	ROADS																		
	Time of Monitorine	Road	Road Cas	Sandrook	Maintenance Maintenance	Anifecture spec	Maintenante Spet	ksestreet	ksestent Hetory	Inspection Tue	e Specthsetuature	Carper Record	Q Nues	nert street	n score in the state of the sta	Artitle Application	Delte Application	Current meath	nestrective treet
10-16	2021-01-13 10:04	25-A-@-00035- Hudson Bay Mountain Road	В	Gravel Portion	3. Winter Maintenance	3.02-Snow and Ice Bonding Prevention and Control	3.02.2-3 Restore Traction immediately outside Event	1	MEETS_SPEC	Present State	Ice bladed. Abbrasives present. Traction fair.	COMPACT_SNOW,COMP ACT_ICE		0	MEDIUM RATE HILLS/CORNERS		NOT_APPLICABLE	Partly Cloudy	
15	2021-01-12 13:04	25-A-@-00035- Hudson Bay Mountain Road	В	Above Skyline Rd	3. Winter Maintenance	3.01-Highway Snow Removal	3.01.2-1 Remove Winter Accumulations	MEETS_SPEC	MEETS_SPEC	Present State	total accumulations of 3-4cm on road. Above Skyline Rd, narrowing, requires gradingbor potential work with a snow cat to move banks back, expanding rkad and snow storage. Some signs not visible (warning signs) for curve. ensure clear and visible.	COMPACT_SNOW,COMP ACT_ICE,SLIPPERY_SECTI ONS,WINTER_DRIVING_ CONDITIONS	1	4	MEDIUM RATE HILLS/CORNERS	NOT_APPLICABLE	NOT_APPLICABLE	Cloudy	
15	2021-01-21 7:20	25-A-@-00035- Hudson Bay Mountain Road	В	Upper reaches above Skyline Rd.	3. Winter Maintenance	3.01-Highway Snow Removal	3.01.2-1 Remove Winter Accumulations	Meets Specification	MEETS_SPEC	Present State	No accumulations on road. Traction fair. Road width narrowly, borderline unsafe. Abrasive present, medium rate.	COMPACT_SNOW	11	0	MEDIUM RATE ALL	NOT_APPLICABLE	NOT_APPLICABLE	Clear	
15	2021-01-25 8:54	25-A-@-00035- Hudson Bay Mountain Road	R	above skyline	3. Winter Maintenance	3.01-Highway Snow Removal	3.01.2-1 Remove Winter Accumulations	Does Not Meet	DOES NOT MEET SPEC	In Process	Road widening underway with snow cat and grader. current accumulations being pushed across rosd making road width narrower than typical two lanes. opposing traffic not possible in some locations.	COMPACT SNOW	7	20	MEDIUM RATE HILLS/CORNERS	NOT APPLICABLE	NOT EVIDENT	Partly Cloudy	
15	2021-02-04 14:14	25-A-@-00035- Hudson Bay Mountain Road	В	Entire length	3. Winter	3.02-Snow and Ice Bonding Prevention and Control	3.02.2-6 Restore Traction to Compact Lanes	Meets	MEETS_SPEC		Minimal accumulations atop compact snow/ice surface. Traction fair. Low rate abrasives present	COMPACT_SNOW,COMP ACT_ICE,WINTER_DRIVI NG_CONDITIONS	1		LOW RATE ALL		NOT_APPLICABLE	, ,	IN PROCESS
10-16	2021-02-07 10:15	25-A-@-00035- Hudson Bay Mountain Road	В	Entire length	3. Winter Maintenance	3.01-Highway Snow Removal	3.01.2-1 Remove Winter Accumulations	Meets Specification	MEETS_SPEC	Present State	Both lanes plowed full width. Met plow truck heading back to town plowing back edges.	COMPACT_SNOW,COMP ACT_ICE		0	LOW RATE HILLS/CORNERS	NOT_APPLICABLE	NOT_APPLICABLE	Partly Cloudy	END EVENT
15	2021-02-10 12:43	25-A-@-00035- Hudson Bay Mountain Road 25-A-@-00035-	В	Entire length	3. Winter Maintenance	3.02-Snow and Ice Bonding Prevention and Control 3.02-Snow and Ice	3.02.2-6 Restore Traction to Compact Lanes 3.02.2-6 Restore	1	MEETS_SPEC	Present State	Traction ok. little abrasive present, cold compact not holding abrasives.	COMPACT_SNOW	-20	2	LOW RATE HILLS/CORNERS	NOT_APPLICABLE	NOT_APPLICABLE	Clear	
10-16	2021-02-13 9:28	Hudson Bay Mountain Road 25-A-@-00035-	В	Dahlie to ski lodge	3. Winter Maintenance	Bonding Prevention and Control 3.02-Snow and Ice	Traction to Compact Lanes 3.02.2-6 Restore	1	MEETS_SPEC	Present State	Abrasive present hills, corners and intersections. Traction good	COMPACT_SNOW,COMP ACT_ICE		0	HIGH RATE HILLS/CORNERS	NOT_APPLICABLE	NOT_APPLICABLE	Partly Cloudy	
15	2021-02-17 12:14	Hudson Bay Mountain Road 25-A-@-00035-	В	Alpine way to pavement	3. Winter Maintenance	Bonding Prevention and Control	Lanes	Specification	MEETS_SPEC	In Process	Abrasive present, recently graded.	COMPACT_SNOW	6	0	LOW RATE ALL	NOT_APPLICABLE	NOT_APPLICABLE	Clear	
10-16	2021-02-28 14:53	Hudson Bay Mountain Road	D	After CN overhead	5. Traffic Maintenance	5.01-Sign System Maintenance	5.01.2-2 Maintain Sign Systems	Meets Specification	MEETS_SPEC	Present State	Load restrictions effective 11am today. Signed appropriately for 70% 11 am to 11pm	BARE_AND_WET	4					Partly Cloudy	

NON-CONFORMANCE REPORT



Ministry of Transportation and Infrastructure

NCR #: SA25-26

SECTION 1: TRACKING DETAILS

Service Area: SA25 - Bulkley Nass

Name of Contractor: Dawson Road Maintenance

Date: March 23, 2021 Prepared by: Jeff McKay

SECTION 2: DESCRIPTION OF NON-CONFORMANCE

Dawson Road Maintenance did not identify or respond, within required response times, to Slippery conditions as they developed during a Weather Event, and immediately outside of the Weather Event on March 21st, 2021. This resulted in a temporary closure of Hudson Bay Mountain Road, required to re-establish safe conditions for the Travelling Public.

