



**Newco Metal and Auto Recycling  
Scrap Metal Processing Initiative  
390 Incinerator Road  
St. John's, NL**

***Environmental Assessment Registration***  
*Pursuant to the Newfoundland & Labrador Environmental Protection Act (Part X)*

Submitted by:  
Newco Metal and Auto Recycling  
50 Robin Hood Bay Road  
St. John's, NL  
A1A 5V3

**February 13<sup>th</sup>, 2018**

**1 Name of Undertaking:** Scrap Metal Processing Initiative

**2 Proponent**

Name of Proponent: Newco Metal and Auto Recycling Ltd.

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**3 The Undertaking**

Newco Metal and Auto Recycling Ltd. (Newco) proposes to upgrade its metal recycling facility located on Incinerator Road in St. John's, NL. The upgrades will allow Newco to perform secondary processing of recycled metals to significantly reduce the physical volumes of material it handles while increasing the resale value of its recovered material. Upgrades will include construction of a large concrete pad with associated drainage control (oil/metal/sediment separator); placement of a self-contained automobile de-pollution unit, installation of a metal shredding unit and a non-ferrous processing plant.

**3.1 Name of Undertaking**

Newco currently owns and operates a metal and auto recycling facility on Robin Hood Bay Road in the City of St. John's, NL. The facility operates under a Certificate of Approval (WMS-09-09-009) issued by the Department of Municipal Affairs and Environment. At present, Newco stores derelict vehicles and metals on their site on Robin Hood Bay Road until such time when they can be crushed and put aboard flat deck trailers and transported out of the province.

This method has resulted in storage challenges at the site to the point where storage space is becoming limited and will eventually be depleted. Installing the upgrades at the Incinerator Road site will enable vehicles and metals to be fully processed at a faster pace than the Robin Hood Bay Road site allows, thus alleviating the storage problems at Robin Hood Bay. Currently, scrap metals are bulk shipped out of province with only limited processing; essentially items are crushed or compacted prior to shipping. The equipment used to achieve this requires manual operation and scrap metals are being received at a rate faster than the facility can process them. The metal shredder which Newco plans to install features a more automated scrap metal handling process and is capable of processing significantly higher volume of

material in a shorter time period. The shredder segregates metal types and separates unusable materials from the product. The incorporation of the metal shredder into Newco's operations will allow for efficient and thorough scrap metal processing. It will allow Newco to clear through the backlog of recycled metals that is currently accumulating and it will allow Newco to manage recycled metal material from its various facilities located throughout the province. Once operational, the metal shredder, permanently installed at the location on Incinerator Road at the outskirts of St. John's, will significantly reduce the vehicular traffic into the Robin Hood Bay Road site and eliminate the large stockpiles of recycled metal currently accumulating there. The Robin Hood Bay Road site will strictly be a receiving yard for customers to drop off material, and Newco will have trucks dedicated to transporting material from the Robin Hood Bay site to the Incinerator Road site, where all material will be processed.

### **3.2 Purpose/Rationale/Need for Undertaking**

Shipping whole vehicles out of the province has not maximized the environmental and economic benefits of secondary processing to the local area and province. Enabling vehicles to be shredded at the Incinerator Road site will result in a number of benefits.

#### **3.2.1 Reduction of Carbon Footprint of Export Trucking**

Newco transports over 1400 trailers of crushed cars or baled white goods to Halifax and Montreal each year from various places in the province, transporting roughly equal number of loads to each (1441 loads in 2017). Newco ships approximately 800 of these loads via vessel, (808 in 2017). The remaining 600 loads are transported via Truck, in most all cases to Montreal, a 2000 km haul, depending on departure location in the province. Using the EPA's "Emission Factors for Greenhouse Gas Inventories" tables (EPA, 2015), diesel consuming heavy vehicles produce roughly 2.701 kg of CO<sub>2</sub> per litre, (10.21 kg of CO<sub>2</sub> per gallon). An NRC study concluded that benchmark fuel consumption performance for trucks in Canada is 40 L/ 100 km, which can be used for the estimation of our carbon footprint (NRCAN, 2016). Therefore, trucking produces over 1,296,000 kg's of CO<sub>2</sub> every year. Steel shred, which makes up about 73% of the material processed with the new processing facility, will now be shipped instead of trucked, which produces significantly less CO<sub>2</sub> per/tonne. Using the EPA's "Emission Factors for Greenhouse Gas Inventories" tables (EPA, 2015), the CO<sub>2</sub> factor for a Heavy-Duty Truck is 0.146 kg/ton-mile, vs 0.059 kg/ton-mile for a waterborne Craft, a 60% reduction.

#### **3.2.2 Reduction of Carbon Footprint of Transporting Waste**

Waste will be disposal at local landfill instead of trucked with crushed/baled goods. Waste makes up 19% of material currently transported outside the province as it is not separated from the scrap material. The new processing facility will be able to separate the waste from the material, allowing Newco to dispose locally, meaning significantly less environmental impacts from transportation, whether by vessel or truck. Given the local disposal of waste (19%) and shipping steel shred via vessel (73%), Newco estimates a 92% reduction of export trucking when operating the shredder.

#### **3.2.3 Maximizing Economic Benefits**

Maximize local regional economic benefits by having secondary processing occur within the province. The operation as a whole will add 20-25 sustainable jobs and provide an in-province market for the other smaller operators to sell their scrap metal.

#### **3.2.4 Increasing Value of Scrap Material**

Newco will have the ability to create a valuable product that can be sold to international markets.

### 3.2.5 Streamline the Business

Enable Newco to operate the business in a more streamlined manner with less transportation complexities by processing in one location.

### 3.3 Description of Undertaking

#### 3.3.1 Geographical Location

The proposed site, approximately 4.5 hectares, is located on Incinerator Road which is off the Foxtrap access road north of the Trans Canada Highway. Formerly, the site was developed as a quarry, followed by a metal scrap facility which Newco then acquired in 2016. It is under the jurisdiction of the City of St. John's. Figure 1: Topographic Map - 390 Incinerator Road, shows the location of the proposed site (taken from 1:50,000 scale NTS Map Sheet 1N/7) and a Google Earth screen capture shows the Project site and surrounding properties.

