MINISTRY OF TRANSPORT AND INFRASTRUCTURE

ISLAND RAIL CORRIDOR CONDITION ASSESSMENT
TRACK CONDITION ASSESSMENT

MARCH 13, 2020
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1 SCOPE OF WORK

The British Columbia Ministry of Transportation and Infrastructure (MoTI) engaged WSP Canada Group Ltd. (WSP) to conduct a condition assessment, provide restoration improvements and all in costing for reinstatement of rail operations on the Island Rail Corridor between Victoria and Courtenay (including Wellcox spur) and Parksville to Port Alberni.

As part of the Island Rail Corridor Condition Assessment, WSP conducted a field investigations with the support of Southern Railway of Vancouver Island (SVI) and the Island Corridor Foundation (ICF) and has drawn on both party’s experience and knowledge base to understand the operations of the Island Rail Corridor.

This report analyzes the current rail infrastructure condition of the Victoria and Port Alberni subdivisions, as shown in Figure 1: Island Rail Corridor Subdivision Map.

The aim of this report summarizes findings and outcomes from the field investigations conducted in September 2019. This report feeds into the Island Rail Corridor Condition Assessment Summary Report.
Figure 1: Island Rail Corridor Subdivision Map
2 CONDITION ASSESSMENT

During the site investigation and analysis phases of this project, both the Victoria (including Wellcox spur) and Port Alberni subdivisions were inspected visually by hi-rail and walking in September 2019. Some sections of the Port Alberni subdivision were not accessible by hi-rail or by foot due to vegetation growth and downed trees along the subdivision.

Representatives from SVI, accompanied WSP for the inspections, both of whom shared their knowledge of the corridor with WSP. The corridor is broken down into six (6) segments, as shown in Error! Reference source not found., to aid in the analysis.

The segments are defined as:

- Segment 1: Victoria to Langford – mile 0.00 to 10.0
- Segment 2: Langford to Duncan – mile 10.0 to 39.7
- Segment 3: Duncan to Nanaimo – mile 39.7 to 72.5
- Segment 4: Nanaimo to Parksville – mile 72.5 to 95.2
- Segment 5: Parksville to Courtenay – mile 95.2 to 139.7
- Segment 6: Port Alberni subdivision – mile 0.00 to 39.4

Elements Assessed

During the site investigation a Good, Fair, Poor rating was applied at each element inspected to grade the overall condition of the railway infrastructure. The Railway infrastructure has been broken down into three (3) main section; Road Bed, Track Structure and turnouts. Figure 2: Typical Track Cross Section shows a typical track cross section outlining the typical railway infrastructure elements.

![Figure 2: Typical Track Cross Section](image)

The railway elements inspected include:

- Road Bed
  - Track Surface
  - Drainage
  - Vegetations

- Turnouts

- Track Structure
  - Ballast
  - Rail
  - Ties
  - Tie Plates
  - Spike and Anchors
Corridor Overview

The Island Rail Corridor, broken down into six (6) segments (as shown in Figure 3: Segment Map), comprises of the below railway alignment features outlines in Table 1: Corridor Features Breakdown.

Table 1: Corridor Features Breakdown

<table>
<thead>
<tr>
<th>Segment</th>
<th>Track Length (mi)</th>
<th>Track Length (km)</th>
<th>Total Siding Length (ft)</th>
<th>Total Siding Length (m)</th>
<th>Number of Sidings</th>
<th>Number of Turnouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segment 1: Victoria to Langford</td>
<td>10.0</td>
<td>16.2</td>
<td>3360</td>
<td>1024</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Segment 2: Langford to Duncan</td>
<td>29.7</td>
<td>47.8</td>
<td>2001</td>
<td>610</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Segment 3: Duncan to Nanaimo</td>
<td>32.8</td>
<td>52.8</td>
<td>2690</td>
<td>820</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Segment 4: Nanaimo to Parksville</td>
<td>22.7</td>
<td>36.5</td>
<td>5250</td>
<td>1600</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Segment 5: Parksville to Courtenay</td>
<td>44.5</td>
<td>71.6</td>
<td>3756</td>
<td>1145</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Segment 6: Parksville to Port Alberni</td>
<td>39.5</td>
<td>63.5</td>
<td>4904</td>
<td>1195</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Wellcox Yard</td>
<td>2.45</td>
<td>3.94</td>
<td>5.14 (miles)</td>
<td>8.27 (km)</td>
<td>23</td>
<td>34</td>
</tr>
</tbody>
</table>
Figure 3: Segment Map
2.1 SEGMENT 1: VICTORIA TO LANGFORD

2.1.1 ROAD BED

Surface

The surface condition of the Victoria to Langford segment of the Victoria subdivision was determined to be in a fair condition. There was no warping or dips in the track profile noted while on site. There were no major cross level concerns observed while inspecting the subdivision via hi-rail.

Drainage

During a wet site inspection, no significant drainage issues along the corridor were observed. In some locations however, local ponding between the cribs was noted. This is due to fines and vegetation fouling the ballast void spaces, consequently inhibiting drainage.

Vegetation

It is understood, by discussions with and evident on site, that SVI have a Pest Management Plan (PMP) in place to combat vegetation in the corridor. However, from the site visits, it was observed that vegetation on the corridor is still prevalent within and around the right of way. The condition of the vegetation impact ranges from poor in some areas to good in others. Typically, in the Victoria to Langford segment the condition of the vegetation is considered fair.

Figure 4 shows a typical example of the road bed between Victoria and Langford.

Figure 4: Victoria to Langford - Typical Road Bed
2.1.2 TRACK STRUCTURE

**Ballast**
Along the Victoria and Langford corridor the ballast was generally observed to be crushed pit run gravel fouled with fines and generally in a poor condition for the length of the corridor. The ballast cribs were noted to be full along most of the corridor with some sections empty or only partially full. The ballast shoulder was observed to range from fair (present but incomplete) to poor (no shoulder).

**Rail**
The rail condition along the Victoria to Langford segment of the corridor was determined to be generally fair with between 6-10mm of head loss in the inspected zones. There was a mixture of predominantly standard joint bars with a few sections of angled joint bars connecting the rails. The condition of the joint bars was considered to be good if the joints were connected by standard joint bars and poor if they were connected by angled joint bars. There were no significant rail defects noted while onsite, however it should be understood that only a portion of the overall segment was inspected on foot.

**Spikes, Anchors & Tie Plates**
The spikes, anchors and tie plates are in poor condition on the Victoria to Langford segment. The tie-plates used across the segment, are all single shoulder and should be upgraded to double shoulder plates in the restoration phases.

**Ties**
Wooden ties are used throughout the length of the corridor. It was observed on site during the inspections that between 44% and 55% off these ties were defective.

Figure 5 shows a typical example of the track structure between Victoria and Langford.
2.1.3 TURNOUTS

No condition assessment of any of the mainline turnouts between Victoria and Langford were undertaken during the site investigation. However, the southern Victoria siding turnout was photographed and logged for reference (Figure 6). It is believed that the 5 turnouts between Victoria and Langford are in a generally fair condition, based upon the overall turnout condition of the Victoria subdivision and hi-rail assessment.

Figure 6: Turnout Mile 0.37 General Condition

A site investigation was undertaken in September 2019. For detailed inspection reports refer to Appendix A for Track Inspection Reports and Appendix B for Turnout Inspection Reports.
2.2 SEGMENT 2: LANGFORD TO DUNCAN

2.2.1 ROAD BED

Surface
The surface condition for the Langford to Duncan segment of the Victoria subdivision was noted to be in a fair condition. There was no warping or dips in the track profile noted while on site. There were no major cross level concerns observed while inspecting the subdivision via hi-rail.

Drainage
During a wet site inspection, no significant drainage issues along the corridor were observed. In some locations however, local ponding between the cribs was noted. This is due to fines and vegetation fouling the ballast void spaces, consequently inhibiting drainage.

Vegetation
It is understood, by discussions with and evident on site, that SVI have a Pest Management Plan (PMP) in place to combat vegetation in the corridor. However, from the site visits, it was observed that vegetation on the corridor is still prevalent within and around the right of way. The condition of the vegetation running along the corridor, range from poor to good condition. However, the segment is considered in a fair condition.

Figure 7 shows a typical example of the road bed between Victoria and Langford.
2.2.2 TRACK STRUCTURE

Ballast
The ballast in the Langford to Duncan corridor the ballast was generally observed to be crushed pit run gravel fouled with fines and generally in a poor condition for the length of the corridor. The ballast cribs were noted to be full along most of the corridor with some sections empty or only partially full. The ballast shoulder was observed to be in poor (no shoulder) condition.

Rail
The rail condition along the Langford to Duncan segment of the corridor was determined to be generally fair with between 7-9mm of head loss in the inspected zones. There was a mixture of predominantly angled joint bars with a few sections of standard joint bars connecting the rails. The condition of the joint bars was considered to be good if the joints were connected by standard joint bars and poor if they were connected by angled joint bars. In one inspected location, a large gap between the rails was noted. However, there were no other significant rail defects noted while onsite, however it should be understood that only a portion of the overall segment was inspected on foot.

Spikes, Anchors & Tie Plates
The spikes and anchors are in fair condition on the Langford to Duncan segment. The tie-plates used across the segment are considered in poor condition, due to all inspected locations being single shoulder and should be upgraded to double shoulder plates in the restoration phases.

Ties
Wooden ties are used throughout the length of the corridor. It was observed on site during the inspections that between 41% and 53% off these ties were defective.

Figure 8 shows a typical example of the track structure between Langford and Duncan
2.2.3 TURNOUTS

During a site inspection one turnout condition assessment was undertaken. The 85lb turnout was observed to be in a fair condition with some components of the turnout in poor condition. The ballast and ties were shown to be in poor condition while the rail, frog and anchors were in fair condition with approximately 9mm of rail head loss noted in the inspection. While not all of the 3 mainline turnouts were inspected out on site, it is observed from the hi-rail that the other 2 turnouts are in a similar condition. Figure 9 shows the typical condition of the turnouts between Langford and Duncan.

Figure 9: Turnout Mile 38.20 General Condition

A site investigation was undertaken in September 2019. For detailed inspection reports refer to Appendix A for Track Inspection Reports and Appendix B for Turnout Inspection Reports.
2.3 SEGMENT 3: DUNCAN TO NAMAIMO

2.3.1 ROAD BED

Surface
The surface condition for the Duncan to Nanaimo segment of the subdivision was determined to be in a fair condition. There was no warping or dips in the track profile noted while on site. There were no major cross level concerns observed while inspecting the subdivision via hi-rail.

Drainage
During a wet site inspection, no significant drainage issues along the corridor were observed. In some locations however, local ponding between the cribs was noted. This is due to fines and vegetation fouling the ballast void spaces, consequently inhibiting drainage.

Vegetation
It is understood, by discussions with and evident on site, that SVI have a Pest Management Plan (PMP) in place to combat vegetation in the corridor. However, from the site visits, it was observed that vegetation on the corridor is still prevalent within and around the right of way. The condition of the vegetation impact ranges from poor in some areas to good in others. Typically, in the Duncan to Nanaimo segment the condition of the vegetation is considered fair.

Figure 10 shows a typical example of the road bed between Duncan to Nanaimo.
2.3.2 TRACK STRUCTURE

**Ballast**

The ballast in the Duncan to Nanaimo corridor was generally observed to be crushed pit run gravel fouled with fines and generally range from fair to poor condition for the length of the corridor. The ballast cribs were noted to be full along most of the corridor with some sections empty or only partially full. The ballast shoulder was observed to be in poor (no shoulder) condition.

**Rail**

The rail condition along the Duncan to Nanaimo segment of the corridor was determined to be generally fair with 9mm of head loss in the inspected zones. There was a mixture of predominantly standard joint bars with a few sections of angled joint bars connecting the rails. The condition of the joint bars was considered to be good if the joints were connected by standard joint bars and poor if they were connected by angled joint bars. There were no other significant rail defects noted while onsite, however it should be understood that only a portion of the overall segment was inspected on foot.

**Spikes, Anchors & Tie Plates**

The spikes and anchors are in fair to poor condition on the Duncan to Nanaimo segment. The tie-plates used across the segment are considered in poor condition, due to all inspected locations being single shoulder and should be upgraded to double shoulder plates in the restoration phases.

**Ties**

Wooden ties are used throughout the length of the corridor. It was observed on site during the inspections that between 38% and 64% off these ties were defective.

Figure 11 shows a typical example of the track structure between Duncan and Nanaimo.
2.3.3 TURNOUTS

During a site inspection one turnout was noted for reference at the northern wye turnout to Wellcox yard. A condition inspection was not undertaken as the 100lb turnout was noted to be in a fair condition. Current operations and maintenance procedures show that the turnout is in a fair working condition. While not all the 7 mainline turnouts were inspected while out on site, it is observed from the hi-rail that the other turnouts are in a fair condition, similar to the rest of the Victoria subdivision. Figure 12 shows the typical condition of the turnouts between Duncan and Nanaimo.

Figure 12: Turnout Mile 70.07 General Condition

A site investigation was undertaken in September 2019. For detailed inspection reports refer to Appendix A for Track Inspection Reports and Appendix B for Turnout Inspection Reports.
2.4 SEGMENT 4: NANAIMO TO PARKSVILLE

2.4.1 ROAD BED

Surface
The surface condition for the Nanaimo to Parksville segment of the subdivision was determined to be in a fair condition. There was no warping or dips in the track profile noted while on site. There were no major cross level concerns observed while inspecting the subdivision via hi-rail.

Drainage
During a wet site inspection, no significant drainage issues along the corridor were observed. In some locations however, local ponding between the cribs was noted. This is due to fines and vegetation fouling the ballast void spaces, consequently inhibiting drainage.

Vegetation
It is understood, by discussions with and evident on site, that SVI have a Pest Management Plan (PMP) in place to combat vegetation in the corridor. However, from the site visits, it was observed that vegetation on the corridor is still prevalent within and around the right of way. The condition of the vegetation impact ranges from poor in some areas to good in others. Typically, in the Parksville to Nanaimo segment the condition of the vegetation is considered fair.

Figure 13 shows a typical example of the road bed between Nanaimo to Parksville.
2.4.2 TRACK STRUCTURE

Ballast
The ballast in the Nanaimo to Duncan corridor the ballast was generally observed to be crushed pit run gravel fouled with fines and generally in a poor condition, with some sections observed in a fair condition. The ballast cribs were noted to be full along most of the corridor with some sections empty or only partially full. The ballast shoulder was observed to be in fair (present but incomplete) with some sections in poor (no shoulder) condition.

Rail
The rail condition along the Nanaimo to Parksville segment of the corridor was determined to be generally fair with between 2-7mm of head loss in the inspected zones. There was a mixture of predominantly standard joint bars with a few sections of angled joint bars connecting the rails. The condition of the joint bars was considered to be good if the joints were connected by standard joint bars and poor if they were connected by angled joint bars. In a few inspected locations, metal overflow on the outer edge of the rail was noted. However, there were no other significant rail defects noted while onsite, however it should be understood that only a portion of the overall segment was inspected on foot.

Spikes, Anchors & Tie Plates
The spikes, anchors and tie plates are in poor condition on the Nanaimo to Parksville segment. The tie-plates used across the segment are single shoulder and should be upgraded to double shoulder plates in the restoration phases.

Ties
Wooden ties are used throughout the length of the corridor. It was observed on site during the inspections that between 47% and 52% off these ties were defective.

Figure 14 shows a typical example of the track structure between Nanaimo and Parksville.
### 2.4.3 TURNOUTS

During a site inspection one turnout condition assessment was undertaken and one turnout was visually reviewed and logged. Both 85lb turnouts was observed to be in a generally fair condition with some segments of the turnout considered to be poor. The ballast and ties were noted to be in poor condition while the rail, frog and anchors noted to be in fair condition with no head loss measured on site. While not all the 9 mainline turnouts were inspected while out on site, it is observed from the hi-rail that the other turnouts are in a similar condition.

