



WORK PLAN METHODOLOGY TEMPLATE
MX-TRK-FRM-002
 Sept. 29, 2023

All Sections of the Work Plan Methodology (WPM) Template is to be filled by the Contractor except for Section 2. Project Delivery Team and/or Consultant to verify the contents of the form.

SECTION 1 - COVER PAGE

SECTION 1.1 - WORK OVERVIEW

Work Plan Name		Project Name	
Work Plan Number		Project Number	
Work Plan Revision No.		Metrolinx Contract Number	
Contractor		Subdivision	
Subcontractor(s)		Work Limits (Start and End Mileage)	
WPM Author		Excavation Permit Required	
Metrolinx PDT Contact		Corridor	
Consultant / Technical Advisor		Competent Supervisor	
Access Category		Shifts (Day / Night / Continuous)	
Access Start	Date	Access End	Date
	Time (24hr)		Time (24hr)
Total Work Duration (Hours)		Total Number of Work Days / Nights	
Track Protection Required		Track Protection Limits (Start and End Mileage)	
Comments on Work Duration and Available Work Window			

Dates are displayed in Day / Month / Year format and times are displayed in Military Time format (range 0000 to 2359).

SECTION 1.2 - SUBMISSION STAGE GATE

Stage No.	Stage Description	Work plan Submission Deadline	Work plan Submission Date	Submission Deadline Met / Missed	Work Plan Revision No.	Status (Reviewed, Review with Comments, Revise and Resubmit, Scope Change)
1	WPM Submittal (T-35 weeks prior to Rail Corridor Access for Disruptive Access)					
2	WPM Approval and Flagging Coordination (T-3 weeks prior to Rail Corridor Access)					
3	GO/NO-GO Meeting (T-1 week prior to Rail Corridor Access)					

Summary of Access Planning Timelines and Deadlines are outlined in Network Access Planning Standard. Dates are displayed in Day / Month / Year format.

SECTION 1.3 – CORRIDOR ACCESS

Who is the Constructor for this work?	
Has Rail Corridor Access been requested for this work?	

SECTION 2 - STAKEHOLDER DISTRIBUTION AND REVIEW

SECTION 2.1 - REVIEW LOG

THE COMPLETION OF THIS SECTION IS MANDATORY.

This section is to be completed by the Project Delivery Team. Please identify the status of the WPM Review.

Stage Description	Work Plan Revision No.	Submission Date	Name of Reviewer	Status (Reviewed, Review with Comments, Revise and Resubmit)
WPM Submittal				
WPM Received and distributed by Contract Administrator				
WPM Reviewed by Consultant				
WPM Reviewed by PDT				
WPM Reviewed by RCAC				
WPM Reviewed by MD or EAM				
WPM Review Finalized				

SECTION 2.2: STAKEHOLDERS

This section is to be completed by the Project Delivery Team. Please check stakeholders that are impacted by the work outlined in this WPM. Add any missing stakeholders where required.

Metrolinx Internal Stakeholders

	For INFO	For Review		For INFO	For Review
Project Delivery Team (PDT)			MD Track and Structures		
Engineering & Asset Management - Track			MD Signals & Communications		
Rail Corridor Access and Management (RCAC)			MD Bridges and Structures		
Rail Operations			Community Relations		
Service Planning			Transit Safety		
Engineering and Asset Management - Electrification			Station Operations		
Engineering and Asset Management - Signals			Customer Communications		
Engineering and Asset Management - Civil			Bus Operations		
Indigenous Relations Office			Sponsor Office		
Metrolinx Safety					

External Stakeholders (Railways)

	For INFO	For Review		For INFO	For Review
Canadian National Railway (CN)			VIA Rail		
Canadian Pacific Railway (CP)			Amtrak		

External Stakeholders (Other Transit, Cities, Townships, Governments, Public Interest)

	For INFO	For Review		For INFO	For Review

Regulators

	For INFO	For Review		For INFO	For Review
Ministry of Environment (MOE)			Transport Canada		
Toronto and Region Conservation (TRCA)					

Public Services

	For INFO	For Review		For INFO	For Review
Fire Department			Schools		
Emergency Medical Services (EMS)			Police Department		

External Stakeholders (Utility Companies - Crossings or Parallel to track within WPM limits)

	For INFO	For Review		For INFO	For Review
CN Fibre Optic			CP Fibre Optic		
Hydro			Bell		
TransCanada (Pipelines)			COGECO		
Enbridge			Rogers		
Water Lines			Storm Sewer Lines		
Sanitation Sewer Lines					

SECTION 2.3: COORDINATION WITH ADJACENT WORKS

Please identify and list any adjacent works that this work will need to coordinate with.