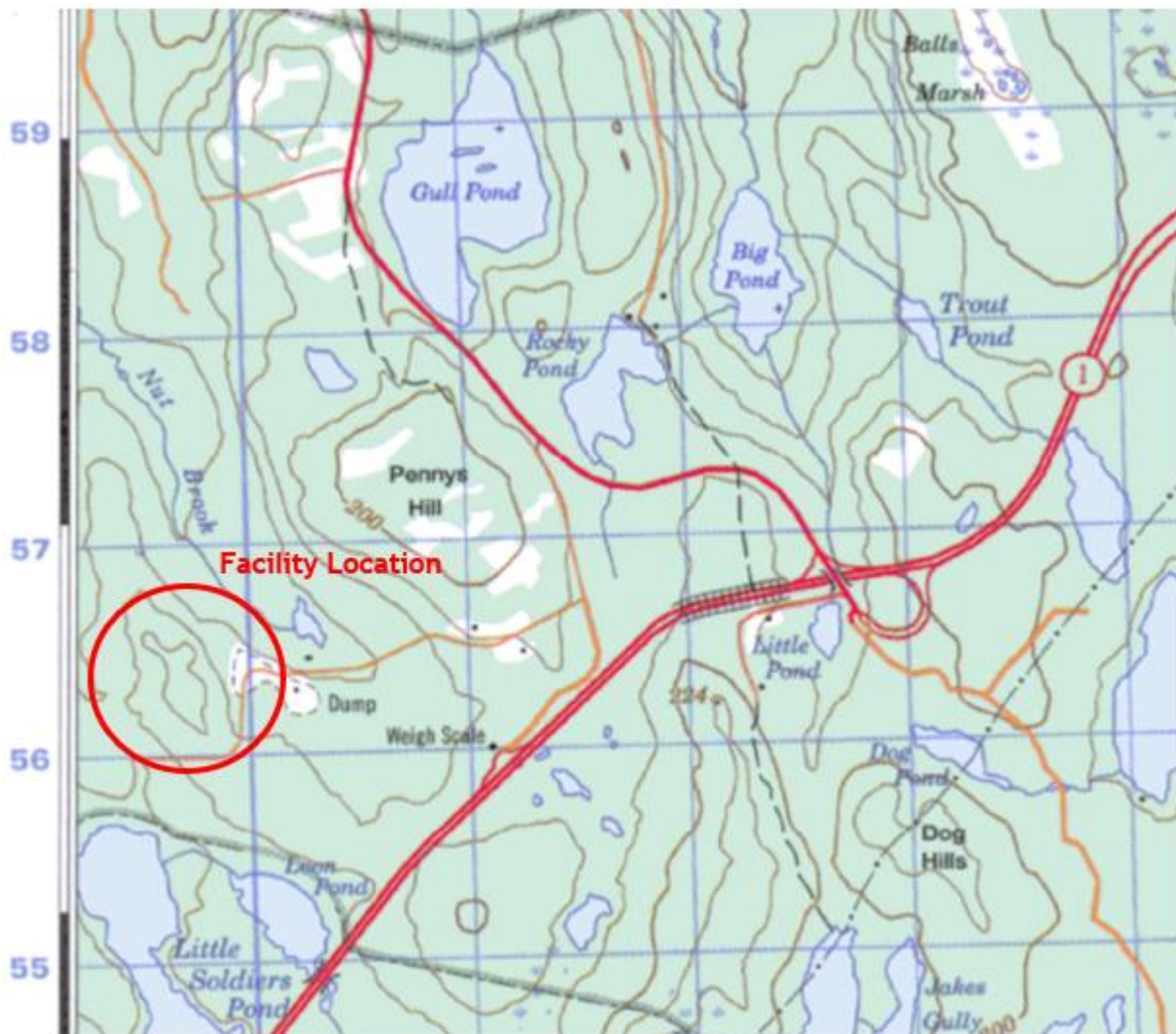


Figure 1: Topographic Map - 390 Incinerator Road



As shown in Figure 2: Google Earth Site Image, the Project site (A) is bound to the south and east by Incinerator Road. A quarry is situated to the southeast (B). The Marine Institute Offshore Safety and Survival Centre (C) is located to the west and to the east is Newalta's Waste Transfer Facility (D). The area north of the site is currently undeveloped. The immediate surroundings and land that borders the property line is crown land.



**Figure 2: Google Earth Site Image**

The nearest residential development is 3.75 km (3750 m) from where the shredder itself will be operating, as show in Figure 3: Proximity to Residential Area. APPENDIX C, further presents proximities to neighboring locations.



Figure 3: Proximity to Residential Area

### 3.3.2 Physical Features

The current site, as indicated in APPENDIX B – SITE SURVEY, outlines the current infrastructure on site. This includes but is not limited to a 70' x 140' building, as well as scales and a fence along with mobile equipment for material handling on site. The site is relatively level, with little vegetation from the quarry operation.

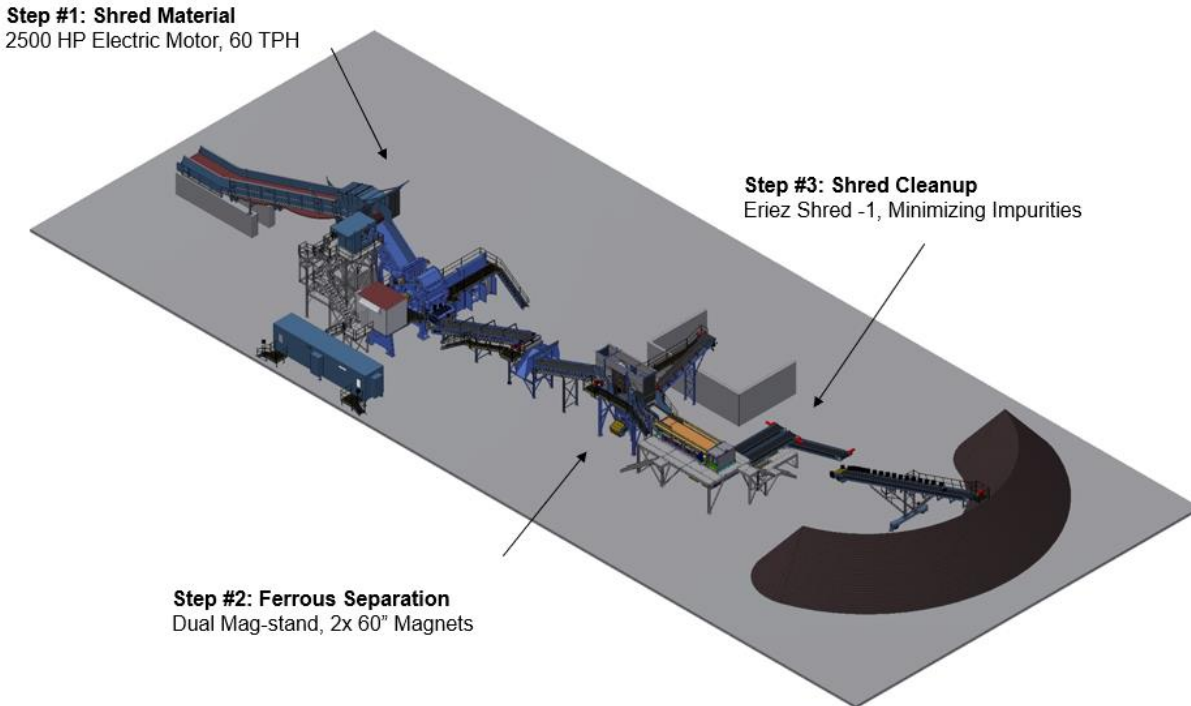
The primary components of the development will include the installation of the following:

- a. Wendt M6090 Metal Shredder
- b. Wendt Non-Ferrous (NFe) ASR Processing Plant

- c. Concrete pad, with associated storm water management systems
- d. 2 ea. SEDA Automotive De-polluting stations

### 3.3.3 Wendt M6090 Shredder

The Wendt M6090 Shredder (Figure 4: Wendt M6090 Shredder) will be the key component of the material processing operation. This machine will shred scrap into a size (roughly 5” diameter, “fist-sized” and smaller) that can be separated and processed through the entirety of the plant. The shredder will have the ability to process 60 metric tonnes of material per hour.



**Figure 4: Wendt M6090 Shredder**

The Shredder portion of the operation will segregate the ferrous materials from the non-ferrous materials through use of a dual-magstand. This plant will prepare a steel shred product, shown in Figure 5: Ferrous Shred, that is ready for market. Both ferrous shred and ASR will be conveyed into concrete bins for storage until trucking offsite or further processing, as described in Operation.





Figure 5: Ferrous Shred



Figure 6: ASR (Automotive Shredder Residue)

### 3.3.4 Air Pollution Sources & Prevention

The shredder component has a dust control system to limit any airborne particles during operation and keep a suitable amount of moisture in the material as to optimize processing efficiency. Water is injected into the infeed to keep material damp to eliminate the production of dust ensuring no air pollution as well as improving the system's ability to handle material and prevent fire. The injected water is absorbed and contained within the material. Water, for the purpose of dust control, will be supplied to the equipment by the water storage tanks Newco will have installed at the facility, as indicated in APPENDIX A – SITE PLAN. The equipment consumes anywhere from 0-15 GPM of water, depending on moisture level of material, sourcing water from the artesian well installed on site.

