

**SWAN LAKE FIRST NATION – MATRIX SOLUTIONS
INC. PARTNERSHIP**

INDIGENOUS CONSTRUCTION MONITORING

WEEKLY REPORT

SPREAD 8

OCTOBER 29TH TO NOVEMBER 3RD

1. PURPOSE OF THIS REPORT

The report is a weekly summary of the daily reports submitted by the Indigenous Construction Monitors that are working on spread eight. The social and cultural findings have been tabulated with locations and mitigation measures below. A summary of the construction activities has been summarized for the weeks of October 29th to November 3rd, 2018.

Social and Cultural Features

Field Observation	# of occurrences	Description and Mitigation Measures	Mitigation Status	Further Action Required (Yes/No)
Traditional Use Area (hunting, fishing, gathering, trapping)	N/A			
Rock Formations (rocks of significance, tipi rings, etc.)	N/A			
Artifacts	N/A			
Bones	N/A			
Potential Gravesites	N/A			

Environmental Features

Field Observation	# of occurrences	Description and Mitigation Measures	Mitigation Status	Further Action Required (Yes/No)
Medicinal or Cultural Plants	N/A			
Aquatic Life	N/A			
Animal Observations or Burrows	N/A			
Bird Nests	N/A			
Trees (Red Willow)	N/A			
Wetlands	N/A			
Watercourse Crossing	N/A			

Additional Observations and Summary of Activities or Concerns

October 29, 2018 - Safety included: Stay out of swing zones while on site. Watch for wildlife. Watch for wide loads on Hwy#2. Be careful waking up and down steep slopes. Slips, trips, falls, Driving conditions, Congested sites, Wildlife, Distracted driving, Fatigue. Watch out for Busses on rural roads and school zones. Watch out for vehicles in uncontrolled intersections. Stay out of machine swing zones and blind spots. Watch for dangerous drivers. Watch out for domestic animals. Be careful on mats vehicle too low to the ground. Foggy out drive with caution.

Weather forecast/Environment: Cloudy and foggy, high of 7

Fine clean and bleach when entering a new RM or land owner requested wash. Watch for ruts on ROW. Colder in the morning dress warm and delayer as the day warms up.

General: Attended morning meeting.

SF 3 West side of the road (KP 913+205) clean-up crew is onsite working ahead of machines putting back top soil. Crew is also taking out the bridge on the creek crossing. Excavators are being used to remove the soil surrounding the bridge while crew members remove the silt fencing around it. Garbage is being picked up throughout the site and piled near the approach.

SF 8 Oak creek crossing #1 crew is backfilling pipe. Soil is being brought to the East side of the creek by a rock truck which places on the ROW for the dozer to push into the trench. Crew members removed the sand points and placed the plastic tubing in piles which are to be removed from site. Subterranean is also onsite removing sheet piles, A crane with an attachment is pulling out the sheet piles from the ground and is placing on ROW which will be removed at a later time. SF 11 Crew is digging tie-in ditches. Excavators are onsite removing soil and placing next to trench leaving enough room for vehicles and equipment to get by. Oiler is giving depth measurements to the operator that is digging the trench. Fencing and signage is installed properly. SF 33 Crew is onsite backfilling tie-ins. Excavators are on each side of the road placing soil in the trench covering the pipe and filling the trench to ground level. Fencing and signage is to be removed once backfill is complete. SF 43 (KP 982+819) Crew is onsite digging Tie-in ditch. Excavator is removing soil and placing on the ROW for the dozer to pile on the South side of the ROW separate from the other soil piles. An Oiler is working with the excavator providing the operator with depth measurements. Stairs have been built into the trench walls throughout the length of the trench. Fencing and signage has been installed.

SF32 Excavators and caterpillars backfilling ditches on both sides of the road. SF33 Excavators backfilling the ditch on the West side of the road. SF35 KP 976+475 Side booms holding pipe for the tie-in crew. A fuel truck was filling side boom. Ultra sound crew cleaning weld for testing. Ultra sound unit was on the back of truck. A crew bus was on site waiting. Safety fences were in place, Ladders are tied on to the T-posts. An excavator was carrying extra attachments in the bucket while crossing the road. Goal posts were still in place. Clean-up crew were on site.

SF47 KP 990+471 A hydro-vac was checking were the fibre optic cable to measure the distance from the surface. Drill crew were using a receiving monitor to check the depth of the drill rod. They were using Hydro-vac for the visual measures. Excavator and Hydro-vac were getting ready to start digging the bell hole for the drill rod. SF44A Side booms were holding the pipe while the crew were putting the skid piles underneath. Shuttle bus on site. An excavator was digging the ditch and a caterpillar was moving the clay to the side.

