



August 26, 2020

To: Benjamin McPherson (NYSDEC)

From: Todd Waldrop (Inventum)

CC: Jon Williams (Riverview); John Yensan (OSC); Craig Slater (CS Law); John Black, P.E., and James Edwards (Inventum)

RE: Abandoned Pipeline IRM Work Plan
Riverview Innovation & Technology Campus, Inc.
Brownfield Cleanup Program Site No. C915353
Town of Tonawanda, New York

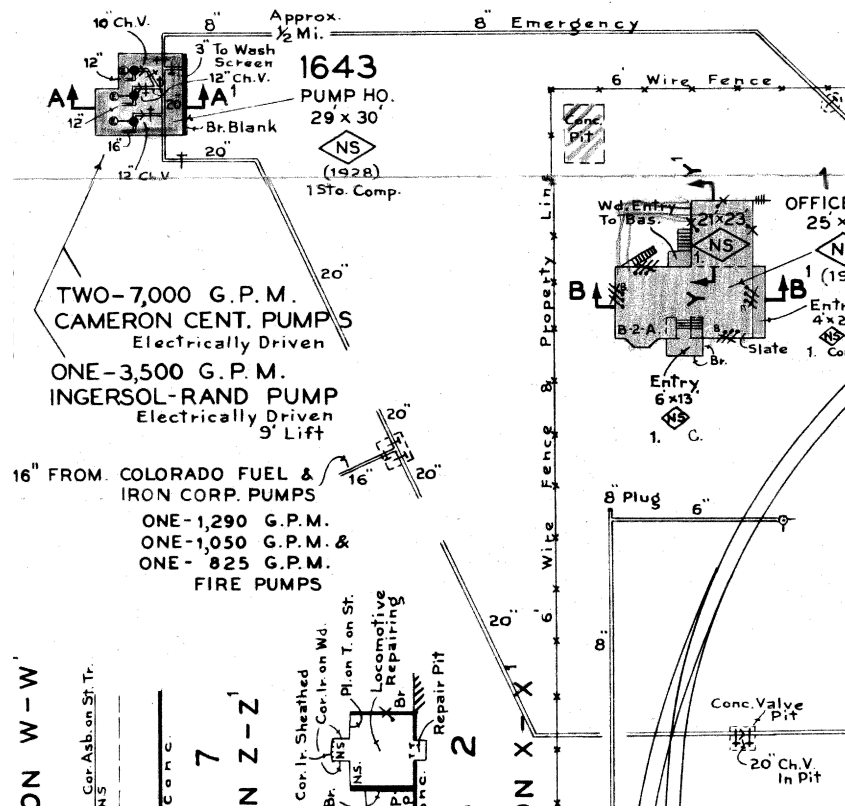
Inventum Engineering, P.C. (Engineering), on behalf of Riverview Innovation & Technology Campus, Inc. (Riverview), is submitting this Abandoned Pipeline Interim Remedial Measure (IRM) Work Plan (work plan) to the New York State Department of Environmental Conservation (NYSDEC) for the Riverview Brownfield Cleanup Program (BCP) Site (#C915353) located at 3875 River Road, Tonawanda, New York.

Background and Purpose

Two pipes were used between the start of operations and the 1970s to convey river water to the then operating coke plant and return the combined non-contact cooling and process water to the river. The first reference to the right-of-way for these pipes is 1921, but it references the original pipe, so a pipe was there before the current piping. The right-of-way crossed property owned by the Lake Erie Rolling Mill (later known as Wickwire Spencer Steel, Colorado Fuel & Iron, then Roblin Steel, now Niagara River World). The pipes were either upgraded, supplemented, or replaced in 1926. To the best of all site knowledge, the right-of-way and pipes still exist but have not been used for decades. It is probable that the water and discharge lines were cut during construction of the North South Storm Sewer that crosses both the water and discharge line rights-of-way¹.

The water pipe route was from a pump house located on the Niagara River (4008 River Road) to a valve pit on the BCP Site. The water pipe is listed as a 20-inch diameter pipe on Drawing T-M-57A-F (n.d.) and according to the figure was supplemented with an emergency 8-inch diameter pipe along the railroad tracks north of the site that entered the property northeast of the Mansion and, an emergency 16-inch diameter supply pipe from Colorado Fuel & Iron (a/k/a CF&I) that joined at some point west of River Road. It is likely that the CF&I emergency pipe joined the 20-inch diameter pipe west of the Erie Canal on what would have been the steel mill property.

¹ The water and discharge rights of way appear to be filed as a single right of way, even though the two pipes diverge as they approach the BCP Site. Solely for purposes of this work plan they are referred to as rights of way.



