



# **Fifteen Mile Stream Gold Project Map Book**

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FIGURE 1.1-1

**Fifteen Mile Stream Project Area and Proposed Transportation Routes**

Halifax County, NS

**Legend**

- Concentrate haul route (following completion of Beaver Dam Haul Road)
- Initial concentrate haul route
- Project Area



Coordinate System: NAD 1983 CSRS UTM Zone 20N  
 Projection: Transverse Mercator  
 Datum: North American 1983 CSRS  
 Units: Meter



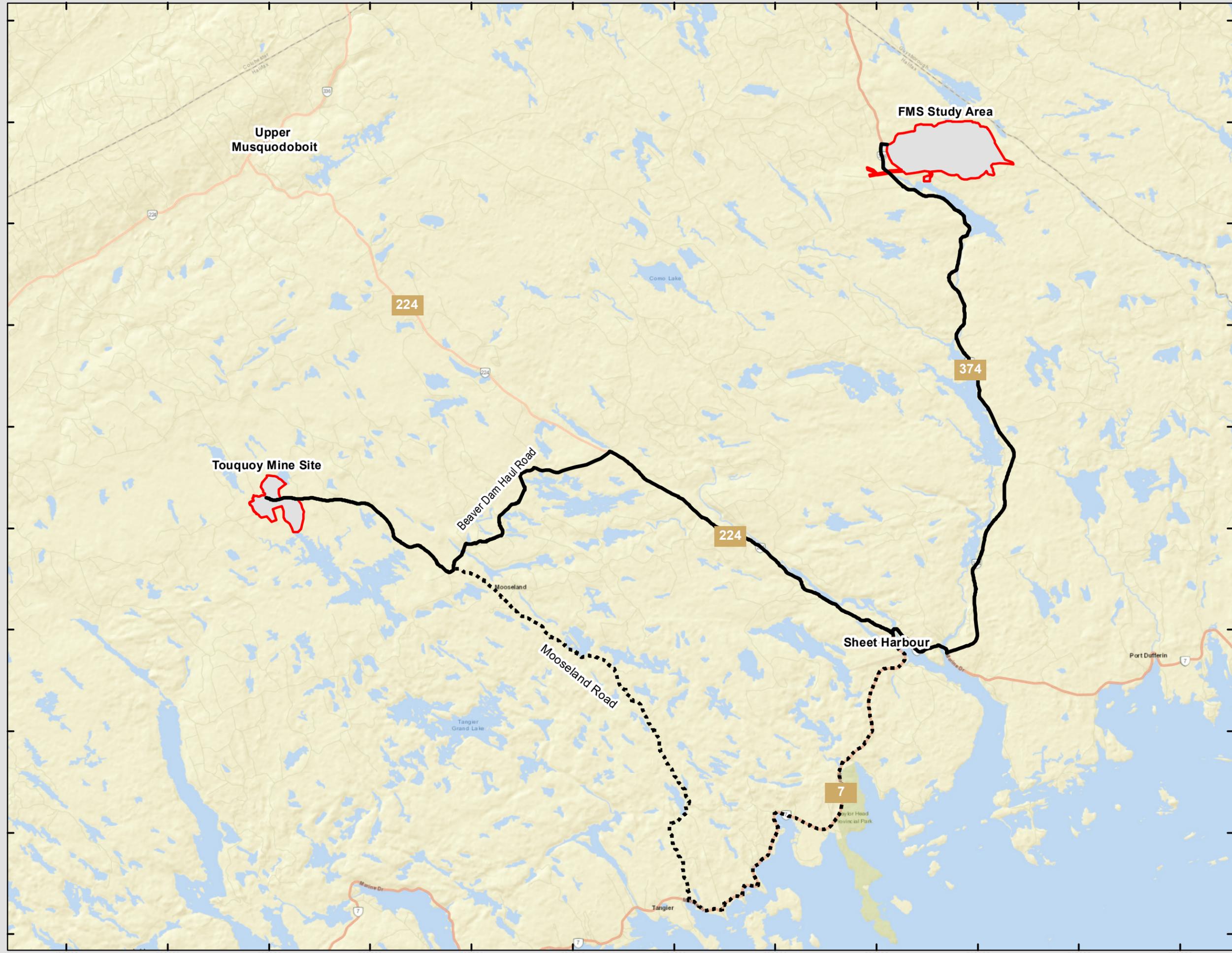
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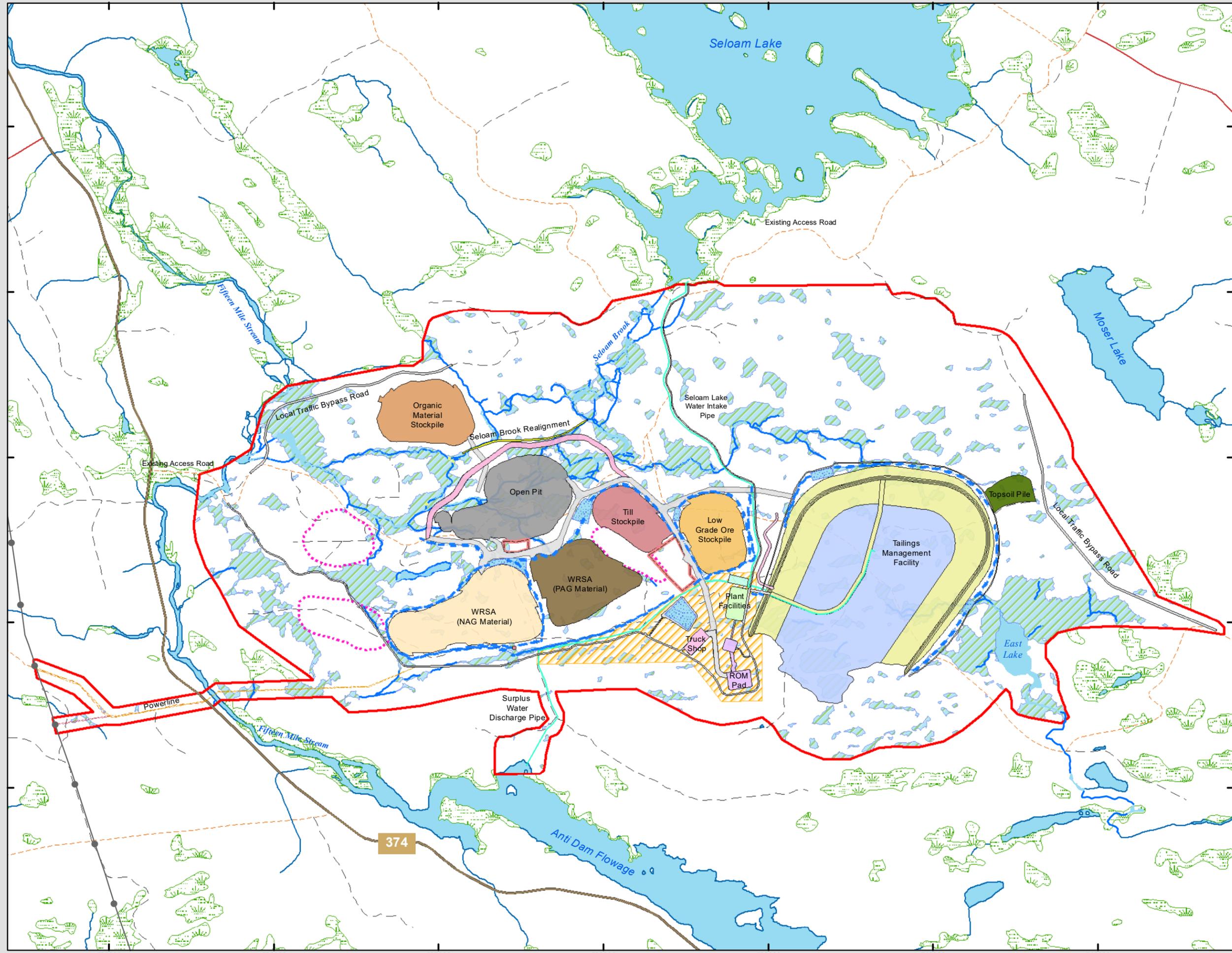
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**FIGURE 1.1-2**

**Fifteen Mile Stream Study Area**

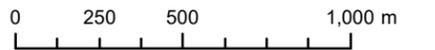
**Trafalgar, NS**



FMS Planned Infrastructure	
	Realignment Channel
	Water Control Structure
	Pit
	Plant
	Truck Shop
	Crusher Pad
	ROM Pad
	Water Treatment
	Plant and Admin Building Footprint
	Seloam Diversion Berm
	Tailings Management Facility
	TMF pond
	Topsoil Stockpile
	Organics Pile
	Till Stockpile
	Low Grade Stockpile
	WRSA (NAG)
	WRSA (PAG)
	Access Road
	Haul Road
	Contractor Laydown Area
	Outflow Channel
	Water Management Pump
	Water Management Pond
	Water Management Ditch
	Water Intake/Discharge Pipe
	Powerline Tie In
	Powerline Tie in Option 2
	Potential Borrow Pit
NSTDB Roads	
	Collector
	Local
	Dry Weather / Seasonal
	Track
	Transmission Line
	FMS Study Area



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FIGURE 2.1-1

Property Ownership

Halifax County, NS

- CW Busted
- MacGregor Properties
- NSPI
- Northern Timber
- AMNS
- Crown
- Private
- Unknown
- Road
- Water
- D.D.V. Gold Limited
- Musquodoboit Lumber Co Ltd
- Northern Timber Nova Scotia Corp
- Wilderness Area
- Provincial Park
- Project Area



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 Units: Meter



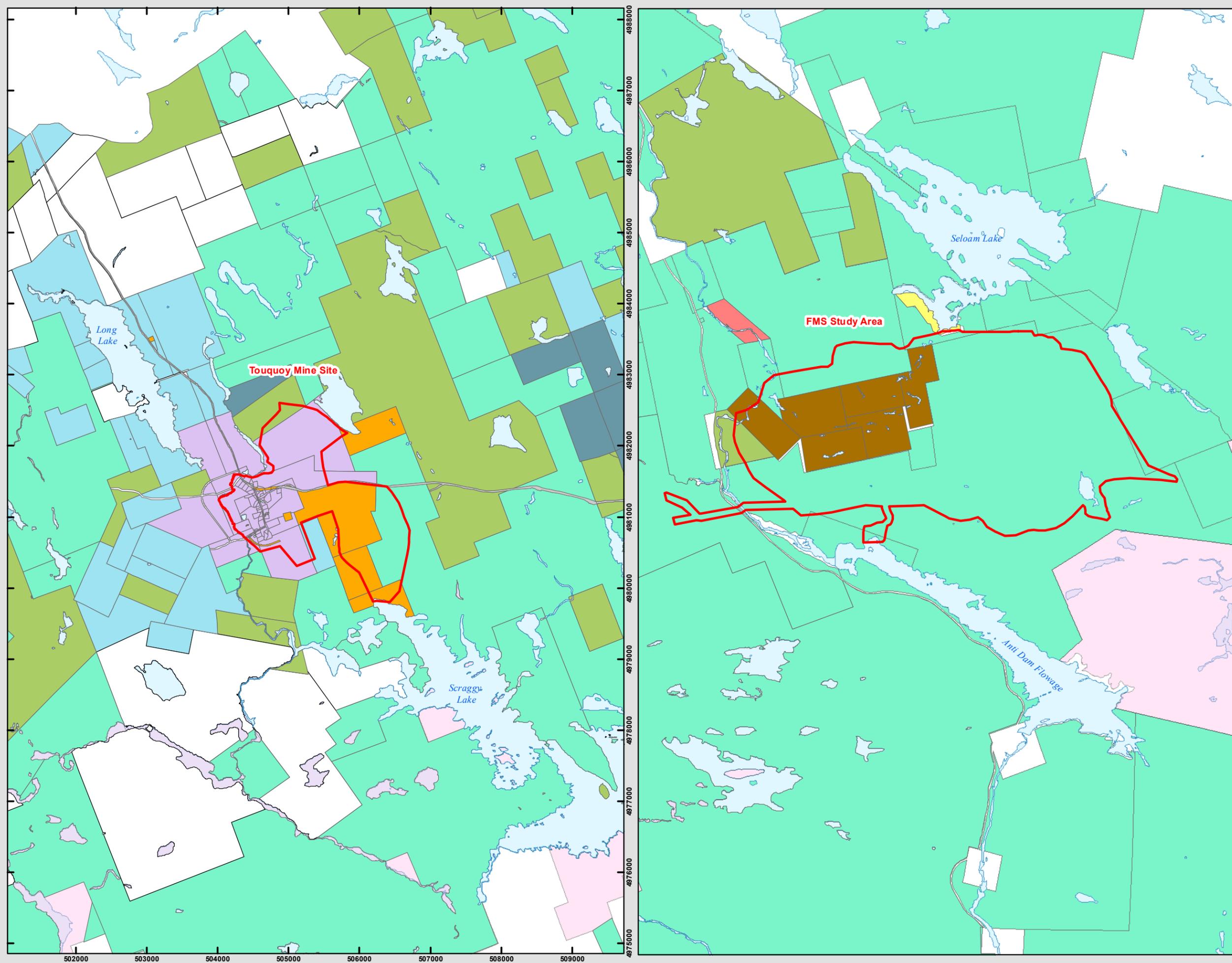
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FIGURE 2.1-2

