



Table of Contents

Introduction	1
Application	2
Agency Assistance	3
Category 1: Billing guidelines for scheduled maintenance of crossing warning systems (Schedule A)	3
Applicable railway crossing projects	3
Direct Labour Rates	4
Direct Material Rate	5
Electricity Costs	5
Overhead Rates	5
Vehicle Costs	5
Billing Periods	6
Category 2: General billing guidelines	6
Applicable Railway Crossing Projects	6
Construction	6
Crossing Surface Maintenance	7
Unscheduled Maintenance	7
Charges	7
Labour Charges	7
Material Charges	10
Miscellaneous Charges	10
Rental Rates of Railway Equipment (Schedule E)	13
Summary of Overhead Charges	13
Salvage Values	16
Injury or Death	16
Discontinuance of the Operation of a Railway Line	16
Railway Company Contacts	17
Definitions	18
Other Available Documents	19

For More Information	19
Schedule A: Scheduled Maintenance of Crossing Warning Systems	20
Type 1: Crossing Warning Systems with Gates	20
Type 2: Crossing Warning Systems Without Gates	22
Schedule B: Construction, Crossing Surface Maintenance, and Unscheduled Maintenance Overhead Charges — LABOUR	24
Schedule C: Construction, Crossing Surface Maintenance and Unscheduled Maintenance Overhead Charges — MATERIAL	25
Schedule D: Miscellaneous Charges	26
Schedule E: Railway Equipment Rental Rates	27
Methodology to apply in calculating operation costs	33

This document and other Canadian Transportation Agency publications are available on our website at www.otc-cta.gc.ca.

© His Majesty the King in Right of Canada, as represented by the Canadian Transportation Agency, 2023

Catalogue No : TT4-3/2023E

ISSN 2368-0768

For more information, please contact the Agency:

Canadian Transportation Agency

Ottawa, Ontario K1A 0N9

Phone: 1-888-222-2592

TTY: 1-800-669-5575

Fax: 819-997-6727

Email: info@otc-cta.gc.ca

Note:

The rates in the schedules of this Guide are based on information submitted by Canadian National Railway Company (CN) and Canadian Pacific Kansas City Railway Company (CPKC) in 2019, which the Agency has indexed for 2023.

Introduction

The Canadian Transportation Agency (Agency) is responsible for, among other duties, resolving disputes or facilitating the resolution of disputes related to railway crossings, as they arise between federal railway companies and other parties such as utility companies, road authorities and landowners.

Under section 101 of the *Canada Transportation Act* (the Act), railway companies, road authorities and utility companies may negotiate agreements for any aspect of a crossing. These agreements usually include rates to be charged for work performed, and specify which parties are responsible for paying for this work. Where agreements cannot be reached by the parties, the Agency, upon receiving an application, may resolve issues relating to the construction, maintenance and apportionment of costs of road and utility crossings.

Under section 103 of the Act, if the construction of a railway line does not divide a landowner's land, but the railway company and the landowner adjoining the railway disagree on some aspect of a private crossing, the landowner can apply to the Agency. The Agency may order the railway company to construct a suitable crossing, if the Agency considers such a crossing necessary to the landowner's enjoyment of the land. It may also determine what constitutes a suitable crossing, and what terms and conditions should govern the crossing. In these cases, the landowner pays the costs of constructing and maintaining the crossing.

This Guide has been developed to assist railway companies, landowners, road authorities, and utility companies, by providing a third-party assessment of rail costs, and proposing consistent, nation-wide schedules and guidelines for work performed by railway companies. This Guide may be used by federal railway companies, as a reference, when charging for work performed at crossings, crossing warning systems, or for any other crossing-related work either agreed to by the parties or authorized by an order of the Agency.

The rates in the attached schedules are developed from Class I railway companies' accounting data in accordance with the principles, methods and procedures established for the costing of Class I railway operations for regulatory purposes. They have been developed to provide guidance to the parties involved in a railway crossing agreement as to the total costs incurred by Class I railway companies for work and services performed at road crossings.

Application

Parties are encouraged to negotiate contracts for crossing-related work that incorporate:

- specifications;
- rates;
- time frames; and
- any other relevant terms and conditions.

In the event of a dispute, the Agency will assess the merits of the case and determine whether the rates in this Guide should apply. Furthermore, these rates may apply, from the effective date of this Guide, to any past orders issued by the Agency's predecessors.

As indicated above, the rates in this Guide are developed from Class I railway companies' accounting data to represent their total costs and therefore:

- may not accurately reflect the costs incurred by non-Class I railway companies; and
- do not take into consideration any costs related to crossing maintenance and construction that are incurred by parties other than the railway companies.

The rates contained in this Guide fall into two categories:

1. **Scheduled maintenance rates (Schedule A)** which cover routine maintenance of crossing warning systems; and
2. **General billing guidelines (Schedules B to E)** which cover construction and unscheduled maintenance projects, and crossing surface maintenance, based on the actual activities performed.

