**SCOPE OF WORK**
**DIRECT-PUSH SERVICES**
**NORTH FRANKLIN STREET SITE**
**SOIL GAS CONDUIT INSTALLATION**
**VILLAGE OF WATKINS GLEN, NEW YORK– SITE ID #8-49-002**
**WORK ASSIGNMENT D003825-09.5**

## 1.0 INTRODUCTION

This scope of work describes the requirements for direct push services for the installation of permanent soil-gas conduits at the North Franklin Street site, located in the Village of Watkins Glen, Schuyler County, New York (Figure 1).

### 1.1 Site Description

The North Franklin Street Class 2 inactive hazardous waste site (Site #8-49-002) is an approximately 0.3-acre parcel of land situated in the Village of Watkins Glen, Schuyler County, New York. The site is located in an urban area approximately 400 feet south of Seneca Lake, as shown on Figure 1. Two structures currently exist on site (shown on Figure 2). The building referred to as the "Former Auto Museum" is a single-story metal building on a concrete slab. The second structure is referred to as the "Former Dry Cleaning Building." This is a two-story brick building that also includes two unoccupied single-story brick sheds to the east. Both of these buildings have housed a variety of businesses in the past, including a machine shop and dry cleaning operations.

## 2.0 SCOPE OF WORK

This contract is for direct-push services for the installation of permanent soil-gas conduits to be performed as part of a contract between URS Corporation - New York (URS) and NYSDEC. The Contractor will be a subcontractor to URS. All work is to be performed in accordance with applicable NYSDEC guidance and regulatory documents. The Contractor will provide the services outlined below.

## 2.1 Mobilization/Demobilization

The Contractor shall provide a Geoprobe® direct-push rig (or equivalent) with a two-man crew and the necessary support vehicle(s) and equipment to sustain the crew without delays in schedule. The direct-push rig shall be operational at all times and will be inspected for hydraulic leaks and general condition by a URS representative prior to site entry. The direct-push rig shall be capable of advancing borings to depths of up to 10 feet below grade. The borings may be installed through concrete or asphalt paving.

## 2.2 Decontamination of Equipment

Prior to their introduction or reintroduction, all downhole tools and equipment used during the advance and installation of the soil-gas conduits specified in this project work plan will be cleaned using a brush and potable water, at the discretion of the NYSDEC representative. The Contractor shall provide potable water for the decontamination of equipment and tools. The Contractor shall use clean transport containers, which will not contaminate any transported water.

## 2.4 Permanent Soil-Gas Conduit Installation

This work will consist of installing up to 14 permanent stainless steel soil-gas conduits at the proposed locations shown on Figure 2. The total number of soil-gas conduits installed will be determined in the field by the supervising URS geologist. The 14 proposed soil-gas conduits will be installed at four main locations. A truck-mounted Geoprobe® hydraulic push sampling unit shall be used to advance 2.25 inch outside-diameter (OD) macrocore soil borings to a maximum depth of 10 feet below ground surface (bgs). The water table is estimated to be between 2 and 10 feet bgs. Temporary piezometers constructed of 1-inch diameter polyvinyl chloride (PVC) screen and riser will be installed in one boring at each of the four main locations to determine the location of the water table. Once the location of the water table has been determined by the URS geologist at each of the four main locations, the soil-conduit borings will be advanced to a depth comparable to the depth of foundation footings of nearby buildings or to approximately 1-foot above the top of water table to remain above the top of the capillary fringe, where the water table is less than 6 feet bgs. Six-inch (152 mm) long stainless steel vapor sampling implants (i.e., Geoprobe® AT86 series, or approved equivalent) shall be inserted down the boreholes and

anchored at the depth determined by the URS geologist. The bottom of the implants must have a "PRT" style thread, the same fitting style used with Geoprobe® PRT vapor sampling tools. The implant shall be connected to the teflon or polyethylene tubing using a stainless steel swage-lock or clamp fitting to prevent leakage during sample collection. During construction of the soil-gas conduit, as the probe rod is withdrawn, the annular space around the vapor sampling implant (screen) shall be filled with #1 silica sand. Tamped and hydrated bentonite pellets shall be placed immediately above the sand for the seal, and a high-solids bentonite grout shall be used from the top of the seal to one-foot below grade. The soil-gas conduit seal and grout shall meet USEPA and ASTM D-5092 requirements.

The Contractor shall set a flush-mount protective casing around the top of the probe tubing and cement it in place. The probe tubing shall have a minimum of one foot of stick-up above grade and there shall be clearance in the protective casing for a stopcock valve at the top of the tubing. The probe tubing shall be supported inside the protective casing with #1 silica sand.

Boreholes not converted into soil-gas conduits will be backfilled with bentonite pellets. The Contractor is responsible for restoring the surface pavement for unused boreholes to pre-boring condition.

