



AECOM
1350 Deming Way, Suite 100
Middleton, Wisconsin 53562

608.836.9800 tel
608.836.9767 fax

October 15, 2019

Mr. R. Michael Schmoller
Remediation & Redevelopment Program
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, Wisconsin 53711

**Re: Site Investigation Work Plan
ATC Transformer Fire
722 East Main Street
Madison, Wisconsin
FID#: TBD
BRRTS #: 02-13-584085**

Dear Mr. Schmoller:

On behalf of American Transmission Company, LLC (ATC), AECOM is submitting the attached *Site Investigation Work Plan* for the site located at 722 East Main Street in Madison, Wisconsin. This work plan describes the planned activities to address site investigation requirements identified by the WDNR in their responsible party letter, dated October 10, 2019.

If you have any questions or comments about the planned site investigation activities, please contact me at (608) 828-8208.

Sincerely,

AECOM

Leo B. Linnemanstons, P.G.
Senior Project Hydrogeologist

Enclosure: As stated.

cc: Erika Biemann, American Transmission Company, LLC

**WORK PLAN
SITE INVESTIGATION
ATC TRANSFORMER FIRE
MG&E BLOUNT SUBSTATION
MADISON, WISCONSIN**

**I. SITE INFORMATION
[NR 716.09(2)(A)(B) AND (C)]**

- Project Title: ATC Transformer Fire – Site Investigation
MG&E Blount Substation
722 East Washington Avenue
Madison, Wisconsin
- Responsible Party (RP): American Transmission Company, LLC
W234 N2000 Ridgeview Parkway Court
Pewaukee, Wisconsin
- RP Contact: Ms. Erika Biemann
American Transmission Company, LLC
W234 N2000 Ridgeview Parkway Court
Pewaukee, Wisconsin
(262) 506-7602
- Current Property Owner: Madison Gas & Electric
133 South Blair Street
Madison, Wisconsin 53703
(608) 252-7000
- Consultant: AECOM Technical Services, Inc.
1350 Deming Way
Middleton, Wisconsin 53562
Mr. Leo B. Linnemanstons
(608) 828-8208
- Site Name: ATC Transformer Fire -
MG&E Blount Substation
BRRTS#: 02-13-584085
WDNR FID: TBD
SIC Code: 4911
NAICS Code: 221121
- Location: NE ¼, of the SW ¼ of Section 13, T7N, R9E
722 East Washington Avenue
City of Madison
Dane County, Wisconsin

II. SCOPING INFORMATION

[NR 716.09(2)(d)]

A. Background Information

1. Site Description

The site location map is shown on Figure 1 and the site map is shown on Figure 2. The subject property is 115,424 square feet (2.64 acres) in size. The property contains an electrical substation, two brick control buildings, and two metal buildings. The two brick control buildings have basements with active foundation sumps, and the two metal buildings consist of a control building and a pump house containing an 8,000-gallon mineral oil tank.

2. Site History

The former Madison Gas Light & Coke Company was initially constructed in 1855 and operated until the 1950s. Initial operations reportedly used a coal carbonization (coking) process before the plant was converted to a carbureted water gas process (EDI, 1989). The MGP facility was decommissioned in several stages beginning in 1951. Gas holder number 1 (GH-1), which was the largest of several gas holders used on-site, was reportedly demolished in 1967. At that time, residual coal tar was removed from the gas holders to the extent possible. However, underground pipes for transmission of gas and coal tar were not removed. The gas holder foundation, beneath existing grade, was reportedly filled with soil. In 1984, MGE installed three new high-voltage cables through GH-1. The existing soil within the planned utility corridor was removed and replaced with clean, granular fill to accommodate cable installation.

3. Previous Investigations

MG&E MGP Remediation (2004)

From historical information, the Blount Substation is also a closed Environmental Repair Program (ERP) site and is tracked in the WDNR's BRRTS as 02-13-001567 Madison Gas & Electric Manufactured Gas Plant (MGP) site. The MGP site was closed in June 2005 with residual soil and groundwater contamination in place (see documentation in Appendix A). The soil within GH-1 was investigated on several occasions and was the focus of an in-situ bioventing demonstration project to stimulate aerobic biodegradation of volatile and semi-volatile organic compounds from 1997 through 2003. Results from previous investigation activities and remedial activities are described briefly in the Removal Action Work Plan (RAWP, Barr, 2003) and in detail in the Final Report submitted to MGE by Gas Technology Institute (GTI, 2003). MGE successfully completed two years of full-scale operation of the in-situ treatment (bioventing) system at GH-1, which was consistent with the approved performance-based (NR 720.19) soil cleanup plan submitted to the WDNR for remediation at the site.

ATC Transformer Fire – Spill Response (7/2019)

On the morning of July 19, 2019, a 138 kV power transformer owned by ATC exploded at the Madison Gas & Electric (MGE) Blount Substation in downtown Madison. The explosion ruptured the transformer, releasing a portion of the approximately 18,000 gallons of mineral oil that it contained. The explosion is believed to have also ignited the mineral oil causing a large fire.

The Madison Fire Department (MFD) first responders used an aqueous film forming foam (AFFF) fire suppressant agent, Fire Service Plus, Inc., FireAde brand, 3% AFFF Liquid Foam Concentrate for firefighting. Based on information from the manufacturer, the AFFF product contained at least one of the Per- and Polyfluoroalkyl Substances (PFAS). The MFD is understood to have discharged approximately 120,000 gallons of water mixed with 55 gallons of the AFFF. In addition, the Truax Fire Department is reported to have applied just over 4 gallons of military-grade foam mixed with about 170 gallons of water.

Summarizing the apparent release of fluids as follows:

- 18,000 gallons of mineral oil (laboratory test confirm non-PCB)
- 120,000 gallons of City of Madison municipal water for fire suppression (only estimated, not metered)
- 55 gallons of AFFF from the MFD for fire suppression
- 4 gallons of AFFF from the Truax FD for fire suppression

The 120,000 gallons of water mixed with AFFF overwhelmed the secondary containment berm surrounding the transformer and displaced the mineral oil across the eastern half of the substation causing extensive staining. The oil-water-AFFF mixture was observed flowing out of the substation at the nearby Main Street entry gate and into the City street where the MFD directed flow into a nearby storm catch basin. Because the storm sewers in the area are generally surcharged by nearby surface water bodies, the oil-water-AFFF mixture is believed to not have displaced water beyond the storm-sewer system.

The WDNR directed that environmental oil, water, and soil samples be collected for waste characterization purposes, and the analytes include the following:

- PCBs – The transformer was believed to be manufactured around 1984, and equipment records indicate that a test from 1989 were non-PCB.
- PFAS – Because the MFD and Truax FD used AFFF, WDNR required the PFAS to be an analyte.
- DRO – WDNR-accepted analyte for assessing the mineral oil impacts in soil.

After the first responders completed activities at the site, ATC mobilized its spill response contractor, North Shore Environmental Construction, Inc. (NSEC), of

Germantown Wisconsin. NSEC performed immediate cleanup of mineral oil and AFFF residuals that were observed in storm sewers and on the ground surface.

A total of approximately 80 soil, water, or oil samples were collected from the ATC Blount Substation by NSEC, SCS, and AECOM between July 19th and August 8th, 2019. Most samples were analyzed for DRO and PFAS. Soil, water, and oil data were presented in a technical memorandum entitled Preliminary Summary of Environmental Laboratory Data and dated September 6, 2019.

Between July 19 (date of fire) and August 8 (WDNR declares spill response complete), spill response activities performed by ATC and their contractors included the following:

Water (stored for treatment prior to discharge):

- Removal of approximately 60,000 gallons of oil-water-AFFF mixture from oil skimming operations in cable vaults inside the substation and storm catch basins along Livingston and Blount Streets;
- Removal of approximately 80,000 gallons of oil-water-AFFF mixture from bulk removal from the storm sewers at Livingston and Blount Street adjacent to the substation.
- Additional removal: Approximately 40,000 gallons of oil-water-AFFF mixture was collected during the next two months from oil skimming and utility vault dewatering during construction to install a replacement transformer in the substation in August and September.

Mineral Oil (beneficial reuse):

- Recovery of approximately 14,000 gallons of mineral oil from removal from the burned transformer and separating from the 140,000 gallons of oil-water-AFFF mixture stored in FRAC tanks from the water removals identified above.

Electrical Equipment (recycled as scrap):

- Removal of the burned transformer and other fire-damaged electrical equipment. Electrical remnants and debris from the fire and explosion that were strewn onto the ground around the substation were properly scrapped and disposed. This includes the cleaning and removal of the entire concrete foundation, onto which the burned transformer had been mounted.

Soil (disposed as non-hazardous waste at Subtitle C Landfill):

- Removal of an estimated 60 to 80 cubic yards from the approximately 2 to 3 inches of the surface stained soil and gravel from the following areas:
 - Immediate area around the burned transformer (approximate radius of 30 ft);
 - Area east of the burned transformer to the Main Street substation gate and east perimeter substation wall;
 - Area along the east perimeter substation wall (approximately 100 ft);
 - Area along the south perimeter substation wall (approximately 400 ft);

- To be performed: Area beneath the energized electrical substation equipment that is presently being planned.
- Additional removal: Removal of an estimated 300 cubic yards of impacted soil beneath the immediate area of the fire from the ground surface to the top of the water table. The estimated excavation was approximately 30 ft wide by 30 ft long by 5 ft deep.

III. SITE DESCRIPTION **[NR 716.09(2)(e)]**

A site investigation was previously completed at the Blount Substation for the MG&E manufactured gas plant (BRRTS# 02-13-001567). The MGP site was closed in June 2005 with residual soil and groundwater contamination in place (see documentation in Appendix A). During the MGP site investigation, twelve monitoring wells were installed and monitored periodically from 1986 until 2004. Information developed from that site investigation is included in Appendix A and will be used as the foundation for this new investigation. The following sections summarize that information and is supplemented with recent observations.

A. Topography

The 7.5-minute topographic map of the Madison East, Wisconsin quadrangle (dated 1983) shows the area topography and surface water features in and around the subject property (Figure A-1 in Appendix A). The topographic map shows the subject property as generally flat at an elevation of approximately 850 feet above mean sea level (AMSL). The topography of the general site vicinity of the subject property is generally flat. The subject property is on an isthmus located between Lake Mendota (normal water level (NWL) 849 MSL) to the north and Lake Monona (NWL 845 MSL) to the south.

B. Site Drainage

Drainage at the substation is generally through infiltration through the graveled surface; however, the site does have a modest crown that directs flow radially to the perimeter walls. Precipitation may also be retained within secondary containment for oil-filled equipment present at the substation. During the response activities to the transformer fire, the following observations were made regarding site drainage:

- Fire suppression water was observed to have covered most of the substation inside the perimeter walls, and also to have seeped beneath the perimeter walls onto the adjacent sidewalks and terraces along Main and Livingston Streets.
- The substation has one surface water drain structure (Stormceptor) located adjacent to the east perimeter wall that is connected to the City storm sewer beneath Livingston Street.
- MGE control buildings located on the east and west sides of the substation have basements that are drained by sump pumps that are also connected to the City storm sewers under Livingston and Blount Streets.

C. Surficial Soils

According to the Soil Survey of Dane County published by the US Department of Agriculture, surficial soils for the subject property are mapped as the Dodge-St. Charles-McHenry association consisting of well drained and moderately well drained deep silt loams (USDA Soil Conservation Service, 1976).

