GIS REGISTRY
Cover Sheet

July, 2008
(RR 5367)

Source Property Information

CLOSURE DATE:

BRRTS #: 02-41-547332

FID #: 341129800

ACTIVITY NAME: 25th St. and Canal Retention Facility

DATCP #:

PROPERTY ADDRESS: 25th St. and Canal Retention Facility

COMM #:

MUNICIPALITY: Milwaukee

PARCEL ID #: 400-9999-211, 400-9999-211-7

***WTM COORDINATES:**

X: **687280** Y: **286403**

** Coordinates are in WTM83, NAD83 (1991)*

WTM COORDINATES REPRESENT:

○ Approximate Center Of Contaminant Source

◉ Approximate Source Parcel Center

Please check as appropriate: (BRRTS Action Code)

Contaminated Media:

☐ Groundwater Contamination > ES *(236)*

- ☐ Contamination in ROW
- ☐ Off-Source Contamination

*(**note:** for list of off-source properties see "Impacted Off-Source Property")*

☒ Soil Contamination > *RCL or **SSRCL *(232)*

- ☐ Contamination in ROW
- ☐ Off-Source Contamination

*(**note:** for list of off-source properties see "Impacted Off-Source Property")*

Land Use Controls:

☒ Soil: maintain industrial zoning *(220)*

*(**note:** soil contamination concentrations between residential and industrial levels)*

☐ Structural Impediment *(224)*

☐ Site Specific Condition *(228)*

☒ Cover or Barrier *(222)*

*(**note:** maintenance plan for groundwater or direct contact)*

☐ Vapor Mitigation *(226)*

☐ Maintain Liability Exemption *(230)*

*(**note:** local government or economic development corporation)*

Monitoring wells properly abandoned? *(234)*

◉ Yes ○ No ○ N/A

** Residual Contaminant Level*
*** Site Specific Residual Contaminant Level*

State of Wisconsin Department of Natural Resources http://dnr.wi.gov	**GIS Registry Checklist** Form 4400-245 (R 4/08) Page 1 of 3

This Adobe Fillable form is intended to provide a list of information that is required for evaluation for case closure. It is to be used in conjunction with Form 4400-202, Case Closure Request. The closure of a case means that the Department has determined that no further response is required at that time based on the information that has been submitted to the Department.

NOTICE: Completion of this form is mandatory for applications for case closure pursuant to ch. 292, Wis. Stats. and ch. NR 726, Wis. Adm. Code, including cases closed under ch. NR 746 and ch. NR 726. The Department will not consider, or act upon your application, unless all applicable sections are completed on this form and the closure fee and any other applicable fees, required under ch. NR 749, Wis. Adm. Code, Table 1 are included. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than reviewing closure requests and determining the need for additional response action. The Department may provide this information to requesters as required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

BRRTS #: 02-41-547332 PARCEL ID #: 400-9999-211, 400-9999-211-7

ACTIVITY NAME: 25th St. and Canal Retention Facility WTM COORDINATES: X: 687280 Y: 286403

CLOSURE DOCUMENTS (the Department adds these items to the final GIS packet for posting on the Registry)

☒ **Closure Letter**

☒ **Maintenance Plan** *(if activity is closed with a land use limitation or condition (land use control) under s. 292.12, Wis. Stats.)*

☐ **Conditional Closure Letter**

☐ **Certificate of Completion (COC)** for VPLE sites

SOURCE LEGAL DOCUMENTS

☒ **Deed:** The most recent deed as well as legal descriptions, for the **Source Property** (where the contamination originated). Deeds for other, off-source (off-site) properties are located in the **Notification** section.
Note: *If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.*

☒ **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map *for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map.* (lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).

Figure #: **Title:**

☒ **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description accurately describes the correct contaminated property.

MAPS (meeting the visual aid requirements of s. NR 716.15(2)(h))

Maps must be no larger than 8.5 x 14 inches unless the map is submitted electronically.

☒ **Location Map:** A map outlining all properties within the contaminated site boundaries on a U.S.G.S. topographic map or plat map in sufficient detail to permit easy location of all parcels. If groundwater standards are exceeded, include the location of all potable wells within 1200 feet of the site.
Note: *Due to security reasons municipal wells are not identified on GIS Packet maps. However, the locations of these municipal wells must be identified on Case Closure Request maps.*

Figure #: **Title:**

☒ **Detailed Site Map:** A map that shows all relevant features (buildings, roads, individual property boundaries, contaminant sources, utility lines, monitoring wells and potable wells) within the contaminated area. This map is to show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding a ch. NR 140 Enforcement Standard (ES), and/or in relation to the boundaries of soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Levels (SSRCL) as determined under s. NR 720.09, 720.11 and 720.19.

Figure #: **Title:**

☒ **Soil Contamination Contour Map:** For sites closing with residual soil contamination, this map is to show the location of all contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL)as determined under s. NR 720.09, 720.11 and 720.19.

Figure #: **Title:**

BRRTS #: 02-41-547332 ACTIVITY NAME: 25th St. and Canal Retention Facility

MAPS (continued)

☐ **Geologic Cross-Section Map:** A map showing the source location and vertical extent of residual soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL). If groundwater contamination exceeds a ch. NR 140 Enforcement Standard (ES) when closure is requested, show the source location and vertical extent, water table and piezometric elevations, and locations and elevations of geologic units, bedrock and confining units, if any.

Figure #: **Title:**

Figure #: **Title:**

☐ **Groundwater Isoconcentration Map:** For sites closing with residual groundwater contamination, this map shows the horizontal extent of all groundwater contamination exceeding a ch. NR140 Preventive Action Limit (PAL) and an Enforcement Standard (ES). Indicate the direction and date of groundwater flow, based on the most recent sampling data.
Note: *This is intended to show the total area of contaminated groundwater.*

Figure #: **Title:**

☐ **Groundwater Flow Direction Map:** A map that represents groundwater movement at the site. If the flow direction varies by more then 20° over the history of the site, submit 2 groundwater flow maps showing the maximum variation in flow direction.

Figure #: **Title:**

Figure #: **Title:**

TABLES (meeting the requirements of s. NR 716.15(2)(h)(3))

Tables must be no larger than 8.5 x 14 inches unless the table is submitted electronically. Tables must not contain shading and/or cross-hatching. The use of **BOLD** or *ITALICS* is acceptable.

☒ **Soil Analytical Table:** A table showing remaining soil contamination with analytical results and collection dates.
Note: This is one table of results for the contaminants of concern. Contaminants of concern are those that were found during the site investigation, that remain after remediation. It may be necessary to create a new table to meet this requirement.

Table #: **Title:**

☐ **Groundwater Analytical Table:** Table(s) that show the most recent analytical results and collection dates, for all monitoring wells and any potable wells for which samples have been collected.

Table #: **Title:**

☐ **Water Level Elevations:** Table(s) that show the previous four (at minimum) water level elevation measurements/dates from all monitoring wells. If present, free product is to be noted on the table.

Table #: **Title:**

IMPROPERLY ABANDONED MONITORING WELLS

For each monitoring well not properly abandoned according to requirements of s. NR 141.25 include the following documents.
Note: *If the site is being listed on the GIS Registry for only an improperly abandoned monitoring well you will only need to submit the documents in this section for the GIS Registry Packet.*

☐ **Not Applicable**

☐ **Site Location Map:** A map showing all surveyed monitoring wells with specific identification of the monitoring wells which have not been properly abandoned.
Note: *If the applicable monitoring wells are distinctly identified on the Detailed Site Map this Site Location Map is not needed.*

Figure #: **Title:**

☐ **Well Construction Report:** Form 4440-113A for the applicable monitoring wells.

☐ **Deed:** The most recent deed as well as legal descriptions for each property where a monitoring well was not properly abandoned.

☐ **Notification Letter:** Copy of the notification letter to the affected property owner(s).

BRRTS #: 02-41-547332 ACTIVITY NAME: 25th St. and Canal Retention Facility

NOTIFICATIONS

Source Property

☐ **Letter To Current Source Property Owner:** If the source property is owned by someone other than the person who is applying for case closure, include a copy of the letter notifying the current owner of the source property that case closure has been requested.

☐ **Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying current source property owner.

Off-Source Property

Group the following information per individual property and label each group according to alphabetic listing on the "Impacted Off-Source Property" attachment.

☐ **Letter To "Off-Source" Property Owners:** Copies of all letters sent by the Responsible Party (RP) to owners of properties with groundwater exceeding an Enforcement Standard (ES), and to owners of properties that will be affected by a land use control under s. 292.12, Wis. Stats.
Note: *Letters sent to off-source properties regarding residual contamination must contain standard provisions in Appendix A of ch. NR 726.*

Number of "Off-Source" Letters:

☐ **Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying any off-source property owner.

☐ **Deed of "Off-Source" Property:** The most recent deed(s) as well as legal descriptions, for all affected deeded **off-source property(ies).** This does not apply to right-of-ways.
Note: *If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.*

☐ **Letter To "Governmental Unit/Right-Of-Way" Owners:** Copies of all letters sent by the Responsible Party (RP) to a city, village, municipality, state agency or any other entity responsible for maintenance of a public street, highway, or railroad right-of-way, within or partially within the contaminated area, for contamination exceeding a groundwater Enforcement Standard (ES) and/or soil exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL).

Number of "Governmental Unit/Right-Of-Way Owner" Letters:

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary
Gloria L. McCutcheon, Regional Director

Southeast Region Headquarters
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee, Wisconsin 53212-3128
FAX 414-263-8606
Telephone 414-263-8500
TTY Access via relay - 711

August 14, 2008

Ghassan Korban
City of Milwaukee
841 N. Broadway, RM715
Milwaukee, WI 53202

SUBJECT: Final Case Closure with Land Use Limitations or Conditions, 25th St. and Canal Bioretention Facility, 25th St. and Canal St., Milwaukee, WI, WDNR FID# 341129800, WDNR BRRTS Activity #: 02-41-547332

Dear Ghassan Korban:

On August 14, 2008, the Southeast Region Closure Committee reviewed the above referenced case for closure. This committee reviews environmental remediation cases for compliance with state laws and standards to maintain consistency in the closure of these cases. On July 10, 2008 the Department received correspondence indicating that you have complied with the requirements of closure by providing the WDNR with an updated Cap Maintenance Plan.

Based on the correspondence and data provided, it appears that your case meets the requirements of ch. NR 726, Wisconsin Administrative Code. The Department considers this case closed and no further investigation or remediation is required at this time.

GIS Registry

The conditions of case closure set out below in this letter require that your site be listed on the Remediation and Redevelopment Program's GIS Registry. The specific reasons are summarized below:

- Residual soil contamination exists that must be properly managed should it be excavated or removed
- Before the land use could be changed from industrial to non-industrial, additional environmental work must be completed
- Pavement, an engineered cover or a soil barrier must be maintained over contaminated soil and the state must approve any changes to this barrier

Information that was submitted with your closure request application will be included on the GIS Registry. To review the sites on the GIS Registry web page, visit the RR Sites Map page at http://dnr.wi.gov/org/aw/rr/gis/index.htm. If your property is listed on the GIS Registry because of remaining contamination and you intend to construct or reconstruct a well, you will need prior Department approval in accordance with s. NR 812.09(4)(w), Wis. Adm. Code. To obtain approval, Form 3300-254 needs to be completed and submitted to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line http://dnr.wi.gov/org/water/dwg/3300254.pdf or at the web address listed above for the GIS Registry.

