
ENVIRONMENTAL ASSESSMENT REGISTRATION

STEPHENVILLE SEWAGE TREATMENT FACILITY

Submitted to:

**Department of Environment
Environmental Assessment Division**

October 2003

ENVIRONMENTAL ASSESSMENT REGISTRATION

STEPHENVILLE SEWAGE TREATMENT FACILITY

Prepared for:

Department of Environment
Environmental Assessment Division
PO Box 8700
St. John's, NF
A1B 4J6

Prepared by:

BAE-Newplan
1133 Topsail Road
Mount Pearl, Newfoundland
A1N 5G2

October 2003

**Environmental Assessment Registration
Stephenville Sewage Treatment Facility**

Project No.: 722023

Title: ENVIRONMENTAL ASSESSMENT REGISTRATION,
STEPHENVILLE SEWAGE TREATMENT FACILITY

Client: Town of Stephenville

B	03/10/15		Environmental Registration	VC	WM	WM
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1.0 NAME OF THE UNDERTAKING

Stephenville Sewage Treatment Plant

2.0 PROPONENT

2.1 *Name of Corporate Body*

Town of Stephenville

2.2 *Address*

Town of Stephenville
PO Box 420
Stephenville, NL
A2N 2Z5

2.3 *Contact*

Name: Barry Coates
Official Title: Town Manager
Telephone #: (709) 643-8360
Fax #: (709) 643-2770

2.4 *Principal Contact Person for Purposes of Environmental Registration*

Wayne Manuel, P. Eng.
BAE ♦ Newplan Group Limited
1133 Topsail Road
Mount Pearl, NF
A1N 5G2
Telephone #: (709) 368-0118
Fax #: (709) 368-3541

3.0 THE UNDERTAKING

3.1 *Nature of the Undertaking*

It is proposed to develop a Sewage Treatment Plant in Stephenville, Newfoundland and Labrador. The development will consist of a sewage lift station, sewage treatment plant, clarifier, sludge management system, engineered wetland, outfall, as well as associated sewage mains. Access to the site will require construction of an access road off Massachusetts Drive. General location and layout of the proposed sewage treatment plant are provided in the Appendix A, Figures 1, 2, and 6.

3.2 *Need for the Undertaking*

Untreated municipal wastewater from the Town of Stephenville is currently being discharged directly into the receiving environment through outfalls at two separate locations, St. George's Bay and Blanche Brook. Blanche Brook runs through the community and empties into St. George's Bay.

A study completed by BAE-Newplan Group (Sewage Treatment Study, Town of Stephenville, 2002) identified levels of coliform, Biochemical Oxygen Demand (BOD), and Total Suspended Solids (TSS) in excess of the *Control Water and Sewage Regulations*, as well as the Department of Environment *Guidelines for the Discharge of Municipal Wastewater*. The following results were observed throughout the study:

- High concentrations of total and fecal coliform, exceeding the *Control Water and Sewage Regulations* as well as the *Guidelines for the Discharge of Municipal Wastewater* (shellfish and recreational water guidelines) were observed within 0.5 km radius of both existing outfalls. High concentrations of fecal coliform, exceeding the *Guidelines for the Discharge of Municipal Wastewater* (shellfish water guidelines) were observed within 1.0 km radius of the outfalls;
- High concentrations of total and fecal coliform, were detected upstream of the point where West Street outfall enters Blanche Brook. Flooding tidal current forces effluent to flow upstream, instead of flushing into the bay;
- BOD was detected in vicinity of Airport Outfall, exceeding the *Control Water and Sewage Regulations*;
- TSS was detected greater than the *Control Water and Sewage Regulations* within 0.5 km of the outfalls.

Based on the exceedances of the above referenced regulations and guidelines, the effluent has an adverse impact on the marine environment and its valuable resources, particularly near the existing outfalls, which are close to the shoreline, beaches, and homes. It also has an adverse effect on aquaculture, tourism, recreation, and human health.

4.0 DESCRIPTION OF THE UNDERTAKING

4.1 *Geographic Location*

The proposed development will be located in the Town of Stephenville, on the southwest coast of Newfoundland. The proposed sewage treatment facility will be located immediately adjacent to the Stephenville Airport. See Appendix A, Figure 2 for the proposed location of the sewage treatment plant.

The outfall will proceed from the treatment plant in a south west direction and will deposit treated effluent into St. Georges Bay.

4.2 *Existing Infrastructure*

Currently, the Town of Stephenville has two sewage outfalls. These include:

- Blanche Brook – Blanche Brook receives sanitary sewer from all areas of the Town of Stephenville west of Blanche Brook via a 750 mm diameter outfall. The area served by this outfall encompasses approximately two thirds of the Town of Stephenville. Under normal river conditions, the top of the pipe is not covered by the water surface. There is no treatment or disinfection prior to discharge of wastewater from the outfall and the effluent is not in compliance with the *Control Water and Sewage Regulations*

or the Department of Environment *Guidelines for the Discharge of Municipal Wastewater*.

- Airport Outfall – The airport outfall receives wastewater through a series of three outfalls. One outfall is storm sewer and the remaining two outfalls (1200 mm and 900 mm) are combined storm water and sanitary sewage. The airport outfall receives sanitary sewer from all areas of the Town of Stephenville east of Blanche Brook. The outfalls were originally protected by a concrete headblock, however, the pipes have deteriorated since their original installation and the outfall now discharges into a small lagoon inland from the headblock. Under some tidal conditions the outfall is not covered by the ocean surface. There is no treatment or disinfection prior to discharge of wastewater from the outfall and the effluent is not in compliance with the *Control Water and Sewage Regulations* or the Department of Environment *Guidelines for the Discharge of Municipal Wastewater*.

4.3 Overview of the Proposed Sewage Treatment Process

The existing sewer mains at both the Blanche Brook outfall and the Airport outfalls will be intercepted and passed through the proposed sewage treatment system. The Blanche Brook outfall will be intercepted at the end of the outfall. The airport outfalls will be intercepted at the following locations:

- Combined 900 mm storm and sanitary sewer main – See Appendix A, Figure 2 for location where existing infrastructure will be intercepted using a cast in place manhole with an overflow wier. The interception pipe will be 375 mm, which will convey the normal dry weather peak flows to the sewage treatment process. In the event of heavy storm activity, the overflow wier will allow excess diluted sewage to bypass the proposed sewage treatment system;
- Existing 250 mm sanitary sewer main – intercepted at MH 814 - See Appendix A, Figure 2.