Closest Residences

Trafalgar, NS

- Closest Residences (ID relates to Table 2.1-1)
- Transmission Line
- Collector
- Local
- Dry Weather / Seasonal
- Diveways (>300 m)
- Track
- FMS Study Area



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 Units: Meter



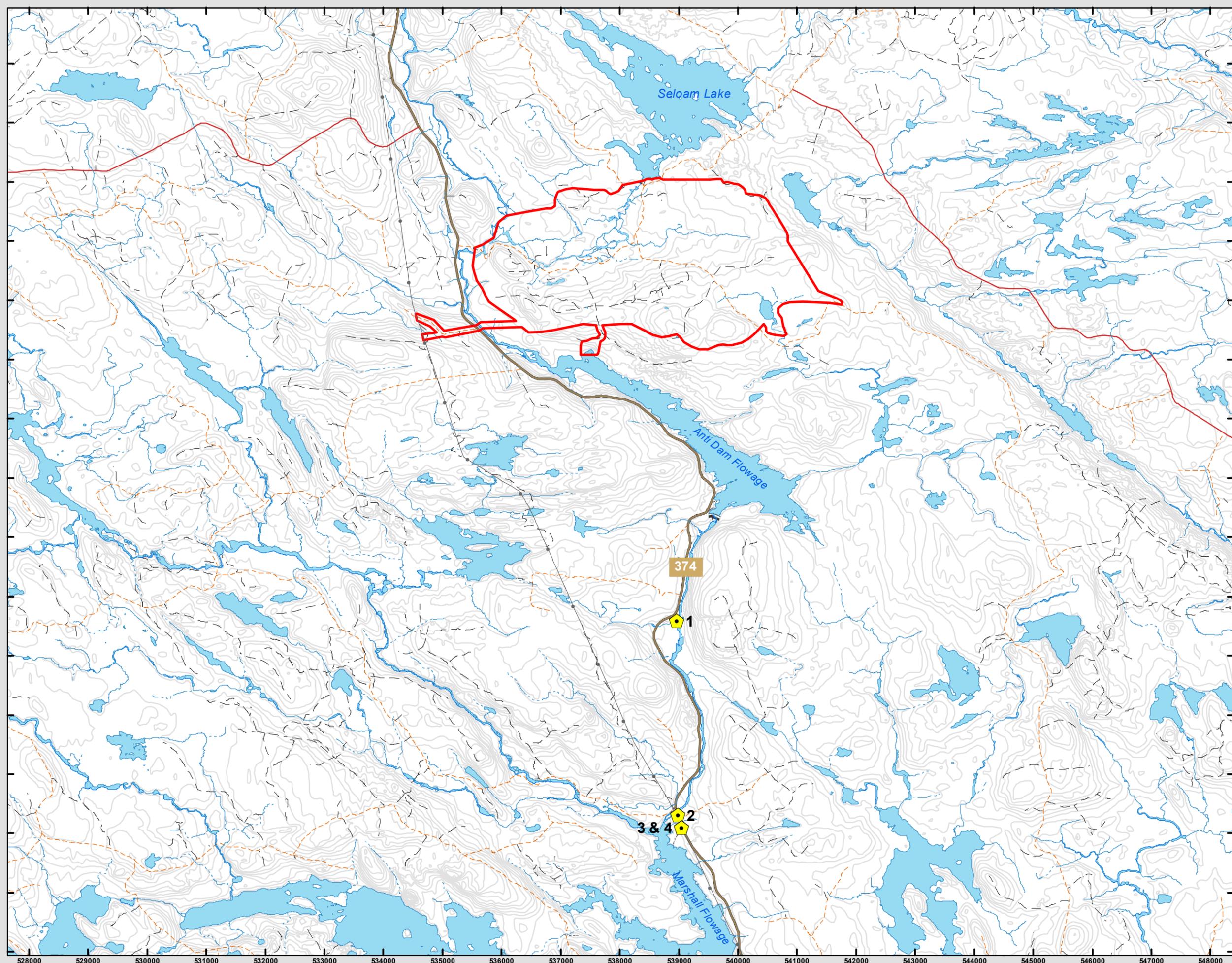
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FIGURE 2.1-3

Exploration Licences and  
AMO Locations

Trafalgar, NS

- Abandoned Mine Opening
- NSTDB Roads**
- Collector
- Local
- - - Dry Weather / Seasonal
- - - Track
- Transmission Line
- Exploration Licences
- FMS Infrastructure Layout
- FMS Study Area



Coordinate System: NAD 1983 CSRS UTM Zone 20N  
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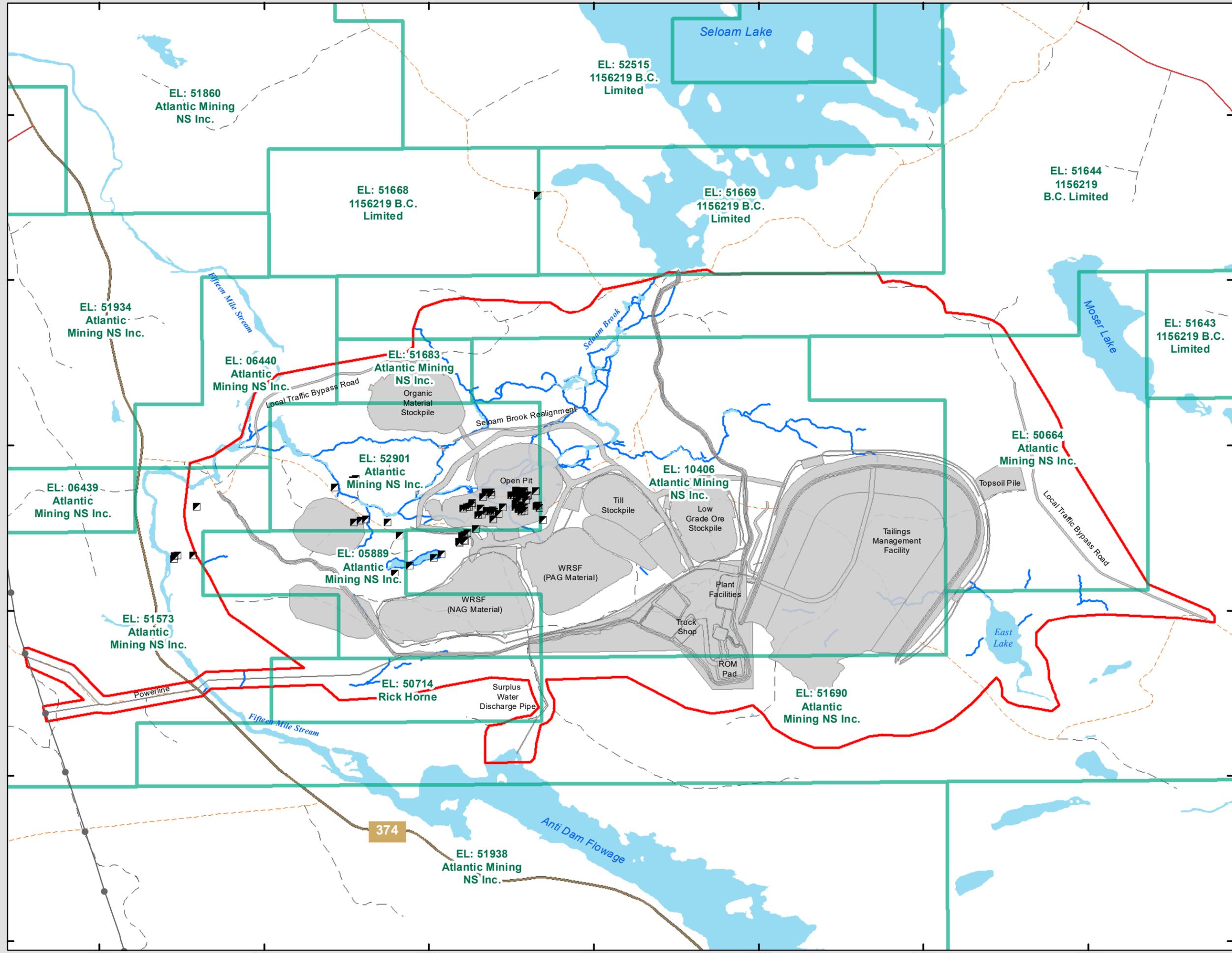
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**FIGURE 2.1-4**

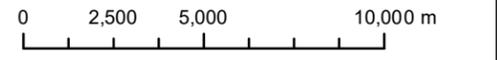
**Protected Areas**

**Halifax County, NS**

- |   |   |
|---|---|
|  Concentrate haul route (following completion of Beaver Dam Haul Road) | <b>Existing or Pending Protected Areas</b>  |
|  Initial concentrate haul route  |  Land Trust or Conservation Easement       |
|  Project Area  |  Nature Reserve                            |
|  Indian Reserve Lands  |  Wilderness Area                           |
|  Liscomb Game Sanctuary  |  Provincial Park                           |
|   |  Eastern Shore Islands Important Bird Area |



Coordinate System: NAD 1983 CSRS UTM Zone 20N  
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 Datum: North American 1983 CSRS  
 Units: Meter

