

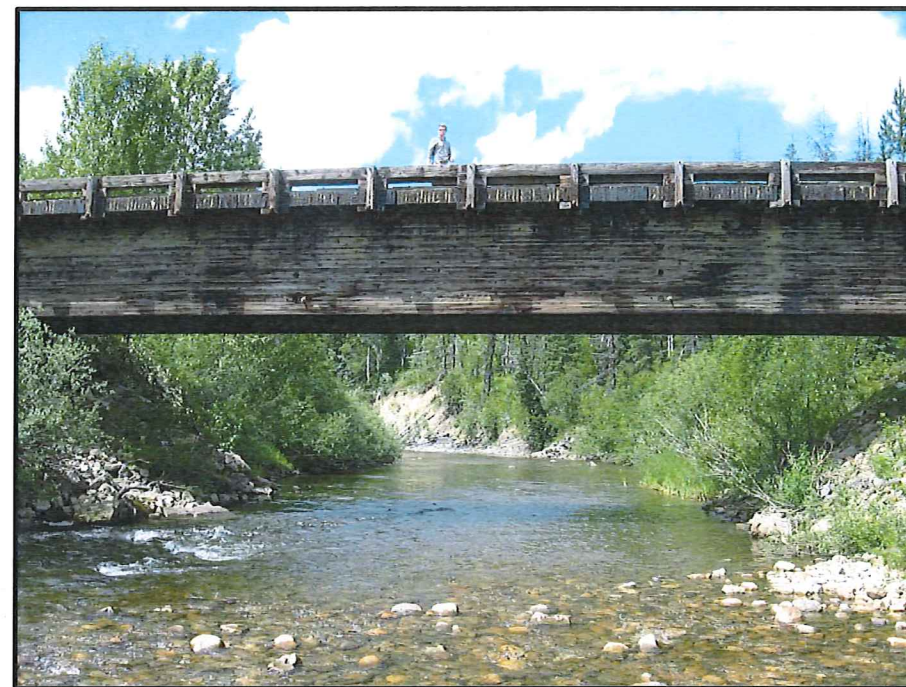
## CHUCHINKA RIVER CROSSING

27.432m STEEL GIRDER/CONCRETE COMPOSITE BRIDGE ON SPREAD FOOTINGS (L100)  
km 0.1 ON THE CHUCHINKA-COLBOURNE (G1-150A)

Lat. 54° 31' 47.8" Long. 122° 35' 1.51"



CROSSING LOOKING UPSTREAM



CROSSING LOOKING DOWNSTREAM

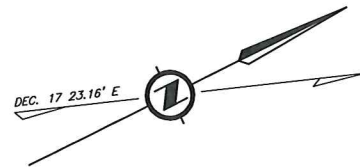


| Description                            | Drawing No. |
|----------------------------------------|-------------|
| Site Plan                              | 1518-126-11 |
| Site Profiles & Sections               | 1518-126-12 |
| General Arrangement Plan               | 1518-126-13 |
| General Arrangement Profile & Sections | 1518-126-14 |

INTENDED TO BE PLOTTED ON 11"x17"  
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ISSUED FOR CONSTRUCTION

|                                                                                                                                                                                                                                  |          |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------|
| <b>1518-126-10</b>                                                                                                                                                                                                               | <b>B</b> | DESIGNED BY: EAC |
| DRAWING NAME:                                                                                                                                                                                                                    | REV.:    | CHECKED BY: JP   |
| DATE ISSUED: 15/09/15                                                                                                                                                                                                            |          | DRAWN BY: WD/MM  |
|  DWB Consulting Services Ltd.<br>1578 9 <sup>th</sup> Avenue<br>Prince George, B.C.<br>V2L 3R8<br>Phone: (250) 562-5541 Fax: (250) 562-5561 |          |                  |