Work Forecast: Continue to monitor construction activities, and monitor wetland and traditional land use areas.

October 30, 2018 - Safety included: Stay out of swing zones while on site. Watch for wildlife. Watch for wide loads on Hwy#2. Be careful walking up and down steep slopes. Slips, trips, falls, Driving conditions, Congested sites, Wildlife, Distracted driving, Fatigue. Watch out for busses on rural roads and school zones. Watch out for vehicles in uncontrolled intersections. Stay out of machine swing zones and blind spots. Watch for dangerous drivers. Watch out for domestic animals. Be careful on mats vehicle too low to the ground. Foggy out drive with caution.

Weather forecast/Environment: Mix of sun and cloud, windy in the afternoon, High of 7

Fine clean and bleach when entering a new RM or land owner requested wash. Watch for ruts on ROW. Colder in the morning dress warm and delayer as the day warms up.

General: Attended morning meeting.

SF 10 East side of the road Bore crew is onsite HD Boring under the road. Side booms are used to hold the drill rig into place. Fencing has been removed so work could take place. Stairs are built into the trench walls and ladders are installed and secured on each side of the trench. Flaggers are in place ready to stop traffic when needed. Crew on the West side of the road is preparing to lower in pipe once drilling is complete. SF 34, Road 66W. Crew is onsite backfilling tie-ins, East side of the road excavators and a dozer are working together placing soil into the trench. Oilers are with the excavators watching for rocks that could potentially damage the pipe, when found they are removed and placed to the side. SF 35, Road 30N. Crew is onsite backfilling trench with sand that is being brought in with dump trucks. Excavator is placing sand gently around the pipe. SF 42 Bore crew is onsite HD Boing under the road. Side boom with sling is assisting the drill rig by holding it in place while it operates. Fencing has been taken down for work to take place. Goal posts are installed on the East side of the road to prevent equipment from coming into contact with the powerlines overhead. SF10 Three side booms holding up the boring unit, with a caterpillar on the road anchoring the pulley for the cable and winch. An excavator is moving clay away from the ditch. The boring crew are checking the level and guiding the side boom crew. The fences are in place and the ladders are tied to the T-posts. SF14 On the East side an excavator was digging the ditch while another was moving the clay to the side. On the West side a Hydro-vac crew were checking the depth of a cable. Fences in place. SF33 Excavators and caterpillars are backfilling the ditch and levelling. SF35 Side boom crew holding pipe in place for the tie-in crew and welding crew. SF43A Excavators are digging ditches on both sides of the road. Crew member checking the depth of the ditch. Caterpillar moving clay around on the West side.

Work Forecast: Continue to monitor construction activities, and monitor wetland and traditional land use areas.

October 31, 2018 - Safety included: Stay out of swing zones while on site. Watch for wildlife. Watch for wide loads on Hwy#2. Be careful walking up and down steep slopes. Slips, trips, falls, Driving conditions, Congested sites, Wildlife, Distracted driving, Fatigue. Watch out for busses on rural roads and school zones. Watch out for vehicles in uncontrolled intersections. Stay out of machine swing zones and blind spots. Watch for dangerous drivers. Watch out for domestic animals. Be careful on mats vehicle too low to the ground.

Weather forecast/Environment: Cloud and windy, High of 3

Fine clean and bleach when entering a new RM or land owner requested wash.

Watch for ruts on ROW. Colder in the morning dress warm and delayer as the day warms up.

General: Attended morning meeting.

SF 3 crew is onsite putting back seconds, and top soil piles. Dozer is spreading soil throughout the ROW. Some garbage was missed by the clean-up crew, I picked up garbage and removed from site. Crew trucks were reminded to park on the same side of the road. SF 8, Rd 90W Oak creek crossing. Two crews are onsite, Crew is moving top soil from the East side of the creek to

the West side. Excavator is loading soil into rock trucks which are hauling across the creek. Crew is also performing site clean-up, removing any garbage and removing pig pens. Subterranean is onsite removing the last of the sheet piles. Sheet piles are being piled on the ROW and a loader is hauling them to the access at Rd 90W. SF 10 Rd 89W. Two crews are onsite. West side of the road Tie-in crew is welding pipe joints together connecting to the mainline. Side booms are being used to hold pipe in place. Crew members are wearing proper PPE for the task that is being performed. Fencing and signage around the open trench is in place. Crew on the East side of the road is excavating the tie-in ditch. Soil is being removed and placed on the South side of the ROW. Oiler is providing depth measurements for the operator that is digging trench. SF 35 Rd 30N. Crew is onsite backfilling tie-in trench. Multiple excavators and a dozer are working together to place soil back into trench. Packer is compacting soil. Crew members are removing fencing and any garbage onsite and piling near the approach. SF12 KP 926+639 Excavator, caterpillar and slip bore unit are getting ready to bore under the road. The caterpillar moved onto the road to anchor the pulley cable for the slip bore unit to work. Bay ditch soil was moved beside the approach. Crew were wearing PPE. SF42 An excavator was cleaning the ditch and the welding crew is preparing the pipe. SF45 A hydro-vac truck was dewatering the bell hole for the HD drilling unit boring under the road. On the other side an excavator was cleaning wet clay out of ditch. SF47 HD drill boring under the road. SF48 Side boom holding pipe for the welding crew. Crew bus parked on the site. Crew wearing PPE.