As per PM3.02.2-4, the subject section located between 14-18 kilometers on Hudson Bay Mountain Road can be identified as a grade that exceeds 5%, a curve with warning signage, curves on a hill and an incident prone location. DRM did not proactively identify or rectify the issue during their morning maintenance activities and did not respond within the required timeframe once notified of deteriorating/Slippery road surface conditions. This NCR is to accompany **SA25 Yr2 WF21**.

Performance Measures reviewed included:

PM3.02.2-3	Restore traction on Travelled Lanes immediately, when Slippery
	conditions occur outside of a Weather Event

PM3.02.2-4 Restore traction on Travelled Lanes with Slippery conditions, once the Weather Event commences as follows:

D.	rformance Criteria	Response by Highway Class		way Classi	sification	
re	normance Criteria	A	В	С	D	
a)	Grades exceeding 5 percent,	3.	A		di-	
b)	Curves with regulatory or warning speeds under 60 km per hour					
c)	Curves on a hill					
d)	School zones	60 min	90 min	2h	4 h	
e)	Intersections	60 min	90 min	211	4 n	
f)	Black ice prone locations					
g)	Incident prone locations					
h)	Shady areas					
i)	All other locations	2 h	3 h	4 h	6 h	

SECTION 3: REQUIRED CORRECTION

Does Contractor have to re-do/do the work? Select N/A if non-conformance is not curable or opportunity to rectify has passed.

YES		Deadline for correction:
NO	X	MoTI accepts the non-conforming product/service Reason: Works already performed to rectify the non-conformance

NON-CONFORMANCE REPORT



Ministry of Transportation and Infrastructure

N/A Reason:	
Signatures upon completion of required correction:	
Contractor representative confirms correction complete.	Contractor Signature:
Date accepted by MoTI:	MoTI Representative:
SECTION 4: ROOT CAUSE ANALYSIS & CORRE	CTIVE ACTION PLAN
4A) Deadline for submission of corrective action plan to M	OT: April 6, 2021
4B) Root Cause Analysis: (Why did the non-conformance o	ccur?)
4C) Corrective Action Plan: (How will the contractor prev	ent re-occurrence of the non-conformance?)
Signatures:	
Contractor representative commits to implementing the contractor representative commits and contractor representative commits are contractor of the Non-conformation of the contractor representative contra	·
Name: Cont	ractor Signature:
MoTI representative accepts the corrective action plan. A responsibility to perform the services in accordance with	
Name:	MoTI Signature:
Date:	
INSTRUCTIONS: SECTIONS 1, 2, 3 & 4A) TO BE COMPLETED BY MOTI	

Distribution: Original to District; Copy to Contractor

SECTIONS 4B) & 4C) TO BE COMPLETED BY THE CONTRACTOR

PRESENT STATE



SECTION 1: AUDIT DETAILS

Audit Report #: SA25 Yr2 WF21

Service Area: SA25 - Bulk	kley Nass	Name of Contractor: Dawson Road Maintenance					
Audit Date: March 21, 2021		Date Discussed with MC: March 23, 2021					
Auditor:Jeff Mch	Kay	Jeff McKay					
Field Attendee Register: MC presence, but if present list atte	_(NOTE: field audit does not require endees)	Office Attendee Register:					
Name Jeff McKay	Position RAM	Name	Position				
Topic of Audit: Restore t	raction to Travelled Lanes	Location(s): Hudson Bay Mountain Road (5B)					
required response times i	dentified in PM3.02.2-4 during vent as per PM3.02.2-3. The re	ance failed to respond to Slipp the Weather Event and did no esponse time of 90 minutes du	t restore traction immediately				

Attachments (e.g. photos, monitoring records, public complaints, etc.): Photographs, WeatherNet weather forecast, RAM call records.

PM3.02.2-3 Restore traction on Travelled Lanes immediately, when Slippery conditions occur outside of a Weather Event.

PM3.02.2-4 Restore traction on Travelled Lanes with Slippery conditions, once the Weather Event commences as follows:

n-	f	Response by Highway Classifi		ication	
Per	formance Criteria	A	В	C 2h	D
a)	Grades exceeding 5 percent,	8			2.
b)	Curves with regulatory or warning speeds under 60 km per hour				
c)	Curves on a hill				
d)	School zones	60 min	90 min	26	4 h
e)	Intersections	ou min	90 min	211	4 n
f)	Black ice prone locations				
g)	Incident prone locations				
h)	Shady areas				
i)	All other locations	2 h	3 h	4 h	6 h

Note: The audit is based on a limited sampling of the operations. Although conformance with the relevant contractual requirement has been examined, other observations or non-conformances may exist.

PRESENT STATE



SECTION 2: QUESTIONS/ FINDINGS/ EVIDENCE - RECORDS REVIEWED

Question 1:

What is being assessed:

Site Name/Number & Highway:

- Hudson Bay Mountain Road
- 3.02.2-3 Restore traction to Travelled Lanes immediately when slippery conditions occur outside of a Weather Event.
- 3.02.2-4 Restore traction on Travelled Lanes with Slippery conditions, once the Weather Event commences.

Findings:

A weather event was forecast for Smithers & the Ski Hill by Dawson's WeatherNet forecasting service. This is illustrated in the above photograph, showing the forecasted snowfall for March 20th & 21st, 2021. Trace amounts of precipitation were anticipated at low elevations, with precipitation amounts increasing with elevation towards the Ski Hill for a total accumulation of approximately 10cm over a 36-hour period. This forecast does not capture the potential for wind transport of loose snow to cause drifting or solar effect to melt and refreeze the surface.

A review of the road at 09:15 found bare and wet conditions from the road's start to intersection with the McDonnell Lake FSR. Beyond this point, the road transitioned to a thin compact snow surface (appx. 1-2cm thick). Two-wheel drive vehicles were observed struggling to find traction on steep grades and corners. Traction was fair to poor, but navigable by most vehicles.

