

**NATIONAL FUEL GAS
DISTRIBUTION CORPORATION**



**PIPELINE
ENCROACHMENT
MANUAL**



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I. INTRODUCTION

National Fuel Gas Distribution Corporation (NFGDC) is a subsidiary of National Fuel Gas Company. The company was incorporated in 1902 and is headquartered in Buffalo, New York. NFGDC owns and operates a pipeline system that distributes or transports natural gas to over 730,000 customers in western New York and northwestern Pennsylvania.

This encroachment manual provides basic information for landowners, contractors, developers, designers, and other persons with development plans near NFGDC facilities or rights-of-way. It is intended to minimize the possibility of damage to NFGDC facilities and help ensure a safe and reliable pipeline system. It is also intended to ensure that NFGDC has sufficient access to its facilities for operation and maintenance purposes.

These guidelines will aid in the design of any proposed work that affects NFGDC facilities or rights-of-way. All development plans that affect NFGDC rights-of-way must be approved in writing by NFGDC. Please read these guidelines carefully, as requests and proposals will be processed more efficiently if complete information is provided.

These guidelines may not include your particular situation. If you should have any questions, please contact NFGDC at your earliest convenience.

**Contact National Fuel Gas Distribution Corporation by calling:
1-800-365-3234**



II. GENERAL ENCROACHMENT INFORMATION

This encroachment manual is intended to achieve the following objectives:

- ◆ Provide guidance as to when it is necessary to contact NFGDC for permission to perform projects above, under, or in the vicinity of natural gas facilities.
- ◆ Prevent persons from creating unsafe conditions when conducting activities near natural gas facilities.
- ◆ Prevent damage to natural gas facilities.
- ◆ Provide NFGDC continued access (*ingress and egress*) to natural gas facilities.

The term *encroachment* for the purpose of this manual means any project or act near NFGDC facilities which creates potentially unsafe conditions along the pipeline system or impairs the ability of NFGDC to access its facilities.

NFGDC pipelines include *transmission lines, distribution mains, and service lines*, which can be installed on either public or private property and may be located in either rural or urban environments. NFGDC *facilities* include any valve fittings, regulators, meters, cathodic protection devices, accessories, and other equipment and appurtenances as may be necessary or convenient for system maintenance, transportation and distribution of gas.

A *right-of-way* is a corridor or strip of land that surrounds a pipeline. A right-of-way is generally established by an agreement that enables NFGDC to install, remove, operate, test, inspect, maintain and protect its pipelines and facilities. Where right-of-way agreements exist, the landowner retains all the normal rights of the property he owns, except those special privileges granted by the landowner or his/her predecessors in interest to NFGDC. Landowners may utilize their property as they see fit, provided their activities do not:

- ◆ Create unsafe operating conditions along the pipeline that could result in dangers to the public or property.
- ◆ Encroach onto the right-of-way.
- ◆ Violate the rights granted to NFGDC, which include the right of access in order to operate, maintain, and replace its facilities.



GENERAL ENCROACHMENT INFORMATION (continued)

When encroachment is imminent and inquiries are received in advance of projects, NFGDC will consider provisions for either protecting or relocating its natural gas facilities. Failure to adhere to this manual can create unsafe operating conditions along the pipeline system that can result in project delays, danger to the public, damage to property, or damage to the pipeline system. (*Refer to Section V Pre-Construction Planning.*)

It is imperative that projects planned near pipelines neither compromise public safety nor restrict the reasonable and necessary access by NFGDC to its facilities for operation, maintenance, and replacement activities. Therefore, persons planning projects that are near pipelines or pipeline rights-of-way, must contact NFGDC in the planning phase of their project, prior to commencing any work.

