SITE INVESTIGATION WORK PLAN

TRIPLE CITIES METAL FINISHING SITE
ELMIRA, NY
SITE No. 808045
Work Assignment D007622-19

Prepared for:
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 Broadway, Albany, New York

Joseph Martens, Commissioner

DIVISION OF ENVIRONMENTAL REMEDIATION

URS Corporation
77 Goodell Street
Buffalo, New York 14203

July 2013

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BUFFALO, NY 14203

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1 Site Description

The Triple Cities Metal Finishing (TCMF) site is a former metal finishing facility located at 926 Stowell St. in Elmira, NY (See Figure 1). The site is bordered by light industrial and residential areas. A junk yard and rail yard are located to the northeast. Newtown Creek is approximately 3,600 feet to the northeast, and the Chemung River is approximately 5,000 feet to the south. The block and lot number is 89.11-1-25.

The site was formerly operated by Industrial Service Corporation (ISC) starting in 1945 as a small electroplating shop that manufactured steel and aluminum products such as screws, bolts, and fasteners. Processes used required the use of acid and alkaline baths including sulfuric acid, hydrochloric acid, and sodium hydroxide. Manufacturing operations included cleaning, plating, and polishing processes. Zinc plating and anodizing made up approximately 80% of ISC's business. The anodizing process involved the application of aluminum oxide coating to metal surfaces through the use of sulfuric acid. Black oxide, copper, and nickel plating, in addition to phosphating, made up the remainder of the overall business. In 1997, the facility was purchased by Triple City Metals Finishing of Binghamton, NY. A molly coating line (a mixture of silicone and stoddard solvent) was installed in August, 2000. Finished metal parts are dipped into this mixture for corrosion protection.

ISC originally operated under Resource Conservation and Recovery Act (RCRA) interim status as a hazardous waste treatment, storage, and disposal facility (TSDF). In 1983, ICS petitioned to cease to be a TSDF, and be a generator only. ICS was granted this petition in 1985 and was required to develop a closure plan for the TSDF activities. The closure plan was executed in 1989 and its interim status as a TSDF was terminated.

The TCMF building was recently purchased by Mr. Gerzo Reis who uses the building for storage and for space for operation of a machine to cut granite for countertops.

1.1 Physical Description

The TCMF building is primarily a one-story building, with a second story in a small portion of the southern part of the building, and a basement level in the northern part of the building. The building is located on the flat top of a small hill. The hill drops off quickly to the east; a retaining wall is present along the northeast portions of the property, providing structural support for the building.

Most of the building is currently unused. The current owner has removed the original wiring and thus the building is not powered or heated (a new electrical power drop has been installed for just the former office portion of the building located in the central portion of the western edge of the building).

1.2 Previous Investigation Results

As part of the RCRA closure performed in 1989, ICS's consultant collected two samples from the concrete floor. The first sample was chiseled from the concrete floor where hazardous waste drums were stored, and the second sample was chiseled from the steel electropolishing tank outer wall (slightly rusted). This tank originally had a leaded containment liner which had been removed.

The first sample was found to contain cadmium at 6.9 milligrams per kilogram (mg/kg) and lead at 120 mg/kg. The second sample was found to contain arsenic at 32 mg/kg, barium at 3.8 mg/kg, cadmium at 39 mg/kg, chromium at 27 mg/kg, lead at 14,000 mg/kg and mercury at 0.13 mg/kg.

2 Sampling Plan

Sampling will be performed in accordance with the procedures outlined in the URS Generic Field Activities Plan dated April 2011. URS will perform the following sampling:

- Collect surface soil samples from 0 to 6 inches below ground surface (bgs), plus quality control (QC) will be collected from up to eight locations. All surface soil samples will be analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semivolatile organic compounds (SVOCs), TCL pesticides/polychlorinated biphenyls (PCBs), Target Analyte List (TAL) metals, hexavalent chromium and cyanide.
- Collect five concrete chip samples plus QC will be collected. The samples will be analyzed for TCL SVOCs, TCL pesticides/PCBs, TAL metals, hexavalent chromium and cyanide. VOCs will not be analyzed for the samples collected from the concrete chip locations.
- Install up to eight soil borings will be advanced and sampled inside the building using a hydraulic direct-push unit up to approximately 4 feet bgs. Floors/slabs will be cored and a 4-foot long sample will be collected from beneath the floor/slab. One sample will be collected from each location. Each sample will be analyzed for TCL VOCs, TCL SVOCs, TCL

pesticides/PCBs, TAL metals, hexavalent chromium and cyanide. All boreholes will be backfilled with concrete.

