BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS

J.D. STREETT & COMPANY, INC., Petitioner,	)	
v.	)	PCB 2018-003
	)	(LUST Appeal)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, Respondent.	)	

NOTICE

Don Brown, Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, IL 60601
don.brown@illinois.gov

Carol Webb, Hearing Officer
Illinois Pollution Control Board
1021 North Grand Avenue East
P.O. Box 19274
Springfield, IL 62794-9274
carol.webb@illinois.gov

Patrick D. Shaw
Law Office of Patrick D. Shaw
80 Bellerive Road
Springfield, IL 62704
pdshaw1law@gmail.com

PLEASE TAKE NOTICE that I have today filed with the office of the Clerk of the Pollution Control Board an **APPEARANCE,** the **ADMINISTRATIVE RECORD** and a **CERTIFICATE OF RECORD ON APPEAL,** copies of which are herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent

Melanie A. Jarvis
Assistant Counsel
Division of Legal Counsel
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-5544
217/782-9143 (TDD)
Dated: May 29, 2018

BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS

J.D. STREETT & COMPANY, INC., Petitioner,	)	
v.	)	PCB 2018-003
	)	(LUST Appeal)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, Respondent.	)	

APPEARANCE

The undersigned, as one of its attorneys, hereby enters her Appearance on behalf of the Respondent, the Illinois Environmental Protection Agency.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent

Melanie A. Jarvis
Assistant Counsel
Special Assistant Attorney General
Division of Legal Counsel
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-5544
217/782-9143 (TDD)
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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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CERTIFICATE OF RECORD ON APPEAL

Pursuant to 35 Ill. Adm. Code 105.116(b) and 105.410, the following constitutes an index of documents comprising the record:

PAGES	DOCUMENT(S)	DATE
R0001–R0015	Illinois EPA Decision Letter	June 19, 2017
R0016–R0153	Corrective Action Plan and Budget	March 24, 2017
R0154–R0160	LUST Technical Review Notes	June 15, 2017
R0161	Email between Thorpe &Dilbaitis	October 2, 2015
R0162–R0165	Email chain between Thorpe &Dilbaitis	October 2, 2015
R0166–R0167	Email chain between Thorpe &Dilbaitis	June 2, 2017
R0168–R0175	Email chain between Thorpe &Dilbaitis	June 5, 2017

I, Bradley Dilbaitis, certify on information and belief that the entire record of the Respondent's decision, as defined in 35 Ill. Adm. Code 105.410(b), is hereby enclosed.

By: Bradley Dilbaitis

Bradley Dilbaitis, Project Manager
Leaking Underground Storage Tank Section
Illinois Environmental Protection Agency

CERTIFICATE OF SERVICE

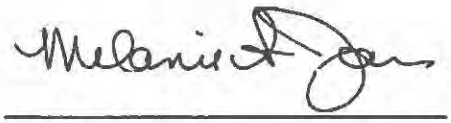
I, the undersigned attorney at law, hereby certify that on **May 29, 2018**, I served true and correct copies of an **APPEARANCE,** the **ADMINISTRATIVE RECORD** and a **CERTIFICATE OF RECORD ON APPEAL,** via the Board's COOL system and email, upon the following named persons:

Don Brown, Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, IL 60601
don.brown@illinois.gov

Carol Webb, Hearing Officer
Illinois Pollution Control Board
1021 North Grand Avenue East
P.O. Box 19274
Springfield, IL 62794-9274
carol.webb@illinois.gov

Patrick D. Shaw
Law Office of Patrick D. Shaw
80 Bellerive Road
Springfield, IL 62704
pdshaw1law@gmail.com

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent



Melanie A. Jarvis
Assistant Counsel
Division of Legal Counsel
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-5544
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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
BRUCE RAUNER, GOVERNOR ALEC MESSINA, DIRECTOR

217/524-3300

CERTIFIED MAIL
7014 2120 0002 3287 2788

JUN 19 2017

J.D. Streett & Company, Inc.
James A. Schuering, CFO
144 Weldon Parkway
Maryland Heights, MO 63043

Re: LPC #1990400008—Williamson County
Herrin/ J.D. Streett & Company
701 South Park
Leaking UST Incident No. 20131026
Leaking UST Technical File

Dear Mr. Schuering:

The Illinois Environmental Protection Agency (Illinois EPA) has reviewed the Corrective Action Plan (plan) submitted for the above-referenced incident. This plan, dated March 24, 2017, was received by the Illinois EPA on March 24, 2017. Citations in this letter are from the Environmental Protection Act (415 ILCS 5) (Act) and Title 35 of the Illinois Administrative Code (35 Ill. Adm. Code).

