SHALL RE-MOBILISE TO THE BRIDGE DECK TO COMPLETE PLACING RIPRAP AS AGREED TO BY THE HYDRO REPRESENTATIVE.

**NOT FOR CONSTRUCTION**



Reviewed/Examined  
Date: 2020-08-19  
By: [Signature]  
2014-500336 1 of 1  
Navigation Protection Program  
Programme de protection de la navigation

**DRAFT**

DSGN: J. MORLEY INDEP CHK: R. MATHIESON DFTG: B. MEHREL DFTG CHK: A. IZETT INSP: RM, DG CIV: STR, MECH, GEO, ELEC		PRELIMINARY DRAWING NOT TO BE USED FOR CONSTRUCTION	
SITE C CLEAN ENERGY PROJECT ROADS - NORTH BANK PEACE RIVER CONSTRUCTION BRIDGE PIER SCOUR PROTECTION NPP File #2020-502832		DATE: 25 JUN 2020 DIST: [ ] DWG NO: 1016-C09-06412 SIZE: A0 R: A	

REF#	DRAWING NUMBER	TITLE	REF#	DRAWING NUMBER	TITLE
		REFERENCE DRAWINGS			REFERENCE DRAWINGS

A	ISSUED FOR PERMIT	XX JUL 2020	JOHN MORLEY	RM	BM	AI	INDEP CHK	DFTG	DFTG CHK	INSP CIV	INSP STR	INSP MECH	INSP GEO	INSP ELEC	REV	ACPT