Agency Assistance

If any party wishes to seek Agency assistance in resolving issues relating to work performed at crossings, an application must be made in writing, include all supporting information, be signed by the applicant and be filed with the Agency at the following coordinates:

Email, courier or fax the completed form, copies of the documents supporting your application and any additional pages to:

Attn: Secretary

Canadian Transportation Agency

By email: secretariat@otc-cta.gc.ca

By fax: 819-953-5253

By courier:

Canadian Transportation Agency

60 Rue Laval

Gatineau, Quebec

J8X 3G9

Category 1: Billing guidelines for scheduled maintenance of crossing warning systems (Schedule A)

Applicable railway crossing projects

The charges in this section apply only to scheduled maintenance of crossing warning systems. Scheduled maintenance is the standard preventative maintenance which is intended to ensure the reliable and safe operation of a crossing warning system. The scheduled maintenance rates cover all labour, material, vehicle costs and overhead associated with ensuring the functional operation of a crossing warning system. A breakdown of the rates to be charged for each category is contained in [Schedule A](#).

For the purposes of this Guide, and to better reflect the costs involved, scheduled maintenance rates have been divided into two categories: **crossing warning systems with gates (Type 1)**; and **crossing warning systems without gates (Type 2)**. No scheduled maintenance rates are to be charged for crossings having only passive warning systems such as reflectorized signboards.

This section addresses the following cost components:

- [Direct labour rates](#);
- [Direct material rate](#);
- [Electricity costs](#);
- [Overhead rates](#);
- [Vehicle costs](#); and
- [Billing periods](#).

Direct Labour Rates

The scheduled maintenance labour rates include the labour costs associated with all routine service calls and maintenance work, and scheduled testing and inspections. The labour portion of the work has been divided into two categories: **work performed by signal maintainers**; and **work performed by track and roadway crews**.

The work performed by signal maintainers includes regular service calls and inspections, painting and parts replacement, and all scheduled safety tests – which comprise weekly, monthly, 3-month, 6-month, 1, 2, 4, 8 and 10-year tests. The work performed by track and roadway crews includes: weekly testing in place of signal maintainers (for certain regions of the country); flagging during routine maintenance; and the replacement of insulated joints and temporary bond wires.

Weekly tests are performed on all crossing warning systems across Canada where railway companies operate. In some regions, these tests are performed by the signal maintainers and in other regions, by the track and roadway crews. The system-wide time spent on the weekly tests has been apportioned between these two labour groups.

The base labour rate is calculated for both signal maintainers and track and roadway crews by dividing the total dollar amount paid to employees in each labour category by the total hours worked in the same labour category. The amount paid includes straight time, vacation, statutory holidays, overtime and other pay-related benefits as well as a standby charge.

Direct Material Rate

The scheduled maintenance direct material rate covers the costs associated with the replacement of basic material items (including paint, batteries, and light bulbs), as well as any other material components replaced due to normal wear. This rate also covers any additional charges for the replacement of materials such as masts, cantilevers, gates, etc., due to normal wear.

The basic material cost includes the total material items purchased for crossing maintenance.

Electricity Costs

The electricity cost includes the base cost of electricity supply and consumption required to maintain the operation of a crossing warning system. No material overhead is added to the electricity costs.

Overhead Rates

In addition to the direct costs of labour and material, the railway company also incurs overhead costs related to planning, supervision, and administration of the maintenance activity, as well as administration costs of the railway company as a whole such as accounting, finance, human resources, legal, management services and information systems. The overhead also includes an employee benefit allowance to cover costs relating to the company's portion of employment insurance, pensions, health plans, and other employee benefits.

The scheduled maintenance overhead rates are calculated using the Agency's costing model and are applied to the labour and material used in the maintenance project. The labour overhead rate is applied to the hours of direct labour employed in the project, and the material overhead rate is applied to each of the material items used in the project.

Vehicle Costs

Vehicle costs incurred for transportation of signal maintainers and track and roadway crews to and from crossings to perform the scheduled tests are also included as part of the scheduled maintenance rates. Vehicle costs are developed using a per hour rate

which reflects the costs of ownership and maintenance of these vehicles multiplied by the number of hours the vehicle is used for scheduled maintenance purposes.

Billing Periods

The rates have been presented, for convenience, on an annual basis. Parties to a crossing agreement for scheduled maintenance are free to negotiate the frequency and timing of billing periods (e.g., monthly or annually) that best meet their needs.

Category 2: General billing guidelines

Applicable Railway Crossing Projects

The general billing guidelines apply to all work at crossings except for scheduled maintenance of crossing warning systems. Charges under the general billing guidelines should be billed separately from any scheduled maintenance charges and should include a full description of the actual work performed and the related charges. The general billing guidelines include three types of projects:

- construction;
- crossing surface maintenance; and
- unscheduled maintenance.

The charges relating to all three categories can be found in Schedules B through E of this Guide.

Construction

Construction projects which are captured under the general billing guidelines are the initial construction, reconstruction or upgrade of a:

- grade crossing, including the crossing surface and/or the installation of the associated crossing warning system;
- grade-separated crossing (no crossing warning system required); or
- utility crossing (no crossing warning system required).

Crossing Surface Maintenance

Maintenance performed by a railway company on the crossing surface of a grade crossing, or on a grade separation, is not included in the standard maintenance rates. Any such costs incurred by the railway company are captured under the general billing guidelines.

Crossing surface refers to planking, pavement or other suitable material placed between the rails and to the ends of the ties for the full width of the road crossing.