The Illinois EPA requires modification of the plan; therefore, the plan is conditionally approved with the Illinois EPA's modifications. The following modifications are necessary, in addition to those provisions already outlined in the plan, to demonstrate compliance with Title XVI of the Act (Sections 57.7(b)(2) and 57.7(c) of the Act and 35 Ill. Adm. Code 734.505(b) and 734.510(a)):

35 Ill. Adm. Code 742.300(a) states if an evaluation under this Subpart (Subpart C: Exposure Route Evaluations) demonstrates the applicable requirements for excluding an exposure route are met, then the exposure route is excluded from consideration and no remediation objective(s) need be developed for that exposure route. 35 Ill. Adm. Code 742.300(b) states that no exposure route may be excluded from consideration until characterization of the extent and concentrations of contaminants of concern at a site has been performed. The actual steps and methods taken to characterize a site shall be determined by the specific program requirements under which the site remediation is being addressed. 35 Ill. Adm. Code 742.312(b)(1)(A) states that the indoor inhalation exposure route may be excluded from consideration if there is also no soil or groundwater contamination exceeding Tier 1 remediation objectives for residential property (Appendix B, Table A) or Class I groundwater (Appendix B, Table E) located 5 feet or less, horizontally, from any existing or potential building or man-made pathway. The release currently meets the criteria for a petroleum vapor intrusion (PVI) investigation. Groundwater monitoring wells MW-3, MW-9 and

MW-10 currently meet the criteria for an indoor inhalation exposure route evaluation in accordance with 35 Ill. Adm. Code 734.Subpart E: Tier 1 Evaluation. However, it is recognized that the proposed soil excavation will affect the hydrogeologic conditions at the site. To properly evaluate the necessity to perform an indoor inhalation evaluation following the proposed excavation activities, MW-3, MW-9 and MW-10 must be evaluated for the indoor inhalation exposure route. MW-3 and MW-9 are located within the proposed excavation and must be reinstalled after the excavation is complete. MW-3 shall be reinstalled/relocated in native soil near the northwest corner of the on-site building, approximately 15 feet south and 5 feet west of its current location. MW-9 shall be reinstalled/relocated approximately 12 to 15 feet south of its current location in native soil. Soil samples must be collected from each five-foot interval of the soil borings as described in 35 Ill. Adm. Code 734.210(h)(2)(D).

Please note that all activities associated with the remediation of this release proposed in the plan must be executed in accordance with all applicable regulatory and statutory requirements, including compliance with the proper permits.

Further, the Illinois EPA has determined that the use of a project labor agreement (PLA) is required, as set forth in Attachment A. A *Standard Project Labor Agreement for UST Fund Corrective Action Work* (model PLA) is available on the Illinois EPA's Leaking UST Program Web site. This model PLA has been reviewed and approved by the AFL-CIO Statewide PLA Committee, which is the central committee authorized by all respective crafts to negotiate and sign PLAs on behalf of the crafts (PLA Committee). Please submit a signed copy of a PLA to the PLA Committee for the Committee's execution at the following address:

Michael T. Carrigan, President
Illinois AFL-CIO
534 South Second Street, Suite 200
Springfield, IL 62701-1764

Once the PLA is fully executed, a copy will be returned to the environmental consultant retained by the UST owner or operator so the environmental consultant will know when work conducted under the PLA may begin. Please note that, as more fully set forth in Attachment A, when submitting an application for payment from the UST Fund, the UST owner or operator will be required to certify that work for which a PLA is required was performed under a PLA. The environmental consultant should provide a copy of the fully executed PLA to the UST owner or operator so the UST owner or operator will be able to make the certification.

In addition, the budget is modified pursuant to Sections 57.7(b)(3) and 57.7(c) of the Act and 35 Ill. Adm. Code 734.505(b) and 734.510(b). Based on the modifications listed in Section 2 of Attachment A, the amounts listed in Section 1 of Attachment A have been approved. Please note that the costs must be incurred in accordance with the approved plan. Be aware that the amount

of payment from the Fund may be limited by Sections 57.7(c), 57.8(d), 57.8(e), and 57.8(g) of the Act, as well as 35 Ill. Adm. Code 734.630 and 734.655.

