

Environmental Impact Statement for 276 Duke St.

Prepared by: Scott Schelske, P.Eng., F.E.C.

Date: January 27, 2021

1.0 Introduction:

Channel Technical Services Ltd. has been retained by Fusion Capital to prepare certain reports and other document submissions for the purpose of rezoning a property located at 276 Duke Street, Dryden, Ontario. This Environmental Impact Statement is being prepared as part of that application for the rezoning. The present zoning for the site is R2 (Residential Two) and the developers are submitting an application to change the zoning to RM (Residential Multiple). It is intended that, once that zoning amendment has been approved, the developers will begin the process to utilize the subject property as the site for the construction of 4 multi unit residential complex buildings. Each building is to house 12 individual apartments and will be 3 stories high.

Once the zoning has been approved, and prior to the commencement of construction, a number of design studies and engineering field work will be performed in addition to the detailed plans and specifications for the buildings themselves.

2.0 <u>Description of Proposed Project Location:</u>

The proposed development is to take place on a vacant piece of property located on the south side of Duke Street, at the very Eastern end of the subdivided area (See attached plan maps, Google Aerial, and other photos of immediate area). This portion of Duke street is 2 blocks east of the north bound bend for the majority of traffic that directs it to the overpass over the Canadian Pacific Railway (CPR) Main Line and that terminates at the intersection with Highway 17.

The legal description of the lot (see attached copy of drawing from W.J. Bowman Ltd. Ontario Land Surveyors entitled "Part of Block B, Registered Plan M-318, Town of Dryden, District of Kenora") is: Registered Plan M-318, Parcel 18801 D.K.F., Part 1, Plan KR-1013, Parcel 25313 D.K.F., Part 1, Plan 23p-2337, part of Parcel 28040 D.K.F., Secondly.

The lot measures 125 m (410') x 47.25 m (155') as shown on the attached site plan.

The lot is at the corner of Duke Street and the northern branch of Arthur Street, (which is a gravel road leading to the south) and the northeast corner of the lot is "kitty corner" from the

CPR railyard. There is a lockable steel gate located at the approximate mid point of Duke Street in front of the lot at which point the paved street becomes a gravel road.

Immediately to the west of 276 Duke Street are single family houses on both sides of the street, so there would be residential units that have full services (water, sewer, Hydro and phone) and there are a manhole, fire hydrant, power, and phone lines next door at 274 Duke St. so service connections are immediately available to the vacant lot. However, it is noteworthy that there has been no work done to date by the developer's consulting team to determine the available capacities of these services to handle the new development as that work will be part and parcel of any detailed design work upon the re-zoning approval.

Since the location of the proposed construction is at the end of a short residential street that is 2 blocks removed from any major transportation route, and the presence of the gate indicates that there would be periodic times when traffic would be prohibited from continuing to Arthur Street, there would be limited traffic going past the property. Therefore, the only real source of noise would be any passing trains, which averaged 21 per day in 2019 according to the CPR website. It is noteworthy that when we were on site on November 17, 2020, the only traffic that passed by the lot were 3 vehicles from CPR, and the gate was open.

3.0 Description of Topography:

The lot itself is a short plateau that is relatively flat running in a south-westerly direction until it reaches a bedrock ridge located past the southern lot boundary that runs diagonally to the property line ranging from approximately 75 m past it at the easter end to 15 m at the western end. (Refer to photos and the topographic survey done by others for topography map and details). The plateau does slope gently to the northeast with an overall drop of approximately 2.5 - 3.5 m. Duke St, running in front of the lot, starts at a level to the lot at the west end then runs downhill to become approximately 6.5 m below the crest of the plateau at the bottom of the ditch at the corner with Arthur Street then there is a further 1.5 m drop along Arthur St. to become 7.5 m at the bottom of the ditch below the top of the very steep slope on the east end to the road.

The lot also has what appears to be a set of what perhaps could be shallow (.5-1 m) drainage ditches, but also could have been caused by the excavation of unknown materials (perhaps plumbing, building footings, driveway drainage, etc.) from previous structures on the lot. These ditches run both parallel and perpendicular to Duke Street (see photos).

In addition, there are dozens of back dumped piles of soil piled along the eastern end of the lot, (see photos) that would range from 1.5 to 2 m in height, starting at the crest and extending for 10-15 m westward to the edge of one of the ditches.

4.0 Soil and Geology:

At the time of this writing, there had been no soils drilling performed on the property, which will be required to be done prior to any foundation design work. However, the soils profile visible from the ditches and along Duke and Arthur Streets (see photos) shows a layer of topsoil from .5 - 1 m deep followed by 5 - 8 m of a coarse sand and gravel/ silt mixture, however, the coarse sand and gravel very well could be surficial coverage created by the aforementioned back dumping of material along the eastern crest of the lot. The bottom of the exposed slope has been stabilized by the importation of coarse blasted rock which also extends into the drainage ditch that parallels the 2 streets.

There were no visible bedrock outcrops and with the depth of the ditching being 1.5 - 2 m deep, the soils would be expected to be at least to that depth.

5.0 Surface Water: (fens, swamp, lakes, ponds)

There is no surface water nor wetlands on site. However, there is a small pond located approximately 350 m to the southeast of the lot and approximately 75 m north east of the corner of the east/west branch of Arthur St. and its north/south branch (see aerial photos and plan map). This and another small pond further to the south are identified as Milaneses's Lakes and are tributaries of Wabigoon Lake. It is noteworthy that storm water drainage from Duke Street (and its surrounding area streets) will ultimately flow into Milanese's Lakes.