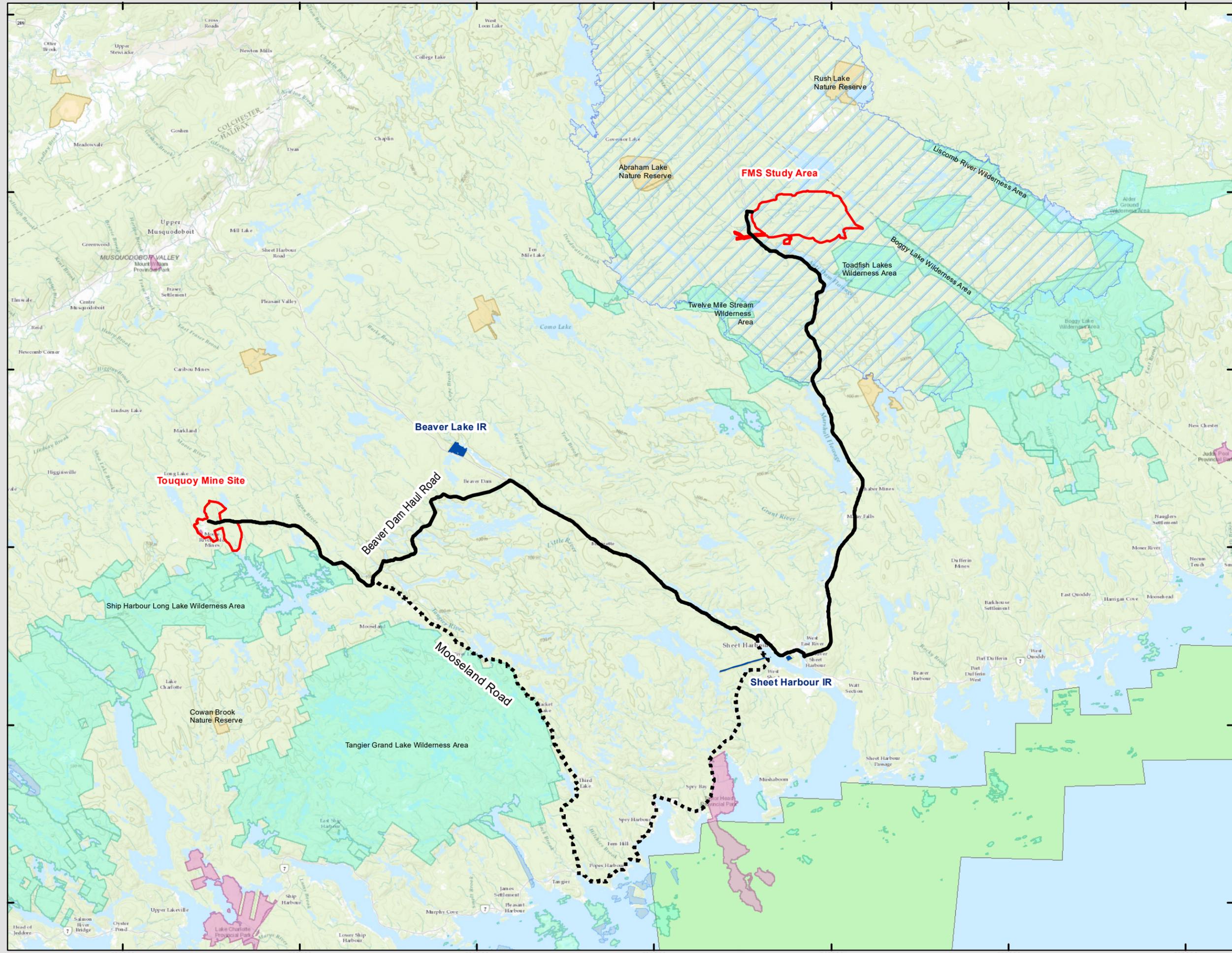


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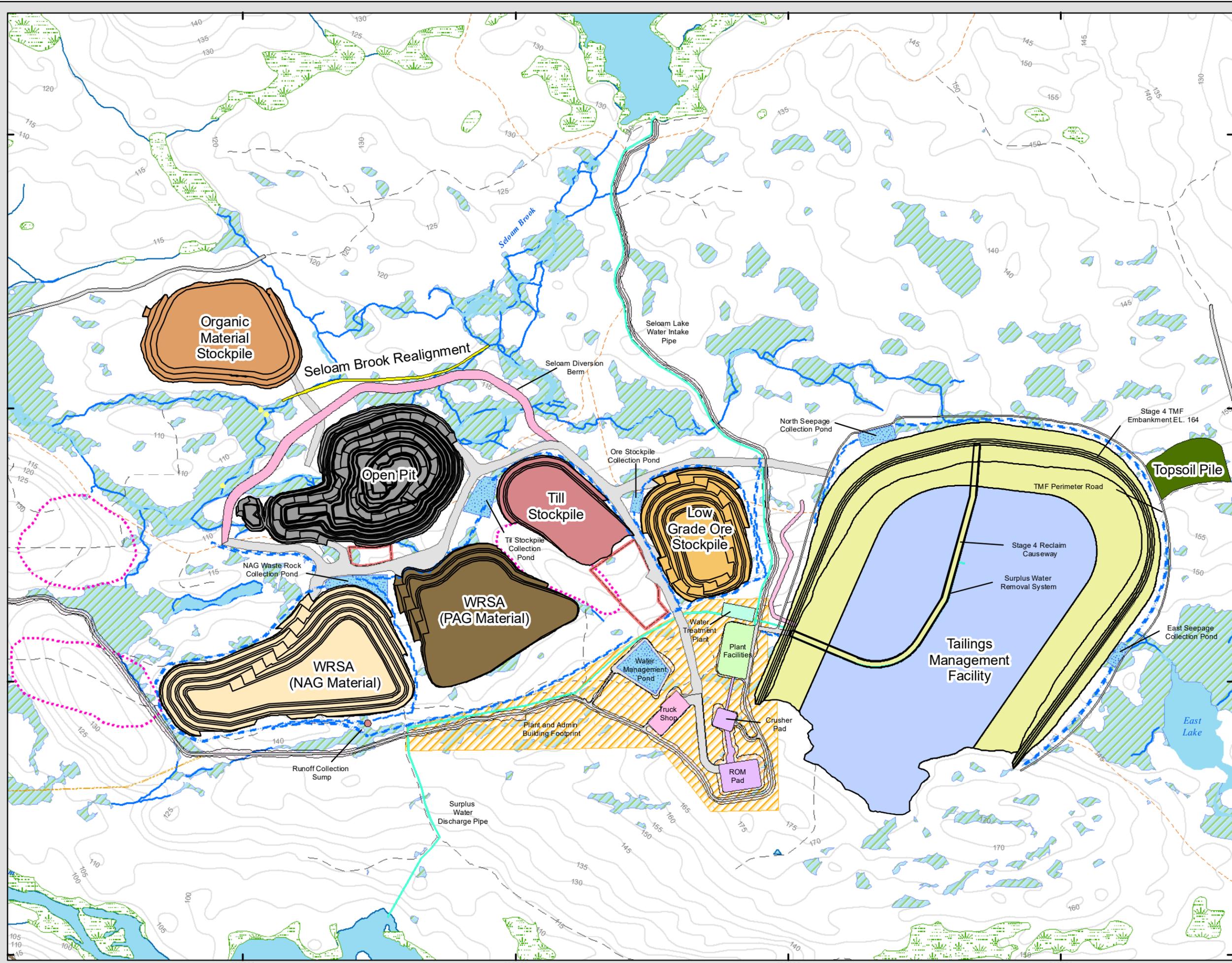
**McCallum Environmental Ltd.**



**FIGURE 2.1-5**

**Fifteen Mile Stream  
 General Mine Arrangement**

**Trafalgar, NS**



FMS Planned Infrastructure	
	Realignment Channel
	Water Control Structure
	Plant
	Truck Shop
	Crusher Pad
	ROM Pad
	Water Treatment
	Plant and Admin Building
	Footprint
	Seloam Diversion Berm
	Tailings Management Facility
	TMF Pond
	Topsoil Stockpile
	Organics Pile
	Till Stockpile
	Low Grade Stockpile
	WRSA (NAG)
	WRSA (PAG)
	Access Road
	Haul Road
	Road Cut and Fill
	Contractor Laydown Area
	Outflow Channel
	Water Management Pump
	Water Management Pond
	Water Management Ditch
	Water Intake/Discharge Pipe
	Powerline Tie In
	Potential Borrow Pit
NSTDB Roads	
	Collector
	Dry Weather / Seasonal
	Track



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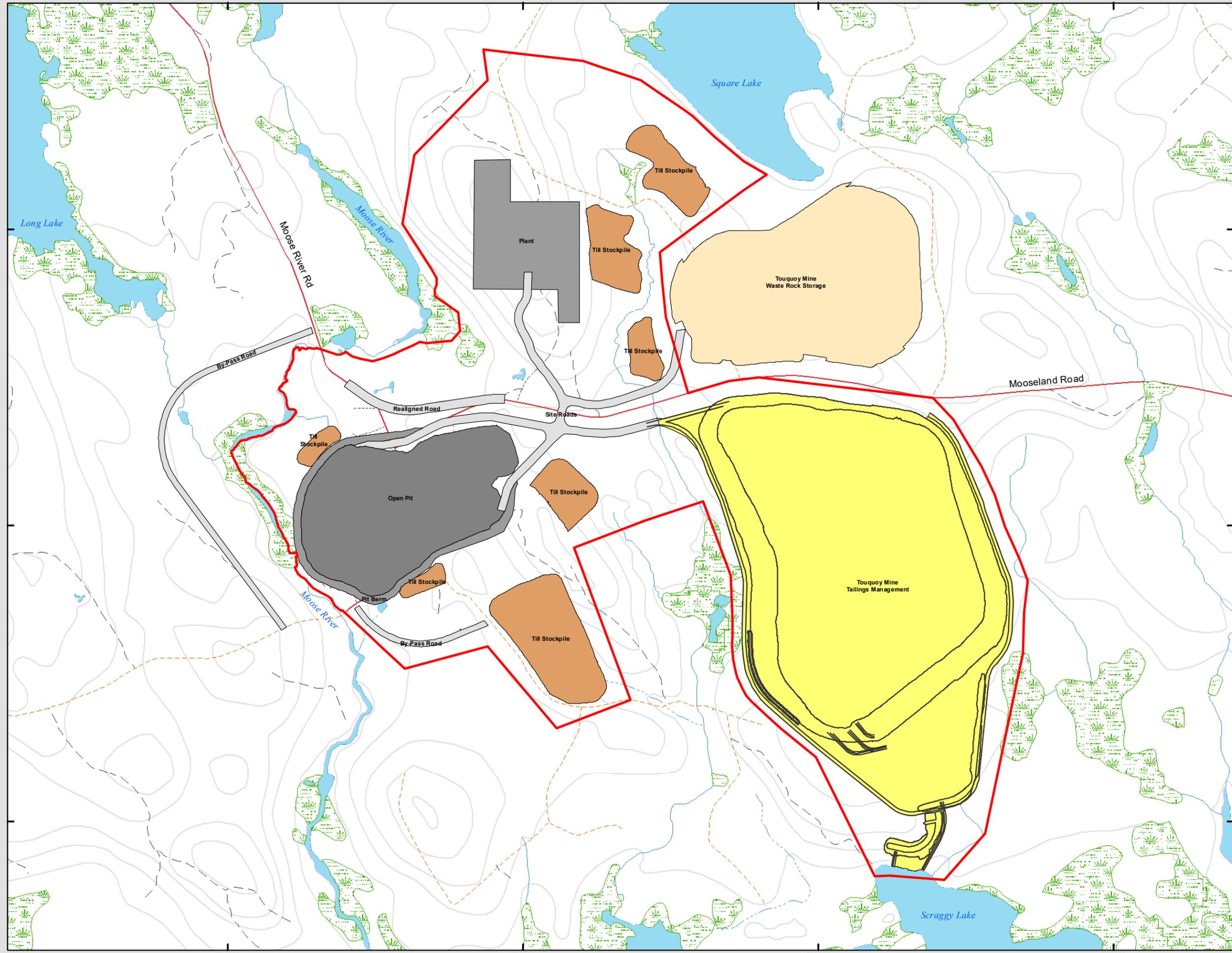
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FIGURE 2.1-6

