

NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS  
MAIN WITH 350 PSIG TO 15 PSIG GATE STATION  
Baseline Schedule Narrative Report

---

**NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS  
MAIN WITH 350 PSIG TO 15 PSIG GATE STATION**

Contract No.: 44000048281



**Contractor:  
NETWORK INFRASTRUCTURE  
INCORPORATED**

**CPM Scheduling Consultant:  
HSE Contractors Inc.**

**BASELINE SCHEDULE  
NARRATIVE REPORT**

**FOR:  
NATIONAL GRID**

**Contract award Date                   –    December 01, 2014**  
**Contract Completion Date           –    December 05, 2015**

**NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS  
MAIN WITH 350 PSIG TO 15 PSIG GATE STATION  
Baseline Schedule Narrative Report**

---

**Table of Contents**

**1. Project Scope of Works ..... 2-3**

**2. Baseline Plan Approach For Project Construction ..... 4-5**

**3. Data Summary ..... 6-7**

**4. Calendars ..... 8**

**5. Schedule Statistics ..... 9**

**6. Integrated Project Schedule ..... 10**

**7. Critical Path ..... 10**

**8. Logic Report ..... 11**

**9. Schedule Tabular Report ..... 11**

# NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS MAIN WITH 350 PSIG TO 15 PSIG GATE STATION

## Baseline Schedule Narrative Report

---

### **1. Project Scope of Works:**

#### **1.1 Steel Gas Main Installation:**

The approx. 36,000 feet of 20 inch 350 psig .500" wall pipeline installation will include the installation of a 20 inch ROV in a pit with I & C on Rockaway Blvd.; 20" weld end insulating joints, as required; approximately twelve (12) 20 inch full port ball valves with 2" western purge assemblies; and the installation of a vault, permanent pipe, valves, equipment, and appurtenances for ILI pig inspection. Prior to the hydrostatic pressure test and "full tee" tie in to the existing 26 inch 350 psig gas transmission main, also procure, coordinate and support base line caliper ILI pigging for the entire newly constructed 20 inch 350 psig steel gas main installation. The 20 in. transmission pipe will be API 5L Grade X52 PSL-2, .500 in. wall with long radius (LR) fittings. At the outlet of the new gas reg station, install approx. 2,000 feet of 20 inch steel .375" wall 15 psig gas distribution main including two (2) 20" full port ball valves, 2" Western purge assemblies and insulating joints as specified. Install the full tee tie in to the existing 20 inch 15 psig distribution system piping. The 20 in. distribution pipe as part of the outlet piping downstream of the gate station will be API 5L Grade X52 PSL-2, .375in. wall. Steel protection plates are required to be installed for the entire portion of the 20" 350 psig main installed in the sidewalk area along 50th Ave. between 97th Pl. and 98th St. Procure and install the 5/8" steel plate. Catch basin protection / filter devices shall be installed above the grating of each catch basin along the entire route of the gas main installation to prevent spoils, soil, and construction debris entering the storm water drainage system.

#### **1.2 Gas Main Tie-Ins and Tie-In Locations:**

Perform all necessary work to successfully tie in the newly installed steel gas mains. Operation of all existing valves, inserting, purging and gassing in of all high-pressure gas mains shall be performed by National Grid. Excavating and shoring pits as well as installing all fittings and appurtenances needed to perform the tie-in. This includes all temporary and permanent fittings such as, elbows, tees, end caps, night caps, valves, couplings, etc. as needed.