The M6090 Shredder is 100% electric, using a 2500 hp DC motor with all electric conveyer motors, significantly improving emissions in comparison to older diesel-powered shredders.

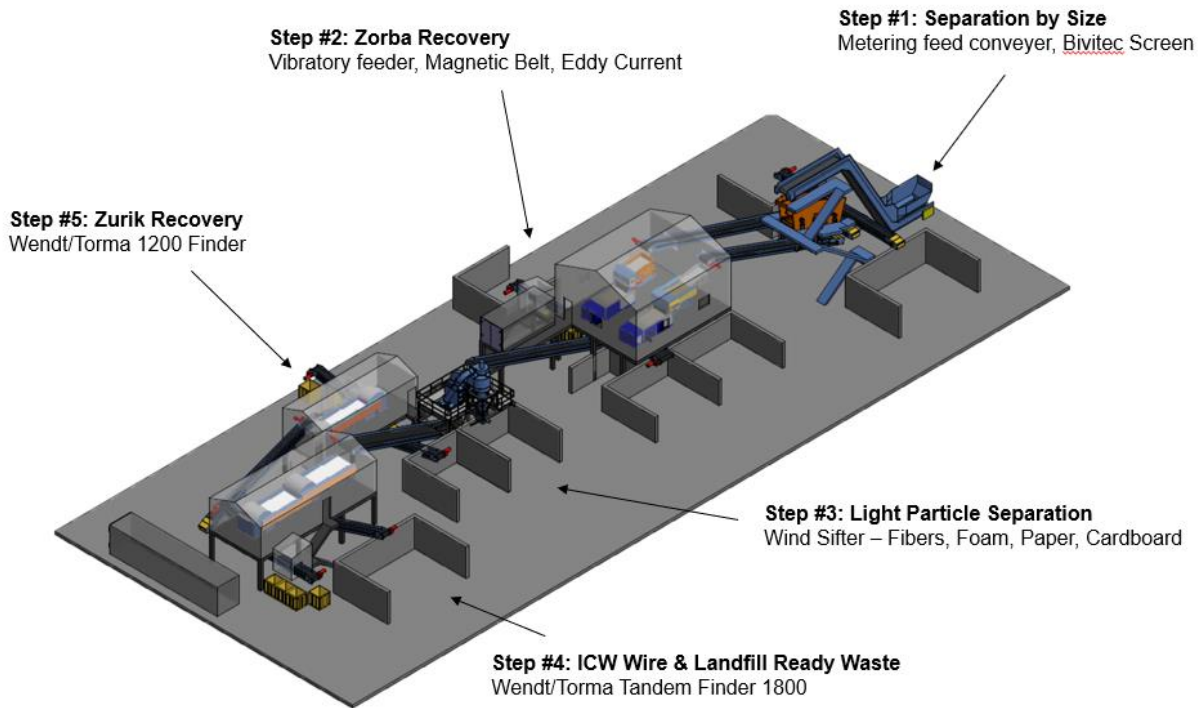
### 3.3.5 Noise Prevention

Noise pollution to neighboring properties is not anticipated by operating the M6090 shredder. Noise levels expected by the shredder are outlined in APPENDIX D – NOISE LEVEL DIAGRAM. considerations Newco has assessed in Noise pollution are as follows:

- a. Proximity to Neighbors: The decision to install on 390 Incinerator road leaves a significant amount of distance between neighboring operations. APPENDIX C – GEOGRAPHIC LOCATION, outlines proximities to neighboring property. The nearest neighbor is approximately 250 m from the shredder, and nearest residential community is 3750 m, or 3.75 km.
- b. Area of Installation: The Incinerator Road area contains a variety of heavy industrial sites including rock crushers, hazardous waste disposal facilities, firefighting facilities, all of which are most appropriately operated away from residential areas.
- c. Site Plan and Geography: The nearest residential area is located North-west of the property. Also located near the property boundary is a high elevation peak which will be an effective noise barrier to ensure that no noise will be audible near residences.
- d. The site is also located at high elevation, avoiding any effects of echo or resonance which could have intensifying effects in a valley location.



### 3.3.6 Wendt NFe (Non-Ferrous) Processing Plant



The non-ferrous (NFe) processing plant (Figure 9: Wendt NFe (Non-Ferrous) Processing Plant) houses a series of processes which utilize state of the art technology to clean and extract all non-ferrous metals from automotive shredder residue. The purpose of this plant is to purify the waste that is to be disposed of at local landfill, ensuring no metal scrap is in the mixture. Similar to the shredder, the non-ferrous plant is 100% electric, with no diesel power or emissions.



**Figure 9: Wendt NFe (Non-Ferrous) Processing Plant**

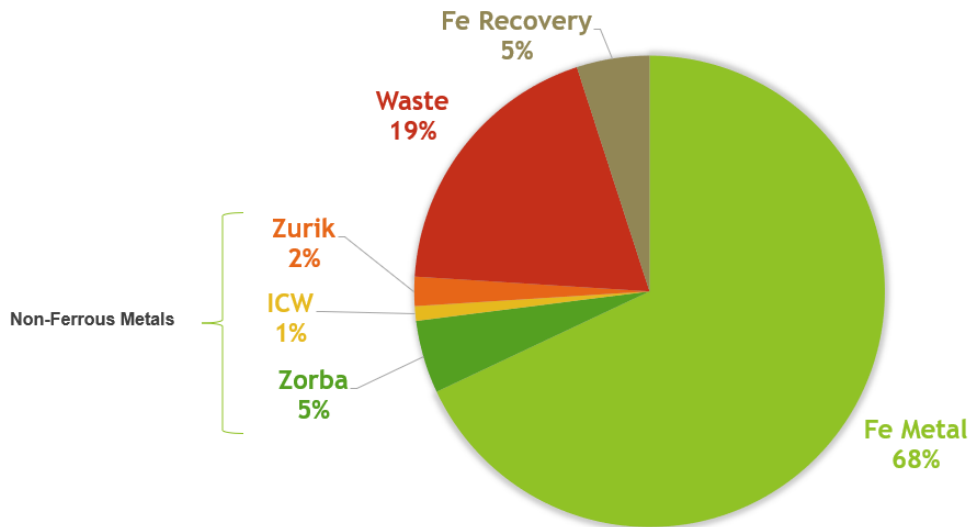
The NFe Plant will be able to extract another 13% of recoverable, marketable material from the total throughput which in older style shredders lacking modern technology and many other Canadian operators, would normally dispose of as landfill waste. Table 1: NFe Plant Recoverables outlines the material that will be recovered from the plant.

Product	Description	Photo
Zorba	Product from Eddy current separators, containing mostly Aluminum.	
Zurik	Product from Finders, containing mostly stainless steel.	

ICW	Insulated Copper Wire, produced from finders.	
Landfill Waste	From ASR. Seats, fabrics, plastics etc.	

**Table 1: NFe Plant Recoverables**

Figure 10: Material Breakdown by %Mass provides the breakdown of material for automotive shredding operations.



**Figure 10: Material Breakdown by %Mass**

A variety of studies have been completed to gain knowledge and learn about the composition of waste material from ASR. The material composition of ASR is highly dependent on material throughput and material de-polluting, but can be broken down as follows. (Cheminform Services Inc., 2014)

- Plastics – 20-45%
- Metals – 5-20%
- Rubber – 5-25%
- Foam – 0-15%
- Wood/Cardboard – 0-5%
- Textiles/Fibres – 5-30%
- Glass – 0-20%

The de-polluting of automobiles is the single most important step to ensure that the quality of the ASR waste is suitable for disposal. Newco's SEDA Easydrain systems that will be installed on site feature the best technology for waste fluid extraction from the automobile, as well as the best containment system to keep the site and surrounding environment free of pollution.