Adjacent Works

	For INFO	For Review		For INFO	For Review

SECTION 3: MAIN CONTENT**SECTION 3.1 - STAKEHOLDER CONSIDERATIONS**

Construction work on Metrolinx / GO Property can impact services, operations and the public. The Contractor shall ensure that their work will not impact operations or put public safety at risk. In relation to the tasks, all mitigating measures to eliminate or reduce operational and public impacts shall be described here. Risks to operations and public shall be identified in detail and evaluated in Section 6 Risk Assessment (RA) and Site Safety. The Contractor shall allocate enough time to clean up site after completion of work, to make site safe for operations and the public.

Service and Operational Impact**Surrounding Community Impact**

Describe any impact the work can impose on the community in the surrounding area (such as noise, dust, traffic control). Inform if special signage for the operation will be posted where and which kind, who will provide the signage, etc. Direct all communications with the public through Metrolinx PDT.

Roadway and Private Property Impact

Describe any traffic control, road closures and private property encroachments that are required for the work. List all permits required for the work and confirm if they have been obtained. A Traffic Plan shall be appended, and identified in Section 5 Attachments and Personnel List.

SECTION 3.2 - SCOPE OF WORK

Please provide a description of the work to be completed, including all objectives that are to be accomplished. Please include any multi-disciplinary involvement.

SECTION 3.3 - DETAILED TASK DESCRIPTION (Gantt Chart to be Appended)
Provide a detailed description of the work, including pre-work and post-work activities, in a chronological order to be performed.

Task No.	Activity/Task	Task Location and Detailed Task Description	Start Date	Start Time	Duration
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

SECTION 3.6 - SCHEDULE RISK DESCRIPTION

List the milestone tasks to be completed before the next task can be started.

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List the outside influences, including Weather and General Public constraints (ex. Road Closures, Public Events, etc.)

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Can the work be stopped halfway through?

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Can the work be extended without impacting operations?

--

Provide a contingency plan below in case this work extends beyond the allotted time and beyond the track protection arrangements. Describe the anticipated overrun scenario and provide relevant contact information to communicate the block overrun and when the decision will be made to escalate.

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SECTION 3.7 - CONTINGENCY PLAN

Please identify and list additional resources that can be utilized if required

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Please identify the amount of hours allocated to contingency:

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Please provide the contingency plan for each milestone:

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SECTION 3.8 - POINT OF NO RETURN DECISION (GO OR NO GO)

Recovery Plan to be appended with the WPM.

Critical Milestone	Meeting Location, Time and Date	Rail Operations Notified	Stakeholders Notified

Point of No Return	<i>Describe when the point of no return is reached in the schedule. Provide a date and time for the point of no return.</i>
How is the Decision Made	<i>Describe in detail exactly who makes the call and when it is to happen. Who from the contractor is allowed to make the call? Who from the stakeholders should be consulted?</i>
What Influences this Decision?	<i>Describe the influences that trigger the point of no return. (Examples: Weather, delay in pre-work, service disruption, funding, schedule, etc.)</i>

SECTION 3.9 - TRACK BLOCK

Identify Tracks Required for Track Block. Please see the accompanying document for the WPM which describes each block type.

Type of Track Block	Partial Block	Split Block	Total Block
Multi-Track		Single Track	
List the tracks required:		Other Railroads?	
From Mileage		To Mileage	
Length of time required to complete work:			
Length of time available to complete the work:			
If time required is greater than time available, can the work be completed in stages?			

SECTION 3.10 - TRACK PROTECTION

Identify which company will provide flagging from the list below and Identify as Track Flagging and / or Signals Support

Track Protection	Track or Signals		Track Protection	Track or Signals	
A&B Rail	Track Flagging	Signals Support	Siemens	Track Flagging	Signals Support
TTR		Signals Support	CNR	Track Flagging	Signals Support
PNR	Track Flagging	Signals Support	CPR	Track Flagging	Signals Support
	Track Flagging	Signals Support		Track Flagging	Signals Support

When will the flagman be on site?		Is flagging continuous?	
When will the flagman leave site?		Is Local Control Required?	

