

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

INDIGENOUS CONSTRUCTION MONITORING

WEEKLY REPORT

SPREAD 8

OCTOBER 15TH TO OCTOBER 20TH

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 15th to October 20th, 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

Weekly activity included attending daily tailgate meetings and continue to check access points on the ROW and monitor activities on Spread 8.

October 15, 2018 - Safety included: 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 speeding drivers in construction zones signs are being ignored. Watch out for domestic animals. Watch for wide loads on Hwy #2. Mud was freezing making it slippery.

Weather forecast/Environment: Mostly sunny, high of 8

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

ROW is thawing due to warmer than normal temperatures. ROW is wet and muddy late in the day.

General: Attend morning meeting

SF 8 Oak creek crossing #1. Tie in crew is in the area, wetlands crew is onsite. Equipment operators are warming up their vehicles and exercising their equipment to prevent anything from breaking and causing a leak to occur. Welders are prepping the pipe at the creek crossing for Tie in to mainline. SF 22 Pipe backfill crew is onsite. Excavators and dozers are working together to backfill and level out the ROW. Excavators had oilers/spotters with them. SF 26 Tie in crew is onsite. Pipe has been lowered in by side booms with slings and holding pipe in place for welders to tie into the mainline. Crew members are heating the pipe closer to the road, Safety ladder is in trench for safe entry/exit. Proper signage and fencing is around the trench closest to the road. SF 43A Excavators are being delivered to site. Semi has proper signage on truck and trailer for wide load, Semi also had a Truck with wide load signs on it. Flaggers were in place to stop traffic while unloading equipment. SF 39 East side of the road. Pipe backfill crew is onsite. excavators and dozers are working together to backfill the pipe. ROW is wet and muddy, No access to ROW due to not having suitable vehicle. SF22 Caterpillars and excavators levelling frozen mud on ROW. SF24A Crew South side filling pumps and moving hoses round to pump water out of the trench to silt pen. Caterpillar levelling frozen mud on ROW. Hd drill is on the North side. SF41A Excavator on the East side digging trench. Trencher working coming from farther West. SF42 trencher working down ROW. SF44 Mulching crew working on the East side. Mack tandem refilling water tanks for the mulching. SF49 Grader levelling the road.

SF50 Repair crew heating welds with a tiger torch and then covering with a blanket to keep the weld warm. Truck crane loading up pads from wash station. SF35 Side boom holding the pipe up for welding crew. Excavator was digging trench. SF26 Side boom holding pipe for Tie-in crew.

Work Forecast: Continue to Monitor construction, wetlands, water courses and traditional land use areas.

October 16, 2018 - Safety included: 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 speeding drivers in construction zones signs are being ignored. Watch out for domestic animals. Watch for wide loads on Hwy #2. Mud was freezing making it slippery.

Weather forecast/Environment: Mix of sun and cloud, high of 4

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

ROW is thawing due to warmer than normal temperatures. ROW is wet and muddy late in the day.

General:

Attend morning meeting

SF 41 crew onsite picking up skids along the ROW, side boom is being used to pull a trailer along the ROW. Crew members are walking along the trailer piling skids onto the trailer. Crew is working West to East. Mainline backfill crew arrived onsite. Crew is using excavators to place soil into trench, each excavator has a oiler/spotter with them. Spotter removes any rocks/boulders to prevent any damage to the pipe. Crew members are installing signage, T-posts and roping off the trench that is not being backfilled.

SF 42 Lowering crew is onsite. Sidebooms with slings are working in tandem to lower the pipe into the trench. A smaller excavator is being used to move the skids piles out of the way of the side booms. Inspectors are walking along the pipe being lowered and directing the operators when needed to center the pipe in the trench. Any garbage on the ROW is being picked up by the crew picking up skids following the lowering in crew. Crews are working West to East. SF 35 Bore crew is onsite drilling bore hole South to North. Excavator on the North side of the road is digging bore pit. SF21 Loader unloading rig mats from truck. Excavator and caterpillar levelling clay. SF22 Excavator removing part of the ramp. Caterpillar and excavator are covering trench and levelling clay. SF24 UT crew on site doing an ex-ray on the welds. Pump crew on site pumping water into silt pen from the trench. SF26 Excavator crew was covering pipe on the North side of the road. SF28 Excavator and caterpillar was covering pipe. SF35 Excavator and side boom moving pipe into place on the North side of the road. HD drill working Hydro-Vac truck on site. Work Forecast: Continue to Monitor construction, wetlands, water courses and traditional land use areas. Meet with NEB at SF 35 Cypress creek crossing.