Based on historical information and recent observations during subgrade construction at the substation, the site is completely underlain by fill materials to a depth of 4 to 10 feet below ground surface, most of which is contaminated from the MGP site. Because of the long heavy industrial use of the site, the subsurface also contains numerous current and abandoned foundations, utility lines, and other former structures.

D. Site Geology

Pleistocene glacial deposits (Lacustrine Plain) are present below the surficial soils on the subject property. These deposits generally consist of fine-grained silt and clay with sand present near former shorelines and near stream inlets. These areas are often flat, poorly drained areas with peat accumulations (Michelson, 1983). The underlying bedrock formation is mapped as Cambrian sandstone underlain by the Prairie Du Chien, St. Peter Sand Stone and Platteville, Decorah and Galena Formations. Bedrock is anticipated to be present at depths ranging between 100 and 150 feet below existing ground surface.

E. Site Hydrogeology

Regional groundwater flow in the area is anticipated to be across the isthmus from Lake Mendota (NWL 849 ft MSL) to the southeast toward Lake Monona (NWL 844 ft MSL). Based on recent groundwater observations, the depth to groundwater at the site has been observed to be between 4 and 8 ft below ground surface. Groundwater levels appear to respond rapidly to precipitation events that also affect the nearby lake levels. Based on the groundwater observations made during the MGP investigation, the shallow groundwater flow direction locally was not distinctly discernable across the site, which led to a general interpretation that shallow groundwater flow is radially away from the substation but with such a flat gradient that negligible migration was occurring.

Because of relatively easier infiltration through the substation gravel surface compared to the pavement of the surrounding area, shallow groundwater at the substation is likely slightly higher than the surrounding area. The City's storm sewer system is also surcharged throughout this area of the isthmus, which through granular backfill and leaky sewer pipes, provides direct communication with the area's surface water bodies. Thus, changes in lake levels quickly result in changes in water levels across the isthmus.

IV. SAMPLING PLAN [NR 716.09(2)(f)]

A. Pre-Investigation Tasks

Prior to starting this Sampling Plan, a site visit will be conducted with representatives from ATC, MG&E, and AECOM to mark out final sampling locations based on actual field conditions (e.g., underground utilities). Before initiating fieldwork, “Digger’s Hotline” will be contacted to mark utilities and a project specific Health & Safety Plan will be prepared.

B. Site Investigation

The site investigation will be composed of three tasks to collect necessary soil, surface water, and groundwater samples. To address WDNR’s concerns, the following samples will be collected at the facility (see Figures 1 and 2):

- **Soil:** A sampling grid will be established across the existing substation area, and shallow soil samples will be collected from the fill or fine-grain material located just below the surface gravel layer at an estimated depth of 1 to 2 ft below ground surface. Soil samples will be analyzed for PFAS to provide residual concentrations following completion of spill response.
- **Surface water:** Two rounds of water samples will be collected from the surcharged storm sewer catch basin and the two storm sewer outfalls (Yahara River and Lake Mendota). Surface water samples will be analyzed for PFAS only to provide trend data on residual concentrations of target PFAS compounds associated with the AFFF release.
- **Groundwater:** Three rounds of groundwater samples will be collected from three existing groundwater monitoring locations to determine residual concentrations and monitor trends. Groundwater water samples will be analyzed for PFAS to provide trend data on residual concentrations of target PFAS compounds associated with the AFFF release only.

In addition, the existing data will be evaluated and presented to address the other two concerns:

- **AFFF analysis:** A sample of the residual AFFF product will be submitted for laboratory analyses to determine presence and character of PFAS compounds.
- **WDNR PFAS Analyses:** Technical memorandum and reports issued by the WDNR for PFAS testing around the City of Madison will also be reviewed regarding the potential background levels of PFAS.

1. Soil Sample Collection

Soil samples will be collected to determine residual PFAS impacts in near-surface soil across the substation. A sampling grid will be established across the substation on approximately 50-ft centers. A soil sample will be collected from within each grid location to avoid surface obstacles and to provide a representative distribution across the substation of the residual PFAS impacts. Because the substation surface is completely covered with 6 to 12 inches of clear stone, soil samples will be collected from the first fill or fine-grained material that is found beneath the gravel surface. Decontaminated hand sampling equipment will be used to remove the surface gravel, and dedicated sample devices will be used to collect soil samples into laboratory prepared containers.

2. Surface Water (Storm Sewer) Sampling

Surface water samples will be collected to determine the trend in PFAS concentrations from eight previously-sampled monitoring locations:

- **Storm Ceptor:** A water sample from the east catch basin within the substation to evaluate progression of product recovery nearly a week after the incident. This catch basin drains to the City of Madison storm sewer system at structure number IN 5247-050.
- **River Outlet:** A water sample was collected from the storm sewer outlet (near AS 5543-084) near the intersection of E. Washington Ave. and the Yahara River Bike Path to evaluate potential PFAS impact at the Yahara River. The distance from the transformer to this outlet via storm sewer is approximately 1.02 miles.
- **Blount St. Outlet:** A water sample was collected from the S. Blount Street storm sewer outlet (Near IN 5349-001) to evaluate potential PFAS impact at Lake Monona. The distance from the transformer to this outlet via storm sewer is approximately 0.33 miles.
- **Path Outlet:** A water sample was collected from the storm sewer outlet at the north end of Law Park to evaluate potential PFAS impact at Lake Monona. The distance from the transformer to this outlet via storm sewer is approximately 0.40 miles.
- **LVN-6:** A water sample was collected from a catch basin (Structure #IN 5247-115) at the corner of S Livingston Street and E. Washington Ave to evaluate potential PFAS impact between the Storm Ceptor and the Yahara River.
- **BNT-3, BNT-4, and BNT-8:** Three water samples were collected from catch basins along S. Blount St. to evaluate potential PFAS impact between the substation and Lake Monona.

These surface water samples will be collected using dedicated and disposable sampling equipment. Collected water will be transferred into laboratory prepared containers.

Results will be reviewed to determine if PFAS constituents observed in the water samples change in nature or magnitude. Surface water results will be compared to the groundwater results at the substation to assess if there are continuing impacts. Additionally, these results will be compared to available PFAS results from WDNR studies that are being conducted around Madison that provide information on other sources that contribute to a developing background condition.

3. Groundwater Sampling

Groundwater samples will be collected to determine the trend in PFAS concentrations from three existing monitoring locations:

- Transformer Sump (Trans Sump)
- West Control Building Sump (WCB Sump)
- East Temporary Well (ETW-1)

Because of the challenges posed by the operating substation, as well as subsurface obstacles, no additional NR141 - compliant groundwater monitoring wells will be installed. Historical information already provides sufficient information on stratigraphy and groundwater flow. Therefore, the objective for the groundwater monitoring will be to determine trends in the residual PFAS concentrations.

The sumps and temporary well will be purged using a submersible pump or bailer. The groundwater samples will be collected following appropriate PFAS-free sampling protocols.

V. REPORTING [NR 716.15]

Based on the information collected during the investigation, a report will be prepared describing the results. The report will address the PFAS concentrations in the soil, surface water, and groundwater. The report will contain text, drawings, tables and appendices describing the results.

A. Sampling Methods, Including Preservation and Delivery

Samples submitted for analysis will be immediately placed in appropriate laboratory-supplied containers, labeled, and maintained in coolers at 4°C. A State of Wisconsin certified laboratory will perform laboratory analyses. Standard sample chain-of-custody procedures will be followed for sample handling and shipment.

B. Parameters and Analytical Methods

1. Soil and Water Samples

Samples will be submitted to the laboratory under standard chain of custody procedures. The proposed list of PFAS analytes includes 36 compounds that can currently be analyzed by Test America/Eurofins or Vista Analytical as a single sample. Upon receipt of the analytical report, the lab data will be reviewed for quality and tabulated. If detections occur in the blank sample(s) an opinion of their significance to the tested media will be provided.

Quality Control Samples

Quality control samples will include equipment rinsate blanks. A field blank and a trip blank sample will also accompany the water sample(s) collected in the field.

Other PFAS Sampling Considerations

PFASs are present in hundreds of commercial items (e.g. waterproof clothing, cookware, dental products). With analytical reporting limits for PFAS compounds being in the parts per trillion range, care must be taken to assure non-site-related PFAS compounds are not introduced into the samples.

Specific items that must not be brought on-site include:

- Field sampling items or equipment that contain Teflon® that will be in direct contact with the sampling media,
- Gore-Tex® treated fabrics or clothing
- Any item in the ingredient list that includes the term “fluoro”
- Aluminum foil
- Teflon-bearing plumber’s tape
- Blue (or chemical) ice
- Clothing or boots described as waterproof, water-resistant, or stain-treated
- Tyvek® or coated Tyvek
- Clothing that has been washed with fabric softener as fabric softeners may contain PFAS
- Waterproof field books (e.g. Rite in the Rain®)
- Plastic clipboards, binders, or spiral hard cover notebooks
- Post-it Notes®
- Food packaging material
- Markers

C. Description of Quality Control and Quality Assurance

Duplicate grab samples will be collected for analysis at a rate of 1 per 10 sampled collected. One equipment blank will accompany the groundwater sample for analysis to evaluate the performance of decontamination between sample locations.

D. Procedures to Prevent Cross-Contamination

The soil and groundwater sampling equipment (e.g., water level indicator, bowls) will be decontaminated before use, between sample locations, and at the conclusion of sampling.

The procedures outlined below will be used to decontaminate field sampling equipment where dedicated equipment is not used.

- Wash equipment with laboratory-grade Alconox detergent and rinse with potable tap water from an approved potable water source to remove visible contamination.
- Rinse equipment with distilled or deionized water.
- Record information concerning decontamination methodology, date, time, and personnel in the field logbook.

Decontamination fluids and solids will be contained and disposed in the same manner as the investigation derived wastes.

E. Investigative Waste Handling

To meet WDNR requirements, the following protocols will be used during this investigation for storage and disposal of investigation-derived waste such as soil cuttings, purged groundwater, decontamination fluids, water, and disposable equipment.

1. Soil Cuttings

Soil generated during the investigation will be placed in sealed 55-gallon drums. The soil will be characterized and disposed by NSEC in accordance with applicable state and federal regulations.

2. Water

Groundwater and decontamination water will be contained in DOT-approved 55-gal drums. The water will be characterized and disposed by NSEC in accordance with applicable state and federal regulations.

3. Disposable Equipment

Disposable equipment (e.g., sampling gloves, protective clothing.) will be collected and disposed of off-site by the contractor in accordance with applicable regulations.

F. How Results Will be Used

Upon completion of the field activities and receipt of analytical results, a report will be prepared which summarizes the investigation. The report will be prepared in consideration of ch. NR 716.15, Wis. Adm. Code requirements. The report will include a discussion of field methods, tabulated field and laboratory data, laboratory reports with chain-of-custody documentation, a site location map and a site features map.

**VI. SITE RESTORATION
[NR 716.09(2)(g)]**

The facility will be returned to its original condition. Minimal disruption is expected.

**VII. ANTICIPATED SCHEDULE
[NR 716.09(2)(h)]**

The following schedule approximates the time frame in which the investigation will be performed.