## GENERAL NOTES:

1. SITE PLAN SURVEY WAS PERFORMED ON June 30, 2015  
AND UNDER THE FOLLOWING CONDITIONS:

- GENERAL WEATHER CONDITIONS: CLOUDY
- SITE SUPERVISOR: N. CHEUNG
- RODMAN: H. CARTWRIGHT

2. RIPARIAN STREAM ASSESSMENT:

- CLASSIFICATION: S2
- AVERAGE WIDTH: 15.7m

3. HYDROLOGICAL DATA:

- Q100: FLOW: 135.5m<sup>3</sup>/s
- DRAINAGE AREA: 304.3km<sup>2</sup>
- ESTIMATED STREAM VELOCITY: 1m/s

4. NO GEOTECHNICAL DATA GATHERED AT THIS TIME.

- SURFACE SOILS (SIEVE ANALYSIS):

**Silty SAND and trace gravel**

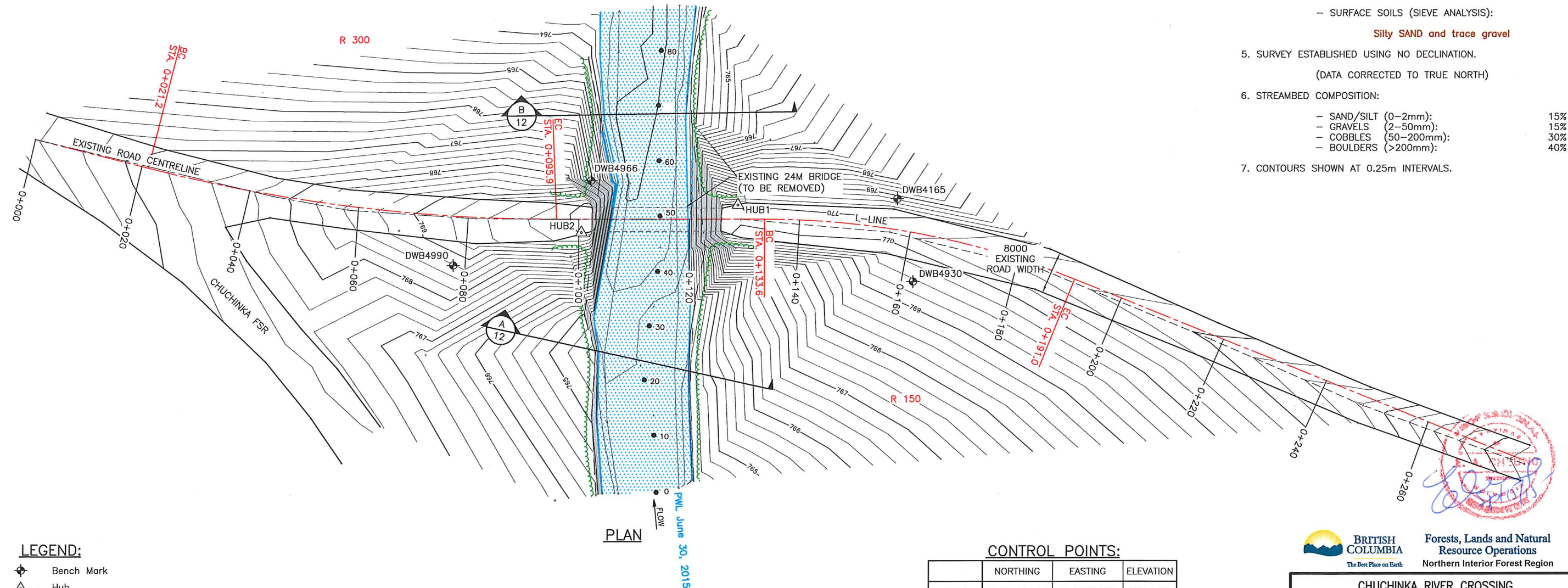
5. SURVEY ESTABLISHED USING NO DECLINATION.