Encroachment of transmission lines, distribution mains, and service lines located on private property can occur on a temporary or permanent basis. Following are some examples of encroachments which could compromise the public safety or unreasonably restrict NFGDC's access to its facilities:

- ◆ Where a meter is located inside of a building and the meter is enclosed, covered, or obstructed due to an addition, restoration, replacement, or removal of walls, ceilings, cupboards, cabinets, closets, or other enclosures or apparatus.
- ◆ The installation or introduction of ignition sources closer than 3 feet to the meter assembly, installation of electrical panels closer than 3 feet to the meter assembly, or lack of support on the house line which can cause loading onto the meter assembly or service line.
- ◆ Where projects occur above or below grade outside of buildings, regardless of where meters are located, encroachment may occur due to the addition, restoration, replacement, or removal of items, such as: fences, posts, buildings, foundations, structures, out buildings, pavement, deer stands, playground equipment, swimming pools, trees, shrubbery, utility lines, drains, ponds, water impoundment, ground-surface materials, or materials in aggregate.

NFGDC routinely inspects and patrols its facilities and NFGDC employees and contractors are instructed to immediately report possible encroachments. Property owners or other responsible persons will be contacted to discuss remedial measures where NFGDC discovers encroachments. Remedial measures may include removing the encroachment at the property owner's expense.



III. SERVICE LINES

In New York, service lines consist of the piping and associated meter and pressure reducing equipment in a distribution system that transports gas from the main or common source to the outlet or first fitting downstream of the meter if the meter is located inside of a building. If the meter is located outside of the building, the service line will be deemed to terminate at the outside of the building foundation wall.

In Pennsylvania, a service line consists of the pipe and appurtenances of the gas utility which connect any main with either the point of connection of a customer's service line or the meter of the public utility if the utility owns all the pipe and appurtenances between its main and meter.

Typically, residential and commercial service lines in each state are owned and operated by NFGDC. Service lines can be operated at low, medium, and high pressures which is dependent upon the operating pressure of the supplying facility.

NFGDC is responsible for inspecting, testing and operating service lines in New York and Pennsylvania. In Pennsylvania, NFGDC is also responsible for performing a periodic leakage survey of any customer-owned service line located between the main line and either the meter set assembly or the wall of a residence or commercial building if the customer owns part of the piping, whichever is more remote.

Property owners are responsible for ensuring that service lines, including the meter or regulator set assemblies, are protected from damage and readily accessible for examination, meter reading, replacement, and maintenance.



IV. MAINS AND TRANSMISSION LINES

Distribution mains and transmission lines are installed on private property according to the specifications of the most current right-of-way agreements obtained by NFGDC or its predecessors. Where distribution mains and transmission lines are located on private property, NFGDC will attempt to work with the property owners or their representative to resolve any issues, misunderstandings, or questions regarding the most current right-of-way agreement.

Cross-country distribution mains and transmission lines, that traverse *rural or urban areas*, are normally operated at medium or high pressures. The width of their rights-of-way and articles of agreement are expressly defined in the right-of-way agreement. Typically, these types of rights-of-way may be as much as 66 feet wide.

Distribution mains located in typical *rural or urban areas* are normally operated at either low or medium pressures. These mains are sometimes covered by blanket right-of-way agreements that do not mention right-of-way widths but will state other articles of agreement. If the right-of-way width is not stipulated, then it is considered a blanket right-of-way and its width is deemed to be as wide as is reasonably necessary for NFGDC's use and enjoyment of the right-of-way, usually 50 feet.

Distribution mains and transmission lines may be operated at various (*industry accepted*) operating pressures over the course of their lifetimes, as shown in the following table:

NFGDC OPERATING PRESSURES

<u>Pressure Type</u>	<u>Pressures</u>
Low	4 ounces or 7" w.c.
Medium	1 through 60 psig
* High	> 60 psig

- - Pressures may range up to several hundred psig (*pounds per square inch gauge*).
- The abbreviation "w.c." refers to water column.



V. PRE-CONSTRUCTION PLANNING

A. General Pre-Construction Planning Information

Failure to give advanced notification to NFGDC in the planning stage of projects can create potentially unsafe conditions and can result in unnecessary and costly project delays.

Large projects such as logging and timber operations, blasting, use of vibration equipment, buried cables crossing pipeline rights-of-way and mining operations require special considerations, as set forth in *Section VI Construction Requirements*.