Damage to the crossing surface can occur due to weather, accidents, scraping by snow ploughs, hits by low ground clearance heavy vehicles, and normal wear and tear over the years. Surface abrasion increases with traffic levels, and the impact loads imposed by vehicle tires transitioning from rail to crossing surface. Cracking can develop in surface material, and wood crossing surfaces are also subject to rot and splitting. The railway company responsibility for performing the maintenance and repair of crossing surfaces may include such work as filling potholes, removing/replacing defective or worn panels, patching, etc.

Unscheduled Maintenance

Unscheduled maintenance refers to corrective work on any crossing warning system damaged by accidents, vandalism, or weather, to restore the reliable, safe, and effective operation of the system.

Charges

This section outlines the general billing guidelines as they pertain to:

1. [Labour charges](#);
2. [Material charges](#);
3. [Miscellaneous charges](#); and
4. [Rental rates for railway equipment](#).

Labour Charges

The overall labour rate may include the following components:

- Direct labour charge;
- Indirect labour factor;

- Labour overhead rate;
- Contracted labour rate; and
- Rate for labour in contracted services.

Direct Labour Charge

Direct labour charges are directly related to the labour hours, of railway company employees, used in the construction of new or upgraded crossings, or for unscheduled maintenance of the crossings or the maintenance of the crossing surfaces. The labour charges applicable under this Guide for any general billing project should be based on the actual hours worked multiplied by an hourly labour rate, as specified in each employee's collective agreement. For construction purposes, the labour charges are applicable to the actual on-site installation of materials.

Indirect Labour Factor (Schedule B)

The direct labour charge only covers the hourly salaries and wages, for the actual hours worked on the project, of the employees whose costs are billed directly to the road authority. However, the railway company also incurs costs related to vacations, statutory holidays, sick leave, and other types of leave, as specified in collective bargaining agreements for those employees. The indirect labour factor covers allowances for these costs, based on railway company data showing the hours actually worked and the hours paid by the railway company for each employee category, and that factor is applied to the direct hourly wage of railway company employees.

Schedule B of this Guide outlines the appropriate indirect labour factor to be applied to direct wage rates for labour costs that fall into the general billing guidelines.

Labour Overhead Charges (Schedule B)

The labour overhead rate for construction, upgrade, crossing surface maintenance, or unscheduled maintenance of crossings covers the same types of expenses as described previously for scheduled maintenance of crossings, and is calculated using the Agency's costing model. The types of overhead are described in more detail in the Overhead Summary section of this Guide.

Schedule B of this Guide outlines the labour overhead rate to be applied to direct wage rates for labour costs that fall into the general billing guidelines.

Contracted Labour Rate (Schedule B)

For the construction or upgrade of crossing warning systems, a construction crew comprising railway company unionized employees is used in most cases. However, if there are not enough railway company employees available for a construction project, contracted labour may be used.

In these cases, the contracted labour is a part of the construction crew, working alongside the railway company employees. The review of overheads that was initiated after the 2013 update of the Guide shows that the activities undertaken by the railway company to enable and support the construction, such as supervision, rail communications, rail traffic control, etc., encompass both the contracted and railway company labour. Therefore, in the construction or upgrade of a crossing warning system, it is reasonable that the contracted labour would incur the approved railway overhead that relates to enabling and supporting the project. Contracted labour will not incur the overhead related to employee benefits.

Schedule B of this Guide outlines the appropriate overhead rate to be applied to the invoiced contracted labour costs. To emphasize, this overhead rate is applicable only to the direct cost of contracted labour used as part of the project crew in the actual construction or upgrade of a crossing.

Labour in Contracted Services (Schedule B)

The review of activities undertaken to enable or support railway crossing projects suggests that in special circumstances the railway company may contract out specific activities during the construction or upgrade to third parties. For example, digging trenches, locating and moving utilities, drilling and fitting of pipes, etc., could be performed by a contractor as part of the overall project.

Again, it is reasonable that the labour used in performing the contracted part of the project would incur the approved railway overhead relating to enabling and supporting the project, such as rail traffic control and rail communication systems, and their associated administrative costs. The overhead related to employee benefits and associated administrative costs would not be applicable to this labour.

Schedule B of this Guide outlines the appropriate overhead rate to be applied to the labour portion of contracted services performed as part of the overall project. To emphasize, this overhead rate is applicable only to the cost of labour used by a contractor performing assigned tasks during the actual construction or upgrade of a crossing.

Material Charges

The overall material charge is comprised of two components:

- Direct material charges; and
- Material overhead rates.

Direct Material Charges

Direct material charges are related to the material used in the construction of new or upgraded crossings, crossing surface maintenance, or unscheduled maintenance of the crossings, including any pre-wired and/or pre-assembled items; and reflect the actual price (including applicable net sales tax¹) paid by the railway company.

Material Overhead Charges (Schedule C)

In addition to the direct material charges, a material overhead rate is applied to the actual purchase price paid by the railway company for all material items used in the construction, upgrade, crossing surface maintenance or unscheduled maintenance of a crossing, including pre-wired and/or pre-assembled items. The applied rate covers the same types of expenses as previously described for scheduled maintenance projects, and is calculated using the Agency's costing model.

Schedule C of this Guide outlines the material overhead rate applicable to all material charges used in construction, crossing surface maintenance, and unscheduled maintenance projects.

