



One Step. One Source.

Pre-Fabricated Gate Stations and LNG Facilities

SHORTENED INITIAL DESIGN
PROCESS

MODULAR and PRE-
FABRICATED

MINIMIZED FIELD
CONSTRUCTION

METER & CONTROL
FACILITIES TOGETHER

DESIGN MODULES INCLUDE

- Metering
- Preheating (using a proprietary shell and tube heating method)
- Pressure regulation
- Odorization
- Control/SCADA Interface
- Electric cogeneration

IDENTIFYING NEEDS, DELIVERING REQUIREMENTS

Northstar's Modular Gate Stations provide a single building alternative, expandable to meet future demands, for custody transfer and regulator stations meeting all D.O.T. and A.G.A. requirements. These stations are designed and preconstructed entirely off-site by Northstar and installed on the customer's work site.

- System approach to gate station upgrade or new facility construction
- Greatly reduces project costs
- Reduces overall site size
- Expandable to meet your future needs
- Accommodates loads from 50 MCFH - 6,000 MCFH
- Preconstructed off-site
- No down time due to adverse weather
- Significant reduction in travel and associated costs

Contact 978.975.5500 or email: bd@northstarind.com for a custom Gate Station solution.



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Gate Station - Major Design Modules

Metering

Our standard metering module use an ultrasonic orifice or turbine meters which send an output to RTU's located in the optional Data Acquisition and Control (DAC) Room located at the opposite end of the building.

- Explosion-proof MC Cable is used to connect the device to the DAC equipment.
- All seals are installed to meet the National Electric Code

Preheating

One of the unique features of the Northstar System is in the preheating module. Northstar has developed a patent-pending system which allows a great deal of heat transfer capacity to be present in a small area inside the building.

- Can save up to 30 percent in fuel gas cost savings
- Replaces large, outdoor, indirect fired heaters,
- Substantially reduces noise, weather resistant, and requires minimum maintenance.

Pressure Regulation

Regulator runs can be provided for pressure regulation and may include several regulators.

Odorization

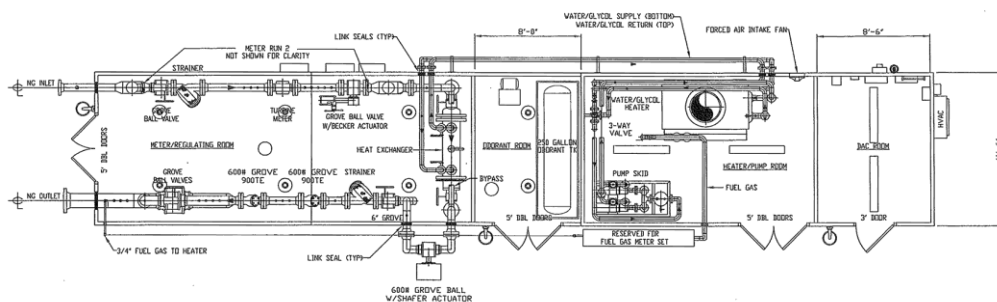
An odorization package can be added using variously sized configurations, odorization tanks, containment skids, audit trail packages, and SCADA interface through the RTU. Typically, the odorizer and tank are placed in the center of the meter and regulating room to reduce overall costs.

If a larger tank is needed or if it becomes necessary to separate the odorant from the metering and regulating equipment, a separate odorant room can easily be added to the station.

Control and SCADA Interface

A Data Acquisition and Control Room is another optional module. This room provides mounting locations for the RTU (Remote Terminal Unit) and UPS (uninterrupted power supply), the electrical service and motor control center, an emergency generator interface panel, and telephone interface. A wall mounted electric HVAC system can be provided for operator convenience.

- Standard operator's work desk/chair
- Permit board
- Project data book documentation
- All equipment wired and constructed off-site
- Explosion-proof MC cable connects
- Electric cogeneration module option



Type II 30 Metering, Preheating, Pressure Regulating and Odorizing Facility