The diverted sanitary sewage will proceed to a lift station. The lift station is required due to the differences in elevation of the sewer mains and the treatment plant. From the lift station, the sewage will proceed through a sewage treatment building, clarifier, the Kickuth BioReactor engineered wetlands, and will be discharged into the marine environment through a 60 m outfall – See Appendix A, Figure 4.

4.4 Major Physical Features of the Undertaking

The proposed development consists of an access road, sewage lift station, sewage treatment plant, clarifier, sludge management system, engineered wetlands, outfall, as well as associated sewer mains. General location and layout of the proposed treatment system are provided in the Appendix A, Figures 2, 3, and 6. Excluding the lift station and associated sewer mains and outfalls, the footprint of the proposed site will be approximately 25,700 m². With the exception of asphalt surfaces, the site will be hydro seeded or sodded and trees will be planted.

a) Access

Access to the site will require the construction of a new access road that will run parallel to Massachusetts Drive. The main access road will be approximately 37 m in length – See Appendix A, Figure 2. A parking lot (6 vehicles) will also be constructed. Minor access roads will be constructed off the main road to access the clarifier chamber and the bioreactor beds. All access roads will be paved with asphalt.

b) Utilities

1. Electrical: Three phase electrical power will be required to operate the sewage treatment plant system. Three phase power is available along Massachusetts Drive.
2. Sewer: Sewer from the facility will be directed to the lift station for mixing prior to going through the treatment process.
3. Water – Drinking water, as well as water required for the operation of the facility, will be supplied from the Town of Stephenville water supply.

c) Lift Station

Refer to concept plan for location of lift station. The size of the structure will be approximately 5.8 m x 5.5 m. The structure will consist of an underground concrete chamber (with access hatches) as well as three sewage lift pumps. These pumps will lift the sewer to a sufficient elevation where it will flow by gravity to the Sewage Treatment Plant.

The location of the lift station will be elevated from an existing grade of 2.2 m to a final elevation of 4.5 m. This is due to the lift station being located in the Blanche Brook flood plain.

d) Sewage Treatment Plant

A sewage treatment plant (STP) of approximately 28.9 m x 19.8 m will be constructed. Please refer to Appendix A, Figures 1 & 2 for location and Figure 3 & 6 for layout. The building will be constructed of a structural steel frame and a block finish. The treatment processes inside the sewage treatment plant include screening and a vortex separator (grit removal). The solid material produced from the screening and vortex separator will go through a clarifier where it will be dewatered. The dewatered solids will be stored in a hopper inside the Sewage Treatment Plant building. Final disposal of the dewatered solids produced will be at the local landfill.

The STP will also contain a sludge management system to treat the sludge from the clarifier.

e) Clarifier

The clarifier will consist of three parallel chambers, each measuring 5 m x 30 m. The wastewater will flow from the Sewage Treatment Plant building into the chambers. In these chambers, the organic compounds will have the opportunity to settle out of the wastewater column. The clarifier will reduce the BOD content by 25%. Once the organic compounds settle, they are collected using a mechanical chain and flight mechanism and deposited in a sump.

f) Centrifuge

The collected organic compounds are pumped using a sludge pump into the dewatering centrifuge. The centrifuge separates the liquid component of the organic compounds from the sludge by spinning at a rate of 1600-2000 rpm. The liquid is returned to the wastewater flow for continuation through the treatment process. The dewatered solids are transferred to the Sludge Management System for stabilization.

g) Sludge Management System

The dewatered solids are treated in the pug mill using lime stabilization. The lime is added to the dewatered solids to raise the pH to 12 or higher. Once the dewatered solids reach a high pH it does not putrefy, create odours, or pose a health hazard. In order to get a significant level of pathogen kill, a high lime dosage and a three hour contact time is required. The final process is for the stabilized dewatered solids to be conveyed to a hopper for storage until the solids can be transported to the local landfill.

h) Kickuth BioReactor Engineered Wetland

The engineered wetland, based on site conditions and operational considerations, will consist of 16 bioreactor beds, measuring 28 m x 31 m. They are configured as part of a four main bioreactor system. See Appendix A, Figure 6. This configuration, consisting of four beds that contain two bilateral treatment zones per bed allows for parallel or serial operation due to the design of the piping for effluent distribution.

The system configuration is a three-stage process:

- Lined wastewater lagoon to contain effluent during treatment;
- Soil medium inside the lagoon area for biological degradation and for eliminating surface water; and
- Aerobic treatment produced by plants transporting oxygen to the soil to host aerobic bacteria.

Ahead of the wetland will be a diversion chamber to separate the low concentration heavily diluted storm water, from two times the average daily design flow. The highly diluted storm water will bypass the wetland and flow directly to the outfall. It is estimated that 3 – 5% of the total flow may bypass the wetland. Effluent quality from the wetland will be designed to meet the following limits:

BOD	40mg/l
TSS	80 mg/l
Ammonia	100 mg/l
Phosphorous	10 mg/l
Fecal coliforms	1000 per 100 ml

i) Outfall

The outfall will be 60 m in length, consist of 650 mm HDPE, and in a water depth of 3 m (See Appendix A, Figure 2 & 4 for location and general direction of outfall and Figure 5 for a profile view of the outfall).

g) Associated Sewer Mains

As discussed in a previous section, PVC sewer mains will be constructed to intercept the sanitary sewage at both existing outfall locations and convey it to the lift station. Sewer will flow from these locations to the lift station by gravity. The sewer main from the Blanche Brook outfall will have a 750 mm diameter and the airport sewer main will have a diameter of 375 mm. The associated sewer mains will be buried approximately 2.5 m – 3.5 m below surface.

The 750 mm sewer main from the Blanche Brook outfall will cross Blanche Brook, and will be buried approximately 1 m–1.5 m under Blanche Brook. In the area of Blanche Brook, the sewer main will be encased in concrete.

h) Physical Features

The site is presently vacant and undeveloped. The site is located on the eastern side of the airport access road and adjacent to the airport hanger. It is primarily grass covered and is relatively level throughout the area.

i) Environmental Site Conditions

At the proposed Sewage Treatment Plant location, no prior geotechnical investigation was completed. As a result, environmental site conditions are unknown.