Closure Conditions

Please be aware that pursuant to s. 292.12 Wisconsin Statutes, compliance with the requirements of this letter is a responsibility to which you and any subsequent property owners must adhere. If these requirements are not followed or if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, welfare, or the environment, the Department may take enforcement action under s. 292.11 Wisconsin Statutes to ensure compliance with the specified requirements, limitations or other conditions related to the property or this case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code. It is the Department's intent to conduct inspections in the future to ensure that the conditions included in this letter including compliance with referenced maintenance plans are met.

Pursuant to s. 292.12(2)(a), Wis. Stats., the impacted soils are to be covered surface barriers consisting of clay liners, roadways and/or greenspace areas that currently exists in the location shown on the attached map shall be maintained in compliance with the **attached maintenance plan** in order to minimize the infiltration of water and prevent additional groundwater contamination that would violate the groundwater quality standards in ch. NR 140, Wis. Adm. Code, and to prevent direct contact with residual soil contamination that might otherwise pose a threat to human health. If soil in the specific locations described above is excavated in the future, the property owner at the time of excavation must sample and analyze the excavated soil to determine if residual contamination remains. If sampling confirms that contamination is present the property owner at the time of excavation will need to determine whether the material would be considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable statutes and rules. In addition, all current and future owners and occupants of the property need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken during excavation activities to prevent a health threat to humans.

The attached maintenance plan and inspection log are to be kept up-to-date and on-site, and the inspection log need only be submitted to the Department upon request.

Prohibited Activities

The following activities are prohibited on any portion of the property where [pavement, a building foundation, soil cover, engineered cap or other barrier] is required as shown on the attached map, unless prior written approval has been obtained from the Wisconsin Department of Natural Resources: 1) removal of the existing barrier; 2) replacement with another barrier; 3) excavating or grading of the land surface; 4) filling on capped or paved areas; 5) plowing for agricultural cultivation; or 6) construction or placement of a building or other structure.

The Department appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Margaret Brunette at 414-263-8557.

Sincerely,

Jim Schmidt
Southeast Region Remediation & Redevelopment Team Supervisor

cc: Eric R. Sikora – Sigma Environmental
WDNR Case file

Enclosure

ATTACHMENT 1

ENGINEERED BARRIER OPERATION AND MAINTENANCE PLAN
CANAL STREET LIFT STATION AND BIORETENTION FACILITY

The Engineered Barrier Operation and Maintenance Plan[1] (EBOMP) is designed to prevent direct contact with residual soil containing arsenic, lead, and polyncyclic aromatic hydrocarbons (PAHs). The impacted soils are to be covered surface barriers consisting of clay liners, roadways, and/or greenspace areas as specified in current design plans[2], which will be underlain in some cases by geotextile or geofabric warning layers as specified in the Remedial Action Plan. Pavement at the site which will serve as engineered barriers is shown on ***Exhibit A-1***. Greenspace areas serving as engineered barriers also are shown in detail on ***Exhibit A-2***. The hardwood mulch berm and adjacent mesic prairie and short prairie strips (see below) are shown on ***Exhibit A-3***. The normal operation of the engineered barriers will be as a direct contact barrier between site soils and typical, non-invasive users of the property. The engineered barriers will function as intended unless disturbed.

Disturbance Management

The City of Milwaukee and any subsequent property owners shall take the following steps to assure that uncontrolled disturbances of the engineered barriers do not occur:

- A copy of this EBOMP will be available on-site from the property manager to all interested parties.
- A copy of this EBOMP will be provided to all private utilities seeking easements for the purpose of installing facilities on the property.
- A copy of this EBOMP will be provided to all contractors and repair workers, including utility and landscaping services, during construction and repairs on the property.
- On-site staff employed by the City of Milwaukee Department of Public Works or its successors/assigns will be made familiar with the contents and restriction requirements of this EBOMP.

Inspections of Engineered Barriers

Inspections will be required to assure that the engineered barriers are functioning as planned:

- Inspections of the engineered barriers will be performed by competent personnel according to the following schedule:

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[1] This Engineered Barrier Operation and Maintenance Plan is an attachment to a letter from Sigma Environmental Services, Inc. to Ms. Margaret Brunette of the Wisconsin Department of Natural Resources dated August 9, 2006 RE: Addendum to "Summary of Site Investigation Results and Remedial Action Plan, Canal Street Lift Station and Bioretention Facility."

[2] Please refer to plans entitled "City of Milwaukee Department of Public Works Canal/25th Street Lift Station and Bioretention Facility", October 2005, Milwaukee County, Project No. 2984-25-02/03(D).

- Annual inspections will be completed for all accessible surface pavements and green space areas.

- Inspections will be completed for the hardwood mulch berm and adjacent mesic prairie and short prairie strips surrounding the north half of the site on a monthly basis from April through September of each year, and on a quarterly basis from October through March which will involve a single inspection occurring approximately three months following the previous September inspection.

- As necessary, the engineered barriers will be repaired to maintain integrity. Repairs may include, but are not limited to, replacing soil in low and/or eroded areas and re-establishing appropriate vegetation, replacement of mulch on the hardwood mulch berm, and patching or replacing concrete, asphalt, or gravel pavement where damage or wear allows direct contact with underlying soil.

- An inspection log will be maintained to record any disturbances of the engineered barriers and the steps that have been taken to maintain the integrity of the engineered barriers. The inspection log will be made available for inspection by representatives of the Wisconsin Department of Natural Resources upon reasonable prior request. The inspection log will be maintained as long as inspection and maintenance of the engineered barriers are required. An example inspection log is included as on ***Exhibit B***.

Planned Breaches of Engineered Barriers

In the event an engineered barrier is breached, the following precautions shall be taken:

- The Owner shall be given notice of any planned breach.

- To the extent possible, all material excavated from beneath an engineered barrier will be returned to the excavation prior to the restoration of the engineered barrier. The excavation zone and any soils excavated will be secured from public access until the engineered barrier is restored. While on-site, the excavated soil will be placed on an impervious surface (e.g., existing concrete or asphalt pavement or plastic) and covered with plastic. Soil that cannot be returned to the excavation will be sampled and disposed of at an appropriate facility in accordance with applicable solid and hazardous waste rules and regulations.

- The engineered barriers will be restored to meet original conditions. This work, including the proper disposal of excess soils, should be completed as soon as reasonably practical.

- Details of the engineered barrier breach, the handling of excavated soils, individuals responsible for the work, and the restoration of the engineered barrier shall be recorded in the engineered barrier maintenance log. The maintenance log will be available for inspection by representatives of the Wisconsin Department of Natural Resources upon reasonable prior request.

Amendments

The EBOMP may be amended or withdrawn upon written approval from the Wisconsin Department of Natural Resources or its successor agency.

Contact Information

- For responsible party and owner information contact:

  Mr. Ghassan Korban
  City of Milwaukee Department of Public Works
  841 North Broadway, Room 919
  Milwaukee, WI 53202
  Telephone: (414) 286-2461
  Fax: (414) 286-0759

- For environmental consultant information contact:

  Ms. Kristin Kurzka, P.E.
  Sigma Environmental Services, Inc.
  1300 W. Canal Street
  Milwaukee, WI 53233
  Telephone: (414) 643-4200

- For Wisconsin Department of Natural Resources information contact:

  Ms. Margaret Brunette
  Wisconsin Department of Natural Resources
  Southeast Region Headquarters Remediation & Redevelopment Program
  2300 N. Dr. Martin Luther King Jr. Drive
  Milwaukee, WI 53212
  Telephone: (414) 263-8557
  Fax: (414) 263-8606

ENGINEERED BARRIER INSPECTION LOG

City of Milwaukee, 25th & Canal Lift Station & Bioretention Facility

South 25th Street and Canal Street, Milwaukee, Wisconsin

INSPECTION DATE	INSPECTOR (NAME, TITLE, ORGANIZATION)	CONDITION OF ENGINEERED BARRIERS	RECOMMENDATIONS FOR FUTURE ACTIONS	RECOMMENDATIONS FROM PREVIOUS INSPECTIONS COMPLETED?

POINT NUMBER	EASTING	NORTHING
T1	596393.35	296985.83
T2	596384.59	297030.73
T3	596345.56	297067.82
T4	596295.64	297103.68
T5	596283.77	297160.18
T6	596277.66	297177.19
T7	596261.20	297183.56
T8	596183.83	297167.90
T9	596169.33	297163.90
T10	596153.79	297159.52
T11	596105.42	297142.76
T12	596063.46	297125.23
T13	596042.49	297109.82
T14	596030.80	297093.61
T15	596013.81	297050.57
T16	596022.04	297003.82
T17	596035.07	296976.69
T18	596047.28	296966.11
T19	596068.70	296950.76
T20	596090.30	296935.61
T21	596100.79	296929.94
T22	596115.55	296893.20
T23	596105.81	296850.91
T24	596108.24	296838.77
T25	596111.81	296832.82
T26	596111.57	296827.11

POINT NUMBER	EASTING	NORTHING	POINT NUMBER	EASTING	NORTHING
P1	596211.81	297108.91	P25	596229.78	297019.91
P2	596183.25	297131.14	P26	596237.26	297029.09
P3	596098.20	297118.70	P27	596251.80	297031.22
P4	596059.43	297065.55	P28	596305.99	297012.02
P5	596058.21	297049.60	P29	596329.98	296994.50
P6	596082.59	297006.81	P30	596351.57	296987.05
P7	596104.66	296994.45	P31	596364.03	296987.13
P8	596135.78	296991.45	P32	596387.31	297005.88
P9	596167.12	296996.20	P33	596368.04	297035.87
P10	596201.47	297008.52	P34	596352.66	297049.75
P11	596148.42	297024.80	P35	596333.89	297058.52
P12	596126.35	297032.40	P36	596303.17	297076.41
P13	596101.16	297060.92	P37	596282.02	297100.97
P14	596098.37	297084.51	P38	596271.72	297131.07
P15	596118.76	297114.63	P39	596270.91	297162.88
P16	596150.42	297145.02	P40	596266.80	297171.17
P17	596067.37	297112.52	P41	596237.01	297166.35
P18	596053.44	297102.75			
P19	596043.59	297088.87			
P20	596033.72	297009.04			
P21	596085.15	296986.47			
P22	596192.25	296987.11			
P23	596212.36	296999.35			
P24	596226.82	297010.50			

POINT NUMBER	EASTING	NORTHING	POINT NUMBER	EASTING	NORTHING
F1	596338.88	296863.23	F16	596363.03	296881.37
F2	596325.43	296877.74	F17	596356.83	296896.83
F3	596283.20	296916.77	F18	596327.28	296926.32
F4	596247.06	296919.60	F19	596292.64	296945.34
F5	596224.26	296913.71	F20	596237.59	296960.86
F6	596204.36	296902.48	F21	596194.67	296959.61
F7	596199.13	296892.45	F22	596136.16	296924.33
F8	596200.85	296884.98	F23	596129.99	296901.60
F9	596222.51	296862.06	F24	596135.22	296888.04
F10	596258.17	296852.49	F25	596180.27	296846.59
F11	596277.31	296852.37	F26	596245.93	296825.47
F12	596297.18	296853.16	F27	596277.77	296823.03
F13	596317.65	296853.19	F28	596309.83	296824.01
F14	596329.10	296855.16	F29	596339.68	296829.53
F15	596370.23	296860.32	F30	596363.16	296843.69

Engineered Barrier Operation & Maintenance Plan
City of Milwaukee, 25th & Canal Lift Station &
Bioretention Facility

EXHIBIT A-1

PROJECT NO: 2984-25-02/03(D)	HWY: CANAL STREET	COUNTY: MILWAUKEE	PROP. SITE GRADING, PAVING & EROSION CONTROL	SHEET SP-4	E

FILE NAME : I:\35000\t1\cds\cs4SP04.dgn PLOT DATE : 06-OCT-2005 12:47 PLOT BY : nfroggatt PLOT NAME : PLOT SCALE : 50.000000 '/ IN.