Figure 15 shows the typical condition of the turnouts between Nanaimo and Parksville.

![Figure 15: Turnout Mile 75.70 general photo](image)

A site investigation was undertaken in September 2019. For detailed inspection reports refer to Appendix A for Track Inspection Reports and Appendix B for Turnout Inspection Reports.
2.5 SEGMENT 5: PARKSVILLE TO COURtenAY

2.5.1 ROAD BED

Surface
The surface condition for the Parksville to Courtenay segment of the subdivision was determined to be in a fair condition. There was no warping or dips in the track profile noted while on site. There were no major cross level concerns observed while inspecting the subdivision via hi-rail.

Drainage
During a wet site inspection, no significant drainage issues along the corridor were observed. In some locations however, local ponding between the cribs was noted. This is due to fines and vegetation fouling the ballast void spaces, consequently inhibiting drainage.

Vegetation
It is understood, by discussions with and evident on site, that SVI have a Pest Management Plan (PMP) in place to combat vegetation in the corridor. However, from the site visits, it was observed that vegetation on the corridor is still prevalent within and around the right of way. The condition of the vegetation impact ranges from poor in some areas to fair in others. Typically, in the Parksville to Courtenay segment the condition of the vegetation is considered fair.

Figure 16 shows a typical example of the Track road bed between Parksville and Courtenay.
2.5.2 TRACK STRUCTURE

Ballast

The ballast in the Parksville to Courtenay corridor the ballast was generally observed to be crushed pit run gravel fouled with fines and generally in a poor condition for the length of the corridor, with a small number of inspected areas noted to be in fair condition. The ballast cribs were noted to be full along most of the corridor with some sections empty or only partially full. The ballast shoulder was observed to be in poor (no shoulder) condition.

Rail

The rail condition along the Parksville to Courtenay segment of the corridor was determined to be generally fair with between 7-9mm of head loss in the inspected zones. There was a mixture of predominantly standard joint bars with a few sections of angled joint bars connecting the rails. The condition of the joint bars was considered to be good if the joints were connected by standard joint bars and poor if they were connected by angled joint bars. There were no other significant rail defects noted while onsite, however it should be understood that only a portion of the overall segment was inspected on foot.

Spikes, Anchors & Tie Plates

The spikes and anchors are in fair condition on the Parksville to Courtenay segment. The tie-plates used across the segment are considered in poor condition, due to all inspected locations being single shoulder and should be upgraded to double shoulder plates in the restoration phases.

Ties

Wooden ties are used throughout the length of the corridor. It was observed on site during the inspections that between 37% and 74% off these ties were defective, with an average of 58% ties being defective.

Figure 17 shows a typical example of the track structure between Parksville and Courtenay.
2.5.3 TURNOUTS

During a site inspection one turnout condition assessment was undertaken at Courtenay station. The 85lb turnout was observed to be in a fair condition with some components of the turnout considered to be poor. The ballast and ties were deemed to be in poor condition while the rail, frog and anchors deemed to be in fair condition with approximately 7-8mm of rail head loss, with a maximum of 11 noted on the through rail. While not all 7 mainline turnouts were inspected while out on site, it is observed from the hi-rail that the other turnouts are in a similar condition.

Figure 18 shows the typical condition of the turnouts between Parksville and Courtenay.

Figure 18: Turnout Mile 139.70 general photo

A site investigation was undertaken in September 2019. For detailed inspection reports refer to Appendix A for Track Inspection Reports and Appendix B for Turnout Inspection Reports.
2.6 SEGMENT 6: PARKSVILLE TO PORT ALBERNI

2.6.1 ROAD BED

Surface

The surface condition for the Port Alberni subdivision was determined to be in a fair condition. There was no warping or dips in the track profile noted while on site. There were no major cross level concerns observed while inspecting the subdivision on foot.

Drainage

During a wet site inspection, no significant drainage issues along the corridor were observed. In some locations however, local ponding between the cribs was noted. This is due to fines and heavy vegetation fouling the ballast void spaces, consequently inhibiting drainage.

Vegetation

After discussions with SVI, it was determined that there is no regular vegetation management of the Port Alberti subdivision. It was also discussed that after a storm in last 2018 a large number of trees came down over the track at Cameron Lake. These trees have not been cleared from the line as there is no current railway traffic. The general condition of the vegetation due to these key reasons, is considered to be in a poor condition with only a small area of the inspectable corridor considered to be in a fair condition. The fair condition is located in Port Alberni town center or at the interface with Victoria subdivision.

Figure 19 shows the typical road bed for the Port Alberni subdivision.
### 2.6.2 TRACK STRUCTURE

#### Ballast
The ballast in the Port Alberni Subdivision was generally observed to be crushed pit run gravel fouled with fines and generally in a poor condition for the length of the corridor apart from Port Alberni being fair. The ballast cribs were noted to be full along most of the corridor with some sections empty or only partially full. The ballast shoulder was observed to range from fair (present but incomplete) to poor (no shoulder) depending on the vegetation in the area.

#### Rail
The rail condition along the Port Alberni Subdivision was determined to be generally fair with between 1.5-10mm of head loss in the inspected zones. There was a mixture of predominantly angled joint bars with a few sections of standard joint bars connecting the rails. The condition of the joint bars was considered to be good if the joints were connected by standard joint bars and poor if they were connected by angled joint bars. There were no other significant rail defects noted while onsite, however it should be understood that only a small portion of the overall segment was inspected on foot due to heavy vegetation making the subdivision inaccessible.

#### Spikes, Anchors & Tie Plates
The spikes, anchors and tie plates are in poor condition on the Port Alberni subdivision. The tie-plates used across the segment are considered in poor condition, due to all inspected locations being single shoulder and should be upgraded to double shoulder plates in the restoration phases.

#### Ties
Wooden ties are used throughout the length of the subdivision. It was observed on site during the inspections that between 20% and 67% off these ties were defective, with an average of 34% ties being defective.

Figure 20 shows a typical example of the track structure between Parksville and Port Alberni.

---

**Figure 20: Parksville to Port Alberni- Typical Track Structure**
2.6.3 TURNOUTS

During a site inspection three turnout condition assessments were undertaken along the subdivision. All 85lb turnouts was observed to be in a generally fair condition with some parts of the turnout considered to be poor. The ballast was noted to mainly in poor condition while the rail, frog and anchors noted to be in fair condition with approximately 9mm of rail head loss, with a maximum of 11mm noted on the through and closure rails. While not all 5 mainline turnouts were inspected while out on site, it is observed from a walking inspection, that the other turnouts are in a similar condition. Figure 21 shows the typical condition of the turnouts between Nanaimo and Parksville.

A site investigation was undertaken in September 2019. For detailed inspection reports refer to Appendix A for Track Inspection Reports and Appendix B for Turnout Inspection Reports.
2.7 WELLCOX YARD

2.7.1 ROAD BED

Surface
The surface condition for Wellcox Yard off the Victoria subdivision was noted to be in a fair condition. There was no warping or dips in the track profile noted while on site. There were no major cross level concerns observed while inspecting the subdivision on foot.

Drainage
During the site inspection, no significant drainage issues along the corridor were observed. In some locations however, local ponding between the cribs is believed to occur. This is due to fines fouling the ballast void spaces, consequently inhibiting drainage.

Vegetation
It is understood, by discussions with and evident on site, that SVI have a Pest Management Plan (PMP) in place to combat vegetation in the corridor. The condition of the vegetation impact ranges from poor in some areas to good in others. Typically, in the Wellcox yard segment the condition of the vegetation is considered good.

Figure 22: Wellcox Yard - Typical Road Bed

Figure 23 shows a typical example of the track road bed within Wellcox yard.
2.7.2 TRACK STRUCTURE

Ballast
The ballast in Wellcox Yard generally observed to be crushed pit run gravel fouled with fines and generally in a poor condition for the length of the corridor. The ballast cribs were noted to be empty along most of the corridor with some sections full or only partially full. The ballast shoulder was observed to be in fair (present but incomplete) condition.

Rail
The rail condition in Wellcox yard was determined to be generally fair with between 10-11mm of head loss in the inspected zones. There was a mixture of predominantly standard joint bars with a few sections of angled joint bars connecting the rails. The condition of the joint bars was considered to be good if the joints were connected by standard joint bars and poor if they were connected by angled joint bars. There were no other significant rail defects noted while onsite, however it should be understood that only a portion of the overall segment was inspected on foot.

Spikes, Anchors & Tie Plates
The spikes, anchors and tie plates are in poor condition in Wellcox yard. The tie-plates used across the segment are considered in poor condition, due to all inspected locations being single shoulder and should be upgraded to double shoulder plates in the restoration phases.

Ties
Wooden ties are used throughout the spur and yard. It was observed on site during the inspections that between approximately 25% off these ties were defective.

Figure 23 shows a typical example of the track structure within Wellcox yard.
2.7.3 TURNOUTS

During a walking site inspection of the yard only one of the 34 turnouts had a condition assessment undertaken. The 85lb turnout was observed to be in a generally fair condition with some components of the turnout considered to be poor. The ballast, ties and anchors were deemed to mainly in poor condition while the rail and frog deemed to be in fair condition with approximately 11mm of rail head loss, with a maximum of 12mm noted on the and closure rails. While not all 34 yard turnouts were inspected while out on site, it is observed from a walking inspection, that the other turnouts are in a similar condition.

Figure 24Figure 15 shows the typical condition of the turnouts between Nanaimo and Parksville.

Figure 24: Turnout Wellcox Yard. General Photo

A site investigation was undertaken in September 2019. For detailed inspection reports refer to Appendix A for Track Inspection Reports and Appendix B for Turnout Inspection Reports
3 SUMMARY

In 2009 the Ministry of Transportation and Infrastructure (MoTI) conducted an evaluation of the E&N Railway Corridor. The evaluation was undertaken by Hatch Mott MacDonald. The report assessed the condition of a range of items. This included, road bed, drainage, track structure, vegetation, yards and facilities, bridges, crossings and communications. The Evaluation of E&N Railway Corridor: Baseline Reference Report concluded the track was in poor condition, due to vegetation, fouled ballast, decayed ties, worn rail and frozen bolts.

WSP conducted track inspections in September 2019, with the detailed reports attached in Appendix A and B. The Island Corridor Foundation (ICF), the owner of the Island Rail corridor, and Southern Railway of Vancouver Island (SVI), the operator of the Island Rail Corridor assisted WSP in conducting field investigations and understanding the operations of the corridor. WSP, conducted informal continuous discussions with SVI to obtain knowledge of issues of the railway and understand the current status of maintenance and inspection regimes.

WSP found, the general railway condition from Victoria and Port Alberni subdivisions, to be in a poor condition. The main issues noted with the track bed, resulting in a poor condition, was the vegetation. The track structure was considered to be in fair condition with rails, joints, spikes, and anchors observed to also be in fair condition. However, the tie plates, ties and ballast deemed to be in poor condition with an average of 52% defective ties for the Victoria Subdivision and 34% defective ties for the Port Alberni subdivision. The rail for both subdivisions, is in fair condition with significant head loss but is suitable for near term proposed use. There were no serious rail defects noted during the inspection. The turnouts along the subdivisions are also considered to be in fair condition with only the ties and ballast considered in poor condition.

A detailed breakdown of the track and turnout inspections findings are found below in Table 2: Track Assessment Summary and Table 3: Turnout Assessment Summary.
Table 2: Track Assessment Summary

<table>
<thead>
<tr>
<th>WSP Inspection ID</th>
<th>Segment</th>
<th>Subdivision</th>
<th>Start Mileage</th>
<th>End Mileage</th>
<th>Rail Condition</th>
<th>Head loss (mm)</th>
<th>No. of Tie Defects</th>
<th>% of tie defects</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
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**Table 3: Turnout Assessment Summary**
REFERENCES

— Reports
   — IBI, 2009, Evaluation of the E&N Railway Corridor: Commuter Rail

— Reference drawings/ design information;
   — E&N Railway (from kmz).dwg, Rail Line in CAD format
   — E&N Railway Corridor-Legal ICIS.dwg, Legal Boundary in CAD format
   — MOT MODEL-E N Railway-TRSI.zip, LiDAR and Imagery
   — Canada Lands – Google Earth
   — UberMashup.kml – Transport Canada Google Earth Railway Mapping
APPENDIX

A

TRACK

INSPECTION

REPORTS
### WSP Track Inspection

**Railway Authority**
SVI

**Lead Inspector**
Kris Dhawan

**Subdivision**
Victoria

**Date**
12/09/2019

<table>
<thead>
<tr>
<th>Start Mileage</th>
<th>End Mileage</th>
<th>Inspection Type</th>
<th>Alignment</th>
<th>Speed (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.27</td>
<td>.365</td>
<td>Short Walking Inspection</td>
<td>Tangent</td>
<td>15</td>
</tr>
</tbody>
</table>

### Condition Assessment

#### Rail Condition

<table>
<thead>
<tr>
<th>Rail Condition</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td>1913</td>
<td>Not Observed</td>
<td>85</td>
<td>39.00</td>
<td>6</td>
<td>2</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

- **Joint Bars Type**: Standard
- **Tie-Plates Type**: Single shoulder
- **Number of Tie Defects**: 160
- **Ballast Type**: Crushed gravel
- **Ballast Description**: Ballast fouled with dirt
- **Are the ballast Cribs full?**: Yes
- **Gauge (in)**: 56.50

- **Joint Bar Condition**: Poor
- **Tie-Plate Condition**: Poor
- **Spike/Anchor Condition**: Poor
- **Ballast Condition**: Poor
- **Shoulder Condition**: Fair
- **Surface Condition**: Fair
- **Vegetation Condition**: Poor

#### General Tie and Gauge Comments

All ties 53 defective. Likely replace full deck. Some angle joint bars

#### Ballast, Surface & Vegetation Comments

No Comment
## Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WSP Track Inspection

WSP Inspection ID
Track Inspection V0.270 - Johnson St Bridge

No. 00005

1C927546-1A13-4470-B901-5A93C522985C
WSP Track Inspection

Ties and Gauge Photos

<table>
<thead>
<tr>
<th>Tie-Plates Photo</th>
<th>Anchor / Spikes Photo</th>
<th>Tie Photo</th>
<th>Typical Track Structure Photo</th>
</tr>
</thead>
</table>

No. 00005

1C927546-1A13-4470-B901-5A93C522985C
## Ballast and Surface Photos

<table>
<thead>
<tr>
<th>Ballast Photo</th>
<th>Surface Photo</th>
<th>Vegetation Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Ballast Photo" /></td>
<td><img src="image2.png" alt="Surface Photo" /></td>
<td><img src="image3.png" alt="Vegetation Photo" /></td>
</tr>
</tbody>
</table>

WSP Track Inspection

WSP Inspection ID
Track Inspection V0.270 - Johnson St Bridge

No. 00005

1C927546-1A13-4470-B901-5A93C522985C
# WSP Track Inspection

**Additional Photos**

<table>
<thead>
<tr>
<th>Additional Photo 1</th>
<th>Additional Photo 2</th>
<th>Additional Photo 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Additional Photo 1" /></td>
<td><img src="image2.jpg" alt="Additional Photo 2" /></td>
<td><img src="image5.jpg" alt="Additional Photo 5" /></td>
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<table>
<thead>
<tr>
<th>Additional Photo 1 Description</th>
<th>Additional Photo 2 Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnson Bridge Approach</td>
<td>Johnson Bridge Approach</td>
</tr>
</tbody>
</table>