Task	Estimated Duration
Pre-Investigation Tasks	1 week
Field Activities	
Soil	1 week (after soil removal completed)
Surface Water	6 months (sampling will take one day for each event; first event ASAP and second event in spring)
Groundwater	12 months (3 quarterly sampling events)
Laboratory Analysis	2 to 3 weeks turnaround time
Site Investigation Report	2 to 3 weeks (after last results received)
Project Management	Ongoing
ESTIMATED TOTAL	Approximately 1 year

N:\Data\Projects\60611431\400_Technical\NR716 SI Work Plan\BlountSS-SI-WorkPlan-20190926.docx

Figures

PROJECT

ATC BLOUNT
SUBSTATION
RESPONSE AND
CLEANUP
MADISON, WISCONSIN

CLIENT

AMERICAN
TRANSMISSION CO.

2 FEN OAK CT.
MADISON, WI 53718
(866) 899-3204 tel
www.atcllc.com

CONSULTANT

AECOM
1555 N RIVERCENTER DR.
MILWAUKEE, WI 53212
(414) 944-6080 tel
www.aecom.com

REGISTRATION

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

60611431

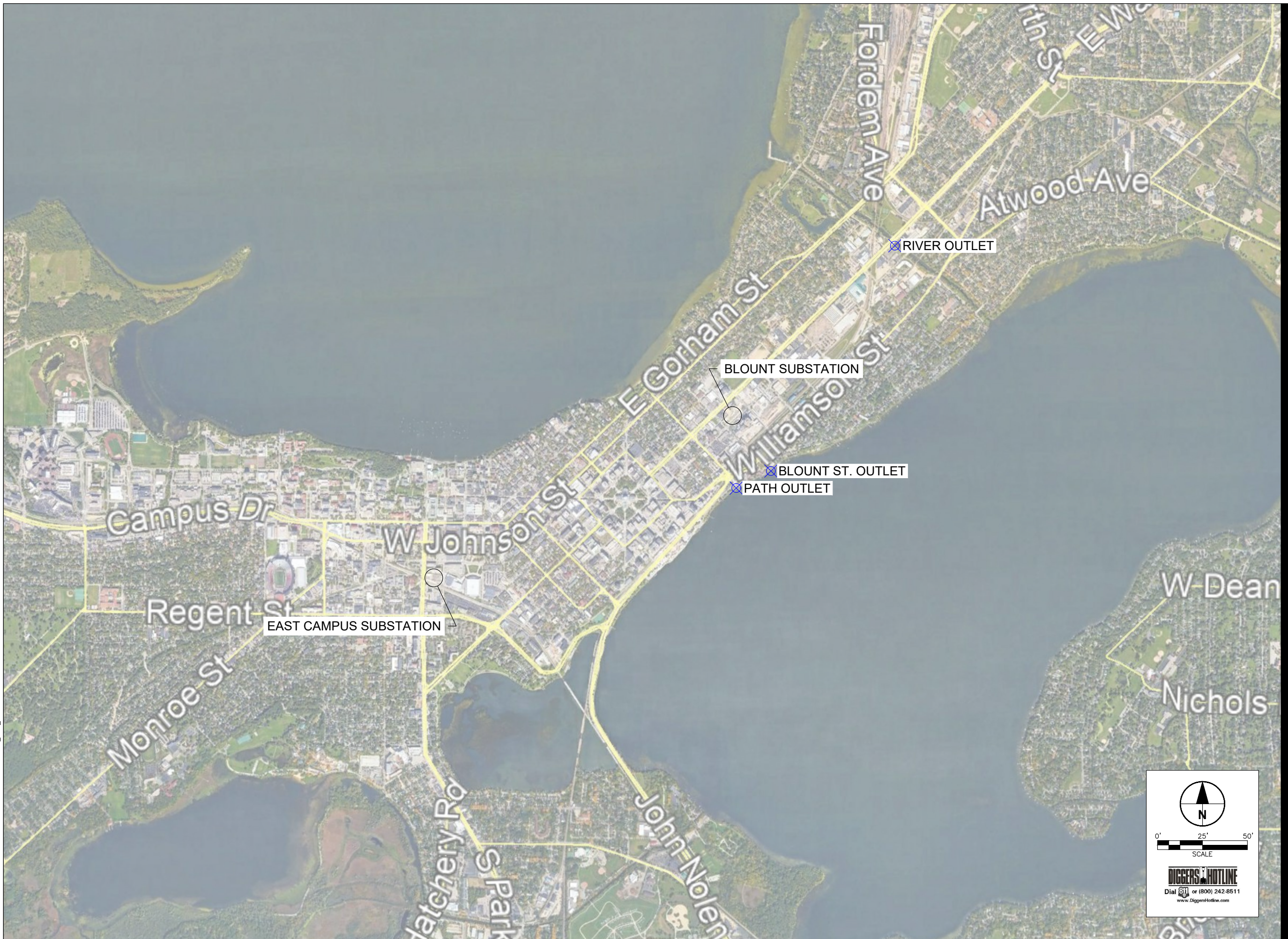
DRAWING TITLE

SITE LOCATIONS AND
OUTLET MAP

DRAWING NUMBER

FIGURE 1

SHEET NUMBER



Plotted By: brandt
 Plot File Date Created: Oct/11/2019 3:50 PM
 Filename: \\USM\WK1\FS001\PROJECTS\60611431\1800_CAD_GIS\910_CAD\20-SHEETS\FIG 1.DWG

LEGEND

- ⊕ SS SOIL SAMPLES
- ⊕ GROUND WATER SAMPLES

REGISTRATION

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER

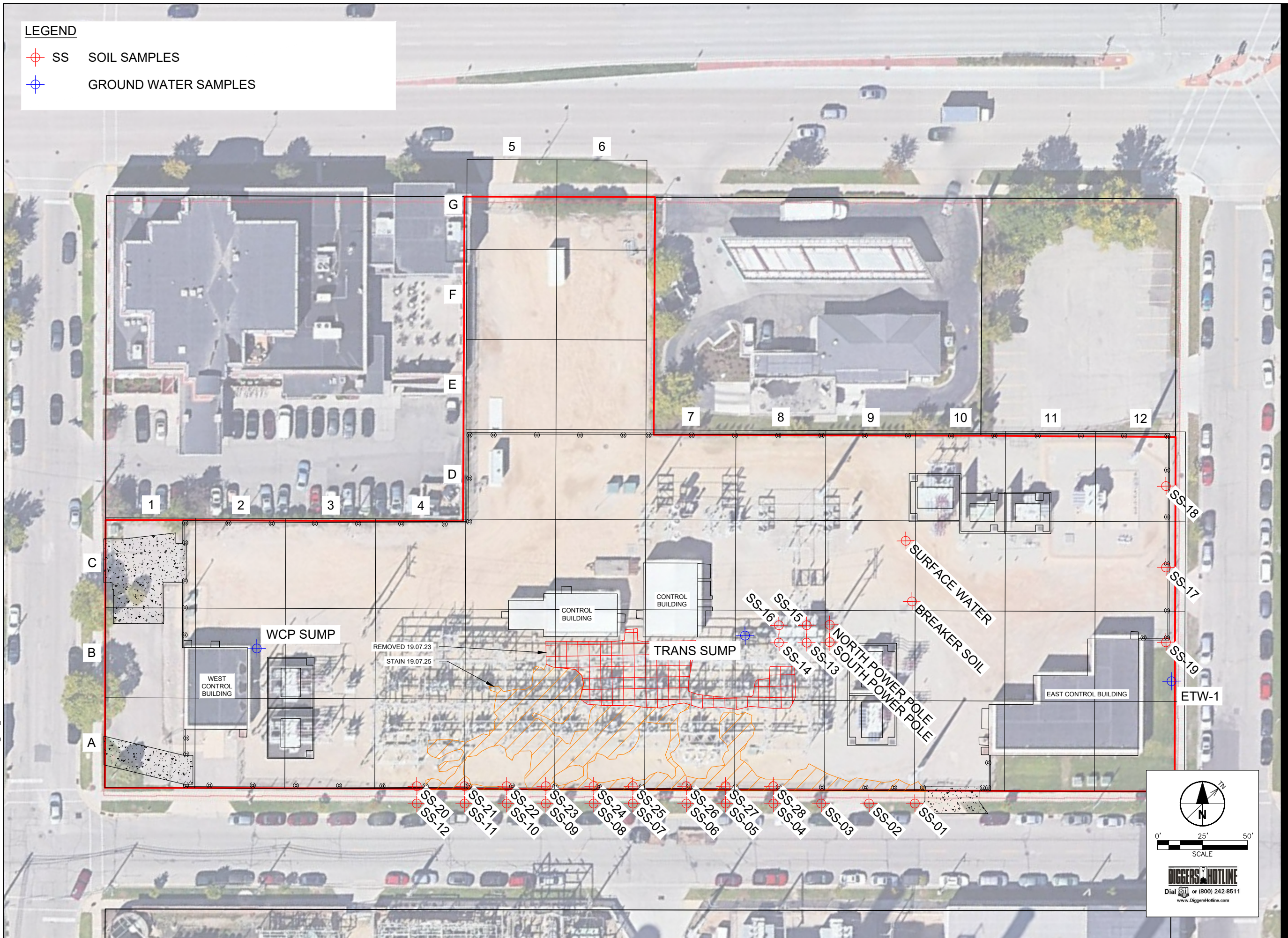
60611431

DRAWING TITLE

SOIL AND GROUND
 WATER SAMPLE
 LOCATIONS

DRAWING NUMBER SHEET NUMBER




FIGURE 2



0' 25' 50'
SCALE

Plotted By: brandt
 Plot File Date Created: 08/11/2019 3:37 PM
 Filename: \\USM\WK1\FS001\PROJECTS\60611431\9000_CAD_GIS\910_CAD\20-SHEETS\FIG 2.DWG