(DATA CORRECTED TO TRUE NORTH)

6. STREAMBED COMPOSITION:

- SAND/SILT (0-2mm): 15%
- GRAVELS (2-50mm): 15%
- COBBLES (50-200mm): 30%
- BOULDERS (>200mm): 40%

7. CONTOURS SHOWN AT 0.25m INTERVALS.



## LEGEND:

- ⊕ Bench Mark
- △ Hub
- Survey Point
- Existing Road
- Proposed Road C (L-LINE)
- Present Water Level
- Top of Bank (Lc)
- Top of Bank (Hc)
- HWL
- Tree Line

## CONTROL POINTS:

|         | NORTHING    | EASTING    | ELEVATION |
|---------|-------------|------------|-----------|
| HUB1    | 6042566.000 | 526937.000 | 760.000   |
| HUB2    | 6042538.382 | 526928.876 | 770.012   |
| DWB4165 | 6042592.220 | 526948.787 | 769.799   |
| DWB4930 | 6042588.085 | 526963.547 | 767.993   |
| DWB4966 | 6042544.057 | 526921.235 | 766.934   |
| DWB4990 | 6042514.964 | 526923.953 | 768.245   |

(SURVEY CONTROL BASED ON COORDINATES ESTABLISHED LOCALLY)



Forests, Lands and Natural  
Resource Operations  
Northern Interior Forest Region

**CHUCHINKA RIVER CROSSING**  
**27.432m STEEL GIRDER/CONCRETE COMPOSITE**  
**BRIDGE ON SPREAD FOOTINGS (L100)**  
Site Plan

LOCATION:

km 0.1 ON THE  
CHUCHINKA-COLBOURNE (G1-150A)

Coordinates: Lat. 54° 31' 47.8" Long. 122° 35' 1.51"