Excerpt from T-M-57A-F
(Not to Scale)

Notes:

1. Break Lines, indicating the sections of pipe on former Wickwire Spencer property.
2. The property line shown on this excerpt was before the parking lot that was purchased from Wickwire Spencer.

The valve pit for the water pipe contains four valves (three are closed) and a backflow preventor (Photograph No. 1). This combination of closed valves eliminates any risk of flow through the water supply line toward River Road. The water pipe is carried over a pipe bridge above River Road which shows there is no possibility of flow along the pipe reaching the former Erie Canal or the Niagara River.



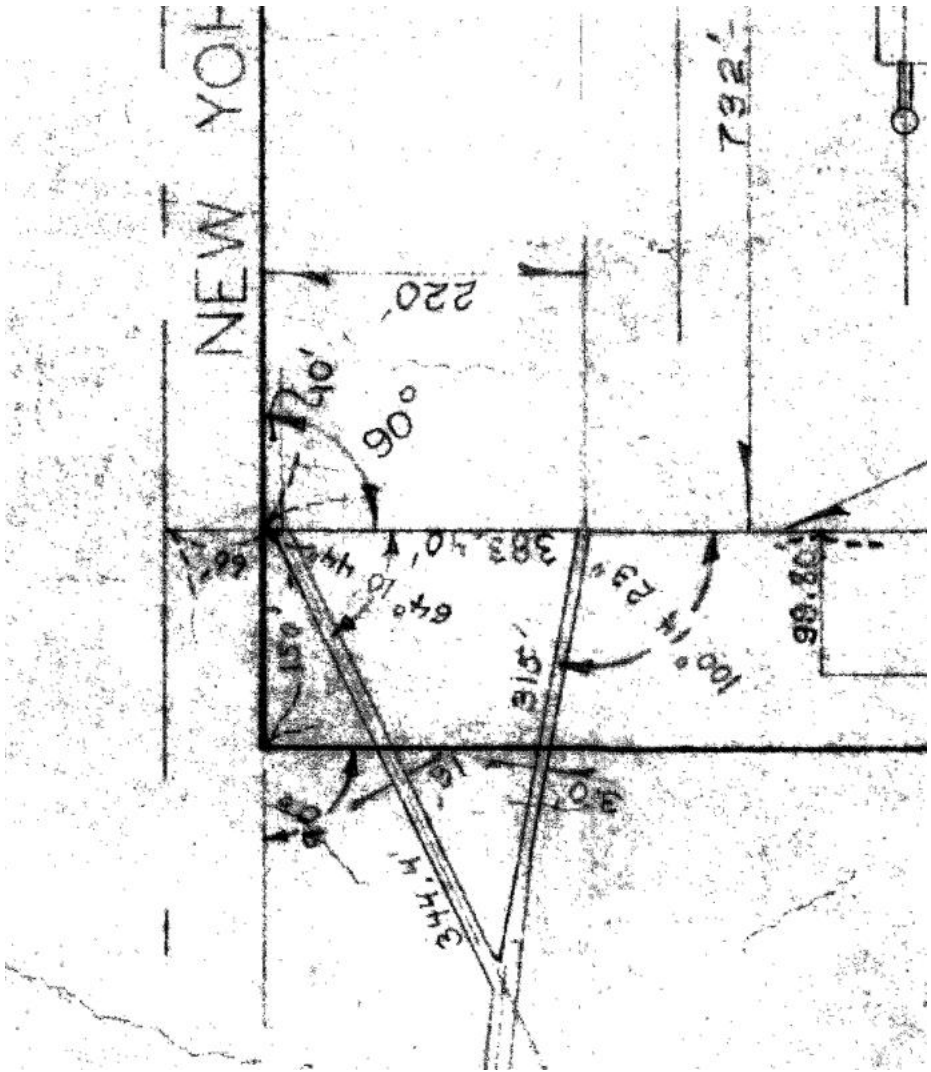


Photograph No. 1

Valve Pit – Former Water Supply Junction
(Note: three valves closed and Backflow Preventor)

The discharge pipe flowed from the northwest corner of the site from the northwest corner of the Mansion Sump. There is no flow from the Mansion Sump to the pipe at that location. The point the pipe is blocked is not visible from the Mansion Sump, but there is no flow at the sump. This IRM is intended to provide a known verifiable seal. All flow from the Mansion Sump currently enters the North South Storm Sewer and flows to the Concrete Lined Settling Ponds. According to Figure T-R-25, the right- of-way for the discharge pipe and the water pipe join 344.4-feet west at an alignment 31-degrees 11-minutes south of the corner of the Mansion Sump. From that point, the two pipes share a common right- of- way to the River Road Bridge. The alignment of the North South Storm Sewer crosses the former water supply line and discharge line rights of way. It is likely that the abandoned water and discharge lines were cut to allow the new construction, but no documentation is available.