### 3.3.7 SEDA Easydrain Automotive De-Polluting Stations

Automobiles will undergo a strict de-polluting procedure to ensure the proper drainage, containment and disposal of the following materials:

- a. Batteries
- b. Tires
- c. Motor Oil
- d. Transmission Fluid/Gear Oil
- e. Glycol (Engine Coolant)
- f. Gasoline
- g. Refrigerant Contained in Air Conditioning Systems
- h. Brake Fluid
- i. Windshield Wash
- j. Mercury Containing Switches

Fluids will be drained using (2) SEDA EasyDrain systems. The SEDA systems have been engineered to remove 98% of fluids from vehicles without spilling a drop. This technology is state-of-the-art and is important for the proper drainage and containment of environmentally hazardous materials. The two systems have been strategically planned to process the number of vehicles Newco plans to process daily.



**1. Impermeable Floor**  
Any wasted fluid is Contained

**Figure 11: SEDA Easydrain System**

The system is fastened to a steel base with an impermeable floor that if for any reason a small amount of fluid is released during the de-polluting process, it is contained and can be drained from the base as a part of the facility maintenance program.

The SEDA system will pump waste fluids to a series of double walled tanks (specifications shown in Site Plan, APPENDIX A – SITE PLAN, specifically designed for the storage of waste fluids. Newco self-sufficiently disposes of its waste oil with a certified waste oil furnace at the Robin Hood Bay facility. The operator of the SEDA system has the ability to inspect gasoline to separate reusable fuels and dirty fuels. Newco has a gasoline recycling program with its employees to have the ability to reuse drained fuels. In this program, reusable fuels are collected on a daily basis in Gasoline tanks and can be used in employee



vehicles. Dirty fuels, glycols, brake fluid and mercury switches will be disposed of through local certified disposal facilities. While the vehicle is on the de-polluting rack, wheels and tires will be removed. Steel wheels will be recycled as #1 steel product which is trucked and stored in Newco's facility in Argentina before it is exported to international markets.

### **3.3.8 Concrete Pad**

The site will have a 128m x 128m (1.60 Ha) concrete pad which will contain the shredding unit and all other associated equipment and operations. All storm water from the site will be processed by a StormwaterRx "Clara" oil/water/sediment separator. This system is a modern separator that uses gravity to remove hydrocarbons and suspended solids from storm water.

The site will be designed around the capabilities of the storm water separator such that throughput will be well within the separator's processing capabilities. This will be completed though operating a detention system which regulates the flow through the separator in a high rain/flow event. A full detention system that will temporarily store the difference in volume between the cities pre-development and post-development design storms is a requirement as a part of the City of St. Johns Stormwater Detention Policy. 25-year, 50-year, and 100-year return periods for 6 hour, 12 hour and 24 hour durations will be analyzed for the design of the stormwater detention system. The system will also ensure the preservation of the environment and fish habitat. It is important to note that the de-polluting systems, described later in this document, are designed to contain all waste fluids from vehicles, so it is not anticipated the separator will have to process any hydrocarbons. The separator is installed as a contingency as well as to improve stormwater runoff water quality. From there the run off will be handled to meet or exceed standards set out by the City of St. John's, and the Environmental Control Water and Sewer Regulations.

Newco will operate using a strict spill prevention and management plan that will meet the following criteria:

- a. A spill cleanup procedure that outlines process and materials to be used to clean up a spill of chemical waste.
- b. The location of main drain of the concrete pad.
- c. Location of material to temporarily block the drain in a spill event.
- d. A schedule for inspecting storage areas and spill containment systems.

This will ensure that if any fluid is released on the concrete pad, it will be contained and removed for disposal, before reaching the drain.

### **3.4 Operation**

Scrap materials that will be processed with the development are white goods, automobiles and light irons. Figure 12: Scrap Metal Processing Flowchart, presents the flow of material through the facility.

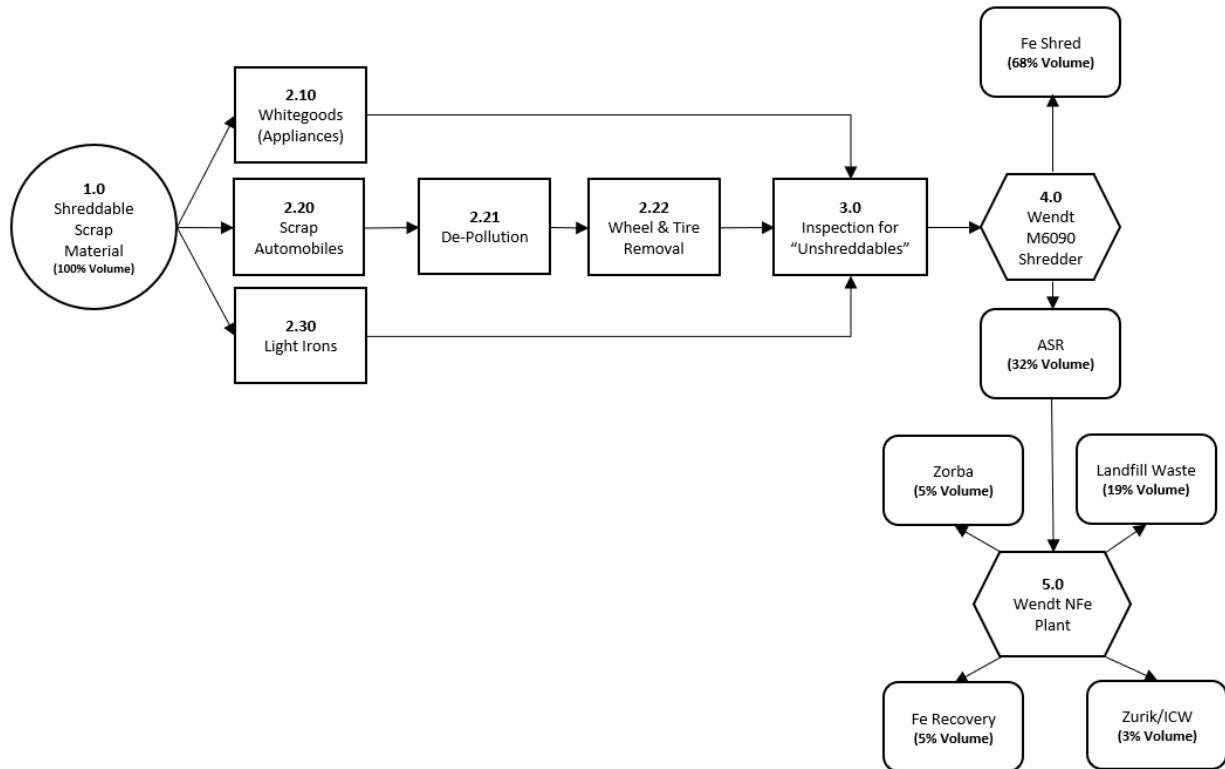


Figure 12: Scrap Metal Processing Flowchart

### 3.4.1 De-Pollution

Scrap automobiles will be de-polluted prior to shredding to ensure any environmental hazardous materials are contained, this is important for all stages of the end of life vehicle for ensuring waste material isn't released at the site and isn't contained in material that will be disposed of at the landfill.

Whitegoods (i.e. refrigerators, freezers, washers, dryers, dishwashers, etc), and vehicles are typically accepted free of any refrigerants or damaged by disposer such that refrigerant piping has been damaged. In cases where material still contains refrigerants (CFC's, HCFC's), Newco will have a licensed handler remove the material to properly contain and dispose.

### 3.4.2 Wheel & Tire Removal

While at the de-polluting station, wheels and tires are removed to prepare vehicle for the next step of processing.

### 3.4.3 Inspection for Unshreddables or Explosives

This step involves a final inspection of the vehicle to ensure all mercury containing switches are removed, and verification that there are no combustible or explosive materials and no heavy steel plate that could potentially damage the shredder and associated components of the equipment. If any "Unshreddables" or explosives are found, they will be immediately transported to a licensed facility on Incinerator road.