LEGEND

-  LVN LIVINGSTON STREET OIL AND WATER SAMPLES
-  BNT BLOUNT STREET OIL AND WATER SAMPLES
-  SS SOIL SAMPLES

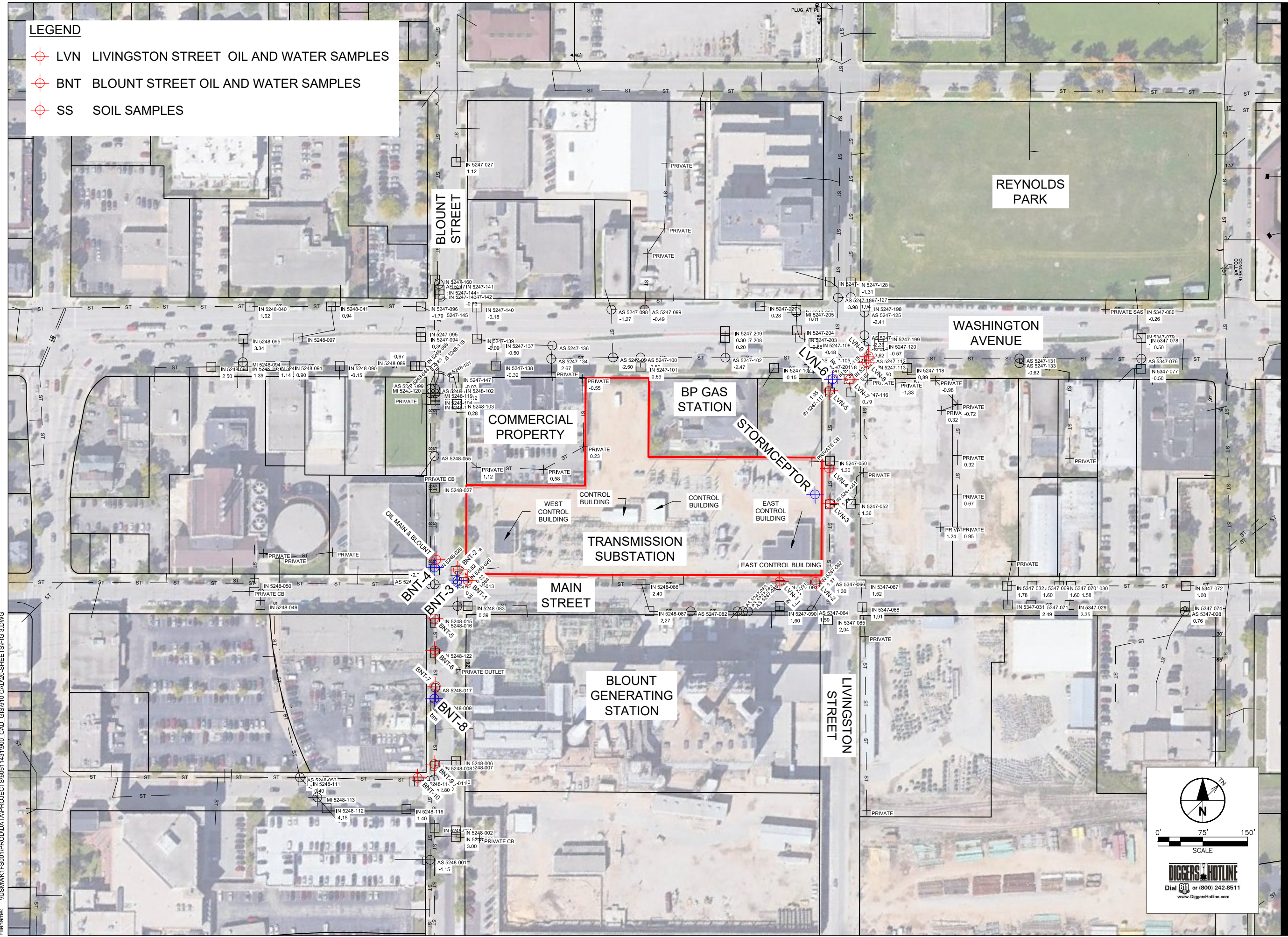


PROJECT
 ATC BLOUNT
 SUBSTATION
 RESPONSE AND
 CLEANUP
 MADISON, WISCONSIN

CLIENT
 AMERICAN
 TRANSMISSION CO.

2 FEN OAK CT.
 MADISON, WI 53718
 (866) 899-3204 tel
 www.atcllc.com

CONSULTANT
 AECOM
 1555 N RIVERCENTER DR.
 MILWAUKEE, WI 53212
 (414) 944-6080 tel
 www.aecom.com



REGISTRATION

ISSUE/REVISION

I/R	DATE	DESCRIPTION

KEY PLAN

PROJECT NUMBER
60611431

DRAWING TITLE
STORM WATER
SAMPLE LOCATION

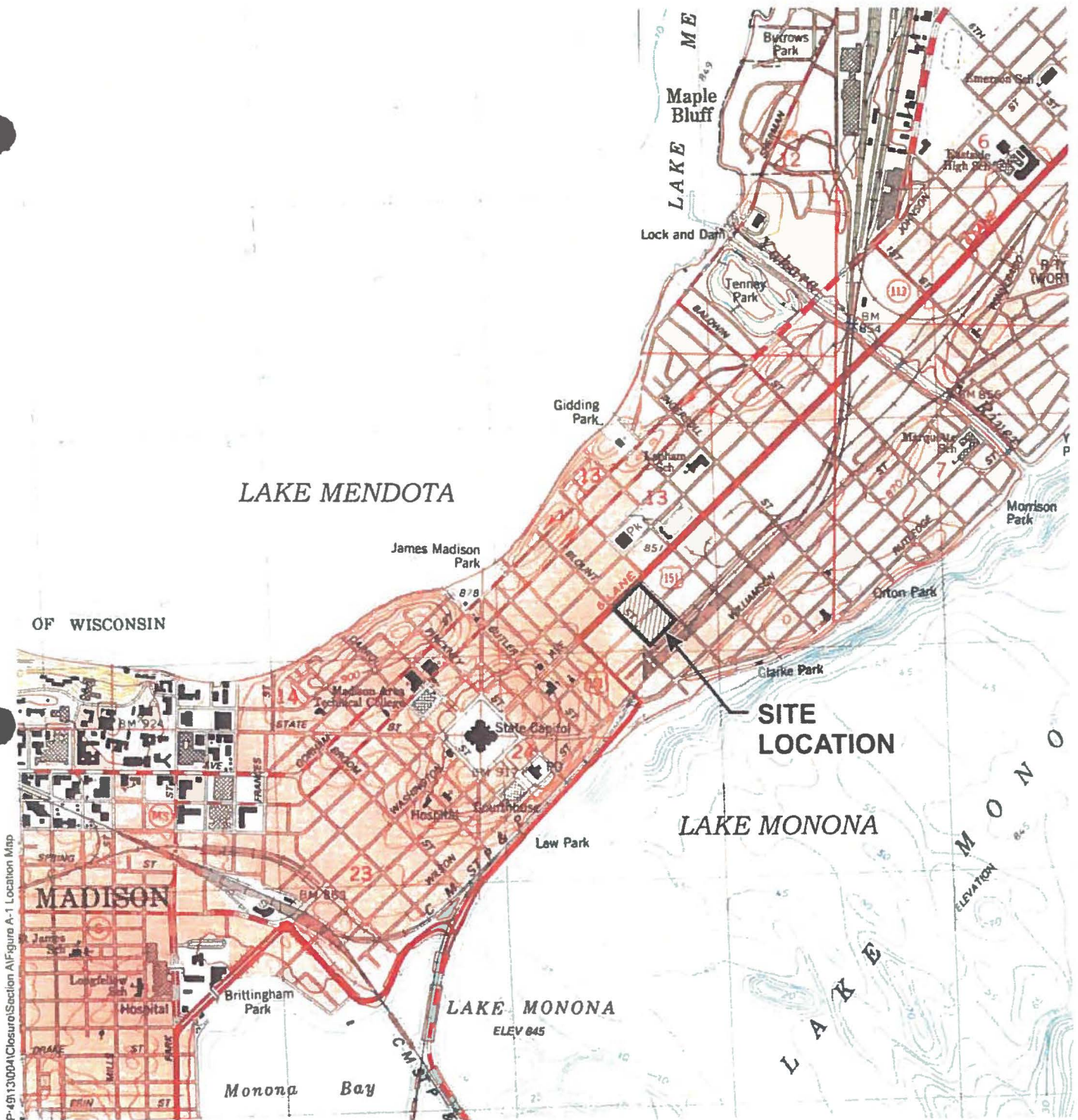
DRAWING NUMBER SHEET NUMBER
FIGURE 3

Plotted By: brandt
 Plot File Date Created: 3/47 PM
 Filename: \\USM\WK1\FS001\PROJECTS\60611431\9000_CAD_GIS\910_CAD\20-SHEETS\FIG 3.DWG

Appendix A

Previous Site Investigation Information MG&E Manufactured Gas Plant (BRRTS# 02-13-001567)

<https://dnr.wi.gov/botw/GetActivityDetail.do?detailSeqNo=36077>

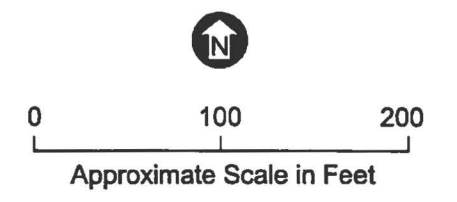
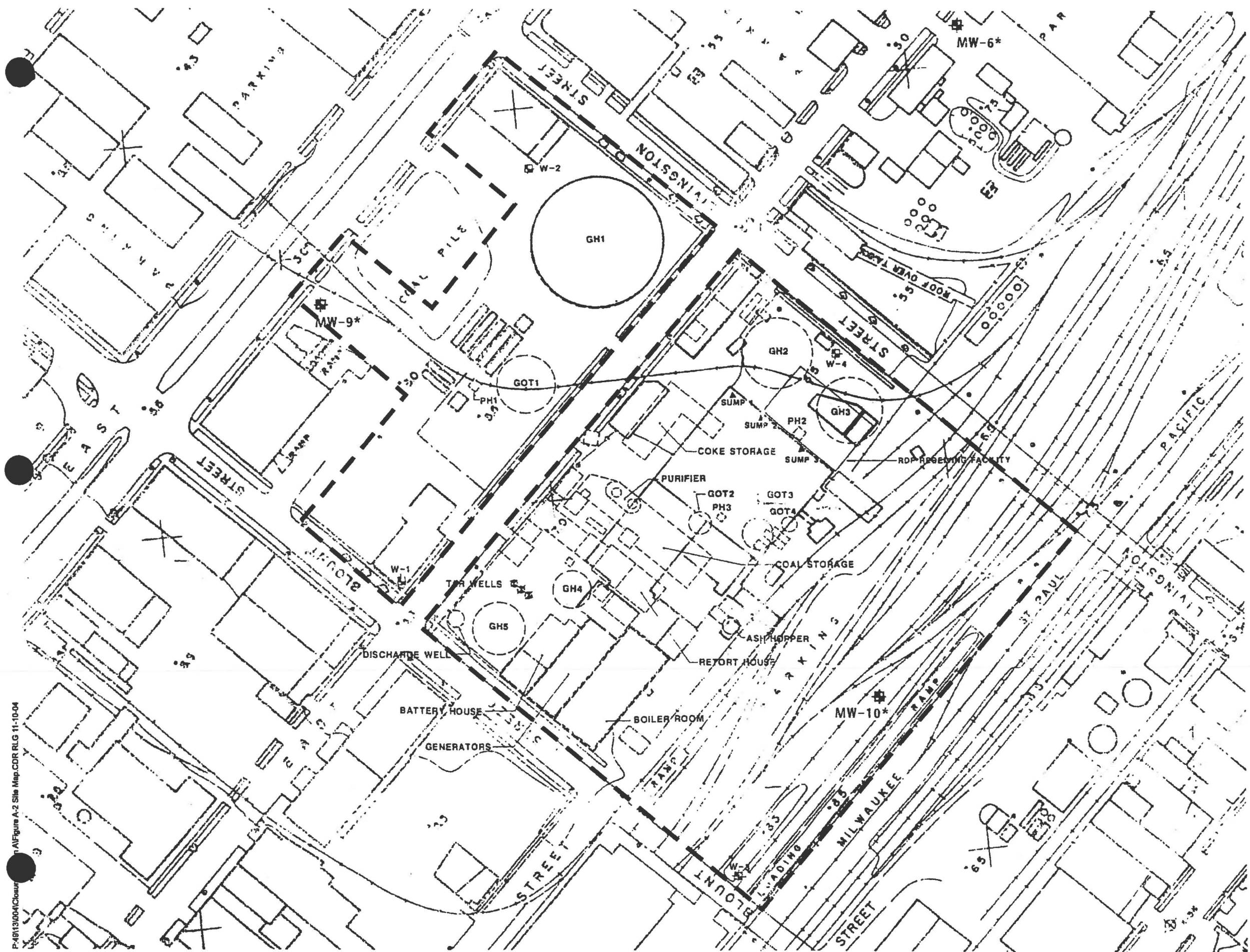


Source: Madison West and Madison East, Wisconsin Quadrangles, 7.5 Minute Series, 1983.