**WSP Inspection ID**

Track Inspection V0.270 - Johnson St Bridge
**WSP Track Inspection**

**Railway Authority**
SVI

**Lead Inspector**
Kris Dhawan

**Subdivision**
Victoria

**Date**
12/09/2019

<table>
<thead>
<tr>
<th>Start Mileage</th>
<th>End Mileage</th>
<th>Inspection Type</th>
<th>Alignment</th>
<th>Speed (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Spot Inspection</td>
<td>Mixed</td>
<td>Not Observed</td>
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</tbody>
</table>

**Condition Assessment**

<table>
<thead>
<tr>
<th>Joint Bars Type</th>
<th>Tie-Plates Type</th>
<th>Number of Tie Defects</th>
<th>Ballast Type</th>
<th>Ballast Description</th>
<th>Are the ballast Cribs full?</th>
<th>Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>No Comment</td>
<td>No Comment</td>
<td>56.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint Bar Condition</th>
<th>Tie-Plate Condition</th>
<th>Spike/ Anchor Condition</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**General Tie and Gauge Comments**
No Comment - For Reference Only

**Ballast, Surface & Vegetation Comments**
No Comment - For Reference Only
WSP Track Inspection

No. 00006

WSP Inspection ID
Track Inspection - Victoria yard (For Reference)

Photo Library

Site Photo
### WSP Track Inspection

#### WSP Inspection ID
Track Inspection - Victoria yard (For Reference)

#### Ties and Gauge Photos

<table>
<thead>
<tr>
<th>Tie-Plates Photo</th>
<th>Anchor / Spikes Photo</th>
<th>Tie Photo</th>
<th>Typical Track Structure Photo</th>
</tr>
</thead>
</table>

No. 00006

36FD68E0-88BA-4D73-A2B3-D55F9696FE33
### Ballast and Surface Photos

<table>
<thead>
<tr>
<th>Ballast Photo</th>
<th>Surface Photo</th>
<th>Vegetation Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WSP Track Inspection

WSP Inspection ID
Track Inspection - Victoria yard (For Reference)
## WSP Track Inspection

### Railway Authority
SVI
Lead Inspector
Kris Dhawan

### Subdivision
Victoria

### Date
12/09/2019

### Start Mileage
3.644

### End Mileage
3.744

### Inspection Type
Short Walking Inspection

### Alignment
Mixed

### Speed (mph)
25

## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>1911</td>
<td>Not Observed</td>
<td>85</td>
<td></td>
<td>10</td>
<td>3</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

### Joint Bars Type
- Standard

### Tie-Plates Type
- Single Shoulder

### Number of Tie Defects
- 153

### Ballast Type
- Pitt run

### Ballast Description
- Fouled

### Are the ballast Cribs full?
- Yes

### Gauge (in)
- 56.50

### Joint Bar Condition
- Fair

### Tie-Plate Condition
- Poor

### Spike/ Anchor Condition
- Poor

### Ballast Condition
- Poor

### Shoulder Condition
- Fair

### Surface Condition
- Fair

### Vegetation Condition
- Fair

### General Tie and Gauge Comments
- 153 in .1 mile. 2900 ties per mile on avg or 290 ties per tenth of mile

### Ballast, Surface & Vegetation Comments
- No Comment
WSP Track Inspection

Photo Library

Site Photo
### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td><img src="image1.jpg" alt="Rail Defect Photo 1" /></td>
<td><img src="image2.jpg" alt="Rail Defect Photo 2" /></td>
<td><img src="image3.jpg" alt="Rail Defect Photo 3" /></td>
</tr>
<tr>
<td></td>
<td>Chipping side and mushroom outside</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Ties and Gauge Photos

<table>
<thead>
<tr>
<th>Tie-Plates Photo</th>
<th>Anchor / Spikes Photo</th>
<th>Tie Photo</th>
<th>Typical Track Structure Photo</th>
</tr>
</thead>
</table>

No. 00010
## WSP Track Inspection

### Ballast and Surface Photos

<table>
<thead>
<tr>
<th>Ballast Photo</th>
<th>Surface Photo</th>
<th>Vegetation Photo</th>
</tr>
</thead>
</table>

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No. 00010

WSP Inspection ID
Track Inspection V3.644

9F27B591-8124-4AD7-9B98-55086CEFD206
WSP Track Inspection

Railway Authority
SVI
Lead Inspector
Kris Dhawan

Subdivision
Victoria
Date
12/09/2019

Start Mileage | End Mileage | Inspection Type | Alignment | Speed (mph)
---|---|---|---|---
1.390 | 1.410 | Short Walking Inspection | Tangent | 15

Condition Assessment

<table>
<thead>
<tr>
<th>Rail Condition</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td>Not Observed</td>
<td>85</td>
<td>33.00</td>
<td>7.5</td>
<td>2</td>
<td>Fair</td>
<td>No Comment</td>
<td></td>
</tr>
</tbody>
</table>

Joint Bars Type
Angle and standard 4 hole.

<table>
<thead>
<tr>
<th>Joint Bar Condition</th>
<th>Tie-Plate Condition</th>
<th>Spike/ Anchor Condition</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Fair</td>
<td>Good</td>
</tr>
</tbody>
</table>

General Tie and Gauge Comments
44 defective ties
To meet class 3 only need to replace 6 ties
Plate 6.5x 98.5

Ballast, Surface & Vegetation Comments
Poor condition.

Ballast Type
Pitt run gravel with dirt

Ballast Description
Fouled

Are the ballast Cribs full?
No

Gauge (in)
56.50
Site Photo
<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1.jpg" alt="Defect Photo 1" /></td>
<td><img src="image2.jpg" alt="Defect Photo 2" /></td>
<td><img src="image3.jpg" alt="Defect Photo 3" /></td>
</tr>
</tbody>
</table>

No comment
WSP Track Inspection

Ties and Gauge Photos

Tie-Plates Photo

Anchor / Spikes Photo

Tie Photo

Typical Track Structure Photo
Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
<table>
<thead>
<tr>
<th>Additional Photos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Photo 1</td>
</tr>
</tbody>
</table>

![Image of rail tracks and surrounding area]

---

WSP Track Inspection

WSP Inspection ID
Track Inspection V1.390

No. 00011

B7629EA7-ADB0-41B7-BDD8-40FE0E66CAF6
### WSP Track Inspection

**Railway Authority:** SVI  
**Lead Inspector:** Kris Dhawan  
**Subdivision:** Victoria  
**Date:** 12/09/2019

<table>
<thead>
<tr>
<th>Start Mileage</th>
<th>End Mileage</th>
<th>Inspection Type</th>
<th>Alignment</th>
<th>Speed (mph)</th>
</tr>
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<tbody>
<tr>
<td>10.000</td>
<td>10.100</td>
<td>Short Walking Inspection</td>
<td>Tangent</td>
<td>25</td>
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</table>

#### Condition Assessment

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td></td>
<td></td>
<td>85</td>
<td>7</td>
<td>4</td>
<td></td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

**Joint Bars Type**  
**Standards**  
**Tie-Plates Type** Single Shoulder  
**Number of Tie Defects** 141  
**Ballast Type** Pitt run gravel  
**Ballast Description** Fouled  
**Are the ballast Cribs full?** Yes  
**Gauge (in)** 56.50

**Joint Bar Condition**  
**Fair**  
**Tie-Plate Condition** Poor  
**Spike/ Anchor Condition** Poor  
**Ballast Condition** Poor  
**Shoulder Condition** Poor  
**Surface Condition** Fair  
**Vegetation Condition** Fair

**General Tie and Gauge Comments**  
Per one tenth mile

**Ballast, Surface & Vegetation Comments**  
No Comment
### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1.jpg" alt="Image" /></td>
<td></td>
<td><img src="image2.jpg" alt="Image" /></td>
</tr>
<tr>
<td>Ties and Gauge Photos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tie-Plates Photo</td>
<td>Anchor / Spikes Photo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tie Photo</td>
<td>Typical Track Structure Photo</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo  Surface Photo  Vegetation Photo
# WSP Track Inspection

**Railway Authority**  
SVI  
Lead Inspector  
Kris Dhawan

**Subdivision**  
Victoria  
**Date**  
12/09/2019

<table>
<thead>
<tr>
<th>Start Mileage</th>
<th>End Mileage</th>
<th>Inspection Type</th>
<th>Alignment</th>
<th>Speed (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.100</td>
<td>13.200</td>
<td>Short Walking Inspection</td>
<td>Curve</td>
<td>25</td>
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</tbody>
</table>

## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td>Not Observed</td>
<td></td>
<td>85</td>
<td>7</td>
<td>1</td>
<td>Fair</td>
<td>No Comment</td>
<td></td>
</tr>
</tbody>
</table>

### Joint Bars Type
- Standard

### Tie-Plates Type
- Single Shoulder

### Number of Tie Defects
- 155

### Ballast Type
- Pitt run gravel

### Ballast Description
- Fouled

### Are the ballast Crib full?
- Yes

### Gauge (in)
- 56.50

### Joint Bar Condition
- Fair

### Tie-Plate Condition
- Poor

### Spike/ Anchor Condition
- Fair

### Ballast Condition
- Fair

### Shoulder Condition
- Fair

### Surface Condition
- Fair

### Vegetation Condition
- Fair

### General Tie and Gauge Comments
Cut ties from derailment. Replaced ties yellow ties have double shoulder plates. Single Shoulder plates everywhere else.

### Ballast, Surface & Vegetation Comments
- No Comment
WSP Track Inspection

Photo Library

Site Photo

83DA56B-B389-4A30-AF24-15B4703D4E9F
<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Ties and Gauge Photos

Tie-Plates Photo

Anchor / Spikes Photo

Tie Photo

Typical Track Structure Photo
## Ballast and Surface Photos

<table>
<thead>
<tr>
<th>Ballast Photo</th>
<th>Surface Photo</th>
<th>Vegetation Photo</th>
</tr>
</thead>
</table>

No. 00007

WSP Inspection ID
Track Inspection V13.100

83DBA56B-B389-4A30-AF24-15B4703D4E9F
<table>
<thead>
<tr>
<th>Additional Photos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Photo 1</td>
</tr>
</tbody>
</table>

![Additional Photo 1](image_url)
## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
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</thead>
<tbody>
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<td>85</td>
<td>9</td>
<td>0</td>
<td></td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

### Joint Bars Type

<table>
<thead>
<tr>
<th>Angle</th>
<th>Joint Bars Type</th>
<th>Tie-Plates Type</th>
<th>Number of Tie Defects</th>
<th>Ballast Type</th>
<th>Ballast Description</th>
<th>Are the ballast Cribs full?</th>
<th>Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angle</td>
<td>Angle</td>
<td>Tie-Plates Type</td>
<td>Number of Tie Defects</td>
<td>Ballast Type</td>
<td>Ballast Description</td>
<td>Are the ballast Cribs full?</td>
<td>Gauge (in)</td>
</tr>
<tr>
<td>Angle</td>
<td>Angle</td>
<td>Tie-Plates Type</td>
<td>Number of Tie Defects</td>
<td>Ballast Type</td>
<td>Ballast Description</td>
<td>Are the ballast Cribs full?</td>
<td>Gauge (in)</td>
</tr>
</tbody>
</table>

### Joint Bar Condition

<table>
<thead>
<tr>
<th>Condition</th>
<th>Joint Bar Condition</th>
<th>Tie-Plate Condition</th>
<th>Spike/ Anchor Condition</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Fair</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Good</td>
</tr>
</tbody>
</table>

### General Tie and Gauge Comments

No Comment

### Ballast, Surface & Vegetation Comments

No Comment
WSP Track Inspection

Photo Library

Site Photo

No. 00012

D40726F8-2DF3-4BD7-9C47-80F1504FB3D5
### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1.png" alt="Joint gap" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
</tbody>
</table>

- **Joint gap**
WSP Track Inspection

Ties and Gauge Photos

Tie-Plates Photo

Anchor / Spikes Photo

Tie Photo

Typical Track Structure Photo
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
**WSP Track Inspection**

### Additional Photos

<table>
<thead>
<tr>
<th>Additional Photo 1</th>
<th>Additional Photo 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Image 1" /></td>
<td><img src="image2.jpg" alt="Image 2" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Additional Photo 1 Description

Water ponding
## WSP Track Inspection

**Railway Authority:** SVI  
**Lead Inspector:** Kris Dhawan  
**Subdivision:** Victoria  
**Date:** 12/09/2019

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### Condition Assessment

#### Rail Condition

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<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
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<td>3</td>
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**Joint Bars Type:** Angled  
**Tie-Plates Type:** Single Shoulder  
**Number of Tie Defects:** 120  
**Ballast Type:** Pitt run gravel  
**Ballast Description:** Fouled  
**Are the ballast Cribs full?** Yes  
**Gauge (in):** 56.50  
**Joint Bar Condition:** Poor  
**Tie-Plate Condition:** Poor  
**Spike/ Anchor Condition:** Fair  
**Ballast Condition:** Poor  
**Shoulder Condition:** Poor  
**Surface Condition:** Fair  
**Vegetation Condition:** Poor

#### General Tie and Gauge Comments

No Comment

#### Ballast, Surface & Vegetation Comments

No Comment
WSP Track Inspection

Photo Library

Site Photo
### Rail Condition

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<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
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WSP Track Inspection

Ties and Gauge Photos

- Tie-Plates Photo
- Anchor / Spikes Photo
- Tie Photo
- Typical Track Structure Photo
## WSP Track Inspection

### Ballast and Surface Photos

<table>
<thead>
<tr>
<th>Ballast Photo</th>
<th>Surface Photo</th>
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No. 00009

WSP Inspection ID
Track Inspection V35.429 - Cowichan

9DB12A8A-3799-4421-A2E0-B47FD26AF11F
WSP Track Inspection

Additional Photos

Additional Photo 1

Additional Photo 2

Additional Photo 3

Additional Photo 2 Description
Station cowichan

No. 00009

9DB12A8A-3799-4421-A2E0-B47FD26AF11F
## WSP Track Inspection

**Railway Authority**
SVI

**Lead Inspector**
Kris Dhawan

**Subdivision**
Victoria

**Date**
12/09/2019

### Start Mileage: 46.310 | End Mileage: 46.410 | Inspection Type: Short Walking Inspection | Speed (mph): 30

### Condition Assessment

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Ties and Gauge Photos

Tie-Plates Photo

Anchor / Spikes Photo

Tie Photo

Typical Track Structure Photo
### Additional Photos

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**Railway Authority**
SVI
**Lead Inspector**
Kris Dhawan

**Subdivision**
Victoria

**Date**
13/09/2019

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## Condition Assessment

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### Joint Bars Type

- **Mixed**

### Tie-Plates Type

- **Mixed**

### Number of Tie Defects

- 112

### Ballast Type

- Pitt run gravel

### Ballast Description

- Fouled

### Are the ballast Cribs full?

- Yes

### Gauge (in)

- 56.50

### Joint Bar Condition

- **Poor**

### Tie-Plate Condition

- **Poor**

### Spike/ Anchor Condition

- **Poor**

### Ballast Condition

- **Poor**

### Shoulder Condition

- **Poor**

### Surface Condition

- **Fair**

### Vegetation Condition

- **Fair**

### General Tie and Gauge Comments

Both angle and standard joint bars. Single and double shoulder plates. 80 and 85 lb rail. 85 lb head loss =9 flange loss =1

### Ballast, Surface & Vegetation Comments

No Comment

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46B49B80-ACBB-4768-BAD1-112A0C631520
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No. 00016
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WSP Track Inspection

Ballast and Surface Photos
## WSP Track Inspection

**WSP Track Inspection**

### Additional Photos

<table>
<thead>
<tr>
<th>Additional Photo 1</th>
<th>Additional Photo 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Additional Photo 1" /></td>
<td><img src="image2.jpg" alt="Additional Photo 2" /></td>
</tr>
</tbody>
</table>