Work forecast: Continue to Monitor construction, wetlands, water courses and traditional land use areas.

October 17, 2018- Safety included: 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 speeding drivers in construction zones signs are being ignored. Watch out for domestic animals.

Weather forecast/Environment: Sunny, High of 12

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

ROW conditions were wet and muddy.

General:

Attend morning meeting. N.E.B inspection at SF 35 Cypress creek crossing. Light plants had proper secondary containment underneath them. Pig pens were installed correctly. Rare plant material was kept separate from the rest of the soil piles, it was fenced off

with snow fence and had signage documenting what it was (Blunt Fruited Sweet Cicely). There was some concern about a tree that had been chewed by a Beaver next to the pig pens. A small crew was brought in to knock the tree down before it potentially fell on someone or the pig pen. Toured the line back to home office to work on administrative duties. SF35 Mud and snow warming up making it muddy and slippery. Pumping crew were pumping water out of two pencils in the ground into silt pens between the creek and the high creek bank. SF33 An excavator was digging a trench by the ramp. SF30 Two excavator were covering the pipe. SF24 Excavator covering the pipe. SF24A Excavators covering the pipe. SF26 Side booms holding pipe for the welding crew. SF28 Caterpillar levelling the clay. SF33 Excavator digging trench on the West side of the road. SF35 Excavator digging trench on the North side loading clay into a rock truck to be moved over to the side of the ROW. Another excavator was pilling it up on the south side the HD drill was working and an excavator was digging out clay. SF44 Plane flew low over ROW heading East at 2:17 pm.
Work Forecast: Continue to Monitor construction, wetlands, water courses and traditional land use areas. Monitor construction at SF 8 Oak Creek crossing #1

October 18, 2018 - Safety included: 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 speeding drivers in construction zones signs are being ignored. Watch out for domestic animals. Drive with caution behind bigger vehicles causing dust up. Be careful walking up and down steep slopes.

Weather forecast/Environment: Sunny, high of 22

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

ROW is wet in some areas.

General:

Attend morning meeting. SF Oak creek crossing (KP 921+275) Wetlands crew is onsite. Excavators are digging trench on the East side of the creek. Soil is being removed and placed into rock trucks which are hauling the soil up the hill and placed in soil piles separate from the others. Crew members are pumping water out of the Bore pit. Safety ladders are on the North and South sides of the pit. T-posts and roping is being installed. On the West side of the creek a crane is removing sheet pilings and piling on mats to be removed. SF 10 East side of the road. Welding pipe gang is on site. Side booms are being used to move welding shacks as well as store propane tanks for the crew. Welders are welding the pipe joints together. Welding inspectors are following behind crew checking welds. SF 10 West side of the road. Sand blasting crew is onsite cleaning the welding joints for coating crew. SF 25 Tie in crew is onsite tying in the mainline. Safety ladder is on the North side of the trench, stairs have been built into the trench on the South side. Open pit is fenced off and has proper signage. Side booms were used to hold pipe into place while the crew welded the pipe joints. SF 24 Tie in Backfill is onsite. Excavators worked together to place soil into trench covering the pipe, each excavator had a spotter with them. Crew picking up skids is also onsite, when crossing the road flaggers were used to stop traffic. signage was uncovered. SF8 Oak creek crossing KP 921+275. On the West side the crane is removing sheet piles out of

the trench and placing them to the side. The pipe is covered. On the East side the de-watering crew are pumping water from the trench to the silt bags located North of the trench. Excavators are loading rock trucks with clay. The long boom excavator was filling a sink hole with clay and packing it as he filled it up. Sand Points de-watering to silt bags. SF10- The pipe gang working on the East side of the crossing, UT crew were also on site as was the sand blasting crew cleaning the welds. SF25 Side boom holding pipe for the crew. An excavator was cleaning the trench. SF26 A truck with a Zoom boom was loading short pieces of the pipe onto it.