Figure A-1

LOCATION MAP
Blount Station Former MGP Site
Madison, Wisconsin



LEGEND

- PREVIOUS TANK LOCATION
- PREVIOUS BUILDING LOCATION
- TAR WELL
- GH3 GAS HOLDER
- GOT4 GAS OIL TANK
- PH1 PUMP HOUSE
- POTENTIAL SOURCES OF GROUNDWATER IMPACT
- W-1 GROUNDWATER MONITORING WELL

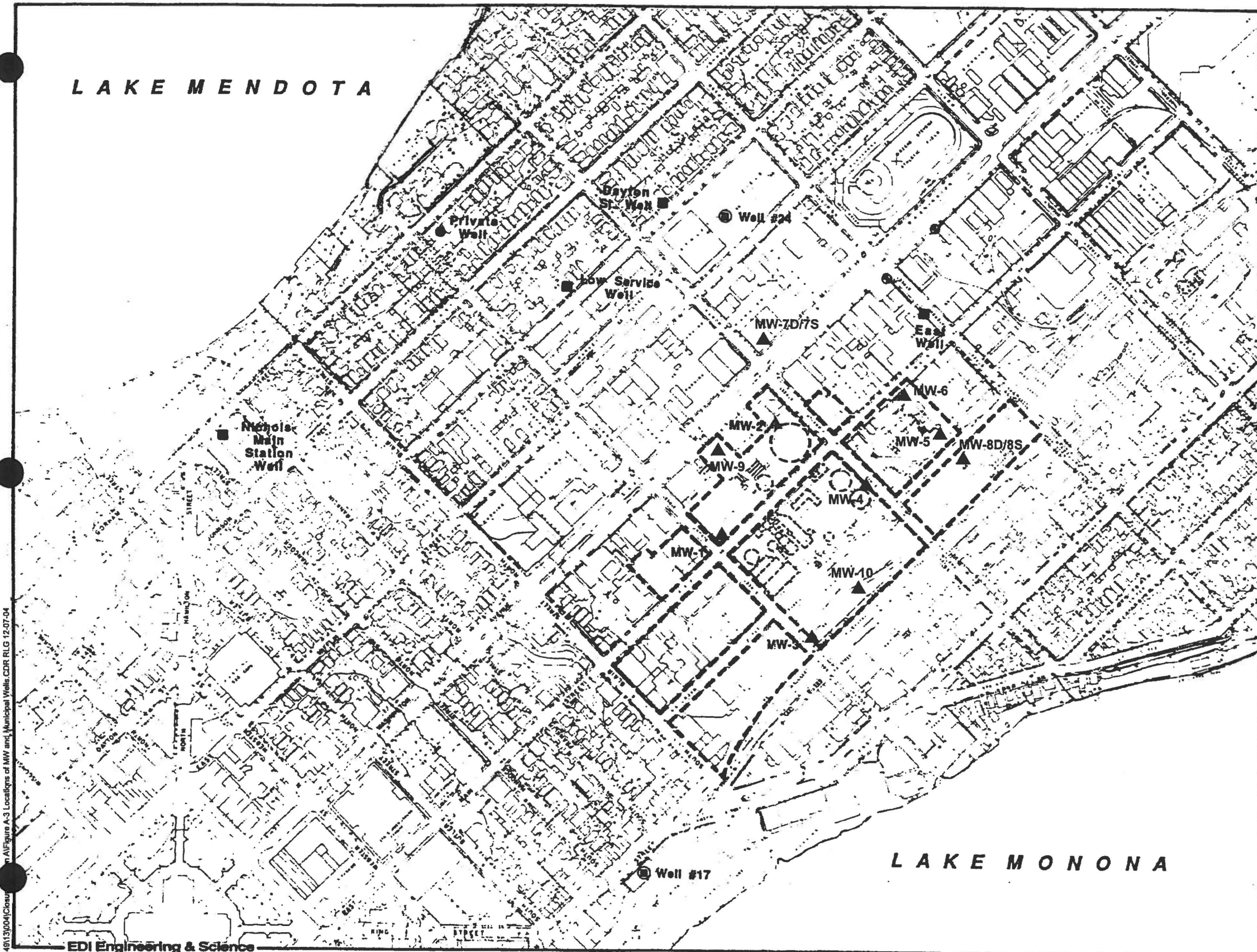
* Approximate Location from Dames & Moore, 1990

Madison Gas & Electric Source Property Boundaries (Approx.)

NOTE:
Additional Site Monitoring Wells are present outside of the area of this map.

P:\613004\Closure\AV\Figure A-2 Site Map.CDR RLG 11-10-04

Figure A-2
SITE MAP
Blount Station MGP
Madison, Wisconsin



LAKE MENDOTA

LAKE MONONA

LEGEND

- Previous Tank Location
- Previous Building Location
- ▭ Madison Gas & Electric Property Boundaries
- ▲ Monitoring Well
- City of Madison Water Supply Well
- City of Madison Water Supply Well (Abandoned)
- Private Well
- ⊙ Local Bench Mark

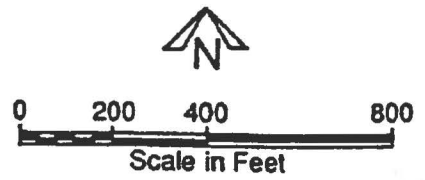


Figure A-3
Locations of Monitoring Wells and Municipal Wells

Madison Gas and Electric Co.
 Madison, Wisconsin

February, 1988

20850

P:4813(004)Closeup on A:Figure A-3 Locations of MW and Municipal Wells CDR RLG 12.07.04

NORTHWEST

SOUTHEAST

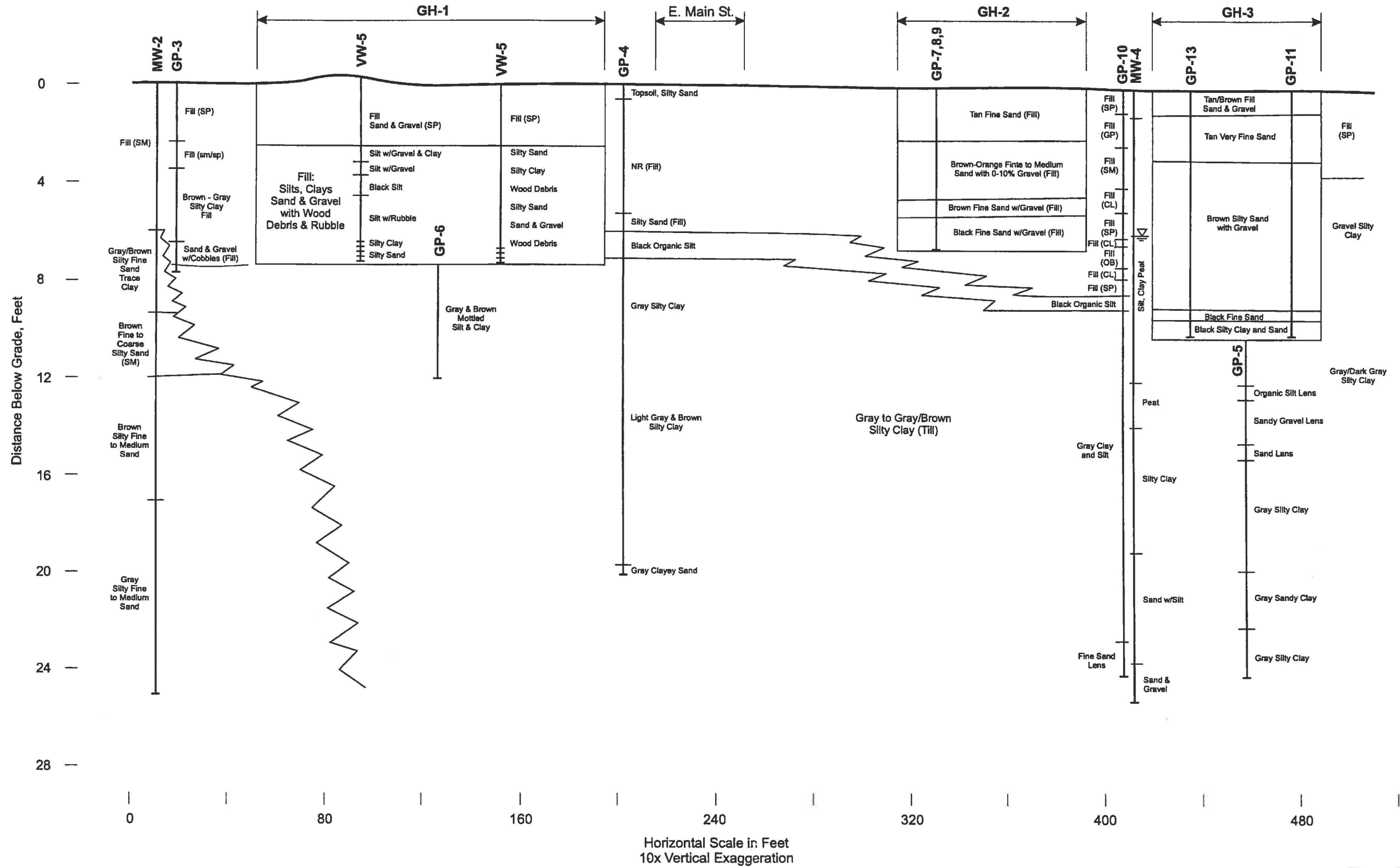
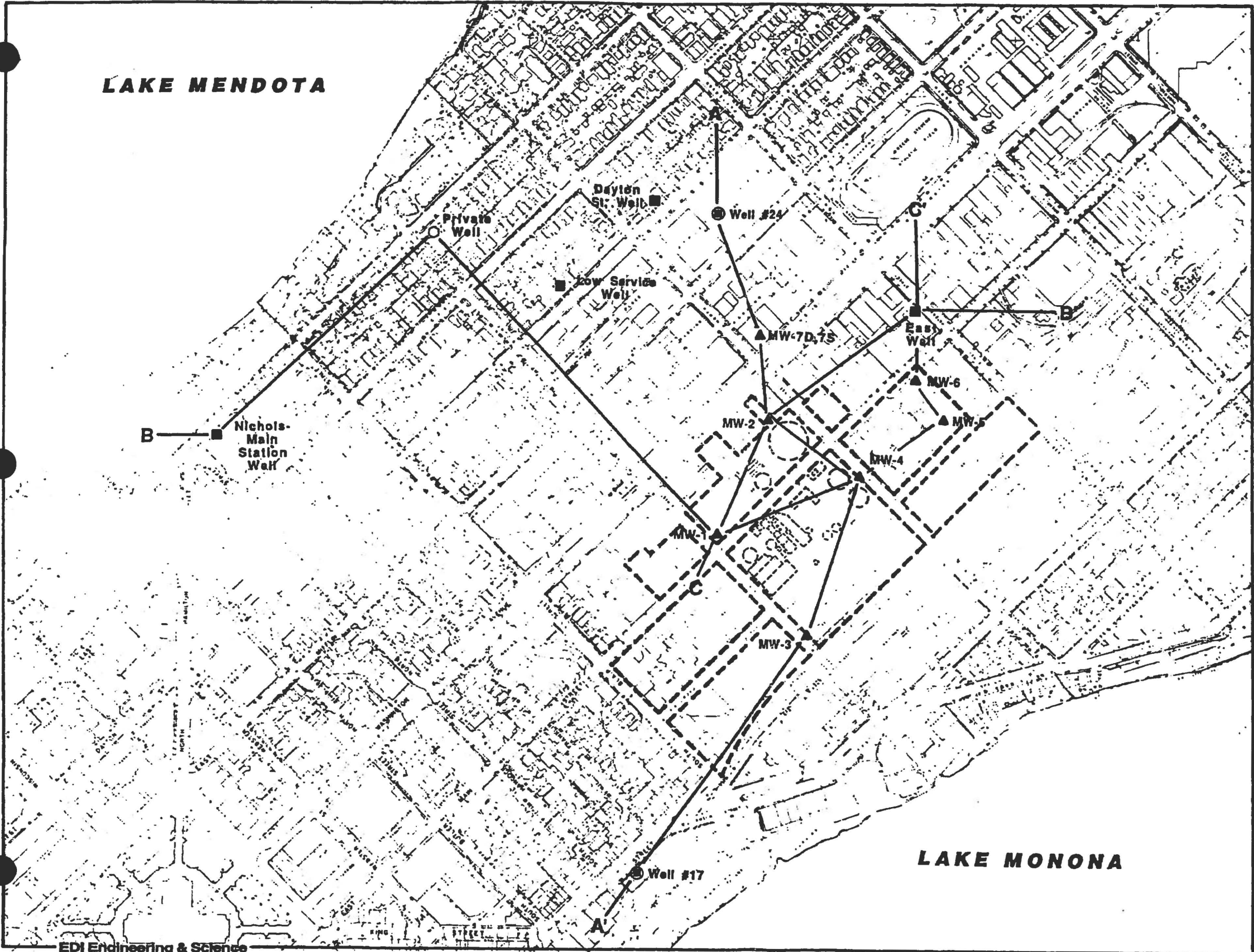