In Pennsylvania, it is the duty of each designer (e.g., architect or engineer), preparing a drawing requiring excavation or demolition work to request line and facility information in advance of completing the drawing. They must show on the drawing the position and type of each facility owner's line. The designer may accomplish this by furnishing NFGDC copies of his/her drawings so that all natural gas facilities can be plotted onto the drawings, or the designer can visit the respective operating location to view NFGDC operating maps. The actual location of facilities will not be marked at the project site for designer requests unless there are specific areas of potential conflict. Refer to PA Act 287 for details of the Underground Utility Line Protection Act, 73 P.S. §§ 176 *et seq.*

It is likewise the duty of persons planning projects in New York and Pennsylvania, including designers in New York, to contact NFGDC in advance of commencing projects where the possibility of encroachment may exist.

When reviewing plans that may encroach on its rights-of-way or pipeline facilities, NFGDC reserves the right to request all information it deems necessary to evaluate the project, including, but not limited to, the following:

1. A detailed cover letter describing the proposed project and stating the name, address, and telephone number of the property owner, contractor, and developer.
2. Three (3) completed sets of drawings of the project, which must include the following information:
 - ◆ A plan of the project drawn to scale, showing the location of the project and indicating where changes in grade are proposed to the surface of rights-of-way. Existing and proposed elevations must be shown. NFGDC will need to be contacted to determine actual pipeline elevations.
 - ◆ A ground profile where changes in grade are to be made to the surface of rights-of-way for activities such as road crossings, excavations, fill, etc.
 - ◆ If hauling or traveling across a pipeline facility or right-of-way is part of the project, vehicle information is to be supplied to NFGDC. This shall include vehicle type, number of axles, and gross vehicle weight. NFGDC will review this information and determine if special modifications need to be made to the depth of cover on the pipeline.



PRE-CONSTRUCTION PLANNING (continued)

Following receipt of the plans for the proposed project by NFGDC, please allow up to four weeks for project review. This time frame will depend upon the scope and complexity of the project.

When properly notified, NFGDC will investigate all requests to assess proposed projects. If encroachment is imminent, alternatives will be considered for permanent and temporary situations, including the possible relocation of natural gas facilities. Encroachment agreements will be required by NFGDC when it is suspected projects will encroach onto existing rights-of-way. *(Refer to parts C & D of this Section.)*

Persons (e.g., contractors or excavators) must contact the appropriate One Call System prior to commencing projects that involve any type of excavation or demolition work. However, merely notifying the One Call System prior to commencing projects will not always provide adequate notice to NFGDC for resolving encroachment issues. Therefore, persons planning projects that are near NFGDC facilities or rights-of-way, should personally contact NFGDC well in advance of the commencement of their projects. *(Refer to part B of this Section.)*

B. One Call System

The One Call System is a communication system established to provide a single toll-free telephone number for persons to call and give notice of their intent to perform excavation or demolition work to the operators of underground facilities. Operators, such as NFGDC, are then notified by the One Call System and required to locate and mark their facilities prior to the planned commencement date. In Pennsylvania, it is also intended for designers preparing a drawing detailing excavation or demolition work to request line and facility information in advance of completing the drawing. **Failure to contact the One Call System is a direct violation of the law and may result in fines and/or imprisonment.**

Excavation work means any movement of earth, rock, or other material, and includes, but is not limited to, anchoring, augering, backfilling, blasting, boring, digging, ditching, drilling, driving-in, grading, plowing-in, pulling-in, ripping, scraping, trenching and tunneling.

One Call Systems work to promote public safety and to protect underground facilities from damage. To contact a One Call System, use the following:

In New York:

Dig Safely, New York
5065 Brittonfield Parkway, E. Syracuse, NY 13057
811 or 1-800-962-7962
www.digsafelyny.org

- ◆ Coverage Area: State of New York, except New York City and Long Island.
- ◆ Request Time: Notice must be served at least 2, but not more than 10, working days, not including the date of the call, before the proposed commencement date of the excavation or demolition.



PRE-CONSTRUCTION PLANNING (continued)

In Pennsylvania:

**Pennsylvania One Call System, Inc.
Borland Complex
925 Irwin Run Road
West Mifflin, PA 15122-1078
811 or 1-800-242-1776
www.paonecall.org**

- ◆ Coverage Area: State of Pennsylvania
- ◆ Request Time: For excavation or demolition work not less than 3 nor more than 10 working days in advance of beginning excavation or demolition work.
- ◆ Designers are required to request information not less than 10 nor more than 90 working days before final design is to be completed.