Work Forecast: Continue to monitor construction activities, and monitor wetland and traditional land use areas.

November 1, 2018 - Safety included: Stay out of swing zones while on site. Watch for wildlife. Watch for wide loads on Hwy#2. Be careful walking up and down steep slopes. Slips, trips, falls. Driving conditions - No cruise control on wet roads, congested sites, Wildlife - deer coming out of ditches, distracted driving, fatigue. Watch out for busses on rural roads and school zones. Watch out for vehicles in uncontrolled intersections. Stay out of machine swing zones and blind spots. Watch for dangerous drivers. Watch out for domestic animals. Be careful on mats vehicle too low to the ground.

Weather forecast/Environment: Mostly cloudy and windy, High of 5. Winds 10 to 15 km/h 60% chance of rain.

Fine clean and bleach when entering a new RM or land owner requested wash.

Watch for ruts on ROW. Colder in the morning dress warm and delayer as the day warms up.

General:

SF 3 East side of the road, clean-up Crew is putting back top soil, Dozers and excavator are working together spread top soil throughout the ROW. Tractor is unloading straw bales from a semi and placing on the edges of the ROW. SF 10 Rd 89W. Tie in coating crew is on site. Crew members are heating the pipe joint with blow torches and sand blasting once pipe was heated, Crew then coated the pipe joint. All proper PPE was worn during the process of work completed. Stairs were built into the trench wall and secured ladders were placed on the North side of the trench. SF 36 East side of the road a dozer is backfilling the tie-in trench.

SF 37 South side of the road Tie-in crew is onsite. Sidebooms are being used to hold pipe into place while the welders weld the pipe joints connecting it to the mainline. Stairs have been built into trench walls and secured ladders have been installed on the opposite side of the trench stairs. Once complete sidebooms were removed and trench was ready for backfill.

SF4 KP 914+930 Excavators and caterpillars levelling out transition. Excavator crossed road, crew on hand to direct traffic. Truck and tractor delivering straw bales for the ROW. SF10 Tie-in crew are heating, sandblasting the welds and then coating them. Four excavators stand by waiting to backfill. SF11 KP 924+989 Three sidebooms on each side of the road hold the pipe while the tie-in crews clamp and weld the pipe together. SF12 KP 926+639 Excavators cleaning

the ditch on both sides of the road for the tie in crews. SF15 A caterpillar moved onto the road to anchor the pulley for the skid boring unit to push the pipe under the road. The sidebooms were holding up the unit. SF16 there were two excavators on each side of the road digging ditches and moving clay to the side. Two crew members were checking the depth of the ditches.

Work Forecast: Continue to monitor construction activities, and monitor wetland and traditional land use areas.

November 2, 2018 - Safety included: Stay out of swing zones while on site. Watch for wildlife. Watch for wide loads on Hwy#2. Be careful walking up and down steep slopes. Slips, trips, falls. Driving conditions - No cruise control on wet roads, Congested sites, Wildlife - deer coming out of ditches, Distracted driving, Fatigue. Watch out for Busses on rural roads and school zones. Watch out for vehicles in uncontrolled intersections. Stay out of machine swing zones and blind spots. Watch for dangerous drivers. Watch out for domestic animals. Be careful on mats vehicle too low to the ground. Drive to weather conditions.

Weather forecast/Environment: Cloudy and snowy, high of 2, winds E N E 10 to 15 km/h.

Fine clean and bleach when entering a new RM or land owner requested wash.

Watch for ruts on ROW. Colder in the morning dress warm and delayer as the day warms up.