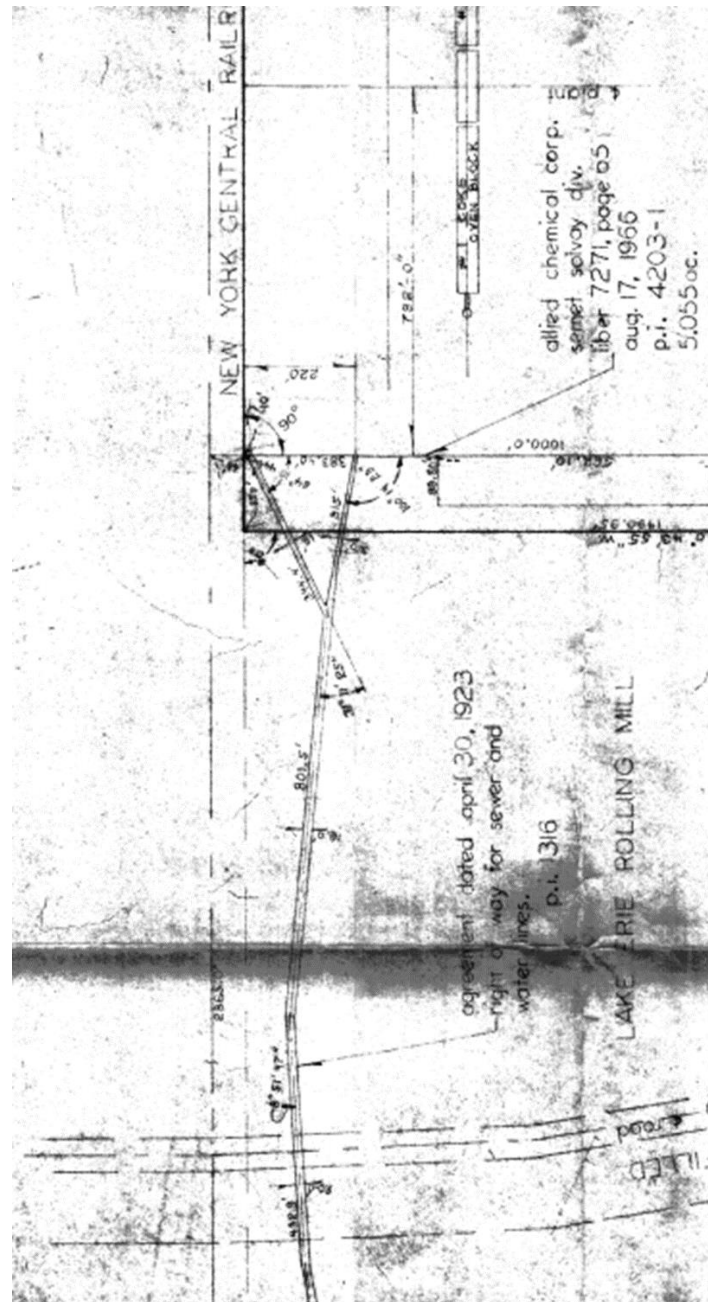


Excerpt from T-R-25

Notes:

1. North is to the left.
2. The rights of way are shown from the Wickwire Property west.





Excerpt from T-R-25

Notes:

1. North is to the left.
2. The rights of way are shown from the Wickwire Property west to River Road.
3. The pipe is above ground across River Road, therefore no possible transport.



Purpose

The purposes of this work plan are:

1. To verify the locations of the water and discharge pipes prior to the Remedial Investigation, the MW-BCP-01 location is in the vicinity of the discharge pipe;
2. To confirm there is no flow to or from the Niagara River within the water supply or discharge pipes;
3. To identify the conditions surrounding the pipes to confirm there is no potential offsite exposure associated with these lines; and
4. To create and document a gap (likely a second gap as the pipes were probably cut for the construction of the North South Storm Sewer Line) in the pipes at the property boundaries to confirm there is no question that in the future these lines could become migration pathways.

Scope of Work

The scope of work will provide the opportunity for definitive observations at the locations cross the western property line shared with Swift River Associates Inc. (Swift River) and the north boundary with the railroad right of way. The three locations that pipes may cross the property line are shown on the partial aerial photographs (Niagara Boundary, 2019) below.