Figure C-3

GASHOLDER CROSS SECTIONS
Blount Station MGP

P-08130041 Chesapeake Division C:\Figure C-4 Locations of Cross Sections.CDR RLG 11-11-04



LAKE MENDOTA

LAKE MONONA

LEGEND

- Previous Tank Location
- Previous Building Location
- ▭ Madison Gas & Electric Property Boundaries
- ▲ Monitoring Well
- City of Madison Water Supply Well
- City of Madison Water Supply Well (Abandoned)
- Private Well

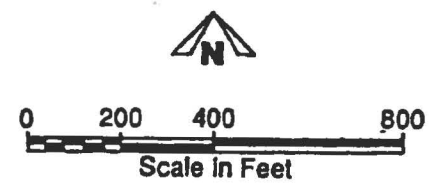
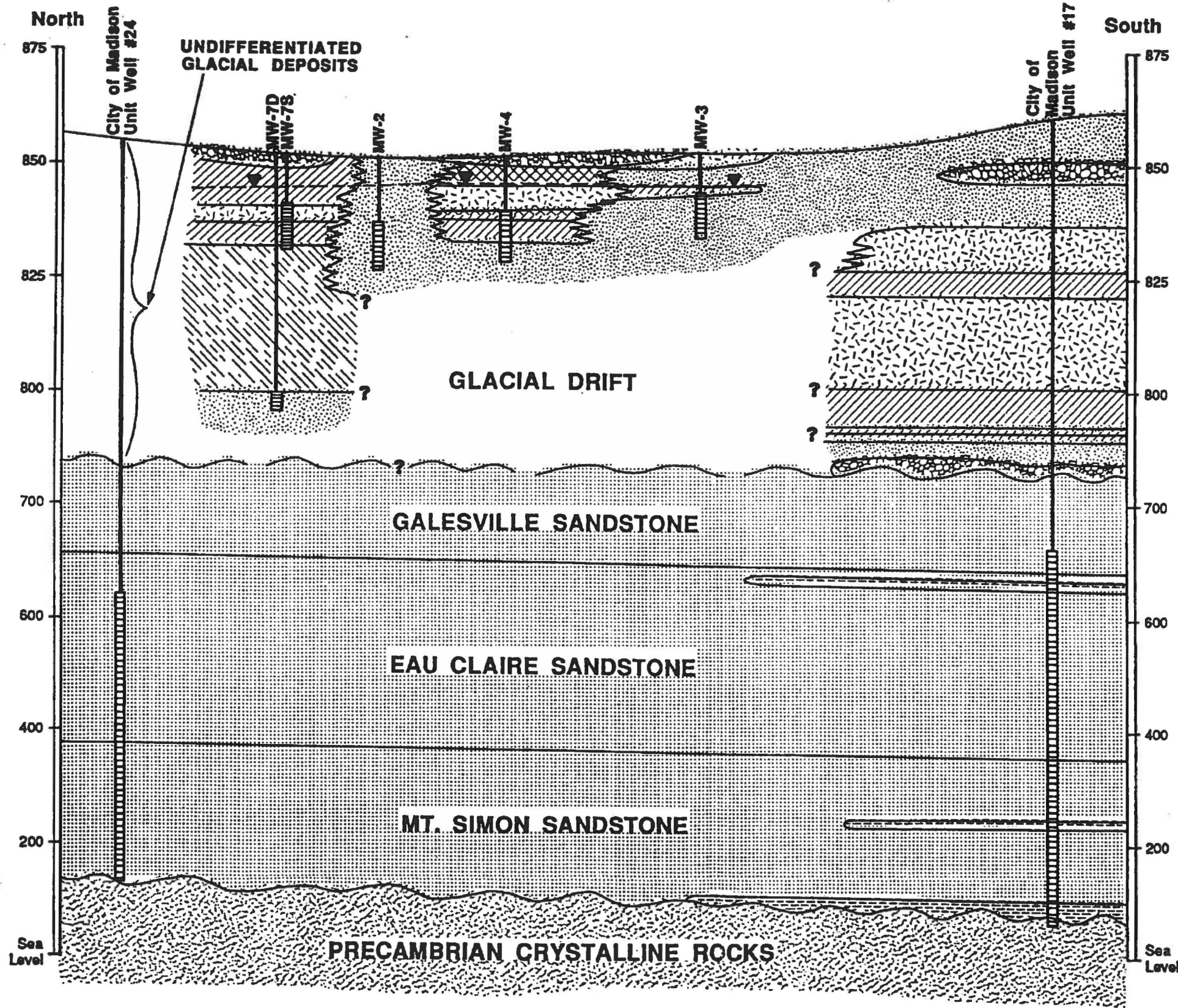


Figure C-4
Locations of Cross-Sections

Madison Gas and Electric Co.
Madison, Wisconsin

January, 1989

20850



LEGEND

- Clay
- Silt
- Sand
- Gravel
- Glacial Till
- Peat, Clayey to Silty
- Sandstone
- Shale
- Crystalline Rocks
- Unconformity
- Screened Interval or Open Hole
- Water level

Vertical Scale: Variable (Indicated Below)
 875' to 800' Elev.: 1" = 25'
 800' to 600' Elev.: 1" = 100'
 600' to Sea Level Elev.: 1" = 200'

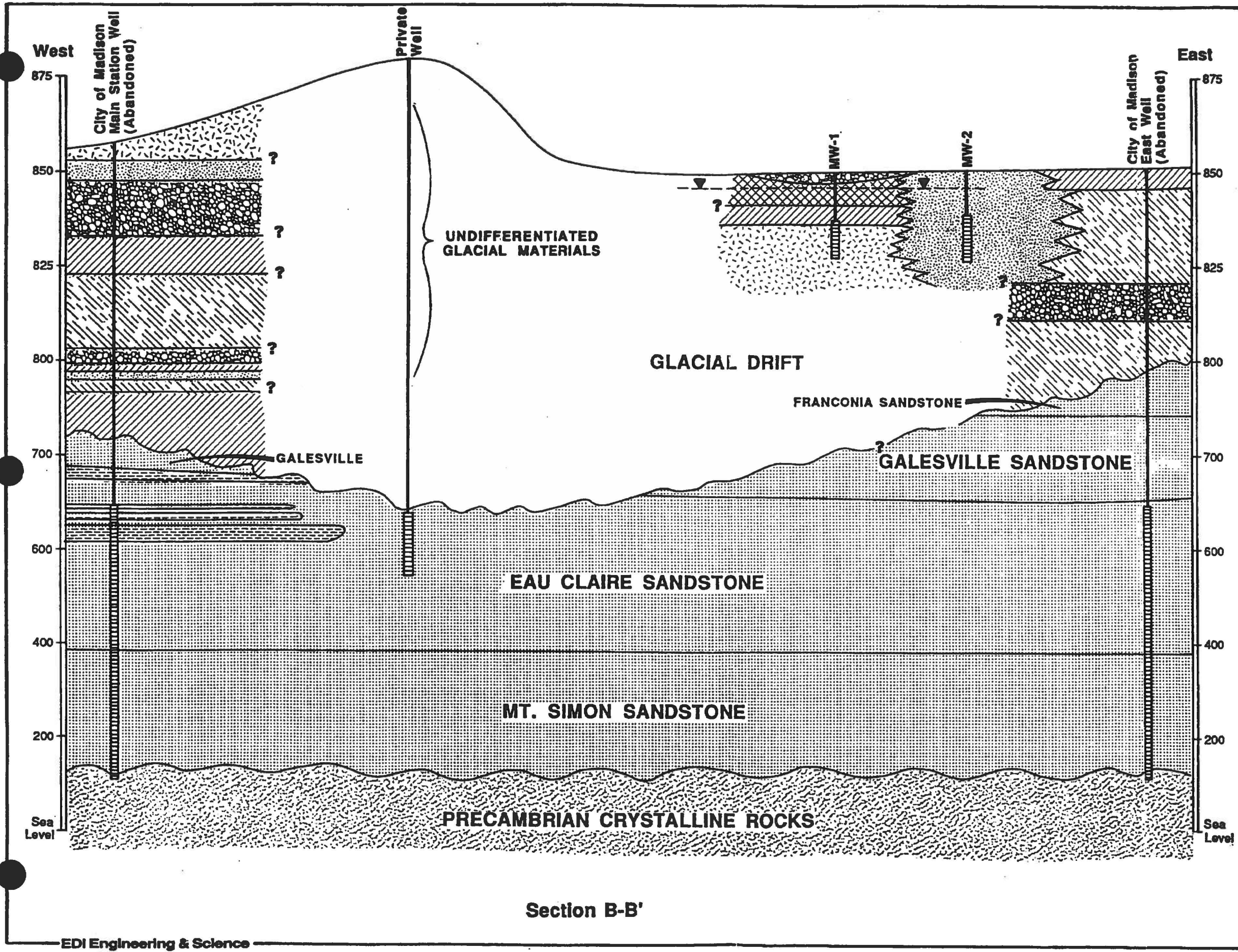


Figure C-5

Cross-Section A-A'

Madison Gas and Electric Co.
Madison, Wisconsin

P:\4813\004\Class\1\Section C-6 Cross Section BB.CDR RLG 11-11-04



LEGEND

- Clay
- Silt
- Sand
- Gravel
- Glacial Till
- Peat, Clayey to Silty
- Sandstone
- Shale
- Crystalline Rocks
- Unconformity
- Screened Interval or Open Hole
- Water level

Vertical Scale: Variable (Indicated Below)
 875' to 800' Elev.: 1" = 25'
 800' to 600' Elev.: 1" = 100'
 600' to Sea Level Elev.: 1" = 200'