## 2.5 Permits

Prior to the start of activities at the site, the Contractor shall obtain all necessary permits (i.e., street/sidewalk, obstruction, road opening, drilling permits) for conducting intrusive activities. The Contractor will also obtain permits for water usage, if needed.

## 2.6 Investigation Derived Waste (IDW)

It is anticipated that investigation derived waste (IDW) will need to be containerized in 55-gallon drums during this investigation. The Contractor shall provide DOT-approved, open top 55-gallon drums to segregate, contain, and stage the IDW (soil cuttings, spent acetate liners, PPE, etc.) as necessary and as directed by the supervising URS geologist. It is estimated at least two drums will be required.

## 3.0 PROJECT SCHEDULE

Upon receipt of authorization to proceed by its client, URS will notify the Contractor to proceed. The Contractor is expected to mobilize within five days of the Notice to Proceed. The work is expected to begin the week of July 11, 2005. It is anticipated that the fieldwork for this site will be completed within two (10-hour) days.

## 4.0 UNIT PRICE SCHEDULE

Payment for work performed under this Scope of Work shall be in accordance with the attached Unit Price Schedule (Table 1). The contractor shall complete Table 1 with their unit prices. The estimated quantities shown are approximate and may change depending on the conditions encountered. Payment shall be made for actual quantities of work performed by the Contractor, based on approval of the supervising URS geologist.

Two (10-hour) days have been estimated to complete all work at the site.

## 5.0 SPECIFIC RESPONSIBILITIES

The following specific responsibilities will be assumed by URS.

a. URS shall provide an onsite representative to monitor Contractor's work.

b. URS shall be responsible for determining the presence of any buried utilities in the proposed drilling areas.

c. URS shall survey the location and elevations of soil-gas conduits.

d. URS shall coordinate with a subcontractor for pick-up of drums containing IDW.

The following responsibilities shall be assumed by the Contractor:

a. It is the Contractor's responsibility to complete all work to the satisfaction of the URS site representative. Work so performed will form the basis for compensation.

b. In the event of equipment malfunction, the Contractor shall provide replacement equipment of equivalent specification in a timely manner so as not to incur a delay unacceptable to URS.

c. The Contractor shall provide for the security of his equipment and will ensure the security of the borings prior to completion.

d. The contractor shall provide all necessary equipment, parts, and supplies to complete the installation of each soil-gas conduit.

e. The Contractor shall provide all necessary permits for intrusive work and water use for each phase of work.

## 6.0 HEALTH AND SAFETY

The work to be performed under this Scope of Work will occur in an area of suspected soil contamination. It is anticipated that all work will be conducted in 10-hour days in USEPA Level "D" personal protective equipment (PPE). The Contractor shall provide safety equipment necessary for its own employees.

The Contractor shall, at a minimum, satisfy all applicable federal, state, and local statutes, regulations and ordinances regarding health and safety. Beyond this minimum requirement, the Contractor shall develop and submit to URS for review a health and safety plan specific to this Scope of Work before start of work. As an alternative, the Contractor has the option of adopting in writing the URS Health and Safety Plan for the site.

All personnel onsite must be appropriately trained to comply with the OSHA regulations found in 29 CFR 1910.120(e) and are required to bring copies of all certificates with them on the first day of field activities. All onsite personnel must participate in a medical surveillance program to comply with 29 CFR 1910.120(f) and are required to bring copies of certificates indicating their ability to participate in hazardous waste site work with them on the first day of field activities. All copies of certificates must be submitted to the URS Site Health and Safety Officer.

## 7.0 CONFIDENTIALITY

It is important that all information produced by the activities of the Contractor, and all information be treated, developed, or compiled in connection with this project must be kept confidential. All information developed by, or on behalf of Contractor in connection with this subcontract, shall be the sole and exclusive property of URS/NYSDEC and must be promptly turned over to URS at the completion of work. Data, reports, memoranda, and correspondence developed or compiled in connection with this project must be kept confidential.

**TABLE 1**

**UNIT PRICE SCHEDULE**

**DIRECT-PUSH SERVICES**

**NORTH FRANKLIN STREET SITE**

**WATKINS GLEN, NEW YORK - SITE ID #8-49-002**
**WORK ASSIGNMENT D003825-09.5**

| BID | | | | |
|---|---|---|---|---|
| Description - Direct-Push services | Unit | Estimated Quantity | Unit Cost Level D | Estimated Total Level D Cost |
| Mobilization/Demobilization* | Lump Sum | 1 | | |
| Direct-Push Rig with 2 man crew, 10-hr day. | Day | 2 | | |
| Installation and removal of temporary 1-inch PVC piezometers | Each | 4 | | |
| Installation of Stainless Steel Permanent Soil Gas Points [including 6 inch (i.e., Geoprobe® AT86 series, or equivalent) implant, tubing, and other materials]. | Each | 14 | | |
| Flush-mount protective casing | Each | 14 | | |
| DOT approved, 55-gallon drum | Each | 2 | | |
| Work Permits | Lump Sum | 1 | | |
| | | | Total | |

Notes:

1. The cost of all activities required by the Scope of Work and not specifically identified above as Payment Items shall be spread among and included within the quoted costs for the listed Payment Items.