Work Forecast: Continue to Monitor construction, wetlands, water courses and traditional land use areas. Monitor Oak creek crossing #1.

October 19, 2018 - Safety included: 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 speeding drivers in construction zones signs are being ignored. Watch out for domestic animals. Drive with caution behind bigger vehicles causing dust up. Be careful walking up and down steep slopes.

Weather forecast/Environment: Sunny, high of 8

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

ROW is wet in some areas.

General: Attend morning meeting.

SF 8 (KP 921+275) Wetlands crew is onsite installing sheet metal pilings on the east side of the creek. Crew members are preparing to pump water out of the Bore trench. Soil that is being removed is piled in a separate pile on top of the hill. Safety ladders are in place on the North and South side of the trench. Sand points have been installed to reduce ground water. Silt fencing is installed on ground level. Spill response kits are on each side of the creek in case of any spills occur. Light plants have spill trays underneath them. SF 12 (KP 926+634) Welding pipe gang is onsite working West to East. Side booms are hauling the welding shacks along the ROW as well as storing propane tanks. Welders are welding the pipe joints together. When crossing the road crew members were flagging to stop traffic while equipment crossed. SF 26 Dozer was levelling the ROW, garbage bin is onsite for clean-up. SF 34 Crew is onsite excavating Tie-in trench. Excavator is removing soil and placing it into a rock truck which is being dumped on the South side of the ROW. Dozer is pushing the soil into piles separate from the top soil and seconds piles. T-posts and snow fencing has been installed around the open ditch, crew members are installing T-posts and rope on the North side of the trench. Proper signage is in place. Existing utilities that cross the trench are being held in place with rope and T-posts. Crew is preparing to pump water out of trench into pig pens North of the ROW. SF12 KP 926+639 Pipe gang welding crew crossing road to the East side. SF17 Poor Boy welding gang on the West side. SF20 ROW disced on the North side of the road. SF24 KP 949+564 Two excavators and a caterpillar were backfilling tie-ins with clay. SF47 KP 990+471 Excavators backfilling the pipe and tandem trucks were hauling sand for them. SF49 KP 996+500 Trenching machine was driving East. Treatment centre truck was parked a short distance down the road.

SF35 Side booms holding up pipe getting ready to go under the road. HD drill on site as was a hydro-vac truck. Work Forecast: Continue to Monitor construction, wetlands, water courses and traditional land use areas. Monitor Oak creek crossing #1.

October 20, 2018 - Safety included: 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 speeding drivers in construction zones signs are being ignored. Watch out for domestic animals. Drive with caution behind bigger vehicles causing dust up.

Weather forecast/Environment: Sunny, High of 8 very windy

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

General: Attend morning meeting.

SF 8 (KP 921+345) Oak creek crossing. Wetlands crew is onsite digging trench, excavator is removing soil and placing into rock trucks which are piling the soil on top of the hill separate from the top soil and seconds piles. Excavator with long boom is digging Bore pit deeper. Crew members are pumping water out of Bore pit, water is being pumped into pig pens. SF 25 Excavator is digging Tie-in trench. Soil is being removed and placed on the ROW. An excavator and dozer are piling the soil on the South side of the ROW. SF 32 Bore crew is onsite drilling North to South. Excavator is on the South side of the road digging Bore pit. T-posts and snow fencing is installed around the trench. Proper signage is in place. SF 35 Bore crew is onsite drilling South to North. Bore trench is being excavated by an excavator. Trench has proper signage and Snow fencing around it. Hydro Vac removing water from trench. Crew is wearing proper PPE. SF8 KP 921+345 Excavator 374F was unloading large metal sheets off of a truck on the East side of the trench on top of the bank. Another excavator was making a ramp leading into the trench. De-watering crew were also pumping water to the silt bags on the North side. Crew working on weight bags for the pipe. Long boom excavator was cleaning trench. Ladders tied on.