- Install a total of three monitoring wells. The approximate depths are as follows: 1 @ 20 feet, 1 @ 30 feet, and 1 @ 40 feet deep. All boring locations will be hand cleared to 5 feet bgs prior to drilling. The borings will be advanced and sampled using a drill rig equipped with 4¼-inch hollow stem augers (HSAs) and 2-inch split spoon samplers. All wells will be 2-inch inside diameter polyvinyl chloride (PVC) with 15-foot long screens. All wells will be finished with a flush mount protective casing and concrete pad.
- Collect a soil sample from each monitoring well boring. Soil samples will be collected from the split spoon(s) exhibiting the highest photoionization detector (PID) readings, staining, odor or other observations. If nothing unusual is noted, a sample will be collected from the interval just above water table. All soil samples will be analyzed for TCL VOCs, TCL SVOCs, TCL pesticides/PCBs, TAL metals, hexavalent chromium and cyanide.
- All borings not converted to monitoring wells will be backfilled with cement/bentonite grout to one foot bgs and the remainder of the borehole will be backfilled with on-site soils, concrete, or asphalt, to grade, to match the existing surface conditions.
- Monitoring wells will be developed a minimum of 24 hours after their completion in accordance with the procedures outlined in the Generic Field Activities Plan.
- Collect groundwater samples (plus QC samples) in accordance with low-flow groundwater sampling procedures. All groundwater samples will be analyzed for TCL VOCs, TCL SVOCs, TCL pesticides/PCBs, TAL metals, hexavalent chromium and cyanide. Groundwater samples will be collected a minimum of one week after the last monitoring well has been developed.
- All investigation-derived waste (IDW) (e.g., soil cuttings, development, purge and decontamination water) will be drummed for disposal. Drums will be stored inside the building.
- Collect one representative sample from the IDW drums containing soil cuttings and one from the drums containing water for IDW waste profiling. The samples will be analyzed for the full toxicity characteristic leaching procedure (TCLP) parameters for toxicity and the Resource Conservation and Recovery Act (RCRA) characteristics of ignitability (flashpoint or burn rate), corrosivity (pH) and reactivity (reactive cyanide and sulfide). It is anticipated that one pick-up of the drums for off-site disposal will occur, after waste profiling has been completed.

Sample locations will be determined in the field. The approximate locations of the surface soil samples and the monitoring wells are shown on Figure 2. Locations of indoor concrete chip and subslab soil samples will be determined in the field.

A summary of the analyses to be performed is presented in Table 1.

3 Schedule

This work assignment will be performed according to the following time frames:

Work Element	Days from NTP	Estimated Date
Notice to Proceed	0	6/10/2013
Scoping meeting/Site visit	8	6/18/13
Submit 2.11s	28	7/10/2013
Budget Approval	60	8/9/2013
Task 2 Fieldwork Start	63	8/12/2013
Task 2 Fieldwork End	77	8/26/2013
Task 3 Report Draft	165	11/22/2013
Receipt of comments from Dept.	179	12/6/2013
Task 3 Report Final	193	12/20/2013