SCALE: 1:750 PAGE: 1 of 4

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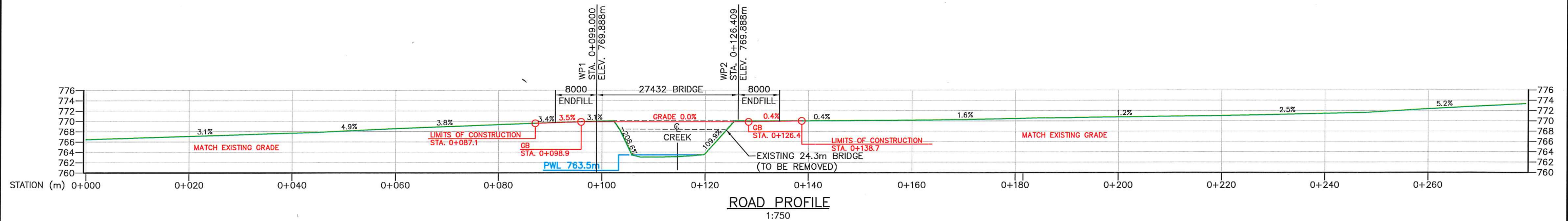
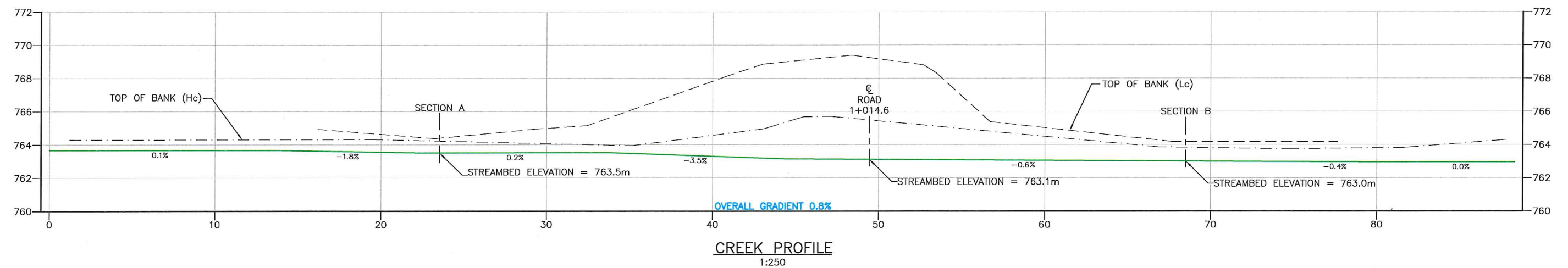
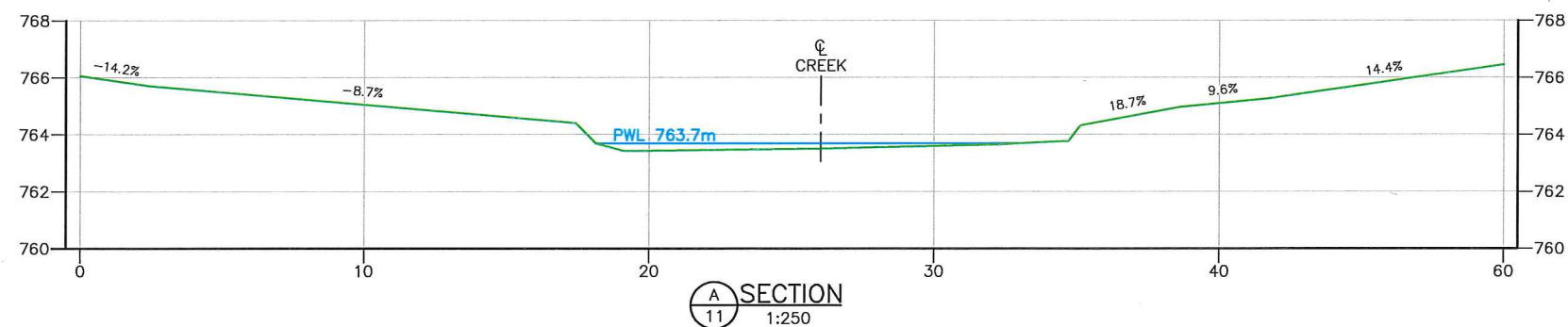
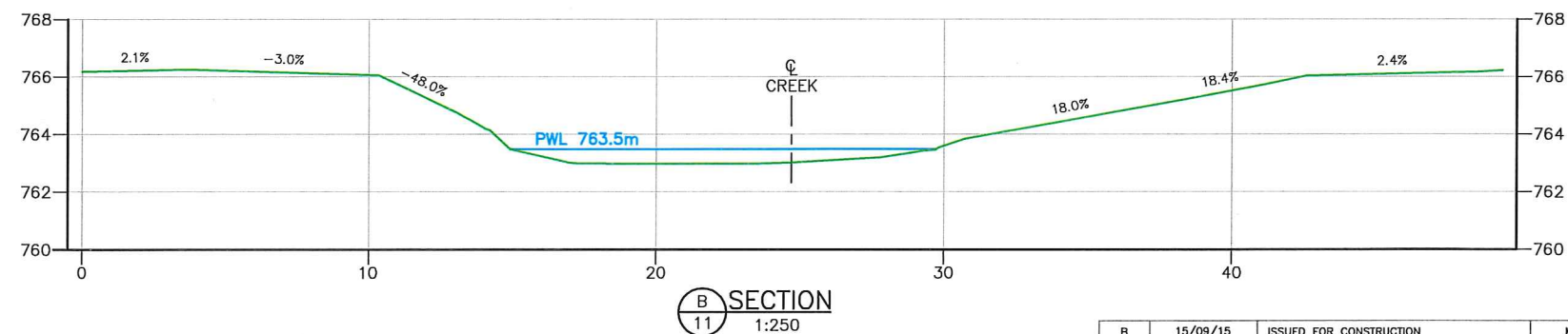


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|     |          |                         |    |         |
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| A   | 20/08/15 | ISSUED FOR REVIEW       | MM | EAC     |
| No. | Date     | Revision                | By | Approv. |



#### LEGEND:

- Present Water Level
- Top of Bank (Lc)
- Top of Bank (Hc)
- Existing Ground
- Proposed Road Grade



**CHUCHINKA RIVER CROSSING**  
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BRIDGE ON SPREAD FOOTINGS (L100)  
Site Profiles & Sections

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Coordinates: Lat. 54° 31' 47.8" Long. 122° 35' 1.51"