If the owner or operator agrees with the Illinois EPA's modifications, submittal of an amended plan and/or budget, if applicable, is not required (Section 57.7(c) of the Act).

NOTE: Pursuant to Section 57.8(a)(5) of the Act, if payment from the Fund will be sought for any additional costs that may be incurred as a result of the Illinois EPA's modifications, an amended budget must be submitted. Amended plans and/or budgets must be submitted and approved prior to the issuance of a No Further Remediation (NFR) Letter. Costs associated with a plan or budget that have not been approved prior to the issuance of an NFR Letter will not be paid from the Fund.

Further, pursuant to 35 Ill. Adm. Code 734.145, it is required that the Illinois EPA be notified of field activities prior to the date the field activities take place. This notice must include a description of the field activities to be conducted; the name of the person conducting the activities; and the date, time, and place the activities will be conducted. This notification of field activities may be done by telephone, facsimile, or electronic mail—and must be provided at least two weeks prior to the scheduled field activities.

Pursuant to Sections 57.7(b)(5) and 57.12(c) and (d) of the Act and 35 Ill. Adm. Code 734.100 and 734.125, the Illinois EPA requires that a Corrective Action Completion Report that achieves compliance with applicable remediation objectives be submitted within 30 days after completion of the plan to:

Illinois Environmental Protection Agency
Bureau of Land - #24
Leaking Underground Storage Tank Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276

Please submit all correspondence in duplicate and include the Re: block shown at the beginning of this letter.

If within four years after the approval of this plan, compliance with the applicable remediation objectives has not been achieved and a Corrective Action Completion Report has not been submitted, the Illinois EPA requires the submission of a status report pursuant to Section 57.7(b)(6) of the Act.

An underground storage tank system owner or operator may appeal this decision to the Illinois Pollution Control Board. Appeal rights are attached.

If you have any questions or need further assistance, please contact Brad Dilbaitis at (217) 785-8378 or Bradley.Dilbaitis@illinois.gov.

Sincerely,

SAColantino

Stephen A. Colantino
Acting Unit Manager
Leaking Underground Storage Tank Section
Division of Remediation Management
Bureau of Land

SAC:BD\CAPmodBUDmod.docx

Attachment: Attachment A
Appeal Rights

c: Shane Thorpe, CSD Environmental Services, Inc. (electronic copy), sthorpe@csdenviro.com
BOL File

Attachment A

Re: LPC #1990400008—Williamson County
Herrin/ J.D. Streett & Company
701 South Park
Leaking UST Incident No. 20131026
Leaking UST Technical File

SECTION 1

As a result of Illinois EPA's modification(s) in Section 2 of this Attachment A, the following amounts are approved:

$2,121.64	Drilling and Monitoring Well Costs
$4,216.38	Analytical Costs
$126,162.15	Remediation and Disposal Costs
$0.00	UST Removal and Abandonment Costs
$0.00	Paving, Demolition, and Well Abandonment Costs
$27,611.48	Consulting Personnel Costs
$2,448.40	Consultant's Materials Costs

Handling charges will be determined at the time a billing package is reviewed by the Illinois EPA. The amount of allowable handling charges will be determined in accordance with Section 57.1(a) of the Environmental Protection Act (Act) and 35 Illinois Administrative Code (35 Ill. Adm. Code) 734.635.

SECTION 2

1. An additional $619.80 was added to the Monitoring Well Costs for the modification made to the Corrective Action Plan. The extra cost is for two hollow-stem auger wells (re-installation of MW-3 and MW-9) to a maximum depth of 15 feet below the ground surface for a total of 30 feet at the Subpart H maximum amount of $20.66 per foot.

2. An additional $1,067.55 was added to the Analytical Costs for the modification made to the Corrective Action Plan. The extra cost is for 3 groundwater samples (MW-3, MW-9, MW-10) at a rate of $101.37 per sample, a possible 6 BETX/MTBE soil samples (re-installation of MW-3 and MW-9) at a rate of $106.38 per sample and 2 sample shipping events at a rate of $52.58 per event.

3. An additional $495.67 was added to the Remediation and Disposal Costs for the modification made to the Corrective Action Plan. The extra cost is for one 55-gallon drum for solid waste at a cost of $309.79 and one 55-gallon drum of liquid waste at a cost of $185.88.