As part of the proposed site selection, a geotechnical investigation will be completed prior to construction of Sewage Treatment Plant.

j) Drainage and Stormwater Management

A catch basin will be constructed on the south eastern portion of the paved parking lot. The remaining stormwater will drain to the adjacent surrounding area.

4.5 Construction

4.5.1 Construction Period

It is expected that construction and commissioning of all facilities will take in the order of 12 months.

The proposed construction start date is June 2004 and is scheduled to be completed June 2005.

4.5.2 Construction Activities Affecting Physical Environment

Construction of the Sewage Treatment System for the Town of Stephenville will involve grubbing, excavation, infilling, trenching in freshwater and marine environments, linear developments, as well as placing an outfall in a marine environment. Realizing some impact is likely on certain areas, the proponent is committed to keeping those impacts to a minimum. During the construction and operation of the Sewage Treatment System all efforts will be made to preserve and conserve the natural environment. Vegetation will be maintained to provide natural buffer zones and any exposed slopes will be stabilized with grass or a tree cover.

Grubbing and Disposal of Related Debris

The principal concerns associated with grubbing are the potential effects of erosion on marine and freshwater ecosystems, as well as water quality. All grubbing and disposal of related debris near watercourses will adhere to relevant regulatory requirements, including permits from the Department of Environment and the formal "Letters of Advise" and Authorizations for Works and undertakings Affecting Fish Habitat from the Department of Fisheries and Oceans. Grubbing activities shall be minimized where possible and limits of stripping shall be placed on all drawings "Issued for Construction".

Measures will be implemented to minimize and control runoff of sediment-laden water during grubbing, and the re-spreading of the grubbed material. Erosion control measures will be implemented in areas prone to soil loss.

Grubbed materials will be stockpiled for use in other areas of the project. Areas used for stockpiling will not be adjacent to any water bodies.

In-filling, Excavation, Embankments, and Grading

In-filling, excavation, embankment, and grading will only be completed upon completion of grubbing and stripping. Where engineering requirements do not require grubbing and stripping, filling shall occur without any disturbance to the vegetation mat or upper soil horizons. Excavation, embankment, and grading in the vicinity of a waterbody shall be done in a manner, which ensures that erosion and sedimentation of watercourses and water bodies is minimized.

Crossing Blanche Brook

The environmental concerns associated with in-stream work include direct disturbances to, or mortality of fish, loss of fish habitat resulting from sedimentation, and removal of substrate and stream bank vegetation. The duration of instream activities will be minimized. All instream work will adhere to relevant regulatory requirements, including permits from the Department of Environment and the formal "Letters of Advise" and Authorizations for Works and undertakings Affecting Fish Habitat from the Department of Fisheries and Oceans. Erosion control measures will be initiated prior to any work being completed in the vicinity of Blanche Brook.

All instream work will be conducted in the dry by constructing cofferdams around the area to be excavated from stream flow. The cofferdam will consist of a double row of sandbags with plastic between the rows. Only clean, sediment free materials will be used as fill and all bags and materials will be removed after construction is completed. Any fish entrapped in the dry work area will be removed and relocated to an appropriate area of the stream. If pumping of water is required within the cofferdam the water will be treated by discharging to settling ponds, vegetated areas, or sediment traps prior to release to streams.

To maintain a fish passageway throughout the period of instream work, the stream will not be completely dammed. Construction of cofferdams will be completed in sections.

Areas along the shoreline of Blanche Brook that have been disturbed will be stabilized. Stabilization of the shoreline will occur as quickly as possible after the disturbance.

Stabilization measures may include, but not be limited to, a combination of rip rap, gabion baskets, or geotextile membranes. Stabilization of the shoreline will consider the following:

- Shape streambanks so that the bank slope is stable and conforms to the existing topography;
- Streambank stabilization will not result in a decrease in the cross sectional width of the stream;
- Stabilization material will be placed outside the wetted perimeter of the stream, from the toe of the bank slope to the height on the streambed equal to the anticipated high water level;
- If required, and in consultation with the appropriate government authorities, bank stabilization will be supplemented with the planting of vegetation.

The stream bottom will be rehabilitated to original conditions when construction is completed.

Placement of Cast in Place Concrete at Blanche Brook

Where cast-in-place concrete is required, all fresh concrete will be kept from coming in contact with the watercourse until adequate curing is achieved. The formwork will be constructed with tight joints to prevent leakage and all necessary precautions will be taken to prevent spillage of concrete in or near a body of water. Tools and equipment, which have been used for working fresh concrete, will not be washed in any body of water or stream.

Work in and Around Marine Environment

The environmental concerns associated with work in and around marine environments include direct disturbances to or mortality of fish, loss of fish habitat resulting from sedimentation, and removal of substrate. The duration of these activities will be minimized. All work in and around the marine environment will adhere to relevant regulatory requirements, including permits from the Department of Environment and the formal "Letters of Advise" and Authorizations for Works and undertakings Affecting Fish Habitat from the Department of Fisheries and Oceans. On shore erosion control measures will be initiated prior to any work being completed in the vicinity of Blanche Brook.

The substrate in the marine environment in the area of the outfall consist primarily of sand and gravel. Turbidity issues associated with this type of substrate is not severe, however the proponent will ensure that turbidity barriers will be placed around the work area.

At the completion of trenching activities, the ocean floor in the area of trenching will be restored to the original conditions.

Dewatering – Work Areas

Water pumped from excavations or work areas will have silt removed by settling ponds, filtration, or other suitable treatment before discharging to a body of water. Where possible, water will be discharged to vegetated areas to further reduce any potential effects of the watercourse.

4.5.3 Potential Source of Pollutants During Construction

The potential sources of pollutants are generally those associated with sewage treatment facility construction. Adherence to permit conditions and application of sound construction practices will protect against the release of pollutants into the surrounding environment.