Miscellaneous Charges

Miscellaneous charges cover three types of costs incurred by railway companies in construction of new or upgraded crossings, crossing surface maintenance, and unscheduled maintenance of existing crossings:

- Transportation charges for work crews, and equipment to and from the crossing site;
- Contract administration fees; and

¹ The applicable sales tax credits should be deducted from the sales taxes being paid for the material item.

- Meals and lodging allowances paid to work crews for the duration of the construction, crossing surface maintenance, or unscheduled maintenance project.

Transportation Charges (Schedule D)

The transportation charges section in Schedule D of the Guide applies to:

- Transportation by rail of material, roadway machines and other miscellaneous equipment to and from work sites, in a work train, or as part of a revenue train;
- Transportation of roadway machines and other miscellaneous equipment to and from work sites by highway vehicle;
- Transportation of employees to and from the project site by highway vehicle; and
- Freight cars used for storage of crossing materials or equipment for a project.

Transportation charges for material or equipment in work trains, revenue trains, or highway vehicles cover ownership, and maintenance costs associated with the locomotives and freight cars, or highway vehicles, used in the respective modes of transportation. The charges for work trains and revenue trains also cover operating costs for crew and fuel. For work trains, an additional trackage charge, which covers the costs of ownership and maintenance of the tracks, is applied.

Schedule D lists the hourly charges (or fractions thereof) applicable for the use of railway company locomotives and cars in work trains for transporting equipment or materials to the work site, plus charges for additional locomotives or cars should they be needed. Charges for the use of revenue trains, or highway vehicles in the transportation of equipment are listed on a per mile basis. The per mile rate for highway vehicles is also applicable for the transportation of employees to and from the project site by railway company-owned vehicles.

A trackage charge is also included in Schedule D to account for the wear and tear on the track from the use of work trains, and the additional freight cars added to revenue trains for the transportation of material or equipment to the project site. In previous editions of the Guide, the trackage charge was presented as a cost per train mile. However, this does not account for the fact that trains of differing lengths would not cause the same track-related costs. That is, a two-car work train for a crossing-related project would not cause the same track-related costs as a 100-car revenue train. To make the trackage charge more accurate for crossing-related projects, the Agency has re-calculated the trackage charge to present it on a per car mile basis in this edition of the Guide. The rate per car mile means the road authority will be charged only in

relation to the number of cars used in the transportation of materials or equipment, on either a work train or a revenue train, for the crossing construction or maintenance project.

The charges in **Schedule D** do not apply to:

- Railway company labour used to transport equipment by highway vehicle; when the labour hours associated with the transportation function are known, the appropriate charge for the labour hours of transportation (direct, indirect, and overhead) are presented in **Schedule B**;
- The use of personal automobiles in the transportation of employees – These charges are billed directly; and
- Transportation of railway company-owned equipment, other than locomotives, to and from job sites under its own power – **Schedule E** daily rental rates apply in these cases.

Meals and Lodging (Schedule D)

Meals and lodging allowances for railway company employees working on a project under the general billing guidelines are applicable for employees that are entitled to such allowances in their collective agreements. The allowable charges are those that are specifically identified in each employee's collective agreement.

Contract Administration Fees (Schedule D)

This is an approved railway administration fee charged by railways to cover the cost of arranging a contract for delivery of materials for a crossing project by a third party, or a contract for performing specific activities in a crossing-related project.

Rental Rates of Railway Equipment (Schedule E)

Where company-owned railway equipment is used for projects that fall under the general billing guidelines, the daily rental rates shown in **Schedule E: Railway Equipment Rental Rates** are applicable.

The rental charges may include the actual time required for moving railway company-owned equipment, under its own power or otherwise, from its home base or point of storage to the project site and back again, provided the railway equipment is not being transported directly to the site of another project. If the equipment goes directly from the site of one project to another, the time to move to the first project cannot be applied to the second project.

Summary of Overhead Charges

The Agency conducts ongoing reviews of the overhead rates applied to the construction, upgrade, and maintenance of crossing warning systems to ensure that the overhead rates continue to accurately reflect the costs associated with the crossing related activities.

The Agency has identified the following types of overhead as being appropriate in the construction, upgrade, or maintenance of crossing warning systems, as well as the maintenance of crossing surfaces, which are reflected in the rates found in **Schedule's B and C**, and embedded in the rates in **Schedule A**, of this Guide. The descriptions of the specific types of overhead are accompanied by processes to which they apply.

Overhead:	Applies to:
Track and roadway administration: Planning and supervision activities to support the railway company's maintenance activities.	<ul style="list-style-type: none">- Crossing Construction or Upgrade- Scheduled and Unscheduled Maintenance- Crossing Surface Maintenance
General administration: Accounting, finance, human resources, legal, management services, information systems and other management	<ul style="list-style-type: none">- Crossing Construction or Upgrade- Scheduled and Unscheduled Maintenance