4. $6,257.50 for Consulting Personnel Costs associated with the preparation of the Corrective Action Plan by a Senior Project Manager, which lack supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities in excess of those necessary to meet the minimum requirements of Title XVI of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act. In addition, the request exceeds the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the minimum requirements necessary to comply with the Act are not eligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o). Furthermore, the request is not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

   The Consulting Personnel Costs requests 50 hours for the preparation of the Corrective Action Plan by a Senior Project Manager at a rate of $125.15 per hour for a total of $6,257.50. The total number of hours requested for the preparation of the Corrective Action Plan is not supported by the information included in the Corrective Action Plan. Several attempts were made by the Illinois EPA for clarification of the request. The information that was received does not support the request for 50 hours for the preparation of the Corrective Action Plan. Please note that 734.505(a) states that the Agency may review any or all technical or financial information, or both, relied upon by the owner or operator or the Licensed Professional Engineer or Licensed Professional Geologist in developing any plan, budget, or report selected for review. The Agency may also review any other plans, budgets, or reports submitted in conjunction with the site. 35 Ill. Adm. Code 734.510(b) states that a financial review must consist of a detailed review of the costs associated with each element necessary to accomplish the goals of the plan as required pursuant to the Act and regulations. Items to be reviewed must include, but are not limited to, costs associated with any materials, activities, or services that are included in the budget. The overall goal of the financial review must be to assure that costs associated with materials, activities, and services must be reasonable, must be consistent with the associated technical plan, must be incurred in the performance of corrective action activities, must not be used for corrective action activities in excess of those necessary to meet the minimum requirements of the Act and regulations, and must not exceed the maximum payment amounts set forth in Subpart H of this Part. 35 Ill. Adm. Code 734.850(b) states that owners and operators seeking payment must demonstrate to the Agency that the amounts sought are reasonable.

5. $14,016.80 for Consulting Personnel Costs associated with the oversight of the corrective action excavation and backfilling by a Senior Project Manager, which lack supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities in excess of those

necessary to meet the minimum requirements of Title XVI of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act. In addition, the request exceeds the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the minimum requirements necessary to comply with the Act are not eligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o). Furthermore, the request is not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

The Consulting Personnel Costs requests 112 hours for a Senior Project Manager for oversight of the corrective action excavation and backfilling at a rate of $125.15 per hour for a total of $14,016.80. The request appears to be for 14 8-hour days to complete the excavation. Several requests were made by the Illinois EPA to ensure that the number of hours requested to complete the 1,304-cubic yard excavation were reasonable and did not exceed the minimum amount of time required to completed an excavation of this size. The information that was received does not support the time requested to complete the excavation. Please note that 734.505(a) states that the Agency may review any or all technical or financial information, or both, relied upon by the owner or operator or the Licensed Professional Engineer or Licensed Professional Geologist in developing any plan, budget, or report selected for review. The Agency may also review any other plans, budgets, or reports submitted in conjunction with the site. 35 Ill. Adm. Code 734.510(b) states that a financial review must consist of a detailed review of the costs associated with each element necessary to accomplish the goals of the plan as required pursuant to the Act and regulations. Items to be reviewed must include, but are not limited to, costs associated with any materials, activities, or services that are included in the budget. The overall goal of the financial review must be to assure that costs associated with materials, activities, and services must be reasonable, must be consistent with the associated technical plan, must be incurred in the performance of corrective action activities, must not be used for corrective action activities in excess of those necessary to meet the minimum requirements of the Act and regulations, and must not exceed the maximum payment amounts set forth in Subpart H of this Part. 35 Ill. Adm. Code 734.850(b) states that owners and operators seeking payment must demonstrate to the Agency that the amounts sought are reasonable.

6. The Consulting Personnel Costs associated with the completion and submission of IDPH well abandonment forms are not approved as part of this budget. These charges are included in the monitoring well abandonment rate, for which a maximum rate of $12.52 per foot applies. The costs exceed the maximum payment amounts set forth in Subpart H, Appendix D, and/or Appendix E of 35 Ill. Adm. Code 734. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(zz). In addition, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they are not reasonable.

Based upon the above deduction, a total of $ 500.60 was deducted from Consulting Personnel Costs.