General: Attend morning meeting

SF 12 (KP926+665) Tie-in crew is onsite. Sidebooms are used to hold pipe into place, welders set up a tent to covering the pipe where they need to weld. Pipe is welded together connecting to the mainline. Crew members are preparing for tie-in on the West side of the road. Site is snowy and wet. SF 15 Crew is onsite excavating tie-in trench. Excavator is removing soil and placing on the ROW for the dozer to pile on the South side of the ROW. Oiler is giving depth measurements to operator that is digging trench. SF 16 Tie-in crew is onsite preparing to lower in pipe and weld it to the mainline. Crew is pumping water out of trench into pig pen South of the access. Generator has a spill tray under it. Ladder is in trench and is secure. SF 36 Hydro vac crew is onsite locating utilities on the West side of the road. East side of the road backfilling trench continues. Excavator and a dozer are working together to backfill trench. SF 37 Crew is onsite backfilling tie-in trench, excavators were used to place soil into trench covering the pipe. Dozer is pushing soil piles into trench bringing it to ground level. Fuel truck arrived and refuelled equipment at access. SF 37A Crew is onsite lowering in pipe. Sidebooms with slings are used to lower in pipe. Crew members are using water pump to water out of the tie-in ditch. Stairs are built into trench wall, ladders are installed and secure. SF 44 Bore crew is onsite. Bore hole is complete pipe is lowered in and pulled through the bore hole. Welders are onsite tying into the mainline. Fencing is being reinstalled. Sidebooms are holding pipe into place.

SF3 On the West side of the road, straw was spread and disced in one area near road.

On the East side of road it is disced only. Two tractors, one with straw spreader and the other with disc parked because of the weather. Still snowing out. SF12 KP 926+665 On the East side of the road side booms are holding the pipe for the welding crew working under the tent.

SF15 Excavator is digging the ditch and a caterpillar is pushing the clay to the side.

SF16 KP 931+636 Excavator and de-watering crew set up pump and are pumping water to the silt bags in the pen. Crew driving in T-posts for the ladder. PPE being worn. Side booms and the slip bore unit are moving into place. Caterpillar is moving onto the road to anchor the block pulley. SF38 KP 975+000 Two excavators are backfilling the ditch and another is loading a rock truck with clay farther down ROW for the ditch. A caterpillar is moving clay closer to the ditch. Clean-up crew are on site. De-watering crew are pumping water from both ditches to the pig pens. PPE is being worn. There are two test pads on the pipe.

Work Forecast: Continue to monitor construction activities, and monitor wetland and traditional land use areas.

November 3, 2018 - Safety included: Stay out of swing zones while on site. Watch for wildlife. Watch for wide loads on Hwy#2. Be careful walking up and down steep slopes. Slips, trips, falls. Driving conditions - No cruise control on wet roads, congested sites, Wildlife - deer coming out of ditches, distracted driving, fatigue. Watch out for busses on rural roads and school zones. Watch out for vehicles in uncontrolled intersections. Stay out of machine swing zones and blind spots. Watch for dangerous drivers. Watch out for domestic animals. Be careful on mats vehicle too low to the ground. Drive to weather conditions.

Weather forecast/Environment: Cloudy and snowing with a high of 2C. Winds East North East 10 to 15 km/h

Fine clean and bleach when entering a new RM or land owner requested wash. Watch for ruts on ROW. Colder in the morning dress warm and delayer as the day warms up.

General: Attended morning meeting

SF 3 East side of the road. Crew is onsite putting back Top soil. Excavator and dozer are working together to place soil back into the ground. SF 9 Bore crew is onsite. Drill rig is on the North side of Hwy #2, Hydro Vac arrived onsite to remove water and mud from bore pit. Pit is fenced off and has proper signage. South side of the Hwy crew is preparing to lower in the pipe and pull through the bore hole. Side booms with slings are used to hold pipe in place while pipe is pulled through the hole. SF 11 Crew is onsite backfilling tie-ins West side of the road, excavator is finishing putting back soil into the trench. Crew members are removing fencing and rope and piling at the access. East side of the road excavator and dozers are working together to backfill trench. SF 16 (KP931+655) Crew is onsite tying in. Side booms with slings are being used to hold pipe into place while the welders connect pipe to the mainline. Stairs have been built into the trench walls, ladders are installed on the North side of the trench and are secured. Fencing and signage are installed around the open trench. Crew members are wearing proper PPE. SF 38 (KP975) Crew is onsite backfilling tie-in trench. Dozer is pushing soil to the excavator, excavator is placing soil back into trench. Oiler is spotting for the excavator.

SF11 KP924+989 Two excavators on each side of the road are backfilling. Crew removing straps from pipe that held up the cable over the ditch, so they can backfill above it. Crew members watching cable wearing PPE. Clean-up crew on site. SF14 Welding crews working on both sides. SF16 Side booms holding pipe for the welding crew. Ladder tied on to T-posts.