4 Staffing Plan

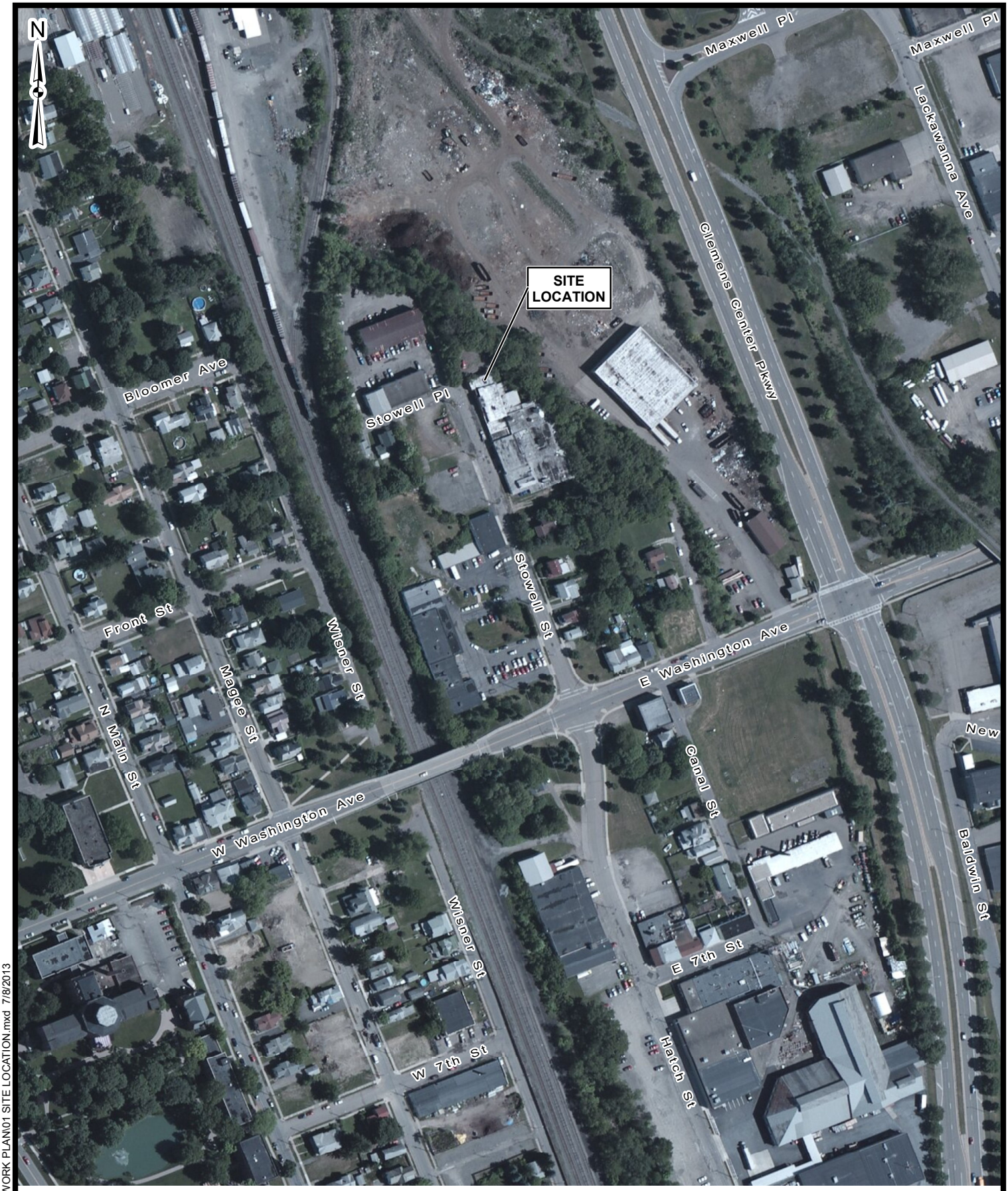
The following staff will perform this work assignment:

Project Manager:	Jon Sundquist
Project Geologist:	Rob Murphy
Project Chemist:	Ann Marie Kropovitch