At 13:15, the RAM was alerted to deteriorating road conditions by Hudson Bay Mountain Resort (HBMR) management. Several MVI's were reported, caused by poor traction which resulted in loss of control and subsequent collisions. The RAM contacted Dawson's weekend call out staff at 13:22 requesting winter abrasives be applied. A truck was actioned to spread abrasive at 13:45, with an estimated arrival of 14:40.

The RAM arrived on scene at 15:17, and noted 14 vehicles stopped, stuck or involved in minor collisions. The road surface was very slippery, hard and icy. Very little abrasive was present. RCMP stopped traffic from the bottom of the switchback segment, and HBMR held traffic from proceeding down the mountain in the interest of public safety. No abrasives had been applied to the road. No emergency traffic control or DRM staff were present at the scene. Approximately 5cm of snow were noted on the road shoulders from the day's flurries. Flurries tapered at the road level by 15:00.

A subcontractor was hired to spread abrasives after DRM's vehicles were unavailable or not functioning. This truck reached the scene at 16:36. Traction was restored to the majority of the

Note: The audit is based on a limited sampling of the operations. Although conformance with the relevant contractual requirement has been examined, other observations or non-conformances may exist.

PRESENT STATE



road affected by Slippery conditions. The RCMP assisted in clearing the congested traffic and HBMR released the traffic being held at the end of the road.

DRM failed to respond to the Slippery conditions while the weather event was occurring, for which the required response time on the Class B road is 90 minutes. A total of 194 minutes elapsed from notification to response.

Evidence-Records Reviewed:

Dawson Road Maintenance – WeatherNet forecast March 20th-21st, 2021. Snowfall was identified, as well as a high potential for ice development and slippery conditions.

	Weather	Temp (C)	Snow Level (m)	Road Snow (cm)	F	I	S
Saturday	Mostly cloudy. A stray flurry or sprinkle possible.	2		0-Trace	Green	Yellow	Yellow
Saturday night	Cloudy. A few light snow showers or flurries.	-4		Trace-2	Green	Red	Red
Sunday	Mostly cloudy. Light snow showers and flurries decreasing and turning to rain late morning through afternoon.	2		Trace-2	Green	Green	Green

Smithers Ski Hill

	Weather	Temp (C)	Snow Level (m)	Road Snow (cm)	F	I	S
Saturday	Mostly cloudy. Flurries end early. A couple flurries possible after.	-4		0-1	Green	Red	Yellow
Saturday night	Cloudy. Occasional light snow showers.	-7		2-4	Green	Red	Red
Sunday	Mostly cloudy. Light snow showers and flurries decreasing.	-2		1-4	Green	Red	Red

Monitoring: Hudson Bay Mountain Road – 21/03/21

15:22 – Multiple vehicles stuck, stopped and involved in minor collisions. Road surface slick and icy, difficult to walk. Little abrasive present. RCMP on scene, traffic stopped at bottom and top of road.



Note: The audit is based on a limited sampling of the operations. Although conformance with the relevant contractual requirement has been examined, other observations or non-conformances may exist.

PRESENT STATE



15:23 – Compact snow surface, little abrasive present. Solar radiation was evident, warming surface before refreezing on colder road surface creating Slippery conditions.

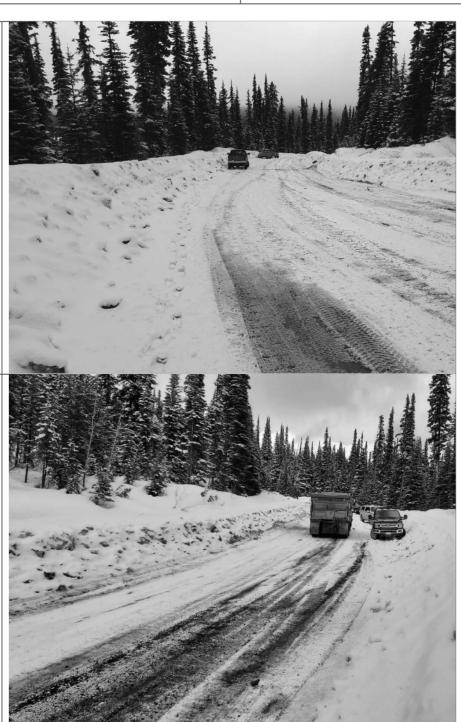


15:51 – Appx. 5cm of accumulated snow on shoulders. Some amount had been compacted by traffic into compact snow surface.

PRESENT STATE



15:54 – Slippery conditions extended down the road with at least five other vehicles stopped to await restoration of traction. Note how broken compact was melting with solar radiation, solid compact was glazed and icy.



16:36 – Arrival of hired truck to spread abrasives. Traction on this segment was restored, traffic cleared and traffic released by HBMR staff.

Note: The audit is based on a limited sampling of the operations. Although conformance with the relevant contractual requirement has been examined, other observations or non-conformances may exist.

PRESENT STATE



SECTION 3: ACTIONS TO BE COMPLETED / RE-DONE

Describe all actions to be completed and/or re-done by the contractor

- Monitor traction and deploy resources as traction quality diminishes within the required response time.
- Provide internal audit/review documentation, Corrective Action Plan and Root Cause Analysis to MoTI for review.

Date accepted by MOTI: $ \subseteq $	Click here to enter a date.	Initials:
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SECTION 4: NCR/OFI ISSUED

NCR #26 Restore Traction in Slippery conditions

Note: The audit is based on a limited sampling of the operations. Although conformance with the relevant contractual requirement has been examined, other observations or non-conformances may exist.