Touquoy Mine Site

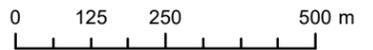
Mooseland, NS



- Touquoy Mine Infrastructure**
- Site Roads
  - Tailings Management
  - Waste Rock Storage
  - Pit
  - Plant
  - Till Stockpile
  - Pit Berm
  - Realigned Road
  - By-Pass Road
- NSTDB Lakes**
- NSTDB Lakes
  - NSE Wetlands
  - NSE Mapped Watercourses
- NSTDB Roads**
- Local
  - Dry Weather / Seasonal
  - Diveways (>300 m)
  - Track
- Touquoy Mine Site**
- Touquoy Mine Site



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 Datum: North American 1983 CSRS  
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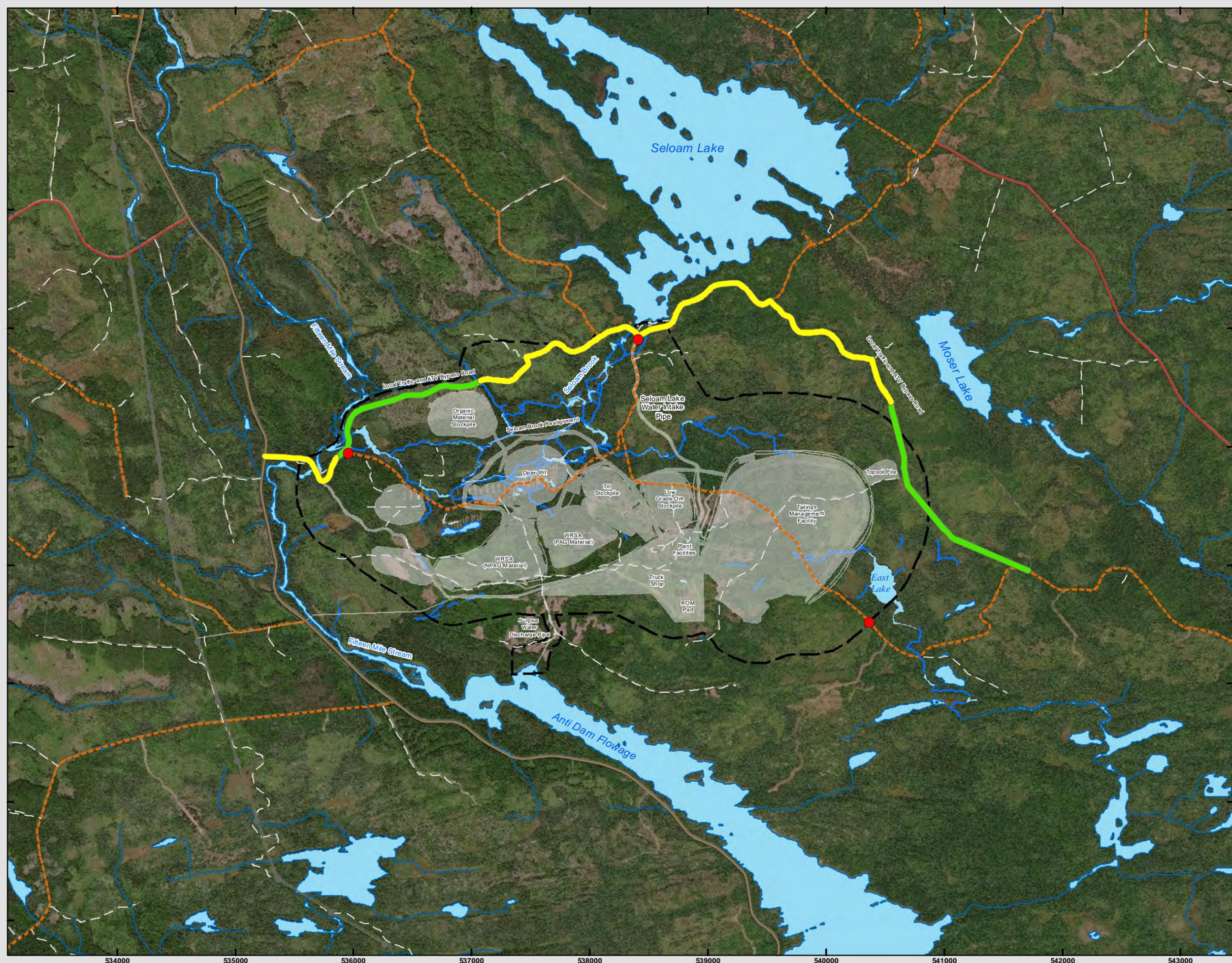


FIGURE 2.1-7

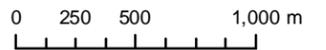
Fifteen Mile Stream Study Area Access

Trafalgar, NS

- Current access points that will be restricted
- Local Traffic and ATV Bypass Road**
  - Existing Access Road
  - New Road Construction
- NSTDB Existing Roads**
  - Highway
  - Local
  - Dry Weather / Seasonal
  - Track
  - Transmission Line
  - Proposed Property Boundary
  - FMS Proposed Infrastructure



Coordinate System: NAD 1983 CSRS UTM Zone 20N  
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 Units: Meter

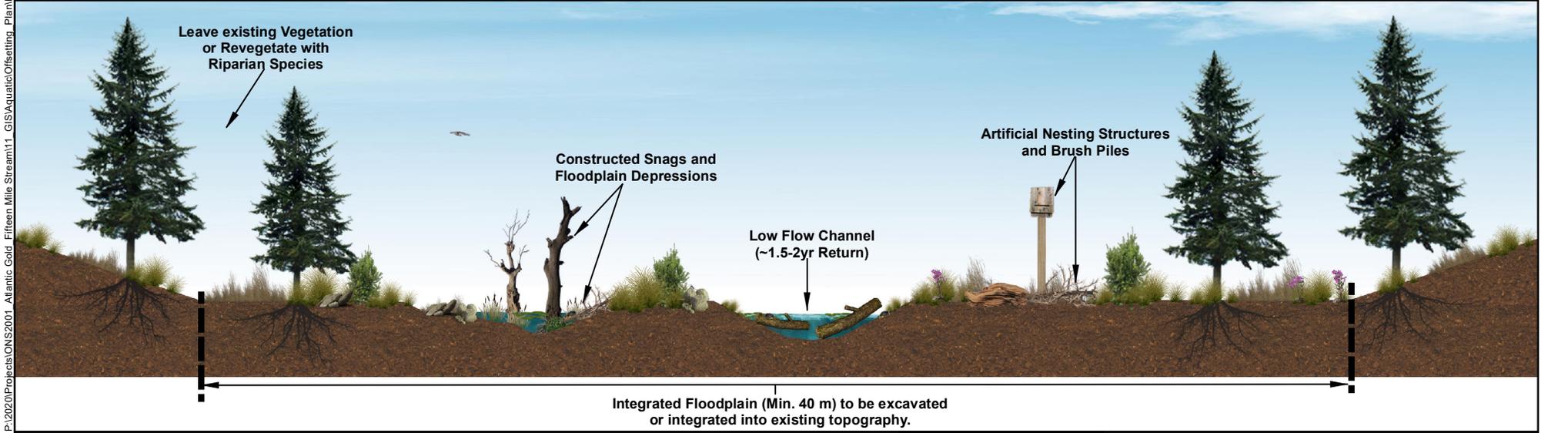
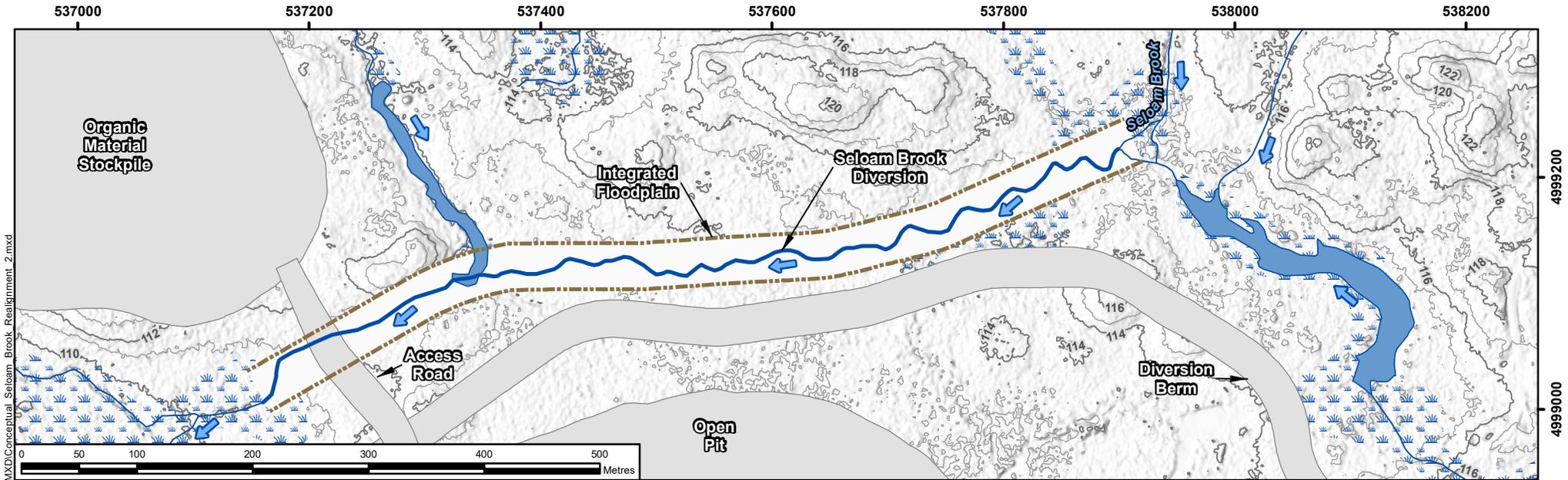


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<b>LEGEND</b> Seloam Brook Diversion Channel (Representative - Design to be Developed) Integrated Floodplain Proposed Mine Feature Watercourse Waterbody Wetland Major Contours (2 metre intervals) Minor Contours (1 metre intervals) Flow Direction	<b>NOTES:</b> - Proposed site plan layout provided by Knight Piésold Consulting, June 18, 2020. - Topographic base data extracted from Nova Scotia GeoPortal.	<b>Atlantic Gold</b> A St Barbara Ltd Company	
		<b>FIFTEEN MILE STREAM GOLD PROJECT</b>	
<b>Conceptual Seloam Brook Channel Realignment</b>		PROJECT N <sup>o</sup> : ONS2001	FIGURE: 2.2-1
Datum: NAD83 Projection: UTM Zone 20N			SCALE: AS SHOWN
		DATE: August 2020	