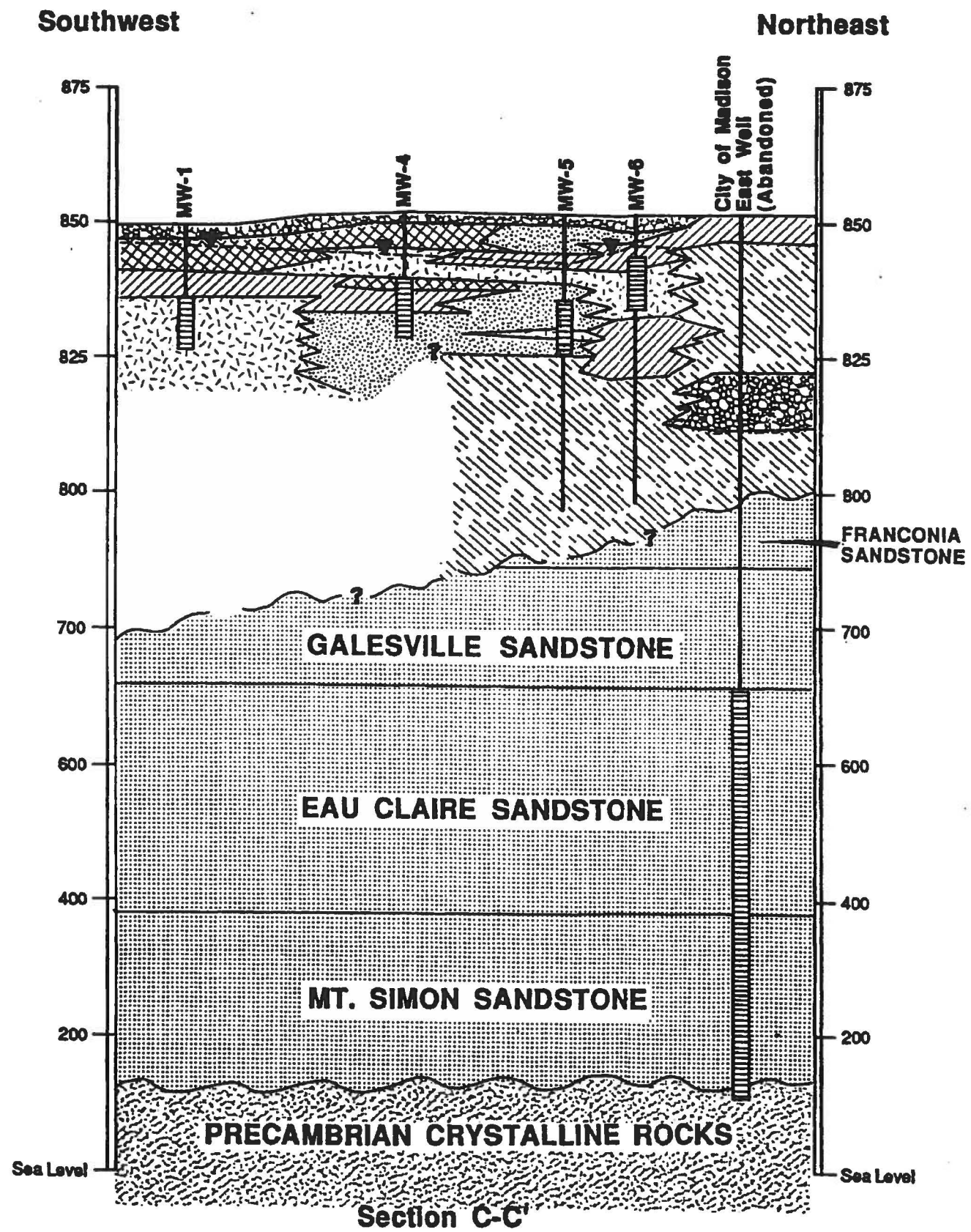
Figure C-6

Cross-Section B-B'

Madison Gas and Electric Co.
Madison, Wisconsin

January, 1989

20850



LEGEND

- Clay
- Silt
- Sand
- Gravel
- Glacial Till
- Peat, Clayey to Silty
- Sandstone
- Shale
- Crystalline Rocks
- Unconformity
- Screened Interval or Open Hole
- Water Level

Vertical Scale: Variable (Indicated Below)
 875' to 800' Elev.: 1"=25'
 800' to 600' Elev.: 1"=100'
 600' to Sea Level Elev.: 1"=200'

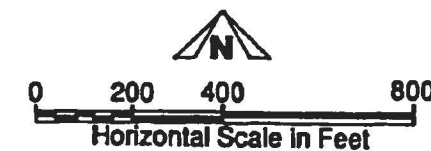
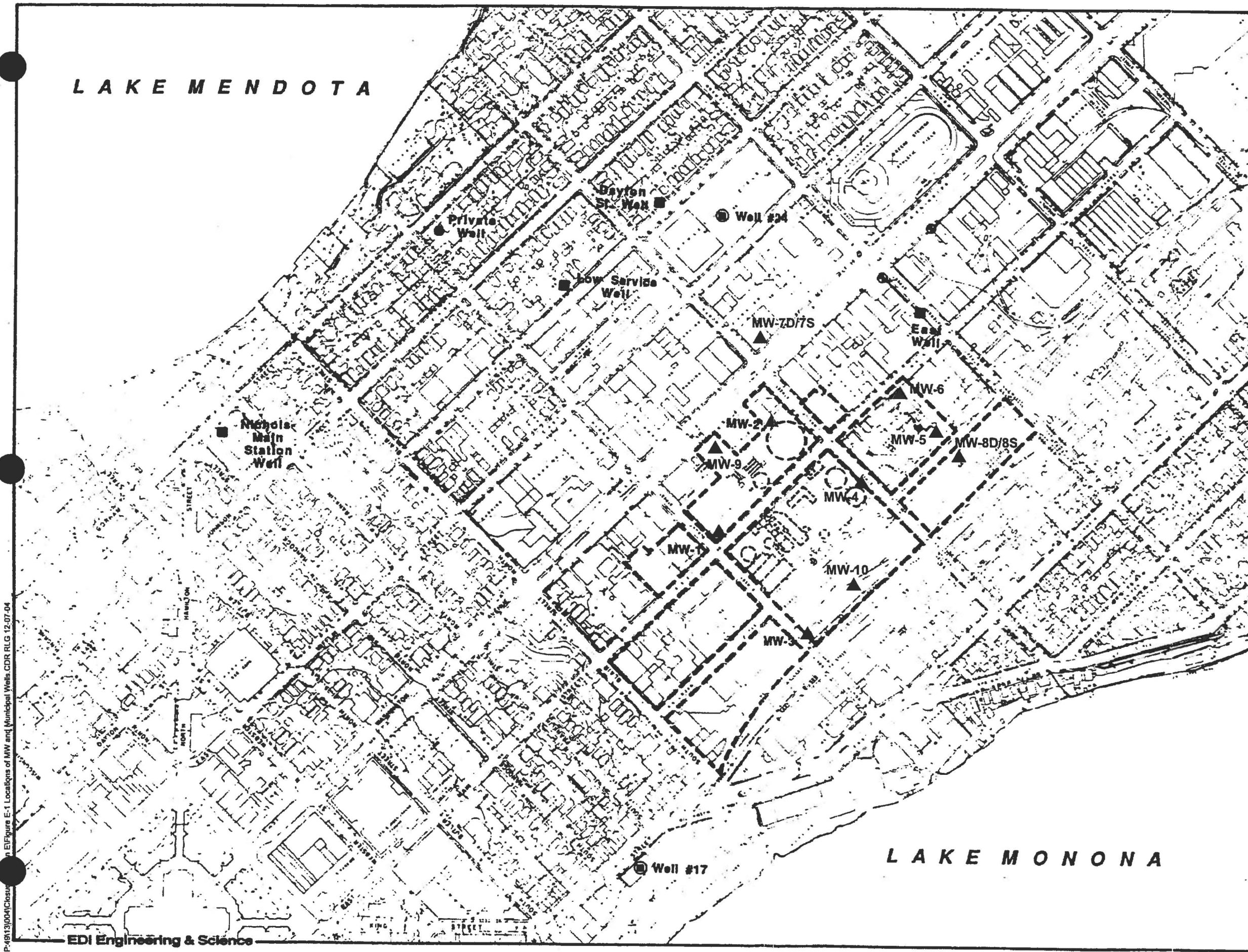


Figure C-7

Cross-Section C-C'

Madison Gas and Electric Co.
 Madison, Wisconsin



LAKE MENDOTA

LAKE MONONA

LEGEND

- Previous Tank Location
- Previous Building Location
- ▭ Madison Gas & Electric Property Boundaries
- ▲ Monitoring Well
- City of Madison Water Supply Well
- City of Madison Water Supply Well (Abandoned)
- Private Well
- ⊙ Local Bench Mark

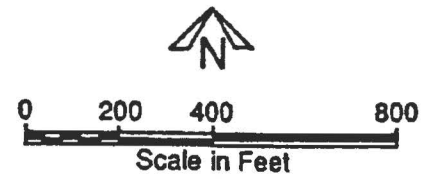
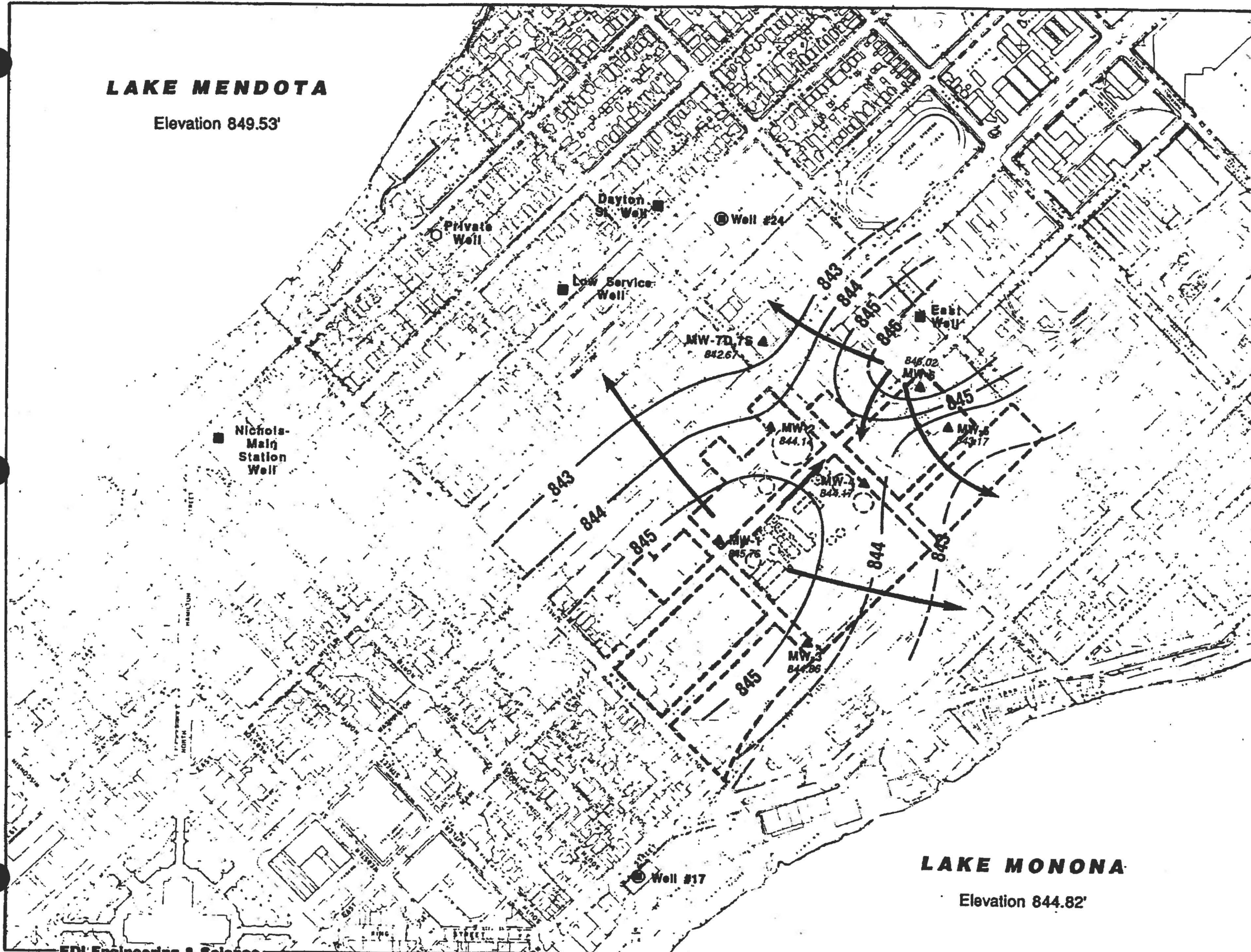