### Additional Photo 1 Description
- Standard joint bar

### Additional Photo 2 Description
- Double shoulder plate

---

**No.**
00016

**WSP Inspection ID**
Track Inspection V59.900

**No.**
46B49B80-ACBB-4768-BAD1-112A0C631520
WSP Track Inspection

Start Mileage | End Mileage | Inspection Type | Alignment | Speed (mph) |
--- | --- | --- | --- | --- |
73.050 | 73.150 | Short Walking Inspection | Curve | 20 |

Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>Not Observed</td>
<td>85</td>
<td>9</td>
<td>1</td>
<td>Fair</td>
<td>Low rail hl 9 fl 1 High rail hl 9 fl 0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Joint Bars Type: Standard
Tie-Plates Type: Single shoulder
Number of Tie Defects: 135
Ballast Type: Pitt run gravel
Ballast Description: Fouled
Are the ballast Cribs full?: Yes
Gauge (in): 56.50

Joint Bar Condition: Fair
Tie-Plate Condition: Poor
Spike/ Anchor Condition: Poor
Ballast Condition: Poor
Shoulder Condition: Fair
Surface Condition: Fair
Vegetation Condition: Good

General Tie and Gauge Comments
No anchors on track.
Low rail head loss 9mm flange 1mm
High rail head loss 9mm flange 0mm

Ballast, Surface & Vegetation Comments
Fair, Still needs ties plates anchors ballast
<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td><img src="image1" alt="Metal overflow" /></td>
<td><img src="image2" alt="Metal overflow" /></td>
<td><img src="image3" alt="Metal overflow" /></td>
</tr>
</tbody>
</table>

- **Metal overflow**
WSP Track Inspection

Ties and Gauge Photos

- Tie-Plates Photo
- Anchor / Spikes Photo
- Tie Photo
- Typical Track Structure Photo
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo  Surface Photo  Vegetation Photo
# WSP Track Inspection

## WSP Inspection ID
Track Inspection V77.400 - Wellington siding

<table>
<thead>
<tr>
<th>Railway Authority</th>
<th>Subdivision</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVI</td>
<td>Victoria</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lead Inspector</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kris Dhawan</td>
<td>13/09/2019</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Start Mileage</th>
<th>End Mileage</th>
</tr>
</thead>
<tbody>
<tr>
<td>77.400</td>
<td>77.500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inspection Type</th>
<th>Alignment</th>
<th>Speed (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Walking Inspection</td>
<td>Mixed</td>
<td>30</td>
</tr>
</tbody>
</table>

## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>Not Observed</td>
<td>80</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Fair</td>
<td>Track head loss gauge doesn't work ok 80lb</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint Bars Type</th>
<th>Tie-Plates Type</th>
<th>Number of Tie Defects</th>
<th>Ballast Type</th>
<th>Ballast Description</th>
<th>Are the ballast Cribs full?</th>
<th>Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>Single Shoulder</td>
<td>150</td>
<td>Pit run gravel</td>
<td>Pitt run gravel</td>
<td>Yes</td>
<td>56.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint Bar Condition</th>
<th>Tie-Plate Condition</th>
<th>Spike/ Anchor Condition</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair</td>
<td>Poor</td>
<td>Poor</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
</tr>
</tbody>
</table>

### General Tie and Gauge Comments

- Double shoulder plates on replaced ties.
- Track head loss gauge doesn’t work ok 80lb

### Ballast, Surface & Vegetation Comments

- No Comment

---

No.
00018

8FBA7EB-B47D-4581-80B0-63ED08457503
<table>
<thead>
<tr>
<th>Rail Condition</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WSP Track Inspection

Ties and Gauge Photos

Tie-Plates Photo

Anchor / Spikes Photo

Tie Photo

Typical Track Structure Photo

WSP Inspection ID
Track Inspection V77.400 - Wellington siding

No.
00018
### Additional Photos

<table>
<thead>
<tr>
<th>Additional Photo 1</th>
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</thead>
<tbody>
<tr>
<td><img src="image" alt="Derail" /></td>
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</tbody>
</table>

**Additional Photo 1 Description**

Derail
## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>Not Observed</td>
<td></td>
<td>100</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

**Joint Bars Type**
- Standard
  - Tie-Plates Type: Single Shoulder
  - Number of Tie Defects: 153

**Ballast Type**
- Pitt run gravel

**Ballast Description**
- Fouled

**Are the ballast Cribs full?**
- Yes

**Gauge (in)**
- 56.50

### General Tie and Gauge Comments
- No Comment

### Ballast, Surface & Vegetation Comments
- No Comment
## Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No. 00015
WSP Track Inspection

Ties and Gauge Photos

Tie-Plates Photo

Anchor / Spikes Photo

Tie Photo

Typical Track Structure Photo
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
# WSP Track Inspection

**WSP Inspection ID**  
Track Inspection V99.000

---

**Railway Authority**  
SVI  
Lead Inspector  
Kris Dhawan

**Subdivision**  
Victoria  
Date  
13/09/2019

---

**Start Mileage** | **End Mileage** | **Inspection Type** | **Alignment** | **Speed (mph)**
---|---|---|---|---
99.000 | 99.100 | Short Walking Inspection | Mixed | 30

---

## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>Not Observed</td>
<td>85</td>
<td>9</td>
<td>1</td>
<td>Fair</td>
<td>No Comment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Joint Bar Condition

<table>
<thead>
<tr>
<th>Joint Bar Condition</th>
<th>Tie-Plate Condition</th>
<th>Shoulder Condition</th>
<th>Ballast Condition</th>
<th>Ballast Description</th>
<th>Ballast Type</th>
<th>Ballast Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Fouled</td>
<td>Pitt run gravel</td>
<td></td>
</tr>
</tbody>
</table>

### Shoulder Condition

<table>
<thead>
<tr>
<th>Shoulder Condition</th>
<th>Ballast Condition</th>
<th>Ballast Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>Poor</td>
<td>Fouled</td>
</tr>
</tbody>
</table>

### Ballast Condition

<table>
<thead>
<tr>
<th>Ballast Type</th>
<th>Ballast Description</th>
<th>Shoulder Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitt run gravel</td>
<td>Fouled</td>
<td>Poor</td>
</tr>
</tbody>
</table>

### General Tie and Gauge Comments

No Comment

### Ballast, Surface & Vegetation Comments

No Comment
WSP Track Inspection

Photo Library

Site Photo

No. 00020

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WSP Track Inspection

Ties and Gauge Photos

- Tie-Plates Photo
- Anchor / Spikes Photo
- Tie Photo
- Typical Track Structure Photo

No. 00020
WSP Track Inspection

Ballast and Surface Photos

<table>
<thead>
<tr>
<th>Ballast Photo</th>
<th>Surface Photo</th>
<th>Vegetation Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Ballast Photo" /></td>
<td><img src="image2.jpg" alt="Surface Photo" /></td>
<td><img src="image3.jpg" alt="Vegetation Photo" /></td>
</tr>
</tbody>
</table>
## WSP Track Inspection

**Railway Authority**
SVI

**Lead Inspector**
Kris Dhawan

**Subdivision**
Victoria

**Date**
13/09/2019

**Start Mileage**
108.900

**End Mileage**
109.000

**Inspection Type**
Short Walking Inspection

**Alignment**
Tangent

**Speed (mph)**
30

### Condition Assessment

#### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>1948</td>
<td>Algoma</td>
<td>85</td>
<td>7</td>
<td>1</td>
<td></td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

**Joint Bars Type**
- Standard

**Tie-Plates Type**
- Single Shoulder

**Number of Tie Defects**
145

**Ballast Type**
- Pitt run gravel

**Ballast Description**
- Fouled

**Are the ballast Cribs full?**
- Yes

**Gauge (in)**
56.50

#### Joint Bar Condition

- Fair

**Tie-Plate Condition**
- Poor

**Spike/ Anchor Condition**
- Poor

**Ballast Condition**
- Poor

**Shoulder Condition**
- Poor

**Surface Condition**
- Fair

**Vegetation Condition**
- Fair

**General Tie and Gauge Comments**
No Comment

**Ballast, Surface & Vegetation Comments**
No Comment
Site Photo

Photo Library
## Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td><img src="image1" alt="Rail Defect Photo 1" /></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image2" alt="General" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo

No. 00017

8ED1B1DD-829F-4223-B552-DAA206B9AF0B
# WSP Track Inspection

**WSP Inspection ID**
Track Inspection V110.17
- Dunsmuir siding

**Railway Authority**
SVI
**Lead Inspector**
Kris Dhawan
**Subdivision**
Victoria
**Date**
13/09/2019

<table>
<thead>
<tr>
<th>Start Mileage</th>
<th>End Mileage</th>
<th>Inspection Type</th>
<th>Alignment</th>
<th>Speed (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>110.170</td>
<td>110.270</td>
<td>Short Walking Inspection</td>
<td>Tangent</td>
<td>30</td>
</tr>
</tbody>
</table>

## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td>Not Observed</td>
<td>85</td>
<td></td>
<td>8</td>
<td>1</td>
<td></td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

### Joint Bars Type

- **Angle**
  - Tie-Plates Type: Single Shoulder
  - Number of Tie Defects: 200
- **Ballast Type**
  - No ballast observed/ Mud
- **Ballast Description**
  - Fouled with mud

### Joint Bar Condition

- **Poor**
  - Tie-Plate Condition: Poor
  - Spike/ Anchor Condition: Poor

### Ballast Condition

- **Poor**
  - Ballast Condition: Poor
  - Shoulder Condition: Poor
  - Surface Condition: Fair
  - Vegetation Condition: Poor

### General Tie and Gauge Comments

No Comment

### Ballast, Surface & Vegetation Comments

Poor
WSP Track Inspection

Photo Library

Site Photo
<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
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</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1.png" alt="Image" /></td>
<td></td>
<td></td>
</tr>
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</table>

36C93B0E-1537-42AA-A93A-95BA24CAF730
WSP Track Inspection

Ties and Gauge Photos

Tie-Plates Photo

Anchor / Spikes Photo

Tie Photo

Typical Track Structure Photo
WSP Track Inspection

Additional Photos

Additional Photo 1

Additional Photo 2
# WSP Track Inspection

**Railway Authority:** SVI  
**Lead Inspector:** Kris Dhawan  
**Subdivision:** Victoria  
**Date:** 13/09/2019

<table>
<thead>
<tr>
<th>Start Mileage</th>
<th>End Mileage</th>
<th>Inspection Type</th>
<th>Alignment</th>
<th>Speed (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>110.170</td>
<td>110.270</td>
<td>Short Walking Inspection</td>
<td>Tangent</td>
<td>30</td>
</tr>
</tbody>
</table>

## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>Not Observed</td>
<td>Rail</td>
<td>85</td>
<td>7</td>
<td>1</td>
<td>Fair</td>
<td>No Comment</td>
<td></td>
</tr>
</tbody>
</table>

### Joint Bars Type

- **Standard**
- **Number of Tie Defects:** 195
- **Ballast Type:** Pitt run gravel
- **Ballast Description:** Overgrown/ Moss
- **Are the ballast Cribs full?** Yes
- **Gauge (in):** 56.50

### Joint Bar Condition

- **Fair**
- **Spike/ Anchor Condition:** Poor
- **Ballast Condition:** Poor
- **Shoulder Condition:** Poor
- **Surface Condition:** Fair
- **Vegetation Condition:** Poor

### General Tie and Gauge Comments

- **No Comment**

### Ballast, Surface & Vegetation Comments

- **Poor**
WSP Track Inspection

Photo Library

Site Photo

No. 00019

5AECBF0D-9FE5-4CBE-A3AF-02C0FEFA718C
<table>
<thead>
<tr>
<th>Rail Condition</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Ties and Gauge Photos

- Tie-Plates Photo
- Anchor / Spikes Photo
- Tie Photo
- Typical Track Structure Photo
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
## Additional Photos

<table>
<thead>
<tr>
<th>Additional Photo 1 Description</th>
<th>Additional Photo 2 Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushed tie</td>
<td>No shoulder</td>
</tr>
</tbody>
</table>
## WSP Track Inspection

### Railway Authority
- **SVI**

### Lead Inspector
- Kris Dhawan

### Subdivision
- Victoria

### Date
- 18/09/2019

### Start Mileage
- 113.460

### End Mileage
- 113.560

### Inspection Type
- Short Walking Inspection

### Alignment
- Curve

### Speed (mph)
- 30

---

## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>Not Observed</td>
<td>Metal Type</td>
<td>85</td>
<td>9</td>
<td>6</td>
<td>6</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

### Joint Bars Type
- **Standard**

### Tie-Plates Type
- Single Shoulder

### Number of Tie Defects
- 110

### Ballast Type
- Pitt run gravel

### Ballast Description
- Fouled

### Are the ballast Cribs full?
- Yes

### Gauge (in)
- 56.50

### Joint Bar Condition
- **Fair**

### Tie-Plate Condition
- Poor

### Ballast Condition
- Poor

### Shoulder Condition
- Fair

### Surface Condition
- Fair

### Vegetation Condition
- Fair

### General Tie and Gauge Comments
- No Comment

### Ballast, Surface & Vegetation Comments
- No Comment
## Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td><img src="image1.jpg" alt="Rail Defect Photo 1" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Rail Defect Photo 1](image1.jpg)
WSP Track Inspection

Ties and Gauge Photos

Tie-Plates Photo

Anchor / Spikes Photo

Tie Photo

Typical Track Structure Photo
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
## Additional Photos

<table>
<thead>
<tr>
<th>Additional Photo 1</th>
<th>Additional Photo 2</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Additional Photo 1" /></td>
<td><img src="image2.jpg" alt="Additional Photo 2" /></td>
<td><img src="image3.jpg" alt="Additional Photo 3" /></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## WSP Track Inspection

**Railway Authority:** SVI  
**Lead Inspector:** Kris Dhawan  
**Subdivision:** Victoria  
**Date:** 18/09/2019

### Start Mileage
- **Mileage:** 123.240

### End Mileage
- **Mileage:** 123.340

### Inspection Details
- **Type:** Short Walking Inspection  
- **Alignment:** Curve  
- **Speed (mph):** 25

### Condition Assessment

#### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>Not Observed</td>
<td>85</td>
<td>8</td>
<td>1</td>
<td>Fair</td>
<td>No Comment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Joint Bars Type
- **Type:** Standard  

#### Tie-Plates Type
- **Type:** Single Shoulder

#### Number of Tie Defects
- **Number:** 150

#### Ballast Type
- **Type:** Pitt run gravel

#### Ballast Description
- **Some new ballast on top**

#### Are the ballast Cribs full?
- **Response:** Yes

#### Ballast, Surface & Vegetation Comments
- **Gauge (in):** 56.50

#### Joint Bar Condition
- **Type:** Fair

#### Tie-Plate Condition
- **Type:** Poor

#### Spike/ Anchor Condition
- **Type:** Poor

#### Ballast Condition
- **Type:** Fair

#### Shoulder Condition
- **Type:** Poor

#### Surface Condition
- **Type:** Fair

#### Vegetation Condition
- **Type:** Fair

### General Tie and Gauge Comments
- **Comment:** No Comment

### Ballast, Surface & Vegetation Comments
- **Comment:** No Comment
### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td><img src="image1.jpg" alt="Rail Defect Photo 1" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## WSP Track Inspection

### Ties and Gauge Photos

<table>
<thead>
<tr>
<th>Tie-Plates Photo</th>
<th>Anchor / Spikes Photo</th>
<th>Tie Photo</th>
<th>Typical Track Structure Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Tie-Plates Photo" /></td>
<td><img src="image2.jpg" alt="Anchor/Spikes Photo" /></td>
<td><img src="image3.jpg" alt="Tie Photo" /></td>
<td><img src="image4.jpg" alt="Typical Track Structure Photo" /></td>
</tr>
</tbody>
</table>

No. 00035

EEA0B246-EFB6-476B-8BFB-8667D8F0FBA9

WSP Inspection ID
Track Inspection V123.240
## Additional Photos

<table>
<thead>
<tr>
<th>Additional Photo 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image_url" alt="Additional Photo 1" /></td>
</tr>
</tbody>
</table>

