WNY

Science & Technology

Advanced Manufacturing Park

(STAMP)

Gas Service Analysis

March 2011

Project Description

The Science & Technology Advanced Manufacturing Park (STAMP) initiative proposes to develop an approximately 1,340 acre site situated near the Town of Alabama, NY with the intention of enabling various advanced technology manufacturing operations. The purpose of this report is to identify a conceptual plan for adequately supplying gas service to the proposed campus.

The feasibility of natural gas supply for STAMP will be a function of a number of variables. The timing and the need for gas service will depend on the project schedule, related gas supply requirements, the feasibility of obtaining alternate rights of way if required, and permits as the site develops over time.

The proposed gas distribution plan outlined in this report contains the main components which appear necessary for satisfying the project's ultimate service requirements in consideration of the present operating limitations of the existing gas distribution system. Per communications with Ms. Ann Fonfera, a new service accounts representative for National Fuel Gas Company, the nearest natural gas distribution line is located at a distance of approximately 5 miles from the proposed site, near the intersection of Highway 63 (Judge Road) and Highway 22 (Lewiston Road) on the northwest side of the Village of Oakfield (see Figure 1). Per Ms. Fontera, once the gas main is extended to the boundary of the STAMP project, the available gas pressure will be in the range of 30 to 80-PSIG. For the purposes of this report, an average gas pressure of 50-PSIG is used.