Persons are also required under the damage prevention laws to report immediately to NFGDC any damage to its pipelines, including any break, leak, dent, gouge, groove or other damage to such pipelines or to their coating or cathodic protection, made or discovered in the course of the excavation or demolition work.

When excavation and demolition work involves transmission lines or other distribution mains that are considered major supply lines, NFGDC will contact the person making the one-call request in order to verify the commencement date and time of the project so that the company can arrange for a representative to be present as work commences and progresses.

C. Encroachment Agreement

At the request of NFGDC, property owners or other responsible persons will be required to execute a satisfactory encroachment agreement where NFGDC has determined that a project may safely encroach onto an existing right-of-way or pipeline facility on a permanent or temporary basis. The agreement will include a detailed description of the encroachment and it will set forth the specific terms and conditions under which NFGDC will allow the encroachment onto its right-of-way.

Examples of permanent encroachment may be the above or below-grade addition or replacement of any of the following on NFGDC rights-of-way: fences, buildings, structures, pavement, sheds, swimming pools, trees, other utility lines, water impoundment, or surface materials.

Examples of temporary encroachment on, near, or across NFGDC rights-of-way include any of the following activities: excavation, demolition, blasting, construction, crossing, removal of natural resources, logging, mining, well drilling, movement of heavy equipment, staging of materials or equipment, or stockpiling of materials.

When it is necessary for other utilities to install their facilities across NFGDC rights-of-way or underground pipeline facilities, it will be the responsibility of the other utility to obtain permission from NFGDC as well as any affected landowners and to maintain adequate clearance and construction practices at such crossings.



PRE-CONSTRUCTION PLANNING (continued)

D. Pipeline Relocation Requests:

It is the responsibility of property owners or other responsible persons to contact NFGDC well in advance of the scheduled commencement date for projects that are located in the vicinity of pipelines and rights-of-way. Issues regarding encroachment will need to be resolved in advance of project commencement.

**Contact National Fuel Gas Distribution Corporation by calling:
1-800-365-3234**

Once a representative of NFGDC has responded, available alternatives will be considered prior to making any recommendations regarding the relocation of natural gas facilities. The requesting person will be consulted and advised accordingly.

If in NFGDC's sole discretion it is necessary and feasible to relocate facilities, NFGDC will determine the most practical method to satisfy the request and calculate any associated costs. The costs will be communicated to the requesting person and, if necessary, NFGDC will request that the property owner or other responsible person sign a relocation agreement.

Costs associated with relocation are the responsibility of the requesting person, and payment must be made in advance of NFGDC's scheduling of such work. All work on natural gas facilities owned by NFGDC must be performed by NFGDC or its representative.

Should the cost exceed the amounts paid in advance the requesting person shall immediately pay NFGDC the difference between the total cost incurred by NFGDC in relocating such facilities and the advance payment. NFGDC shall refund any requester payment which exceeds the cost incurred by NFGDC in relocating the gas facilities.

Where a change in scope or unforeseen conditions arise, and NFGDC anticipates that the actual cost of relocating the facilities will exceed the amounts paid in advance, the requesting person shall pay such additional costs and NFGDC shall have the right to stop work until the additional anticipated costs are paid in full.

The property owner or requesting person shall be responsible for the cost of repair of grass, concrete, and any other material required in order to facilitate a complete restoration of the property affected by the relocation of NFGDC facilities. NFGDC or its representative shall perform any associated restoration work within public rights-of-way and ensure the restoration is completed.



VI. CONSTRUCTION REQUIREMENTS

NFGDC must be consulted regarding construction requirements prior to commencing projects such as, clearances, support, and backfill when working on NFGDC rights-of-way or near its pipeline facilities. These requirements will vary because of the operating pressure, material composition, and location of the pipeline facility, surface conditions over the facility, ground conditions around the facility, and the normal ambient temperature of the subsurface.

NFGDC may be contacted by calling **1-800-365-3234**. Persons contacting NFGDC should be prepared to describe the project and to give location information (e.g., state, municipality, address or other specific location) so that requests can be directed to the appropriate representative.