**No.**
00035
## WSP Track Inspection

**Railway Authority**
- SVI

**Subdivision**
- Victoria

**Lead Inspector**
- Kris Dhawan

**Date**
- 18/09/2019

### Start Mileage
- 131.327

### End Mileage
- 131.427

### Inspection Type
- Short Walking Inspection

### Alignment
- Curve

### Speed (mph)
- 25

---

## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td>Not Observed</td>
<td>85</td>
<td>8</td>
<td>2</td>
<td>Fair</td>
<td></td>
<td></td>
<td>No Comment</td>
</tr>
</tbody>
</table>

### Joint Bars Type
- Standard

### Tie-Plates Type
- Double shoulder

### Number of Tie Defects
- 175

### Ballast Type
- Pitt run gravel

### Ballast Description
- Fouled but looks like some relatively recent ballast surfacing

### Are the ballast Cribs full?
- Yes

### Gauge (in)
- 56.50

### Joint Bar Condition
- Fair

### Tie-Plate Condition
- Fair

### Spike/ Anchor Condition
- Poor

### Ballast Condition
- Poor

### Shoulder Condition
- Good

### Surface Condition
- Fair

### Vegetation Condition
- Fair

---

### General Tie and Gauge Comments
- No Comment

### Ballast, Surface & Vegetation Comments
- No Comment
WSP Track Inspection

Photo Library

Site Photo
<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1.jpg" alt="Image" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No. 00036
# WSP Track Inspection

**Ties and Gauge Photos**

<table>
<thead>
<tr>
<th>Photo Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tie-Plates Photo</td>
<td>Anchor / Spikes Photo</td>
</tr>
<tr>
<td>Anchor / Spikes Photo</td>
<td>Tie Photo</td>
</tr>
<tr>
<td>Tie Photo</td>
<td>Typical Track Structure Photo</td>
</tr>
</tbody>
</table>

- **No.** 00036
- **WSP Inspection ID** FA1A5523-E8D6-4BF3-8F9D-719A30D1A2C9
<table>
<thead>
<tr>
<th>Ballast Photo</th>
<th>Surface Photo</th>
<th>Vegetation Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Ballast Photo" /></td>
<td><img src="image2.jpg" alt="Surface Photo" /></td>
<td><img src="image3.jpg" alt="Vegetation Photo" /></td>
</tr>
<tr>
<td>Additional Photo 1 Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good shoulder</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Condition Assessment

#### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>Not Observed</td>
<td>Rail</td>
<td>85</td>
<td>8</td>
<td>3</td>
<td></td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

#### Joint Bar Condition

<table>
<thead>
<tr>
<th>Joint Bar Condition</th>
<th>Tie-Plate Condition</th>
<th>Spike/ Anchor Condition</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Fair</td>
<td>Poor</td>
</tr>
</tbody>
</table>

### General Tie and Gauge Comments

- No Comment

### Ballast, Surface & Vegetation Comments

- No Comment
<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td><img src="image1.jpg" alt="Image of right rail" /></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WSP Track Inspection

<table>
<thead>
<tr>
<th>Ballast Photo</th>
<th>Surface Photo</th>
<th>Vegetation Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Ballast Photo" /></td>
<td><img src="image2.jpg" alt="Surface Photo" /></td>
<td><img src="image3.jpg" alt="Vegetation Photo" /></td>
</tr>
</tbody>
</table>
## Additional Photos

<table>
<thead>
<tr>
<th>Additional Photo 1 Description</th>
<th>Additional Photo 2 Description</th>
<th>Additional Photo 3 Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functioning drainage culvert</td>
<td>Functioning drainage culvert</td>
<td>Adjacent path looking south.</td>
</tr>
</tbody>
</table>
Railway Authority: SVI
Lead Inspector: Kris Dhawan
Date: 17/09/2019

Start Mileage: 0.100
End Mileage: 0.128
Inspection Type: Short Walking Inspection
Alignment: Tangent
Speed (mph): 15

Condition Assessment

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td>Not observed</td>
<td>85</td>
<td>10</td>
<td>0</td>
<td>Fair</td>
<td>No Comment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Joint Bars Type:
- Angled

Tie-Plates Type:
- Single Shoulder

Number of Tie Defects:
- 50

Ballast Type:
- Pitt run gravel

Ballast Description:
- Fouled

Are the ballast Cribs full?
- Yes

Gauge (in):
- 56.50

Joint Bar Condition:
- Poor

Tie-Plate Condition:
- Poor

Spike/ Anchor Condition:
- Poor

Ballast Condition:
- Poor

Shoulder Condition:
- Fair

Surface Condition:
- Fair

Vegetation Condition:
- Poor

General Tie and Gauge Comments:
Defective ties 50/140
Location - Port Alberni main track 0.1 between siding and switch or 95.25 Vic sub

Ballast, Surface & Vegetation Comments:
No Comment
## Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1.jpg" alt="Image 1" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No. 00030

344BC99E-870B-478B-9C27-A76B47A58CDC
Ties and Gauge Photos

<table>
<thead>
<tr>
<th>Tie-Plates Photo</th>
<th>Anchor / Spikes Photo</th>
<th>Tie Photo</th>
<th>Typical Track Structure Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Tie-Plates Photo" /></td>
<td><img src="image2.jpg" alt="Anchor / Spikes Photo" /></td>
<td><img src="image3.jpg" alt="Tie Photo" /></td>
<td><img src="image4.jpg" alt="Typical Track Structure Photo" /></td>
</tr>
</tbody>
</table>
Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
WSP Track Inspection

Additional Photos

Additional Photo 1

WSP Inspection ID
Track Inspection P0.100 - Port Alberni Jn (V95.250)
### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>Not Observed</td>
<td>85</td>
<td>9</td>
<td>0</td>
<td>Fair</td>
<td>No Comment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint Bars Type</th>
<th>Tie-Plates Type</th>
<th>Number of Tie Defects</th>
<th>Ballast Type</th>
<th>Ballast Description</th>
<th>Are the ballast Cribs full?</th>
<th>Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>Single Shoulder</td>
<td>51</td>
<td>Pitt run gravel</td>
<td>Fouled</td>
<td></td>
<td>56.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint Bar Condition</th>
<th>Tie-Plate Condition</th>
<th>Spike/ Anchor Condition</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair</td>
<td>Poor</td>
<td></td>
<td>Poor</td>
<td>Fair</td>
<td>Fair</td>
<td>Poor</td>
</tr>
</tbody>
</table>

### General Tie and Gauge Comments
Defective ties 51/100

### Ballast, Surface & Vegetation Comments
No Comment
<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td><img src="image_url" alt="Rail Defect Photo" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WSP Track Inspection

Rail Condition

WSP Inspection ID
Track Inspection P3.900 - Virginia Road
WSP Track Inspection

Ties and Gauge Photos

Tie-Plates Photo

Anchor / Spikes Photo

Tie Photo

Typical Track Structure Photo

No. 00029
WSP Track Inspection

Additional Photos

Additional Photo 1

Additional Photo 3
## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>Not Observed</td>
<td>85</td>
<td></td>
<td>7</td>
<td>2</td>
<td></td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint Bars Type</th>
<th>Tie-Plates Type</th>
<th>Number of Tie Defects</th>
<th>Ballast Type</th>
<th>Ballast Description</th>
<th>Are the ballast Cribs full?</th>
<th>Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>Single Shoulder</td>
<td>75</td>
<td>Pitt run gravel</td>
<td>Fouled</td>
<td>Yes</td>
<td>56.50</td>
</tr>
</tbody>
</table>

### Joint Bar Condition

<table>
<thead>
<tr>
<th>Joint Bar Condition</th>
<th>Tie-Plate Condition</th>
<th>Spike/ Anchor Condition</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Fair</td>
<td>Fair</td>
<td>Poor</td>
</tr>
</tbody>
</table>

### General Tie and Gauge Comments
Defective ties 75/200

### Ballast, Surface & Vegetation Comments
Bad ballast drainage (See Additional Photo 01)
WSP Track Inspection

Site Photo

Photo Library

WSP Inspection ID
Track Inspection P8.880 - Melrose rd

No. 00027

1D16207B-1BB8-4DBE-8495-FFB8FE1C69A6
# WSP Track Inspection

## Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td><img src="image1.jpg" alt="Photo" /></td>
<td><img src="image2.jpg" alt="Photo" /></td>
<td><img src="image3.jpg" alt="Photo" /></td>
</tr>
</tbody>
</table>

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No. 00027

WSP Inspection ID
Track Inspection P8.880 - Melrose rd

1D16207B-1BB8-4DBE-8495-FFB8FE1C69A6
Ties and Gauge Photos

Tie-Plates Photo

Anchor / Spikes Photo

Tie Photo

Typical Track Structure Photo
WSP Track Inspection

WSP Inspection ID
Track Inspection P8.880 - Melrose rd

Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
<table>
<thead>
<tr>
<th>Additional Photos</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Additional Photo 1</strong></td>
</tr>
<tr>
<td><img src="image_url" alt="Image of non-draining ballast" /></td>
</tr>
</tbody>
</table>

**Additional Photo 1 Description**
Non draining ballast
### WSP Track Inspection

**Railway Authority**
SVI

**Lead Inspector**
Kris Dhawan

**Subdivision**
Port Alberni

**Date**
17/09/2019

**Start Mileage**
12.200

**End Mileage**
12.234

**Inspection Type**
Short Walking Inspection

**Alignment**
Curve

**Speed (mph)**
10

### Condition Assessment

**Rail Condition**

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td>Not Observed</td>
<td>100</td>
<td></td>
<td>1.5</td>
<td>8</td>
<td></td>
<td>Fair</td>
<td>RIGHT rail high side of curve</td>
</tr>
</tbody>
</table>

**Joint Bars Type**
Standard

**Tie-Plates Type**
Single Shoulder

**Number of Tie Defects**
71

**Ballast Type**
Pitt run gravel

**Ballast Description**
Fouled

**Are the ballast Cribs full?**
Yes

**Gauge (in)**
56.50

**Joint Bar Condition**
Fair

**Tie-Plate Condition**
Poor

**Spike/ Anchor Condition**
Poor

**Ballast Condition**
Poor

**Shoulder Condition**
Poor

**Surface Condition**
Fair

**Vegetation Condition**
Poor

**General Tie and Gauge Comments**
Defective ties 71/170

**Ballast, Surface & Vegetation Comments**
Lots of trees fallen across tracks
<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1.png" alt="Image of Rail Defect" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**WSP Track Inspection**

**WSP Inspection ID**

Track Inspection P 12.200

- East of Cameron Lake

No. 00023

8BE9DECC-8748-4101-BF64-320FF6156214
WSP Track Inspection

Ties and Gauge Photos

<table>
<thead>
<tr>
<th>Tie-Plates Photo</th>
<th>Anchor / Spikes Photo</th>
<th>Tie Photo</th>
<th>Typical Track Structure Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
</tbody>
</table>

WSP Inspection ID
Track Inspection P 12.200
- East of Cameron Lake

No.
00023

8BE9DECC-8748-4101-BF64-320FF6156214
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
<table>
<thead>
<tr>
<th>Additional Photo 1</th>
<th>Additional Photo 2</th>
<th>Additional Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Bridge" /></td>
<td><img src="image2" alt="Bridge with downed tree" /></td>
<td><img src="image3" alt="Image" /></td>
</tr>
</tbody>
</table>

**Additional Photo 1 Description**
Bridge

**Additional Photo 2 Description**
Bridge with downed tree
## WSP Track Inspection

### Railway Authority
SVI
Lead Inspector
Kris Dhawan

### Subdivision
Port Alberni

### Date
17/09/2019

### Start Mileage
20.680
### End Mileage
20.720
### Inspection Type
Short Walking Inspection
### Alignment
Tangent
### Speed (mph)
10

## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td>Not Observed</td>
<td>85</td>
<td></td>
<td>7</td>
<td>2</td>
<td></td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

### Joint Bars Type

<table>
<thead>
<tr>
<th>Angle</th>
<th>Tie-Plates Type</th>
<th>Number of Tie Defects</th>
<th>Ballast Type</th>
<th>Ballast Description</th>
<th>Are the ballast Cribs full?</th>
<th>Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single Shoulder</td>
<td>40</td>
<td>Pitt run gravel</td>
<td>Fouled</td>
<td>Yes</td>
<td>56.50</td>
</tr>
</tbody>
</table>

### Joint Bar Condition

<table>
<thead>
<tr>
<th>Condition</th>
<th>Tie-Plate Condition</th>
<th>Spike/ Anchor Condition</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Fair</td>
<td>Poor</td>
</tr>
</tbody>
</table>

### General Tie and Gauge Comments
Defective ties 40/200

### Ballast, Surface & Vegetation Comments
No Comment
## WSP Track Inspection

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1" alt="" /></td>
<td><img src="image2" alt="" /></td>
<td><img src="image3" alt="" /></td>
</tr>
</tbody>
</table>

No. 00024

2E7E9164-6539-495D-B4F7-1D576C7DEF40
WSP Track Inspection

Ties and Gauge Photos

Tie-Plates Photo  Anchor / Spikes Photo  Tie Photo  Typical Track Structure Photo
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
<table>
<thead>
<tr>
<th>Additional Photos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Photo 1</td>
</tr>
<tr>
<td>Additional Photo 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Photo 2 Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dog creek crossing</td>
</tr>
</tbody>
</table>
# WSP Track Inspection

**Railway Authority**
SVI

**Lead Inspector**
Kris Dhawan

**Subdivision**
Port Alberni

**Date**
17/09/2019

**Start Mileage**
21.470

**End Mileage**
21.510

**Inspection Type**
Short Walking Inspection

**Alignment**
Tangent

**Speed (mph)**
10

## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>No Observed</td>
<td>85</td>
<td>8</td>
<td>4</td>
<td>Fair</td>
<td>No Comments</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Joint Bars Type

<table>
<thead>
<tr>
<th>Joint Bars Type</th>
<th>Tie-Plates Type</th>
<th>Number of Tie Defects</th>
<th>Ballast Type</th>
<th>Ballast Description</th>
<th>Are the ballast Cribs full?</th>
<th>Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angled</td>
<td>Single Shoulder</td>
<td>45</td>
<td>Pitt run gravel</td>
<td>Fouled</td>
<td>Yes</td>
<td>56.50</td>
</tr>
</tbody>
</table>

### Joint Bar Condition

<table>
<thead>
<tr>
<th>Joint Bar Condition</th>
<th>Tie-Plate Condition</th>
<th>Spike/ Anchor Condition</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Fair</td>
<td>Good</td>
<td>Poor</td>
</tr>
</tbody>
</table>

### General Tie and Gauge Comments

Defective ties 45/200

### Ballast, Surface & Vegetation Comments

No Comments
WSP Track Inspection

Photo Library

Site Photo
### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td><img src="image1.jpg" alt="Image" /></td>
<td><img src="image2.jpg" alt="Image" /></td>
<td><img src="image3.jpg" alt="Image" /></td>
</tr>
</tbody>
</table>

Summit lake bridge
<table>
<thead>
<tr>
<th>Ties and Gauge Photos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tie-Plates Photo</td>
</tr>
<tr>
<td><img src="image" alt="Tie-Plates Photo" /></td>
</tr>
</tbody>
</table>

WSP Track Inspection

WSP Inspection ID
Track Inspection P21.470 - Summit Lake Bridge

4D3A62DB-D9FA-47AB-97E9-06CFD94BA2B0
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
# WSP Track Inspection

## Railway Authority
- **SVI**
- **Lead Inspector**
  - Kris Dhawan

## Subdivision
- **Port Alberni**

## Date
- **17/09/2019**

## Mileage
- **Start Mileage**: 22.100
- **End Mileage**: 22.140

## Inspection Type
- **Short Walking Inspection**

## Alignment
- **Tangent**

## Speed (mph)
- **10**

### Condition Assessment

#### Rail Condition

<table>
<thead>
<tr>
<th>Rail Condition</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td>Not Observed</td>
<td>85</td>
<td>8</td>
<td>2</td>
<td>Fair</td>
<td>85</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

#### Joint Bars

- **Type**: Standard
- **Tie-Plates Type**: Single Shoulder
- **Number of Tie Defects**: 40
- **Ballast Type**: Pitt run gravel
- **Ballast Description**: Fouled
- **Are the ballast Cribs full?**: Yes
- **Gauge (in)**: 56.50

#### Joint Bar Condition

- **Condition**: Fair
- **Tie-Plate Condition**: Poor
- **Spike/ Anchor Condition**: Poor
- **Ballast Condition**: Poor
- **Shoulder Condition**: Poor
- **Surface Condition**: Fair
- **Vegetation Condition**: Poor

### General Tie and Gauge Comments

- Defective ties 40/200

### Ballast, Surface & Vegetation Comments

- No Comment

---

No.