### 3.4.4 Wendt M6090 Shredder

De-polluted Automobiles, white goods and light irons will be picked and loaded into the Wendt M6090 Infeed conveyer, to start the shredding process. The shredder will reduce material in volume and sort ferrous from non-ferrous materials. The ferrous materials (i.e. shred), produced from the shredder is stacked, loaded into scrap material haulers, and stored in Argentia until shipped by bulk vessel to international markets. All materials, once processed by the shredder, can be handled with a front-end loader with either a bucket or plate attachment.

### 3.4.5 Wendt NFe (Non-Ferrous) Processing Plant

Non-ferrous material from the shredder (also called ASR, an acronym for Automotive Shred Residue) will undergo processing and in the non-ferrous plant. This unit, is composed of a series of state-of-the-art technologies designed to take all metal out of the ASR will further separate aluminum, copper, stainless and waste materials for market and disposal.

### 3.4.6 Disposal of ASR Waste

Non-marketable waste from the entire process collected from the non-ferrous plant will be disposed of at a certified waste disposal facility, the Robin Hood Bay Waste Management Facility. Newco will have a truck dedicated to transporting waste to the disposal facility multiple times a day to manage storage, and ensure that the site remains clean. All materials, once processed by the shredder, can be handled with a front-end loader with either a bucket or plate attachment.

Newco has had many discussions with the Robin Hood Bay Waste Management Facility regarding the disposal of ASR. The facility has given the verbal agreement to dispose, and then start reviewing the option of using ASR as land cover. ASR is considered non-hazardous waste in Ontario, where the much of the ASR is developed in Canada. Newco's automotive de-pollution procedure and equipment, as outlined in SEDA Easydrain Automotive De-Polluting Stations, will be paramount in the assurance of containing hazardous materials, and meeting the standards as outlined above.

### 3.4.7 Operations Schedule

Table 2: Weekly Operations Schedule outlines the projected weekly operation of the equipment, which includes a maintenance day. Newco anticipates the running of the equipment for a total of 40 hrs a week.

<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
No Operation	Operation (10 hrs)	Operation (10 hrs)	Operation (10 hrs)	Operation (10 hrs)	Maintenance (10 hrs)	No Operation

**Table 2: Weekly Operations Schedule**

## 3.5 Storage & Material Handling

Newco currently processing approximately 40,000 Metric tonnes of shreddable material per year. It is estimated that approximately 75% of this is crushed automobiles. This data will be used for the purpose of estimating the material generated in the following sections.

### 3.5.1 Batteries

Used car batteries and other types of batteries will be collected from garages and the public and palletized for shipment to smelters, utilizing the following battery shipping criteria.

- a. All batteries removed from scrap vehicles will be stored in an indoor facility to ensure no precipitation makes contact with the same.
- b. Batteries will be shipped from the facility on a monthly basis for recycling at locations outside of the province in containers.
- c. Batteries are stacked with wood or dense cardboard for separation, with the use of heavy shrink-wrap to contain on the pallet, and to ensure no contact or arching.

Battery processing is a continuance from the existing operation on Incinerator Road, except on a larger scale, given the additional throughput of material on site.

### **3.5.2 Mercury Containing Switches/Lead Weights**

Mercury containing switches and tire weights that contain lead will be removed and stored in containers that meet the following criteria.

- a. Stored in an above ground container.
- b. Contain a label indicating the contents of the container.
- c. Contained to ensure precipitation doesn't contact material.
- d. Capable of storing contents without any degradation or degradation.
- e. Container is sealed when not actively used.

Newco Metal & Auto Recycling is a member of the "Switch Out" mercury switch recovery program. Although mercury switches are used less and less in vehicles, Newco still sends a shipment of a pale of mercury switches to the licensed disposal facility annually.

### **3.5.3 Fluids**

Fluids that have been removed from the vehicle or other material will be stored in double walled tanks, specifically designed for waste fluid storage. Newco will have 3 tanks installed on site, to contain and store waste oil (500 gal), Waste Fuel (250 gal), and Waste Glycol (250 gal), as outlined in APPENDIX A – SITE PLAN.

Newco is anticipating the generation of waste fluids from a maximum of 5,000 vehicles per year. This number is significantly less than the total number of vehicles processes as the majority of end of life vehicles are processed are drained prior to taking ownership.

Average # of vehicles/ day: 20

Volume of oil per vehicle: 5 Litres x 20 vehicles = 100 L per day.

Volume of fuel per vehicle: 2.5 Litres = 50 L per day.

Volume of glycol per/vehicle: 5 Litres = 100 L per day.

Waste oil will be consistently transported to the St. Johns location for waste oil furnace heat. Glycol and fuels will be disposed via. Waste disposal truck as needed.

### **3.5.4 Tires**

Where possible, tires will be culled for resale or disposed of through the MMSB Used Tire Management Program. Newco is a large contributor to this program, making up 7% of the total volume MMSB exports, contributing 21935 tires to the MMSB in 2017. Tires are stored on site in piles until loaded into a container. Piles contain no more than 500 tires, and the total number of tires stored on site will not exceed 2000.

Newco anticipates the generation of 80 waste tires/day at the incinerator road facility.

### **3.5.5 Ferrous Shred**

Ferrous shred will be the primary product generated from the operation. A third-party contractor will be hired by Newco to provide trucking services of steel shred from incinerator road to Newco Argentia where it will be stockpiled for export by marine vessel.

As a guide, Newco will not store more than (1) day of produced ferrous shred on site.

# of Operating hours/day: 10

# of days: 1

Average TPH (Tonnes per Hour): 40

Percentage of total throughput: 73 % \*assuming processing scrap automobiles.

The maximum amount of ferrous shred that will be stored on site at any point is 292 MT.

### **3.5.6 Non-Ferrous Metals**

Non-ferrous metals produced by the Wendt Non-ferrous plant will be handled using front end loaders, and stored/exported in shipping containers. Newco will store a maximum of (4) containers on site at any time with non-ferrous materials.

Non-ferrous metals make up approximately 8% of total produced material from the processing plant.

# of Operating hours/day: 10

# of days: 1

Average TPH (Tonnes per Hour): 40

Percentage of total throughput: 8 % \*assuming processing scrap automobiles.

With an anticipated weekly throughput of 1600 metric tonne, based on the above, Newco anticipates the generation of 128 MT of non-ferrous materials (Zorba, Zurik, and ICW) per week.

### **3.5.7 ASR Waste**

ASR Waste, defined as the total volume of ASR subtracting the volume of non-ferrous metals removed by the Wendt NFe plant, makes up 19% of the total product produced from the operation, and will be transported via. Truck to the Robin Hood Bay landfill on a daily basis.

ASR Waste Generation:

# of Operating hours/day: 10

# of operating days/week: 4

Average TPH (Tonnes per Hour): 40

Percentage of total throughput: 19 % \*assuming processing scrap automobiles.

The total amount of ASR Waste generation on a weekly basis will be 314 metric tonnes. The maximum amount of ASR that will be stored on site at any time is (1) day of produced material, which is 76 metric tonnes. Newco processes approximately 40,000 Metric Tonnes a year, therefore a good estimate of total ASR disposed of at the landfill annually is 7600 Metric Tonnes.

### 3.5.8 Inspections

It will be a part of the weekly site maintenance program that storage areas, containers, and systems are inspected to ensure adequate containment and no spills and leaks.

### 3.6 Occupations

The new facility will have the following staff for operation:

- 1 x General Manager
- 1 x Operation & Maintenance Engineer
- 1 x Yard Foreman
- 2 x Crane Operator
- 1 x Shear Operator
- 2 x Steel Cutters
- 1 x Shredder Operator
- 1 x NFe Plant Operator
- 2 x Welder/Maintenance Personnel
- 2 x Loader Operators
- 8 x Laborers for Picking Material
- 1 x Administrative Person
- 6 x Truck Operators

As outlined in Table 2: Weekly Operations Schedule, the operation will run 5 days a week, with 4 days of shredding, and one day of site cleanup and maintenance.