SF16 Pipe gang welding on the East side of the road. Side booms placing the shacks for them. SF25 Caterpillars and excavators are covering the pipe. SF27 caterpillars and excavators are backfilling tie-ins. SF32 HD drill boring under road. SF33 the fuel truck was on site. SF35 On the south side the HD drill and an excavator were working together. Hydro-vac trucks were on site. Water in the trench on the North side.

Work Forecast: Continue to Monitor construction, wetlands, water courses and traditional land use areas. Monitor Oak creek crossing #1.

Photos of Sites Visited & Topics Discussed This Week

October 15, 2018



Description & Location:

SF50 Facing West
Repair crew heating up the weld with a tiger torch and then covering with a blanket.



Description & Location:

SF26 Facing South
Side boom holding pipe for the Tie-In crew on the South side of road.

Photo



Description & Location:

Photo facing West
SF 8 Oak creek crossing
Crew prepping for the days work.

Photo



Description & Location:

Photo facing North
SF 26 North side of the road
Tie in crew is onsite tying into the mainline.

Photo



Description & Location:

Photo facing South
SF 23A
Crew unloading equipment. Flaggers stopping traffic.

Photo

Right Click
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Description & Location:

October 16, 2018

Photo



Description & Location:

Photo facing East
SF 41 East side of the road.
Excavator backfilling trench.

Photo



Description & Location:

Photo facing East
SF 42 East side of the road
Lowering in pipe into trench.

October 17, 2018



Description & Location:

SF24A Facing West
Excavators covering pipe.



Description & Location:

SF26 Facing South
Side Booms holding the pipe for the
welding crew.

October 18, 2018



Description & Location:

SF8 KP 921+275 Facing North
De-watering crew have a ladder bridge for the water hoses to cross the creek and go to the silt bags on the North side of the trench.



Description & Location:

SF10 Facing East
Pipe gang working as with two other crews, the UT crew checking the welds and the sand blasting crew cleaning the

Photo



Description & Location:

Photo facing North West.
SF 8 Oak creek crossing.
Excavator placing soil into rock truck.

Photo



Description & Location:

Photo facing North West.
SF 10 West side of the road.
Crew sand blasting pipe.

Photo



Description & Location:

Photo facing North West
SF 24 North side of the road.
Excavators backfilling trench.

Photo

Right Click
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Description & Location:

October 19, 2018



Description & Location:

SF12 Facing South KP 926+639
Two excavators carrying the welding pig
across the road to the East side.



Description & Location:

SF47 Facing East KP 990+471
Excavators are backfilling trench, and
tandem trucks are hauling sand for them.

Photo



Description & Location:

Photo facing North West.
SF 8 Oak creek crossing.
Crane preparing to instal large water pump
into Bore pit.

Photo



Description & Location:

Photo facing North.
SF 26 North side of the road.
Dozer leveling the ROW.

Photo



Description & Location:

Photo facing West
SF 34 West side of the road.
Crew excavating Tie-in ditch.

Photo

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Description & Location:

October 20, 2018



Description & Location:

SF8 Oak Creek Crossing KP 921+345
De-watering crew working on the East side. Long boom cleaning trench.



Description & Location:

SF8 Oak Creek Crossing KP 921+345
Large excavator unloading sheet metal off of a truck.

Photo



Description & Location:

Photo facing North West.
SF 8 Oak creek crossing.
Excavators digging trench, crew is pumping out water from Bore pit.

Photo



Description & Location:

Photo facing West.
SF 25 West side of the road.
Crew is digging Tie-in trench

Photo



Description & Location:

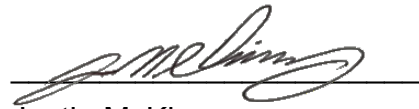
Photo facing North
SF 32 North side of the road.
Directional drilling taking place.

Photo

Right Click
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Description & Location:

APPROVALS



Justin McKinney

Senior Construction Monitor

January 14, 2019

Date



Daniel Tober

Senior Environmental Scientist

January 14, 2019

Date