Location of Water and Discharge Rights-of- Way

Notes:

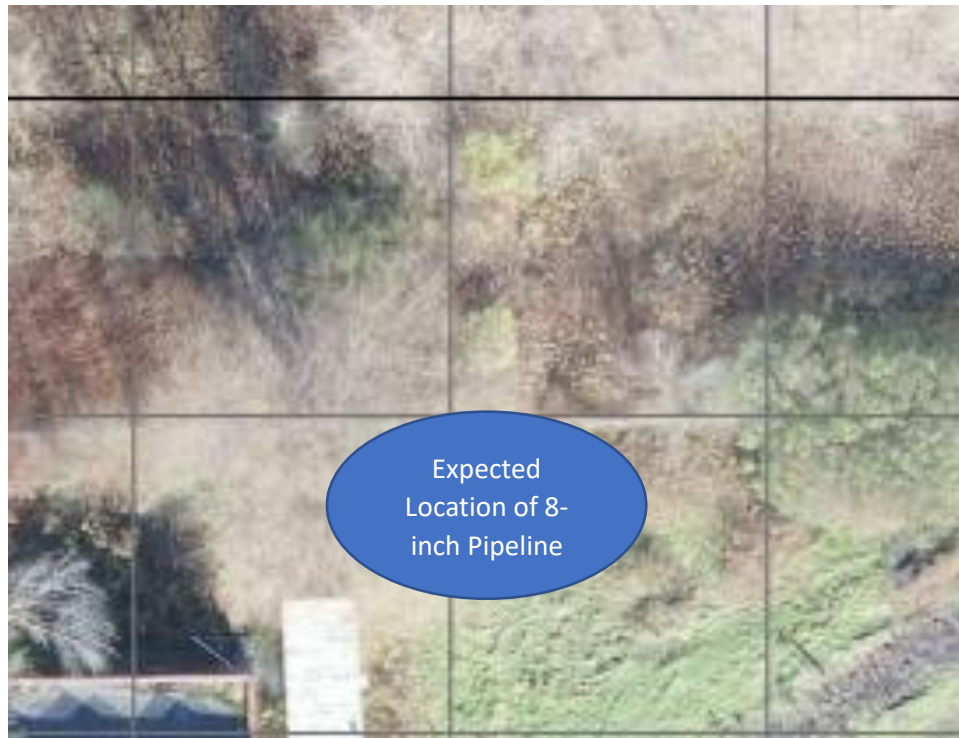
- 1. The surveyed rights-of- way do not exactly coincide with the Drawings available from the plant.
- 2. The location of the junction of the pipe from CF&I is unknown but is most likely on the Niagara River World property.



E

F

2



Location of Potential 8-inch Diameter Emergency Water Pipe

Note:

1. The Mansion is in the lower right corner.
2. The office trailer next to the Mansion is the white rectangle.

A utility locator will be used to trace the location of the water and discharge pipes. The signal generator can be attached to the pipes in the valve pit and to the pipe in the northwest corner of the Mansion Sump. The path of each pipe will be marked at the ground surface at a minimum of 20-foot center-to-center spacing, from the signal source to the fence line. The marked locations will be surveyed with the onsite GPS system. The signal may be lost at the location of the North South Storm Sewer which would confirm the pipes were cut at these locations.

After the locations near the fence line have been identified, a test pit will be advanced from 10-feet north of the pipes to 10-feet south of the pipes in 2-foot depth increments until the sewer and water lines are exposed. The test pit shall be completed after it has been excavated to a depth 1-foot below



the pipe. The test pits will allow access by having 1-foot vertical to 1-foot horizontal side slopes to allow personnel to safely enter the pits and investigate the soil and moisture conditions. The stockpiled soil will be placed more than 4 feet from the top of the slope. The following will be noted:

- Depth;
- Soil classification, color, consistency;
- Moisture content (field classification);
- Presence of free liquids;
- Odor or other visual indications of fill; and
- Utilities.

A description of each of the three pipelines will be given including:

- Material of construction;
- Backfill surrounding the pipe;
- Contents, solid and liquid;
- Length of break; and
- Plug/Cap Construction.

If there is evidence of contamination in the base of the test pit, the test pit shall be extended to identify the depth of the potential impact after the pipes have been plugged.

The test pit across the water pipe will likely be excavated in Grid A-5 or A-6. The location of the North South Storm Sewer should be projected between the first manhole and the opening in the Mansion Sump. Great care shall be exercised to avoid damage to the North South Storm Sewer.

The test pit across the discharge line will likely be in Grid A-3 or A-4. This location should be north of the North South Storm Sewer, but caution will be exercised while excavating. There is also a brick structure in Grid B-2 that may be part of the abandoned discharge line or that may have other buried utilities. The area between the brick structure (under the metal plate in the next picture) and the property line will be investigated and cleared by the proposed test pit across the discharge pipeline.





Brick Structure

Notes:

1. The brick structure is approximately 4 feet square.
2. The Mansion and Mansion Sump are directly east (photograph facing east).

The test pit for the 8-inch diameter emergency water pipe may require more investigation as there is no known exposed pipe. The excavation should start between the office trailer next to the Mansion and proceed east across Grid E-2.