7. $3,754.50 for Consulting Personnel Costs associated with the preparation of the interim report documenting the excavation, which exceed the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the minimum requirements necessary to comply with the Act are not eligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o). In addition, the request is not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

The Consulting Personnel Costs requests 30 hours for a Senior Project Manager to prepare a report documenting the corrective action excavation and proposing the final R-26 extent and Highway Authority Agreement limits. This preparation of an extra report is not necessary to document this information. The information must be included in the Corrective Action Completion Report.

8. $600.64 for Consulting Personnel Costs associated with the preparation of autoCAD figures for a report documenting the excavation, which exceed the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the minimum requirements necessary to comply with the Act are not eligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o). In addition, the request is not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

The Consulting Personnel Costs requests 8 hours for a Senior Draftsperson/CAD to prepare autoCAD figures for a report documenting the corrective action excavation and proposing the final R-26 extent and Highway Authority Agreement limits. This extra report is not necessary to document this information. The information must be included in the Corrective Action Completion Report.

9. $2,775.60, deduction for a reduction in the personnel title listed in Section 734.APPENDIX E Personnel Titles and Rates. Pursuant to Section 734.850(b) personnel costs must not exceed the amounts set forth in Appendix E and the personnel costs must be based on the work performed, regardless the title of the person performing the work. The Senior Project Manager rate for the preparation of the ordinance notification letters has been reduced to a Senior Administrative Assistant rate of $55.76 per hour.

The costs exceed the maximum payment amounts set forth in Subpart H, Appendix D, and/or Appendix E of 35 Ill. Adm. Code 734. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(zz). In addition, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they are not reasonable and 35 Ill. Adm. Code 734.630(dd).

10. $2,230.40 for Consulting Personnel Costs associated with the preparation of the ordinance notification letters by a Senior Administrative Assistant, which lack supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities in excess of those necessary to meet the minimum requirements of Title XVI of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act. In addition, the request exceeds the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the minimum requirements necessary to comply with the Act are not eligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o). Furthermore, the request is not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

    The Consulting Personnel Costs requests 40 hours for the preparation of 40 letters to off-site property owners regarding the use of the local groundwater ordinance as an institutional control. Several requests were made by the Illinois EPA to ensure that the number of hours requested to complete the task were reasonable and did not exceed the minimum amount of time required to prepare the notification letters. The information that was received does not support the time requested to complete this task. Please note that 734.505(a) states that the Agency may review any or all technical or financial information, or both, relied upon by the owner or operator or the Licensed Professional Engineer or Licensed Professional Geologist in developing any plan, budget, or report selected for review. The Agency may also review any other plans, budgets, or reports submitted in conjunction with the site. 35 Ill. Adm. Code 734.510(b) states that a financial review must consist of a detailed review of the costs associated with each element necessary to accomplish the goals of the plan as required pursuant to the Act and regulations. Items to be reviewed must include, but are not limited to, costs associated with any materials, activities, or services that are included in the budget. The overall goal of the financial review must be to assure that costs associated with materials, activities, and services must be reasonable, must be consistent with the associated technical plan, must be incurred in the performance of corrective action activities, must not be used for corrective action activities in excess of those necessary to meet the minimum requirements of the Act and regulations, and must not exceed the maximum payment amounts set forth in Subpart H of this Part. 35 Ill. Adm. Code 734.850(b) states that owners and operators seeking payment must demonstrate to the Agency that the amounts sought are reasonable.

11. $1,627.00 for Consulting Personnel Costs associated with oversight/direction of corrective action by a Senior Professional Engineer, which exceed the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the

minimum requirements necessary to comply with the Act are not eligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o). In addition, the request is reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd). Furthermore, the request lacks supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities in excess of those necessary to meet the minimum requirements of Title XVI of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act.

The Consulting Personnel Costs requests 10 hours for a Senior Professional Engineer to oversee and direct corrective action at a rate of $162.70 per hour for a total of $1,627.00. It is unclear what purpose the oversight of the Senior Professional Engineer has over the oversight of the Senior Project Manager, which was also included in the Corrective Action Budget to provide oversight. Please note that the Senior Professional Engineer should have limited involvement in projects and is generally limited to performing final review, senior design, and complex data analysis. Please refer to the Agency's Personnel Title Descriptions and Duties Summary form located at the IEPA's website at http://www.epa.illinois.gov/topics/cleanup-programs/lust/budget-and-billing-forms/personnel-titles/index for clarification of personnel titles and descriptions.