6.0 Ground Water:

There will be no use of nor impairment of ground water resources due to this proposed development.

7.0 Air Quality:

Other than the normal production of sawdust and some dust created during lot clearing and landscaping during construction and lot development, and since it is presently planned to utilize electric heating appliances, the proposed buildings will, in effect, have no impact on the air quality in Dryden. However, it is noteworthy, that although it has been greatly diminished in recent decades, Dryden does have a past history of foul-smelling emissions from the Pulp mill.

8.0 Vegetation: (forest, ground cover, aquatic plants)

The area of the lot at 276 Duke Street had been stripped for past developments on the property and has sat fallow for several years, which has allowed a host of native grasses to flourish on the property that have reached heights approaching 1 m high. Here the native grass species would be snakeweed, sweet clover, timothy, crab grass and ragweed (see photos). Starting at Duke Street and progressing southward there are 30 - 40 m of mixed grasses running to near the back of the property. In addition, there are a couple of dozen white spruce and jack pine that would be approximately 25 - 30 years old (4 - 7 m high) growing in singles, small pairings and intermittently but mainly located in the southwest corner.

At the bush line which roughly approximates the property line (48 m) a predominately coniferous forest of white spruce and jack pine commences, with intermittent poplar, ash, and birch (see photos). At the back of the property itself and extending into the leading edge of the undeveloped forest are "brush species" of tag alder, willow, and dogwood.

Towards the eastern portion of the property and perhaps as a result of, are the dozens of back dumped piles of soil (see photos). Whatever type of soil is in these piles seems very amenable to growing a very thick patch of ragweed interspaced with thistles and native grasses.

Due to the use of coarse rock rip rap along the side slopes and in the ditches, there is very little vegetation growing in these areas.

9.0 Birds: (waterfowl, songbirds)

Songbirds found in the community were robins, hummingbirds, swallows, grosbeaks, red wing blackbirds, sparrows, martins, woodpeckers, jays, and finches.

Scavengers and birds of prey in the area are ravens and bald eagles. However, it should be noted that there were no stick nests located in the yard, along the road alignment, or in the woods located due south of the property line.

Milaneses's Lakes could have water surface landings made by gulls, loons, herons, cranes, coromats, mergansers, mallards, teal, and other species of waterfowl that would be common to Northwestern Ontario.

10.0 Other Fauna: (mammals/amphibians reptiles/insects; game & protected species)

There are no endangered or protected species of mammals, amphibians, insects, or reptiles identified on the lot. The species of each phylum are typical of Northwestern Ontario. Terrestrial animals in the area could include: ruminants (deer), ursines (black bears), canines (foxes and wolves), rodents (squirrels, chipmunks, field mice), and lagomorphs (jack rabbits) and all could pass through the property. There was a definite "game trail" with deer prints crossing the southwest corner of the lot.

There could be western painted turtles, crayfish, and leopard frogs in the Milanese's Lakes. Garter snakes would be the predominant reptile found here, although none were spotted during our site visit (which was in November).

In Northwestern Ontario there are hoards of insects: black flies, sand flies, horse flies, deer flies, house flies, no see'ums, mosquitoes, wood ticks, tent caterpillars, moths, butterflies, red and black ants, beetles, bees, hornets, and wasps with several species of each, and all of them could be present on the property in some degree of density at times during the late spring and summer and early fall. However, there has never been a report of any rare, endangered, or protected species of any kind identified in the area.

11.0 Special Habitat Areas: (specially designated or protected habitats)

There are no specially designated or protected habitats in the area.

12.0 Sensitive Areas: (residential zones, parkland, hospitals, schools)

The existing water and sewer lines will service the residences. There are 3 schools available in that are of town plus the Dryden campus of Confederation College: Saint Joseph's Separate School is 9 blocks away; Open Roads Public School is 15 blocks away and Dryden District High School is 6 blocks way. There is a hospital in town, but not in the immediate area. There are no park, playground nor other sensitive areas immediately in the neighborhood. There are no plans to incorporate a green space area within the sub-division, especially since there is a wooded area immediately to the south of the lot. The CPR work yard will be off limits to residents and may well be locked up in the evenings since there is a gate across Duke Street.

13.0 <u>Human Health and Safety:</u> (any persons whose health and safety may be affected by the construction and operation of the project)

Other than the construction safety issues with the contractor, there are no human health and safety issues if the project is allowed to proceed.

14.0 <u>Traditional Land Use Activities:</u> (trapping, fishing, medicinal plant collection, ceremonial grounds)

Although the residents may include people of Indigenous origin who may partake in traditional land use activities, non of the activities would occur or be affected by the clearing for the buildings or their construction.

15.0 Aesthetics: (general character of the surrounding area; and if the project is compatible)

The 4 buildings will require the eventual clearing of the property, however, as mentioned previously, under vegetation, there property had been cleared of trees in the past except for a few trees that have grown up among the weeds that are the predominate vegetation. There is no dense forest that will be cut and after construction the weeds that are presently growing on the site will be replaced with lawns suitable for residential lots. In addition, with the well mature forested ridge immediately to the south of the lot, the 3 storey buildings should not be visible from Arthur Road to the south.

16.0 Special Designations: (parks, protected areas)

There are neither parks, protected areas nor special designations within the area to be developed.