Figure E-1
Locations of Monitoring Wells and Municipal Wells
 Madison Gas and Electric Co.
 Madison, Wisconsin
 February, 1988 20850

P-481310041Closeup in E:\Figure E-1 Locations of MW and Municipal Wells.CDR RLG 12-07-04

LAKE MENDOTA

Elevation 849.53'



LEGEND

- Previous Tank Location
- Previous Building Location
- Madison Gas & Electric Property Boundaries
- Monitoring Well
- City of Madison Water Supply Well
- City of Madison Water Supply Well (Abandoned)
- Private Well
- 846.02 Water Table Elevation
- Direction of Ground Water Flow

NOTE:

Water levels for the monitoring wells, Lake Mendota, and Lake Monona were taken on 11/10/88.



Figure E-3

Water Table Contour Map

LAKE MONONA

Elevation 844.82'

Madison Gas and Electric Co.
Madison, Wisconsin









January, 1989

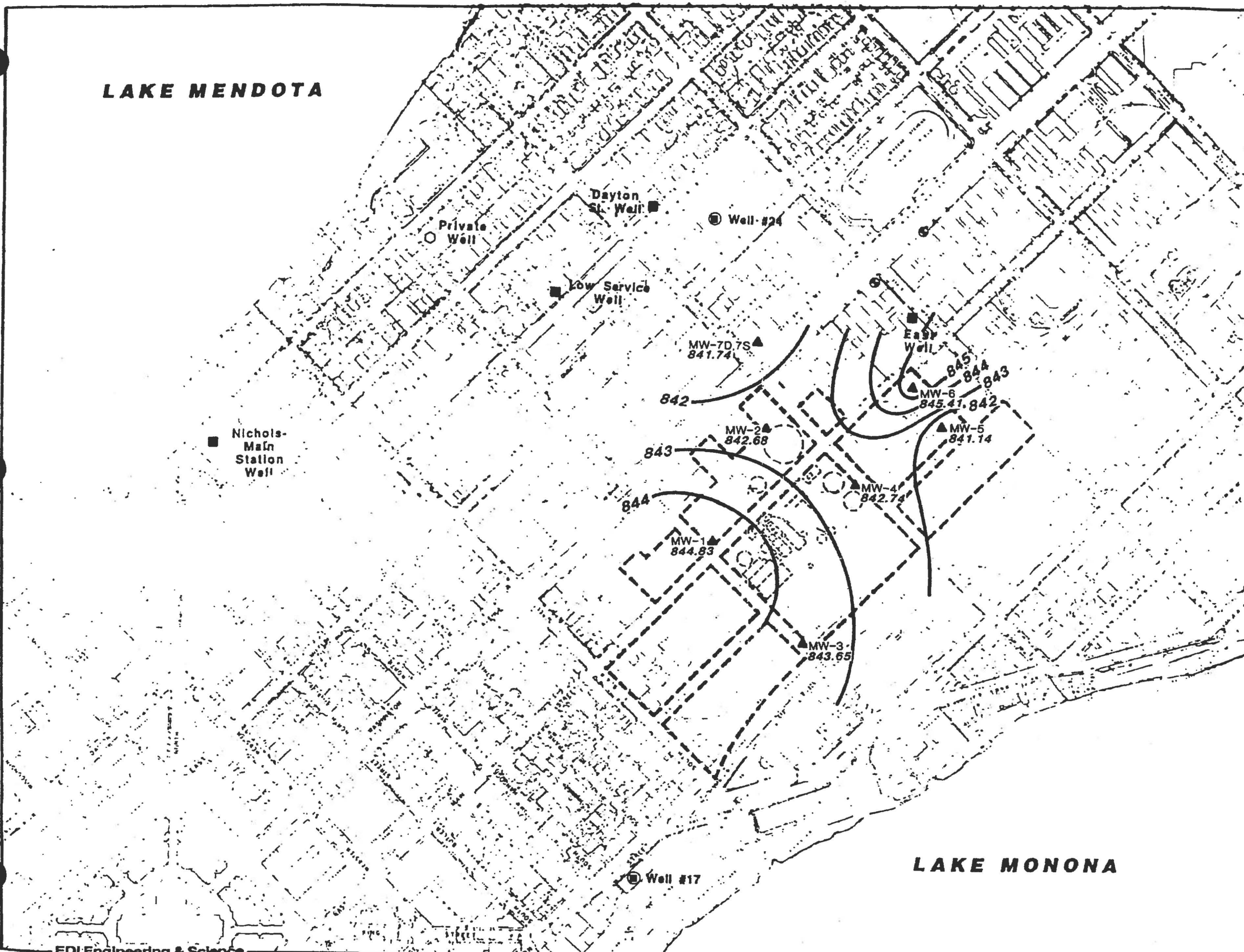
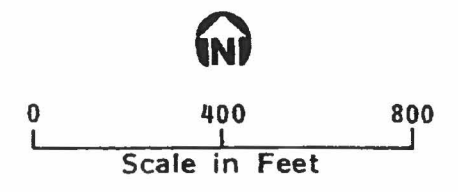
20850

P:4913004Clear on A:Figure E-3 Water Table Contour Map.CDR RLG 11-18-04

LAKE MENDOTA

LEGEND

-  Previous Tank Location
-  Previous Building Location
-  Madison Gas & Electric Property Boundaries
-  Monitoring Well
-  City of Madison Water Supply Well
-  City of Madison Water Supply Well (Abandoned)
-  Private Well
-  Local Bench Mark



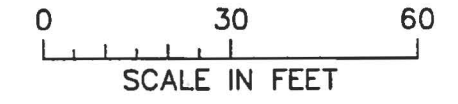
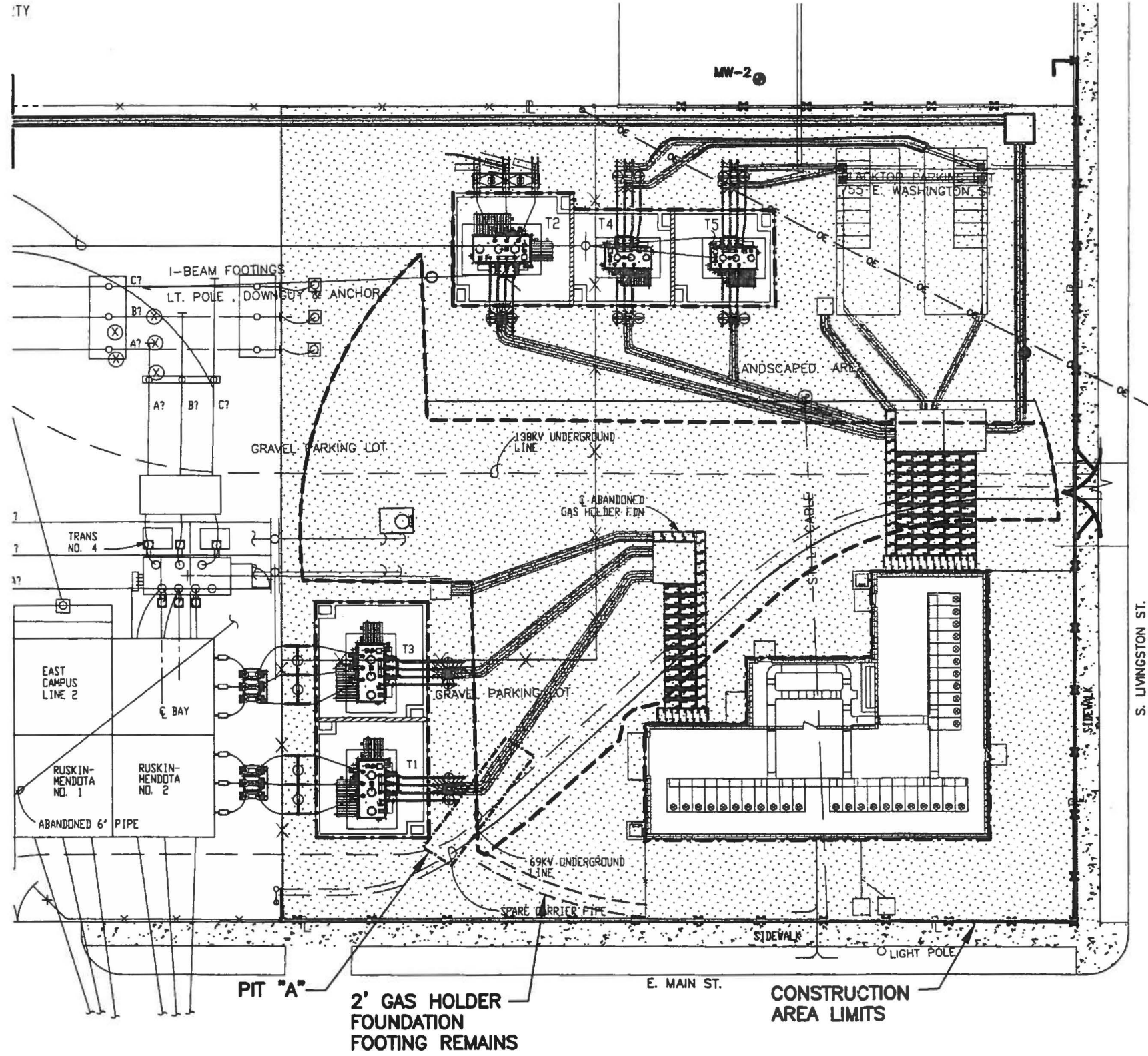
LAKE MONONA

Figure E-4
WATER TABLE CONTOUR
MAP
November, 1997

P:\01\3004\Closure\on AF\Figure E-4 Water Table Contour Map Nov 1997.CDR RLG 11-16-04

in Drawing - M:\cad\4913004\18831_1.dwg M:\cad\4913004\19130_1.dwg
 M:\CAD\4913004\20922_1.DWG Plot at 1 12/16/2004 11:44:29

ITY



LEGEND





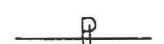
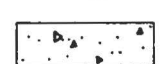




-  Monitoring Well
-  Sanitary Sewer Connection
-  Fence Line
-  Buried Electrical Lines
-  Property Line
-  Concrete Area
-  New Structure Foundation Limit
-  Remaining Gas Holder Foundation Limits
-  Remaining Pipe Pit Limits
-  2-Foot Clean Soil (Gravel) Cover Limits, Approximate

Figure G-1
 EXISTING CAP AREA
 GAS HOLDER 1
 Blount Station MGP