Strict monitoring and sound construction practices will control activities to minimize risks associated with:

- Silt and sediment;
- Dust;
- Construction debris,
- Sewage;

- Risk of fuel, lubricant and hydraulic fluid release;
- Airborne emissions from construction equipment; and
- Noise pollution from construction activities.

4.5.4 Mitigation Measures

Mitigation measures to reduce the environmental concerns associated with construction activities include:

- Silt laden runoff from construction areas will not be permitted to discharge directly into any body of water or watercourse. Runoff will be diverted to settling basins to ensure silt is settled out prior to release into the water. Silt fence construction of filter fabric will be used where necessary to preclude release of construction water directly into any body of water. The measures will include natural vegetation buffer, stone rip rap, wire mesh, settling ponds, and drainage channels.
- Efforts will be made to minimize dust generation during the construction phase of the project. Dust from construction activities will be controlled using the frequent application of water. Any application of calcium chloride will be in accordance with applicable guidelines from the Department of Works, Services, and Transportation.
- Solid waste disposal practices will be in compliance with the *Environmental Protection Act* and associated regulations. Construction debris will not be permitted to be disposed of on site but will be contained in steel boxes on site for disposal at a municipal solid waste disposal facility.
- The sewage generated during the construction phase will be collected using portable toilets, which will be cleaned out by a licensed operator on a regular basis. This practice will control any release of fecal matter into the local ecosystem.
- All fuel handling and storage will be in compliance with *The Storage and Handling of Gasoline and Associated Products Regulations*. Also, to minimize the risk of fuel, lubricant or hydrocarbon release, construction equipment will not be permitted to be re-fuelled within 100 m of any water body. If fuel storage is necessary, it will be stored only in approved containers with all necessary permits in place.
- Equipment exhaust systems will be maintained to provide emissions to the standard designed for by the equipment manufacturer.
- Exhaust systems will be maintained to ensure noise levels are within the design specifications of the machinery.

4.5.5 Potential Resource Conflicts

Fish and Fish Habitat

Construction activities will be conducted in such a manner as to prevent the release of sediment or other deleterious materials into water bodies. These measures are discussed in previous sections.

The duration of construction activities in the marine environment, including Blanche Brook, will be limited in duration to what is necessary. A fish passageway will be maintained in Blanche Brook throughout construction activities. The disturbed stream bottom, as well as the marine floor, will be rehabilitated to original conditions.

Wildlife

The location of the proposed sewage treatment plant is directly adjacent to the Stephenville Airport within the Town of Stephenville. Wildlife is not suspected to be in this area, therefore no wildlife conflicts are expected.

Forestry

The project area consists of a grass cover, with no forested areas, therefore forestry conflicts will not be encountered.

Construction Equipment

During construction operations, equipment will not be permitted to operate outside the construction zone in order to prevent damaging adjacent areas.

Human Activities

Construction of the outfall in the marine environment may have limited interference with placement of fishing gear in the vicinity of construction, as well as the normal passage of marine vessels in the area due to the small area of construction and the limited time frame required to place the outfall in the marine environment.

During construction of the project there will be extra demands placed on the services provided in the local area. The projected work force will not negatively impact these resources but will provide positive economic benefits.

4.6 Operation

The Stephenville Sewage Treatment Plant will operate year round.

4.6.1 Potential Sources of Pollutants During Operation

- Solid Waste;
- Treated Effluent;
- Dewatered Solids;
- Odours;
- Sewage;
- Noise Pollution; and
- Storage and Handling of Chlorine and Sulphur Dioxide.

4.6.2 Mitigation Measures During Operation

Mitigation measures to reduce the environmental concerns associated with operation activities include:

- Solid waste generated at the site will be collected on a regular basis by the “Town of Stephenville”.
- Dewatered solids will be disposed of as per the *Environmental Protection Act* and associated regulations and approvals. A request to dispose of the dewatered solids in the local landfill will be submitted to the Department of Environment.
- Sewage produced at the treatment plant will be fed back to the lift station and put through the Sewage Treatment System;
- The transport of hazardous materials (chlorine and sulphur dioxide) will be undertaken in compliance with the *Transportation of Dangerous Goods Act*. All persons handling dangerous goods will have training, as required under government regulations. Storage of the cylinders will be inside the Sewage Treatment Plant Building in a dedicated area.
- During operation of the facility, treated sewage effluent will be disposed of in the marine environment. However, the effluent parameters will meet the Department of Environment Guidelines for the Discharge of Municipal Wastewater
- Limited noise pollution will be generated during the operation of the sewage treatment plant; therefore noise pollution is not considered a concern.
- Odours produced within the treatment plant will be contained to the treatment plant building, therefore, odour production is not considered a concern.

4.6.3 Potential Causes of Resource Conflicts

Procedures will be established and monitored to minimize the following potential resource conflicts.

Fish & Fish Habitat

The outfall will be buried in the nearshore area to prevent changes in the tidal action as well as disturbance to fish migration patterns.

Treated sewage effluent will be discharged into the marine environment. This is not expected to cause any direct resource conflicts since the treated effluent will meet, or exceed, the Department of Environment *Guidelines for the Discharge of Municipal Wastewater*.

Wildlife

Operation of the sewage treatment plant is not expected to cause any direct wildlife conflict.

Forestry

Operation of the sewage treatment plant is not expected to cause resource conflicts with forest resources.

Adjacent Areas

The Stephenville Airport is located adjacent to the proposed facility. Operation of the sewage treatment facility is not expected to cause resource conflicts with adjacent areas.

Human Activities

Limited human activity will occur during operation of the sewage treatment facility as a result of the system being primarily automated. Therefore, operation of the sewage treatment facility is not expected to cause conflicts with other human activities.

5.0 OCCUPATIONS

5.1 *Construction Phase*

It is expected there will be approximately twenty-seven people employed during the construction phase of the project.

National Occupational Classification*	Positions # Anticipated	Description
0711	1	Construction Manager
7611	6	Labourers
2154	1	Land Surveyors
7252	4	Steamfitters, Pipefitters and Sprinkler System Installers
7217	1	Contractors and Supervisors, Heavy Equipment Construction Crews
7219	1	Contractors and Supervisors, Other Construction Trades, Installers, Repairers, and Servicers
2264	1	Inspector
7241	2	Electricians
7421	3	Heavy Equipment Operators
7271	2	Carpenters
7263	3	Structural Metal and Platework Fabricators and Fitters
7281	2	Bricklayers

* National Occupational Classification has replaced the Canadian Classification and Dictionary of Occupations (CCDO).