#### **1.3 Gate Station and Mechanical:**

At the National Grid property at 98th St and 54 Ave, a 350 psig to 15 psig reg station will be installed, the scope of which and will include, but will not be limited to:

- Removal of existing concrete at the Gate Station site to install underground pipe; vaults, structures, and facilities, as required (see Bid Strategy).
- Installation of station heater and concrete pad
- Installation of piles for heater foundation and pipe supports
- Installation of I&C and electrical conduits
- Installation of I&C electrical and telemetry cabinets and foundations
- Installation of remote inlet and remote outlet full port ball valves
- Installation of inlet and outlet full port ball valves
- Installation of 1st and 2nd stage regulators
- Installation of 1st stage strainers
- Installation of a station heater
- Installation of station heater inlet and outlet valves
- Installation of heater fuel gas supply piping and tie-in source gas main
- Installation of control lines
- Installation of an Annubar

# NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS MAIN WITH 350 PSIG TO 15 PSIG GATE STATION Baseline Schedule Narrative Report

---

## **1.4 Civil Works:**

At the National Grid property at 98th St and 54 Ave, a 350 psig to 15 psig reg station will be installed and will include, but will not be limited to, removal of existing concrete at the reg site to install underground pipe, vaults and structures, and facilities, as required;

- Removal of existing concrete
- Installation of drainage
- Installation of concrete pads and pipe supports
- Installation of 4.5” diameter screw piles, quantity of (6) six, 35 feet deep with 13’ W x 22’ L continuous 4,000 psi high early strength reinforced concrete pile cap.

## **1.5 Electrical:**

Install all direct buried conduit and cable with 2 feet of cover at locations. Pull electric power wire through conduit and make connections to instruments and motors. Mount new control panels. Route conduit with pull cords to new instruments. Instruments will be supplied by National Grid. National Grid will terminate cables to instruments.

## **1.6 Gate Station Site Restoration:**

Grading, paving, etc., and restore the site per the Bid Strategy.

# NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS MAIN WITH 350 PSIG TO 15 PSIG GATE STATION Baseline Schedule Narrative Report

---

## **2. Baseline Plan Approach For Project Construction:**

### **Steel Gas Main:**

Pipeline installation will execute for **19 Zones**; **17 Zones** have **20" 350 PSIG Pipes** planned to start in Jan 17, 2015 and planned to complete in October 24, 2015 and **2 Zones** have **20" 15 PSIG Pipes** planned to start in June 2, 2015 and planned to complete in July 27, 2015. Site works include (Pavement removal, Shuttering, Excavation Works, pipe installation, welding, welding, putting tape, backfill and pavement restoration).

Valves will start in Feb. 17, 2015 and planned to finish in October 29, 2015.

Pigging Pipelines divided to 3 Phases as is the following:

**1. Phase 1 (Pig 20" 350 PSIG Pipes in March, April, May and June 2015) : for 7 Zones as :**

- Lefferts Blvd (2400').
- 84th Ave (1835').
- Queens Blvd (575').
- 110th St (1235').
- 120th St (8651').
- 70th Rd (540').
- 89th Ave (500')

**2. Phase 2 (Pig Pipes in July and August 2015) for 5 Zones as :**

**2.1 For 350 PSIG Pipes:**

- 115th St/ Park Ln South (1825')
- Metropolitan Ave (2775').
- 108th St (6050').

**2.2 For 20" 15 PSIG Pipes:**

- 98th St (283').
- 50th Ave (567').

**3. Phase 3 (Pig Pipes in September and October 2015) for 7 Zones as :**

**3.1 For 350 PSIG Pipes:**

- Ascan Ave (3255').
- Horace Harding Expressway (2455')
- 99th St (To Gate Station 5021').
- 55th Ave (871')
- 97th Pl (1295')
- 50th Ave (256')
- 98th St (258') One Valve 15#

Hydrostatic Test Pipeline is divided to 2 Sections, Section#1 will start after the completion of Pigging Pipeline Phase 1 with Lag 41 days as in July 22, 2015 and planned to complete in July 27, 2015. Section#2 will start with the start of Pigging Pipeline Phase 3 in October 24, 2015 and planned to complete in October 31, 2015.

Junction BLVD 15# Tie site works include (Excavation, Air Test, Prep Main Grid and Tie in Nat Grid) is planned to start after finishing the Hydrostatic Test Pipeline for section#1 with Lag 46 days as in Sept. 19, 2015 and planned to complete Sep. 25, 2015.

# NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS MAIN WITH 350 PSIG TO 15 PSIG GATE STATION Baseline Schedule Narrative Report

---

## Gate Station Installation:

Gate station site works include (Mobilization, clear property, install piping, install heater, install electrical, hydrostatic test and Tie in inlet & outlet). The Gate station is planned to start after finishing the Pigging Pipelines Phase 1 with lag 31 days as in July 10, 2015 and planned to complete in Sept. 28, 2015.

Transmission Tie in to ROV site works that include (ROV Installation and Piping in Rockaway Blvd, Excavate Live Gas, Hydro Tie In Piece, Preparation Main and Tie In to ROV) will start after the completion of Clear Property for Gate Station with Lag 26 days as in August 15, 2015 and planned to complete in Sept. 23, 2015.

Final Tie In at Rockaway site works include (Preparation Main and Tie In) will start after finishing the works of Tie In to ROV with Lag 31 days as in October 30, 2015 and planned to complete in November 9, 2015.

Caliper Run works include (Preparation Main and Run PIG) will start after finishing Tie in at Rockaway as in Nov. 9, 2015 and planned to complete in Nov. 21, 2015.

## Backfill Live Gas Openings:

Backfill works will start in Nov. 9, 2015 and planned to complete after the last completion of (Hydrostatic Test pipeline for section 2, Run PIG for Caliper Run, Tie in Nat Grid for the Junction BLVD 15#Tie In and Tie in Inlet & Outlet for Gate station) as in Nov. 21, 2015.

## Project Completion

Punch list items will start after the completion of Backfill works as in Nov. 21, 2015 and planned to complete in Dec. 4, 2015. Then the Final Payment is planned to start in Dec. 4, 2015 and to complete as in the project Completion Date in Dec. 5, 2015.

**NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS  
MAIN WITH 350 PSIG TO 15 PSIG GATE STATION  
Baseline Schedule Narrative Report**

---

**3. DATA SUMMARY**

<b>Project Name</b>	<i>NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS MAIN WITH 350 PSIG TO 15 PSIG GATE STATION</i>
Scheduling Software	Primavera P6
Data Date	December 01, 2014
Number of Activities	106
Number of Relationships	180
Number of Constraints	0
Number of Milestones	2
Number of Calendars Used	1

**Major Dates & Milestones:**

- Contract Start Date                      Dec. 04, 2014
- Final Punch List and Demob.        Dec. 04, 2015
- Final Payment                              Dec. 05, 2015
- Contract Completion Date            Dec. 05, 2015

# NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS MAIN WITH 350 PSIG TO 15 PSIG GATE STATION

## Baseline Schedule Narrative Report

The initial baseline schedule is also organized by utilizing WBS. The following picture shows a WBS of this project