2. Quanties are estimated. Actual payment will be made based on the actual, approved work performed. The unit prices are fixed and not subject to renegotiation due to an increase or decrease in quantities.

3. * - Prices shall include travel to/from site, per diem and subsistence (if needed).

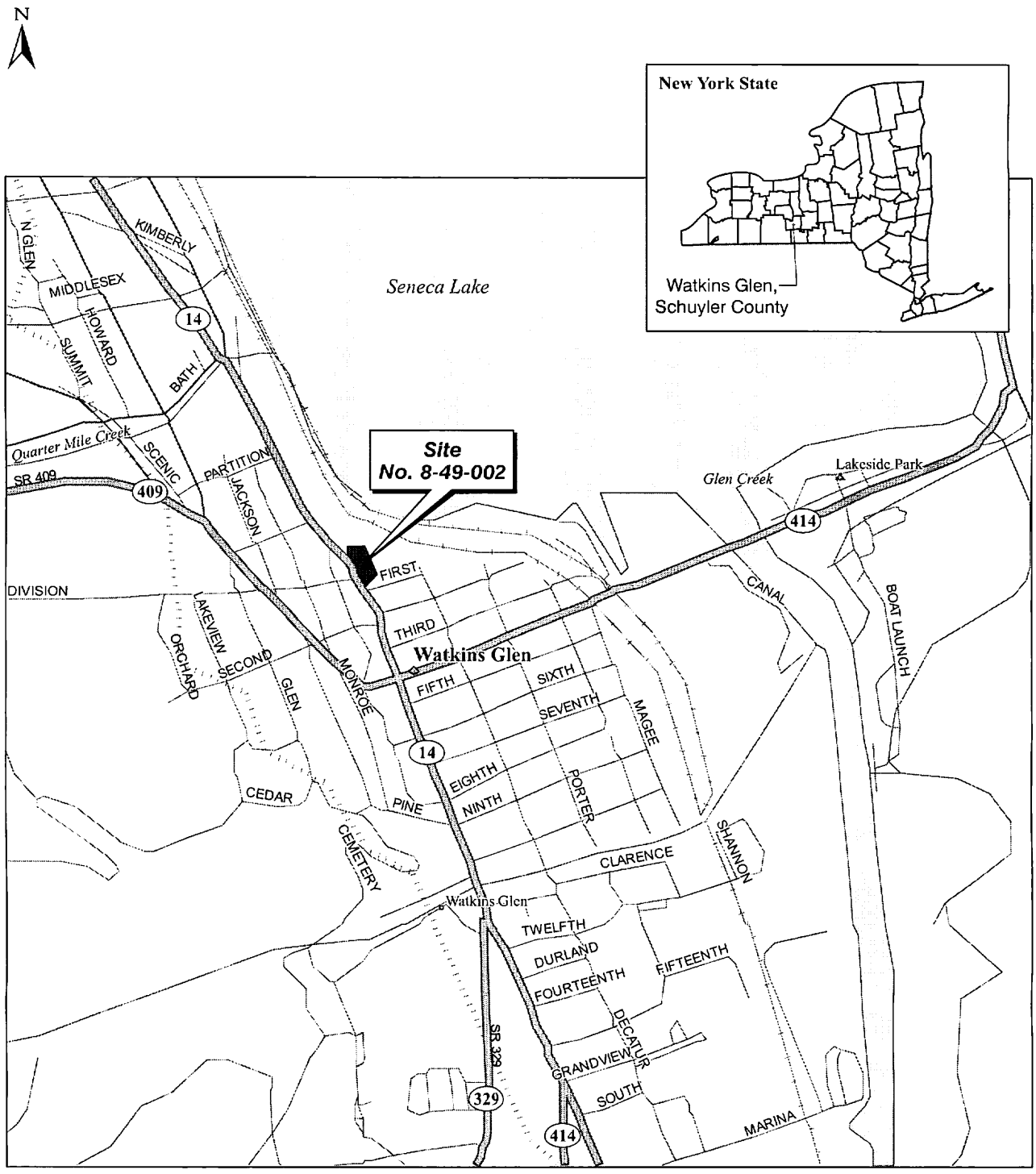
4. Decontamination, drum handling, and IDW management is included in the daily rate.