SECTION 3.13- POST-WORK

<i>Identify any work that must be completed after the track block.</i>			
	Required?	Timeline to Complete:	Separate WPM Required?
Field Welding			
Destressing			
Follow-Up Surfacing			
Installation of Temporary Crossing			
Restore Public Road Crossing Surface			
Temporary Slow Order (Rule 43)			
General Bulletin Order (GBO)			
Test Train			
Train Observation			
Crossing Reactivation			
Demobilization of Equipment			
Clean-up			

SECTION 3.14 - UTILITY IMPACT

Are utility locates required for this work?			
If required; identify if utility locates are current and complete.			
List any Utility companies that are impacted by the work. Copies of locates to be attached separately and identified in Section 5 Attachments. Third party locates must be obtained in addition to One Call, specifically railroad utilities locates when working in the Metrolinx ROW.			
	Impacted?	Protection	Date in which the Locate was Conducted
Telecoms - Bell 360 (Fibre)			
Telecoms - Telephone			
Telecoms - Cable TV			
Natural Gas			
Hydro			
TransCanada			
Water Lines			
Sanitary Sewer Lines			
Storm Sewer Lines			
CN/CP Utilities			
CN/CP Signals			
CN/CP Fibre Optic			
Metrolinx Utilities			
Metrolinx Signals			

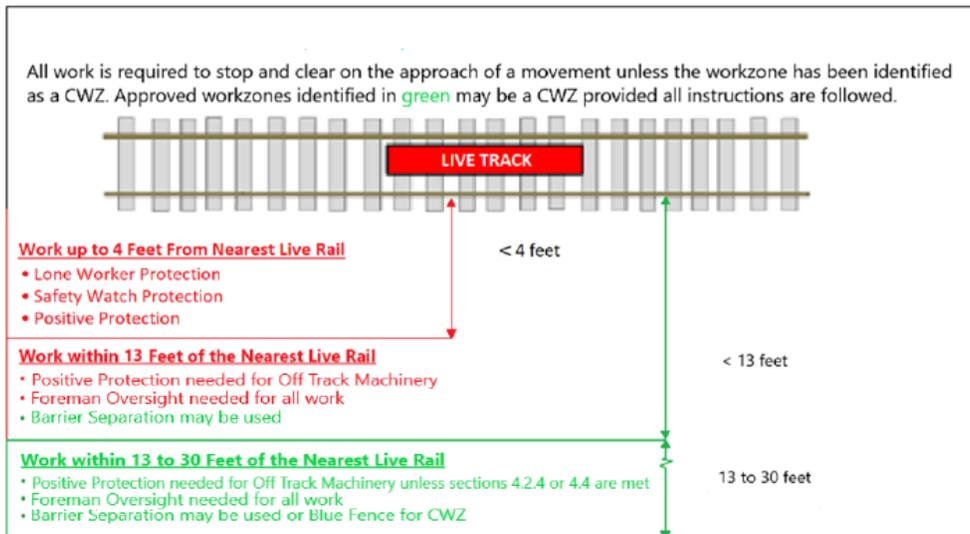
SECTION 3.15 - Horizontal and Vertical Clearances

Contractor to explain how they considered clearances and will meet clearance requirements for clearance between track centrelines (GTTS Section 19.3 Track Clearances and Centres), clearance to platforms (GTTS Section 23 Platforms), and clearance to wayside infrastructure (GTTS Appendix X GO Transit Heavy Rail Clearance Envelopes). Contractor to include a sketch as an attachment for each subject mentioned above.

SECTION 3.16 - Clearances for Operating and Parked Equipment

Contractor to explain how they considered clearances for equipment and will meet clearance requirements for operating equipment (Metrolinx General Engineering Instructions) and parked equipment (GTTS 19.1. Minimum Construction Standards).

Figure: Working within the Rail Corridor Chart (5.1 GEI)





SECTION 5.5 - EXTERNAL CONTACT LIST (add all required personnel)

Role	Name	Phone Number
Contract Administrator		
Contract Administrator		

SECTION 5.6 - METROLINX CONTACT LIST (add all required personnel)

Role	Name	Phone Number
Metrolinx Coordinator (PDT)		
Metrolinx Project Manager (PDT)		
Engineering and Asset Management - Track		
Maintenance Delivery - Track		
Bridges & Structures		
Signals & Communications		

SECTION 5.7 - EMERGENCY CONTACT LIST

Role	Name (If Applicable)	Phone Number
Nearest Hospital		
Emergency Services		911
Metrolinx Network Operations Centre (NOC)		416-681-5309 (Customer Journey Control Room)
CN Police / Railway		800-465-9239 (CN Railway) & 800-661-3963 (CN Police)
CP Police / Railway		800-716-9132
Customer Protective Services (CPS)		877-297-0642
Ontario OneCall		800-400-2255
Emergency Spill Response		

SECTION 6 - RISK ASSESSMENT (RA) AND SITE SAFETY

6.1 – Required CMO Permits

Construction Management Office (CMO) Permits are applicable when Metrolinx is acting as the Constructor. Check off all activities for which CMO work permits are required.