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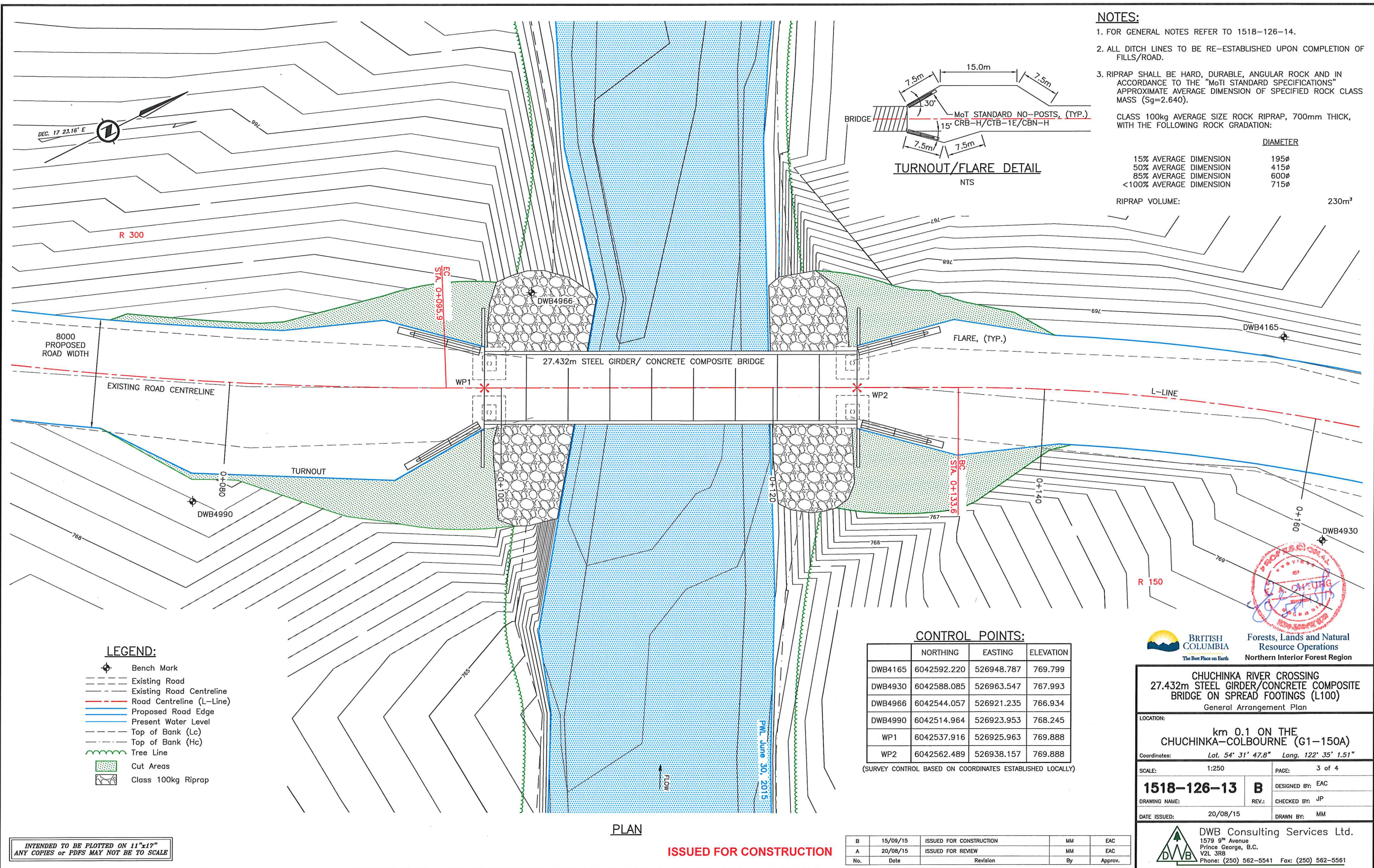
DATE ISSUED: 20/08/15 DRAWN BY: WD/MM