17.0 Archaeological Resources: (recorded, or potential)

The Indigenous community has been in existence in the area for centuries, therefore there is no doubt burial plots, and archaeological artifacts may be found in the community and surrounding area. Although there is no evidence of such on the lot, which has undergone the removal of its original topsoil under previous uses of the property, if such artifacts or human remains are encountered during excavation, tender documents will include a clause that will require the work to cease in that location and for the proper authorities to be notified of such a find.

18.0 Project Justification:

18.1 Need for the Project:

The developers have concluded that there is a need within the City of Dryden for the provision of affordable housing for families.

18.2 Purpose of the Project:

One of the lower cost alternatives to single family dwellings are multi-unit housing construction such as what is being proposed, which will see 48 new housing units become available.

18.3 Alternatives Considered:

This proposed building site at 276 Duke Street is a very large lot (125 m or 410' of road frontage) and as such would require sub-dividing to make it practical for a single-family dwelling or otherwise would be a waste of City services. There are other potential types of housing that can accommodate more than one family on a lot like this, such as row housing and MURBS, and high-rise apartments, but these proposed 3 stories high units makes good use of the property yet is low enough that they will not rise above the tops of the trees in the local forest behind the buildings.

19.0 Past History and Site Conditions:

As mentioned previously the site had been cleared of vegetation in the past with field grasses and a few trees, estimated to be 25-30 years old, growing on site. In the past and for several years, the City of Dryden reportedly has used the area and perhaps even the lot itself as the repository for snow that has been cleared from City streets. This could be part of the source of the dozens of back dumped piles located at the east end of the property (see photos). However, the individual piles contain much more soil than what would ever be associated with the light sanding on top of a street after a snowfall. Therefore, indeed this is the source, it is speculated that the material could be reclaimed sand from City streets that would have been picked up be a street sweeper then transported to the site in the back of a dump truck or bucket of a large front-end loader. If indeed this is the source of the piles of soil, then the material could be lightly contaminated with remnants of road salt and possible some hydrocarbons, litter and other material that accumulate along the shoulders of City roads. If the source of the back dumps was not Dryden Public Works, then they either could have originated from haulage from an unknown outside source or even have been from the original clearing of the property using a front-end loader and/or dump truck combination and depositing the surface material at the crest and never flattening the piles. It is noteworthy that part of the studies being undertaken for this project is soils drilling that would include a chemical analysis of soil cores to identify contaminants that may impact concrete foundations. (Salt can cause a breakdown of concrete). In addition, during our site inspection, a substantial pile of concrete rubble was discovered at the bush line in the south east corner of the property just a few meters south of the back dumped piles (see photos). The pieces were in the order of 300 mm (12") thick which would be indicative of a concrete foundation for a building that would be used for commercial or institutional purposes as opposed to a 100 – 150 mm (4" – 6") slab that would generally be used for a house. However, the pile is located in a forested area with significantly large enough trees growing around them to prove that it had been placed there a couple of decades ago. It is also unknown if the pieces originated on site or were hauled there from off of the property. According to the developer, they were informed at the start of this process, that there had never been any buildings constructed on the property, so if this is in fact true, then the concrete and other materials were hauled in from an outside source.

20.0 <u>Description of Project:</u>

It is intended that, once that zoning amendment has been approved, the developers will begin the process to utilize the subject property as the site for the construction of 4 multi unit residential complex buildings. Each building is to house 12 individual 2-bedroom apartments and will be 3 stories high (see attached conceptual building outside 3D view and floor plan and cross section), for a total of 48 new housing units.

Plans call for each individual unit to have 3 bedrooms, 2 bathrooms with full laundry services. Construction is to be wood frame and all 4 buildings will be built to the latest standards established by the Ontario Building Code, designed by an architect and project managed and inspected by a registered professional engineer as well as the Dryden Chief Building Official.

21.0 Environmental Impacts:

The construction will place the 4 buildings within the direct line of sight between the residents of Duke Street and the forest behind and will occupy the vacant field that presently exists and remove that as a habitat for wandering deer and small rodents that frequent the field. The total height of the buildings will be 12.5 m (41'-2") which would be below the height of the forest immediately to the south of the property. Therefore, the front would only be visible from Duke Street and the side from the north/south extension of Arthur Street and that would be partially obscured by the 8 m high embankment along the side of the road.

Using an average of 4 persons per 3-bedroom unit, at full occupancy, there could be as many as 192 new residents in the neighborhood, half of which could be children. Using standards established by the Ministry of Environment for determining effluent quantities for apartment dwellings (as found in Table 8.2.1.3. under Item 1 of Part 8 of the Ontario Building Code as per the attached found in the Appendix), the daily design quantity per person is 275 litres. Therefore, 192 new residents would add 52,800 litres daily to the sanitary sewer system for the neighborhood. Conversely, that would also require an additional 52,800 litres of domestic water to be taken from the City waterline supply. However, it should be noted that the majority of the buildings' residents may not be new residents of Dryden, just relocated from other residential areas.

The noise levels in the neighborhood would increase, particularly in summer months when

people are outside during the day on weekends and evenings during the week.

The additional 96 children could pose a strain on playground and recreational facilities in the immediate area.

That small block and a half section of Duke Street which grows from 12 residences to 60 with the 48 new families, would see a significant increase in traffic, but not an unbearable traffic density.