TASK



Audit Report #: SA25 Yr2 W04

SECTION 1: AUDIT DETAILS

Service Area: SA25 - Bulkley Nass Name of Contractor: Dawson Road Maintenance

Audit Date: March 15, 2021 Date Discussed with MC: March 18, 2021

Auditor: <u>Jeff McKay – Roads Area Manager</u>

Position

Quality Manager. Roads Foreman Road Area Manager

Attendee Register:

Name

Ted Whanstall, DRM Dallas Oben, DRM Jeff McKay, MoTI

Topic of Audit:

Quality Management - Winter Inspections: Smithers Jan 31/Feb 1 Storm, Carnaby Jan 31 Storm, and Meziadin Jan 29/30 Storm

Overall Summary of Findings:

Dawson was found to generally meet the inspection frequencies and WorkID (WID) processes described in the Quality Management System (QMS). The geographic spread of Inspections across the service area was not found to be well distributed. There was an absence of Present State inspections, which must be completed by the Quality Manager. In Process and End Process were completed at or above the required frequency. The QM130 forms generated by ProntoForms included the pertinent information, though at times can be confusing with fields/specs not relevant the inspection.

SECTION 2: QUESTIONS/ FINDINGS/ EVIDENCE - RECORDS REVIEWED

Question 1: Are winter inspections being completed as defined within the maintenance contractors QMS – QM-17.5 Types of Inspections and Frequency?

What is being assessed: Compliance with QMS

Present State Inspections:

The areas to be inspected are sections picked randomly by the QM and are to be completed throughout the month. The QM completes 10 present state inspections every month, Items noted that do not meet MoTI spec will be WID-ed or scheduled for repair and any safety issues will be dealt with promptly.

The Present State inspections completed by the road supervisor follow the inspection schedule designed by the Quality Manager in order to fulfill the MoTI inspection specification 7.03.

Figure 1: Inspection frequencies for Present State Inspections, QM-17.5

Note: The audit is based on a limited sampling of the operations. Although conformance with the relevant contractual requirement has been examined, other observations or non-conformances may exist.

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In Process Inspections:

Senior/Road Supervisors/Bridge Supervisors or their qualified designates who are responsible for Quality Control are required to conduct 10 in process inspections per month for the contract area. For larger projects such as paving and seal coating we will be inspecting frequently. These inspections will cover a variety of activities and will be recorded on form #s QMS 110, 130, 153, 156, 160, 165, 168, 208, and submitted to the QM for review. If any improper work procedures are noted at time of inspection the job will be stopped and the concerns rectified immediately.

End Product Inspections:

Senior/Road Supervisors/Bridge Supervisors or their qualified designate who are responsible for Quality Control are required to conduct 12 end product inspections per month for the contract area, while performing maintenance activities. These inspections will cover a variety of activities and will be recorded on form #s QMS 110, 130,153,156,160,165,168, and 208 and submitted to the QM for review. End products that do not meet MoTI spec will be rectified promptly.

Figure 2: Inspection frequencies for In Process/End Product Inspections, QM-17.5

	NII I	$I \land D \setminus$	/ 2021
JA	NU	ARI	ZUZI

		OCHOCK	_U_		
	Smithers	Carnaby	Meziadin/Stewart	Total	QMS Req.
IN PROCESS	4	3	3	10	10
END PROCESS	13	3	2	18	12
PRESENT STATE	8	6	4	18	10
		FEBRUARY	2021		
	Smithers	Carnaby	Meziadin/Stewart	Total	QMS Req.
IN PROCESS	22	0	3	25	10
END PROCESS	40	0	0	40	12
PRESENT STATE	0	0	0	0	10
		MARCH 2021	(1-15)		
	Smithers	Carnaby	Meziadin/Stewart	Total	QMS Req.
IN PROCESS	1	0	4	5	10
END PROCESS	7	0	4	11	12
PRESENT STATE	0	0	0	0	10

Findings:

Dawson has transitioned to a new software to generate the QMS 130 Forms for winter inspections. Dawson generally achieved the inspection frequencies, performing an adequate number of In Process and End Process inspections in January and February. These were performed by the Roads Superintendents and Foremen and reviewed segments of road for typical winter maintenance activities (removal of Winter Accumulations and restore traction to Compact Lanes). Typically, the forms provided photos and comments identifying issues where the conditions did not meet specifications.

There is a lapse in the number of Present State inspection being performed. These inspections must be performed by the Quality Manager. Dawson provided Present State inspections which were completed regularly for the Rest Areas by workers, but they do not meet the requirements stated in the QMS for Present State inspections (completed by Quality Manager).

The distribution of inspections is not spread evenly across the yards, with very few inspections completed in the Carnaby yard.

Note: The audit is based on a limited sampling of the operations. Although conformance with the relevant contractual requirement has been examined, other observations or non-conformances may exist.

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Evidence-Records Reviewed:

The following electronic ProntoForms Winter Highway Inspections (QMS 130 Forms) were provided including fields for the following information: date, time, start location, weather, activity, accumulation, surface condition, in process/end-product, response, comments, photos. The Ministry requested all inspections spanning the date range of January 1st – March 15th, 2021.