LEGEND

- EMERGENT VEGETATION
- WET PRAIRIE
- MESIC PRAIRIE
- SHORT PRAIRIE
- LAWN
- HARDWOOD MULCH
- GRAVEL

9 GREEN ASH

3 RED MAPLE

6 RED MAPLE

NO VEGETATION
BELOW EL. 7.5

SILT FENCE

MILWAUKEE
METROPOLITAN
SEWERAGE
DISTRICT

25TH ST.

CANAL ST.

CITY OF MILWA

THE SO
RAILROAD
(CANADIAN
RAIL

NOTES:
1. TREES SHALL BE 2.5" CALIPER. 12'-15' TALL WHEN PLANTED.
2. PLACEMENT OF 6" OF TOPSOIL IS REQUIRED FOR "LAWN", "MESIC PRAIRIE", AND "SHORT PRAIRIE" PLANTING AREAS.

Engineered Barrier Operation & Maintenance Plan
City of Milwaukee, 25th & Canal Lift Station &
Bioretention Facility

EXHIBIT A-2

PROJECT NO: 2984-25-02/03(D)	HWY: CANAL STREET	COUNTY: MILWAUKEE	PROPOSED SITE LANDSCAPING PLAN	SHEET SP-5	E

FILE NAME : I:\35000\t1\cds\cs4SP05.dgn
PLOT DATE : 06-OCT-2005 10:36 PLOT BY : nfroggatt PLOT NAME : PLOT SCALE : 60.000000:1.000000
WISDOT/CADDS SHEET 44

LEGEND

- EMERGENT VEGETATION
- WET PRAIRIE
- MESIC PRAIRIE
- SHORT PRAIRIE
- LAWN
- HARDWOOD MULCH
- GRAVEL

RIVER

3 RED MAPLE

9 GREEN ASH

6 RED MAPLE

SILT FENCE

NO VEGETATION BELOW EL. 7.5

ROW

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

25TH ST.

CANAL ST.

CITY OF MILWA

THE SO RAIL ROAD (CANADIAN

SAPLING

NOTES:
1. TREES SHALL BE 2.5" CALIPER, 12'-15' TALL WHEN PLANTED.
2. PLACEMENT OF 6" OF TOPSOIL IS REQUIRED FOR "LAWN", "MESIC PRAIRIE", AND "SHORT PRAIRIE" PLANTING AREAS.

Squares are 20'+20' (60 scale)

Site Boundaries (unless overlap w/ no layer area)

Boundaries of no warning layer area (landscaped)

AREA OF SITE W/NO LANDSCAPE PLAN

Engineered Barrier Operation & Maintenance Plan
City of Milwaukee, 25th & Canal Lift Station & Bioretention Facility

EXHIBIT A-3

PROJECT NO: 2984-25-02/03(D)	HWY: CANAL STREET	COUNTY: MILWAUKEE	PROPOSED SITE LANDSCAPING PLAN	SHEET SP-5	E

FILE NAME : I:\35000\t1\cds\cs4SP05.dgn PLOT DATE : 06-OCT-2005 10:36 PLOT BY : nfroggatt PLOT NAME : PLOT SCALE : 60.000000:1.000000

3 DOCUMENT NO. STATE BAR OF WISCONSIN FORM 3 - 1982

QUIT CLAIM DEED

* 0 8 9 6 5 8 6 5 *

DOC.# 08965865

REGISTER'S OFFICE | SS
Milwaukee County, WI|

RECORDED 02/25/2005 01:39PM

JOHN LA FAVE
REGISTER OF DEEDS

AMOUNT:15.00

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT ("MMSD") quit-claims to the **CITY OF MILWAUKEE ("CITY")** for the Sum of **Six Thousand One Hundred and No/100 Dollars ($6,100)**, the following described real estate in the City of Milwaukee, Milwaukee County, State of Wisconsin:

The Area to be acquired is more particularly described on the legal description identified as Exhibit "A", and shown as Parcel 6b on Exhibit "B", both attached hereto and made a part hereof.

This Quit Claim Deed is conveyed under the following conditions:

No special assessments shall be levied or charged against MMSD owned lands in the vicinity of North 25th Street and West Canal Street, for the planned Canal Street Reconstruction/Extension Project and for any other associated utility modifications or extensions.

(Transfer Fee exempt 77.25(2) Wis Stats.)
(Transfer Return exempt 77.255 Wis Stats.)

This is not homestead property. This conveyance is authorized by MMSD Commission resolution # 04-130-9 and is part of the Right-of-Way required for the Canal Street Reconstruction/Extension 6th Street to Miller Park, Wisconsin Department of Transportation Project Numbers 2984-25-02 & 2984-09-29.

This space is reserved for recording data

Return to:
MILWAUKEE TRANSPORTATION PARTNERS
ATTN: TED J. TORCIVIA
11414 W. PARK PLACE SUITE 300
MILWAUKEE, WI 53224

Parcel Identification Number/Tax Key Number
400-9999-211-7

Dated this 15th day of February, 2005

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

Kevin L. Shafer (SEAL)

KEVIN L. SHAFER, P.E., Executive Director

Approved As To Form:

AUTHENTICATION

Signature(s)_____

authenticated this ____ day of _____, 2004.

*_____

TITLE: MEMBER STATE BAR OF WISCONSIN
(If not, _____
authorized by §706.06, Wis. Stats.)

THIS DOCUMENT WAS DRAFTED BY
Dennis M. Stefanik on behalf of the Milwaukee Metropolitan Sewerage District

ACKNOWLEGDMENT

State of Wisconsin)
)ss.
Milwaukee County)

Personally came before me this 15th day of February, 2004, the above named Kevin L. Shafer

is known to me to be the person who executed the foregoing instrument and acknowledges the same.

Brenda L. Mooney

* Brenda L. Mooney

Notary Public, Milwaukee County, Wis.
My commission is permanent. (If not, state expiration date) 6-22-08

(Signatures may be authenticated or acknowledged. Both are not necessary.)

**Names of persons signing in any capacity should be typed or printed below their signatures.*

EXHIBIT "A"

LEGAL DESCRIPTION

Grantor: Milwaukee Metropolitan Sewerage District
Grantee: City of Milwaukee
Parcel: 6b
Tax Key Number: 400-9999-211-7

That part of the Southwest 1/4 of Section 30, Township 7 North, Range 22 East, described as follows:

Commencing at the Southeast corner of the Southwest 1/4 of Section 30, Township 7 North, Range 22 East; thence North 89°52′06″ West along the South line of said Southwest 1/4, 1497.23 feet; thence North 00°17′23″ East, 35.00 feet to a point on the existing West right of way line of North 25th Street and the existing right of way line of West Canal Street and the point of beginning; thence North 89°52′06″ West, 85.69 feet; thence North 40°38′45″ West, 120.57 feet to the Southwesterly right of way of North 25th Street, also being a point on a nontangent curve to the left, with a radius of 457.41 feet; thence 189.43 feet along said curve to the left, which has a chord length of 188.08 feet and a bearing of South 60°49′38″ East; to the point of beginning.

This parcel contains **0.062 acres**, more or less.

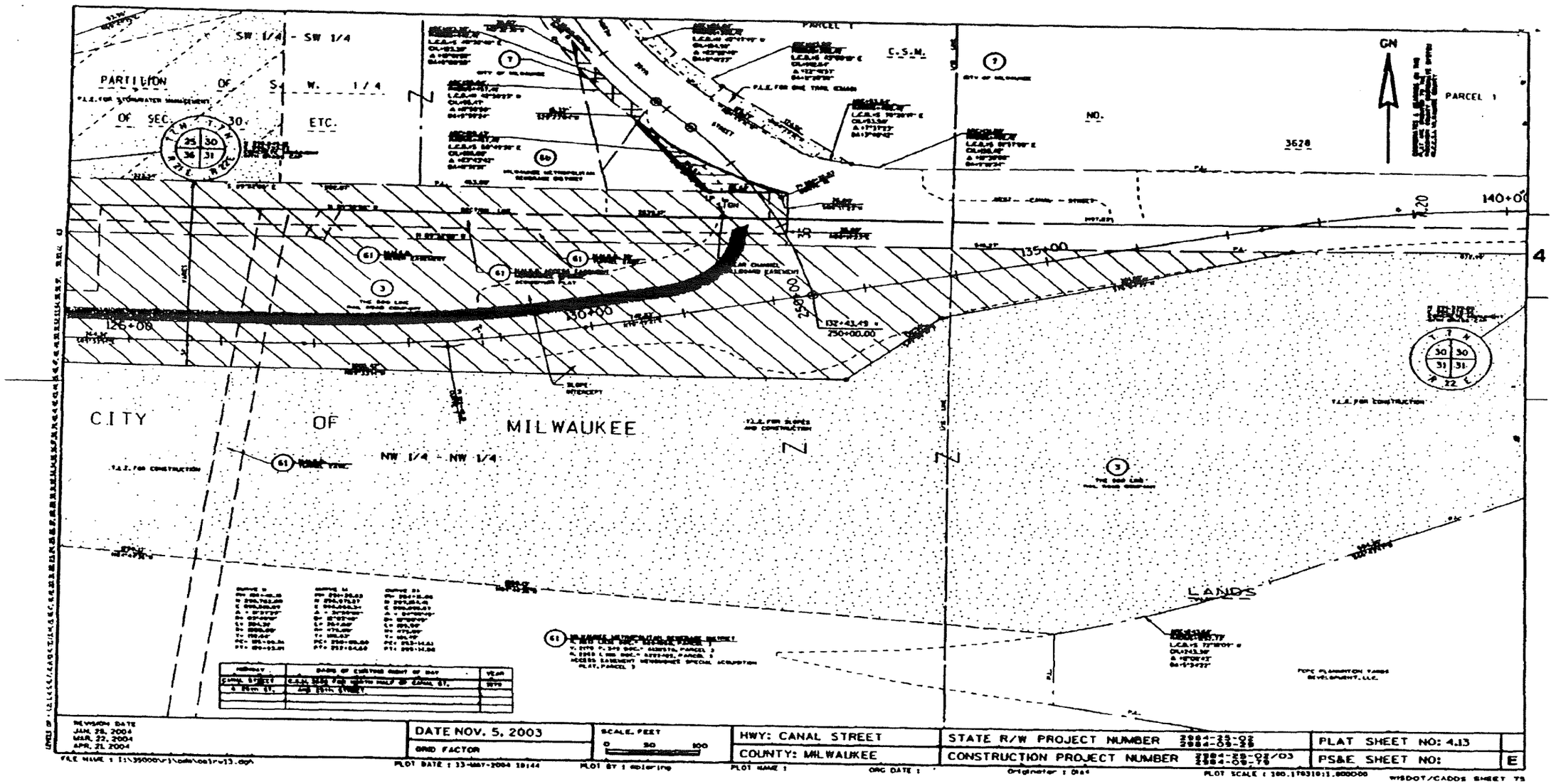


EXHIBIT "B"

4

DOCUMENT NO. STATE BAR OF WISCONSIN FORM 3 - 1982

QUIT CLAIM DEED

(Transfer Fee exempt 77.25(2) Wis Stats.),
Transfer Return exempt 77.255 Wis Stats.)