A. General Construction Guidelines

The following list of construction requirements must be maintained when working near NFGDC facilities or rights-of-way. Persons should direct inquiries to NFGDC by calling **1-800-365-3234**

1. Prior to commencing projects on private or public property, under most circumstances, the states' damage prevention laws require persons to make contact with the appropriate one-call system, **811** or in **New York 1-800-962-7962** / in **Pennsylvania 1-800-242-1776**.
2. Pipelines, facilities and rights-of-way may be crossed, under certain conditions, by fences. However, fences shall not be placed parallel to or along pipelines within the rights-of-way. Additionally, gates must be installed within or near the right-of-way, in order to allow NFGDC continued access to its pipeline and facilities.
3. A minimum distance of 25 feet must be maintained between structures (e.g., buildings, houses or temporary storage sheds) and any of NFGDC's transmission lines, distribution mains, cathodic protection systems, and other associated natural gas pipeline facilities, unless a lesser distance is agreeable with NFGDC.
4. Excavations, changes of grade, water impoundment, erection of structures, storage of any items or materials, planting of trees, movement of heavy equipment or materials within, over, or across a right-of-way or pipeline facility are not permitted without the express written consent of NFGDC.
5. Grading over transmission lines, distribution mains and service lines is not permitted unless a minimum of cover can be maintained as verified by NFGDC. Grading equipment with ripping blades is not permitted within NFGDC's rights-of-way without the express written consent of NFGDC.
6. Pipelines, facilities and rights-of-way may be crossed, under certain conditions, by roads, railroads, streets and utility lines. These facilities, however, are not to be placed parallel to or along pipelines or facilities within NFGDC's rights-of-way.
7. A minimum horizontal clearance of 33 feet must be maintained between any NFGDC pipeline facility and the base of the berm of any pond.



CONSTRUCTION REQUIREMENTS (continued)

8. Underground structures that are unassociated with NFGDC pipelines and facilities must be placed below NFGDC's pipelines and must maintain a minimum vertical clearance of 12 inches for transmission lines and 6 inches for distribution mains and service lines between these NFGDC pipelines and the underground structures.
9. No perforated lines are allowed within NFGDC rights-of-way.
10. Any metallic structure crossing NFGDC's steel pipelines requires the installation of an electrical test station.
11. No trees or bushes that exceed 5 feet in height will be allowed within NFGDC's rights-of-way. Smaller bushes that do not exceed 5 feet in height may be planted no less than 10 feet from the pipeline. No permanent plantings of any type are permitted within 10 feet of the pipeline.
12. Paving may be permitted within NFGDC rights-of-way. However, it must be kept to a minimum. Each paving proposal will be evaluated on its own merits. The landowner will be required to pay for the installation of additional test leads and ground soil test holes along the paved area to allow NFGDC to monitor the integrity of its cathodic protection. Additionally, NFGDC may require grass or gravel islands to allow a path for gas to vent in case of leakage. Should NFGDC damage the paved area during installation, operation, maintenance, repair or replacement of NFGDC's pipelines or facilities, such damage shall be repaired at the landowner's expense.
13. When any portion of a NFGDC pipeline is exposed the following will apply:
 - ◆ Exposed unsupported pipeline sections greater than 15 feet long must be supported by nylon slings and suspended from steel I-beams which are placed across the top of the ditch.
 - ◆ NFGDC must be notified to inspect all transmission lines prior to commencing backfilling.
 - ◆ Any damages to the pipeline or pipeline coating must be repaired by NFGDC or its representative. Contractor and/or landowner shall be responsible for the cost of repairing NFGDC's pipelines and facilities.
14. NFGDC requires a minimum of 1 foot of select backfill for transmission lines and 6 inches of select backfill for distribution mains and service lines next to and around these facilities. This initial backfill must be clean dirt, free of shale, coal, cinders, sharp stones, or crushed stones. Rounded stones must not be larger than one inch in diameter. Select granular (un-crushed) fill such as, bank-run screenings is also acceptable. Backfill beyond the select backfill must be free of debris, logs, cinders, stumps, skids, brush, and rocks larger than 12 inches.