Overhead:	Applies to:
functions needed to support the railway company's operations.	<ul style="list-style-type: none"> - Crossing Surface Maintenance
Dispatching: Dispatching activities to ensure coordination of movements on the track network, control of the project area, and safety of work crews. Dispatching is an overhead on labour only.	<ul style="list-style-type: none"> - Crossing Construction or Upgrade - Scheduled and Unscheduled Maintenance - Crossing Surface Maintenance
Rail communication system expenses: Investment, maintenance, operation and amortization expenses for rail communication systems, which are needed to coordinate movements and ensure safety of the work crews on the project.	<ul style="list-style-type: none"> - Crossing Construction or Upgrade - Scheduled and Unscheduled Maintenance - Crossing Surface Maintenance
Employee benefits expenses: Payment of employment benefits to the employees who work directly on the project or perform the administrative, supervisory and management activities to support the maintenance project, including health and welfare, pensions, Canada and Quebec pension plans, employment insurance, and other employee benefits.	<ul style="list-style-type: none"> - Crossing Construction or Upgrade - Scheduled and Unscheduled Maintenance - Crossing Surface Maintenance
Office buildings expenses: Expenses related to the upkeep of office buildings used by the work crews and the administrative, supervisory and management support staff, including the costs of investments, maintenance, operation and depreciation of the buildings.	<ul style="list-style-type: none"> - Crossing Construction or Upgrade - Scheduled and Unscheduled Maintenance - Crossing Surface Maintenance
Material stores: Expenses related to the upkeep, and operation of the facilities in which materials are stored. Material stores is an overhead on materials only.	<ul style="list-style-type: none"> - Crossing Construction or Upgrade - Scheduled and Unscheduled Maintenance

Overhead:	Applies to:
	<ul style="list-style-type: none"> - Crossing Surface Maintenance
Shop Overheads: Expenses incurred related to using shops as staging facilities in the construction or upgrade of a crossing warning system. Shops are also used in the wiring of bungalows when those activities are performed by the railway company. Shop Overheads apply only to material expenses.	<ul style="list-style-type: none"> - Crossing Construction or Upgrade
Taxes: Costs of municipal property taxes paid on the office buildings.	<ul style="list-style-type: none"> - Crossing Construction or Upgrade - Scheduled and Unscheduled Maintenance - Crossing Surface Maintenance
Insurance: Costs of insurance against injuries to employees and loss, damage and destruction of third-party property.	<ul style="list-style-type: none"> - Crossing Construction or Upgrade - Scheduled and Unscheduled Maintenance - Crossing Surface Maintenance
Working capital: Interest paid on the working capital needed to sustain day-to-day operation.	<ul style="list-style-type: none"> - Crossing Construction or Upgrade - Scheduled and Unscheduled Maintenance - Crossing Surface Maintenance

The Agency also confirms that the construction overhead for materials is also applicable to pre-wired or pre-assembled materials, like all other materials used in the construction or upgrade of a crossing warning system.

Arranging for the pre-contracted supply of material or services for crossing projects, and the associated billing and accounting activities, are difficult to properly estimate as

overhead on direct time in the Agency costing methodology. In the absence of any other information the contract administration fee in previous editions of the Guide is retained **(Schedule D)**.

The transportation of company-owned railway equipment to and from the job site can be done by work train (rail) or by highway vehicle (road). In any case where a work train is used, the rates in **schedule D** should be applied. The work train rates have overhead embedded in them, and thus no other overhead should be added. The use of the transportation overhead is limited to transportation by highway vehicle, and is explained fully in the Transportation Charges section.

Salvage Values

Proper credit is allowed for salvaged crossing warning system materials. Crossing warning system materials removed from service for re-use should be salvaged at 60% of current new price, and when used again, charged out at the same percentage. Material such as relays or other apparatus which must be repaired or rebuilt should be salvaged at 25% of the current new price, and when used again after being repaired, charged out at 75% of current new price.

Injury or Death

No direct charges are to be made for payment of compensation claims for injury or death of railway company employees on a crossing construction or maintenance project.

Discontinuance of the Operation of a Railway Line

The Act ceases to apply to any crossings on a railway line once the operation of that line is discontinued pursuant to Division V of the Act. No maintenance charges are to be billed for crossings located on a line for which the operation have been discontinued. Should a railway company temporarily cease operations, a reduced scheduled maintenance rate may apply to cover the ongoing fixed maintenance costs.

Railway Company Contacts

Canadian Pacific Kansas City Railway Company

Non Freight Billable Projects
BLDG #7, 478 McPhillips Street
Winnipeg, Manitoba
R2X 2G8
Phone: 204-947-8190

Canadian National Railway Company

Manager Legislative Affairs
953 de La Gauchetière Street West
Montréal, Quebec
H3B 2M9
Phone: 514-399-5185
Fax: 514-399-4296

Definitions

road: Includes any way or course, whether public or not, available for vehicular or pedestrian use.

road crossing: That part of a road that passes over, under or across a line of railway and includes any structure supporting or protecting that part of the road or facilitating the crossing.

crossing warning systems: An active system consisting of lights, bells and/or gates used at road/railway crossing intersections to warn the public of the presence or approach of rail traffic.

crossing surface: The planking, pavement or other suitable material placed between the rails and to the ends of the ties for the full width of the road crossing. Crossing surface can be made of lumber, asphalt, concrete, rubber, or other elastomeric material.

maintenance: Work which is required to keep an existing facility in its fully functional condition.

unusual weather-related damage: Damage to crossing warning systems due to exceptional forces of nature such as lightning, high winds, extreme temperature and humidity, which are inconsistent with normally expected weather to the local geography.

car mile: One car mile is equal to one mile of track travelled by one freight car. To calculate the total car miles of a train, the number of miles travelled by the train is multiplied by the number of cars on the train.