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
<b>NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS MAIN</b>		308	01-Dec-14	05-Dec-15	0
<b>Contract Dates</b>		308	01-Dec-14	05-Dec-15	0
<b>Steel Gas Main</b>		280	01-Dec-14	31-Oct-15	17
<b>Mob.</b>		54	01-Dec-14	03-Feb-15	0
<b>20" 15 PSIG</b>		47	02-Jun-15	27-Jul-15	96
50th Ave (567') One Valve 15#		20	06-Jun-15	29-Jun-15	114
98th St (283')		47	02-Jun-15	27-Jul-15	96
<b>20" 350 PSIG</b>		234	17-Jan-15	24-Oct-15	21
84th Ave (1835')		44	11-Apr-15	02-Jun-15	0
89th Ave (500')		28	02-Mar-15	02-Apr-15	20
Lefferts Blvd (2400')		53	07-Mar-15	08-May-15	20
115th St/ Park Ln South (1825')		60	27-Apr-15	07-Jul-15	67
Metropolitan Ave (2775') One Valve 350#		57	15-May-15	22-Jul-15	54
Ascan Ave (3255') One Valve 350#		88	06-Jun-15	18-Sep-15	51
Queens Blvd (575')		39	09-Mar-15	23-Apr-15	15
110th St (1235') One Valve 350#		48	23-Mar-15	18-May-15	9
70th Rd (540')		39	07-Apr-15	21-May-15	9
108th St (6050') One Valve 350#		96	11-Apr-15	03-Aug-15	45
Horace Harding Expressway (2455')		76	13-Jun-15	11-Sep-15	45
99th St (To Gate Station 5021') - 1491' Two Valves 350#		62	15-Jul-15	25-Sep-15	45
55th Ave (871')		46	07-Aug-15	30-Sep-15	41
97th Pl (1295')		40	27-Aug-15	14-Oct-15	30
50th Ave (256')		35	09-Sep-15	20-Oct-15	21
98th St (258') One Valve 15#		35	14-Sep-15	24-Oct-15	21
120th St (8651') One Valve 350#		61	17-Jan-15	31-Mar-15	22
<b>Valves</b>		214	17-Feb-15	29-Oct-15	17
<b>Pigging</b>		130	28-May-15	29-Oct-15	17
<b>Hydrostatic Test Pipeline</b>		86	22-Jul-15	31-Oct-15	17
<b>Junction Blvd 15# Tie In</b>		5	19-Sep-15	25-Sep-15	46
<b>Gate Station Installation</b>		113	10-Jul-15	21-Nov-15	0
<b>Caliper Run</b>		10	09-Nov-15	21-Nov-15	0
<b>Final Tie In at Rockaway</b>		8	30-Oct-15	09-Nov-15	0
<b>Transmission Tie In To ROV</b>		32	15-Aug-15	23-Sep-15	0
<b>Gate Station</b>		67	10-Jul-15	28-Sep-15	45
<b>Backfill Live Gas Openings</b>		10	09-Nov-15	21-Nov-15	0



# NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS MAIN WITH 350 PSIG TO 15 PSIG GATE STATION Baseline Schedule Narrative Report

---

## **4. CALENDARS**

One Calendar is used on this project:

- 6 days' work week Calendar with applying the Federal holidays

### **Federal Holidays List:**

- 1 January New Year's Day
- 19 January Martin Luther King Day
- 16 February Presidents' Day
- 5 April Easter
- 25 May Memorial Day
- 4 July Independence Day
- 7 September Labor Day
- 12 October Columbus Day
- 11 November Veterans Day
- 26 November Thanksgiving
- 25 December Christmas

NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS  
MAIN WITH 350 PSIG TO 15 PSIG GATE STATION  
Baseline Schedule Narrative Report

---

**5. SCHEDULE STATISTICS**

**Scheduling/Leveling Settings:**

Scheduling .....Yes  
Leveling .....No  
Ignore relationships to and from other projects .....No  
Make open-ended activities critical .....No  
Use Expected Finish Dates .....Yes  
Schedule automatically when a change affects dates .....No  
Level resources during scheduling .....No  
Recalculate assignment costs after scheduling .....No  
When scheduling progressed activities use .....Retained Logic  
Calculate start-to-start lag from .....Early Start  
Define critical activities as Total Float less than or equal to .0  
Compute Total Float as .....Finish Float  
Calculate float based on finish date of .....Each project  
Calendar for scheduling Relationship Lag .....Predecessor Activity Calendar

Activities..... 106  
Not Started..... 106  
In Progress.....0  
Completed.....0  
Relationships.....180  
Data Date..... 01-Dec-14  
Earliest Early Start Date..... 01-Dec-14  
Latest Early Finish Date..... 05-Dec-15

**Milestone Activities:**

Activity #104            Project Start Date  
Activity#107            Project Completion Date

**Constraint listing:**

Activities with Constraint ..... 0

**Relationships & Lags listing:**

Enclosed.

**NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS  
MAIN WITH 350 PSIG TO 15 PSIG GATE STATION  
Baseline Schedule Narrative Report**

---

**6.0 INTEGRATED PROJECT SCHEDULE**

Enclosed as a separate XER file.