5.2 *Operational Phase*

It is expected that approximately 1 person will be employed half time during the operation phase of the development.

National Occupational Classification*	Number	Description
0912	1	Utilities Manager

* National Occupational Classification has replaced the Canadian Classification and Dictionary of Occupations (CCDO).

6.0 APPROVAL REQUIRED FOR THE UNDERTAKING

The permits, approvals, and authorizations which may be necessary for the undertaking include:

PERMIT, APPROVAL OR AUTHORIZATION	ISSUING AGENCY
<ul style="list-style-type: none"> ● Approval for the Undertaking 	Minister of Environment
<ul style="list-style-type: none"> ● Water Course Alterations, Certificate of Environmental Approval to Alter a Body of Water ● Application for Water Use Authorization ● Water Course Crossings, Certificate of Environmental Approval ● Construction (Site Drainage) Certificate of a Approval ● Certificate of Approval – Sewage Treatment Plant ● Certificate of Approval – Water and Sewer Distribution System. 	Water Resources Division, Department of Environment and Labour
<ul style="list-style-type: none"> ● Approval under the National Building Code of Canada ● Approval under the National Fire Code of Canada ● Certificate of Approval for any Water Supply >4,500 L/day 	Engineering Services, Department of Government Services and Land
<ul style="list-style-type: none"> ● Building Accessibility Design Registration ● Fuel Storage and Handling-Temporary Storage ● Food Establishment License ● Approval to dispose solids in local landfill. 	Operations Division, Department of Government Services and Lands
<ul style="list-style-type: none"> ● Crown Lands Applications/Licenses ● Develop Land – Protected Road zoning and Development Control Regulations – Preliminary Application to Develop Land ● Electrical Permit 	Customer Services, Department of Government Services and Lands
<ul style="list-style-type: none"> ● Authorization for Works or Undertakings Affecting Fish Habitat ● Navigable Waters Protection Act Letter of Assessment ● Letter of Advise 	Fisheries and Oceans Canada

7.0 PROJECT RELATED DOCUMENTS

Sewage Treatment Study, Town of Stephenville, BAE-Newplan Group, 2002

Town of Stephenville Waste Water Outfalls, Proctor & Redfern Limited, 1986.

8.0 SCHEDULE FOR RELEASE FROM ENVIRONMENTAL ASSESSMENT

Construction of this project is scheduled to begin in June 2004 with an operations date of June 2005. In order to meet this proposed scheduling, the requirement of the Environmental Assessment Act must be completed as soon as possible.

9.0 FUNDING

Financing of the project will be from the Canada-Newfoundland Infrastructure Program.



Wayne Manuel, P. Eng.,
BAE-Newplan Group Ltd.

October 21, 2003


Date

APPENDIX A

Drawings



REV.	ISSUED FOR REPORT	BY	APP.	DATE
A				03/10/14



BAE • NEWPLAN GROUP LIMITED
 1183 TOPSAIL RD., MOUNT PEARL, NF, A1N 5G2
 TEL: (709) 368-0116, FAX: 368-3541

CLIENT: **TOWN OF STEPHENVILLE**

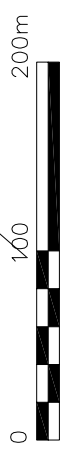
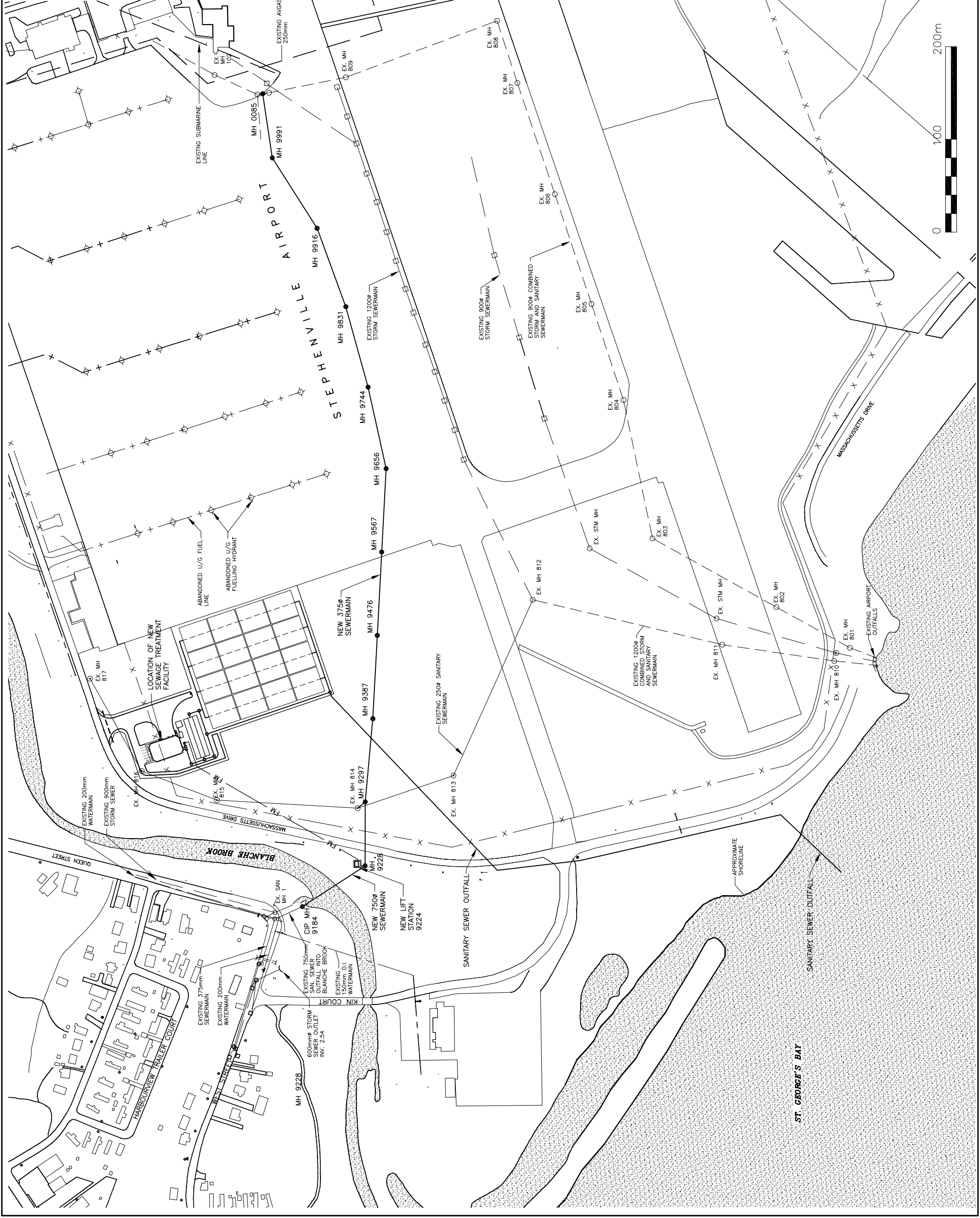
PROJECT: **STEPHENVILLE SEWAGE TREATMENT FACILITY**