00028

C57B3088-F226-49D8-9B19-D8FE8A84E199
WSP Track Inspection

Site Photo
<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1.png" alt="Left Rail Photo" /></td>
<td><img src="image2.png" alt="Left Rail Photo" /></td>
<td><img src="image3.png" alt="Left Rail Photo" /></td>
</tr>
<tr>
<td></td>
<td>No comment</td>
<td>Loon lake beaver dam</td>
<td></td>
</tr>
</tbody>
</table>
## WSP Track Inspection

**WSP Inspection ID**
Track Inspection P22.100 - Arrowsmith Road

### Ties and Gauge Photos

<table>
<thead>
<tr>
<th>Tie-Plates Photo</th>
<th>Anchor / Spikes Photo</th>
<th>Tie Photo</th>
<th>Typical Track Structure Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Tie-Plates Photo" /></td>
<td><img src="image2.jpg" alt="Anchor / Spikes Photo" /></td>
<td><img src="image3.jpg" alt="Tie Photo" /></td>
<td><img src="image4.jpg" alt="Typical Track Structure Photo" /></td>
</tr>
</tbody>
</table>
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
WSP Track Inspection

WSP Inspection ID
Track Inspection P22.100 - Arrowsmith Road

Additional Photos

<table>
<thead>
<tr>
<th>Additional Photo 1</th>
<th>Additional Photo 2</th>
<th>Additional Photo 3</th>
<th>Additional Photo 4</th>
<th>Additional Photo 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
</tbody>
</table>

**Additional Photo 1 Description**
Rock fall

**Additional Photo 2 Description**
Drainage swale

**Additional Photo 3 Description**
Loon lake bridge

**Additional Photo 4 Description**
Metal overflow

**Additional Photo 5 Description**
Loon lake bridge rail 80
WSP Track Inspection

Railway Authority: SVI
Lead Inspector: Kris Dhawan

Subdivision: Port Alberni
Date: 17/09/2019

Start Mileage: 33.300
End Mileage: 33.340
Inspection Type: Short Walking Inspection
Alignment: Tangent
Speed (mph): 10

Condition Assessment

Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td>Not Observed</td>
<td></td>
<td>85</td>
<td>7</td>
<td>1</td>
<td></td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

Joint Bars Type

<table>
<thead>
<tr>
<th>Joint Bars Type</th>
<th>Tie-Plates Type</th>
<th>Number of Tie Defects</th>
<th>Ballast Type</th>
<th>Ballast Description</th>
<th>Are the ballast Cribs full?</th>
<th>Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>Single Shoulder</td>
<td>57</td>
<td>Pitt run gravel</td>
<td>Fouled</td>
<td>Yes</td>
<td>56.50</td>
</tr>
</tbody>
</table>

Joint Bar Condition

<table>
<thead>
<tr>
<th>Joint Bar Condition</th>
<th>Tie-Plate Condition</th>
<th>Spike/ Anchor Condition</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Fair</td>
<td>Fair</td>
<td>Poor</td>
</tr>
</tbody>
</table>

General Tie and Gauge Comments

Defective ties 57/200

Ballast, Surface & Vegetation Comments

Track not in bad shape. Needs vegetation clearing. Could run one train a week but if you are moving loads track will deteriorate quickly. Bad ballast and drainage.
Site Photo
## Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Rail</td>
<td><img src="image.png" alt="Rail Defect Photo 1" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WSP Track Inspection

WSP Inspection ID
Track Inspection P33.300 - Smith road

No. 00032

29BF0588-B2E0-4424-B69A-E73F714F5EC6
WSP Track Inspection

Ties and Gauge Photos

Tie-Plates Photo
Anchor / Spikes Photo
Tie Photo
Typical Track Structure Photo
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
### Additional Photos

<table>
<thead>
<tr>
<th>Additional Photo 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image_url" alt="Additional Photo 1" /></td>
</tr>
</tbody>
</table>
### Condition Assessment

#### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td>Not Observed</td>
<td>85</td>
<td>9</td>
<td>1</td>
<td>Fair</td>
<td></td>
<td>Track condition in this section is fair. Requirements are not as high here. Just take care of vegetation.</td>
<td></td>
</tr>
</tbody>
</table>

#### Joint Bars Type

<table>
<thead>
<tr>
<th>Joint Bars Type</th>
<th>Tie-Plates Type</th>
<th>Number of Tie Defects</th>
<th>Ballast Type</th>
<th>Ballast Description</th>
<th>Are the ballast Cribs full?</th>
<th>Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>Single Shoulder</td>
<td>47</td>
<td>Pitt run gravel</td>
<td>Fouled.</td>
<td>Yes</td>
<td>56.50</td>
</tr>
</tbody>
</table>

#### Joint Bar Condition

<table>
<thead>
<tr>
<th>Joint Bar Condition</th>
<th>Tie-Plate Condition</th>
<th>Spike/ Anchor Condition</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
</tr>
</tbody>
</table>

#### General Tie and Gauge Comments

Defective ties 47/200

#### Ballast, Surface & Vegetation Comments

Ballast fouled with mud.
## Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1.jpg" alt="Rail Defect Photo 1" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WSP Track Inspection

Ties and Gauge Photos

- Tie-Plates Photo
- Anchor / Spikes Photo
- Tie Photo
- Typical Track Structure Photo
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo  Surface Photo  Vegetation Photo
<table>
<thead>
<tr>
<th>Additional Photo 1</th>
<th>Additional Photo 2</th>
<th>Additional Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Additional Photo 1" /></td>
<td><img src="image2.jpg" alt="Additional Photo 2" /></td>
<td><img src="image3.jpg" alt="Additional Photo 3" /></td>
</tr>
</tbody>
</table>

WSP Track Inspection

WSP Inspection ID
Track Inspection P35.800

No. 00022

6F80A1FF-203C-4632-A69C-48C8BF9E7AA2
## WSP Track Inspection

**Railway Authority**  
SVI  
**Lead Inspector**  
Kris Dhawan  
**Subdivision**  
Port Alberni  
**Date**  
17/09/2019

<table>
<thead>
<tr>
<th>Start Mileage</th>
<th>End Mileage</th>
<th>Inspection Type</th>
<th>Alignment</th>
<th>Speed (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>39.330</td>
<td>39.430</td>
<td>Short Walking Inspection</td>
<td>Tangent</td>
<td>10</td>
</tr>
</tbody>
</table>

### Condition Assessment

<table>
<thead>
<tr>
<th>Rail Condition</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td>Not Observed</td>
<td>80</td>
<td></td>
<td></td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Fair</td>
<td>Can’t see ties because of vegetation.</td>
</tr>
</tbody>
</table>

**Joint Bars Type**  
Angle

**Joint Plate Type**  
Single Shoulder

**Number of Tie Defects**  
135

**Ballast Type**  
Mud

**Ballast Description**  
 Fouled

**Are the ballast Cribs full?**  
Yes

**Gauge (in)**  
56.50

**Joint Bar Condition**  
Poor

**Tie-Plate Condition**  
Poor

**Spike/ Anchor Condition**  
Poor

**Ballast Condition**  
Poor

**Shoulder Condition**  
Poor

**Surface Condition**  
Fair

**Vegetation Condition**  
Poor

### General Tie and Gauge Comments

135/200 defective. Hard to see ties because of vegetation.

**Port Property.**

**Ballast, Surface & Vegetation Comments**  
Poor
<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1.jpg" alt="Left Rail Defect Photo 1" /></td>
<td></td>
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</tr>
</tbody>
</table>

No. 00025
**Railway Authority**
SVI

**Lead Inspector**
Kris Dhawan

**Subdivision**
Port Alberni

**Date**
17/09/2019

### Start Mileage | End Mileage | Inspection Type | Alignment | Speed (mph)
---|---|---|---|---
38.920 | 38.960 | Short Walking Inspection | Tangent | 10

## Condition Assessment

### Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td>Not Observed</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint Bars Type Angle</th>
<th>Tie-Plates Type</th>
<th>Number of Tie Defects</th>
<th>Ballast Type</th>
<th>Ballast Description</th>
<th>Are the ballast Cribs full?</th>
<th>Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angles</td>
<td>Single Shoulder</td>
<td>53</td>
<td>Pitt run gravel</td>
<td>Fouled</td>
<td>Yes</td>
<td>56.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint Bar Condition Poor</th>
<th>Tie-Plate Condition Poor</th>
<th>Ballast Condition</th>
<th>Shoulder Condition</th>
<th>Surface Condition</th>
<th>Vegetation Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>Poor</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
</tr>
</tbody>
</table>

### General Tie and Gauge Comments
Defective ties 53/200

### Ballast, Surface & Vegetation Comments
Surface has some low joints
Overall fair structure
WSP Track Inspection

Photo Library

Site Photo
<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1.jpg" alt="Photo" /></td>
<td><img src="image2.jpg" alt="Photo" /></td>
<td><img src="image3.jpg" alt="Photo" /></td>
</tr>
</tbody>
</table>

Left Rail: No defect

No defect

No defect

No defect
Ties and Gauge Photos

- Tie-Plates Photo
- Anchor / Spikes Photo
- Tie Photo
- Typical Track Structure Photo
WSP Track Inspection

Ballast and Surface Photos

Ballast Photo

Surface Photo

Vegetation Photo
### WSP Track Inspection

**Railway Authority**: SVI  
**Lead Inspector**: Kris Dhawan  
**Subdivision**: Wellcox Yard  
**Date**: 18/09/2019  
**Inspection Type**: Short Walking Inspection  
**Alignment**: Mixed  
**Speed (mph)**: 5

#### Condition Assessment

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Year Rolled</th>
<th>Metal Type</th>
<th>Weight (lbs)</th>
<th>Length (ft)</th>
<th>Headloss Estimate (mm)</th>
<th>Flange Estimate (mm)</th>
<th>Rail Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td></td>
<td>Not Observed</td>
<td>85</td>
<td></td>
<td>10</td>
<td>2</td>
<td>Fair</td>
<td></td>
</tr>
</tbody>
</table>

- **Joint Bars Type**: Standard  
- **Tie-Plates Type**: Mixed  
- **Number of Tie Defects**: 51  
- **Ballast Type**: Pitt run gravel  
- **Ballast Description**: Fouled  
- **Are the ballast Cribs full?**: No

- **Gauge (in)**: 56.50

- **Joint Bar Condition**: Fair  
- **Tie-Plate Condition**: Poor  
- **Spike/ Anchor Condition**: Poor  
- **Ballast Condition**: Poor  
- **Shoulder Condition**: Fair  
- **Surface Condition**: Fair  
- **Vegetation Condition**: Good

- **General Tie and Gauge Comments**: Defective ties 51/200

- **Ballast, Surface & Vegetation Comments**: No Comment
WSP Track Inspection

WSP Inspection ID
Track Inspection - Wellcox
yard scale track switch

Photo Library

Site Photo
## Rail Condition

<table>
<thead>
<tr>
<th>Rail</th>
<th>Rail Defect Photo 1</th>
<th>Rail Defect Photo 2</th>
<th>Rail Defect Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Rail</td>
<td><img src="image1" alt="Left Rail Image" /></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No. 00034

3A35BEE9-04A5-4E3F-AD11-22BE4D8E8FB72
## WSP Track Inspection

### Ties and Gauge Photos

<table>
<thead>
<tr>
<th>Tie-Plates Photo</th>
<th>Anchor / Spikes Photo</th>
<th>Tie Photo</th>
<th>Typical Track Structure Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Tie-Plates Photo" /></td>
<td><img src="image2.jpg" alt="Anchor / Spikes Photo" /></td>
<td><img src="image3.jpg" alt="Tie Photo" /></td>
<td><img src="image4.jpg" alt="Typical Track Structure Photo" /></td>
</tr>
</tbody>
</table>
WSP Track Inspection

Ballast and Surface Photos

- Ballast Photo
- Surface Photo
- Vegetation Photo
APPENDIX B

TURNOOUT INSPECTION REPORTS
### WSP Turnout Inspection

**WSP Inspection ID**  
**Turnout Inspection - Vic Siding South End**

**Railway Authority**  
SVI

**Lead Inspector**  
Kris Dhawan

**Subdivision**  
Victoria

**Inspection Date**  
12/09/2019

### Turnout ID

<table>
<thead>
<tr>
<th>Turnout ID</th>
<th>Mile</th>
<th>Turnout Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>0.37</td>
<td>Right Hand</td>
</tr>
</tbody>
</table>

### Rail weight (lbs)

- **100**

### Tie Type

- **Hardwood**

### Frog Type

- **Bolted rigid no. 9**

### Gauge

<table>
<thead>
<tr>
<th>Points Gauge (in)</th>
<th>Through Closure Gauge (in)</th>
<th>Through Check Rail Gauge (in)</th>
<th>Through Guard Rail Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
<tr>
<td>Heel Gauge (in)</td>
<td>Diverging Closure Gauge (in)</td>
<td>Diverging Check Rail Gauge (in)</td>
<td>Diverging Guard Rail Gauge (in)</td>
</tr>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

**Gauge Comment**  
No Comment

### Component Condition

<table>
<thead>
<tr>
<th>Component</th>
<th>Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frog</td>
<td>No Comment</td>
<td></td>
</tr>
<tr>
<td>Guard Rails</td>
<td>No Comment</td>
<td></td>
</tr>
<tr>
<td>Closure Rails</td>
<td>No Comment</td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td>No Comment</td>
<td></td>
</tr>
<tr>
<td>Anchors</td>
<td>No Comment</td>
<td></td>
</tr>
<tr>
<td>Ballast</td>
<td>No Comment</td>
<td></td>
</tr>
</tbody>
</table>

---

No. 00003
## Head Loss

<table>
<thead>
<tr>
<th>Through Stock Rail (mm)</th>
<th>Curve Closure Rail (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
<tr>
<td>Through Closure Rail (mm)</td>
<td>Diverging Stock Rail (mm)</td>
</tr>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

### Head Loss Comments

Not Observed

## Comments and Remarks

### Condition Comments

No Comment
WSP Turnout Inspection

WSP Inspection ID
Turnout Inspection - Vic Siding South End

Photo Library

Turnout Photo
# Turnout Component Photos

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Photo 1</th>
<th>Component Photo 2</th>
<th>Component Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frog</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guard Rails</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closure Rails</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballast</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WSP Turnout Inspection

Turnout Inspection - Vic Siding South End

Additional Photo 1

No. 00003

BD14D77E-2185-42C2-BBA0-9991E7BEDFE7
## WSP Turnout Inspection

**WSP Turnout Inspection ID**

Turnout Inspection -  
Koksilah siding

<table>
<thead>
<tr>
<th>Railway Authority</th>
<th>Subdivision</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVI</td>
<td>Victoria</td>
</tr>
<tr>
<td>Lead Inspector</td>
<td>Inspection Date</td>
</tr>
<tr>
<td>Kris Dhawan</td>
<td>12/09/2019</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Turnout ID</th>
<th>Mile</th>
<th>Turnout Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 9</td>
<td>38.20</td>
<td>Right Hand</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rail weight (lbs)</th>
<th>Tie Type</th>
<th>Frog Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>Softwood</td>
<td>Bolted 85lbs</td>
</tr>
</tbody>
</table>