DOC.# 09142889

REGISTER'S OFFICE | SS
Milwaukee County, WI

RECORDED 12/05/2005 04:02PM

JOHN LA FAVE
REGISTER OF DEEDS

AMOUNT: 21.00

This space is reserved for recording data

Return to:
David Windsor, Public Works Dept.
841 N. Broadway, #919
Milwaukee, WI 53202

Parcel Identification Number/Tax Key Number
Part of 400-9999-211

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT ("MMSD") quit-claims to the **CITY OF MILWAUKEE ("CITY")** for the Sum of **Two hundred twenty eight thousand nine hundred eighty five dollars and No/100 dollars ($228,985.00)**, the following described real estate in the City of Milwaukee, Milwaukee County, State of Wisconsin:

SEE ATTACHED EXHIBITS "A" and "B" for Legal Description of property conveyed.

This Quit Claim Deed is conveyed under the following conditions:

1) No special assessments shall be levied or charged against MMSD for the lands conveyed herein. Special assessments attributable to remaining MMSD property for the Canal Street Reconstruction/Extension project are estimated at $37,248. This amount is included in the above stated compensation associated with this Quit Claim Deed

2) The above described property is transferred in "as is" condition. The CITY acknowledges that MMSD's contractor is currently using the site as a construction staging area. The contractor will vacate the site but will be compensated by the CITY for relocation expenses which are included ($28,300) in the above stated compensation. Comparable staging areas both long term and short term will be made available to MMSD and/or its contractors by the CITY for no extra charge.

3) The MMSD reserves a 20' wide Permanent Sewer Easement for an 84" sanitary sewer connecting MMSD's CT-5/6 drop shaft to the newly constructed Menomonee Special Intercepting Sewer facility and also a 40' x 60' temporary construction area to complete the construction of the above referenced connecting sewer at the CT-5/6 drop shaft.

4) The MMSD also reserves a 30' wide Permanent Sanitary Sewer Easement for an existing 108" MMSD near surface collector sewer connecting to the CT-5/6 drop shaft as well as an easement to the existing monitoring well and access to such monitoring well.

The above listed reservations for sanitary sewer facilities and separate construction staging areas and related access rights will be recorded as separate easement documents.

This is not homestead property. This conveyance is authorized by MMSD Commission resolution # 04-130-9 and is part of the Right-of-Way required for the Canal Street Reconstruction/Extension 6th Street to Miller Park, Wisconsin Department of Transportation Project Numbers 2984-25-02 & 2984-09-29.

Dated this 15th day of November, 2005.

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

Kevin L. Shafer (SEAL)

KEVIN L. SHAFER, P.E., Executive Director

AUTHENTICATION

Signature(s)_____

authenticated this _____ day of _____, 2005.

TITLE: MEMBER STATE BAR OF WISCONSIN
(If not, authorized by §706.06, Wis. Stats.)

THIS DOCUMENT WAS DRAFTED BY
Dennis M. Stefanik on behalf of the Milwaukee Metropolitan Sewerage District

Approved as to form
11.8.2005

ACKNOWLEDGMENT

State of Wisconsin)
)ss.
Milwaukee County)

Personally came before me this 15th day of November 2005, the above named Kevin L. Shafer is known to me to be the person who executed the fore-going instrument and acknowledges the same.

Brenda L. Mooney
* Brenda L. Mooney
Notary Public, Milwaukee County, Wis.
My commission ~~is permanent. (If not, state expiration~~ date)
6-22-08

QUIT CLAIM DEED STATE BAR OF WISCONSIN FORM NO. 3 - 1982

Exhibit "A"

Grantor: Milwaukee Metropolitan Sewerage District

Grantee: City of Milwaukee

Tax Key Number: 400-9999-211

LEGAL DESCRIPTION

Fee Title in and to the following tract of land in Milwaukee County, State of Wisconsin, described as:

That part of the Southwest 1/4 of Section 30, Township 7 North, Range 22 East, described as follows:

Commencing at the Southwest corner of the Southwest 1/4 of Section 30, Township 7 North, Range 22 East; thence South 89°52'06" East along the South line of said Southwest 1/4, 235.02 feet to a point; thence North 08°19'30" East, 35.36 feet to a point; thence South 89°52'06" East, 29.76 feet to a point on a meander line on the easterly bank of the Menomonee River and the point of beginning of the herein described parcel; thence North 20°10'13" East along said meander line, 159.33 feet to a point; thence North 71°37'18" East along said meander line, 254.42 feet to a point; thence South 17°18'45" East, 95.21 feet to a point; thence South 54°42'26" East, 85.44 feet to a point; thence South 34°40'28" East, 66.33 feet to a point; thence South 00°08'52" West, 35.97 feet to a point; thence North 89°52'06" West, 432.09 feet to the point of beginning; together with lands lying between the aforesaid meander line and the centerline thread of the Menomonee River.

This parcel contains 2.656 acres, more or less, of which approximately 0.811 acres lies between the thread of the river and the bank of the river and approximately 1.845 acres lie upland of the bank of the river.