As mentioned previously, present plans call for the use of electric heating in the building, so there will be no emissions from heating systems. Furthermore, the use of "Green Stone" building panel construction will be very energy efficient.

Positive impact benefits will be the addition of 48 housing units to the City of Dryden. These 48 units will all become rate payers and add to Dryden's property tax income. In addition, a "ballpark" estimate of the cost of development is \$10 million. This is a direct addition to Dryden's economy for materials, skilled trades people, equipment operators and general labour.

21.1 Tabulated Summary of Environmental Impacts:

(N/S not significant; SP significant positive effect; SN significant negative effect; U unknown; N/A not applicable)

VALUED ECOSYSTEM COMPONENT	Summa	ary of Effec				
	N/S	SP	SN	U	N/A	comments
Topography/terrain		х				Lot will be graded & Back dumps levelled
Soil/geology		х				Topsoil added for lawn
Aquatic sediment/substrate					х	None
Surface water	х					Runoff still flows to ditches along streets
Groundwater					×	No Effect.

					<u> </u>
Air quality	X		:		Some dust & Sawdust will be created during clearing & construction.
Vegetation		х			Clearing of weeds and thistles. Lawns will be planted, once buildings have been finished
Wetlands				х	None
Fish & fish habitat				х	None
Migratory birds	Х				
Other fauna	×				
Special habitat				х	None
Sensitive areas				х	None
Human health and safety		X			Has potential of reducing overcrowding of other residences in town.
Traditional land use activities				х	None
Aesthetics			X		Buildings will block view of woods for houses across the street, but unsightly field will be replaced by landscaped yard.
Archaeological resources	Х				None

Noise		×		There will be noise created during daytime hours when lot clearing & building construction is being done. 48 new families will add to the noise level in the neighborhood to an unknown level.
Specially designated areas			X	None

22.0 Summary and Conclusions:

In summary it is perhaps noteworthy that the zoning by law change request at 276 Duke Street is for a single, large 125 m x 47.25 (410'x 155') lot to be rezoned from R2 to RM and not a large subdivision development. Furthermore, the lot in question is at the end of a short. 1 ½ block extension to one of Dryden's major thoroughfares and is gated by the CPR at approximately the ½ way point so as to restrict passing traffic.

Although the CPR Mainline passes within 63.4 m (208') of the nearest corner of the nearest building to be constructed, the accompanying railway vibration study states emphatically that there will be no effect on the structure due to vibrations.

The developers had been informed that was no previous buildings constructed on site. However, the site has ample evidence of some sort of previous disturbance. This includes: the stripping and removal of the original forest; the presences of ditches running in both directions (N-S and E-W); the existence of dozens of back dumped piles of soil of an unknown origin; the presence for over a decade of blocks of concrete rubble in what size (300 mm or 12" thick) would appear to be from a commercial on industrial building. Given the height of the larger coniferous trees that have grown

up on the property it is concluded that the clearing of the lot and perhaps stripping of soil occurred 25-30 years ago.

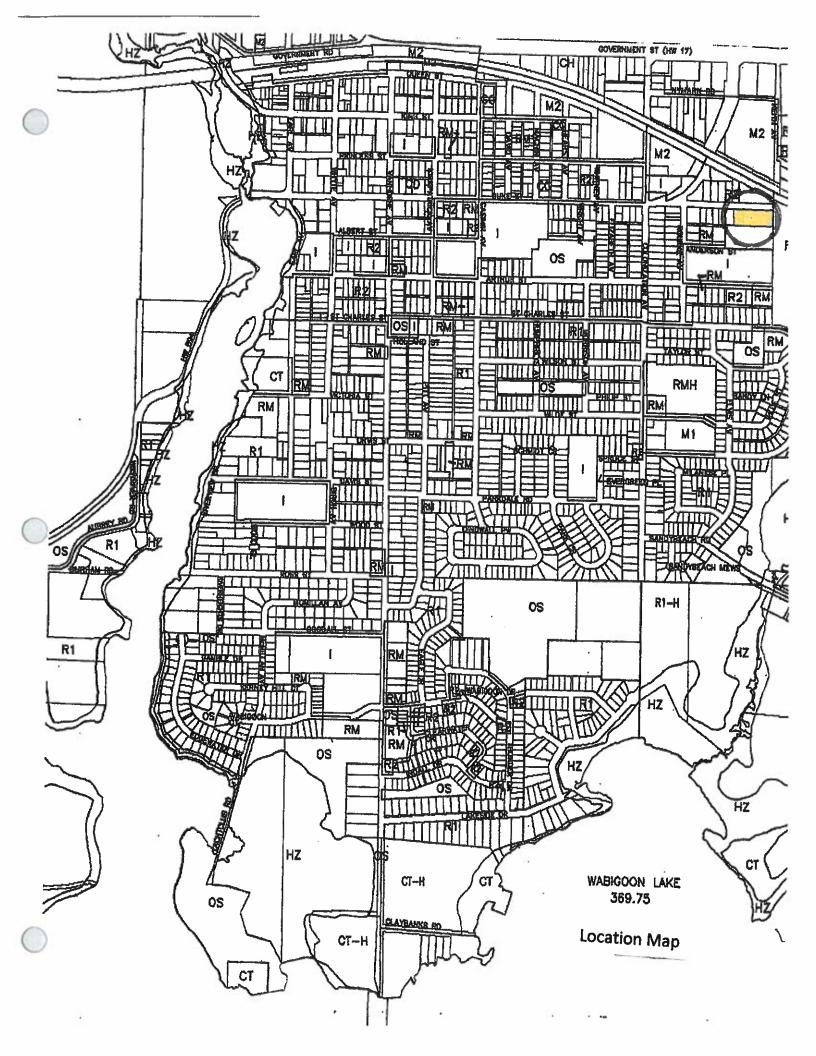
The statement and summary of Environmental impacts identified no <u>Significant Negative Impacts</u> but did have 2 items of <u>Unknown Impact</u>. The 2 items of unknown impact are the Aesthetics and Noise. There will be a visual impairment to the sight of the forest behind the now building for a couple of residences on the east end of the north side of Duke Street. This is balanced by the fact that the field of grasses including significant amounts of mainly ragweed and thistles will be replaced by lawn and garden and the buildings themselves will be aesthetically pleasing to look at.