### Gauge

<table>
<thead>
<tr>
<th>Points Gauge (in)</th>
<th>Through Closure Gauge (in)</th>
<th>Through Check Rail Gauge (in)</th>
<th>Through Guard Rail Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>56.5</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>54.7</td>
</tr>
<tr>
<td>Heel Gauge (in)</td>
<td>Diverging Closure Gauge (in)</td>
<td>Diverging Check Rail Gauge (in)</td>
<td>Diverging Guard Rail Gauge (in)</td>
</tr>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>54.70</td>
</tr>
</tbody>
</table>

**Gauge Comment**

No Comment

### Component Condition

<table>
<thead>
<tr>
<th>Component</th>
<th>Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td>Poor</td>
<td>No Comment</td>
</tr>
<tr>
<td>Anchors</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
<tr>
<td>Ballast</td>
<td>Poor</td>
<td>No Comment</td>
</tr>
<tr>
<td>Guard Rails</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
<tr>
<td>Frog</td>
<td>Fair</td>
<td>Chip</td>
</tr>
<tr>
<td>Closure Rails</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

No. 00002
WSP Turnout Inspection

WSP Inspection ID
Turnout Inspection -
Koksilah siding

Head Loss

<table>
<thead>
<tr>
<th>Through Stock Rail (mm)</th>
<th>Curve Closure Rail (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Not Observed</td>
</tr>
<tr>
<td>Through Closure Rail (mm)</td>
<td>Diverging Stock Rail (mm)</td>
</tr>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

Head Loss Comments
Min wears
0 flange loss

Comments and Remarks

Condition Comments
Adjustable rail braces in fair condition
# WSP Turnout Inspection

## Turnout Component Photos

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Photo 1</th>
<th>Component Photo 2</th>
<th>Component Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td><img src="" alt="Component Photo" /></td>
<td><img src="" alt="Component Photo" /></td>
<td><img src="" alt="Component Photo" /></td>
</tr>
<tr>
<td>Anchors</td>
<td><img src="" alt="Component Photo" /></td>
<td><img src="" alt="Component Photo" /></td>
<td><img src="" alt="Component Photo" /></td>
</tr>
<tr>
<td>Ballast</td>
<td><img src="" alt="Component Photo" /></td>
<td><img src="" alt="Component Photo" /></td>
<td><img src="" alt="Component Photo" /></td>
</tr>
</tbody>
</table>
## WSP Turnout Inspection

**WSP Inspection ID**
Turnout Inspection -
Koksilah siding

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Photo 1</th>
<th>Component Photo 2</th>
<th>Component Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guard Rails</td>
<td><img src="https://example.com/.guard_rails_1.jpg" alt="Image" /></td>
<td><img src="https://example.com/guard_rails_2.jpg" alt="Image" /></td>
<td><img src="https://example.com/guard_rails_3.jpg" alt="Image" /></td>
</tr>
<tr>
<td>Frog</td>
<td><img src="https://example.com/frog_1.jpg" alt="Image" /></td>
<td><img src="https://example.com/frog_2.jpg" alt="Image" /></td>
<td><img src="https://example.com/frog_3.jpg" alt="Image" /></td>
</tr>
<tr>
<td>Component</td>
<td>Component Photo 1</td>
<td>Component Photo 2</td>
<td>Component Photo 3</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Closure Rails</td>
<td><img src="image1.jpg" alt="Component Photo 1" /></td>
<td><img src="image2.jpg" alt="Component Photo 2" /></td>
<td><img src="image3.jpg" alt="Component Photo 3" /></td>
</tr>
</tbody>
</table>
### WSP Turnout Inspection

**Railway Authority**: SVI  
**Lead Inspector**: Kris Dhawan  
**Subdivision**: Victoria  
**Inspection Date**: 13/09/2019

<table>
<thead>
<tr>
<th>Turnout ID</th>
<th>Mile</th>
<th>Turnout Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>70.07</td>
<td>Left Hand</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rail weight (lbs)</th>
<th>Tie Type</th>
<th>Frog Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Softwood</td>
<td>No. 9 solid manganese</td>
</tr>
</tbody>
</table>

### Gauge

<table>
<thead>
<tr>
<th>Points Gauge (in)</th>
<th>Through Closure Gauge (in)</th>
<th>Through Check Rail Gauge (in)</th>
<th>Through Guard Rail Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
<tr>
<td>Heel Gauge (in)</td>
<td>Diverging Closure Gauge (in)</td>
<td>Diverging Check Rail Gauge (in)</td>
<td>Diverging Guard Rail Gauge (in)</td>
</tr>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

**Gauge Comment**: Good

### Component Condition

<table>
<thead>
<tr>
<th>Component</th>
<th>Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frog</td>
<td></td>
<td>No Comment</td>
</tr>
<tr>
<td>Guard Rails</td>
<td></td>
<td>No Comment</td>
</tr>
<tr>
<td>Closure Rails</td>
<td></td>
<td>No Comment</td>
</tr>
<tr>
<td>Ties</td>
<td></td>
<td>No Comment</td>
</tr>
<tr>
<td>Anchors</td>
<td></td>
<td>No Comment</td>
</tr>
<tr>
<td>Ballast</td>
<td></td>
<td>No Comment</td>
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</tbody>
</table>
## Head Loss

<table>
<thead>
<tr>
<th>Head Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through Stock Rail (mm)</td>
</tr>
<tr>
<td>Through Closure Rail (mm)</td>
</tr>
<tr>
<td>Curve Closure Rail (mm)</td>
</tr>
<tr>
<td>Diverging Stock Rail (mm)</td>
</tr>
</tbody>
</table>

### Head Loss Comments
- Good

## Comments and Remarks

- **Condition Comments**
  - In good working order.
  - Replace a few ties
## Turnout Component Photos

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Photo 1</th>
<th>Component Photo 2</th>
<th>Component Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frog</td>
<td><img src="image1.jpg" alt="Frog Photo 1" /></td>
<td><img src="image2.jpg" alt="Frog Photo 2" /></td>
<td><img src="image3.jpg" alt="Frog Photo 3" /></td>
</tr>
<tr>
<td>Guard Rails</td>
<td><img src="image4.jpg" alt="Guard Rails Photo 1" /></td>
<td><img src="image5.jpg" alt="Guard Rails Photo 2" /></td>
<td><img src="image6.jpg" alt="Guard Rails Photo 3" /></td>
</tr>
<tr>
<td>Closure Rails</td>
<td><img src="image7.jpg" alt="Closure Rails Photo 1" /></td>
<td><img src="image8.jpg" alt="Closure Rails Photo 2" /></td>
<td><img src="image9.jpg" alt="Closure Rails Photo 3" /></td>
</tr>
<tr>
<td>Component</td>
<td>Component Photo 1</td>
<td>Component Photo 2</td>
<td>Component Photo 3</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Ties</td>
<td><img src="image1.jpg" alt="Component Photo 1" /></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballast</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Head Loss Photo 1
WSP Turnout Inspection

Additional Photo 1 Description
Frog

Additional Photo 2 Description
Guard Rail

Additional Photo 3 Description
Switch Stand

Additional Photo 4
**WSP Turnout Inspection**

**Railway Authority**
SVI

**Lead Inspector**
Kris Dhawan

**Subdivision**
Victoria

**Inspection Date**
13/09/2019

<table>
<thead>
<tr>
<th>Turnout ID</th>
<th>Mile</th>
<th>Turnout Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>75.70</td>
<td>Right Hand</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rail weight (lbs)</th>
<th>Tie Type</th>
<th>Frog Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>Softwood</td>
<td>Bolted 85lb</td>
</tr>
</tbody>
</table>

### Gauge

<table>
<thead>
<tr>
<th>Points Gauge (in)</th>
<th>Through Closure Gauge (in)</th>
<th>Through Check Rail Gauge (in)</th>
<th>Through Guard Rail Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heel Gauge (in)</th>
<th>Diverging Closure Gauge (in)</th>
<th>Diverging Check Rail Gauge (in)</th>
<th>Diverging Guard Rail Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

**Gauge Comment**
No Comment

### Component Condition

| Component         | Condition | Comment |  |
|-------------------|-----------|---------| |
| Guard Rails       | Fair      | No Comment | |
| Frog              | Fair      | Good candidate for replacement with 100lb TO due to higher volume traffic and important customer. | |
| Ties              | Poor      | No Comment | |
| Ballast           | Poor      | No Comment | |
| Anchors           |           | No Comment | |
| Closure Rails     |           | No Comment | |
## WSP Turnout Inspection

### Head Loss

<table>
<thead>
<tr>
<th>Through Stock Rail (mm)</th>
<th>Curve Closure Rail (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
<tr>
<td>Through Closure Rail (mm)</td>
<td>Diverging Stock Rail (mm)</td>
</tr>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

**Head Loss Comments**
No Comment

### Comments and Remarks

**Condition Comments**
Replace with 100lb turnout
## Turnout Component Photos

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Photo 1</th>
<th>Component Photo 2</th>
<th>Component Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guard Rails</td>
<td><img src="image1" alt="Guard Rails Photo 1" /></td>
<td><img src="image2" alt="Guard Rails Photo 2" /></td>
<td><img src="image3" alt="Guard Rails Photo 3" /></td>
</tr>
<tr>
<td>Frog</td>
<td><img src="image4" alt="Frog Photo 1" /></td>
<td><img src="image5" alt="Frog Photo 2" /></td>
<td><img src="image6" alt="Frog Photo 3" /></td>
</tr>
</tbody>
</table>
## WSP Turnout Inspection

### Track Inspection - Superior Gas no. 9

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Photo 1</th>
<th>Component Photo 2</th>
<th>Component Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td><img src="image1" alt="Component Photo 1" /></td>
<td><img src="image2" alt="Component Photo 2" /></td>
<td><img src="image3" alt="Component Photo 3" /></td>
</tr>
<tr>
<td>Ballast</td>
<td><img src="image4" alt="Component Photo 1" /></td>
<td><img src="image5" alt="Component Photo 2" /></td>
<td><img src="image6" alt="Component Photo 3" /></td>
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<tr>
<td>Anchors</td>
<td><img src="image7" alt="Component Photo 1" /></td>
<td><img src="image8" alt="Component Photo 2" /></td>
<td><img src="image9" alt="Component Photo 3" /></td>
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<tr>
<td>Closure Rails</td>
<td><img src="image10" alt="Component Photo 1" /></td>
<td><img src="image11" alt="Component Photo 2" /></td>
<td><img src="image12" alt="Component Photo 3" /></td>
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</tbody>
</table>
## WSP Turnout Inspection

### Railway Authority
SVI

### Lead Inspector
Kris Dhawan

### Subdivision
Victoria

### Inspection Date
13/09/2019

### Turnout ID
- Not Observed

### Mile
- 77.40

### Turnout Hand
- Right Hand

### Tie Type
- Softwood

### Rail weight (lbs)
- 85

### Frog Type
- Bolted rigid

### Component Condition

<table>
<thead>
<tr>
<th>Component</th>
<th>Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closure Rails</td>
<td>Fair</td>
<td>Curve closure Head loss 10 Flange 0</td>
</tr>
<tr>
<td>Guard Rails</td>
<td></td>
<td>No Comment</td>
</tr>
<tr>
<td>Ties</td>
<td></td>
<td>No Comment</td>
</tr>
<tr>
<td>Anchors</td>
<td></td>
<td>No Comment</td>
</tr>
<tr>
<td>Ballast</td>
<td></td>
<td>No Comment</td>
</tr>
<tr>
<td>Frog</td>
<td></td>
<td>No Comment</td>
</tr>
</tbody>
</table>

### Gauge

<table>
<thead>
<tr>
<th>Points Gauge (in)</th>
<th>Through Closure Gauge (in)</th>
<th>Through Check Rail Gauge (in)</th>
<th>Through Guard Rail Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
<tr>
<td>Heel Gauge (in)</td>
<td>Diverging Closure Gauge (in)</td>
<td>Diverging Check Rail Gauge (in)</td>
<td>Diverging Guard Rail Gauge (in)</td>
</tr>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

### Gauge Comment
No Comment
## Head Loss

<table>
<thead>
<tr>
<th>Through Stock Rail (mm)</th>
<th>Curve Closure Rail (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
<tr>
<td>Through Closure Rail (mm)</td>
<td>Diverging Stock Rail (mm)</td>
</tr>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

**Head Loss Comments**
No Comment

## Comments and Remarks

**Condition Comments**
Material wise fair condition
WSP Turnout Inspection

No. 00006

Photo Library

Turnout Photo
# WSP Turnout Inspection

**WSP Inspection ID**
Turnout Inspection - V77.40

## Turnout Component Photos

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Photo 1</th>
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<th>Component Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closure Rails</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guard Rails</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frog</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WSP Turnout Inspection

Additional Photo 1

Additional Photo 1 Description
Switch point lock.
### WSP Turnout Inspection

**Railway Authority**
- SVI

**Lead Inspector**
- Kris Dhawan

**Subdivision**
- Victoria

**Inspection Date**
- 18/09/2019

<table>
<thead>
<tr>
<th>Turnout ID</th>
<th>Mile</th>
<th>Turnout Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courtenay station siding</td>
<td>139.70</td>
<td>Left Hand</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rail weight (lbs)</th>
<th>Tie Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>Softwood</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Turnout Hand</th>
<th>Frog Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left Hand</td>
<td>Bolted rail no. 9</td>
</tr>
</tbody>
</table>

#### Gauge

<table>
<thead>
<tr>
<th>Points Gauge (in)</th>
<th>Through Closure Gauge (in)</th>
<th>Through Check Rail Gauge (in)</th>
<th>Through Guard Rail Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>56.5</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
<tr>
<td>Heel Gauge (in)</td>
<td>Diverging Closure Gauge (in)</td>
<td>Diverging Check Rail Gauge (in)</td>
<td>Diverging Guard Rail Gauge (in)</td>
</tr>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

**Gauge Comment**
- No Comment

#### Component Condition

<table>
<thead>
<tr>
<th>Component</th>
<th>Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td>Fair</td>
<td>Replace 20%</td>
</tr>
<tr>
<td>Ballast</td>
<td>Poor</td>
<td>No Comment</td>
</tr>
<tr>
<td>Frog</td>
<td>Fair</td>
<td>Bolted 85lb no. 9</td>
</tr>
<tr>
<td>Closure Rails</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
<tr>
<td>Anchors</td>
<td>No Comment</td>
<td></td>
</tr>
<tr>
<td>Guard Rails</td>
<td>No Comment</td>
<td></td>
</tr>
</tbody>
</table>
WSP Turnout Inspection

WSP Inspection ID
Turnout Inspection - Courtenay Station

Head Loss

<table>
<thead>
<tr>
<th>Through Stock Rail (mm)</th>
<th>Curve Closure Rail (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Through Closure Rail (mm)</td>
<td>Diverging Stock Rail (mm)</td>
</tr>
<tr>
<td>11</td>
<td>7</td>
</tr>
</tbody>
</table>

Head Loss Comments
No Comment

Comments and Remarks

Condition Comments
Rigid braces
Diverging frog gauge 56.5
Diverging guard 54.5
Through frog gauge 56.3/8
Through guard gauge 54 3/8
WSP Turnout Inspection