EXHIBIT "B"
Page 1 of 4

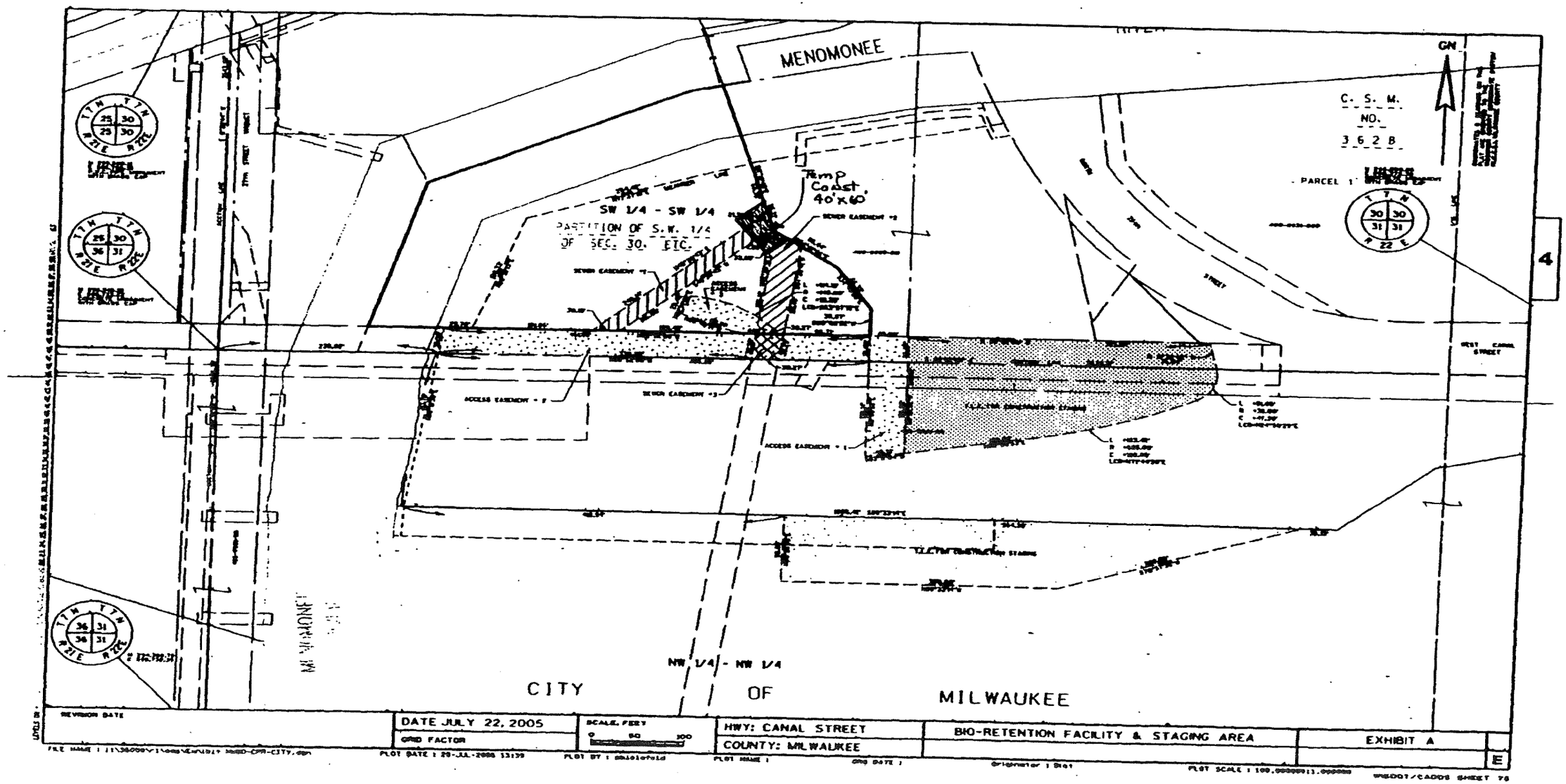
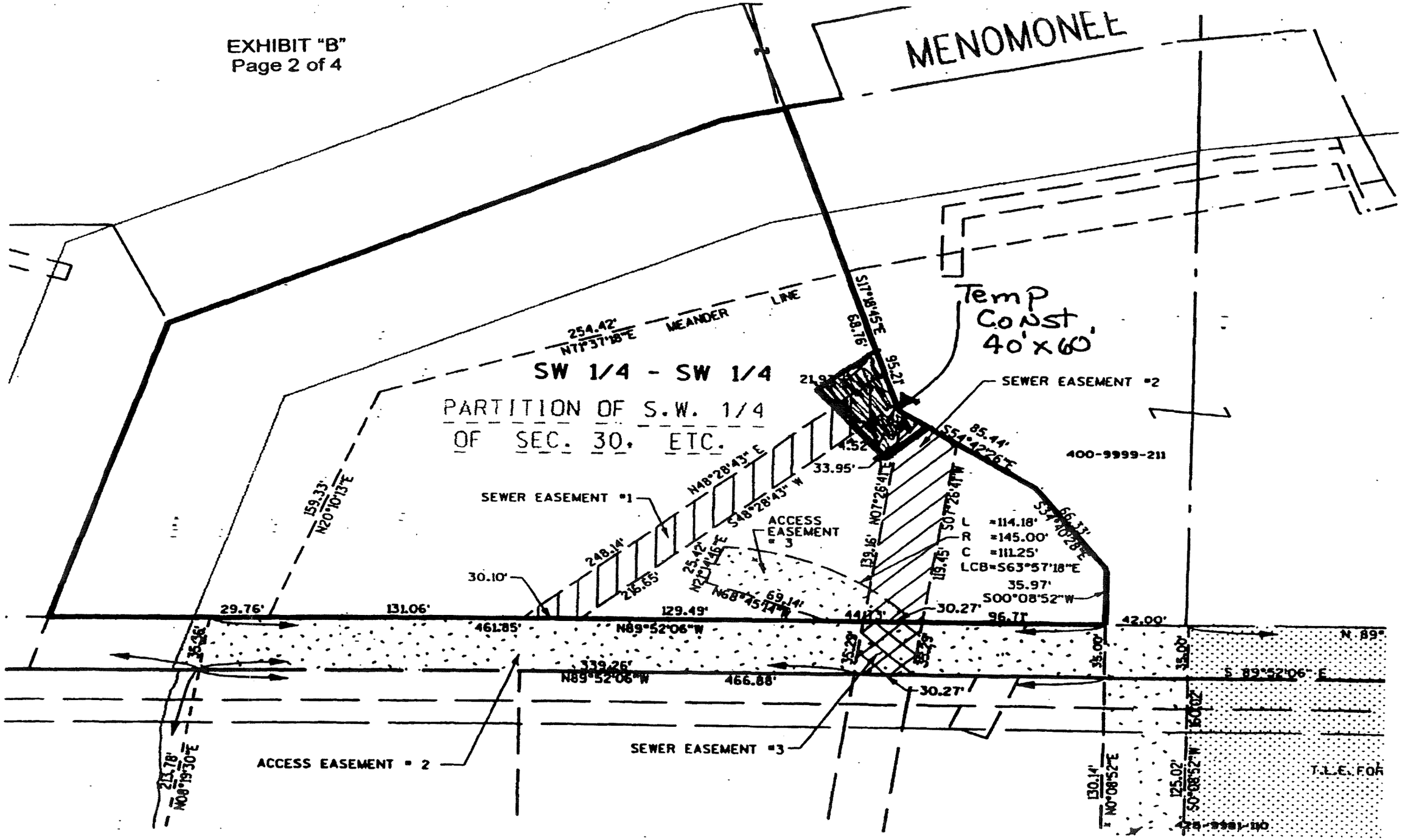
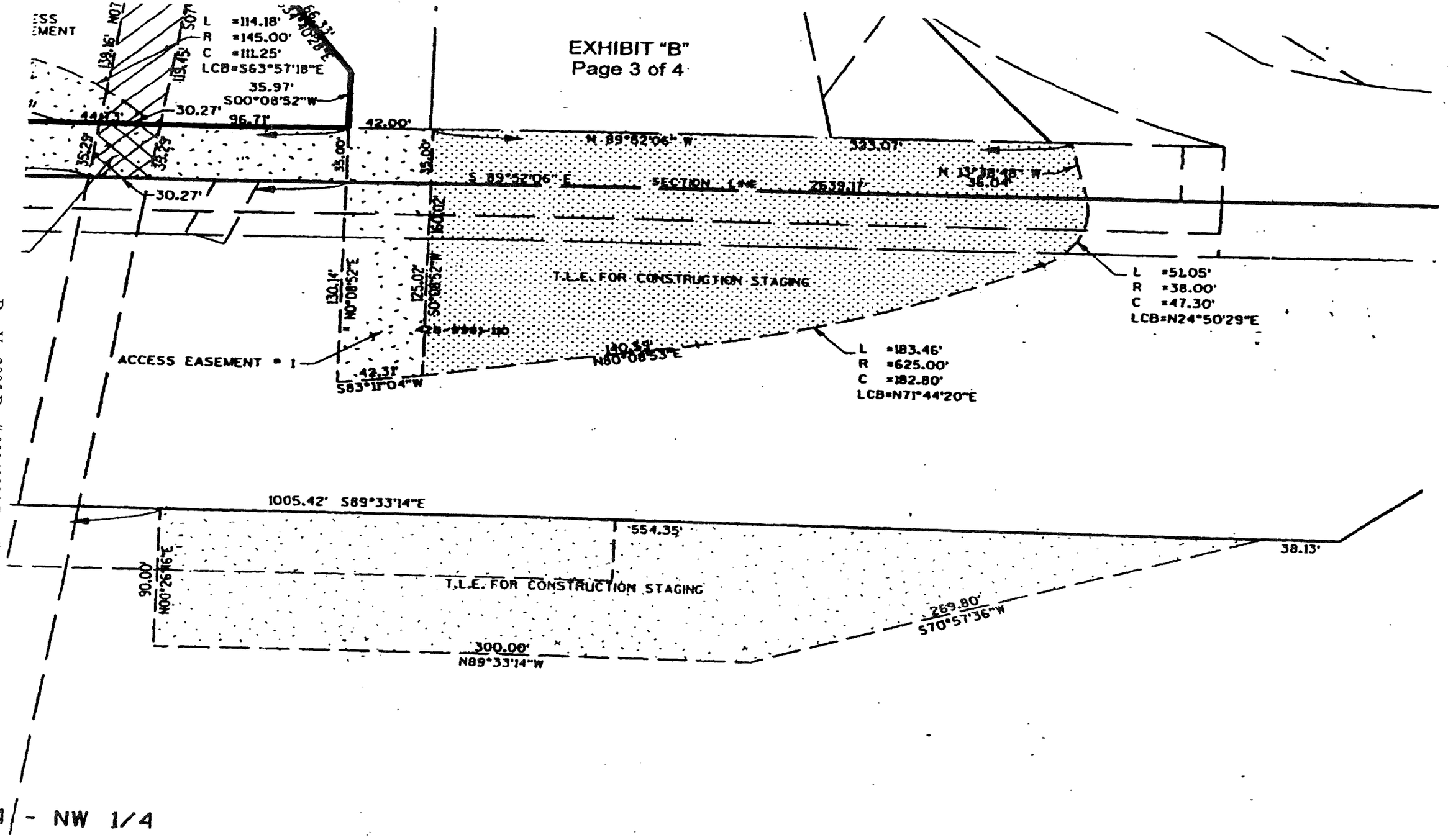
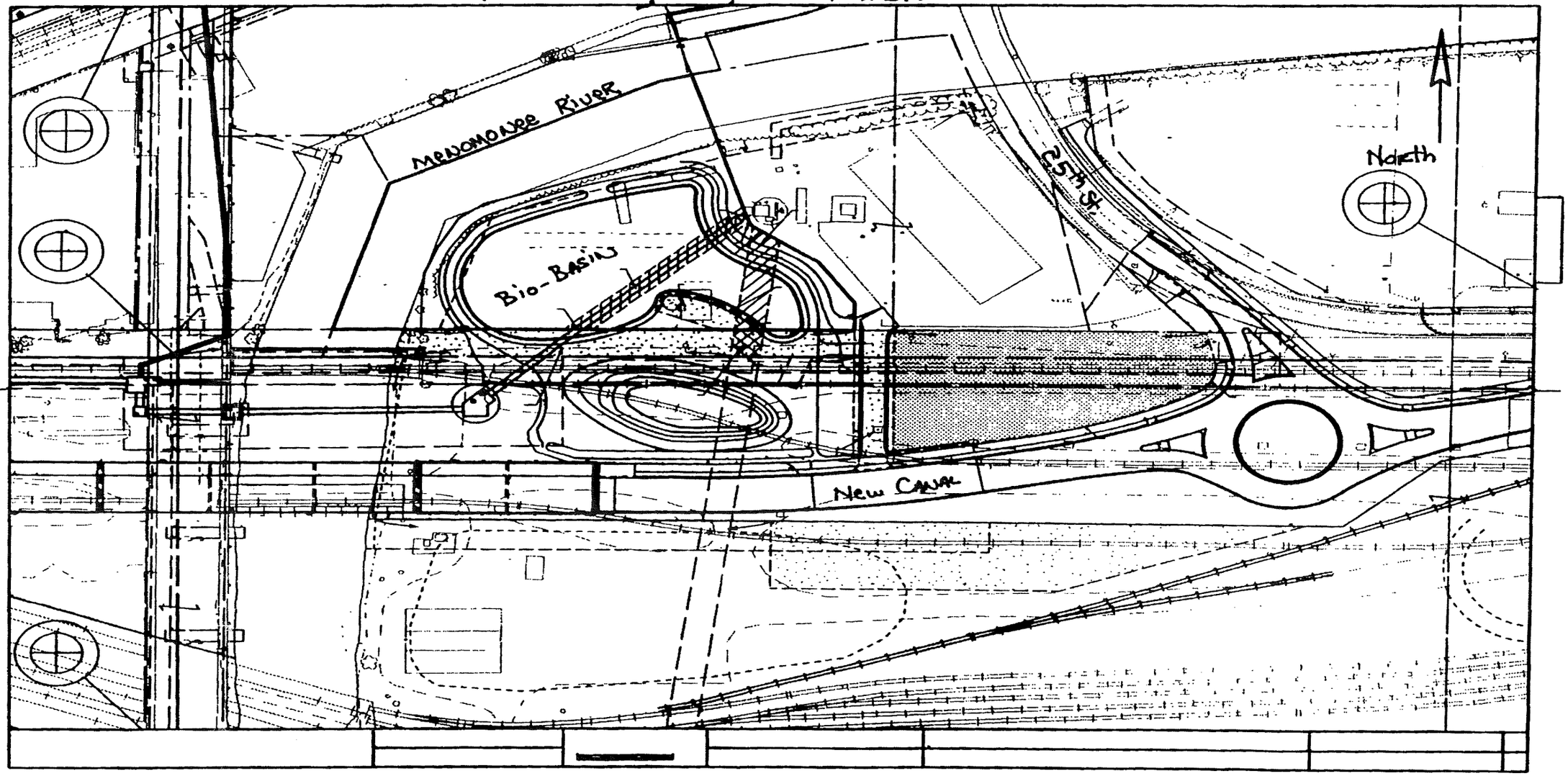