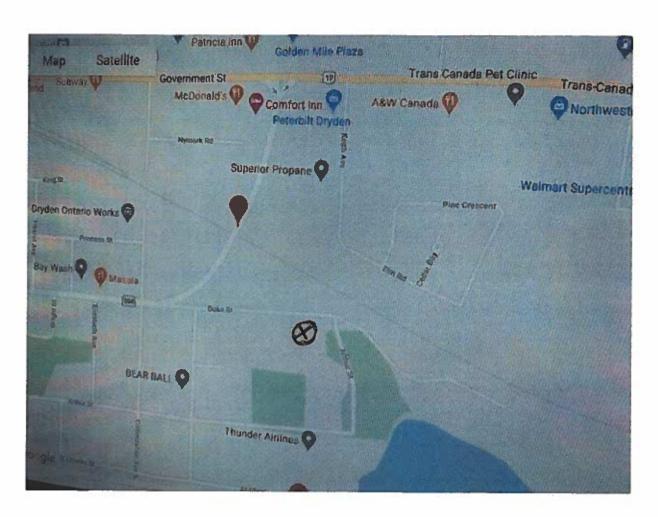
With regards to noise, the clearing and landscaping of the lot using heavy equipment will be accomplished in a matter of a few days. The construction of the buildings themselves would be a several months long project for each of the 4 units and they themselves may be constructed over a period of a few years depending on the local demand for the spaces and cash flow.

The other noise factor is the eventual addition of 48 families to the neighborhood, with an estimated 192 people, half of whom could be children. This is an unknown factor because it is the demographics of the present residents is unknown and the demographics of the new tenants is an unknown. If residents are families with children and the new building do attract families, then the new residents could be welcome additions to the neighborhood. As such it is an <u>Unknown Impact</u> at this juncture.

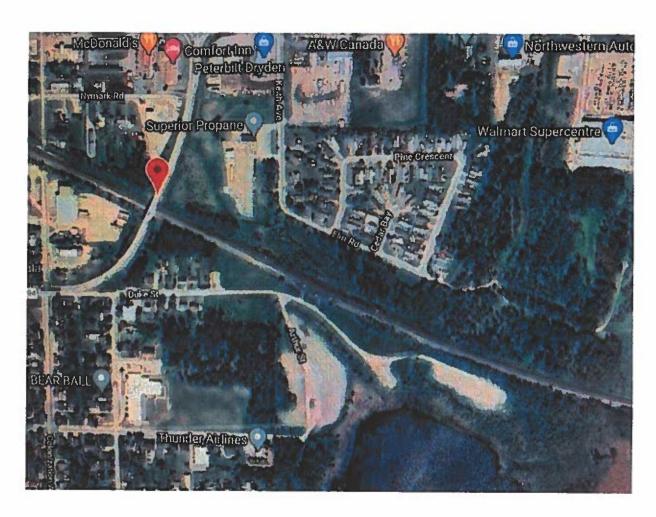
Respectively submitted:

Scott Schelske, P.Eng., F.E.C. License Number 409350177 Appendix:

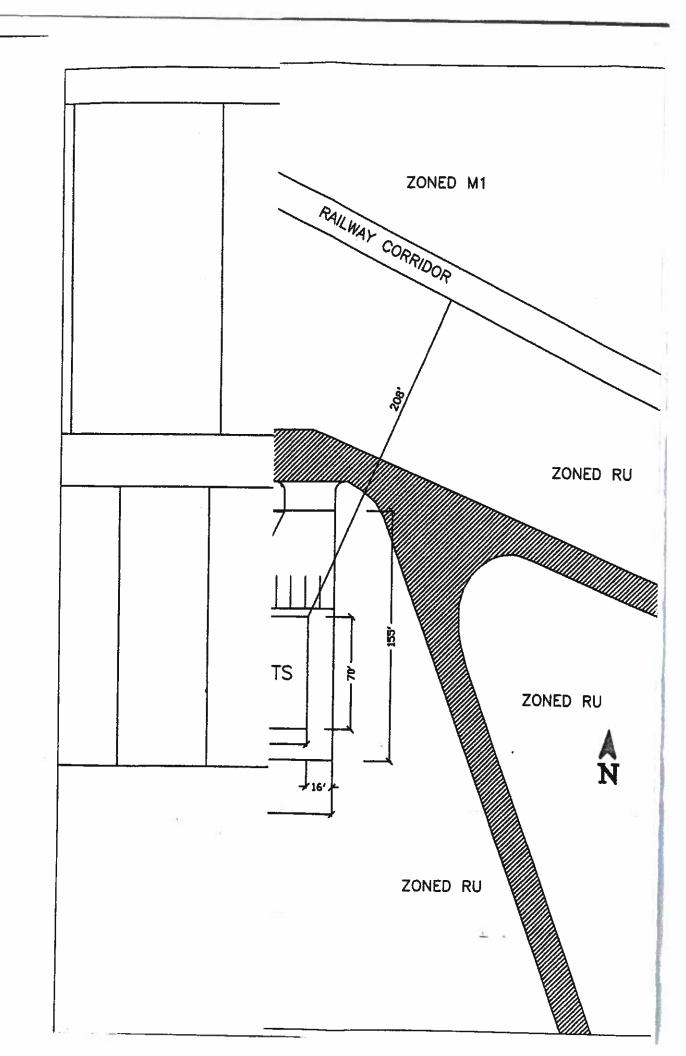


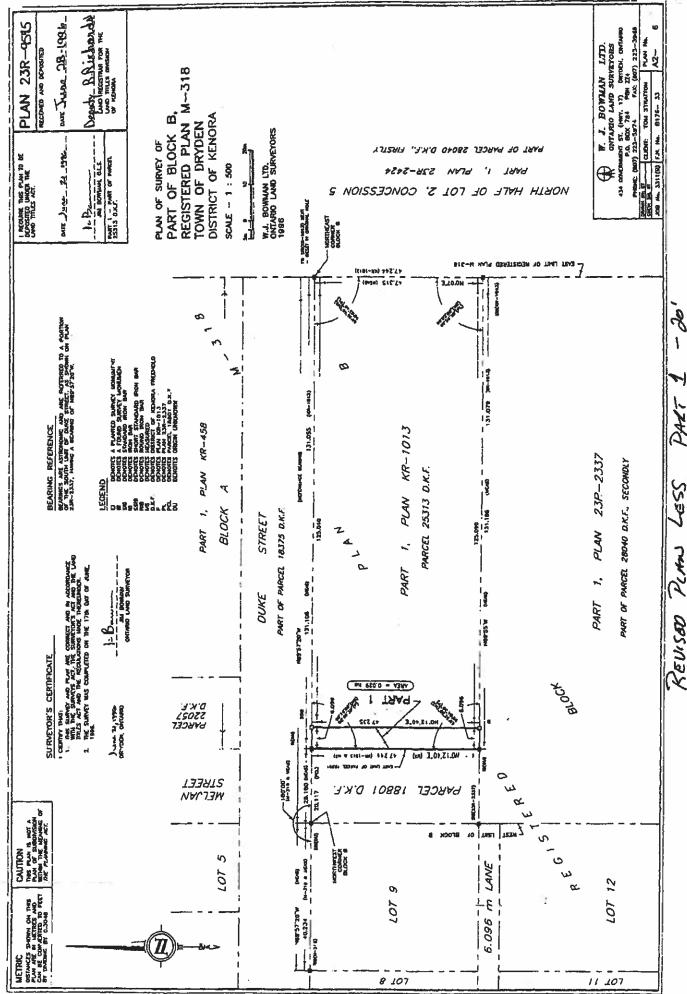


Enlarged Area Map

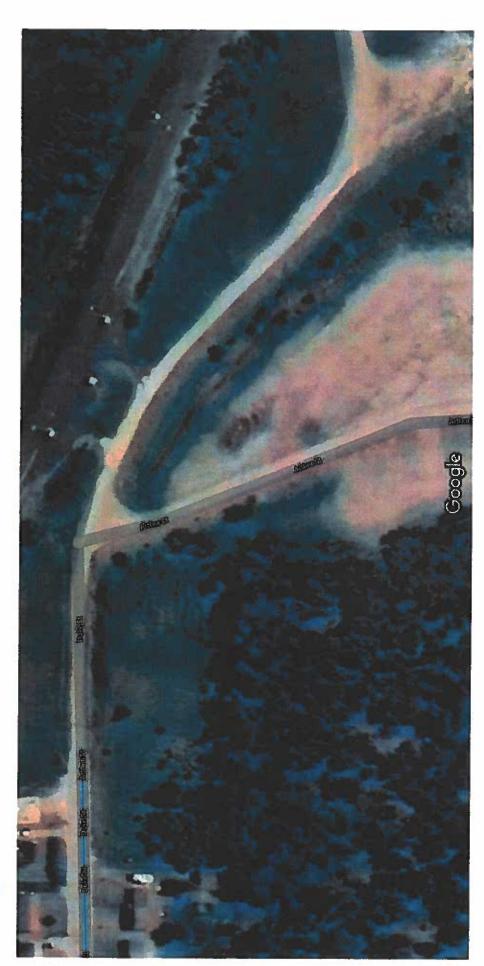


Google Aerial Photo



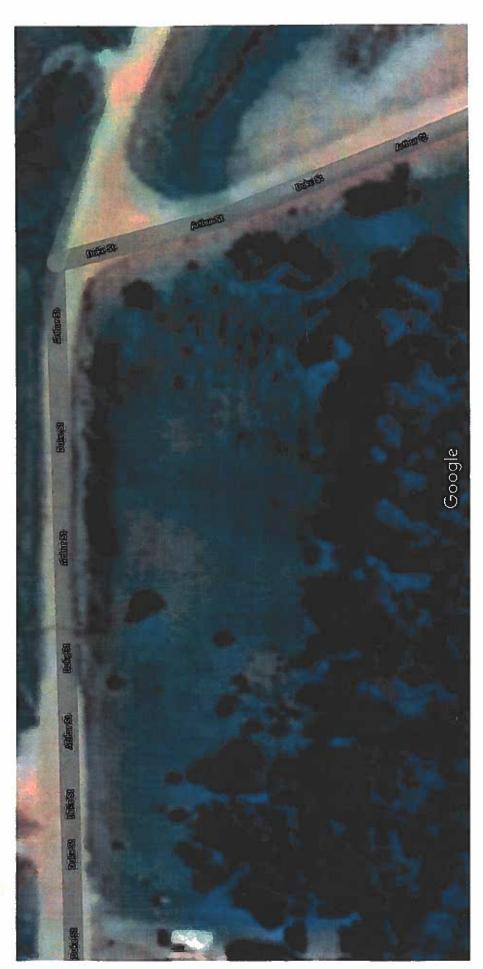


TAKE SS\$7 Legal Survey Plan Peter REVISED



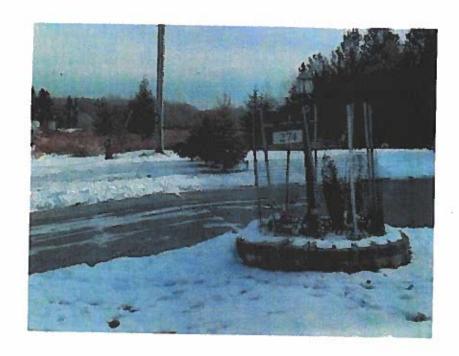
Imagery @2020 CNES / Airbus, Maxar Technologies, Map data @2020 20 m

Google Image of Property



Map data ©2020 , Map data ©2020 10 m ..

Close-Up Google Image of Property



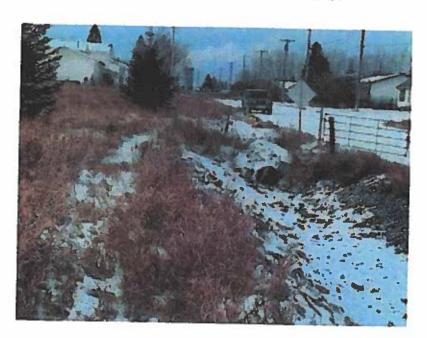
Property Line at 274 Duke St Looking North



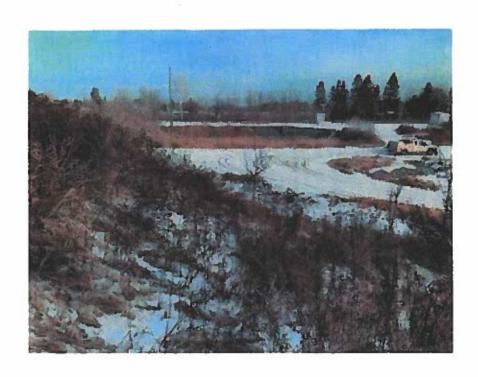