## 4 Approval of the Undertaking

Newco purchased the site from Newfoundland Recycling Limited in 2016. In 2003 the previous site operator submitted a registration for a metal salvage yard (Reg # 1058), which included allowance for the installation and operation of a metal shredder. The Project was released from further environmental assessment subject to conditions. Because too much time had elapsed between the former approval and Newco's plans to upgrade its metal recycling facility, the Environmental Assessment Division advised Newco that its undertakings would require Registration per Part X of the Environmental Protection Act. This document is intended to meet that regulatory requirement. The use of the area as a metal salvage yard was approved by efforts of the former operator. These approvals included a City of St. John's letter dated November 6, 2002 approving the application for the proposed commercial salvage site. The Project will also require a Building and Development Permit from the City of St. John's (in progress) and a certificate of Approval from the Department of Municipal Affairs and Environment (following EA Release).

## 5 Schedule

It is expected that the requirements of the Environment Assessment Registration and Review and anticipated release will occur in mid-March, allowing work to commence on the schedule as outlined in Figure 11.

The Site development, equipment installation, commissioning and start up will occur over the course of 2018, as outlined in **Table 3: Project Schedule**.

## Foxtrap Scrap Automobile Processing Project

Tank No.	Task Name	Start	End	Duration (days)
1	Engineering	1-Dec-2017	1-Apr-2018	121
2	Concrete Foundation Installation	1-Mar-2018	15-Sep-2018	198
3	Electrical Installation	1-Apr-2018	30-Jul-2018	120
4	Mechanical Installation	1-May-2018	30-Jul-2018	90
5	Commissioning & Startup	1-Aug-2018	25-Aug-2018	24
6	Operational Refining & Tuning	1-Aug-2018	31-Dec-2018	152

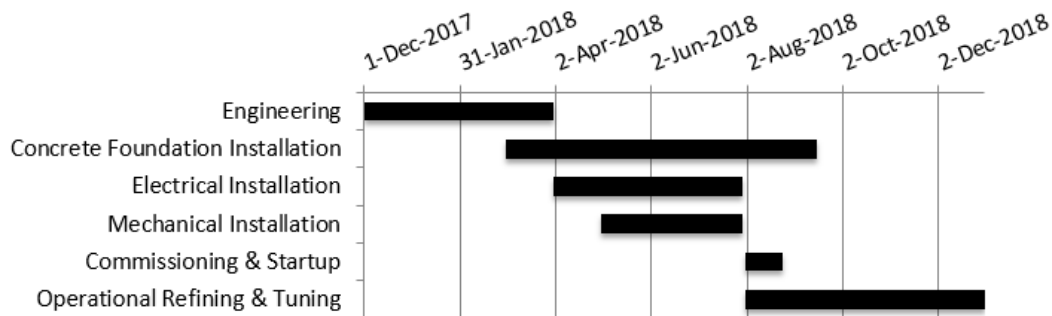


Table 3: Project Schedule

## 6 Funding

Funding for this project will be from private sources and financial institutions. Atlantic Canada Opportunities Agency (ACOA) has provided a \$ 1,900,000.00 loan for development and equipment and is a strong supporter of the project.

## 7 References

- Cheminfo Services Inc. (2014). *Background Study on the Content of Sherdder Residue*. Markham.
- EPA. (2015, November 19). *Emission Factors for Green Gas Inventories*. Retrieved from EPA.GOV: [https://www.epa.gov/sites/production/files/2015-12/documents/emission-factors\\_nov\\_2015.pdf](https://www.epa.gov/sites/production/files/2015-12/documents/emission-factors_nov_2015.pdf)
- NRCAN. (2016, April 28). *Fuel Efficiency Benchmarking in Canadas Trucking Industry*. Retrieved from Natural Resources Canada: <https://www.nrcan.gc.ca/energy/efficiency/transportation/commercial-vehicles/reports/7607>



## 8 Regulatory Requirements

The activities associated with this operation may involve, but are not limited to, the following Provincial Acts and Regulations:

- Environmental Protection Act
- Water Resources Act
- Storage and Handling of Gasoline and Associated Products Regulations, 2003
- Ozone Depleting Substances Regulations
- Environmental Control Water and Sewer Regulations.
- Dangerous Goods and Transportation Act and Regulations
- Fire Prevention Act and Regulations
- Air Pollution Control Regulations, 2004
- Halocarbon Regulations
- Used Oil Control Regulations
- Occupational Health and Safety Act and Regulations