Other Available Documents

- *Apportionment of Costs of Grade Separations: A Resource Tool*
- *Canadian Transportation Agency General Rules*
- *Crossings: A Resource Tool*
- *Determining Net Salvage Value*
- *Environmental Self-Assessment Handbook for Rail Infrastructure Projects*
- *Guide to Certificates of Fitness*
- *Railway Crossings of Other Railways: A Resource Tool*
- *Railway Line Construction: A Resource Tool*
- *Railway Operation Compensation: A Resource Tool*
- *Railway Safety Management Systems Regulations*
- *Railway Third Party Liability Insurance Coverage Regulations*
- *Relocation of Railway Lines in Urban Areas: A Resource Tool*
- *Resolving Disputes Through Mediation*
- *Transfer and Discontinuance of Railway Line Operations and Railway Track Determinations*

These documents are available on the Agency website, and in alternate formats.

For More Information

Canadian Transportation Agency

Ottawa, Ontario K1A 0N9

Telephone: 1-888-222-2592

TTY: 1-800-669-5575

Facsimile: 819-997-6727

E-mail: info@otc-cta.gc.ca

Web site: www.otc-cta.gc.ca

Schedule A: Scheduled Maintenance of Crossing Warning Systems

Type 1: Crossing Warning Systems with Gates

2023/2024– Standard maintenance rates: labour costs

	Annual labour hours	Annual labour rate ¹	Labour costs ²
Work performed by signal maintainers	72.4042	\$83.1676	\$6,022
Work performed by track and roadway crew	5.8333	\$89.07	\$520

Note 1: The Labour Rate is calculated by adding a labour overhead rate of 63% to a base labour rate indexed for 2023/2024.

Note 2: The total Labour costs are rounded to the nearest dollar.

2023/2024 – Standard maintenance rates: material and electricity costs

Material cost ¹	Electricity cost ²	Total materials ³
\$898.46	\$582.26	\$1,481

Note 1: The Material Cost is calculated by adding a material overhead rate of 18% to the 2023/2024 basic material cost.

Note 2: No overhead has been applied to the electricity cost.

Note 3: Total Materials is a sum of the material cost and the electricity cost. All costs are rounded to the nearest dollar.

2023/2024 – Standard maintenance rates: vehicle costs

Vehicle rate per hour	Total annual hours	Total vehicles ¹
\$21.25	78.24	\$1,663

Note 1: Total Vehicles is calculated by multiplying the total annual hours by the vehicle rate per hour. Total vehicle cost is rounded to the nearest dollar.

2023/2024 – Standard maintenance rates: all costs

	Standard maintenance rates
Signal maintainers labour costs	\$6,022
Track and roadway crew labour costs	\$520
Total materials	\$1,481
Total vehicles	\$1,663
Total annual rate¹	\$9,685
50% of total annual rate	\$4,842
Monthly rate²	\$807
50% of monthly rate	\$403

Note 1: The total annual rate is the sum of the labour, material, and vehicle costs.

Note 2: The monthly rate is the total annual rate divided by 12.

Note 3: All rates are rounded to the nearest dollar.

Type 2: Crossing Warning Systems Without Gates

2023/2024 – Standard maintenance rates: labour costs

	Annual labour hours	Annual labour rate ¹	Labour costs ²
Work performed by signal maintainers	65.7396	\$83.17	\$5,467
Work performed by track and roadway crew	5.8333	\$89.07	\$520

Note 1: The labour rate is calculated by adding a labour overhead rate of 63% to a base labour rate indexed for 2023/2024.

Note 2: The total Labour costs are rounded to the nearest dollar.

2023/2024 – Standard maintenance rates: material and electricity costs

Material cost ¹	Electricity cost ²	Total materials ³
\$682	\$582	\$1,264

Note 1: The material cost is calculated by adding a material overhead rate of 18% to the 2023/2024 basic material cost.

Note 2: No overhead has been applied to the electricity cost.

Note 3: Total materials is a sum of the material cost and the electricity cost. All costs are rounded to the nearest dollar

2023/2024 – Standard maintenance rates: vehicle costs

Vehicle rate per hour	Total annual hours	Total vehicles ¹
\$21.25	71.57	\$1,521

Note 1: Total vehicles is calculated by multiplying the total annual hours by the vehicle rate per hour. Due to rounding, the total vehicle cost is slightly different than the straight multiplication of the vehicle rate per hour and the total annual hours.

2023/2024 – Standard maintenance rates: all costs

	Standard maintenance rates
Signal maintainers labour costs	\$5,467
Track and roadway crew labour costs	\$520
Total materials	\$1,264
Total vehicles	\$1,521
Total annual rate¹	\$8,772
50% of total annual rate	\$4,386
Monthly rate²	\$731
50% of monthly rate	\$365

Note 1: The total annual rate is the sum of the labour, material, and vehicle costs.

Note 2: The monthly rate is the total annual rate divided by 12.

Note 3: All rates are rounded to the nearest dollar.

