

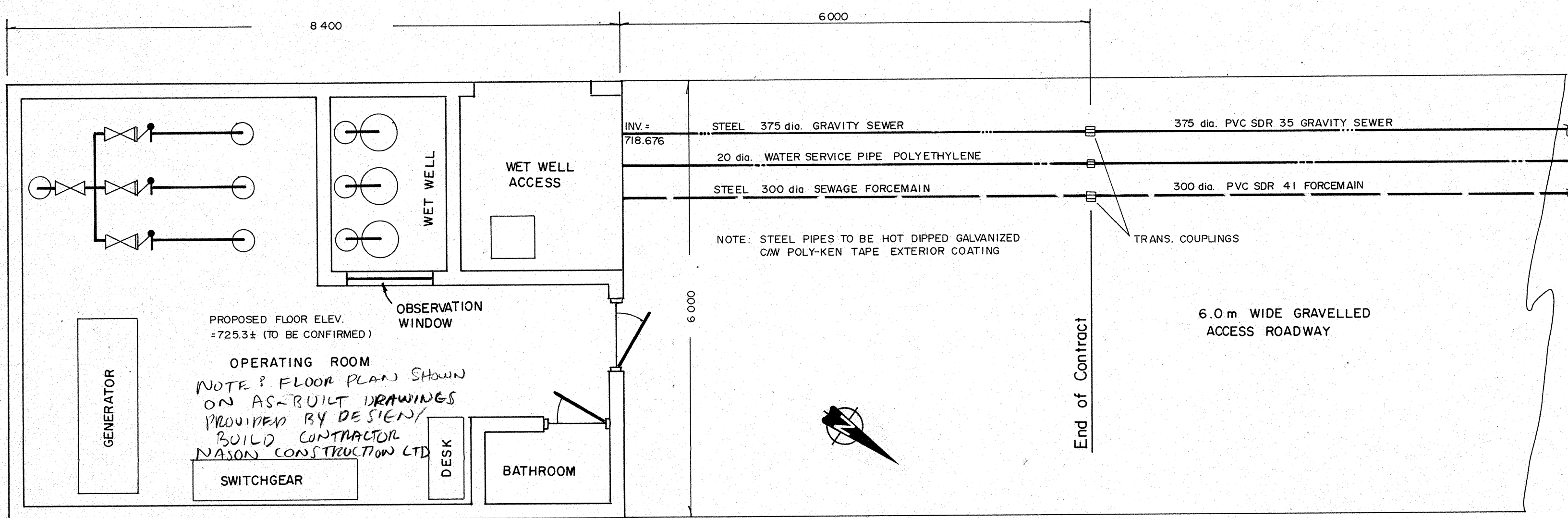
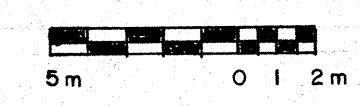
LAC STE. ANNE SETTLEMENT

ALBERTA BEACH LIFT STA. NO. 1

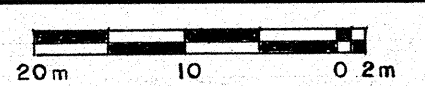
LIMITS OF CONSTRUCTION

- DESIGNATED SUBCONTRACTOR FOR SEWAGE PUMPING STATION TO INSTALL STEEL GRAVITY SEWER AND FORCEMAIN TO TRANSITION COUPLING. TRANSITION COUPLINGS TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR.
- DESIGNATED SUBCONTRACTOR TO UNDERTAKE ALL LANDSCAPING INCLUDING CONSTRUCTION OF ACCESS ROADWAY AND CULVERT INSTALLATION.
- DESIGNATED SUBCONTRACTOR TO INSTALL EMERGENCY OVERFLOW TO LIMITS AS INDICATED.