The excavation of three test pits can address all of the objectives of the Work Plan:

1. To verify the locations of the water and discharge lines prior to the Remedial Investigation, MW-BCP-01 is to be located in the vicinity of the discharge line;
 - a. The test pits will be advanced to expose each pipe within 10 feet of the property line.
 - b. Each test pit will be sloped to allow physical access to the pipe.
2. To confirm there is no flow to or from the Niagara River within the water or discharge lines;
 - a. Each of the pipes will be opened to confirm there is no liquid flowing in the pipes.
 - b. The contents, if any, of the pipes at the property line will be documented and photographed.
 - c. If liquids are present in any pipe, the liquid will be pumped to a weir tank mobilized for this IRM (the water from the IRM shall not be comingled with water from other ongoing site management activities).
 - i. Samples of the liquid will be tested for the suite of analyses to include, TCL Volatile Organic Compounds, TCL Semi-volatile Organic Compounds, TAL Metals, PCBs, and Pesticide/herbicides.



- ii. The liquid will be disposed in accordance with the test data.
 - d. If there is liquid flowing into one or more of the test pits, it will be sampled in the test pit.
 - i. Samples of the liquid will be tested for the suite of analyses to include, TCL Volatile Organic Compounds, TCL Semi-volatile Organic Compounds, TAL Metals, PCBs, and Pesticide/herbicides.
 - ii. The liquid will be pumped to the weir tank and disposed in accordance with the test data.
 3. Identify the conditions surrounding the pipes to confirm there is no offsite exposure associated with these lines; and
 - a. The test pits will allow direct observation of the backfill conditions around the pipes.
 - b. Specific observations of the soil type(s), groundwater elevation, and moisture content of the soils will be made.
 4. Create a gap in the lines and cap at the property boundaries so there is no question in the future that these lines could become migration pathways.
 - a. Each line that is located will be cut and a plugged/cap will be placed in the downstream and upstream side of the pipe.
 - b. The pipe gap will be no less than 1-foot wide.
 - c. The cement plug shall be placed after each exposed end of the pipe is cleaned for a minimum of one foot or twice the pipe diameter, whichever is longer.
 - d. A cement plug will also be placed in the abandoned discharge pipe where the pipe daylights in the Mansion Sump.
 - e. If there is any indication of flow along the pipeline, the test pit will be backfilled with flowable fill to an elevation to within 2 feet of the ground surface.

The proposed test pit locations are shown on Figure 1, an excerpt from the Remedial Investigation Work Plan Figure 6. The actual locations will be determined in the field with utility location equipment and during the advancement of the excavations.

Report

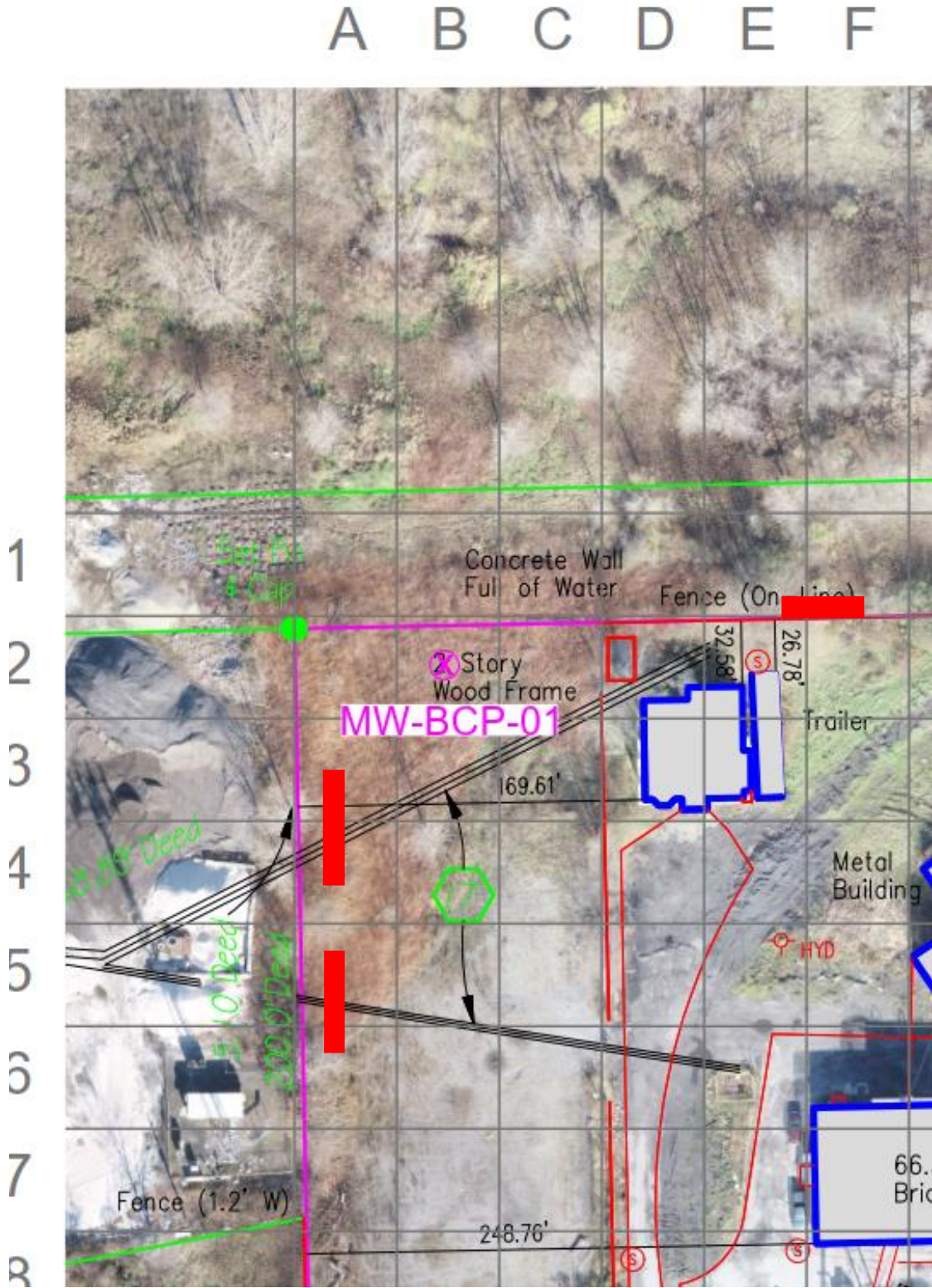
The report of the findings from the three test pits will be summarized in a memorandum that will be incorporated into the Remedial Investigation Report. The memorandum will include all documentation of the pipes and soil or fill conditions surrounding the pipes.