Company Name _____

Authorizing Signature _____

Name / Title _____

Date _____






APPROXIMATE SCALE IN FEET

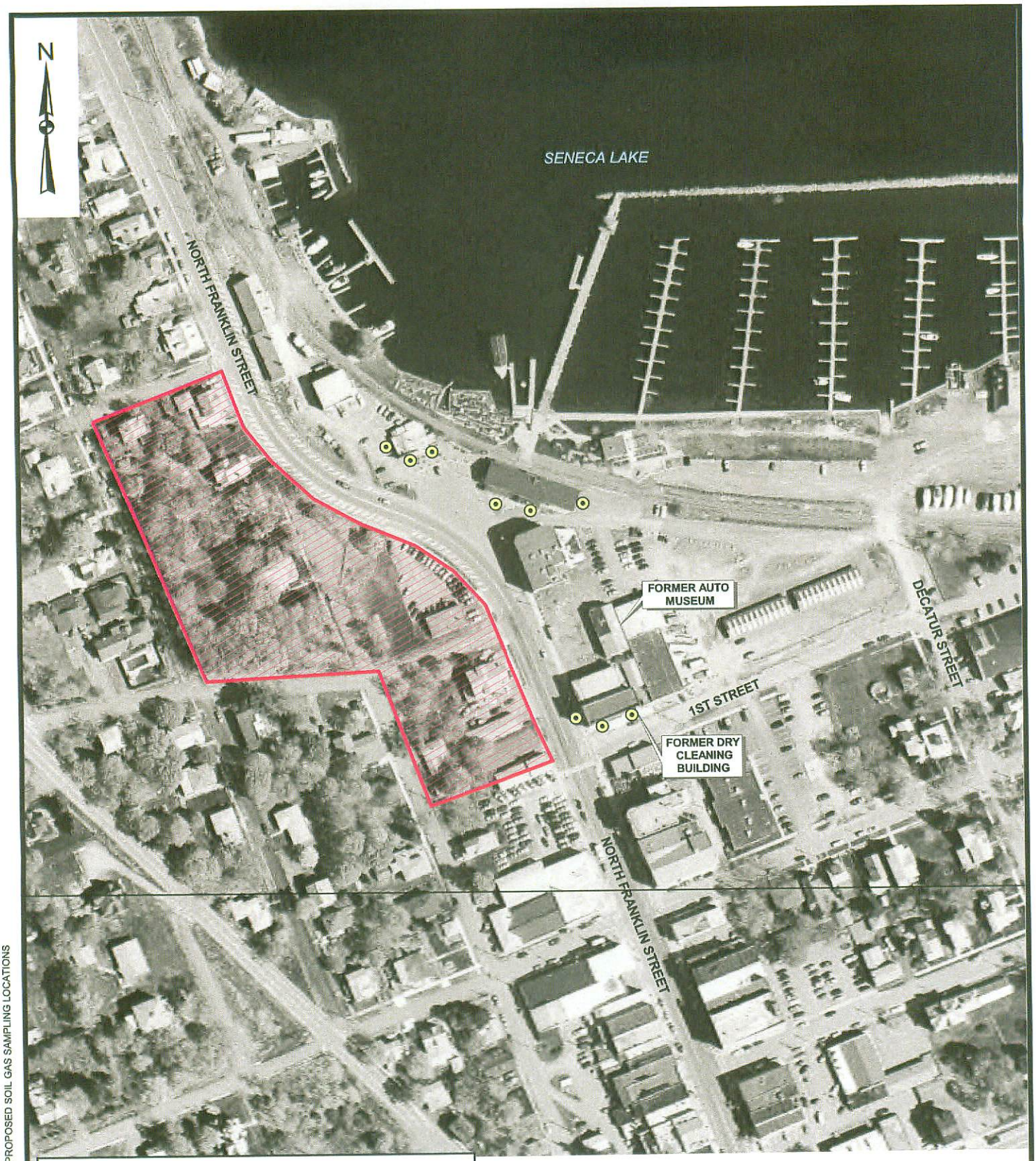
1000 0 1000

AG13546-35388.17-121798-NPV

URS

NORTH FRANKLIN STREET
SITE LOCATION MAP

FIGURE 1




**Legend**

- Proposed Soil-Gas Conduit Location
- Proposed Soil-Gas Conduit Location (To Be Determined In Field)

200 0 200 Feet

| URS | NORTH FRANKLIN STREET<br>PROPOSED SOIL-GAS CONDUIT LOCATIONS | FIGURE 2 |
|---|---|---|

N:\11173258.00000\DB\GIS\DEC2000\n_franklin.apr PROPOSED SOIL GAS SAMPLING LOCATIONS
6/28/2005