EXHIBIT "B"
Page 2 of 4





Preliminary Topo Exhibit

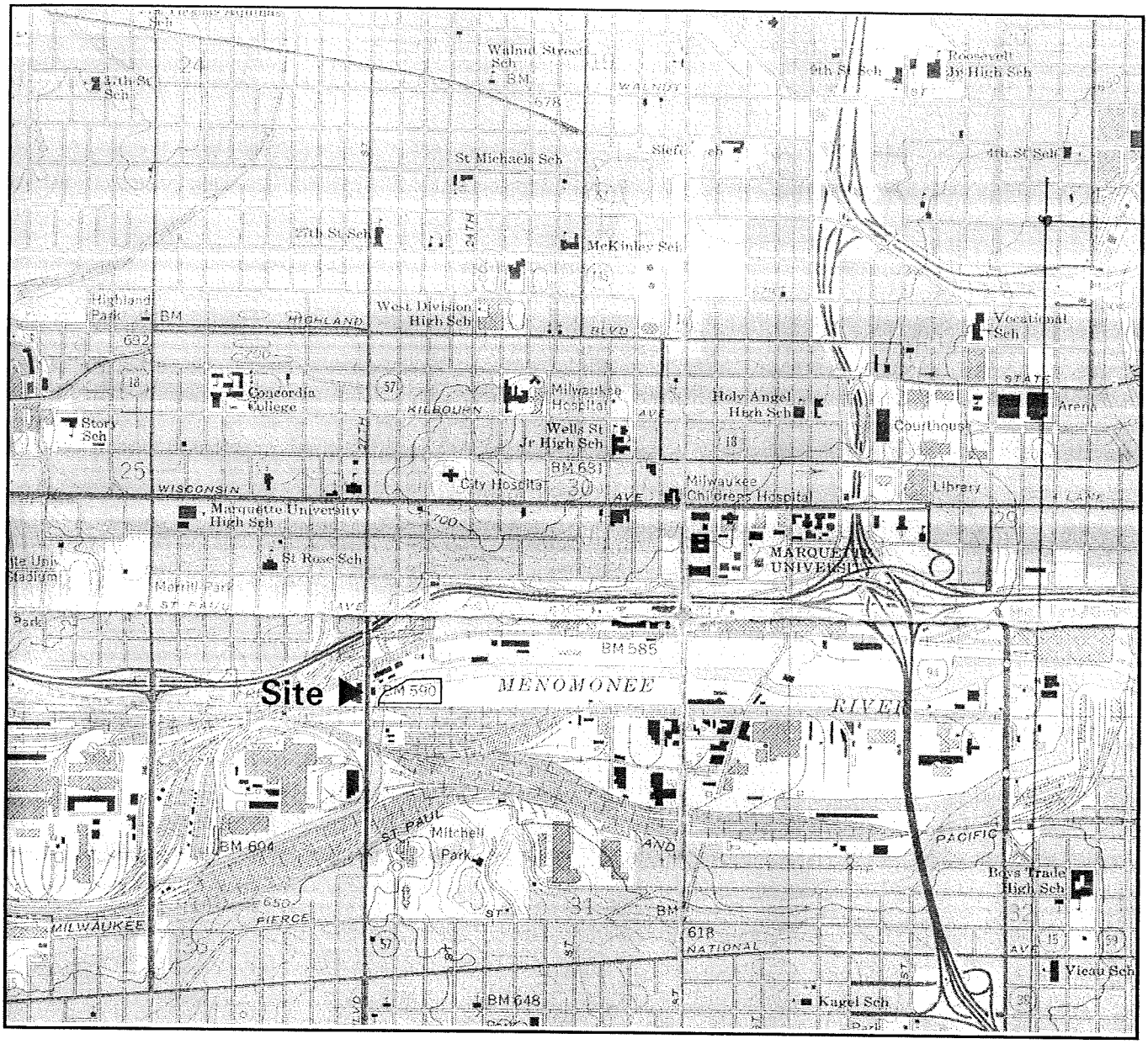


STATEMENT BY RESPONSIBLE PARTY

The City of Milwaukee, owner of the municipal bioretention facility property located at 25th and Canal Streets in Milwaukee, Wisconsin, states that the legal description provided to the Wisconsin Department of Natural Resources (and attached to this statement) for case file reference 02-41-547332 is complete and accurate to the best of our knowledge.

Signature of Representative for Responsible Party

1/19/07
Date



SW ¼ of SW 1/4 of Sec. 30 T7N R22E. Adapted from U.S.G.S. 7.5 minute series, Milwaukee, dated 1958, (photorevised 1971) Wisconsin, quadrangle.

SCALE 1:24000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

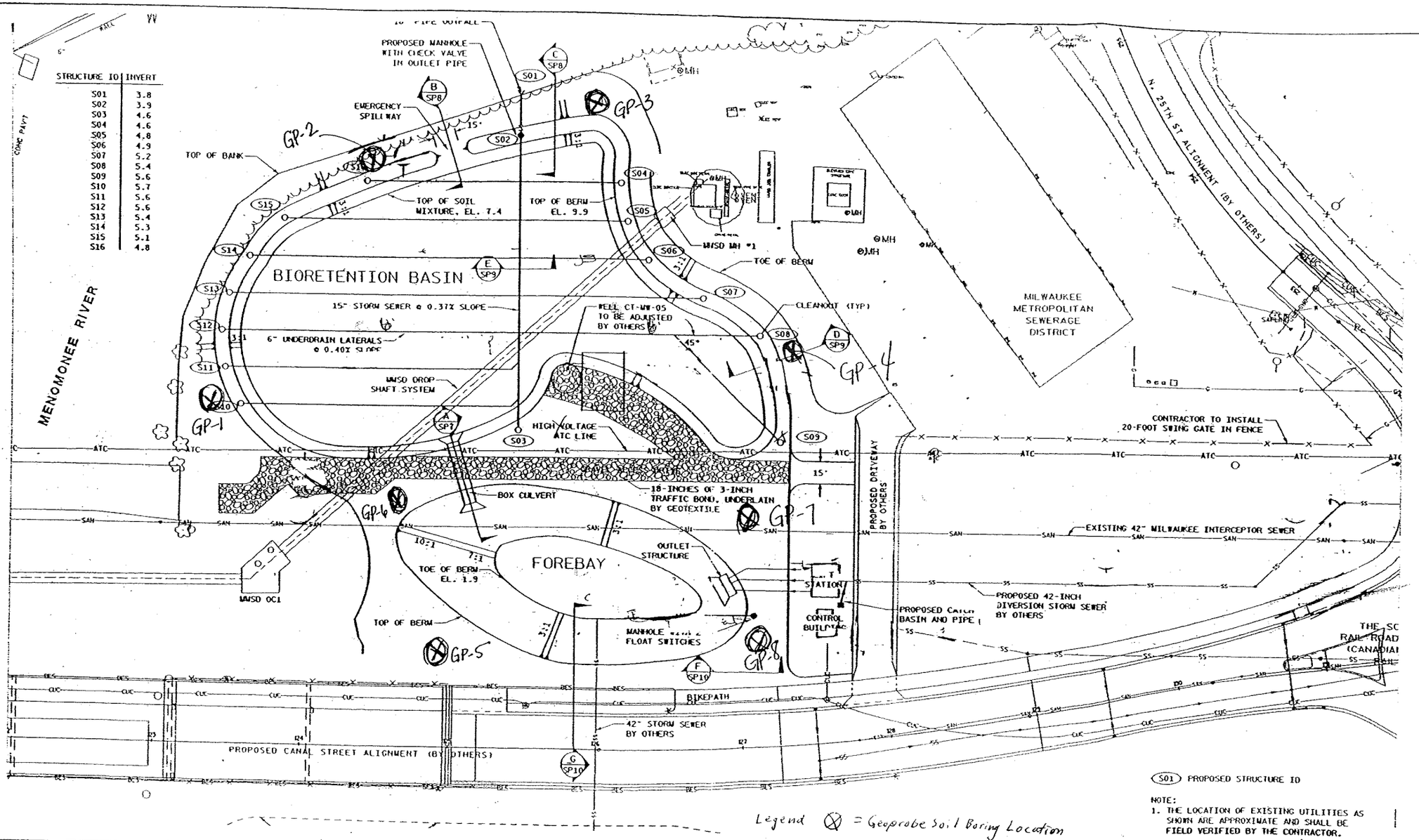
CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

N

Figure 1. Site Location Map
25thand Canal Street Broretention Facility
25th and Canal Street
Milwaukee, Wisconsin

THE SIGMA GROUP
SIGMA ENVIRONMENTAL SERVICES, INC.
SIGMA DEVELOPMENT, INC.
SIGMA LEASING, INC.

9570fig1.pub

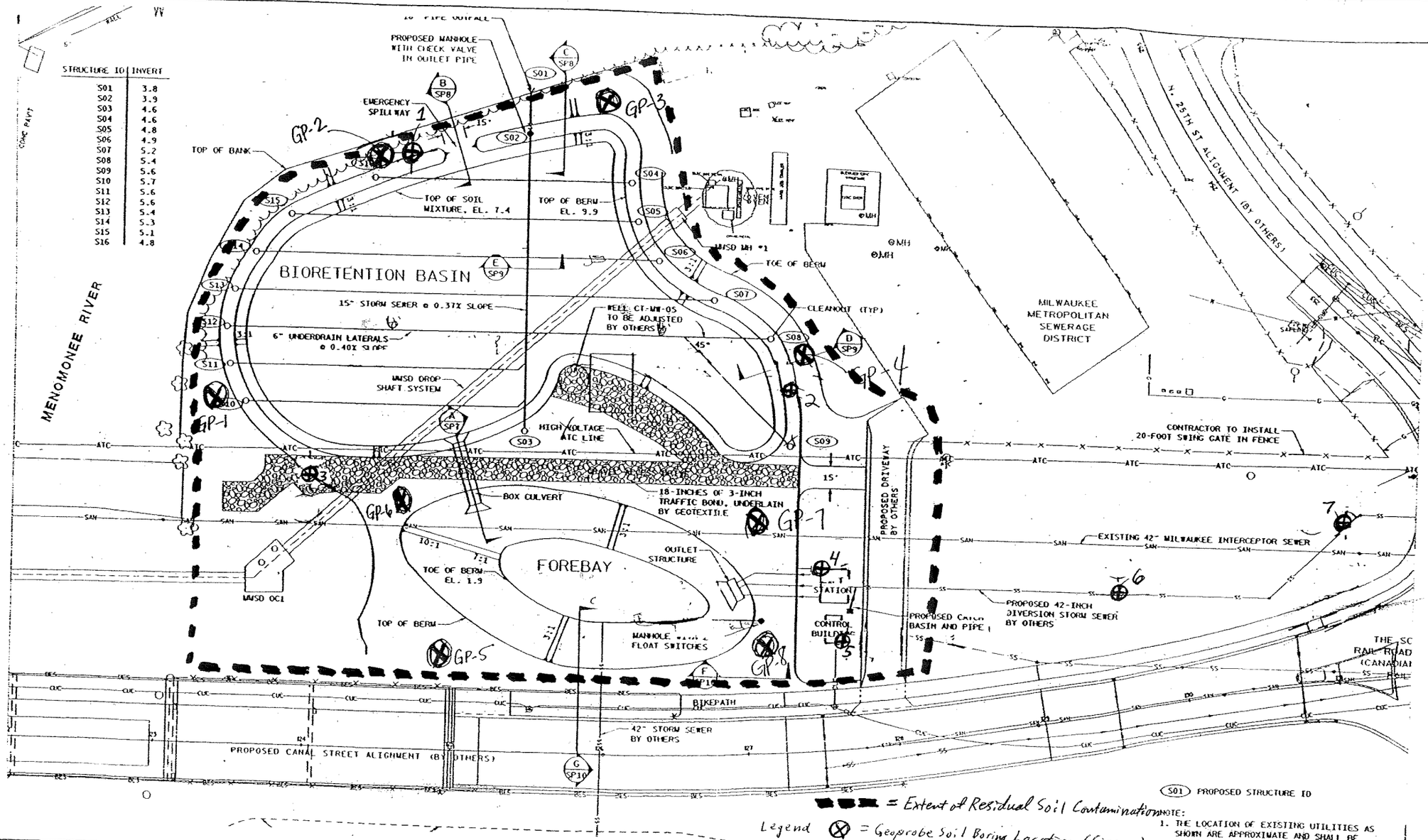


SITE PLAN MAP

Canal Street Lift Station
Milwaukee, Wisconsin

COMMENTS:

Taken from Canal / 25th Street Lift Station and Bioretention Facility Site Plan, Sheet SP-3
~~Scale: 1.0" = 60 Feet~~



Soil Sampling and Soil Impacts
Canal Street Lift Station
Milwaukee, Wisconsin

COMMENTS:

Taken from Canal / 25th Street Lift Station and Bioretention Facility Site Plan, Sheet SP-3
~~Scale 1 0" 60 Feet~~

TABLE 1

Summary of Soil Analytical Laboratory Results - VOCs and Metals
Canal Street Lift Station
Geotechnical Investigation
Milwaukee, WI

Soil Boring ID	Sample ID	Date Collected	Depth (feet bgs)	Volatile Organic Compounds (EPA Method 8260) (ug/kg)										RCRA Metals (mg/kg) EPA Methods 7471A and 6010B							
				Benzene	Ethyl-benzene	1,2,4-TMB	1,3,5-TMB	Naph	Toluene	Total Xylenes	Tetrachloro-ethene	cis-1,2-DCE	Methylene chloride	Mercury	Arsenic	Barium	Cadmium	Chromium**	Lead	Selenium	Silver
B-1	W411262-09	11/19/2004	8	**64.3**	74.2	283	43.3	**1330**	317	1090	328	ND	1430	0.467	**5.91**	105.0	2.11	**42.3**	**312**	ND	ND
B-1	W411262-10	11/19/2004	20	ND	ND	ND	ND	ND	66	ND	ND	155	1720	ND	ND	71.6	ND	**10.6**	13.1	ND	ND
B-2	W411262-11	11/19/2004	9.5	ND	ND	169	ND	**949**	82.5	ND	ND	ND	1370	0.0842	ND	54.8	ND	**14.0**	25.1	ND	ND
B-2	W411262-12	11/19/2004	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	16.8	ND	ND	72.6	ND	13.7	11.9	ND	ND
B-3	W411262-13	11/19/2004	7	1.24	1.8	6.01	0.849	22.9	5.67	26.3	ND	ND	9.42	0.0844	**5.03**	52.5	ND	12.7	**61.5**	ND	ND
B-3	W411262-14	11/19/2004	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	1660	ND	ND	77.3	ND	10.5	14.0	ND	ND
B-4	W411262-01	11/18/2004	9	ND	ND	151	ND	ND	62	ND	ND	ND	920	ND	ND	31.3	ND	10.0	14.0	ND	ND
B-4	W411262-02	11/18/2004	20	ND	ND	ND	ND	ND	45.9	ND	ND	116	875	ND	ND	ND	ND	7.81	ND	ND	ND
B-5	W411262-03	11/18/2004	9	ND	ND	ND	ND	ND	59.3	ND	ND	ND	1210	ND	ND	58.4	ND	12.5	11.1	ND	ND
B-5	W411262-04	11/18/2004	20	ND	ND	ND	ND	ND	52	ND	ND	131	1580	ND	ND	60.4	ND	11.1	9.48	ND	ND
B-6	W411262-05	11/18/2004	7	ND	ND	ND	ND	ND	43.9	ND	ND	ND	1340	ND	ND	ND	ND	6.52	ND	ND	ND
B-6	W411262-06	11/18/2004	20	ND	ND	ND	ND	ND	47.7	ND	ND	ND	1640	ND	ND	88.4	ND	7.88	ND	ND	ND
B-7	W411262-15	11/19/2004	12	**29.8**	33.9	198	ND	**998**	114	1020	ND	ND	1480	ND	ND	39.8	ND	11.0	12.9	ND	ND
B-7	W411262-16	11/19/2004	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	1680	ND	ND	75.3	ND	9.1	ND	ND	ND
Field Blank	W411262-07	11/18/2004	-----	ND	ND	ND	ND	ND	ND	ND	ND	ND	306	NT	NT	NT	NT	NT	NT	NT	NT
Trip Blank	W411262-08	----	----	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	NT	NT	NT	NT
NR 746 Table 1 Values				8,500	4,600	----	----	2,700	38,000	42,000	----	----	----	----	----	----	----	----	----	----	----
NR 746 Table 2 Values				1,100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
NR 720 Generic Residual Contaminant Levels (Table 1) Groundwater Protection				5.5	2,900	----	----	400*	1,500	4,100	----	----	----	----	----	----	----	----	----	----	----
NR 720 Generic Residual Contaminant Levels (Table 2) Non-Industrial Land Use (mg/kg)				----	----	----	----	----	----	----	----	----	----	----	0.039	----	8	14	50	----	----
NR 720 Generic Residual Contaminant Levels (Table 2) Industrial Land Use (mg/kg)				----	----	----	----	----	----	----	----	----	----	----	1.6	----	510	200	500	----	----

Notes:

bgs = Below ground surface
ND = No detection above laboratory reporting limit
ug/kg = Micrograms per kilogram (ppb)
mg/kg = Milligrams per kilogram (ppm)
1,2,4 -TMB = 1,2,4-Trimethylbenzene
1,3,5-TMB = 1,3,5-Trimethylbenzene
Naph = Naphthalene
cis-1,2-DCE =cis-1,2-Dichloroethene
NT = Not Tested

Wisconsin Administrative Code Chapter NR 746 Table 1 Values = NR 746 Indicators of Residual Petroleum Product in Soil Pores
Wisconsin Administrative Code Chapter NR 746 Table 2 Values = Protection of Human Health from Direct Contact with Petroleum Contaminated Soil (Top 4 feet of ground surface)
---- = No standard established
Bold values indicate Wisconsin Administrative Code NR 720 Generic Residual Contaminant Level (RCL) exceedance
* Interim RCL guidance established by the Wisconsin Department of Natural Resources (Groundwater Protection)
** Listed Chromium values are total chromium. Standards are applicable to chromium, hexavalent

TABLE 2

Summary of Soil Analytical Test Results - PAHs
Canal Street Lift Station Geotechnical Investigation
Milwaukee, WI

Soil Boring ID	Sample ID	Date Collected	Depth (feet bgs)	PAH/Semivolatiles (EPA Method 8310) (ug/kg)																
				Acenaph-thene	Acenaph-thylene	Anthracene	Benzo (a)-anthracene	Benzo (a)-pyrene	Benzo (b)-fluoranthene	Benzo (g,h,i)-perylene	Benzo (k)-fluoranthene	Chrysene	Dibenzo (a,h)-anthracene	Fluoranthene	Fluorene	Indeno (1,2,3) cd-pyrene	1-Methyl-naphthalene	2-Methyl-naphthalene	Naphthalene	Phenanthrene	Pyrene
B-1	W411262-09	11/19/2004	8	ND	ND	ND	**148**	**119**	**117**	ND	ND	130	**20.9**	284	ND	70.6	ND	ND	ND	190	ND
B-1	W411262-10	11/19/2004	20	ND	ND	ND	ND	**43**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-2	W411262-11	11/19/2004	9.5	ND	ND	ND	**121**	**88.2**	**90.6**	ND	ND	161	**18.4**	238	ND	ND	ND	214	ND	214	ND
B-2	W411262-12	11/19/2004	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-3	W411262-13	11/19/2004	7	ND	ND	ND	ND	**11.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-3	W411262-14	11/19/2004	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-4	W411262-01	11/18/2004	9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-4	W411262-02	11/18/2004	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-5	W411262-03	11/18/2004	9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-5	W411262-04	11/18/2004	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6	W411262-05	11/18/2004	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-6	W411262-06	11/18/2004	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-7	W411262-15	11/19/2004	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-7	W411262-16	11/19/2004	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WDNR Generic RCLs - Groundwater Pathway				38,000	700	3,000,000	17,000	48,000	360,000	6,800,000	870,000	37,000	38,000	500,000	100,000	680,000	23,000	20,000	400	1,800	8,700,00
WDNR Generic RCLs - Direct Contact Pathway (Residential) (ug/kg)				900,000	18,000	5,000,000	88	8.8	88	1,800	880	8,800	8.8	600,000	600,000	88	1,100,000	600,000	20,000	18,000	500,000
WDNR Generic RCLs - Direct Contact Pathway (Industrial) (mg/kg)				6,000 ppm	360 ppm	300,000 ppm	3.9 ppm	0.39 ppm	3.9 ppm	39 ppm	39 ppm	390 ppm	0.39 ppm	40,000 ppm	40,000 ppm	3.9 ppm	70,000 ppm	40,000 ppm	110 ppm	390 ppm	30,000 ppm

bgs = Below ground surface
ppm = parts per million (mg/kg)
ppb = parts per billion (ug/kg)
PAH = Polyaromatic Hydrocarbons
RCL = Residual Contaminant Level
Bold values indicate exceedance of Generic RCL

TABLE 1
SOIL ANALYTICAL QUALITY RESULTS
CANAL STREET / 25TH STREET LIFT STATION AND BIORETENTION FACILITY
MILWAUKEE, WISCONSIN
Project Reference #9570