Figure



Figure 1

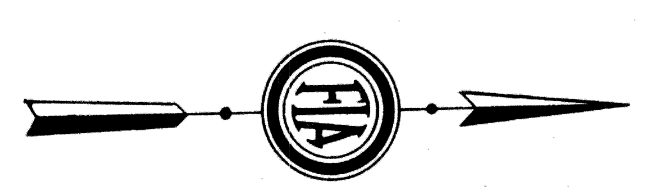


Attachment



Attachment A – Historical Figures





GENERAL NOTES:

1. ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN FEET AND INCHES.

2. ALL CONCRETE SHALL BE 3000 P.S.I. COMPRESSIVE STRENGTH.

3. ALL REINFORCING SHALL BE #4 OR #5 UNLESS OTHERWISE SPECIFIED.

4. ALL STEEL SHALL BE A36 UNLESS OTHERWISE SPECIFIED.

5. ALL WELDS SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.

6. ALL PAINTS SHALL BE AS SPECIFIED UNLESS OTHERWISE SPECIFIED.

7. ALL ELECTRICAL SHALL BE AS SPECIFIED UNLESS OTHERWISE SPECIFIED.

8. ALL MECHANICAL SHALL BE AS SPECIFIED UNLESS OTHERWISE SPECIFIED.

9. ALL PLUMBING SHALL BE AS SPECIFIED UNLESS OTHERWISE SPECIFIED.

10. ALL ROOFING SHALL BE AS SPECIFIED UNLESS OTHERWISE SPECIFIED.

11. ALL FINISHES SHALL BE AS SPECIFIED UNLESS OTHERWISE SPECIFIED.

12. ALL UTILITIES SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.

13. ALL ELEVATIONS SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.

14. ALL DISTANCES SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.

15. ALL ANGLES SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.

16. ALL RADIUS SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.

17. ALL TOLERANCES SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.

18. ALL MATERIALS SHALL BE AS SPECIFIED UNLESS OTHERWISE SPECIFIED.

19. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE BUILDING CODES AND SPECIFICATIONS.

20. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MECHANICAL AND ELECTRICAL CODES AND SPECIFICATIONS.

21. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE PLUMBING AND ROOFING CODES AND SPECIFICATIONS.

22. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FINISHES CODES AND SPECIFICATIONS.

23. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE UTILITIES CODES AND SPECIFICATIONS.

24. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE ELEVATIONS CODES AND SPECIFICATIONS.

25. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE DISTANCES CODES AND SPECIFICATIONS.