12. $448.10 for Consulting Personnel Costs associated with the review and certification of the proposed interim report documenting the excavation, which exceed the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the minimum requirements necessary to comply with the Act are not eligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o). In addition, the request is not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

The Consulting Personnel Costs requests 3 hours for a Senior Professional Engineer to review and certify the proposed interim report documenting the excavation and proposing the final R-26 extent and Highway Authority Agreements at a rate of $162.70 for a total of $448.10. This extra report is not necessary to document this information. The information in the proposed interim report must be included in the Corrective Action Completion Report.

13. $225.28 for Consulting Personnel Costs for a Senior Administrative Assistant associated with the proposed interim report documenting the excavation, which exceed the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the minimum requirements necessary to comply with the Act are not eligible

for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o). In addition, the request is not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

The Consulting Personnel Costs requests 4 hours for a Senior Administrative Assistant to copy, bind, scan and distribute the proposed interim corrective action report at a rate of $56.32 per hour for a total of $225.28. This extra report is not necessary to document this information. The information in the proposed interim report must be included in the Corrective Action Completion Report.

14. $3,379.20, deduction for a reduction in the personnel title listed in Section 734.APPENDIX E Personnel Titles and Rates. Pursuant to Section 734.850(b) personnel costs must not exceed the amounts set forth in Appendix E and the personnel costs must be based on the work performed, regardless the title of the person performing the work. The Senior Project Manager rate for the preparation of reimbursement applications has been reduced to a Senior Account Technician rate of $$68.83 per hour.

The costs exceed the maximum payment amounts set forth in Subpart H, Appendix D, and/or Appendix E of 35 Ill. Adm. Code 734. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(zz). In addition, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they are not reasonable and 35 Ill. Adm. Code 734.630(dd).

15. $275.32, deduction for a reduction in the personnel title listed in Section 734.APPENDIX E Personnel Titles and Rates. Pursuant to Section 734.850(b) personnel costs must not exceed the amounts set forth in Appendix E and the personnel costs must be based on the work performed, regardless the title of the person performing the work. The Senior Project Manager rate for NFR filing and submission to the IEPA has been reduced to a Senior Administrative Assistant rate of $56.32 per hour.

The costs exceed the maximum payment amounts set forth in Subpart H, Appendix D, and/or Appendix E of 35 Ill. Adm. Code 734. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(zz). In addition, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they are not reasonable and 35 Ill. Adm. Code 734.630(dd).

16. $225.28 for Consulting Personnel Costs associated with the NFR filing and submission to the IEPA, which exceed the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the minimum requirements necessary to comply with the Act are not eligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o). In addition, the request lacks supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities in excess of those

necessary to meet the minimum requirements of Title XVI of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act. Furthermore, the request is not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

The Consulting Personnel Costs requests 4 hours to file the NFR and submit the recorded NFR to the IEPA. It is not necessary for the consultant to drive to the County Clerk's office to record the NFR. Please note that the No Further Remediation Letter can be recorded through the mail or may possibly be filed electronically. Please visit the Williamson County Clerk's website http://www.williamsoncountyil.gov/records/land-and-misc-records/ for additional information on recording the No Further Remediation Letter. The 4-hour request for this task exceeds the minimum requirements. Lacks supporting documentation and is not reasonable.

17. $1,704.00 for Consultant's Materials Costs for hotel and per diem associated with the oversight of the corrective action excavation and backfilling by a Senior Project Manager, which lack supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities in excess of those necessary to meet the minimum requirements of Title XVI of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act. In addition, the request exceeds the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the minimum requirements necessary to comply with the Act are not eligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o). Furthermore, the request is not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

The Consultant's Materials Costs requests 12 days for a hotel at a rate of $91.00 per day for a total of $1,092.00 and per diem at a rate of $51.00 per day for a total of $612.00. These costs are associated with the 112 hours (14 days) requested for the oversight of the excavation. Several requests were made by the Illinois EPA to ensure that the number of hours requested to complete the 1,304-cubic yard excavation were reasonable and did not exceed the minimum amount of time required to completed an excavation of this size. The information that was received does not support the time requested to complete the excavation. Please note that 734.505(a) states that the Agency may review any or all technical or financial information, or both, relied upon by the owner or operator or the Licensed Professional Engineer or Licensed Professional Geologist in developing any plan, budget, or report selected for review. The Agency may also review any other plans, budgets, or reports submitted in conjunction with the site. 35 Ill. Adm. Code 734.510(b) states that a financial review must consist of a detailed review of the costs associated with

each element necessary to accomplish the goals of the plan as required pursuant to the Act and regulations. Items to be reviewed must include, but are not limited to, costs associated with any materials, activities, or services that are included in the budget. The overall goal of the financial review must be to assure that costs associated with materials, activities, and services must be reasonable, must be consistent with the associated technical plan, must be incurred in the performance of corrective action activities, must not be used for corrective action activities in excess of those necessary to meet the minimum requirements of the Act and regulations, and must not exceed the maximum payment amounts set forth in Subpart H of this Part. 35 Ill. Adm. Code 734.850(b) states that owners and operators seeking payment must demonstrate to the Agency that the amounts sought are reasonable.