DRAWING TITLE: **FIGURE 1 SITE PLAN**

DRAWN: **K.P.H.** APPROVED: _____ DATE: _____

CLIENT PROJ. NO. _____ BNG PROJ. NO. **722023**

DRAWING NO. **PR1 - XX - EN - XX - 101** REV. **A**



REV.	ISSUED FOR REPORT	REVISIONS	BY	APP.	DATE
A	ISSUED FOR REPORT				03/10/14

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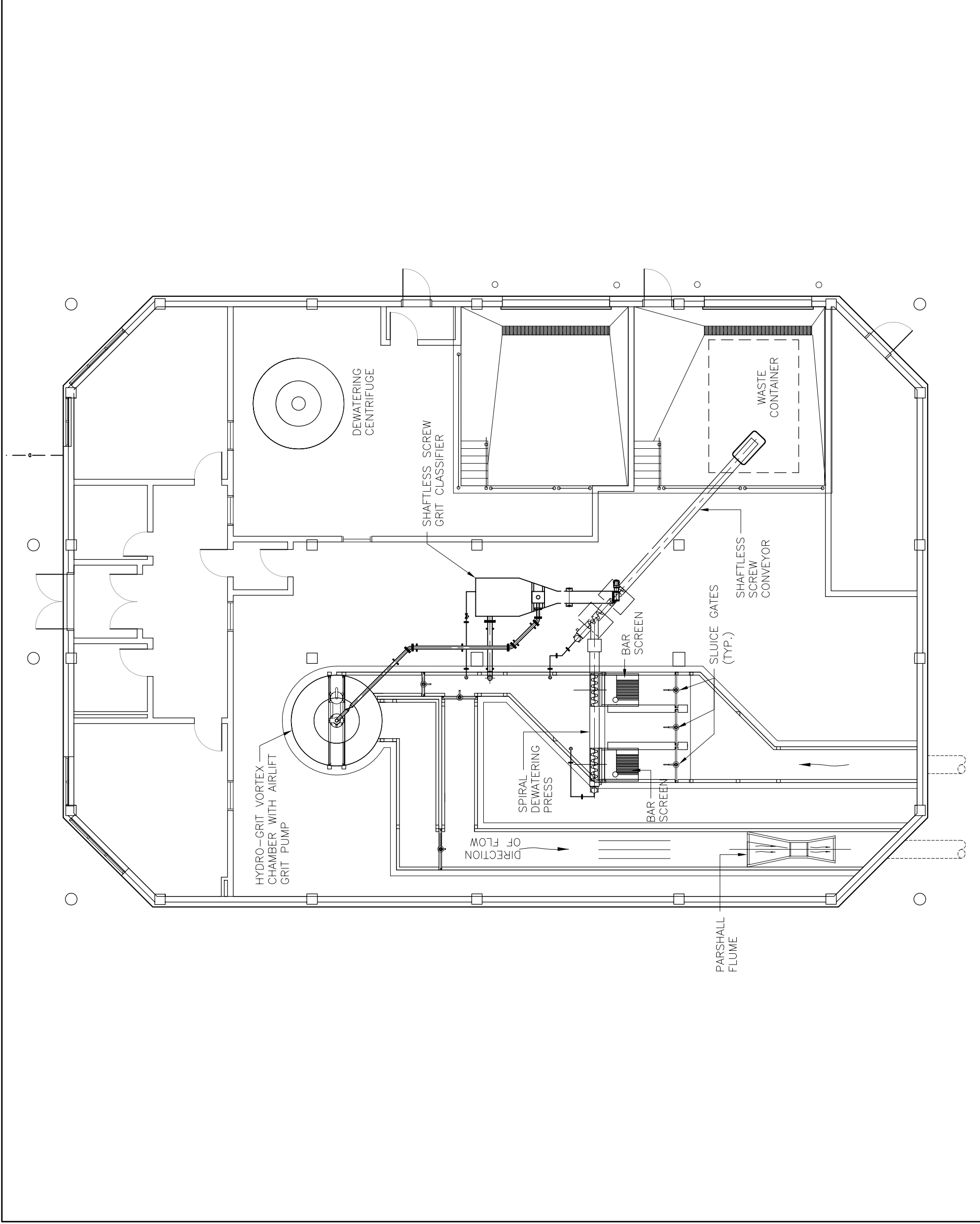
PROJECT: STEPHENVILLE SEWAGE TREATMENT FACILITY

DRAWING TITLE: FIGURE 2 – EXISTING INFRASTRUCTURE AND PROPOSED SEWAGE TREATMENT FACILITY

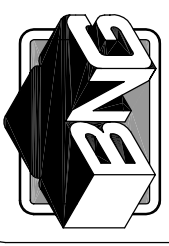
DRAWN: K.P.H. APPROVED: DATE:

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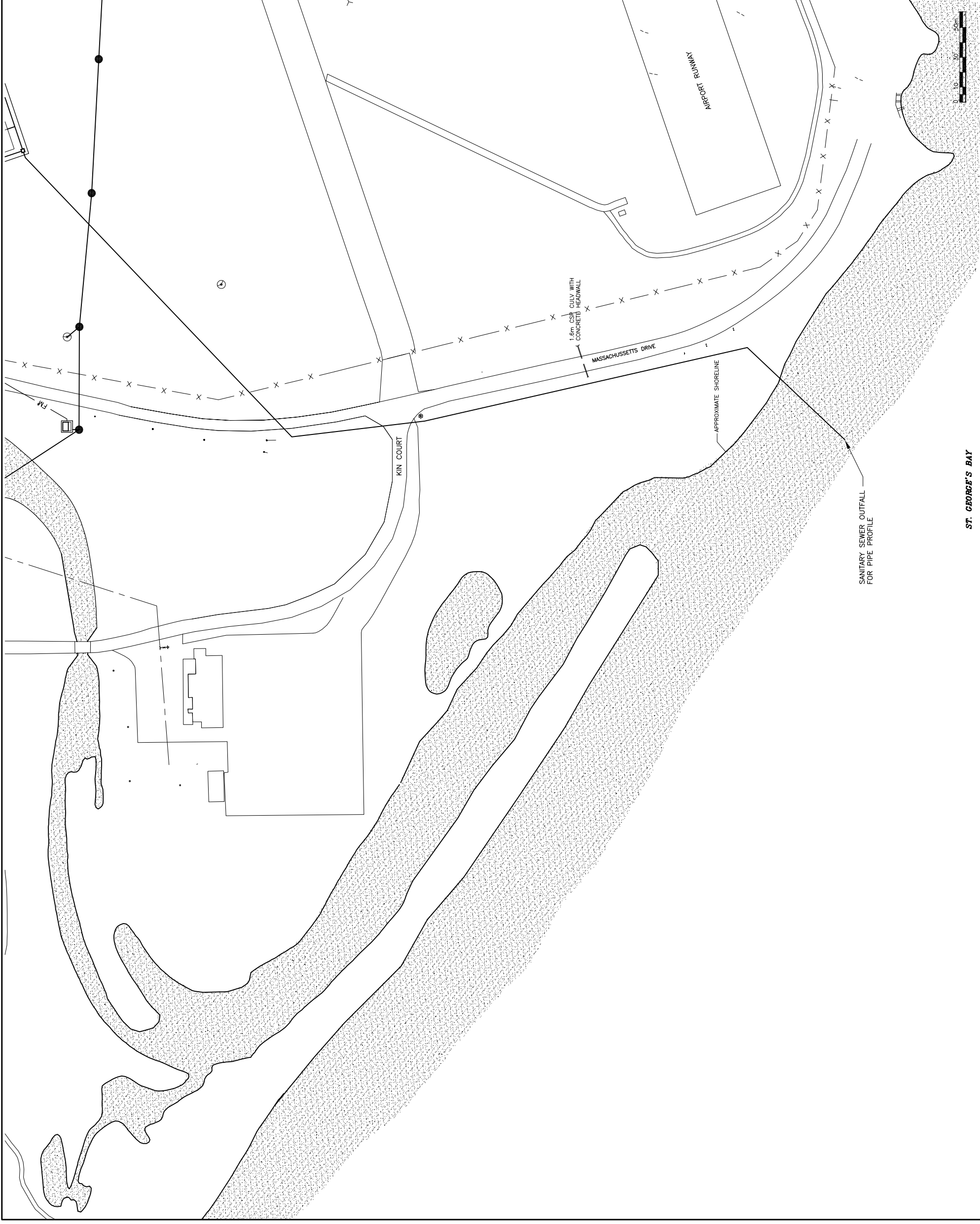
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DRAWING TITLE: FIGURE 3 – LAYOUT OF SEWAGE TREATMENT BUILDING

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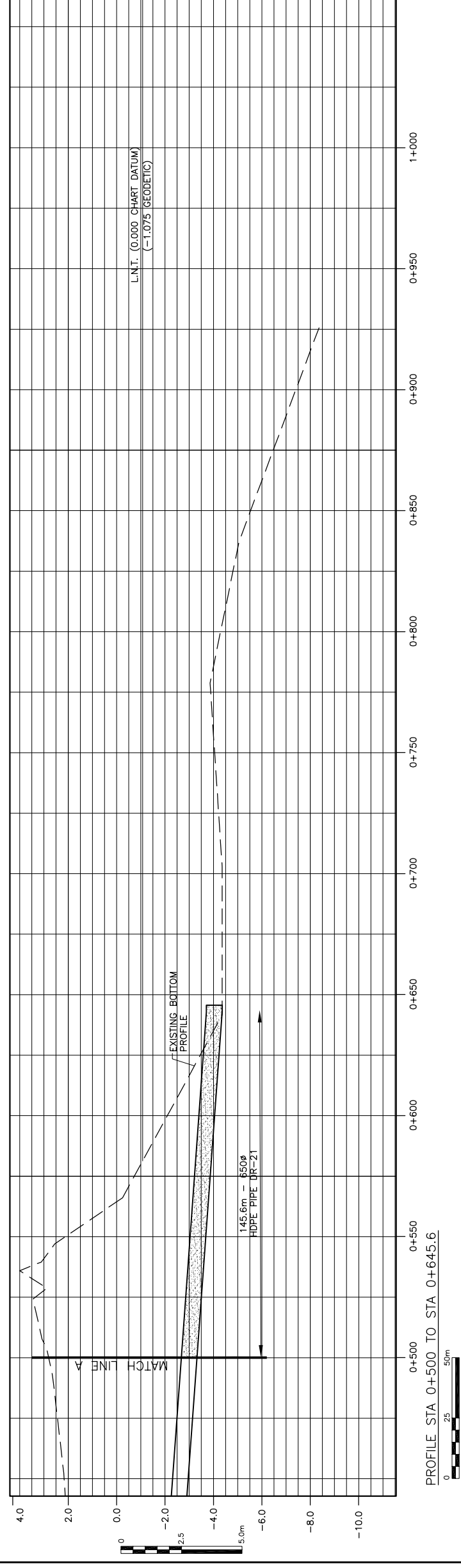
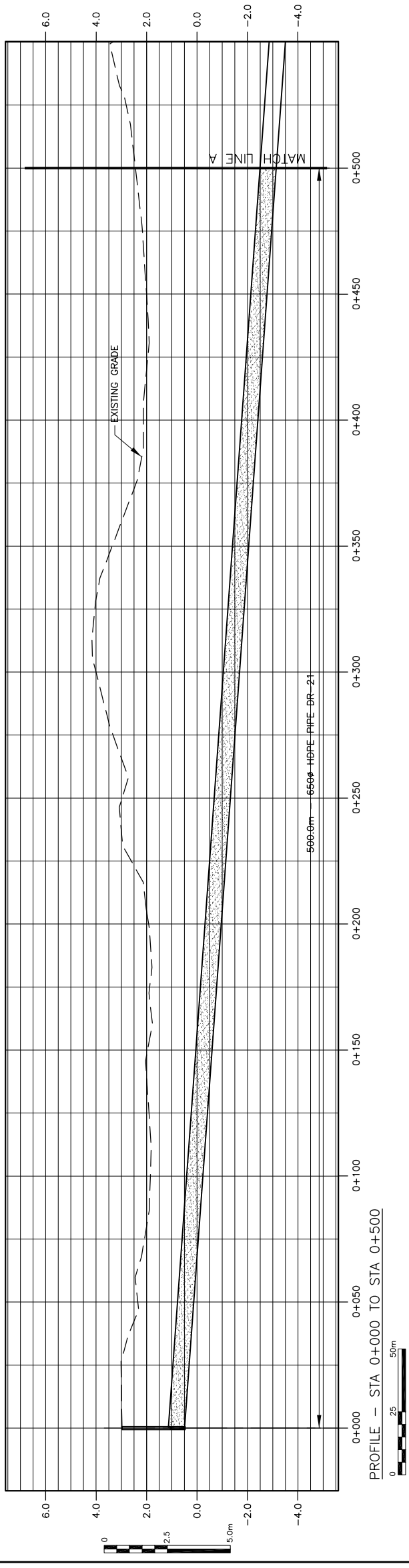
DRAWING TITLE: FIGURE 4
 OUTFALL PLAN