	20210210-18174390474 - Owens Road (25)
20210201-18173287786 - Babine Lake Road (491)	20210210-18174390477 - Rte 16 WB - Yellowhead (16W)
20210105-18169577494 - Rte 16 EB - Yellowhead (16)	20210211-18174421872 - Telkwa High Road (107)
20210105-18169577500 - Tatlow Road (90)	20210211-18174425009 - McCabe Road (61)
20210105-18169587481 - Rte 16 EB - Yellowhead (16)	20210211-18174425042 - Viewmount Road (383)
20210106-18169673830 - Rte 16 EB - Yellowhead (16)	20210212-18174631001 - Willow Road (407)
20210106-18169813841 - Nouch Road (386)	20210212-18174709034 - Gardiner Road (242)
20210106-18169813938 - Dawsons Lane (567)	20210212-18174709070 - Freeland Avenue (325)
20210106-18169816304 - Rte 16 WB - Yellowhead (16W)	20210212-18174710550 - Pidherny Road (403)
20210106-18169820081 - Kitseguecla Loop Road (388)	20210212-18174710596 - Hudson Bay Mountain Road (35)
20210107-18169830436 - Kispiox Valley Road (49)	20210213-18174710940 - Lake Kathlyn Road (104)
20210118-18171484929 - Tintina Road (488)	20210213-18174710985 - Glacier Gulch Road (103)
20210108-18169978000 - Rte 16 EB WB - Yellowhead (16)	20210213-18174742999 - Rosenthal Road (70)
20210118-18171487318 - Babine Lake Road (491)	20210213-18174774678 - Malkow Road (122)
20210108-18169977850 - Hudson Bay Mountain Road (35)	20210213-18174775393 - Millar Road (8)
20210118-18171484927 - Rte 37 NB_SB - Cassiar Highway	20210213-18174775501 - Snake Road (19)
(37)	20210213-18174775826 - Telkwa High Road (107)
20210112-18170534897 - Rte 16 EB_WB - Yellowhead (16)	20210213-18174775841 - Rte 16 WB - Yellowhead (16W)
20210118-18171484926 - Rte 16 EB_WB - Yellowhead (16)	20210215-18175005713 - Hudson Bay Mountain Road (35)
20210118-18171484933 - Rte 16 EB_WB - Yellowhead (16)	20210215-18175005719 - Seymour Lake Road (65)
20210118-18171484930 - Meziadin Lake Crescent (438)	20210215-18175044217 - Rte 16 EB - Yellowhead (16)
20210120-18171685377 - Woodmere Road (476)	20210215-18175044477 - Rte 16 EB - Yellowhead (16)
20210121-18171991237 - Six Mile Road (36)	20210217-18175367854 - Rte 16 EB - Yellowhead (16)
20210129-18172995386 - Rte 37 NB_SB - Cassiar Highway	20210217-18175367856 - Raceway Road (297)
(37)	20210220-18175845081 - Billeter Road (118)
20210201-18173318944 - Aveling Coalmine Road (484)	20210220-18175845087 - Rte 16 EB - Yellowhead (16)
20210201-18173326107 - Cottonwood Road (93)	20210222-18176061757 - Morden Road (457)
20210201-18173326320 - Telkwa Coalmine Road (485)	20210223-18176196779 - Rte 16 EB - Yellowhead (16)
20210201-18173334521 - Jackpine Road (426)	20210225-18176523215 - Viewmount Road (383)
20210201-18173340042 - Quick Station Road (462)	20210225-18176523217 - Alpine Way (563)
20210201-18173340135 - Lawson Road (477)	20210225-18176523220 - Alpine Way (563)
20210201-18173340329 - Quick East Road (464)	20210303-18177351333 - Rte 37 EB_WB - Cassiar Highway
20210201-18173340400 - Quick School Road (454)	(37)
20210202-18173340864 - Rte 16 EB_WB - Yellowhead (16)	20210303-18177351545 - Rte 37A EB_WB - Glacier Highway
20210202-18173415099 - Rte 16 EB_WB - Yellowhead (16)	(37A)
20210202-18173415911 - Rte 16 WB - Yellowhead (16W)	20210304-18177415143 - Kroeker Road (188)
20210202-18173419008 - Rte 16 EB_WB - Yellowhead (16)	20210304-18177415147 - Rte 16 EB - Yellowhead (16)
20210203-18173563898 - Rte 16 EB_WB - Yellowhead (16)	20210306-18177672052 - Babine Lake Road (491)
20210206-18173997851 - Rte 37 NB_SB - Cassiar Highway	20210306-18177672054 - St Anne Road (380)
(37)	20210310-18178087353 - Owens Road (25)
20210208-18174091787 - Rte 16 WB - Yellowhead (16W)	20210312-18178376267 - Babine Lake Road (491)
20210208-18174160976 - Babine Lake Road (491)	20210313-18178502895 - Rte 37 EB_WB - Cassiar Highway
20210208-18174164069 - Rte 16 WB - Yellowhead (16W)	(37)
20210208-18174164074 - Van Horn Frontage Road (324)	20210313-18178502949 - Rte 37A EB_WB - Glacier Highway
20210210-18174390471 - Gelley Road (391)	(37A)
	20210314-18178533132 - Rosenthal Road (70)
	20210314-18178533133 - Rte 16 EB - Yellowhead (16)

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Question 2: Were deficiencies noted in the inspections used to generate WorkID's as stated in the QMS?

QM-17.5 Types of Inspection and Frequency

QM-17.5.1 Inspections and Frequency

Present State Annual Inspections - Highways:

Annual inspections of the roads (culverts and signs) are conducted in each supervisor area in accordance to MoTI Maintenance Specifications 7.03 by Road Supervisor or designate to identify deficiencies. An inspection schedule is provided by the QM ensuring that all required road featured are inspected every year. Items found not to standard or missing are entered into the WID database to be

Figure 3: Procedure outlining generation of corrective actions based upon Inspections.

What is being assessed: Compliance with QMS

Findings: Dawson was found to be in compliance with the process outlined in their QMS, when inspections are performed, they were found to generate WorkIDs (WID).

Dawson provided six examples of instances where inspections had identified deficiencies, resulting in the creation of a WorkID and actioned resolution to the deficiency. Some inspections were prompted by a PCR indicating an issue. Typically, the Roads Foreman visited the site, completed an inspection which was shown to generate a WorkID. Examples were also provided of an inspection being perform independent of the PCR process. A Winter Inspection was not always completed to generate a WID; sometimes a patrol was conducted and WID generated independently of an Inspection.

The transition between software systems has created inconsistency in how inspections are completed, and subsequently how a WID is generated. These do not appear to be uniformly executed through the different yard areas, evidenced by the lower number of inspections in Carnaby.

Evidence-Records Reviewed:

QMS 130 Forms (see above), photographs and timecards.

The examples of the WorkID process were provided to the Ministry as summarized below:

- 21/03/09 Danger tree removal, WID generated from patrol (21/03/09). Timecard, inspection & WID shown.
- 21/03/05 Pothole ID on Old Babine Lake Rd, Babine Lake Rd, Lake Kathlyn Rd. Actioned and filled (see timecard)
- 21/02/25 Old Babine Rd frozen culvert, hired Smithers Hydrovac, receipt provided for 26-27.
- 21/02/22 Alpine Way, received a PCR. Inspection confirmed narrow width. WID created and executed. Follow up inspection documented. Timecards, ID & notes supplied.
- 21/02/24 Jackpine Rd. WID generated, followed by PCR before WID executed. Received PCR, responded and followed up with Stakeholder. Provided timecards, WID, PCR, communications.
- 21/01/08 Boundary Road WID generated actioned and plowed by the 9th. Recognized the NTS, and actioned.