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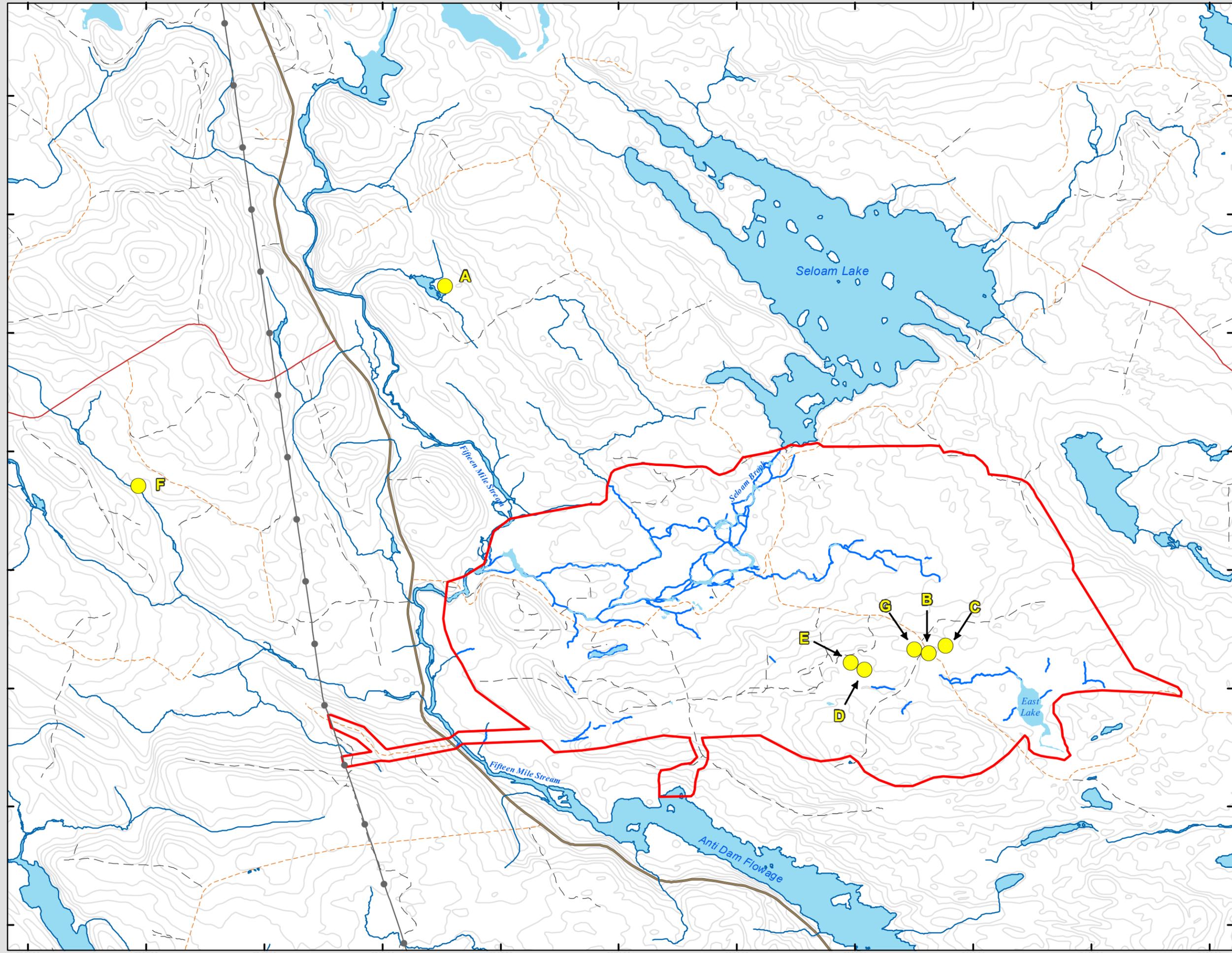


**FIGURE 2.6-1**

**Fifteen Mile Stream  
Study Area:  
Alternative Tailings  
Management  
Facility Sites**

**Trafalgar, NS**

-  Tailings Management Facility Alternative Centroid
-  FMS Study Area
- NSTDB Roads & Utilities**
-  Collector
-  Local
-  Dry Weather / Seasonal
-  Track
-  Transmission Line



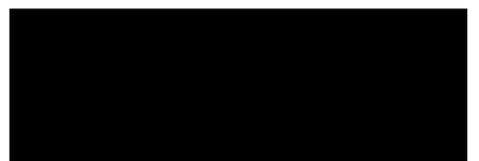
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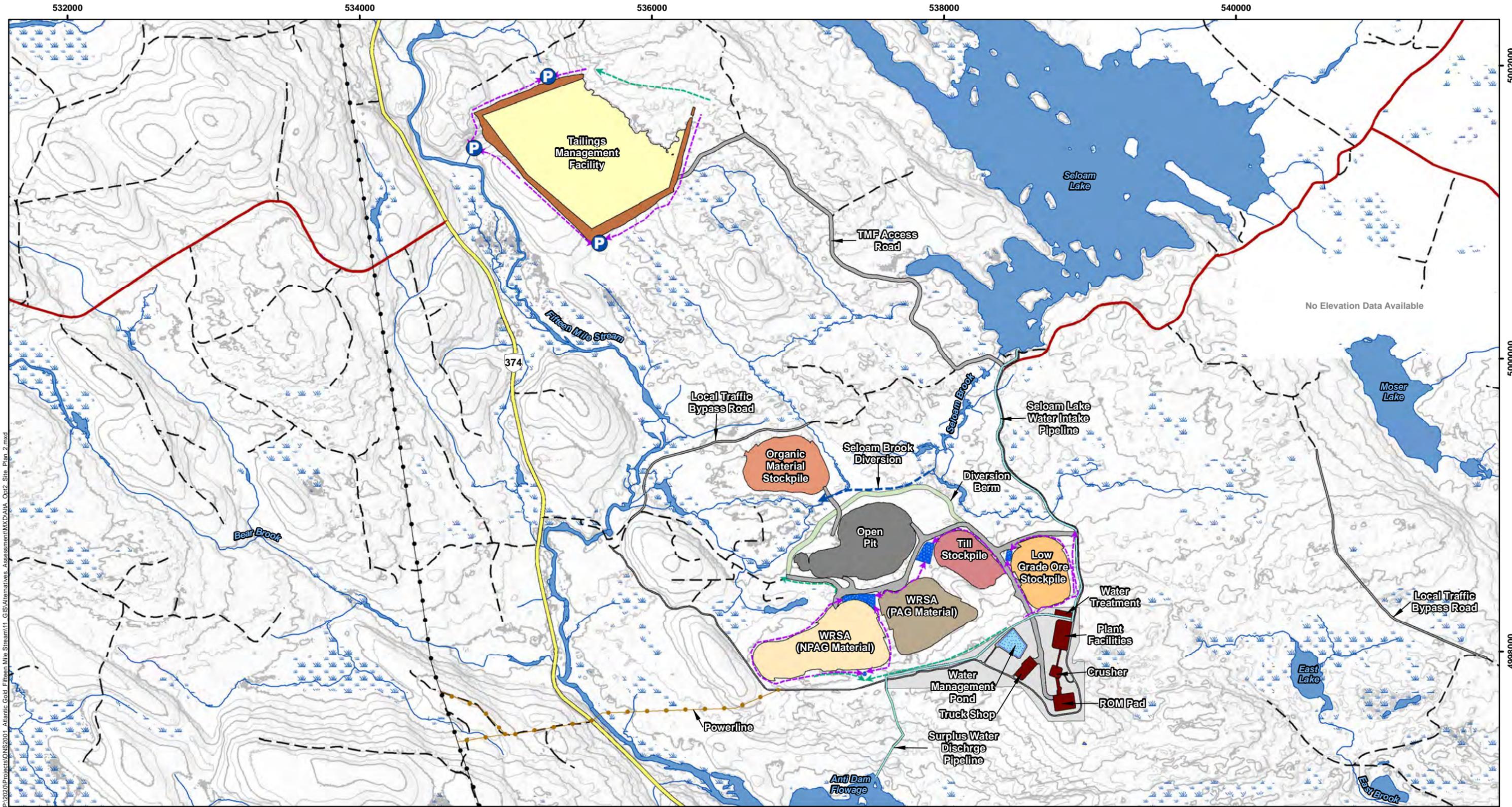
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**LEGEND**

●—● Utility Line	Wetland	<b>Proposed Mine Features</b>	Low Grade Ore Stockpile	Buildings / Crusher
— Highway	Major Contours (10 metre intervals)	Watercourse Diversion	Organic Material Stockpile	Administration Area
— Local	Minor Contours (5 metre intervals)	Non-contact Water Diversion Ditch	Till Stockpile	Haul / Access Roads
- - Resource / Track		Seepage Collection Ditch	WRSA (NAG Stockpile)	
Watercourse		Powerline	WRSA (PAG Stockpile)	
Waterbody		Pipeline		
		Open Pit		
		TMF Seepage Collection Ponds		
		Tailings Management Facility Dam		
		Deposited Tailings		
		Diversion Berm		
		Seepage Collection Ponds		
		Water Management Pond		

**NOTES:**  
 - Proposed site plan layout provided by Knight Piésold Consulting, June 18, 2020.  
 - Topographic base data extracted from Nova Scotia GeoPortal.

Datum: NAD83  
 Projection: UTM Zone 20N

<p>A St Barbara Ltd Company</p>	
<p><b>FIFTEEN MILE STREAM GOLD PROJECT</b></p> <p><b>Alternative A Configuration</b></p>	
<p>PROJECT N°: ONS2001</p> <p>SCALE: 1:25,000</p>	<p>FIGURE: 2.6-2</p> <p>DATE: July 2020</p>



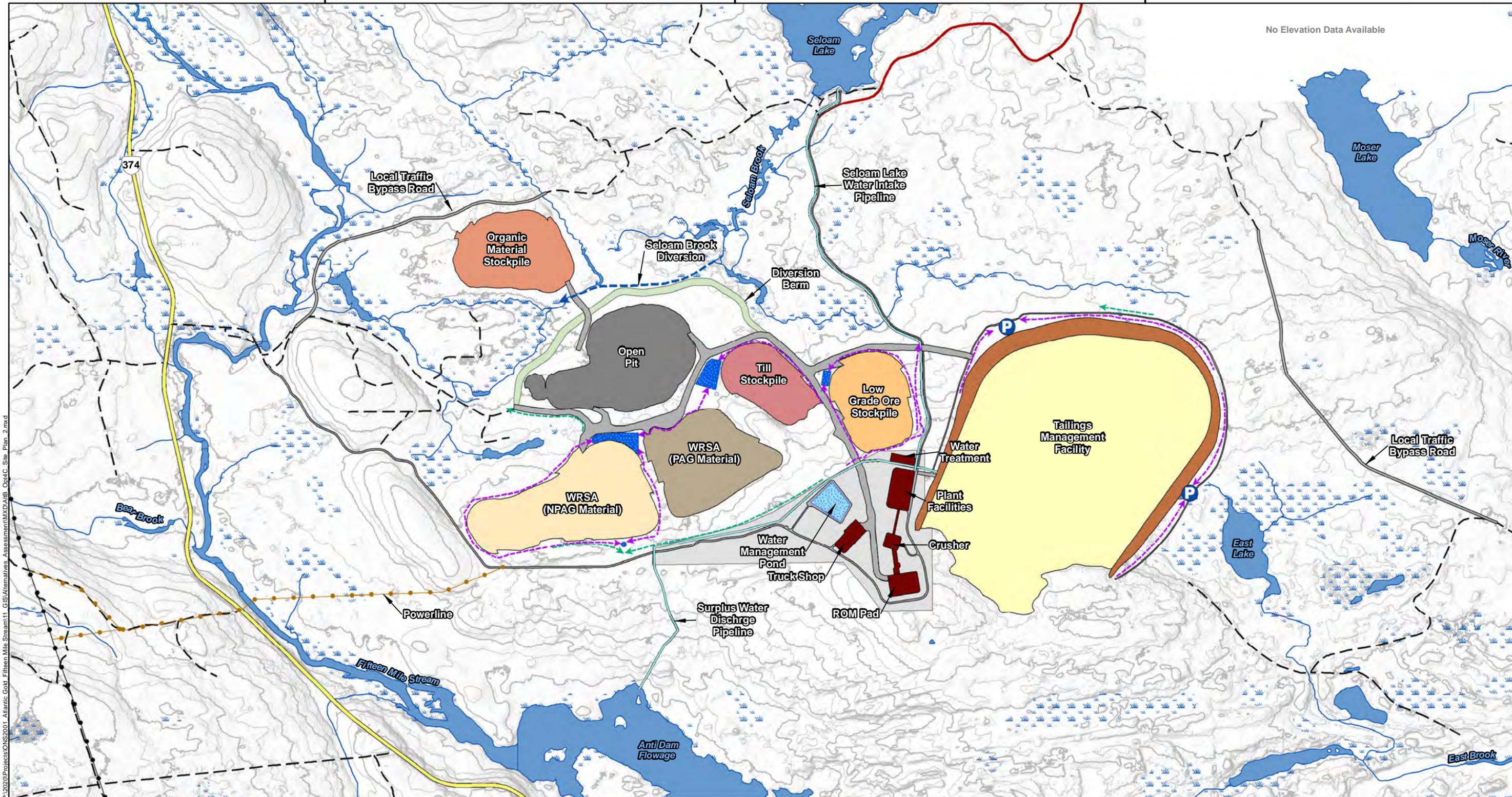
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536000