SITE PLAN

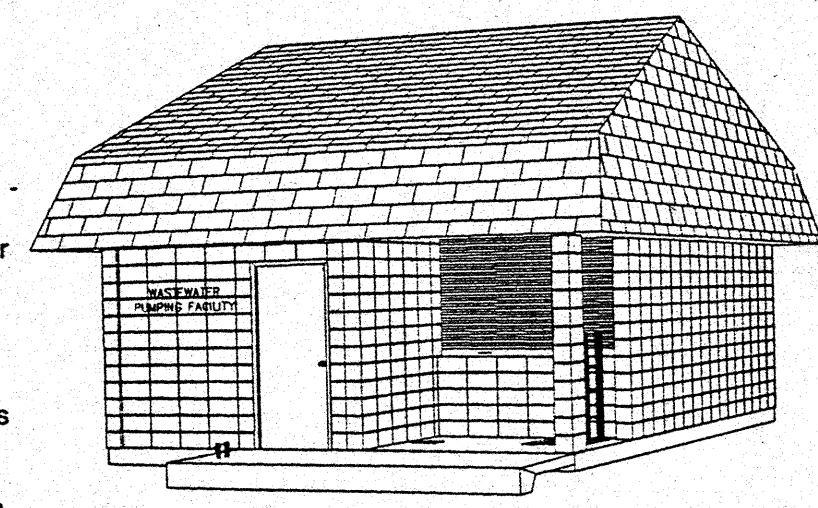


MAIN FLOOR PLAN



NOTE: AS-BUILT DRAWINGS FOR MAIN LIFT STATION PROVIDED SEPARATELY.

- WET WELL**
 - Precast concrete box sections, 8'-0" x 10'-0" with Kent-seal gaskets
 - Precast concrete base, benched to minimize siltation.
 - Galvanized grating floors and ladders.
 - Aluminum access door.
 - Handrails and details to meet Occupational Health and Safety regulations.
 - Wet well designed to resist full buoyancy forces in saturated soil conditions.
 - Sodium vapour lighting for safety & convenience.
- FOUNDATION**
 - Reinforced concrete grade beams.
 - Colored structural concrete floors
 - Grade beams supported on steel piles to conform to actual soil conditions.
- SUPERSTRUCTURE**
 - Color impregnated split-face insulated hollow masonry units.
 - Metal doors and frames.
 - Glulam beams and wood joist roof construction.
 - Cedar shake roof.
 - R-20 roof insulation
 - Cedar planked ceilings.
 - Safety glass window for wet well viewing from dry well area.
 - Washroom facilities.
 - Q deck mezzanine for heating and ventilation equipment.
 - Extruded insulated aluminum rollup shutter doors for wet well access.
 - Painted interior walls and floor.
- PUMPING EQUIPMENT**
 - Three 47 HP Flygt submersible pumps to meet design conditions, complete with flush valves on all pumps.
 - Galvanized guide bars.
 - Plug - in type electrical connections for pumps and flush valves.
 - Three wet well pumping units for versatility and for economy in electrical power cost by reducing electrical demand charges.
 - Provision to add three dry mounted Flygt CT pumps in series with existing units to meet increasing future design conditions.
 - Design Condition Each Pump - 30 US @ 41.1 m
474 USgpm @ 135'
- PIPING**
 - Welded steel piping, hot dipped galvanized for corrosion resistance.
 - Buried pipe Polyken tape wrapped for further corrosion protection.
 - 316 stainless steel flange bolting throughout.
 - Air release valve bypass, manual air bleed, piping of exhaust to wet well, and connection for clear water flush.
 - Auxiliary connection to forcemain from exterior of the facility to allow for emergency portable pumping into forcemain from collection manhole or wet well.
- EQUIPMENT REMOVAL**
 - Pump removal accomplished with three independent chain hoists, trolleys, and trolley beams. [Entering of wet well is not required.]
 - Truck access to building provided to allow loading of pumps directly from hoist and trolley arrangement.
- ELECTRICAL**
 - 600 volt 3 phase electrical service.
 - Factory manufactured motor control center including all switch gear, control transformer, splitter, disconnects, breakers, motor starters, and overload protection devices.
 - Motor control center is equipped with voltmeters, ammeters, low voltage, single phase, and phase reversal equipment.
 - All receptacles are ground fault protected.
 - Photocell controlled low pressure sodium exterior lighting.
 - Vapour tight fluorescent interior light fixtures.
 - Automatic transfer switch.
 - 125kw Onan electric generating set c/w remote radiator.
- VALVING**
 - All valving located in dry well area for ease of operation and maintenance.
 - Isolation valves - Keystone Ballcentric gear operating eccentric plug valves.
 - Check valves - Prince B Series with external spring c/w position switch.
 - Air release - Apco 2" Model 445 sewage combination air valve c/w backwash accessories.
 - Air cylinder operated slide gate on inlet sewer to wet well c/w air compressor.
- VENTILATION**
 - Independent ventilation of both wet well and dry well at 6 air changes per hour.
 - 80% heat recovery of exhaust air with independent wet well / dry well heat recovery units.
 - Supply air discharge 150 mm above high liquid level in wet well with exhaust at ceiling.
 - Air filters
 - Exhaust fan & motorized louvres for generator cooling.
- PLUMBING**
 - Wall hung water closet and stainless steel lavatory.
 - Hose bibbs with cross-connection control.
 - Floor drains.
 - Domestic hot water heater.
 - Washdown hose and reel.
- HEATING**
 - Raypack natural gas hydronic heating boiler - 325,000 BTU output, Grundfos circulating pumps - Glycol charged.
 - Heat recovery ventilators.
 - Radiant underfloor heating of dry well areas.
- SPECIALTIES**
 - Metal single pedestal desk.
 - Chair
 - Floor mat
 - Washroom accessories - mirror, waste receptacle, soap dispenser
 - Fire extinguishers
 - Emergency lighting
 - Foot scraper
 - Building sign
 - Equipment labeling
- INSTRUMENTATION**
 - Controls manufactured by Token Controls utilizing ultrasonic level sensing.
 - Five infinitely adjustable digital input set points for pump start/stop levels and alarm functions.
 - Automatic 3 pump alternation.
 - Digital output of wet well volume or level.
 - Volume pumped totalization.
 - Running time metering of each pump.
 - Redundant ENH-10 Flygt level regulator to restart and initiate high level alarm indication and telemetry.
 - Hand-off-auto selector switches, test switches, indicator pilot lights, eight point alarm telemetry for pump failure, power supply failure, high water level, pump flow failure as sensed by check valve limit switches, low temperature alarm, and wet or dry well ventilation failure.
 - Building intrusion alarm.
- WATER SUPPLY**
 - 455 litre storage tank and float valve.
 - Hydropneumatic pressure system.
- REQUIREMENTS**
 - 3 Phase - 600 volt power supply.
 - Telephone Service.
 - Water Service.
 - Natural gas supply.
- FUTURE PROVISIONS**
 - Designed for addition of three 13 HP Flygt CT booster pumps to meet future flow requirements.
- DRAWINGS AND DESIGN**
 - Computer generated suitable for submission for Environment approval.
 - Design certified by professional engineer.
- OPERATION MANUALS AND COMMISSIONING**
 - Includes detailed operation manuals, wiring diagrams, commissioning, and operator instruction.
- WARRANTEE**
 - One year warrantee on defective materials and workmanship.
 - 50% Performance Bond.
 - 50% Labour and Materials Bond.
 - Optional extended warrantee.