CONSTRUCTION REQUIREMENTS (continued)

B. Logging And Timber Operations

NFGDC approval must be obtained by the property owner or other responsible persons before logging and timber operations commence on NFGDC rights-of-way or near its pipeline facilities. To ensure public safety and the integrity of pipelines and rights-of-way, an encroachment agreement may require the installation of land bridges ramps, plates or temporary erosion controls and shall require restoration of the right-of-way and final inspection of the site by NFGDC. The responsible person may also be required to post a bond to insure potential damages including restoration of pipelines and rights-of-way.

The NFGDC representative overseeing the right-of-way area or pipeline facility must be contacted at least three working days prior to the proposed activity. A NFGDC representative will meet on site to discuss the proposed activity. No skidding, staging areas, or stockpile areas will be allowed along or within rights-of-way or in the vicinity of pipeline facilities. Perpendicular crossings of NFGDC rights-of-way and pipeline facilities will be permitted as long as satisfactory measures to protect the pipeline are put into place. The logging company will identify its preferred crossing location. A NFGDC representative will determine the requirement for mats and logging bridges constructed of wood or gravel over any NFGDC pipeline facilities. Any potential for erosion and the requirement of temporary erosion control devices within the right-of-way area or in the vicinity of pipeline facilities will be addressed prior to the commencement of the logging activity and as activities progress.

If work is to be suspended for more than four weeks, all ruts on the right-of-way area or in the vicinity of pipeline facilities shall be filled and graded, and the area seeded with a temporary cover to prevent erosion.

Upon completion of the logging activities, all ruts shall be filled and graded. Any permanent erosion control devices removed or destroyed during the logging activity shall be restored. Temporary erosion control devices are to be installed by the logging company to ensure proper vegetation on the surface of rights-of-way. All disturbed surface areas of rights-of-way shall be seeded and mulched with a conservation blend or a seed mixture approved by NFGDC and the Soil Conservation Agent or the State Forester. At least three days prior to completion of the project and restoration to the surface of rights-of-way, the logging company shall meet with a NFGDC representative on site to determine how the surface shall be restored and the site stabilized.

C. Blasting And Use Of Vibration Equipment Near Gas Lines

Contractors or other responsible persons must contact NFGDC prior to blasting within 200 feet or using vibratory equipment within 25 feet of a pipeline. After contacting NFGDC, the contractor will be advised to submit a completed "National Fuel Gas Blasting and Construction Information Request" form detailing the project. Approval will normally take up to ten (10) working days.

A work plan must be submitted for review and approval by NFGDC at least ten (10) working days prior to using vibrating equipment within 25 feet or blasting within 200 feet of NFGDC pipelines.



CONSTRUCTION REQUIREMENTS (continued)

Vibratory equipment includes, but is not limited to, the operation of any type of seismic, construction, industrial, or processing equipment capable of inducing a shock wave, sound wave or vibration that could cause damage to underground facilities through the use of tools and instruments such as: augers, drills, drivers, hammers, breakers, plows, pulverizers, shakers, spudders, and vibrators.

Prior to approving any blasting within 200 feet of natural gas facilities, NFGDC personnel will investigate the work sites. After the preliminary information is reviewed, a pre-blast meeting will be scheduled with the contractor or responsible person.

Minimum requirements for blasting and use of vibration equipment near natural gas facilities include the following:

1. Blast monitoring will be conducted by NFGDC within 200 feet of any NFGDC facilities unless specifically exempted. This will not supersede any local governmental ordinances.
2. Vibrational monitoring may be conducted by NFGDC within 25 feet of its facility.
3. A leakage survey utilizing a portable Hydrogen Flame Ionization unit (or equivalent) shall be conducted by NFGDC in the area prior to, during, and after all construction activities. The contractor will be advised in advance of any problems and only held accountable for any additional damage.
4. Monitoring by NFGDC will occur at the closest facility to blasting locations, as close as possible to the vertical axis (90°). Buried utilities will be exposed for monitoring purposes only as a matter of the last resort.
5. Contractors may be required to perform remedial actions on the job site such as installation of sheet pile wall in order to attenuate vibration that has approached or violated the following peak particle velocities (PPV):
 - ◆ 2 inches per second on transverse or longitudinal channels.
 - ◆ 4 inches per second on vertical channel.
6. Contractor shall be responsible for NFGDC's costs associated with monitoring activities performed because of blasting or vibratory activities.
7. The contractor and any other responsible person will be entirely responsible for the safety and protection of NFGDC personnel and their representatives.