TABLE 1
ANALYTICAL PROGRAM
TRIPLE CITIES METAL FINISHING
WORK ASSIGNMENT D007622-19

	Analytical Method	Samples	Field Dups	MS/MSD (pair)	Trip Blanks	Equipment Blanks	Total No. of Samples
SURFACE SOIL SAMPLES (1 sample per location)							
TCL Volatiles +10 TICs	8260B	8	1	1	0	1	12
TCL Semi-Volatile +20 TICs	8270C	8	1	1	0	1	12
TCL Pesticides/PCBs	8081A/8082	8	1	1	0	1	12
TAL Metals (22) ICP	6010B	8	1	1	0	1	12
Mercury	7470A	8	1	1	0	1	12
Cyanide	9010B/9012A	8	1	1	0	1	12
Hexavalent Chromium	218.5	8	1	1	0	1	12
SOIL BORING SAMPLES FROM MONITORING WELL LOCATIONS (1 sample per location)							
TCL Volatiles +10 TICs	8260B	3	1	1	0	1	7
TCL Semi-Volatile +20 TICs	8270C	3	1	1	0	1	7
TCL Pesticides/PCBs	8081A/8082	3	1	1	0	1	7
TAL Metals (22) ICP	6010B	3	1	1	0	1	7
Mercury	7470A	3	1	1	0	1	7
Cyanide	9010B/9012A	3	1	1	0	1	7
Hexavalent Chromium	218.5	3	1	1	0	1	7
SOIL SAMPLES FROM GEOPROBE (1 sample per location)							
TCL Volatiles +10 TICs	8260B	8	1	0	0	0	9
TCL Semi-Volatile +20 TICs	8270C	8	1	0	0	0	9
TCL Pesticides/PCBs	8081A/8082	8	1	0	0	0	9
TAL Metals (22) ICP	6010B	8	1	0	0	0	9
Mercury	7470A	8	1	0	0	0	9
Cyanide	9010B/9012A	8	1	0	0	0	9
Hexavalent Chromium	218.5	8	1	0	0	0	9
CONCRETE CHIP SAMPLES (1 sample per location)							
TCL Volatiles +10 TICs	8260B	5	1	1	0	1	9
TCL Semi-Volatile +20 TICs	8270C	5	1	1	0	1	9
TCL Pesticides/PCBs	8081A/8082	5	1	1	0	1	9
TAL Metals (22) ICP	6010B	5	1	1	0	1	9
Mercury	7470A	5	1	1	0	1	9
Cyanide	9010B/9012A	5	1	1	0	1	9
Hexavalent Chromium	218.5	5	1	1	0	1	9
AQUEOUS SAMPLE (1 sample per well)							
TCL Volatiles +10 TICs	8260B	3	1	1	1	0	7
TCL Semi-Volatile +20 TICs	8270C	3	1	1	0	0	6
TCL Pesticides/PCBs	8081A/8082	3	1	1	0	0	6
TAL Metals (22) ICP	6010B	3	1	1	0	0	6
Mercury	7470A	3	1	1	0	0	6
Cyanide	9010B/9012A	3	1	1	0	0	6
Hexavalent Chromium	218.5	3	1	1	0	0	6
INVESTIGATION DERIVED WASTE SAMPLES (1 soil, 1 water)							
TCLP Volatiles	8260B	2	0	0	0	0	2
TCLP Semi-Volatile	8270C	2	0	0	0	0	2
TCLP Pesticides	8081A/8082	2	0	0	0	0	2
TCLP Metals	6010B/7470A	2	0	0	0	0	2
Corrosivity	9040B/9045C	2	0	0	0	0	2
Ignitability	1010/1030	2	0	0	0	0	2
Reactivity	Ch. 7, Sec 7.3	2	0	0	0	0	2

Category B Deliverables, Standard Turn-Around-Time.