Schedule B: Construction, Crossing Surface Maintenance, and Unscheduled Maintenance Overhead Charges — LABOUR

Cost components to be added to employee's base wage rate to develop labour charges under the general billing guidelines

Cost component	Unscheduled maintenance and Crossing surface maintenance (%)	Construction projects (%)			Transportation ¹ (%)
		Railway Company Employees	Contracte d Labour	Labour in Contracted Services	
Unproductive Ratio ² : 29%					
Overhead rate					
Administration: <ul style="list-style-type: none">• track and roadway administration• general railway company administration	13	13	13	13	13
Associated costs: <ul style="list-style-type: none">• office buildings• taxes• working capital• insurance• rail communication systems• dispatching	7	7	7	7	7
Employee benefit allowance	43	43	0	0	43
Total overhead rate	63	63	20	20	63

Note 1: The transportation overhead is only applicable to the labour hours (of railway company employees) relating to the transportation of equipment, by highway vehicle, when those hours are known. Transportation by work train is accounted for in Schedule D, and an overhead rate is embedded in the rate.

Note 2: When charging for work performed by signal maintainers, crossing construction crews, or railway company employees used for transportation of equipment, an indirect labour factor of 29% may be added to the direct labour rate as allowed pursuant to their collective agreements. The respective overhead rate is applied to the direct wage rate plus indirect labour factor.

Schedule C: Construction, Crossing Surface Maintenance and Unscheduled Maintenance Overhead Charges — MATERIAL

Cost components of the material overhead rate to be applied to actual material costs under the general billing guidelines

Cost component	Unscheduled maintenance and Crossing Surface Maintenance (%)	Construction projects (%)
Administration: <ul style="list-style-type: none"> • track and roadway administration • general railway company administration 	12	12
Associated costs: <ul style="list-style-type: none"> • office buildings • working capital • material stores and shop overhead • taxes • insurance • rail communications systems 	3	3
Employee benefit allowance	3	3
Total	18	18

Note: As the Agency cannot identify any material that would be used for the sole purpose of transportation, it has removed the material overhead rate for transportation from Schedule C.

Schedule D: Miscellaneous Charges

Meals and lodging	
Meals and lodging allowance as per each employee's collective agreement.	
Transportation charges	
Revenue trains and hi-railers	\$1.03 per car mile for each car/vehicle serving the project.
Equipment transported by highway	\$1.03 per vehicle mile.
Work Train using one Locomotive and two Freight Cars	\$453 per hour for first 8 hours.
	\$553 per hour for 9th and subsequent hours.
	\$240 per hour per additional locomotive.
	\$6 per hour per additional freight car. Also, hourly rate per freight car for freight cars used as storage.
Trackage charge for work trains or revenue train.	\$ 0.52 per car mile.
Contract administration fees	
Fees for the administration of contracts.	3% on amounts up to \$50,000
	2% on amounts of \$50,000 up to \$100,000
	1% on the excess of \$100,000

Note 1: No overhead is to be applied to the transportation charges listed here. Overhead is embedded in the rates.

Note 2: For the trackage charge, the rate is to be applied to the cars on the revenue train that are serving the project.

Schedule E: Railway Equipment Rental Rates

Schedule E is comprised of rates developed from data submitted by CP in 2019, which the Agency has indexed for 2023. CN did not submit data related to Schedule E. In cases where the Agency did not receive any equipment data, no daily rate has been indicated.

Parties and CN can agree to use the rates in Schedule E, or can negotiate amongst themselves to determine appropriate rate. The Agency has re-introduced vehicle costs to Schedule E.

Equipment description	CP Billing code	Daily Rate
POWER TRACK WRENCH	002	
SPIKE PULLER, DUAL	008	\$370
SPIKER, DUAL	009	\$322
ANCHOR ADJUSTER, RAIL	010	\$260
ANCHOR APPLICATOR, RAIL	011	\$368
ANCHOR REMOVER, DUAL	012	\$196
ANCHOR SPREADER, DUAL	013	\$282
LIFTER,RAIL	014	\$438
PRE-GAUGER, PLATE	015	\$75
RAIL HEATERS	017	\$156
RAIL HEATER, TUG	077	\$139
SPIKER, DUAL/GAUGER	099	\$417
CRANE, TIE	102	\$347
SCARIFIER, TIE BED	103	\$334
DRILL,TIE	105	\$276
SPACER, TIE	106	\$34
PLUGGER, TIE	108	\$765

Equipment description	CP Billing code	Daily Rate
TIE, REPLACER	110	\$426
KRIBBER/ADZER	191	\$711
TAMPER	201	
TAMPER, SWITCH	204	\$621
TAMPER, SWITCH/SURFACE/LINE	206	\$1,086
POWER JACK/SLEWER	208	
BALLAST REGULATOR,< 50,000 LBS (S)	211	\$291
CRIBBER, BALLAST	212	\$68
UNDERCUTTER, SPOT < 40,000 LBS	213	
BROOM, BALLAST	214	\$104
UNDERCUTTER, PRODUCTION	215	\$3,314
TRACK SKELETONIZER	219	
STABILIZER, TRACK	220	\$876
BRUSHCUTTER, RAILBOUND	301	
RAIL SAW, LARGE	303	\$19
BLOWER, SNOW/JET/SKID	401	
BLOWER, SNOW ATTACHMENT	403	\$152
CLEANER, SNOW/SWITCH	404	\$283
WHEEL MOUNTED RUBBER TIRE CRANE	501	\$210
CRANE, CRAWLER	502	\$100
CRANE, RAIL < 20 TON	503	\$556
LOADER, WHEEL < 3YD	506	\$205
MATERIAL HANDLER, CARTOP JIMBO	507	\$1,138