SF9 HD drill boring under the road. Hydro-vac trucks on site.

SF6 KP 916+588 Excavators and caterpillars levelling topsoil on the West side. Tractor pulling a drag behind. Excavators and a caterpillar levelling transition on the East side. Fuel truck on site. Approaches and road muddy and slippery.

Work Forecast: Continue to monitor construction activities, and monitor wetland and traditional land use areas.

Photos of Sites Visited & Topics Discussed This Week

October 29, 2018



Description & Location:

SF33 KP 964+964 Facing West
Excavators backfilling ditch

Photo



Description & Location:

Photo facing South West
SF 3 (KP913+205)
Excavator in the process of removing ramp
to the bridge.

Photo



Description & Location:

Photo facing South East
SF 43 (KP982+819)
Excavator is digging tie-in trench and
placing soil in a pile.



Description & Location:

SF47 KP 990+471 Facing North North East
Hydro-vac making hole for visual on fibre
optic cable.

Photo



Description & Location:

Photo facing West
SF 8 Oak Creek crossing #1
Crew is backfilling trench.

Photo

Right Click
Change Picture..

Description & Location:

October 30, 2018



Description & Location:

SF24A KP 949+600 Facing South
Snowy Owl on top of the topsoil pile.



Description & Location:

SF10 Facing East
Boring unit pushing under the road. Ladder tied on.

Photo



Description & Location:

Photo facing East
SF 34, Road 66W
Excavators and dozer working to backfill trench.

Photo



Description & Location:

Photo facing West
SF 35, Road 30N
Crew is placing sand around pipe.

Photo



Description & Location:

Photo facing South West
SF 42 West side of the road.
HD Boring is taking place, drilling under the road.

Photo

Right Click
Change Picture..

Description & Location:

October 31, 2018



Description & Location:

SF12 KP 926+639 Facing South West
Drill head and crew member on the side as
the boring starts.



Description & Location:

SF12 KP 926+639 Facing West South West
Slip Bore unit ready to start boring under
the road.

Photo



Description & Location:

Photo facing West
SF 3 West side of the road.
View of Top soil that is put back.

Photo



Description & Location:

Photo facing West
SF 10 Rd 89W
Crew is welding pipe joint together.

Photo



Description & Location:

Photo facing South West
SF 35 Rd 30N
Crew is working together backfilling trench.

Photo

Right Click
Change Picture..

Description & Location:

November 1, 2018



Description & Location:

SF11 KP 924+989 Facing East
Side-booms holding the pipe in place while tie-in crew clamp and weld it.



Description & Location:

SF15 KP 929+962 Facing west
Bore crew getting the skid bore unit ready to work.

Photo



Description & Location:

Photo facing East
SF 3 East side of the road.
Top soil being put back.

Photo



Description & Location:

Photo facing East
SF 10 Rd 89W (KP 923+335)
Crew member is sand blasting the pipe joint.

Photo



Description & Location:

Photo facing South East
SF 37 South side of the road.
Crew tying into the mainline.

Photo

Right Click
Change Picture..

Description & Location:

November 2, 2018



Description & Location:

SF12 KP 926+665 Facing East
Tie-in crew welding under tent due to snowing conditions. Ladders tied to the T-posts. Wet and slippery on ROW.



Description & Location:

SF38 KP 975+000 Facing South East
Two excavators backfilling the ditch while another loads a rock truck with clay. Caterpillar is moving clay pile closer

Photo



Description & Location:

Photo facing East
SF 15 East side of the road.
Excavator is excavating tie-in trench.

Photo



Description & Location:

Photo facing West
SF 16 West side of the road.
Crew is pumping water out of trench.

Photo



Description & Location:

Photo facing East
SF 44 West side of the road.
Crew tying into the mainline.

Photo

Right Click
Change Picture..

Description & Location:

November 3, 2018



Description & Location:

SF11 KP 924+989 Facing West
Two excavators backfilling the ditch. Crew taking off straps to remove the pipe holding up the cable.



Description & Location:

SF6 KP 916+608 Facing East
Excavators and caterpillars leveling transition. Clean up crew on site.

Photo



Description & Location:

Photo facing North
SF 9 North side of Hwy #2
Drill rig drilling under Hwy #2

Photo



Description & Location:

Photo facing East
SF 16 East side of the road.
Crew is tying into the mainline.

Photo



Description & Location:

Photo facing South East
SF 38 South side of the road.
Crew is backfilling trench.

Photo

Right Click
Change Picture..

Description & Location:

APPROVALS



Justin McKinney
Senior Construction Monitor

December 18, 2018

Date



Daniel Tober
Senior Environmental Scientist

December 18, 2018

Date