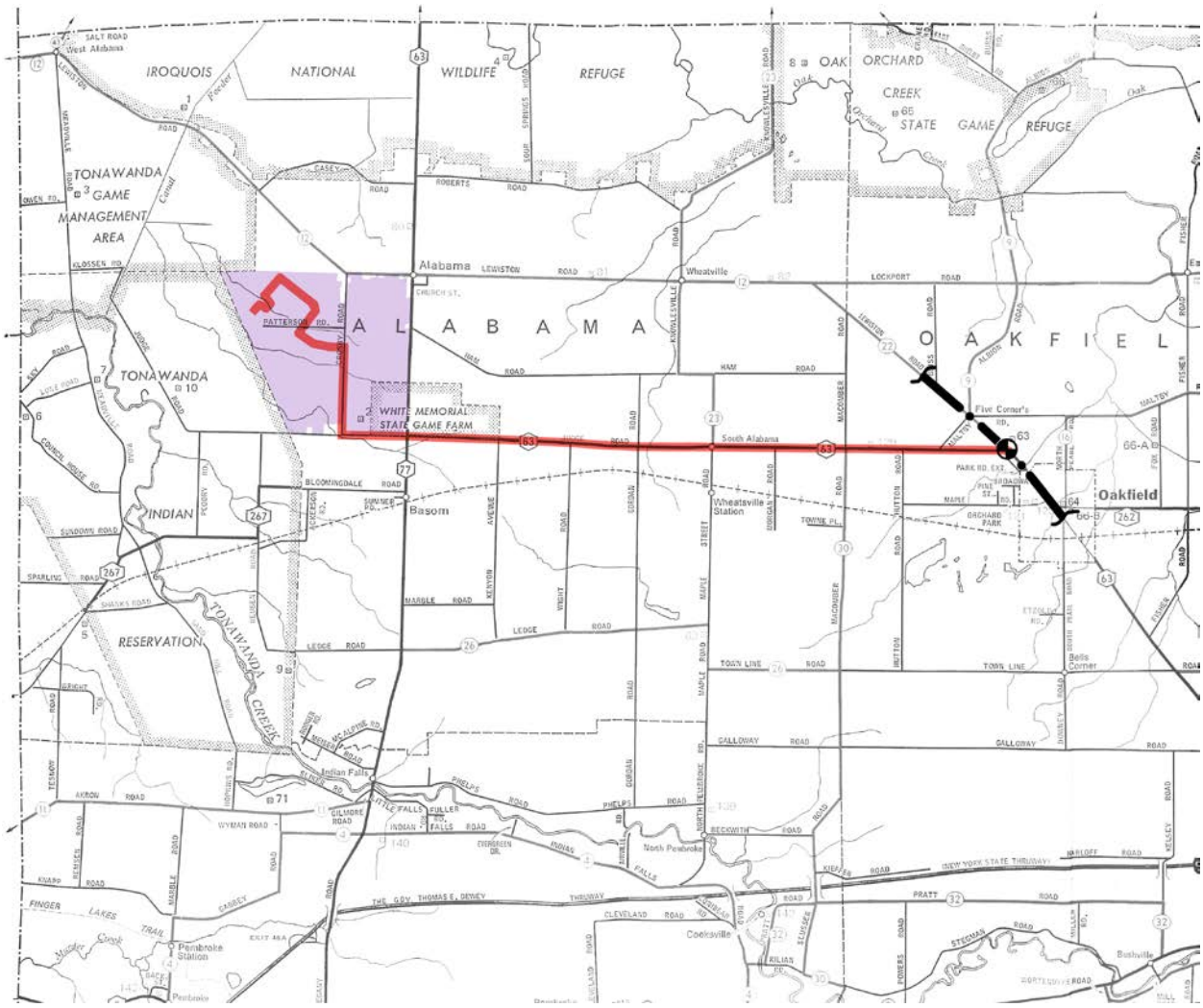

FIGURE 1: According to National Fuel, the closest place to tie into the existing natural gas system is near the northwest corner of the Village of Oakfield (Diagram: Existing gas main and tie point shown in black; proposed extension of natural gas to the STAMP site in Phase 1 shown in red; STAMP site shown in purple)

Proposed Gas Service Plan

The STAMP preferred alternative master plan indicates the following estimated space and associated natural gas usage:

Space allocation	Area SF	Gas use CFH
Technology Manufacturing	4,000,000	306,800
Flex	1,400,000	7,600
Office	500,000	2,900
Retail	180,000	1,000
Demonstration Center/ Public Use	50,000	300
Total	6,130,000	318,600

The approach to providing natural gas to the STAMP site is divided into two phases (see Figure 2):

- Phase 1: Consisting of 1,000,000 square feet of Technology Manufacturing space:
  - Gas use: 77,300 CFH
- Build-out: Consisting of the entire STAMP space allocation as indicated above (6,130,000 square feet):
  - Gas use: 77,300 – 318,600 CFH

FIGURE 2: Phase 1 natural gas service is shown as a red line, while extension of the system to accommodate build-out is shown in the blue lines.

Phase 1 – Gas Requirements 77,300 CFH @ 50-PSIG

The first phase of the STAMP project, illustrated in Figure 3, can be served from the existing gas distribution system with the following system expansion and enhancements.

Gas line extension:

- Install approximately 26,500 feet of 12-inch plastic piping along Highway 63 (Judge Road) between the existing distribution main located near the junction of Highway 22 (Lewiston Road) and Highway 63 (Judge Road) in the Village of Oakfield.

Site distribution:

- Install approximately 14,400-ft of steel piping of sizes ranging from 4 to10-inches from the new gas distribution main on Judge Road along Crosby Road into the proposed Phase 1 development area, including the technology manufacturing buildings located in the northwest corner of the campus.

The rough order of magnitude opinion of cost estimate for the gas system extension/service described above is:

- Gas line extension: $ 400,000
- Site distribution: $ 1,700,000
- Total: $ 2,100,000

Notes:

- Costs are expressed in year 2011 dollars.
- The rough order of magnitude (ROM) cost does not include gas meters to, and gas distribution inside buildings or structures.

FIGURE 3: STAMP Phase 1 Natural Gas system

Build out – Gas Requirements between 77,300-CFH and 318,600-CFH @ 50-PSIG

The build out phase, illustrated as the blue lines in Figure 4, will require additional improvements.

Site Distribution:

- Install approximately 30,000 feet of steel piping of sizes ranging from 1 to 6-inches from the new gas distribution main on Crosby Road to the remaining buildings and structures located at STAMP.

The rough order of magnitude opinion of cost estimate for the gas system extension/service described above is:

- $ 1,400,000

Notes:

- Costs are expressed in year 2011 dollars
- The rough order of magnitude (ROM) cost does not include gas meters to, and gas distribution inside buildings or structures.

FIGURE 4: STAMP Natural Gas system for project build-out is shown in the blue lines above (red lines denote Phase 1 system).