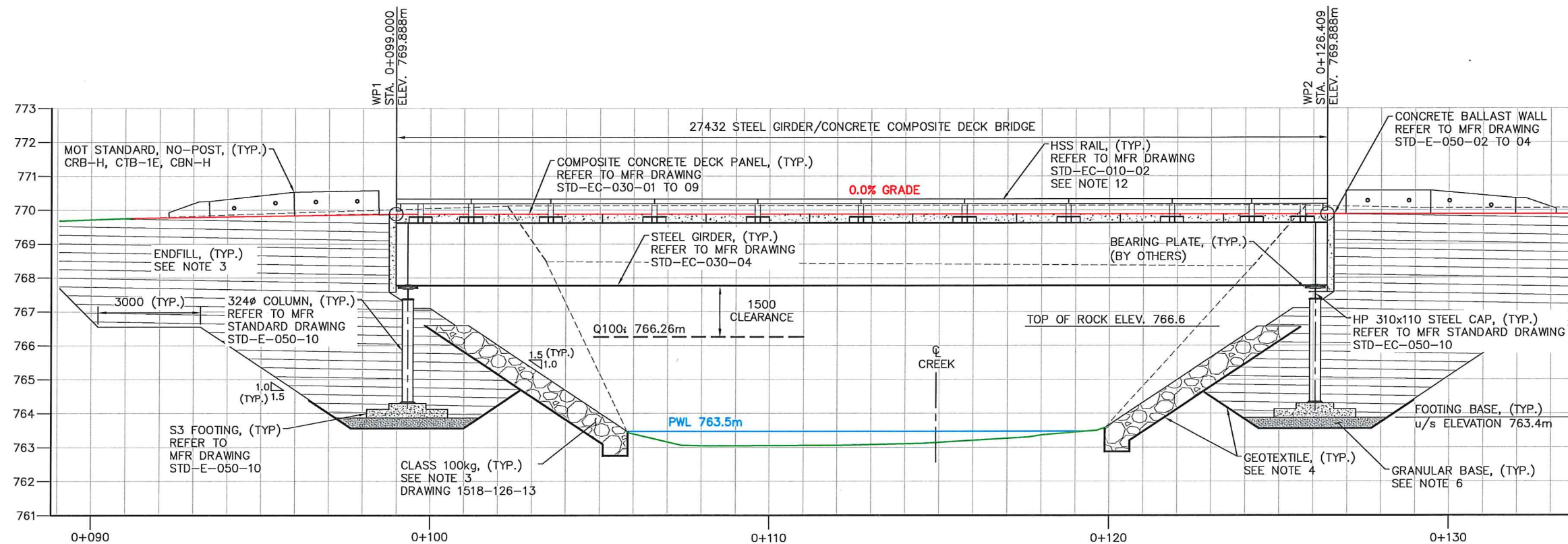
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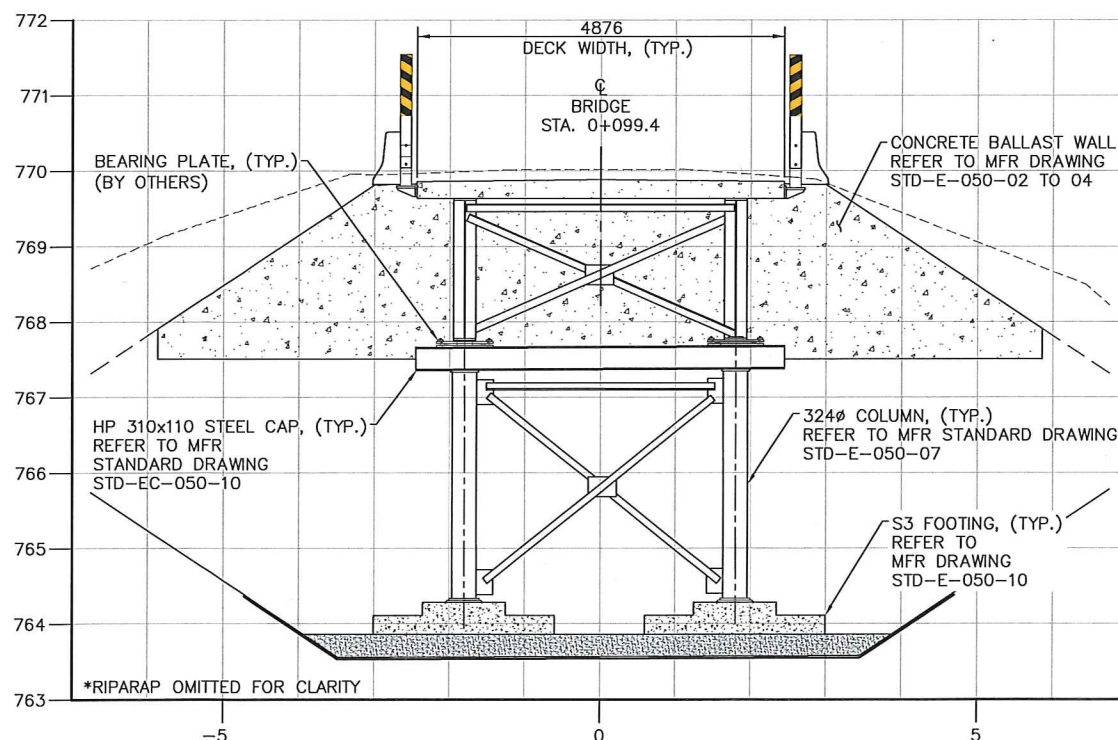