Compliance with these standards does not suggest or imply that the contractor, its subcontractors, blasters, consultants or any other associated party is relieved of any responsibility or liability in the event any of NFGDC's facilities are damaged before, during, or after blasting or vibratory operations. NFGDC will hold all parties responsible for costs incurred for any breach of pipeline or facility integrity.



CONSTRUCTION REQUIREMENTS (continued)

Additionally, the contractor, its subcontractors, blasters, consultants and any other responsible party will indemnify, defend, and hold harmless NFGDC against any and all losses, claims, and actions of any kind arising from or incident to any blasting or vibratory operations.

D. Buried Cables Crossing Pipeline Right-Of-Way

Buried power or communication lines shall cross the pipelines at right angles and should be located so they subject the pipeline to the least practicable disturbance.

All buried conductors, whether in conduit or direct burial cable, are to be installed in accordance with requirements of the National Electric Safety Code (National Bureau of Standards Handbook 81) and the National Electrical Code (NFPA No. 70: ANSI C1 - latest editions). The latest editions of these codes are to apply, the appropriate sections being minimum requirements.

All power and communications lines crossing the Distribution Corporation right of way shall be laid with at least twelve (12) inches separation between the cable/conductors and the pipeline, and are to be protected by a non-metallic conduit. Conduits encasing power lines exceeding 600 volts shall be covered with a minimum of three (3) inches of concrete. Conduits and concrete shall extend a minimum of ten (10) feet each side of the pipeline crossing.

In addition to the above, all power and communication lines crossing the Distribution right of way shall include marking tape laid above the protective conduit and covering that indicates the presence of the buried electrical or communications line.

Any crossing of NFGDC's right-of-way is to be approved only after an encroachment agreement containing an indemnification clause in favor of NFGDC has been signed by both parties.

NFGDC personnel are to be present during installation of the conductor and any associated conduit. All buried cable crossings shall be permanently marked with signs showing the location of the cable and/or conduit. Markers or signs shall be placed above ground on both sides of the pipeline at the point directly above the crossing line(s) and just inside the 10 (ten) foot buffer zone containing the conduit casing.

E. Mining Operations

NFGDC should be contacted in the design phases of the mining project. The following are NFGDC's minimum requirements:

1. If the top edge of slope of the high wall is to remain less than 30 feet in height, then no excavation shall be allowed within 25 feet of the pipeline.
2. If the top edge of slope of the high wall is greater than 30 feet in height, then the top edge of the slope will be maintained 25 feet plus one-half the height of the high wall from the pipeline. The stripping operation must be completed and overburden replaced on the opposite side.



CONSTRUCTION REQUIREMENTS (continued)

3. Blasting operations conducted within 200 feet of any NFGDC facilities must comply with the blasting specifications outlined in this manual.
4. There shall be no augering from the area being left to support and protect the pipeline and right-of-way area. Pipeline and right-of-way crossings for water drainage and vehicle haul roads will be designed, constructed, and placed as directed by NFGDC. There shall be no overburden placed over pipeline facilities or within any NFGDC right-of-way except at haul roads constructed according to NFGDC specifications. These crossings shall be removed by the mine operator or landowner when no longer necessary. The landowner or mine operator shall restore the surface of pipeline facilities and rights-of-way to their original condition.
5. The use of these standards by the mining operator's personnel or assignees does not give, imply, or suggest that the landowner or mine operator is relieved of any responsibility in the event that gas service is interrupted or if the pipeline is damaged in any manner before, during, or after the mining, blasting, or stripping operation. As permitted by the Pennsylvania Department Of Environmental Protection or the New York State Department of Environmental Conservation, NFGDC will hold the landowner and/or mine operator responsible for all costs incurred due to any breach of integrity of the pipeline that is attributable to the mining operations.