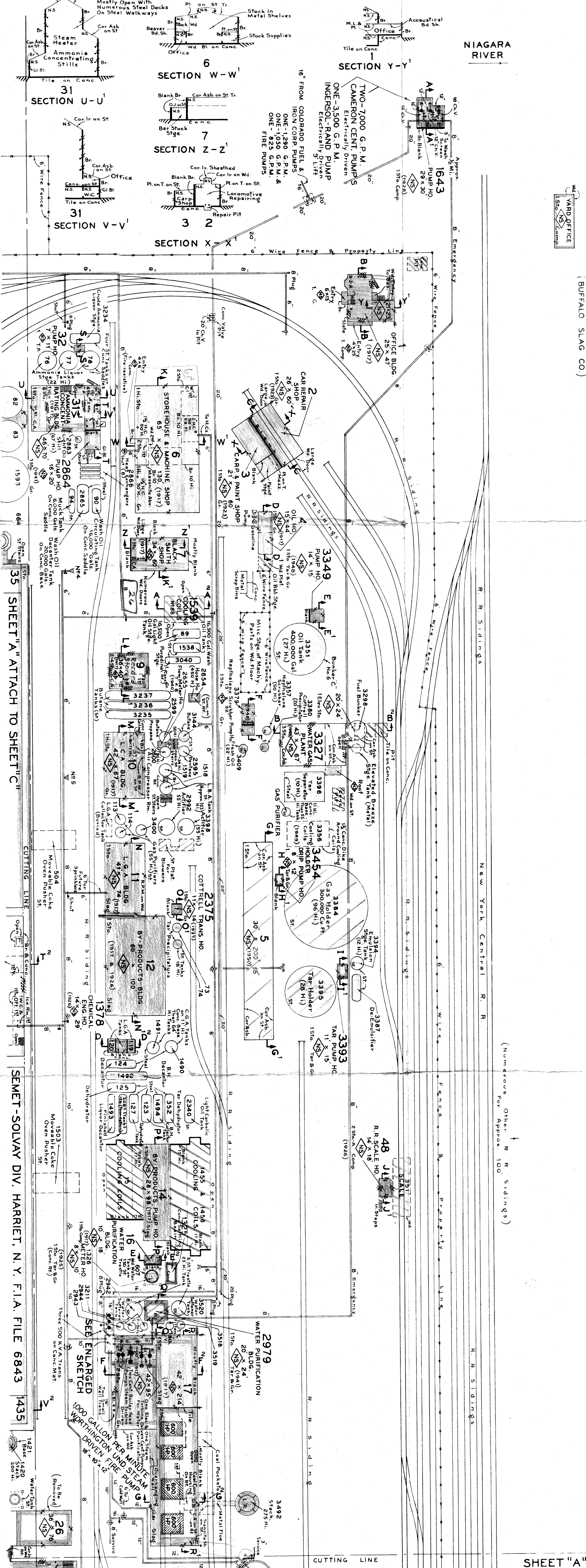
26. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE ANGLES CODES AND SPECIFICATIONS.

27. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE RADIUS CODES AND SPECIFICATIONS.

28. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE TOLERANCES CODES AND SPECIFICATIONS.

29. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MATERIALS CODES AND SPECIFICATIONS.

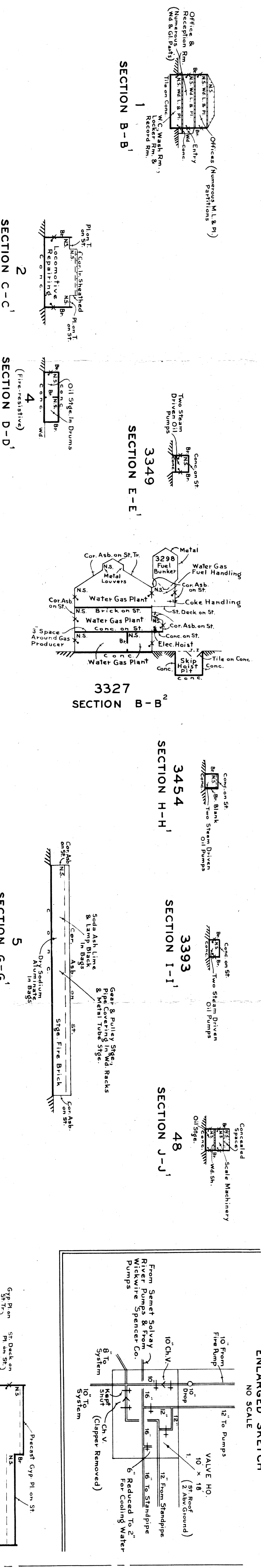
30. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE GENERAL CODES AND SPECIFICATIONS.