BRIDGE PROFILE  
1:150

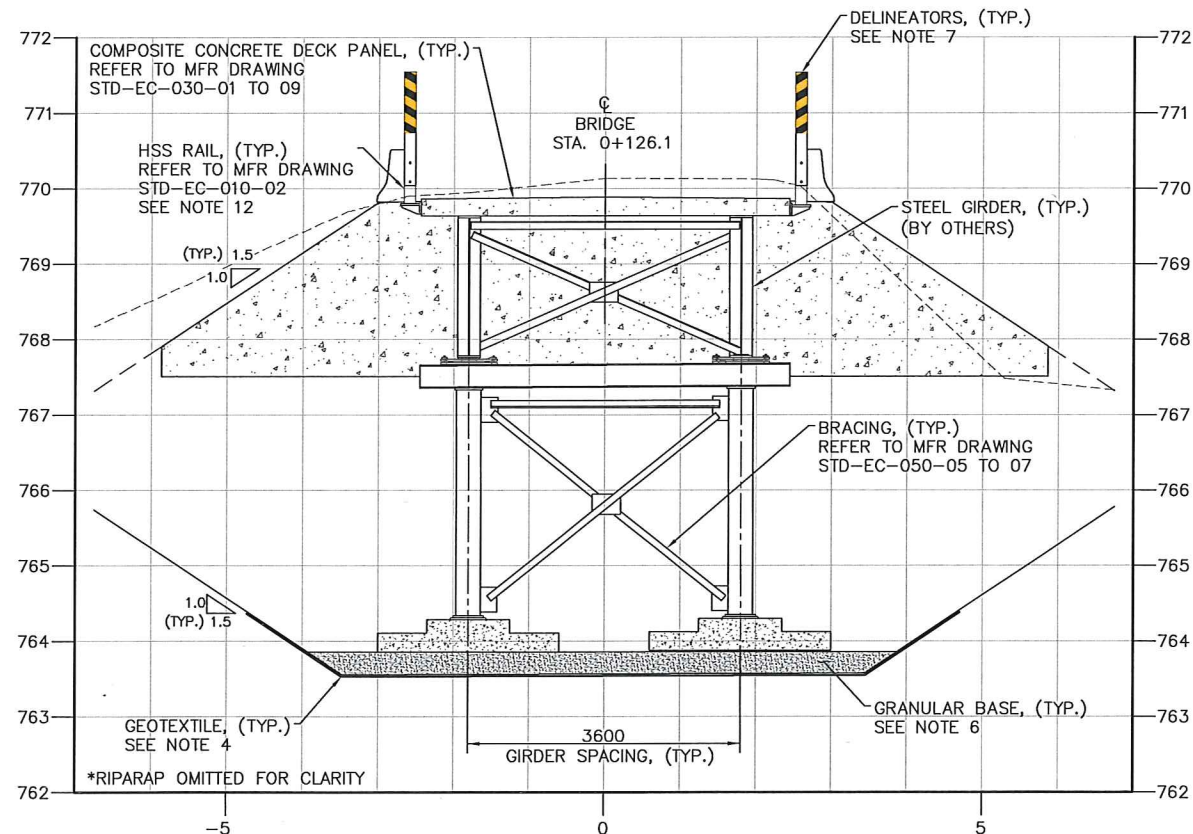
**CLEARANCE NOTE:**

MINIMUM UNDERSIDE OF GIRDER ELEVATION 767.760m; DEPTH OF STEEL WITH DECK ASSUMED TO BE 2128mm. IF STEEL VARIES FROM THIS, WORKPOINT ELEVATIONS AND BALLAST WALL LENGTHS AND LAYOUT MAY NEED TO BE ADJUSTED. PRIOR TO CONSTRUCTION, VERIFICATION OF WORKPOINTS BY THE DESIGN ENGINEER MUST BE COMPLETED.



LOWCHAIN BEARING SECTION  
1:100

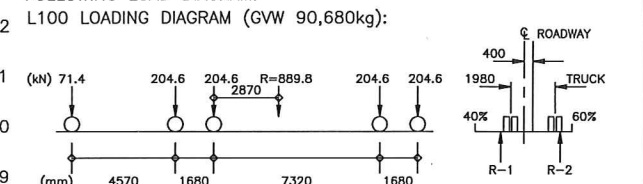
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HIGHCHAIN BEARING SECTION  
1:100

**SPECIFICATION NOTES:**

1. THE PERMANENT BRIDGE SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER LICENCED TO PRACTICE IN BRITISH COLUMBIA. ALL ASPECTS OF THE BRIDGE DESIGN, MATERIAL AND INSTALLATION OF THIS BRIDGE SHALL BE IN ACCORDANCE WITH THE "Forest Service Bridge Design and Construction Manual" July 30, 1999. THE BRIDGE SHALL HAVE L100 OFF HIGHWAY LOAD CAPACITY AND DESIGNED IN ACCORDANCE TO CAN/CSA-S6 AND THE FOLLOWING LOAD DIAGRAM:



2. HYDRAULIC DATA:

|                        |         |
|------------------------|---------|
| MINIMUM CHANNEL WIDTH: | 15.0m   |
| Q100+ ELEVATION:       | 766.26m |
| DESIGN VELOCITY:       | 3.57m/s |
| MINIMUM CLEARANCE:     | 1.5m    |

3. ENDFILL SHALL BE COMPLETED WITH WELL GRADED, SELECT, GRANULAR MATERIAL (<75mm), FREE OF UNSUITABLE MATERIALS, IN LIFTS OF 300mm AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.