**7.0 Critical Path**

- Critical Path is defined as is the Longest Path. The critical activities are located in Zones 120th St (8651'), 89th Ave (500'), Lefferts Blvd (2400') and 84th Ave (1835') for the construction of Steel Gas Main 20" 350 PSIG Pipes and turn the Pig Pipeline Phase 1 as a critical that is planned to start in May 28, 2015 and to finish in June 2, 2015. The activities # 81 and 93 under the WBS of Gate station have Critical ends to Complete in July 10, 2015 and in July 16, 2015. The activities # 111, 85, 87 and 88 under WBS of Transmission Tie in to Rov have Critical ends to finish in Sept 4, 2015 Sept 10, 2015, Sept. 12, 2015, Sept. 18, 2015 and Sept. 23, 2015. The activities # 80 and 90 under WBS of final Tie in at Rockaway have critical ends to finish in Nov. 4, 2015 and Nov. 9, 2015. The activities no. 109 and 110 under the WBS of Caliper Run have critical ends to finish in Nov. 16, 2015 and Nov. 21, 2015. The activity no. 108 under WBS of Backfill Live Gas Openings has Critical end to finish in Nov. 21, 2015.

- Critical Activities ..... 25 as is the following:

Activity#1, Pavt Repl, Shetg, Excav; **under WBS of 120th St (8651') for Steel Gas Main 20" 350 PSIG Pipes.**

Activity#103, Mobilization/Tree Protection/Pruning/Parking/String Pipe/ MPT/ Test Holes/Water/Sewer; **under WBS of Steel Gas Main 350 PSIG Pipes.**

Activity#104, Project Start Date

Activity#105, Final Punch list and Demob

Activity#106, Final Payment

Activity#107, Project Completion Date

Activity#108, Backfill Live Gas Openings; **under WBS of Backfill Live Gas Openings**

Activity#109, Prep Main; ; **under WBS of Caliper Run**

Activity#110, Run PIG; **under WBS of Caliper Run**

Activity#111, ROV Installation and Piping in Rockaway Blvd; ; **under WBS of Transmission Tie In To ROV**

Activity#13, Pavt Repl, Shetg, Excav; **under WBS of 84th Ave (1835') for Steel Gas Main 20" 350 PSIG Pipes.**

Activity#14, Pipe Instn/Welding; **under WBS of 84th Ave (1835') for Steel Gas Main 20" 350 PSIG Pipes.**

Activity#15, Tape/Jeep and Bkfl; **under WBS of 84th Ave (1835') for Steel Gas Main 20" 350 PSIG Pipes.**

# NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS MAIN WITH 350 PSIG TO 15 PSIG GATE STATION Baseline Schedule Narrative Report

---

Activity#16, Pvt Resto; **under WBS of 84th Ave (1835') for Steel Gas Main 20" 350 PSIG Pipes.**

Activity#5, Pavt Repl, Shetg, Excav; **under WBS of 89th Ave (500') for Steel Gas Main 20" 350 PSIG Pipes.**

Activity#81, Mobilization; **under WBS of Gate Station**

Activity#85, Excavate Live Gas; **under WBS of Transmission Tie In To ROV**

Activity#86, Hydro Tie In Piece; **under WBS of Transmission Tie In To ROV**

Activity#87, Prep Main; **under WBS of Transmission Tie In To ROV**

Activity#88, Tie In to ROV; **under WBS of Transmission Tie In To ROV**

Activity#89, Prep Main; **under WBS of Final Tie In at Rockaway**

Activity#9, Pavt Repl, Shetg, Excav; **under WBS of Lefferts Blvd (2400') for Steel Gas Main 20" 350 PSIG Pipes.**

Activity#90, Tie In

Activity#93, Clear property; **under WBS of Gate Stations**

Activity#96, Pig Pipeline Phase 1, **under WBS of Steel Gas Main 20" 350 PSIG Pipes.**

- Critical Path Layout format is as enclosed.

NORTH QUEENS PROJECT- 20 INCH STEEL 350 PSIG GAS  
MAIN WITH 350 PSIG TO 15 PSIG GATE STATION  
Baseline Schedule Narrative Report

---

**8.0 Logic Report**

Enclosed.

**9.0 Schedule Tabular Report**

Enclosed.