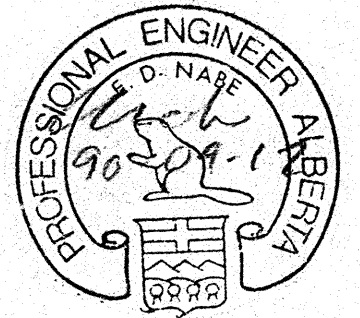


LEGEND

Symbol	GRAVITY SEWER, MANHOLE, INVERT, AND DIRECTION OF FLOW
Symbol	FORCEMAIN
Symbol	ACCESSIBLE
Symbol	CSP CULVERT WIDTH
Symbol	FOUND LEGAL MARKER
Symbol	POWER POLE/W/ GUY
Symbol	FENCE (W/ WIRE, C/LF-CHAIN LINK, BF-BOARD, RF-RAIL, GR-GUARDRAIL, SF-SNOW)
Symbol	GAS REGULATOR STATION
Symbol	POWER LINE
Symbol	GAS LINE
Symbol	TELEPHONE LINE

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AS-BUILT
DATE: 9/10/18
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PERMIT TO PRACTICE
SIEMENS ENGINEERING SERVICES LTD.
Signature: [Signature]
Date: 9/10/18
PERMIT NUMBER: P 2998
The Association of Professional Engineers, Geologists and Geophysicists of Alberta



No.	DATE	DESCRIPTION	BY	APP
1	11/90	AS BUILT	DF	PM
REVISIONS				

SCALE	ASSHOWN	PROJECT No.	60-89-1
DESIGNED BY	EDN	DRAWN BY	DF / TG
CHECKED BY	[Signature]	DATE	MAR., 1990

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TRI-VILLAGE REGIONAL SEWAGE COMMISSION
SUMMER VILLAGE OF ALBERTA BEACH SEWAGE COLLECTION SYSTEM
LIFT STATION NO. 1 (MAIN LIFT STATION)
DETAILS
SHEET _____ OF _____ DWG. No. LS 2.1