	Activities	Regulatory Reference/ Additional Info
	Hot Work	O. Reg. 632/05, s.2
	Work Requiring Fall Protection	O. Reg. 297/13 <i>Note: Provide site specific fall rescue plan.</i>
	Confined Space Entry	O. Reg. 632/05 Proof of Confined Space Training required. <i>Note: Provide site specific CSE rescue plan.</i>
	Trenching or Excavation	(1) Proof of Utility Locates (30 day validity) required. (1) Proof of MoL Trench Notice (Form 0070) may be required. CMO Checklist - Trenching or Excavation required.
	Crane or Hoist Operations	O. Reg. 213/91, s.150 Proof of Crane/ Hoisting Training required.
	Tunnels, Shafts, Caissons or Cofferdam	O. Reg. 213/91, s.245 Proof of MoL Notification (Form 0077) required.
	Designated Substances	O. Reg. 278/05, s.11 Proof of MoL Notification for Asbestos Removal Work (0072) may be required.
	Site Visitor	Any visitor(s) access must be approved by CMO via the Site Visitor Permit.
	Shut Down (HVAC, electric power, fire alarm & sensors, fire suppression)	Permit required for all operations affecting building occupants and fire safety.
	Electrical Work (live or not)	Permit required for work on or around equipment (live or not).

6.2 – Emergency Rescue Plans

*Provide detailed rescue procedures in the event of fall from **working at heights** (O. Reg. 213/91); in the event where a worker needs to be extracted from a **confined space** (O. Reg. 632/05) and; where **trench work** is deeper than 1.2 meters (O. Reg. 213/91). Provide details in the available space below.*

SECTION 6.3 - Operational Safety Risk Matrix

Operational Safety Risk Matrix

Likelihood				
Very Low	Low	Moderate	High	Very High
Very unlikely - all viable controls in place, no major contributing factors identified, but risk occurrence cannot be ruled out	Less likely to occur - strong control in place with a few contributing factors exist	May or may not occur - some controls in place and some contributing factors exist	More likely than not - limited controls in place and substantial contributing factors exist	Highly likely - a few weak controls in place and several contributing factors