Equipment description	CP Billing code	Daily Rate
EXCAVATOR, TRUCK MOUNTED	508	\$319
CRANE, SPEEDSWING	510	\$350
BACKHOE/LOADER	511	\$310
RAILCAR MOVER	601	\$447
TRACTOR, UTILITY	603	\$77
FORKLIFT	607	\$37
GRADER, ROAD	608	\$311
RAILCAR MOVER	610	\$15
MOTOR CAR	700	\$42
BALLAST REGULATOR, > 50,000 LBS/SF (S)	711	\$1,086
PLUCKER, PLATE/DUAL	719	\$129
CAR, TIE BUNDLING	801	\$11
BALLAST CAR	810	\$132
TROLLY MOUNTED FLOOD LIGHT GENERATORS	814	
PLUCKER, SPIKE	819	\$421
WELDER 400 AMP	904	
UNDERCUTTER, SPOT > 40,000 LBS	913	\$28
PORTABLE Air compressor	N/A	\$30
PORTABLE Bear track	N/A	\$11
PORTABLE Generator	N/A	\$7
PORTABLE Inspection cart	N/A	\$14

Equipment description	CP Billing code	Daily Rate
PORTABLE Oil filter crushers	N/A	\$7
PORTABLE Parts washer/steam cleaner	N/A	\$95
PORTABLE Power Wrench	N/A	\$16
PORTABLE Rail Grinder	N/A	\$10
PORTABLE Rail Tensor	N/A	\$10
PORTABLE Spike puller	N/A	\$21
PORTABLE Tie adzer	N/A	\$9
PORTABLE Tie cart	N/A	\$13
PORTABLE Tie drill	N/A	\$8
PORTABLE Tie plugger	N/A	\$27
PORTABLE Tie replacer	N/A	\$23
PORTABLE Tie screw lagger	N/A	\$9
PORTABLE TracHorse power pack	N/A	\$17
PORTABLE Track panel lifter	N/A	\$6
PORTABLE Truck hoist	N/A	\$22
PORTABLE Welder	N/A	\$15
TRAILER	N/A	\$89
WHEEL DOLLY	N/A	\$15

Vehicles:

Vehicle description	Daily Rate	Leasing
SUV	\$50	
LIGHT VEHICLE Mostly less than 4500 KG Class 1, 2 & 3 with single rear wheels. (1/4 thru to 1 Ton)		
LIGHT VEHICLE Van < 1 ton	\$41	
LIGHT VEHICLE < 1 ton Pickup/Truck Hi-rail (Single rear wheel, Basic, Ram 1500, F250, Silverado)	\$102	Lease rate
LIGHT VEHICLE < 1 ton Pickup/Truck (Single rear wheel, Basic RAM 1500, F250, Silverado)	\$65	Lease rate
LIGHT VEHICLE 1 ton Pickup/Truck Hirail (Single rear wheel, F350, RAM 2500)	\$102	Lease rate
LIGHT VEHICLE 1 ton Pickup/Truck (Single rear wheel, F350)	\$69	Lease rate
MEDIUM VEHICLE Between 10,001 lbs and 19,501 lbs Class 3, 4 & 5 trucks and must have dual wheels.		
MEDIUM VEHICLE 1 to 2 ton Hi-rail (Dual rear wheel, RAM 4500/5500, F550)	\$171	Lease rate
MEDIUM VEHICLE 1 to 2 ton (Dual rear wheel, RAM 4500/5500, F550)	\$113	
HEAVY VEHICLE Between 19,501 lbs and 40,000 lbs Class 6, 7, & 8 trucks with a single rear axle (3 & 5 Tons)		

Vehicle description	Daily Rate	Leasing
HEAVY VEHICLE Hi-rail Bus (44 Passengers)	\$178	
HEAVY VEHICLE Bus (44 Passengers)	\$148	
HEAVY VEHICLE Hi-rail (Mechanics Truck BTMF,F650,F750, 3 and 5 ton)	\$276	Lease rate
HEAVY VEHICLE Hi-rail (Thermite Welding Truck, Crane & Tool Circuit, Freightliner, International, 3 and 5 ton)	\$305	Lease rate
HEAVY VEHICLE Hi-rail (Mechanics truck BTMF, Freightliner, International, 3 to 5 ton)	\$358	Lease rate
HEAVY VEHICLE	\$133	
EXTRA HEAVY VEHICLE >40,000 lbs Class 8 trucks with dual or more rear axles (10 tons)		
EXTRA HEAVY VEHICLE Hirail (Crew Thermite Welding and Track Maintenance, 10 ton +)	\$352	
EXTRA HEAVY VEHICLE (Delivery Truck, MS Road Repair, 10 ton +)	\$239	
TRAILERS Heavy Equipment (Highway Heavy Equipment Transport)	\$243	

Methodology to apply in calculating operation costs

No overhead is to be applied to the rental rates listed above as overhead is embedded in the rates.

Rental rates do not include the costs of operating equipment. Charges for employees operating equipment, equipment supplies and fuel can be charged in addition to rental rates. These labour charges can include the appropriate statutory and other leave, and supervision and administration overhead (see above).

These rental rates apply for each day of 8 hours that the equipment actually works on a project. When more than 8 hours work is performed on any one day by the rented item, additional rental can be charged computed on the basis of an hourly prorate of the per diem rate.