538000

540000

No Elevation Data Available



P:\2020\Projects\ONS2001 - Atlantic Gold - Fifteen Mile Stream\11 - GIS\Alternatives - Assessment\MXD\AIB - Opt4C - Site Plan - 2.mxd

**LEGEND**

- |                      |                                     |                                   |                                  |                            |                     |
|----------------------|-------------------------------------|-----------------------------------|----------------------------------|----------------------------|---------------------|
| ●—● Utility Line     | Wetland                             | Proposed Mine Features            | TMF Seepage Collection Ponds     | Low Grade Ore Stockpile    | Buildings / Crusher |
| — Highway            | Major Contours (10 metre intervals) | Watercourse Diversion             | Tailings Management Facility Dam | Organic Material Stockpile | Administration Area |
| — Local              | Minor Contours (5 metre intervals)  | Non-contact Water Diversion Ditch | Deposited Tailings               | Till Stockpile             | Haul / Access Roads |
| - - Resource / Track |                                     | Seepage Collection Ditch          | Water Management Pond            | WRSA (NAG Stockpile)       |                     |
| Watercourse          |                                     | Powerline                         |                                  | WRSA (PAG Stockpile)       |                     |
| Waterbody            |                                     | Pipeline                          |                                  |                            |                     |
|                      |                                     | Open Pit                          |                                  |                            |                     |

**NOTES:**  
 - Proposed site plan layout provided by Knight Piésold Consulting, June 18, 2020.  
 - Topographic base data extracted from Nova Scotia GeoPortal.



**FIFTEEN MILE STREAM GOLD PROJECT**

**Alternative B Configuration**



Datum: NAD83  
 Projection: UTM Zone 20N



PROJECT N°: ONS2001

FIGURE: 2.6-3

SCALE: 1:18,000

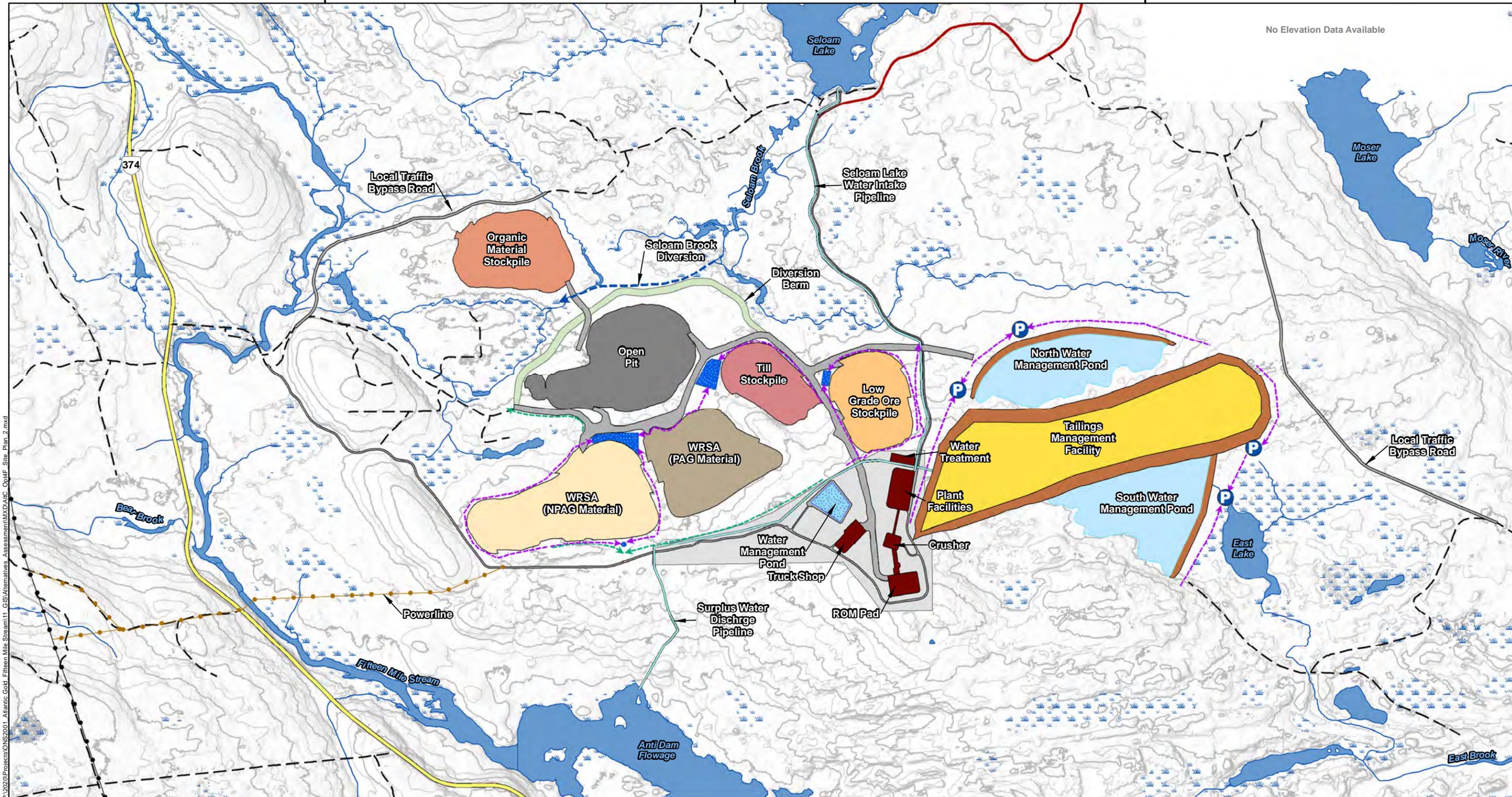
DATE: July 2020

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No Elevation Data Available



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**LEGEND**

- |                      |                                     |                                   |                           |                            |                     |
|----------------------|-------------------------------------|-----------------------------------|---------------------------|----------------------------|---------------------|
| ●—● Utility Line     | Wetland                             | Proposed Mine Features            | Filtered Tailings Storage | Low Grade Ore Stockpile    | Buildings / Crusher |
| — Highway            | Major Contours (10 metre intervals) | Watercourse Diversion             | Dam                       | Organic Material Stockpile | Administration Area |
| — Local              | Minor Contours (5 metre intervals)  | Non-contact Water Diversion Ditch | TMF Water Management Pond | Till Stockpile             | Haul / Access Roads |
| - - Resource / Track |                                     | Seepage Collection Ditch          | Diversion Berm            | WRSA (NAG Stockpile)       |                     |
| Watercourse          |                                     | Powerline                         | Seepage Collection Ponds  | WRSA (PAG Stockpile)       |                     |
| Waterbody            |                                     | Pipeline                          | Water Management Pond     |                            |                     |
|                      |                                     | Open Pit                          |                           |                            |                     |
|                      |                                     | TMF Seepage Collection Ponds      |                           |                            |                     |

**NOTES:**  
 - Proposed site plan layout provided by Knight Piésold Consulting, June 18, 2020.  
 - Topographic base data extracted from Nova Scotia GeoPortal.



**FIFTEEN MILE STREAM GOLD PROJECT**

**Alternative C Configuration**



Datum: NAD83  
 Projection: UTM Zone 20N



PROJECT N°: ONS2001

FIGURE: 2.6-4

SCALE: 1:18,000

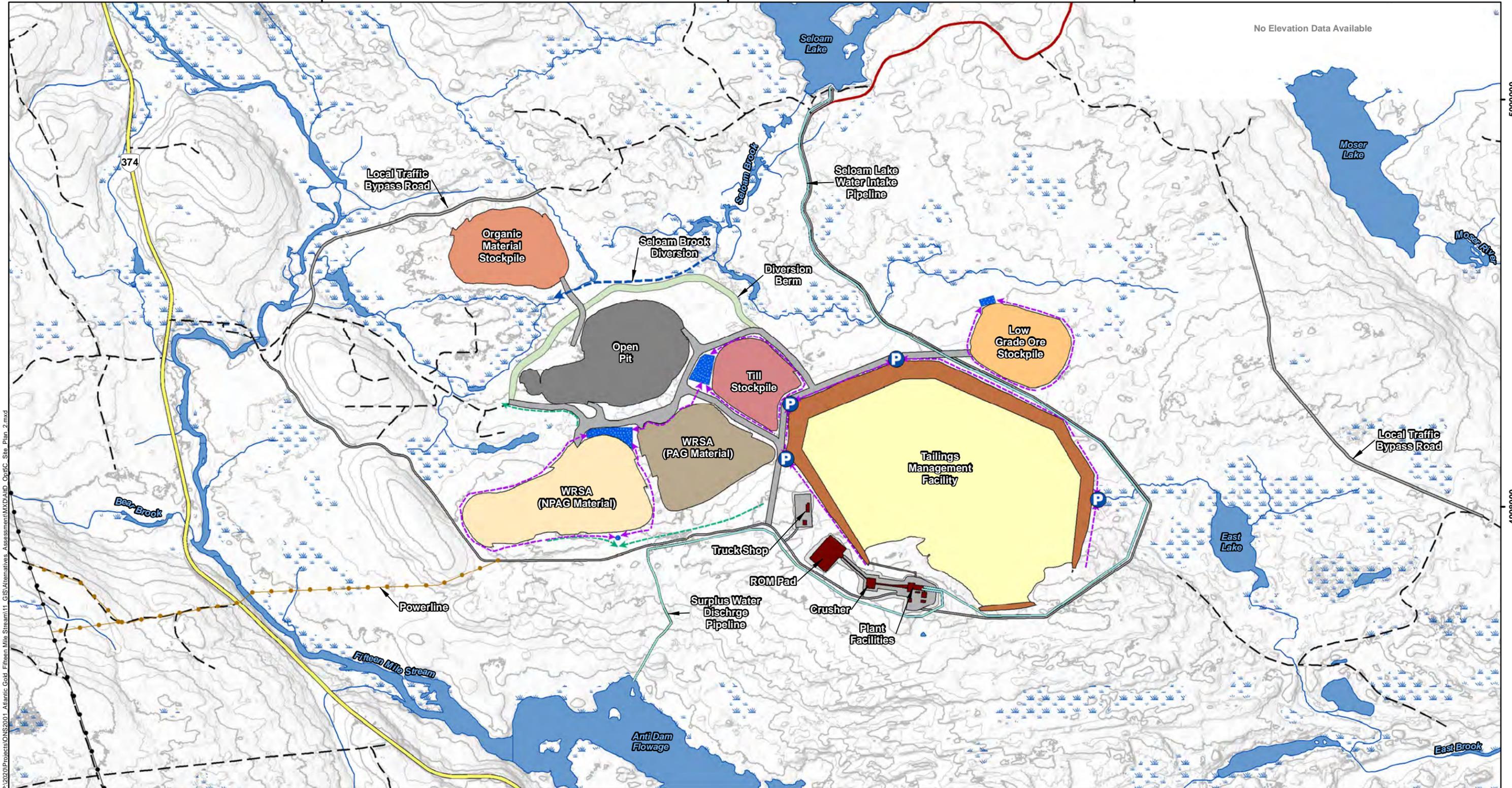
DATE: July 2020

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**LEGEND**

- |                      |                                     |                                   |                                  |                            |                     |
|----------------------|-------------------------------------|-----------------------------------|----------------------------------|----------------------------|---------------------|
| ●—● Utility Line     | Wetland                             | <b>Proposed Mine Features</b>     | TMF Seepage Collection Ponds     | Low Grade Ore Stockpile    | Buildings / Crusher |
| — Highway            | Major Contours (10 metre intervals) | Watercourse Diversion             | Tailings Management Facility Dam | Organic Material Stockpile | Administration Area |
| — Local              | Minor Contours (5 metre intervals)  | Non-contact Water Diversion Ditch | Deposited Tailings               | Till Stockpile             | Haul / Access Roads |
| - - Resource / Track |                                     | Seepage Collection Ditch          | Seepage Collection Ponds         | WRSA (NAG Stockpile)       |                     |
| Watercourse          |                                     | Powerline                         |                                  | WRSA (PAG Stockpile)       |                     |
| Waterbody            |                                     | Pipeline                          |                                  |                            |                     |
|                      |                                     | Open Pit                          |                                  |                            |                     |

**NOTES:**  
 - Proposed site plan layout provided by Knight Piésold Consulting, June 18, 2020.  
 - Topographic base data extracted from Nova Scotia GeoPortal.