Source: ESRI World Imagery

250 0 250 Feet

URS

TRIPLE CITIES METAL FINISHERS
ELMIRA, NEW YORK
SITE LOCATION

FIGURE 1

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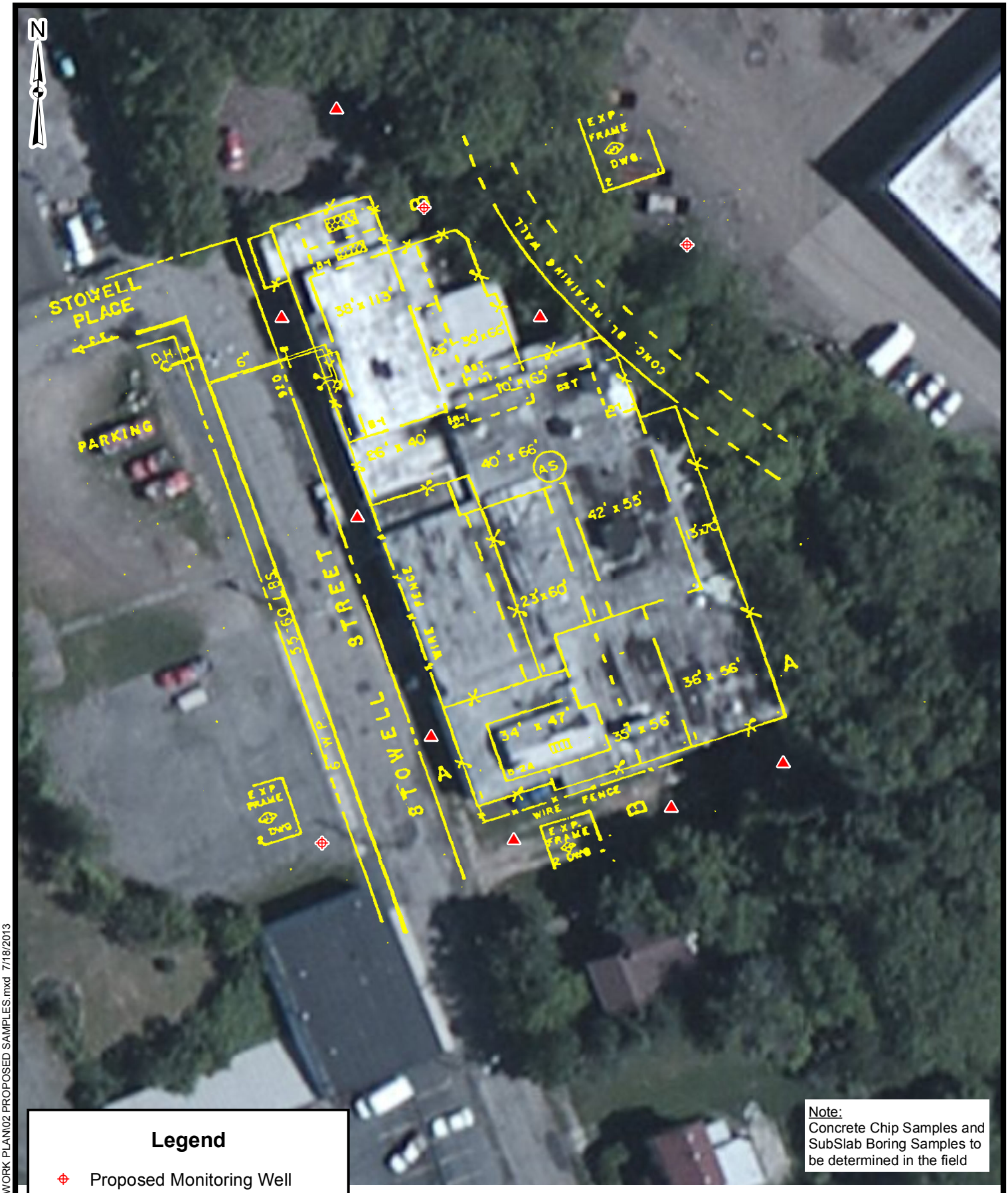

Legend

- Proposed Monitoring Well
- Proposed Surface Soil Sample

Note:
Concrete Chip Samples and SubSlab Boring Samples to be determined in the field

Source: ESRI World Imagery

50 0 50 Feet

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TRIPLE CITIES METAL FINISHERS
ELMIRA, NEW YORK
PROPOSED SAMPLE LOCATIONS

FIGURE 2

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