SECTION 3: ACTIONS TO BE COMPLETED / RE-DONE

Describe all actions to be completed and/or re-done by the contractor

Increase inspection frequencies and distribution to meet the requirements of the QMS.

Date accepted by MOT: Click here to enter a date. Initials:

SECTION 4: NCR/OFI ISSUED

OFI#22 Inspection Frequencies

Note: The audit is based on a limited sampling of the operations. Although conformance with the relevant contractual requirement has been examined, other observations or non-conformances may exist.

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Audit Report #:SA25 Yr2 WO6

SECTION 1: AUDIT DETSAILS

Service Area: SA25 - Bulkley Nass Name of Contractor: Dawson Rd Mtce-Bulkley Nass

Audit Date: March 22, 2021

Marlene Keehn Marlene Keehn Auditor: Auditor Signature

Attendee Register:

Marlene Keehn/MoTI Ops group Ted Whanstall Daniela Miller

Position

Area Mgr/Ops Tech, MOTI DRM Quality Mgr SA25 **DRM Admin Assistant**

Topic of Audit:

7.05 - Communications: Winter 20-21

Overall Summary of Findings:

Overall, DRM communicates well with MOTI staff. There are many complaints logged in January and DRM does analyze the calls and looks for ways to improve service to reduce future calls and ensure DRM is the trusted first contact.

- DRM regularly informs MoTI of major events & MVI's within appropriate response times.
- Drive BC is updated at mandatory times per the specification most of the time, and when road conditions change, and when DRM has planned work.
- DRM provides updates to MoTI daily and provides information to public via social media on a regular basis.
- DRM provided documents of regular 2-way communication with School districts, PIR, District of Stewart, & HudsonBayMtn Ski Hill Mgmt. DRM provided a list of stakeholders with updates re: planned work, closures, delays, and weather conditions.
- Stakeholder meetings were held Oct 29 in Stewart (8) Nov 17 in Smithers (4) & Nov 17 in Carnaby (4), and specific meeting with PIR on Nov 6th
- PCRs for the period of Jan 15-29 (97+4 calls total) show that DRM is following up on PCRs stakeholders are called back when requested. (a few are missing from the report - see section 3)
- DRM actively operates & monitors Facebook & Twitter and provides a direct response to messenger when contacted. Phones are covered in person, 24 hr/day 7 day/week.

However:

- DRM is not proactive in informing MoTI of abandoned vehicles.
- DriveBC is not always accurately reported for the segments provided: The practice of setting conditions from Cranberry to Deltaic does not adequately describe the different conditions between these segments most of the time.
- Conditions north & west of Meziadin on Hwy 37 & 37A narrowed to less than 2 lanes this winter DRM did not adequately communicate the extent of the situation to MOTI in a timely & effective manner, leading to escalating stakeholder frustration.

Compliance: Does the Contractor meet the maintenance specification(s)? DRM meets the specification for most items, communicates well with MoTI. – however, a few areas are an opportunity for improvement. OFI#23

Bonus: What evidence has been gathered against the Local Assessment Criteria? DRM held safe, distanced In-person stakeholder meetings during Covid-19 restrictions.

Note: The audit is based on a limited sampling of the operations. Although conformance with the relevant contractual requirement has been examined, other observations or non-conformances may exist.

Distribution: Original to District; Copy to Contractor

Name

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SECTION 2: QUESTIONS/ FINDINGS/ EVIDENCE – RECORDS REVIEWED

Question 1: MS 7.05.2-1 Does DRM Communicate Highway conditions as follows:

- a) Report to the Province any Major Events and conditions that are unsafe or have the potential to become unsafe to Highway Users or the Highway, including those that are not covered by the Agreement, and those beyond the Right-of-way
- d) Report to the Province abandoned vehicles/equipment and assist in the disposal if required, in accordance with the Province's Abandoned Vehicle or Object Process

What is being assessed: Compliance; Initiate communication with MoTI

Findings:

- a) DRM typically notifies MoTI immediately upon knowing about serious motor vehicle incidents and other major events that impact travelling public. Communication with MOTI is usually proactive and responsive.
 - Dawson notified us as soon as they became aware of events on Hwy62 (Hagwilget bridge), Kispiox Valley Rd, Snow & Ice storm in Stewart, 2Semi accident at Gitsegukla.
 - Dawson provides informative and timely daily activity updates.
 - Dawson replies to emails, calls and MoTI inquiries quickly and professionally. However, the situation on Hwy37 and Hwy37A where the lanes narrowed <2 was not adequately communicated to MoTI working together and diligently, the road widths were restored, but not before stakeholders were impacted. Improvements to the communications, work plans, scheduling have corrected the road widths since early Feb & Dawson continues to make this area a priority for maintenance and communication.
- d) DRM does not notify MoTI of abandoned vehicles on the right of way in an effective or timely manner. OFI #23
 - Smithers area vehicles on H16 at Witset (Dec) Woodmere (Jan), McCabe/Telkwa High Rd (Mar) - all not reported to MoTI
 - Carnaby area 2 cars Kispiox Valley Rd FM reported the cars, but with minimal details re: plate or VIN#, etc, and - after prompt from MoTI Rd Mgr.
 - Stewart area: 1 car on Hwy near Spruce Cr bridge, 1 near docks on Hwy 37A not reported to MoTI
 - DRM provided info of MVI on Hudson Bay Mtn Rd, where they had responded to vehicle left on Hudson Bay Mtn Rd Dec 21/20. RCMP file # noted on form – this incident was reported to Dawson by RCMP/MoTI area Manager

See OFI

Evidence-Records Reviewed:

MoTI monitoring, calls from RCMP Daily Updates Emails & calls re major events Copy of H36 CMC#201221-25-AS1 Dec 21/20

Note: The audit is based on a limited sampling of the operations. Although conformance with the relevant contractual requirement has been examined, other observations or non-conformances may exist.