Soil Boring Identification:					GP-1		GP-2		GP-3		GP-4		GP-5		GP-6		GP-7		GP-8	
Sample Depth (ft):					2-4	4-6	2-4	4-6	2-4	4-6	2-4	4-6	2-4	4-6	2-4	4-6	2-4	4-6	2-4	4-6
Volatile Organic Compounds	Unit	NR 720 RCL	NR 746 Table 1	NR 746 Table 2	Collection Date															
					05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006
Benzene	µg/kg	5.5	8,500	1,100	**53**	**36**	**33**	**46**	<25	<25	**39**	**41**	<25	<25	<25	**98**	**33**	**41**	**42**	**52**
Bromobenzene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Bromodichloromethane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
tert-Butylbenzene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
sec-Butylbenzene	µg/kg	NS	NS	NS	<25	**27.1**	<25	<25	<25	<25	<25	**25.2**^{J}	<25	<25	<25	<25	<25	<25	<25	**38**
n-Butylbenzene	µg/kg	NS	NS	NS	<25	**43**^{J}	<25	<25	<25	<25	**33**^{J}	**41**^{J}	<25	<25	<25	**34**^{J}	**31.4**^{J}	**49**^{J}	**42**^{J}	**49**^{J}
Carbon tetrachloride	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Chlorobenzene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	**540**	<25	<25	<25	<25
Chloroethane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Chloroform	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Chloromethane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
2-Chlorotoluene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
4-Chlorotoluene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,2-Dibromo-3-chloropropane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Dibromochloromethane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Dichlorodifluoromethane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	µg/kg	4.9	600	540	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,1-Dichloroethene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,2-Dichloropropane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,3-Dichloropropane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Di-isopropyl ether	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Ethylbenzene	µg/kg	2,900	4,600	NS	**47**	**64**	**42**	**49**	<25	<25	**64**	**66**	<25	<25	<25	**67**	**46**	**95**	**75**	**107**
Hexachlorobutadiene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Isopropylbenzene	µg/kg	NS	NS	NS	<25	**28.3**^{J}	<25	**25.6**^{J}	<25	<25	**38**^{J}	**53**	<25	<25	<25	**37**^{J}	<25	**43**	**63**	**93**
p-Isopropyltoluene	µg/kg	NS	NS	NS	<25	**25.2**^{J}	<25	<25	<25	<25	**25.7**^{J}	**25.2**^{J}	<25	<25	<25	<25	<25	<25	<25	**26.2**^{J}
Methylene chloride	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Methyl-tert-butyl-ether	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Naphthalene	µg/kg	NS	2,700	NS	**320**	**193**	**312**	**302**	<25	**48**^{J}	**490**	**350**	**87**	**111**	**80**	**298**	**360**	**520**	**390**	**510**
n-Propylbenzene	µg/kg	NS	NS	NS	**29.2**^{J}	**39**^{J}	**34**^{J}	**34**^{J}	<25	<25	**47**	**59**	<25	<25	<25	**47**	**33**^{J}	**66**	**69**	**117**
1,1,2,2-Tetrachloroethane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Tetrachloroethene	µg/kg	NS	NS	NS	<25	<25	**36**^{J}	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Toluene	µg/kg	1,500	38,000	NS	**256**	**153**	**190**	**206**	**33**^{J}	**48**	**249**	**239**	**30.3**^{J}	**54**	**46**	**410**	**213**	**279**	**228**	**390**
1,2,4-Trichlorobenzene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Trichloroethene	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Trichlorofluoromethane	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	µg/kg	NS	83,000	NS	**124**	**159**	**126**	**121**	<25	**26.7**	**192**	**219**	<25	**28.6**	**26.8**	**171**	**133**	**269**	**222**	**286**
1,3,5-Trimethylbenzene	µg/kg	NS	11,000	NS	**31.3**	**59**	**30.3**	**35**	<25	<25	**68**	**86**	<25	<25	<25	**45**	**40**	**87**	**88**	**86**
Vinyl chloride	µg/kg	NS	NS	NS	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Total Xylenes	µg/kg	4,100	42,000	NS	**392**	**306**	**369**	**361**	<50	**25.5**^{J}	**558**	**519**	<50	**103**	**52**^{J}	**478**	**401**	**672**	**510**	**810**

Notes: Laboratory analyses performed by: Synergy Environmental Lab, Inc.
J = Analyte detected between Limit of Detection and Limit of Quantitation
µg/kg = micrograms per kilogram (equivalent to parts per billion)
NA = Not Analyzed NS = No Standard
NR 720 RCL = Wisconsin Administrative Code, Chapter NR 720 generic Residual Contaminant Level (industrial land use RCLs for RCRA metals).
NR 746 Table 1 = Wisconsin Administrative Code, Chapter NR 746, Table 1 soil screening level: Indicators of Residual Petroleum Products in Soil Pores.
NR 746 Table 2 = Wisconsin Administrative Code, Chapter NR 746, Table 2: Protection of Human Health from Direct Contact with Contaminated Soil.
Suggested Generic Interim RCL = More stringent generic Residual Contaminant Level for protection of groundwater (gw) or direct contact (dc) pathway for non-industrial land use from WDNR Publication RR-519-97 *"Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guid*

Exceedances: **BOLD** = detected compound BOX = concentration exceeds standard

TABLE 1
SOIL ANALYTICAL QUALITY RESULTS
CANAL STREET / 25TH STREET LIFT STATION AND BIORETENTION FACILITY
MILWAUKEE, WISCONSIN
Project Reference #9570

Soil Boring Identification:					GP-1		GP-2		GP-3		GP-4		GP-5		GP-6		GP-7		GP-8	
Sample Depth (ft):					2-4	4-6	2-4	4-6	2-4	4-6	2-4	4-6	2-4	4-6	2-4	4-6	2-4	4-6	2-4	4-6
Polynuclear Aromatic Hydrocarbon	Units	Suggested Generic RCLs for PAH Compounds in Soil			Collection Date															
		Groundwater Pathway	Non-Industrial	Industrial	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006	05/25/2006
Acenaphthene	µg/kg	38,000	900,000	60,000,000	**65**	**119**	**317**	**90**	<17	<17	**174**	**102**	**96**	**109**	**341**	**248**	**137**	**103**	**26**^{J}	**22**^{J}
Acenphthylene	µg/kg	700	18,000	360,000	**68**	**65**	**166**^{J}	**105**	<19	<19	**207**	**104**	**39**^{J}	**96**	**91**	**68**	**486**	**248**	**65**	**55**^{J}
Anthracene	µg/kg	3,000,000	5,000,000	3,000,000,000	**307**	**323**	**2650**	**398**	**46**	**35**	**840**	**400**	**423**	**414**	**722**	**595**	**1090**	**749**	**147**	**132**
Benzo(a)anthracene	µg/kg	17,000	88	3,900	**985**	**1480**	**5790**	**1460**	**225**	**170**	**2190**	**1010**	**2000**	**1610**	**1480**	**1140**	**1600**	**1980**	**271**	**287**
Benzo(a)pyrene	µg/kg	48,000	8.8	390	**986**	**1300**	**5240**	**1510**	**255**	**224**	**2360**	**1200**	**2180**	**1700**	**1430**	**1070**	**2110**	**2370**	**263**	**263**
Benzo(b)fluoranthene	µg/kg	360,000	88	3,900	**1430**	**2120**	**7250**	**2280**	**402**	**353**	**3220**	**1730**	**3170**	**2570**	**2040**	**1670**	**3280**	**3550**	**438**	**452**
Benzo(ghi)perylene	µg/kg	6,800,000	1,800	39,000	**784**	**919**	**3270**	**1190**	**216**	**213**	**1960**	**854**	**1190**	**975**	**863**	**681**	**2020**	**1410**	**188**	**179**
Benzo(k)fluoranthene	µg/kg	870,000	880	39,000	**412**	**609**	**2150**	**661**	**118**	**104**	**915**	**535**	**1010**	**753**	**569**	**479**	**987**	**1130**	**130**	**136**
Chrysene	µg/kg	37,000	8,800	390,000	**1040**	**1540**	**4980**	**1590**	**248**	**205**	**2160**	**1120**	**1930**	**1710**	**1740**	**1250**	**1880**	**2210**	**346**	**333**
Dibenz(a,h)anthracene	µg/kg	38,000	8.8	390	**179**	**225**	**747**	**280**	**43**	**38**	**376**	**179**	**282**	**245**	**224**	**155**	**414**	**348**	**42**	**41**
Fluoranthene	µg/kg	500,000	600,000	40,000,000	**1930**	**2790**	**12900**	**2810**	**447**	**347**	**4720**	**1990**	**3710**	**3160**	**3660**	**3190**	**3210**	**3520**	**534**	**586**
Fluorene	µg/kg	100,000	600,000	40,000,000	**110**	**104**	**613**	**124**	**20**^{J}	**14**^{J}	**240**	**76**	**100**	**144**	**523**	**431**	**216**	**157**	**31**	**30**^{J}
Indeno(1,2,3-cd)pyrene	µg/kg	680,000	88	3,900	**861**	**1000**	**3880**	**1220**	**239**	**222**	**2000**	**944**	**1430**	**1180**	**909**	**760**	**1970**	**1590**	**167**	**176**
1-Methylnaphthalene	µg/kg	23,000	1,100,000	70,000,000	**218**	**563**	**262**	**779**	**22**^{J}	**36**^{J}	**542**	**734**	**77**	**694**	**402**	**357**	**558**	**460**	**435**	**393**
2-Methylnaphthalene	µg/kg	20,000	600,000	40,000,000	**335**	**831**	**415**	**1120**	**37**^{J}	**58**	**851**	**1110**	**120**	**1030**	**665**	**544**	**986**	**765**	**647**	**552**
Naphthalene	µg/kg	400	20,000	110,000	**198**	***434***	**273**	***663***	**29**^{J}	**39**^{J}	***468***	***610***	**91**	***634***	**395**	**336**	***591***	***443***	**368**	**321**
Phenanthrene	µg/kg	1,800	18,000	390,000	**1010**	***1920***	***5260***	**1560**	**205**	**153**	***2760***	***1810***	**1130**	***1810***	***2790***	***2250***	***1950***	**1720**	**657**	**652**
Pyrene	µg/kg	8,700,000	500,000	30,000,000	**1580**	**2330**	**10500**	**2510**	**391**	**285**	**4060**	**1750**	**3190**	**2660**	**2880**	**2410**	**2690**	**3070**	**488**	**519**
Metals			NR 720 RCL																	
			Non-Industrial	Industrial																
Arsenic	mg/kg		0.039	1.6	**6.4**	**8.1**	**5.4**	**5.2**	**2.2**	**9.3**	**14**	**9.2**	**2.6**	**10**	**3.4**	**4.5**	**8.4**	**6.3**	**8.0**	**9.3**
Chromium	mg/kg		200	NS	**12**	**15**	**50**	**38**	**8.7**	**13**	**28**	**20**	**9.6**	**18**	**18**	**17**	**29**	**16**	**13**	**15**
Lead	mg/kg		50	500	**83**	**250**	**120**	**95**	**13**	**400**	**180**	**110**	**26**	**130**	**54**	**68**	**190**	**86**	**150**	**150**

Notes: Laboratory analyses performed by: Synergy Environmental Lab, Inc.

J = Analyte detected between Limit of Detection and Limit of Quantitation

µg/kg = micrograms per kilogram (equivalent to parts per billion)

mg/kg = milligrams per kilogram (equivalent to parts per million)

NA = Not Analyzed

NS = No Standard

Suggested Generic Interim RCL = More stringent generic Residual Contaminant Level for protection of groundwater (gw) or direct contact (dc) pathway for non-industrial land use from WDNR Publication RR-519-97 *"Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guid*

Exceedances: **BOLD** = detected compound

BOX = concentration exceeds generic or suggested generic RCL based on direct contact

BOX = concentration exceeds suggested generic RCL based on groundwater pathway