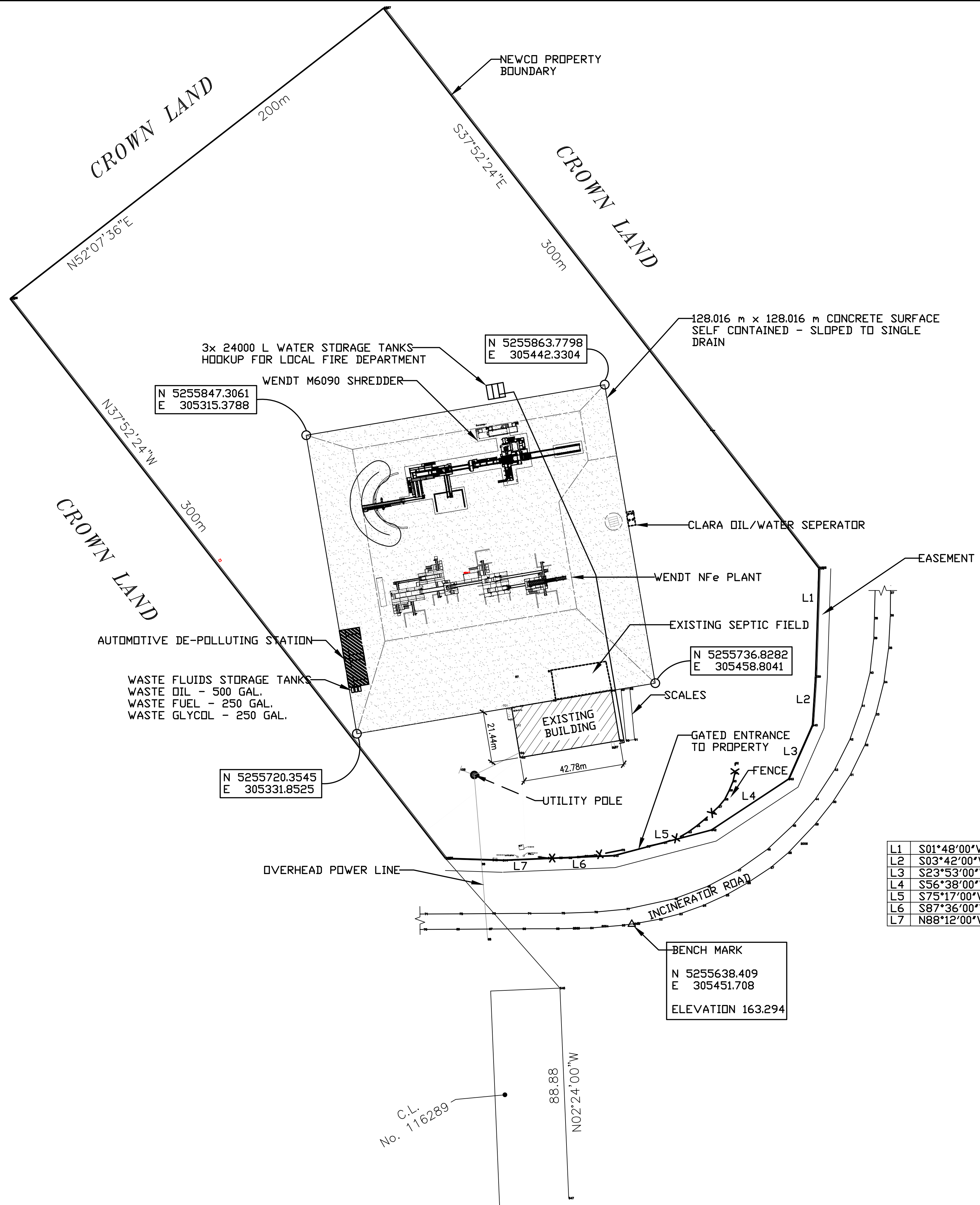
### Signature

February 13<sup>th</sup>, 2018

Date

\_\_\_\_\_  
Robert Anstey, President

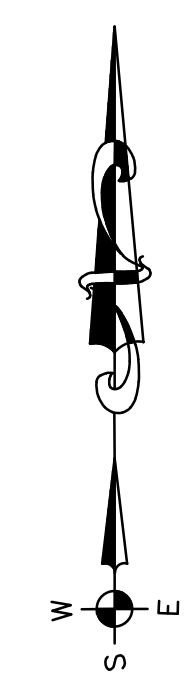
**9 APPENDIX A – SITE PLAN**



1 SITE PLAN  
SK1 1 : 1000

DRAWING NOTES

- DO NOT SCALE FROM DRAWINGS.
- CONTRACTOR MUST VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE BEFORE PROCEEDING WITH ANY PORTION OF THIS WORK.
- THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS ISSUED FOR CONSTRUCTION AND STAMPED AND SIGNED BY THE ENGINEER OF RECORD.
- PROPERTY BOUNDARY AND SITE INFORMATION DERIVED FROM BROWN & WAY SURVEY DATED AUGUST 16, 2016.



NO.	DESCRIPTION	Y/M/D	BY
A	ISSUED FOR PERMITS	2017.12.18	RB

REVISIONS

A	B
A - PLAN, SECTION, ELEVATION, OR DETAIL NO.	B - NO. OF DRAWING WHERE ABOVE IS DRAWN

STAMP

PERMIT  
PROVINCE OF NEWFOUNDLAND AND LABRADOR  
PERMIT HOLDER  
This Permit Allows  
JEWEL BAILEY CONSULTANTS LTD.  
M.I.R.C.  
To practice Professional Engineering in Newfoundland and Labrador  
Permit No. as issued by PEG N0540 which is valid for the year 2017.

CLIENT  
**NEWCO METAL & AUTO RECYCLING LTD.**

CONSULTANT

STRUCTURAL - MECHANICAL - ELECTRICAL  
75 Tiffany Court, St. John's, NL A1A 0L1  
TEL: (709) 579-4255 FAX: (709) 579-3423

PROJECT  
**NEWCO SCRAP AUTOMOTIVE PLANT**  
FOXTRAP, NL

DRAWING

**SITE DEVELOPMENT PLAN**

DRAWN BY	CHECKED BY	APPROVED BY
G.M.	R.B.	R.B.
PROJECT NO. JBC-17-C-066	DWG. FILE NO.	FILE NO.
DATE AUG 2017	SCALE AS SHOWN	DRAWING NO. C-100
		REV. A

**10 APPENDIX B – SITE SURVEY**

DO NOT SCALE FROM PRINT

BENCH MARK  
N 5 255 638.409  
E 305 451.708  
ELEVATION 183.294

NO.	REVISIONS	DATE
A	PAV. REVISED	JUNE 05, 2017
B	GRAVEL ACCESS AND ADJUTINAL GRADES SHOWN	DEC. 20, 2017

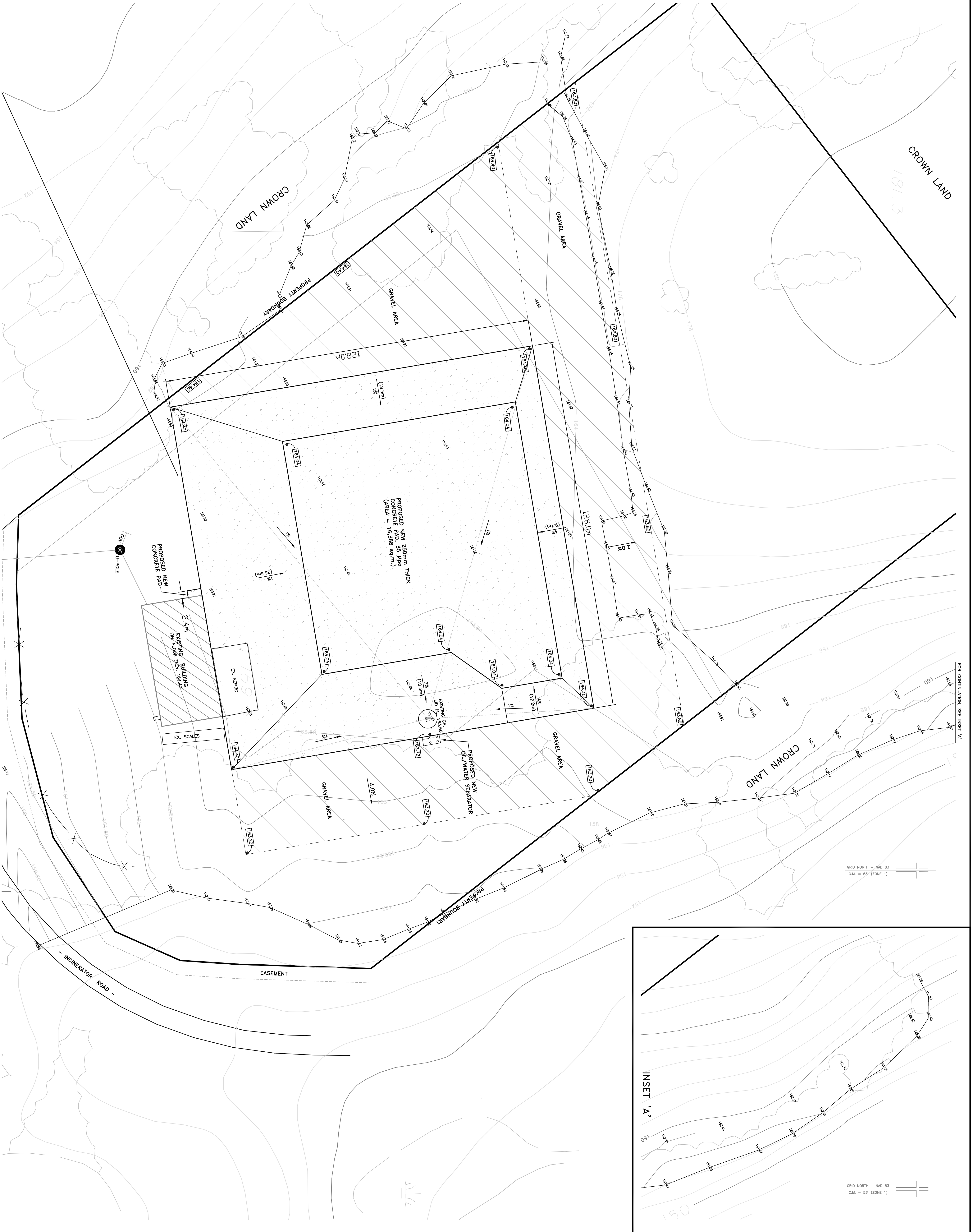
OWNER :  
**Newco Metals**  
390 Incinerator Road  
St. John's, N.L.