Fire Hydrant and Power Pole at 274 Duke St



Manhole for Sewer at 274 Duke St



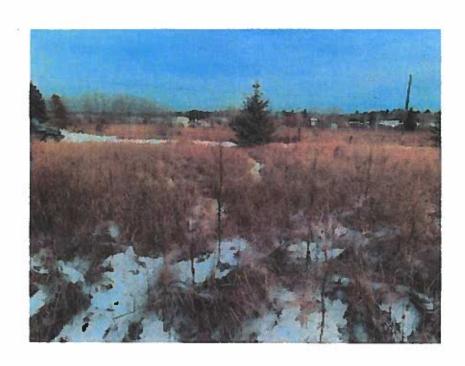
Looking West:
Neighborhood, Lockable Steel Gate &
Ditch & Culvert



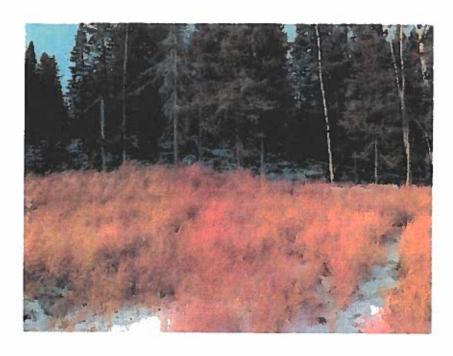
CPR Yard Just Past Corner of Arthur St & Duke St



Looking East from Property Line at 274 Duke St



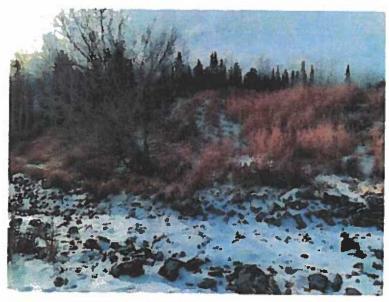
Looking North from South Property Line



Treed Bedrock Ridge South of Property



Looking South from Duke St at Corner with Arthur St



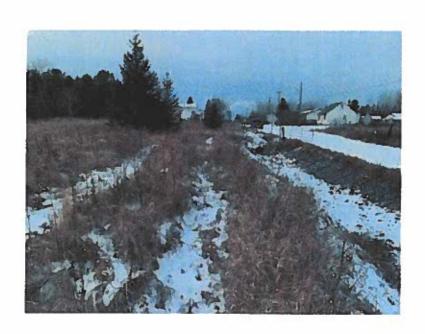
Looking West from Arthur St



South End of Rip Rapped Ditch Along Arthur St.