	Policy, Process and Procedure	Finance	Security	Public Confidence	Environment	Equipment	People	Operation		Likelihood				
										1	2	3	4	5
Impact	Very High Safety system or process affecting multiple departments is not implemented or is wholly ineffective. Non-conformance(s) with grave impact on operational safety. Procedures, processes, and resources do not exist, impact to Enterprise.	Severe Equipment or Infrastructure damages exceeding \$10,000,000.	Security event, responding municipal resources, staff evacuated, area confined, with major impact within multiple stations/trains, multiple zones, and multiple lines.	Very few willing to ride train/bus. Issue attracts media, stakeholder and public attention exceeding up to 28 days. Senior government decides to intervene.	Severe Catastrophic Event, with offsite impact to people and environment and previous regulatory exposure. Clean-up costs >\$5,000,000.	Unable to operate, irreversible damage to rail equipment or infrastructure Train/Bus operation in a non-standard, non-roadworthy, or unsafe condition related to a critical system or component.	Extreme workload on staff. Risk of catastrophic injury such as fatality. Accident with fatalities.	Decreased operating efficiencies impacting service levels within multiple stations/trains, multiple zones, and multiple lines. Delays of 24+ Hours. Multiple major regulatory non-compliances, removal of operating certificate.	5	5 Medium	10 Medium	15 Elevated	20 High	25 High
	High Safety system, process or procedure does not reflect current practice or is not adhered to; failure is evident. Non-conformance(s) with significant impact on operational safety. Procedures and processes do not exist within departments however resources available resulting in impact to multiple divisions.	Heavy Equipment or Infrastructure damages between \$1,000,000 & \$10,000,000.	Security event, responding municipal resources, staff evacuated, area confined, with major impact within multiple stations/trains/buses, within multiple routes, within a single line.	Shaken to the point that significant numbers refuse to take the train/bus. Issue attracts media, stakeholder and/or public attention exceeding 3 weeks. Control over the issue is taken out of our hands as Minister intervenes.	Substantial Major Event that will require up to a year to clean up, with regulatory exposure. Clean-up costs \$750,000 to <\$5,000,000.	Technical delay resulting in substantial costs and long delays or grounding of specific train/bus type. Substantial damage to railway equipment or infrastructure.	Excessive workload of staff. Severe injuries to disability. Accident or incident with serious injuries.	Decreased operating efficiencies impacting service levels within multiple stations/trains/buses, within multiple routes, within a single line. Delays of 12 to 24 Hours. Major regulatory non-compliance, requires immediate corrective action.	4	4 Low	8 Medium	12 Elevated	16 Elevated	20 High
	Moderate Safety process or procedure does not reflect current practice or is not adhered to in most cases. Non-conformance(s) with moderate impact on operational safety. Multi departmental procedures and processes exist within departments resulting in impact to multiple departments.	Significant Equipment or Infrastructure damages between \$100,000 & \$1,000,000	Security event, responded to by staff and municipal resources, area confined, with major impact to passenger routing at a localized location/station.	Public confidence significantly lowered. High profile media coverage and possible Minister's action. Issue attracts media, stakeholder and/or public attention up to 14 days.	Significant Event that will require up to a month to clean up with potential regulatory exposure. Clean-up costs \$100,000 to <\$750,000.	Technical delay resulting in relatively substantial costs or requiring grounding of train/bus. Returning equipment to service in an unsafe condition.	Significant increase on staff workload. Lost time injuries or passenger injuries. Incident with significant injury.	Decreased operating efficiencies impacting service levels within multiple stations/trains/buses, within a single route, line or set of stations/trains/buses. Delays of 4 to 12 Hours. Moderate regulatory non-compliance, corrective action within 30 days.	3	3 Low	6 Medium	9 Medium	12 Elevated	15 Elevated
	Low Safety process or procedure is not adhered to in some cases. Non-conformance(s) with minor impact on safety. Localized departmental procedure and process exist within department however resources from other departments are required.	Noticeable Equipment or Infrastructure damages losses between \$10,000 & \$100,000.	Security event, responded to by staff locally, specific area confined, with minor impact to passenger routing in station.	Public confidence may be lowered, but public still find situation acceptable. Issue attracts media and/or stakeholder attention up to 5 days.	Minimal Event that could be cleaned up in half a day, guidance or policy exposure. Clean-up costs \$10,000 to <\$100,000.	Technical delay resulting in relatively minimal costs or temporary grounding of train/bus.	Slight increase on staff workload. First aid injury, no disability or lost time. Incident with minor injury.	Decreased operating efficiencies impacting service levels within or to a single station/train/bus. Delays of 1 to 4 Hours. Minor regulatory non-compliance, corrective action within 90 days.	2	2 Low	4 Low	6 Medium	8 Medium	10 Medium
	Very Low Policy, process or procedure is documented and circulated but requires revision. Localized departmental procedure, process and resources exist within department resulting in negligible impact to other operating departments.	Slight Equipment or Infrastructure damage losses less than \$10,000.	Security event with no impact to passengers, responded to by staff and no issue apparent to train/bus/station occupants.	No loss of public confidence or media attention. Issue attracts media and/or stakeholder attention within a 24-48 hour period.	Minor No effect or legal exposure. Clean-up costs \$1,000 to \$5000.	No damage or minor technical delay with no immediate cost. Train/Bus defect with little or no impact on safety.	No increase to staff workload. No concerns for employee injury. No concerns for customer injury or risk of minor injury.	Decreased operating efficiencies with marginal service impact to a singular revenue trip. Delays of 30 minutes to 1 Hour. Potential for regulatory non-compliance.	1	1 Low	2 Low	3 Low	4 Low	5 Medium

SECTION 6.4 - Hazard Table

Based on the Detailed Task Description stated in Section 3.3, populate the table below by listing the associated hazards of each task. Then determine the risk rating by evaluating the severity and likelihood of the hazard which poses a risk and/or consequences to policy, process, procedure, finance, security, public confidence, environment, equipment, people, and operation. Please review the MXSD-SSA-MAT-0007-Operational Safety Risk Assessment Worksheet and Matrix for complete details for developing the Hazard Table. Complete Section 6.5 with the sign-off of all contributors to the Hazard Table.

Risk Scenario					Risk Assessment			Manage the Risk			Residual Risk	Comments and Notes		
Task No.	Activity/Task	Hazard	Cause	Consequence/ Risk	Impact	Likelihood	Risk Index	Mitigating Solutions and Risk Controls			Impact	Likelihood	Risk Index	Existing Controls and Points of Discussion Residual Risk Tolerance Notes

SECTION 6.5 - Risk Assessment Sign-off

The development of this Risk Matrix shall be produced by individuals with knowledge, experience and understanding of the work and associated hazards. This would include but not limited to the General Contractor, H&S Representatives, Sub-contractors etc. The name of the individuals who have contributed to the RA shall be listed below.

Hazard Table developed by (Name / Title):	Signature:	
Hazard Table developed by (Name / Title):	Signature:	
Hazard Table developed by (Name / Title):	Signature:	