DRAWN: K.P.H. APPROVED: DATE:

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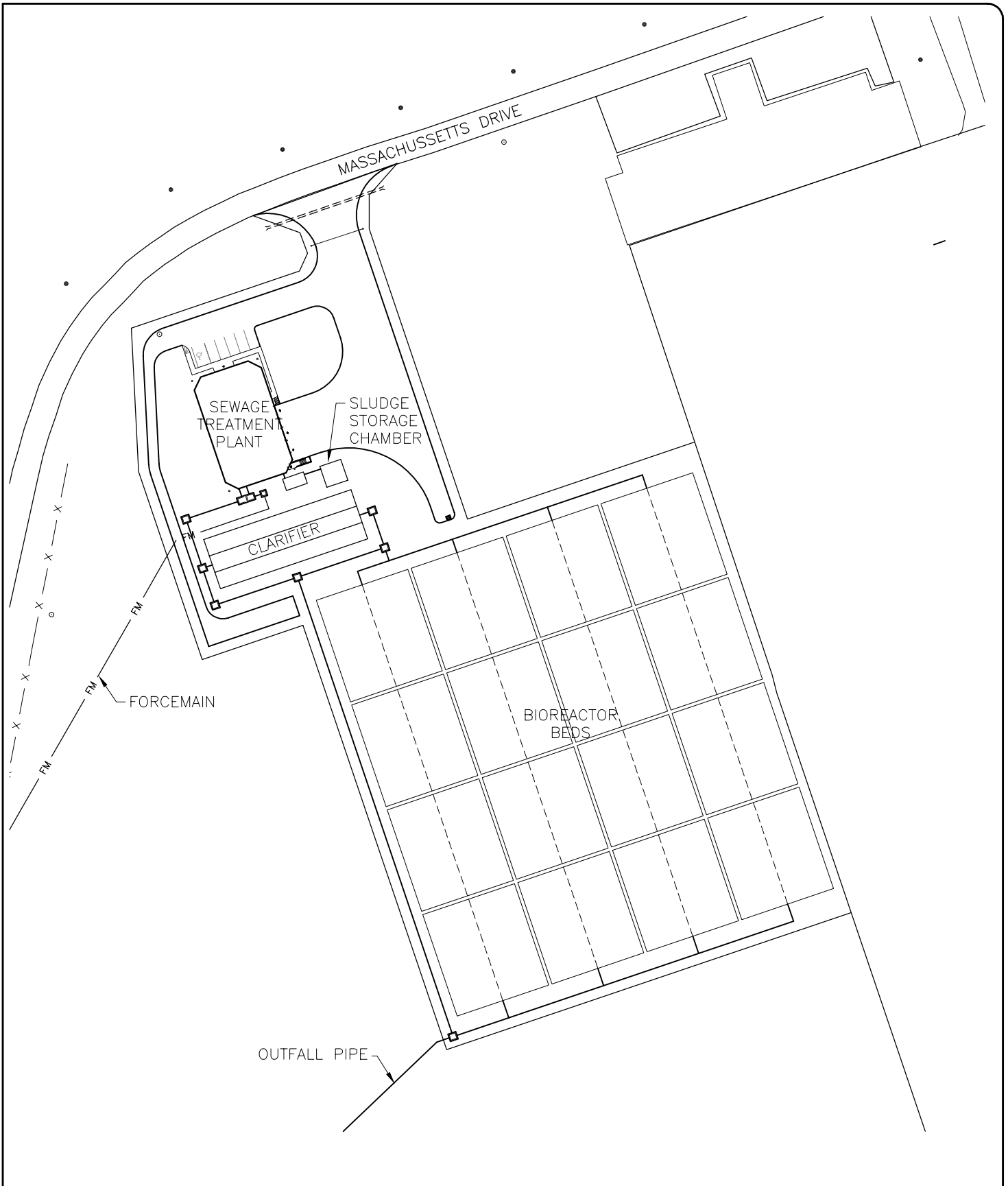
PROJECT: STEPHENVILLE SEWAGE TREATMENT FACILITY

DRAWING TITLE: FIGURE 5
 OUTFALL PROFILE

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PROJECT:
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DRAWING TITLE:
FIGURE 6
SITE LAYOUT PLAN

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