**FIFTEEN MILE STREAM GOLD PROJECT**

**Alternative D Configuration**

Datum: NAD83  
Projection: UTM Zone 20N



PROJECT N°: ONS2001

FIGURE: 2.6-5

SCALE: 1:18,000

DATE: July 2020

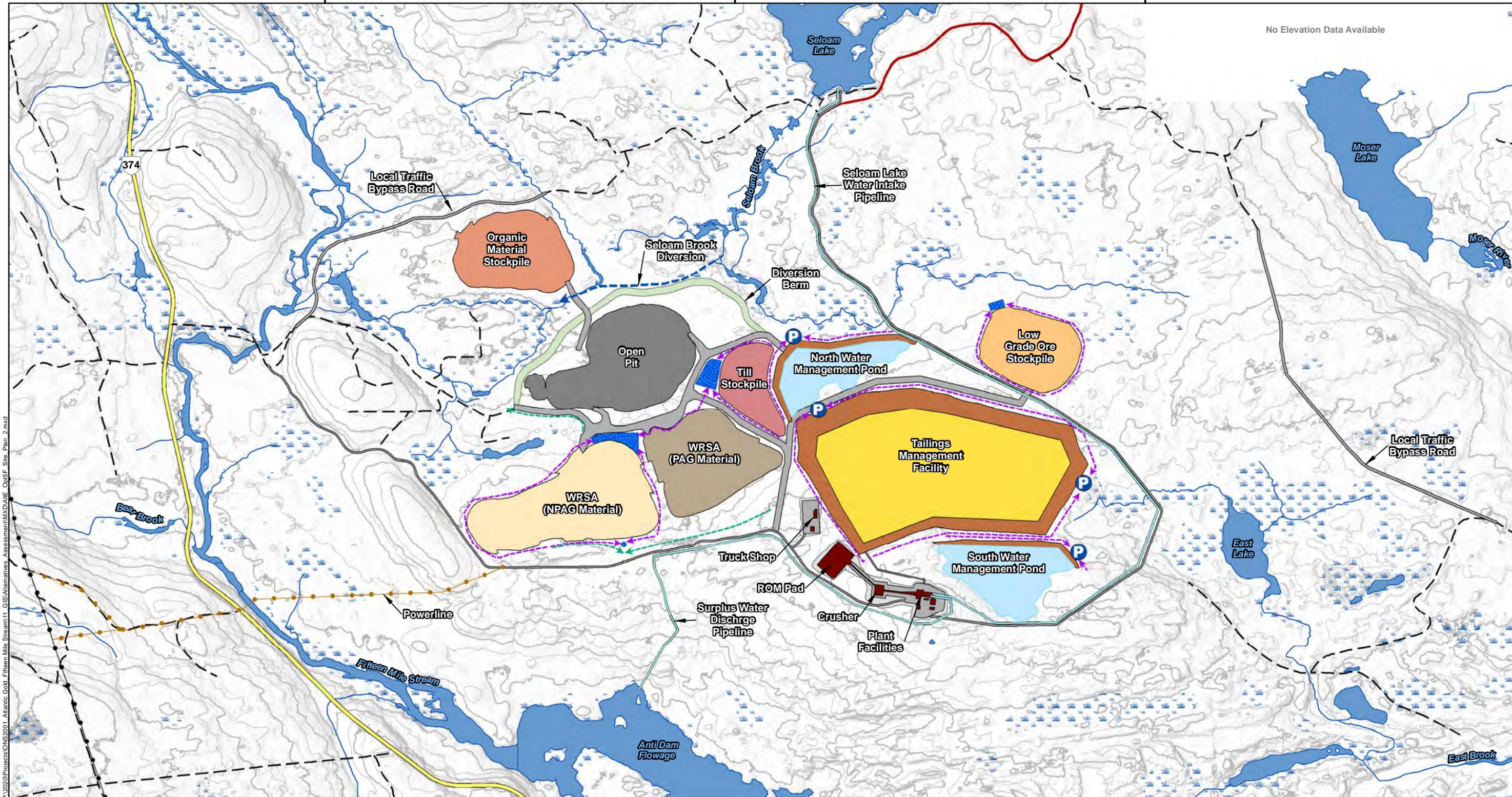


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**LEGEND**

- Utility Line
- Highway
- Local
- - Resource / Track
- ~ Watercourse
- Waterbody
- Wetland
- ~ Major Contours (10 metre intervals)
- ~ Minor Contours (5 metre intervals)
- ➡ Proposed Mine Features
  - ➡ Watercourse Diversion
  - ➡ Non-contact Water Diversion Ditch
  - ➡ Seepage Collection Ditch
  - Powerline
  - Pipeline
  - Open Pit
- Ⓟ TMF Seepage Collection Ponds
- Dam
- TMF Water Management Pond
- Filtered Tailings Storage
- Diversion Berm
- Seepage Collection Ponds
- Low Grade Ore Stockpile
- Organic Material Stockpile
- Till Stockpile
- WRSA (NAG Stockpile)
- WRSA (PAG Stockpile)
- Buildings / Crusher
- Administration Area
- Haul / Access Roads

**NOTES:**  
 - Proposed site plan layout provided by Knight Piésold Consulting, June 18, 2020.  
 - Topographic base data extracted from Nova Scotia GeoPortal.



**FIFTEEN MILE STREAM GOLD PROJECT**

**Alternative E Configuration**



Datum: NAD83  
 Projection: UTM Zone 20N

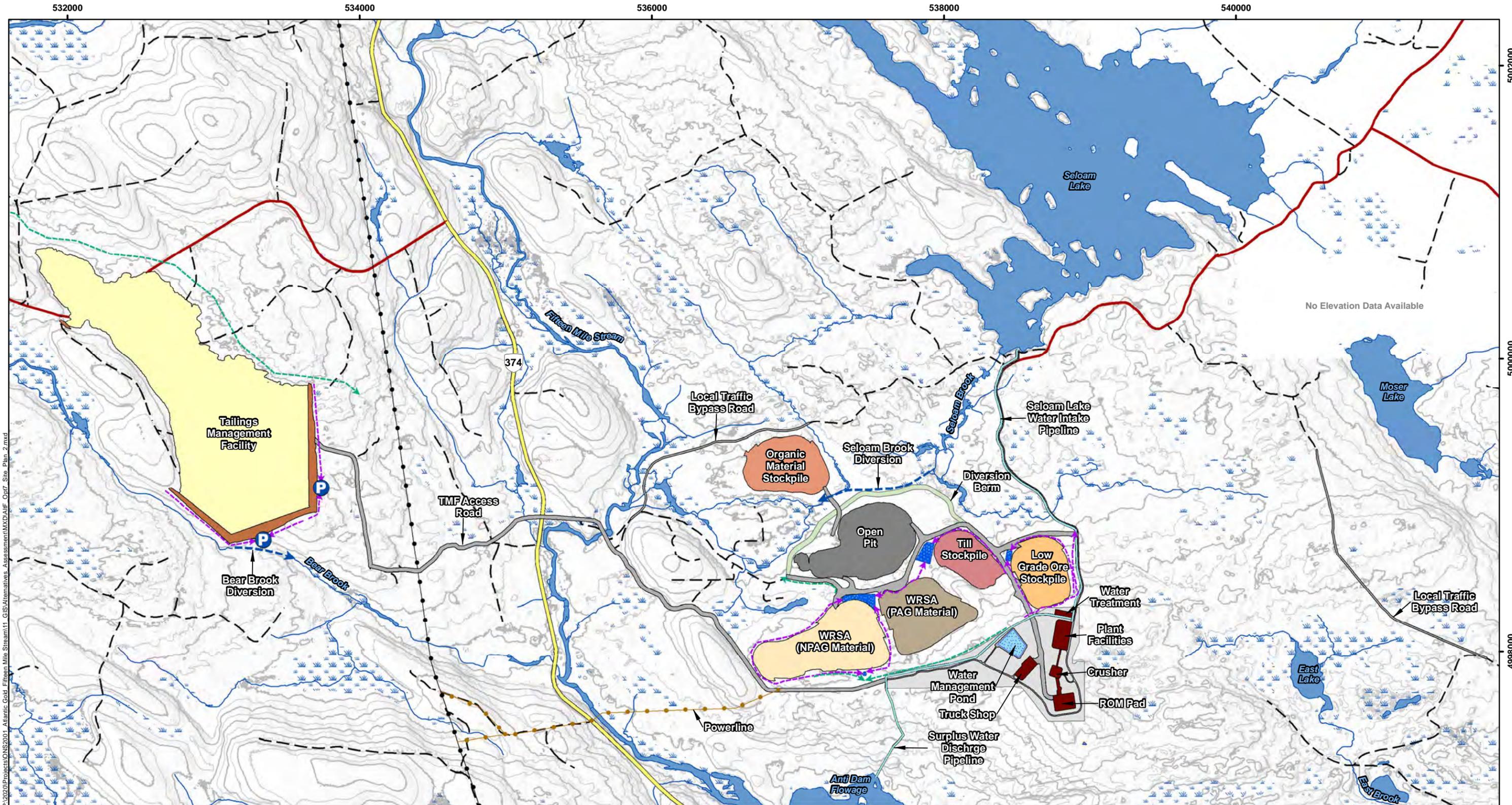


PROJECT N°: ONS2001

FIGURE: 2.6-6

SCALE: 1:18,000

DATE: July 2020



**LEGEND**

●—● Utility Line	Wetland	<b>Proposed Mine Features</b>	● TMF Seepage Collection Ponds	Low Grade Ore Stockpile	Buildings / Crusher
— Highway	Major Contours (10 metre intervals)	→ Watercourse Diversion	● Tailings Management Facility Dam	Organic Material Stockpile	Administration Area
— Local	Minor Contours (5 metre intervals)	→ Non-contact Water Diversion Ditch	● Deposited Tailings	Till Stockpile	Haul / Access Roads
- - Resource / Track		→ Seepage Collection Ditch	● Diversion Berm	WRSA (NAG Stockpile)	
Watercourse		● Powerline	● Seepage Collection Ponds	WRSA (PAG Stockpile)	
Waterbody		— Pipeline	● Water Management Pond		
		Open Pit			

**NOTES:**  
 - Proposed site plan layout provided by Knight Piésold Consulting, June 18, 2020.  
 - Topographic base data extracted from Nova Scotia GeoPortal.