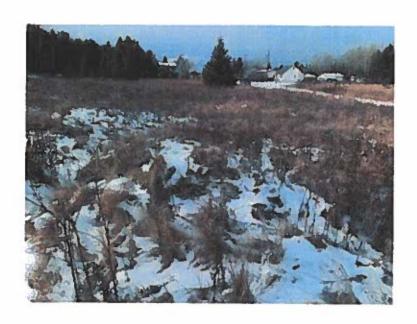
East/West Ditching



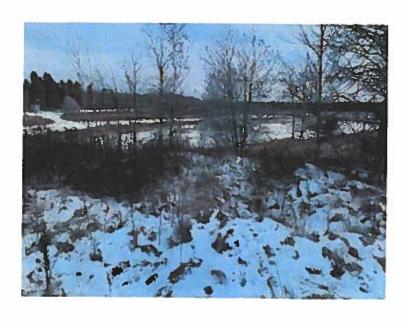
East/West Ditching



North/South Ditching



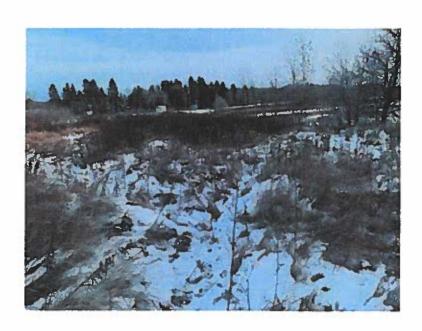
Diagonal, Random Ditching



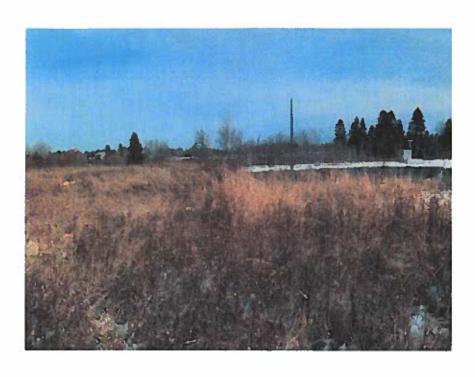
Piles of Back Dumped Soil Material



Piles of Back Dumped Soil Material



Piles of Back Dumped Soil Material



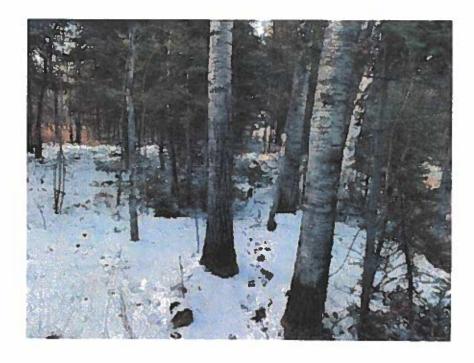
Thick Grasses, Rag Weed and Thistles



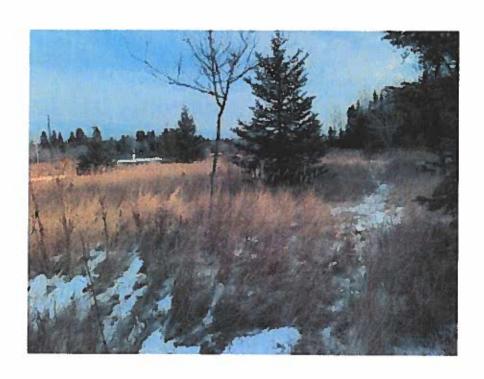
Transition of Grasses into Forest in South West Corner



Second Growth Coniferous Trees in South West Corner



Mature Mixed Forest Just South of Property Line



"Brush Species"



Well Defined "Game Trail" Leading from Woods



Close-Up of Random, Large, Broken Concrete Pieces



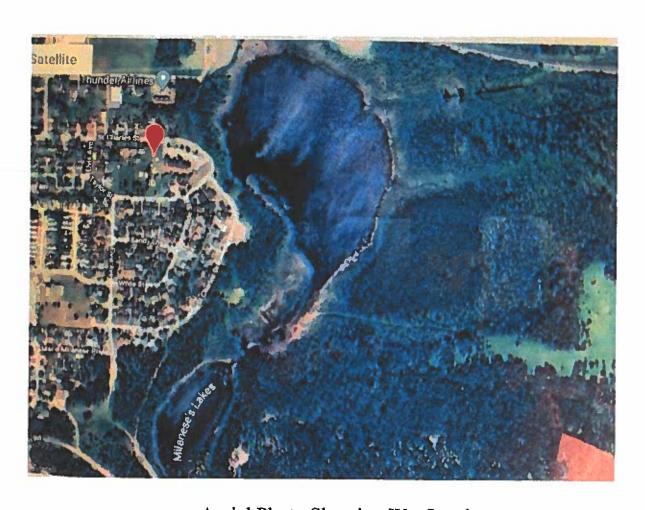
Concrete Pieces With Tree Growing Through Pile



Large Pile of Concrete Pieces at South East Corner



More Large Concrete Chunks



Aerial Photo Showing Wet Land

Near Corner of East/West and North/South Branches of Arthur St.

Erre Best Plan Approvat 3D VIEW WESTMAN LUMBER SUPPLY LTD.