ENGINEERING:  
**BROWN & WAY SURVEYS**  
314 HAMILTON AVENUE  
ST. JOHN'S, N.L.  
A.T.E. 119  
PROFESSIONAL SURVEYING SERVICES  
email: brownway@brownwaysurveys.com  
TEL: (709) 728-1040 FAX: (709) 728-1041

PROJECT :  
**PROPOSED NEW CONCRETE PAD & GRADING PLAN**  
390 INCINERATOR ROAD, ST. JOHN'S, N.L.

TITLE :  
**PROPOSED NEW CONCRETE PAD & GRADING PLAN**  
390 INCINERATOR ROAD, ST. JOHN'S, N.L.

SCALE : 1 : 500  
DATE : DECEMBER, 2017  
DRAWN BY: G.N.  
CHECKED BY:  
APPROVED BY: J.O.B. NO. 11067-1



GRID NORTH - NAD 83  
C.M. = 53° (ZONE 1)

GRID NORTH - NAD 83  
C.M. = 53° (ZONE 1)

FOR CONTINUATION, SEE SHEET 'X'

## **11 APPENDIX C – GEOGRAPHIC LOCATION**









Lance Cove

60

2500.00 m

Foxtrap Access Rd

1

1000.00 m

500.00 m

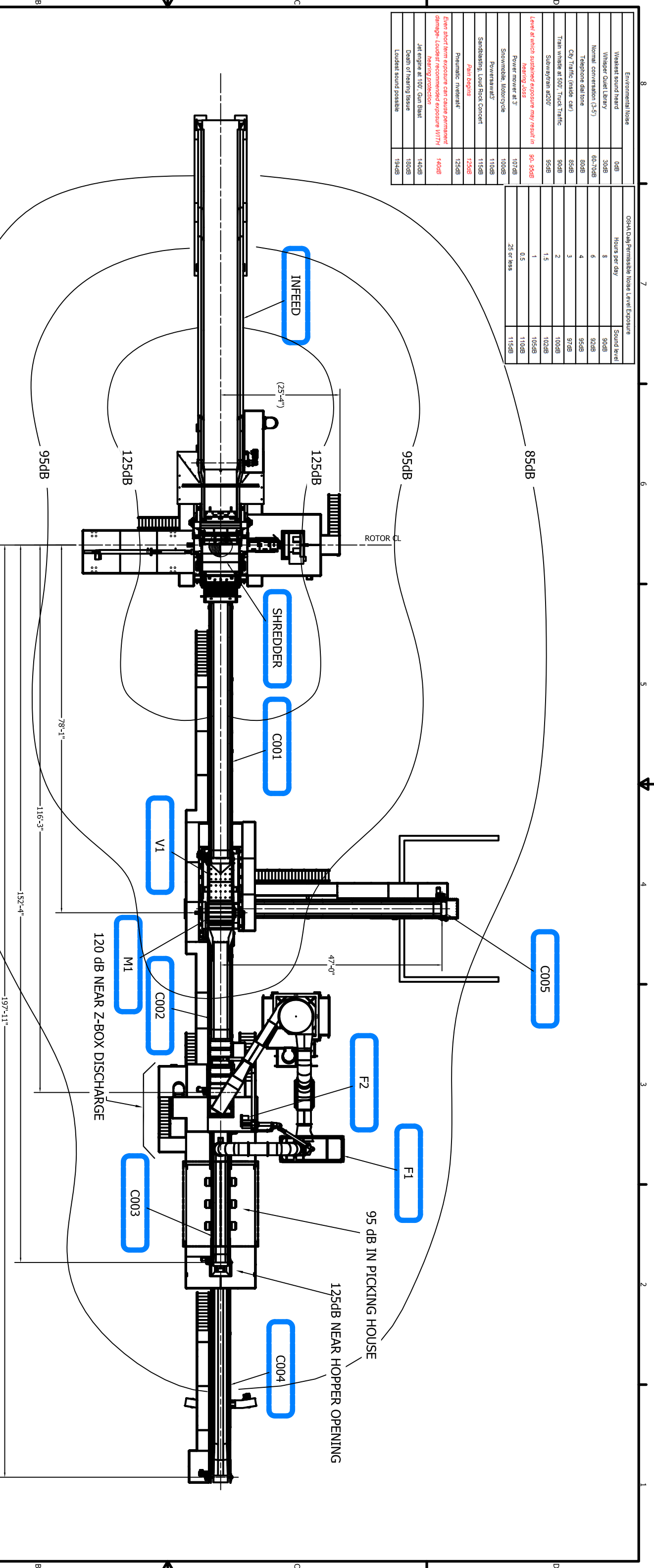
353252.38 m E, 525000.00 m N

Itemref	Quantity	Title/Name, designation, material, dimension etc			Article No./Reference	
Designed by NJH	Checked by ROD	Approved by - date ROD - 9/2/18	Filename R1	Date 28/01/18	Scale NTS	
NEWCO METAL				AERIAL MAP		
				3	Edition 0	Sheet 1 OF 1



**12 APPENDIX D – NOISE LEVEL DIAGRAM**

Environmental Noise	dB	OSHA Daily Permissible Noise Level Exposure	Sound level
Weakest sound heard	0dB	Hours per day	90dB
Whisper Quiet Library	30dB	8	90dB
Normal conversation (3-5')	60-70dB	6	92dB
Telephone dial tone	80dB	4	95dB
City Traffic (inside car)	85dB	3	97dB
Train whistle at 500' Truck Traffic	90dB	2	100dB
Subway train 8200'	95dB	1.5	102dB
<i>Level at which sustained exposure may result in hearing loss</i>	<i>90-95dB</i>	1	105dB
Power mower at 3'	107dB	0.5	110dB
Snowmobile, Motorcycle	100dB	25 or less	115dB
Power saws*	110dB		
Sandblasting, Loud Rock Concert	115dB		
<i>Pain begins</i>	<i>125dB</i>		
Pneumatic Wedger*	125dB		
<i>Even short term exposure can cause permanent damage - Loudest recommended exposure WITH hearing protection</i>	<i>140dB</i>		
Jet engine at 100' Gun Blast	140dB		
Death of hearing tissue	180dB		
Loudest sound possible	194dB		



- GENERAL NOTES:**
1. SOUND PRESSURE READINGS TAKEN WITH HAND HELD METER.
  2. VALUES ARE "A" WEIGHTED.
  3. VALUES ARE "AVERAGE" AND DO NOT INCLUDE SPIKES.
  4. READINGS TAKEN DURING SHREDDING A MIXTURE OF LIGHT IRON AND AUTO BODIES.
  5. DISTANCES ARE APPROXIMATE AND CAN BE AFFECTED BY SITE SPECIFIC CONDITIONS.
  6. dB AVERAGE READINGS NEAR FERROUS STACKING PILE VARY GREATLY BY THE HEIGHT OF FREEFALL
  7. dB AVERAGE READINGS IGNORE INFLUENCES OF MOBILE EQUIPMENT.
- WENDT CORPORATION RESERVES THE RIGHT TO ALTER AND/OR IMPROVE THE DESIGN OR MANUFACTURE OF ITS EQUIPMENT WITHOUT PRIOR NOTICE



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DATE	8/11	CHG#	9414	WHERE USED
------	------	------	------	------------

TOLERANCES UNLESS STATED:  
 FINISH: 32  
 ANGLES: 30°  
 THIS DRAWING MUST NOT BE USED OR COPIED WITHOUT WRITTEN PERMISSION.  
 DRAWN BY: BPP  
 DATE: 11/10/11  
 CHECKED:

**WENDT CORPORATION**  
 2080 MILITARY ROAD  
 TOWNSEND, NY 14155-9765  
 FAX: (716) 873-9399

**ROCHESTER IRON & METAL**  
 NOISE LEVEL  
 DIAGRAM

SCALE	NTS	SHEET	1	OF	5
CODE	945	REVISE	4	DATE	1302
					00

AUTODESK INVENTOR GENERATED DRAWING