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**FIFTEEN MILE STREAM GOLD PROJECT**

**Alternative F Configuration**

Datum: NAD83  
 Projection: UTM Zone 20N

PROJECT N°: ONS2001 **FIGURE: 2.6-7**

SCALE: 1:25,000 **DATE: July 2020**

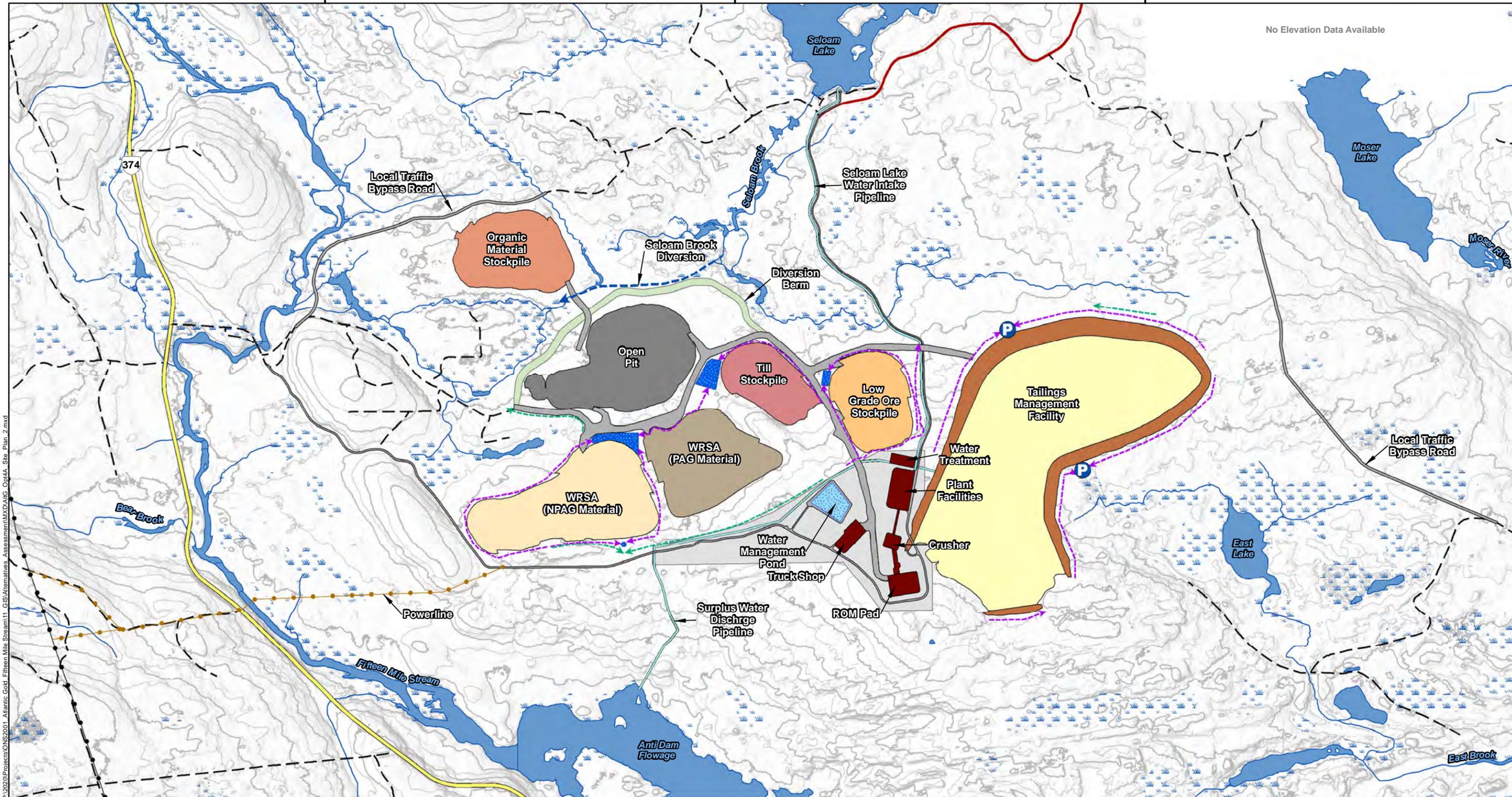


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No Elevation Data Available



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**LEGEND**

- |                      |                                     |                                   |                                  |                     |
|----------------------|-------------------------------------|-----------------------------------|----------------------------------|---------------------|
| ●—● Utility Line     | Wetland                             | <b>Proposed Mine Features</b>     | Low Grade Ore Stockpile          | Buildings / Crusher |
| — Highway            | Major Contours (10 metre intervals) | Watercourse Diversion             | Organic Material Stockpile       | Administration Area |
| — Local              | Minor Contours (5 metre intervals)  | Non-contact Water Diversion Ditch | Till Stockpile                   | Haul / Access Roads |
| - - Resource / Track |                                     | Seepage Collection Ditch          | WRSA (NAG Stockpile)             |                     |
| Watercourse          |                                     | Powerline                         | WRSA (PAG Stockpile)             |                     |
| Waterbody            |                                     | Pipeline                          |                                  |                     |
|                      |                                     | Open Pit                          |                                  |                     |
|                      |                                     |                                   | TMF Seepage Collection Ponds     |                     |
|                      |                                     |                                   | Tailings Management Facility Dam |                     |
|                      |                                     |                                   | Deposited Tailings               |                     |
|                      |                                     |                                   | Diversion Berm                   |                     |
|                      |                                     |                                   | Seepage Collection Ponds         |                     |
|                      |                                     |                                   | Water Management Pond            |                     |

**NOTES:**  
 - Proposed site plan layout provided by Knight Piésold Consulting, June 18, 2020.  
 - Topographic base data extracted from Nova Scotia GeoPortal.



**FIFTEEN MILE STREAM GOLD PROJECT**

**Alternative G Configuration**

Datum: NAD83  
Projection: UTM Zone 20N



PROJECT N°: ONS2001

FIGURE: 2.6-8

SCALE: 1:18,000

DATE: July 2020

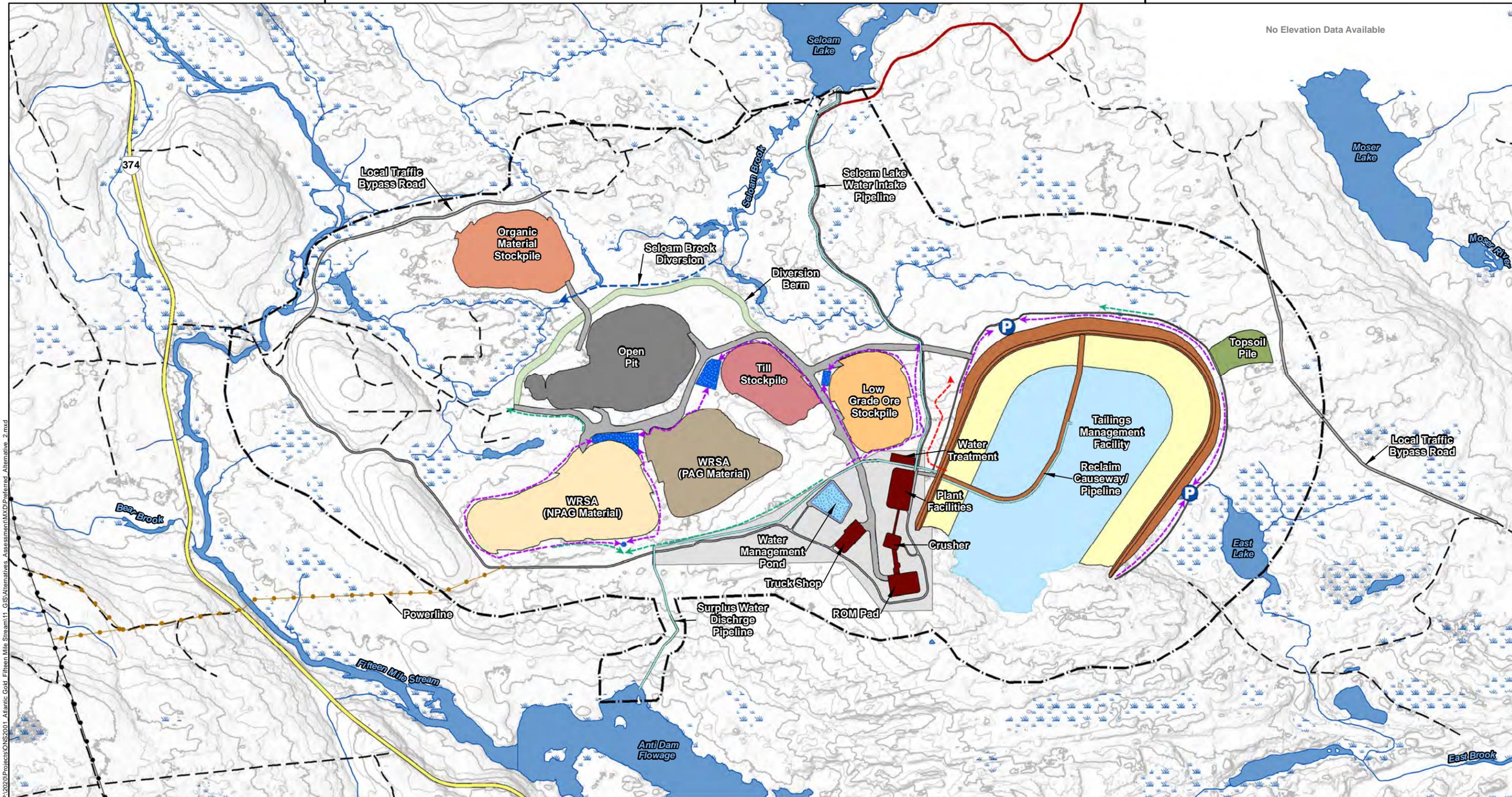


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No Elevation Data Available



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**LEGEND**

- |                   |                                     |                                   |                                  |
|-------------------|-------------------------------------|-----------------------------------|----------------------------------|
| Property Boundary | Wetland                             | <b>Proposed Mine Features</b>     |                                  |
| Utility Line      | Major Contours (10 metre intervals) | Seloam Brook Diversion            | Open Pit                         |
| Highway           | Minor Contours (5 metre intervals)  | Emergency Spillway                | TMF Seepage Collection Ponds     |
| Local             |                                     | Non-contact Water Diversion Ditch | Tailings Management Facility Dam |
| Resource / Track  |                                     | Seepage Collection Ditch          | Topsoil Pile                     |
| Watercourse       |                                     | Powerline                         | Water Management Pond            |
| Waterbody         |                                     | Pipeline                          | Seepage Collection Ponds         |
|                   |                                     | Low Grade Ore Stockpile           | Buildings / Crusher              |
|                   |                                     | Organic Material Stockpile        | Administration Area              |
|                   |                                     | Till Stockpile                    | Haul / Access Roads              |
|                   |                                     | WRSA (NAG Stockpile)              |                                  |
|                   |                                     | WRSA (PAG Stockpile)              |                                  |

**NOTES:**  
 - Proposed site plan layout provided by Knight Piésold Consulting, June 18, 2020.  
 - Topographic base data extracted from Nova Scotia GeoPortal.



**FIFTEEN MILE STREAM GOLD PROJECT**

**Preferred Alternative**

Datum: NAD83  
Projection: UTM Zone 20N



PROJECT N°: ONS2001

FIGURE: 2.6-9

SCALE: 1:18,000

DATE: July 2020