4. LINE EXCAVATION WITH NON-WOVEN GEOTEXTILE, MINIMUM MULLEN BURST STRENGTH OF 2100kPa (Armtec 250/Geotex 801 or APPROVED EQUIVALENT).

|                   |                   |
|-------------------|-------------------|
| TOTAL GEOTEXTILE: | 520m <sup>2</sup> |
|-------------------|-------------------|

5. ESTIMATED VOLUMES:

|                |                    |
|----------------|--------------------|
| EXCAVATION:    | 2610m <sup>3</sup> |
| ENDFILL FILL:  | 1200m <sup>3</sup> |
| ENDFILL CUT:   | 30m <sup>3</sup>   |
| APPROACH FILL: | 110m <sup>3</sup>  |
| APPROACH CUT:  | 110m <sup>3</sup>  |

6. GRANULAR BASE SHALL BE WELL GRADED, SELECT, GRANULAR MATERIAL (<75mm), FREE OF UNSUITABLE MATERIALS AND COMPACTED TO 98% STANDARD PROCTOR DENSITY (MINIMUM 300mm DEPTH).

|                            |                  |
|----------------------------|------------------|
| COMPACTED GRANULAR VOLUME: | 20m <sup>3</sup> |
|----------------------------|------------------|

7. DELINEATORS REQUIRED AS PER MFR STANDARD.

8. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.

9. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL BENCHMARKS.

10. HSS RAILING TO BE PAINTED SAFETY YELLOW. POSTS AND BRACKETS TO BE GALVANIZED. PAINTING AND GALVANIZING AS PER MFR STANDARDS.



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