Photo Library

Turnout Photo
## Turnout Component Photos

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Photo 1</th>
<th>Component Photo 2</th>
<th>Component Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td><img src="image1.jpg" alt="Component Photo 1" /></td>
<td><img src="image2.jpg" alt="Component Photo 2" /></td>
<td><img src="image3.jpg" alt="Component Photo 3" /></td>
</tr>
<tr>
<td>Ballast</td>
<td><img src="image4.jpg" alt="Component Photo 1" /></td>
<td><img src="image5.jpg" alt="Component Photo 2" /></td>
<td><img src="image6.jpg" alt="Component Photo 3" /></td>
</tr>
<tr>
<td>Component</td>
<td>Component Photo 1</td>
<td>Component Photo 2</td>
<td>Component Photo 3</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Frog</td>
<td><img src="Attachment" alt="Component Photo" /></td>
<td><img src="Attachment" alt="Component Photo" /></td>
<td><img src="Attachment" alt="Component Photo" /></td>
</tr>
<tr>
<td>Closure Rails</td>
<td><img src="Attachment" alt="Component Photo" /></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guard Rails</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WSP Turnout Inspection

Head Loss Photo 1
WSP Turnout Inspection

Additional Photo 1 Description
Switch stand

Additional Photo 3 Description
Location
WSP Turnout Inspection

Railway Authority
SVI

Lead Inspector
Kris Dhawan

Subdivision
Port Alberni

Inspection Date
17/09/2019

Turnout ID
No. 9

Mile
34.40

Turnout Hand
Right Hand

Rail weight (lbs)
85

Tie Type
Softwood

Frog Type
85lb bolted

Gauge

Points Gauge (in)
56.5

Heel Gauge (in)
Not Observed

Through Closure Gauge (in)
Not Observed

Diverging Closure Gauge (in)
Not Observed

Through Check Rail Gauge (in)
Not Observed

Diverging Check Rail Gauge (in)
Not Observed

Through Guard Rail Gauge (in)
Not Observed

Diverging Guard Rail Gauge (in)
Not Observed

Gauge Comment
Through gauge at frog 56.5. At guard 54.5
Diverging Same at both

Component Condition

<table>
<thead>
<tr>
<th>Component</th>
<th>Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td>Good</td>
<td>Switch ties in good condition.</td>
</tr>
<tr>
<td>Ballast</td>
<td>Poor</td>
<td>Poor through PS Diverging side beyond TO good ballast</td>
</tr>
<tr>
<td>Anchors</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
<tr>
<td>Frog</td>
<td>Fair</td>
<td>85 lb no 9</td>
</tr>
<tr>
<td>Guard Rails</td>
<td></td>
<td>Not Observed</td>
</tr>
<tr>
<td>Closure Rails</td>
<td></td>
<td>Not Observed</td>
</tr>
</tbody>
</table>
# Head Loss

<table>
<thead>
<tr>
<th>Through Stock Rail (mm)</th>
<th>Curve Closure Rail (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>7</td>
</tr>
<tr>
<td>Through Closure Rail (mm)</td>
<td>Diverging Stock Rail (mm)</td>
</tr>
<tr>
<td>9</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

**Head Loss Comments**

No Comment

---

# Comments and Remarks

**Condition Comments**

Hand throw high mast switch stand
Turnout Photo
## Turnout Component Photos

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Photo 1</th>
<th>Component Photo 2</th>
<th>Component Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td><img src="image1.png" alt="Ties Photo 1" /></td>
<td><img src="image2.png" alt="Ties Photo 2" /></td>
<td><img src="image3.png" alt="Ties Photo 3" /></td>
</tr>
<tr>
<td>Ballast</td>
<td><img src="image4.png" alt="Ballast Photo 1" /></td>
<td><img src="image5.png" alt="Ballast Photo 2" /></td>
<td><img src="image6.png" alt="Ballast Photo 3" /></td>
</tr>
<tr>
<td>Anchors</td>
<td><img src="image7.png" alt="Anchors Photo 1" /></td>
<td><img src="image8.png" alt="Anchors Photo 2" /></td>
<td><img src="image9.png" alt="Anchors Photo 3" /></td>
</tr>
</tbody>
</table>
## WSP Turnout Inspection

### Component | Component Photo 1 | Component Photo 2 | Component Photo 3
--- | --- | --- | ---
Frog | ![Frog Image](image1.jpg) | ![Frog Image](image2.jpg) | ![Frog Image](image3.jpg)
Guard Rails | ![Guard Rails Image](image1.jpg) |  | 
Closure Rails |  |  | 

WSP Inspection ID
Turnout Inspection - McLean mill

---

No. 00007

6A083453-70E4-41A9-8EA7-ABA677216467

5
WSP Turnout Inspection

Head Loss Photo 1
Additional Photo 3 Description
Rail braces are rigid spiked.

Additional Photo 4 Description
Guard rail
# WSP Turnout Inspection

**Turnout Inspection** - Port Alberni Station

## Railway Authority
SVI

## Lead Inspector
Kris Dhawan

## Subdivision
Port Alberni

## Inspection Date
17/09/2019

<table>
<thead>
<tr>
<th>Turnout ID</th>
<th>Mile</th>
<th>Turnout Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>38.77</td>
<td>Left Hand</td>
</tr>
<tr>
<td>Rail weight (lbs)</td>
<td>Tie Type</td>
<td>Frog Type</td>
</tr>
<tr>
<td>85</td>
<td>Softwood</td>
<td>Bolted rail frog no. 7</td>
</tr>
</tbody>
</table>

## Gauge

<table>
<thead>
<tr>
<th>Points Gauge (in)</th>
<th>Through Closure Gauge (in)</th>
<th>Through Check Rail Gauge (in)</th>
<th>Through Guard Rail Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>54.25</td>
<td>Not Observed</td>
</tr>
<tr>
<td>Heel Gauge (in)</td>
<td>Diverging Closure Gauge (in)</td>
<td>Diverging Check Rail Gauge(in)</td>
<td>Diverging Guard Rail Gauge(in)</td>
</tr>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>55</td>
</tr>
</tbody>
</table>

## Gauge Comment
Ahead of PS 56.5
Frog through 56. 1/8
Frog diverging 57
Frog maintained well but needs gauge adjustment.

## Component Condition

<table>
<thead>
<tr>
<th>Component</th>
<th>Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
<tr>
<td>Ballast</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
<tr>
<td>Anchors</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
<tr>
<td>Frog</td>
<td>Fair</td>
<td>Bolted rail frog no 7</td>
</tr>
<tr>
<td>Guard Rails</td>
<td></td>
<td>No Comment</td>
</tr>
<tr>
<td>Closure Rails</td>
<td></td>
<td>No Comment</td>
</tr>
</tbody>
</table>
WSP Turnout Inspection

WSP Inspection ID
Turnout Inspection - Port Alberni Station

Head Loss

<table>
<thead>
<tr>
<th>Through Stock Rail (mm)</th>
<th>Curve Closure Rail (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
<tr>
<td>Through Closure Rail (mm)</td>
<td>Diverging Stock Rail (mm)</td>
</tr>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

Head Loss Comments
9 mm
Flange loss 3 mm

Comments and Remarks

Condition Comments
Old style rigid braces need replacement with adjustable rail braces and riser plates.
Hand throw low switch stand
Switch plates are in fair condition.
WSP Turnout Inspection

Photo Library

Turnout Photo
# Turnout Component Photos

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Photo 1</th>
<th>Component Photo 2</th>
<th>Component Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td><img src="image1" alt="Component Photo 1" /></td>
<td><img src="image2" alt="Component Photo 2" /></td>
<td><img src="image3" alt="Component Photo 3" /></td>
</tr>
<tr>
<td>Ballast</td>
<td><img src="image4" alt="Component Photo 1" /></td>
<td><img src="image5" alt="Component Photo 2" /></td>
<td><img src="image6" alt="Component Photo 3" /></td>
</tr>
<tr>
<td>Anchors</td>
<td><img src="image7" alt="Component Photo 1" /></td>
<td><img src="image8" alt="Component Photo 2" /></td>
<td><img src="image9" alt="Component Photo 3" /></td>
</tr>
<tr>
<td>Component</td>
<td>Component Photo 1</td>
<td>Component Photo 2</td>
<td>Component Photo 3</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Frog</td>
<td><img src="image1.jpg" alt="Frog Photo 1" /></td>
<td><img src="image2.jpg" alt="Frog Photo 2" /></td>
<td><img src="image3.jpg" alt="Frog Photo 3" /></td>
</tr>
<tr>
<td>Guard Rails</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closure Rails</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WSP Turnout Inspection

Head Loss Photo 1
<table>
<thead>
<tr>
<th>Additional Photo 1</th>
<th>Additional Photo 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Additional Photo 1" /></td>
<td><img src="image2.jpg" alt="Additional Photo 2" /></td>
</tr>
<tr>
<td><strong>Additional Photo 1 Description</strong></td>
<td><strong>Additional Photo 2 Description</strong></td>
</tr>
<tr>
<td>Old style spike and plates.</td>
<td>Switch stand</td>
</tr>
</tbody>
</table>
WSP Turnout Inspection

Railway Authority
SVI
Lead Inspector
Kris Dhawan

Subdivision
Port Alberni
Inspection Date
17/09/2019

Turnout ID
Not Observed

Mile
0.00

Turnout Hand
Right Hand

Rail weight (lbs)
85

Tie Type
Softwood

Gauge

<table>
<thead>
<tr>
<th>Points Gauge (in)</th>
<th>Through Closure Gauge (in)</th>
<th>Through Check Rail Gauge (in)</th>
<th>Through Guard Rail Gauge (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>56.75</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
<tr>
<td>Heel Gauge (in)</td>
<td>Diverging Closure Gauge (in)</td>
<td>Diverging Check Rail Gauge(in)</td>
<td>Diverging Guard Rail Gauge(in)</td>
</tr>
<tr>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
<td>Not Observed</td>
</tr>
</tbody>
</table>

Gauge Comment
Diverging track frog 57
Through track frog 56.25

Component Condition

<table>
<thead>
<tr>
<th>Component</th>
<th>Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td>Fair</td>
<td>Will need 40% new switch ties</td>
</tr>
<tr>
<td>Ballast</td>
<td>Poor</td>
<td>Pitt run gravel Fouled</td>
</tr>
<tr>
<td>Closure Rails</td>
<td></td>
<td>No Comment</td>
</tr>
<tr>
<td>Frog</td>
<td>Fair</td>
<td>Bolted rail frog</td>
</tr>
<tr>
<td>Anchors</td>
<td>Fair</td>
<td>Not Comment</td>
</tr>
<tr>
<td>Guard Rails</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
</tbody>
</table>

No. 00009
## Head Loss

<table>
<thead>
<tr>
<th>Through Stock Rail (mm)</th>
<th>Curve Closure Rail (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Through Closure Rail (mm)</td>
<td>Diverging Stock Rail (mm)</td>
</tr>
<tr>
<td>11</td>
<td>10</td>
</tr>
</tbody>
</table>

### Head Loss Comments
- Additional Photo 1: curve closure
- Additional Photo 2: through closure

## Comments and Remarks

### Condition Comments
- Overall fair condition other than switch ties. Need to realign frog to fix gauge.
- Turnout is the main junction connection off the Victoria sub to Port Alberni.
## Turnout Component Photos

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Photo 1</th>
<th>Component Photo 2</th>
<th>Component Photo 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td><img src="image1.jpg" alt="Component Photo" /></td>
<td><img src="image2.jpg" alt="Component Photo" /></td>
<td><img src="image3.jpg" alt="Component Photo" /></td>
</tr>
<tr>
<td>Ballast</td>
<td><img src="image4.jpg" alt="Component Photo" /></td>
<td><img src="image5.jpg" alt="Component Photo" /></td>
<td><img src="image6.jpg" alt="Component Photo" /></td>
</tr>
<tr>
<td>Component</td>
<td>Component Photo 1</td>
<td>Component Photo 2</td>
<td>Component Photo 3</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Closure Rails</td>
<td><img src="image1" alt="Closure Rails" /></td>
<td><img src="image2" alt="Closure Rails" /></td>
<td><img src="image3" alt="Closure Rails" /></td>
</tr>
<tr>
<td>Frog</td>
<td><img src="image4" alt="Frog" /></td>
<td><img src="image5" alt="Frog" /></td>
<td><img src="image6" alt="Frog" /></td>
</tr>
<tr>
<td>Component</td>
<td>Component Photo 1</td>
<td>Component Photo 2</td>
<td>Component Photo 3</td>
</tr>
<tr>
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<td>-------------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Anchors</td>
<td><img src="image1.jpg" alt="Anchors Photo 1" /></td>
<td><img src="image2.jpg" alt="Anchors Photo 2" /></td>
<td><img src="image3.jpg" alt="Anchors Photo 3" /></td>
</tr>
<tr>
<td>Guard Rails</td>
<td><img src="image4.jpg" alt="Guard Rails Photo 1" /></td>
<td><img src="image5.jpg" alt="Guard Rails Photo 2" /></td>
<td><img src="image6.jpg" alt="Guard Rails Photo 3" /></td>
</tr>
</tbody>
</table>
WSP Turnout Inspection

Additional Photo 1 Description
Guard rail through

Additional Photo 2 Description
Diverging gourd rail
WSP Turnout Inspection

Railway Authority
SVI
Lead Inspector
Kris Dhawan
Subdivision
Wellcox Yard
Inspection Date
18/09/2019

Turnout ID
C3/4 mainline switch No 7
Rail weight (lbs) 85

Mile
Turnout Hand
Right Hand
Tie Type
Softwood
Frog Type
Self Guarded no. 7 solid steel

Gauge

Points Gauge (in) 56.5
Heel Gauge (in) 57 3/8 through
Through Closure Gauge (in) Not Observed
Diverging Closure Gauge (in) Not Observed
Through Check Rail Gauge (in) Not Observed
Diverging Check Rail Gauge( in) Not Observed
Through Guard Rail Gauge (in) Not Observed
Diverging Guard Rail Gauge(in) Not Observed

Gauge Comment
Frog through 56.25
Frog diverging 56

Component Condition

<table>
<thead>
<tr>
<th>Component</th>
<th>Condition</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frog</td>
<td>Fair</td>
<td>Self gauged no. 7 solid steel</td>
</tr>
<tr>
<td>Guard Rails</td>
<td>Fair</td>
<td>No Comment</td>
</tr>
<tr>
<td>Ballast</td>
<td>Poor</td>
<td>No Comment</td>
</tr>
<tr>
<td>Anchors</td>
<td>Poor</td>
<td>Small tie plates</td>
</tr>
<tr>
<td>Ties</td>
<td>Poor</td>
<td>No Comment</td>
</tr>
<tr>
<td>Closure Rails</td>
<td></td>
<td>No Comment</td>
</tr>
</tbody>
</table>
## Head Loss

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Through Stock Rail (mm)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Through Closure Rail (mm)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Curve Closure Rail (mm)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Diverging Stock Rail (mm)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

**Head Loss Comments**

No Comment

## Comments and Remarks

**Condition Comments**

Needs ties

Needs gauging of joints

Need larger tie plates
### Turnout Component Photos

<table>
<thead>
<tr>
<th>Component</th>
<th>Component Photo 1</th>
<th>Component Photo 2</th>
<th>Component Photo 3</th>
</tr>
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<td><img src="image1.jpg" alt="Frog Photo" /></td>
<td><img src="image2.jpg" alt="Frog Photo" /></td>
<td><img src="image3.jpg" alt="Frog Photo" /></td>
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<td><img src="image5.jpg" alt="Guard Rails Photo" /></td>
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<tr>
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<tr>
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<td><img src="image2.jpg" alt="Anchors Photo" /></td>
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<tr>
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</tr>
<tr>
<td>Ties</td>
<td>![Ties Photo 1]</td>
<td>![Ties Photo 2]</td>
<td>![Ties Photo 3]</td>
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<tr>
<td>Closure Rails</td>
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</table>
WSP Turnout Inspection

Head Loss Photo 1
# WSP Turnout Inspection

### Additional Photo 1
![Additional Photo 1]

### Additional Photo 2
![Additional Photo 2]

### Additional Photo 2 Description
Standard hand throw switch stand