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Question 2: MS 7.05.2-2 Does DRM Update DriveBC as follows

- b) Highway conditions Sept-Nov (5:00 am, 7:00 a.m. and 4:00 p.m. daily)
- c) When weather conditions affecting visibility deteriorate or improve (immediately)
- d) When driving conditions deteriorate or improve (immediately)

What is being assessed: Compliance; Communication with Stakeholders

Findings:

- a) DRM, for the most part, does update at 5am, 7am, and 4pm daily, and, it is evident that changing conditions are being added/adjusted at varying times (see Feb 2nd). a few dates thru the winter show some timeframes late or missing, but overall, DRM does have a good system to get updates to DriveBC.
 - DRM provided corrective action after Nov 18th to ensure the updates are getting onto the Drive BC system. (Nov 18 email, DRM Quality Mgr).

Eg: Feb 13 - update at 2am, 4am, 6:30 pm, and **5:35** pm, 9:40pm, and 11:24pm The 4PM update was late – all segments updated at 5:35pm

Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Sat 2021-02-13 11:24 PM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Sat 2021-02-13 9:40 PM
Road_condition Condition(s) Activated (10 - Bulkley-stikine / 25 - Bulkley Nass)	Sat 2021-02-13 5:35 PM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Sat 2021-02-13 6:24 AM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Sat 2021-02-13 6:24 AM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Sat 2021-02-13 4:09 AM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Sat 2021-02-13 4:09 AM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Sat 2021-02-13 2:10 AM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Sat 2021-02-13 2:10 AM

Feb 2 update several times throughout the day. The 7am update was late (11am)

Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 11:11 PM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 11:11 PM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 11:11 PM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 7:44 PM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 7:44 PM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 7:44 PM
Road_condition Condition(s) Activated (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 3:17 PM
Road_condition Condition(s) Activated (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 3:17 PM
Road_condition Condition(s) Activated (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 3:16 PM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 12:08 PM
 Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 10:58 AM
Road_condition Condition(s) Activated (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 5:39 AM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 2:33 AM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Tue 2021-02-02 12:40 AM

Note: The audit is based on a limited sampling of the operations. Although conformance with the relevant contractual requirement has been examined, other observations or non-conformances may exist.

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Nov 26- several updates.	hut 1am & 7an	n timoframae micead
110V 20- Several ubuales.	Dul 4 aiii & 7ai	II UIIIEII AIIIES IIIISSEU.

Weather_condition, Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 11:28 PM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 11:28 PM
Weather_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 11:28 PM
Weather_condition, Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 11:15 PM
Weather_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 11:15 PM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 11:15 PM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 4:24 PM
Weather_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 4:24 PM
Weather_condition, Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 4:24 PM
 Weather_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 2:19 AM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 2:19 AM
Weather_condition, Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 2:19 AM
Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 2:14 AM
Weather_condition, Road_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 2:14 AM
Weather_condition Condition(s) Confirmed (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 2:14 AM
Weather_condition, Road_condition Condition(s) Activated (10 - Bulkley-stikine / 25 - Bulkley Nass)	Thu 2020-11-26 2:14 AM

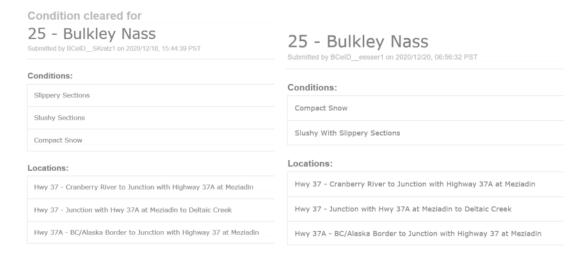
b) DRM does not always ensure that DriveBC conditions represent field conditions as weather improves – Eg: sometimes fog is left on until next update, instead of as it changes.

Eg: Hwy 37 Conditions between Cranberry Jct and Meziadin, vs Meziadin to Deltaic are often very different. The road south of Mez is to be kept bare & black, while the road north of Mez is maintained as a compact snow road – those segments should typically be different, yet DRM tends to add just one condition for the entire section of Hwy 37, instead of breaking it by the sections available on the system.

Similarly, Hwy 16 - the system allows for separation of the conditions, but DRM does not use this in their reports. Or Carnaby area – separate report for Hwy 16 vs Hwy 37 may be needed.

MoTI monitoring reflects differences on Hwy 37 south of Meziadin vs north of Meziadin more often than other areas.

See OFI





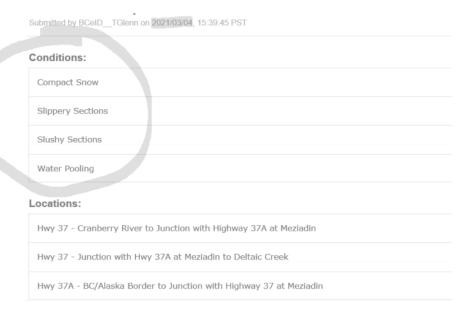
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The segments in Drive BC were provided based on local climate and local compact snow road variance. Dawson could, at minimum, separate Hwy 37 north and south of Meziadin when reporting conditions since those segments have different specifications and weather patterns. Segments available:

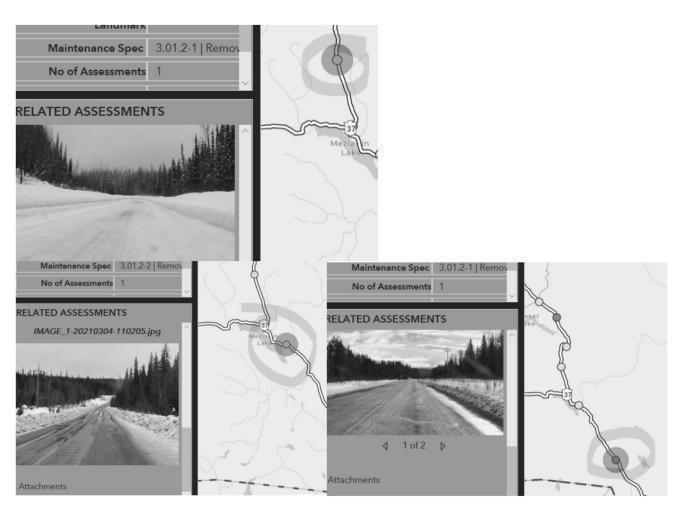


EG: March 4th, the conditions south, on Hwy 37 from Cranberry to Meziadin were Slushy sections, water pooling. The conditions north of Meziadin were compact snow, slippery sections – see photos next page. OFI #23



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Evidence-Records Reviewed:

Drive BC Reports – winter 2021 Monitoring DRM email Nov 18/20

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Question 3: 7.05.2-3 Does DRM Communicate with the public and Stakeholders as follows

- Monitor, receive, and respond to complaints, comments and requests for service across various Communications Platforms or in person and document the result of those communications (within 24 hours)
- **b)** Monitor and communicate across various Communications Platforms in advance, during and after planned Services, traffic disruptions, or upcoming Weather Events, (immediately)
- **d)** Engage in public educational campaigns (including but not limited to winter preparedness, Shift Into Winter and Cone Zone) independently or in conjunction with the Province, (each season)

What is being assessed: Compliance; Proactive Communication with Stakeholders

Findings:

a) A review of the list of PCRS shows Dawson is mostly responding/calling back the stakeholders to discuss resolution of the concerns. PCR export (18) shows PCRs from Jan 15 -29 as requested. DRM Logged 90 complaints in this 2 week period, plus MoTI has 4 PCRs that DRM has not included in their report – follow up required to ensure the PCR's were received. See Section 3

MoTI PCRS are typically returned to MoTI with the resolution added to the PCR. Several recent PCRS have not been returned, even tho the export shows that DRM did close/finalize the call. A recent change in Admin staff may be the cause, DRM & MOTI ops tech will review list of PCRs that MoTI may need documents showing resolution. See OFI

Excel monthly summaries show that PCRS are analyzed with intention of DRM being the trusted first contact. Dawson presented a report "Stakeholder Engagement" listing lessens learned and summarizing key problems and strategies for correction.

2Way Communication with major stakeholders:

Dawson provided documentation showing open communication with PIR, Schools & Hudson Bay Mtn Mgmt, and other major stakeholders in Stewart and the area.

Dawson held pre-winter stakeholder meetings in October 29 (Stewart) and November 17 (Carnaby and Smithers), plus additional meeting Nov 6 with PIR & School board. Documents show attendees and the agenda/topics discussed.

When there is an event on the roads, DRM provides updates to stakeholders. EG: Kispiox Bridge, Narrow Hwy37/37A, Stormy weather, planned closures/delays, via stakeholder distribution lists.

b & d) Weather events & planned events are communicated via Drive BC, social media, daily updates to MoTI via email and phone. Traffic disruptions are communicated as soon as DRM knows. CMS boards are used when needed in the field.

Note: The audit is based on a limited sampling of the operations. Although conformance with the relevant contractual requirement has been examined, other observations or non-conformances may exist.

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Evidence-Records Reviewed:

DRM Facebook & Twitter Feeds

- Feb 9 at 5:35 PM, email from PIR re: Eckman hill slippery, DRM Ops Mgr responds 5:04PM(?)
- Feb 23 from 2 residents of Alpine, email conversation with FM & thanks back for communication & plowing
- DRM Jan 15-18/21 & Feb15/21 emails btwn Hudson Bay Mtn resort managers re: road mtce
- Jan 21, Feb 1 updates to stakeholders re: widening of Hwy 37 Mez area
- Feb 4 to Feb 23 updates to stakeholders re: Kispiox bridge
- Mar 10-12 updates & email to Dist of Stewart re: storm in Stewart
- (Dec to Mar emails) updates and receives feedback from School district
- Comprehensive list of Stakeholders by community provided showing when/who receives communication from Dawson for storms, road delays/closures – including many suggestions from MOTI Feb 11 email
- Pre-winter stakeholder meeting agenda's and attendee Oct 29, Nov 6, Nov 17 2020
- Nov, Dec, Jan Stakeholder call assessments
- Report of stakeholder calls and resolutions (PCR Export)

Question 4: 7.05.3 Does DRM perform these Other Procedures:

- d) Actively operate a minimum of 2 Social Media platforms that are specifically intended for highway maintenance to communicate, engage with and educate the public, fully utilizing the Social Media Platform's communications capabilities; and
- e) Provide an automated acknowledgement on all Communications Platforms, where technically feasible, including the provision of 24 hours per day, 7 days a week contact service for emergency related matters.

What is being assessed: Compliance; Engagement with stakeholders

Findings:

d): Social media platforms (Facebook, Twitter) are actively used to advise public of events, weather, road conditions, traffic disruptions, public educational campaigns, & local events/stories & scenery. MoTI news & campaigns and ICBC campaigns are promoted seasonally.

DRM monitors social media and provided quick response to contact after hours.

e) 24hr/7day contact: See audit SO#5 Sept 2020

Evidence-Records Reviewed:

DRM Facebook & Twitter Feeds

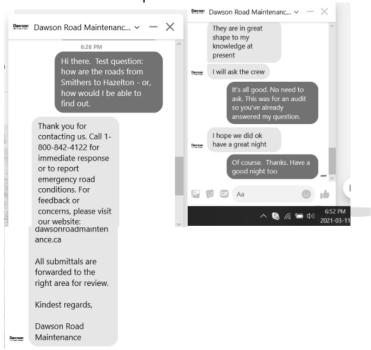
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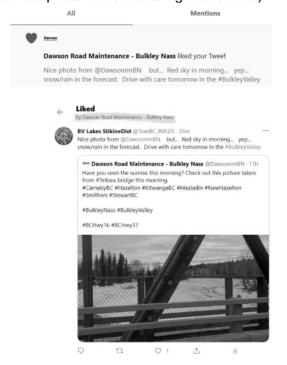
Facebook - after hours response within 15 minutes:



Twitter after hours response:

I sent a direct message after hours, mentioning a photo, and asking them to let me know when they had received my message. (viewed at 6:20pm, and then DRM "liked" the photo I referred to right after that)





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SECTION 3: ACTIONS TO BE COMPLETED / RE-DONE

DRM to	check	records	and see	if these	emails	were	received,	recorded	and re	esponded t	O

☐ Telkwa High Road Hutchinson Jan 20 2021
Kispiox Valley Rd Gene Allen Jan 21 2021
Telkwa Hi - Witset Side Brooks Jan 20 2021
McCabe Rd Lamoureux Jan 19 2021

MoTI resent files for DRMs' review

SECTION 4: NCR/OFI ISSUED

See OFI #23 regarding some areas where DRM could improve with regards to communications.

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