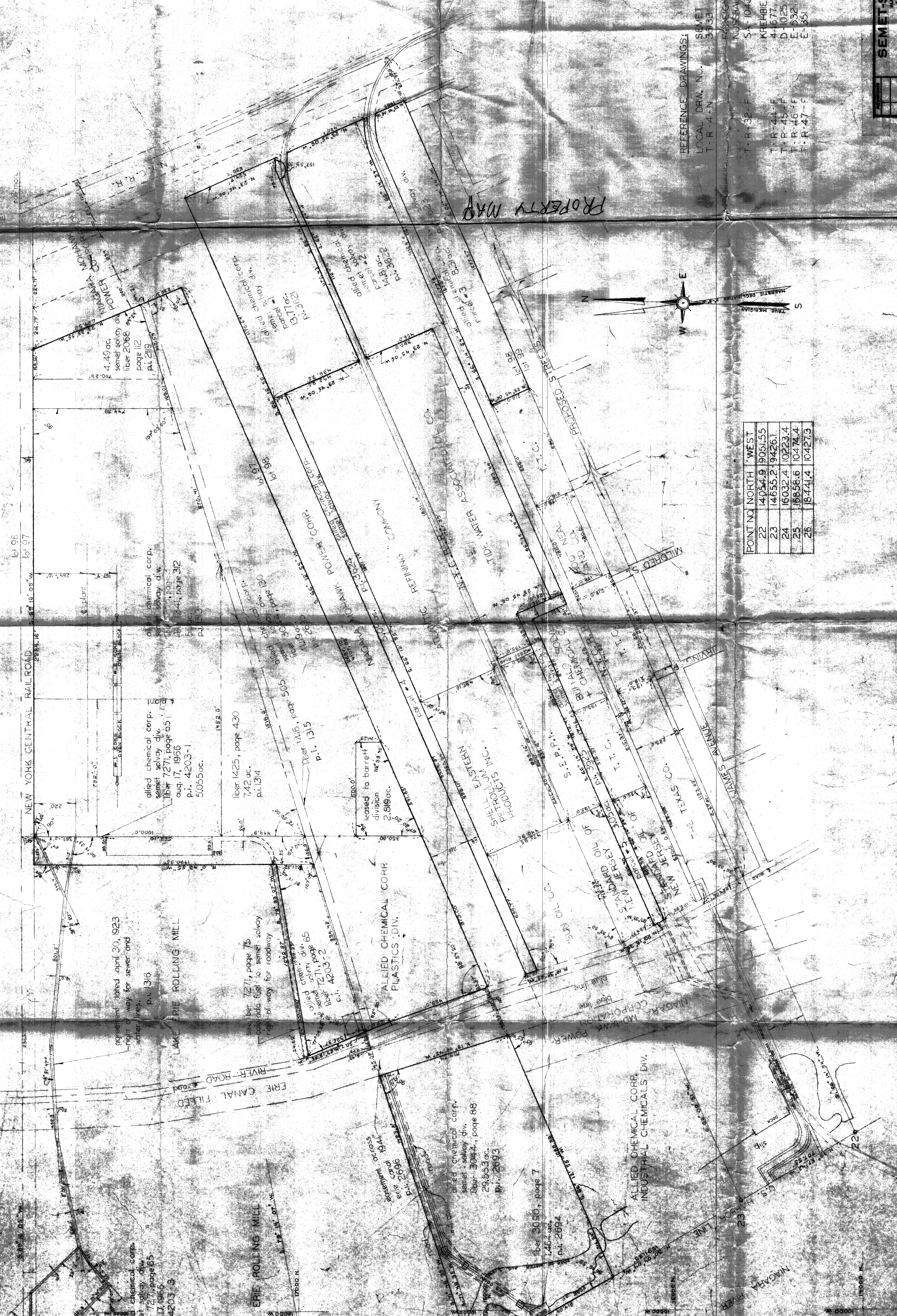
(BUFFALO SLAG CO.)

(Large Gravel Piles)

(Numerous Other R.R. Sidings)



ENLARGED SKETCH
NO SCALE



REFERENCE DRAWINGS:
 LOCAL DRW. NO. SEMET DRW. NO.
 T-R-4-N 3033

T-R-32-F
 S.A. 1045
 KHEIBEL, HUFFOUT, WATERS, GUAY
 4-16-77
 D. 1025
 T-R-45-F
 E. 532
 T-R-47-F
 E. 535

PROSELYT, P.R.V. CO.
 ROSENBAUMER, CLARKE, VELZY, INC.

POINT NO	NORTH	WEST
22	14054.9	19051.55
23	14655.2	19426.1
24	16032.4	10223.4
25	16658.6	10474.4
26	17141.4	10427.3

SEMET-SOLVAY DIVISION
 ALLIED CHEMICAL CORPORATION
HARRIET PLANT

DEPARTMENT: REAL ESTATE
 SUBJECT: PROPERTY MAP - 1957

DATE: 2-3-67
 SCALE: 1" = 200'
 ALC. M.E.C. T-R-25