18. $70.00 for copies associated with the proposed interim report documenting the excavation, which exceed the minimum requirements necessary to comply with the Act. Costs associated with site investigation and corrective action activities and associated materials or services exceeding the minimum requirements necessary to comply with the Act are not eligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(o). In addition, the request is not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

The Consulting Personnel Costs requests 1,000 photocopies at a rate of $0.07 per copy for a total cost of $70.00 for the proposed interim corrective action report. This extra report is not necessary to document this information. The information in the proposed interim report must be included in the Corrective Action Completion Report.

19. $22.75 for Consultant's Materials Costs associated with nitrile gloves, which lack supporting documentation. Such costs are ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 734.630(cc). Since there is no supporting documentation of costs, the Illinois EPA cannot determine that costs will not be used for activities in excess of those necessary to meet the minimum requirements of Title XVI of the Act. Therefore, such costs are not approved pursuant to Section 57.7(c)(3) of the Act because they may be used for site investigation or corrective action activities in excess of those required to meet the minimum requirements of Title XVI of the Act.

Pursuant to 35 Ill. Adm. Code 734.850(b) costs associated with activities that do not have a maximum payment amount set forth pursuant to 35 Ill. Adm. Code 734 Subpart H must be determined on a site-specific basis and the owner/operator must demonstrate to the Agency the amounts sought for reimbursement are reasonable. The Agency has requested additional documentation to support the rate requested for the nitrile gloves pursuant to 35 Ill. Adm. Code 734.505(a). The documentation was either not provided or fails to provide sufficient information for the Agency to make a site-specific reasonableness determination.

In addition, without supporting documentation the rate requested for the nitrile gloves is not reasonable as submitted. Such costs are ineligible for payment from the Fund pursuant to Section 57.7(c)(3) of the Act and 35 Ill. Adm. Code 734.630(dd).

The Consultant's Materials Costs requests $22.75 for one box of nitrile gloves. The documentation that was included with the budget indicates that Lowe's Home Improvement Store sells Blue Hawk 100-count nitrile cleaning gloves for $14.98 and will ship the individual box for $5.99, including sales tax the total is $22.75. The documentation does not indicate that the nitrile gloves were purchased or that this is the way that the nitrile gloves are usually purchased.

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Appeal Rights

An underground storage tank owner or operator may appeal this final decision to the Illinois Pollution Control Board pursuant to Sections 40 and 57.7(c)(4) of the Act by filing a petition for a hearing within 35 days after the date of issuance of the final decision. However, the 35-day period may be extended for a period of time not to exceed 90 days by written notice from the owner or operator and the Illinois EPA within the initial 35-day appeal period. If the owner or operator wishes to receive a 90-day extension, a written request that includes a statement of the date the final decision was received, along with a copy of this decision, must be sent to the Illinois EPA as soon as possible.

For information regarding the filing of an appeal, please contact:

John Therriault, Assistant Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, IL 60601
312/814-3620

For information regarding the filing of an extension, please contact:

Illinois Environmental Protection Agency
Division of Legal Counsel
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276
217/782-5544

Corrective Action Plan & Budget

Prepared for:

J.D. Streett & Company, Inc. (Herrin #233)

LPC # 1990400008 – Williamson County
701 South Park Ave.
Herrin, Illinois
IEMA #20131026

Prepared by:

CSD Environmental Services, Inc.
2220 Yale Boulevard
Springfield, IL 62702

Phone: (217) 522-4085
Fax: (217) 522-4087

Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

The Agency is authorized to require this information under Section 4 and Title XVI of the Environmental Protection Act (415 ILCS 5/4, 5/57 – 57.17). Failure to disclose this information may result in a civil penalty of not to exceed $50,000.00 for the violation and an additional civil penalty of not to exceed $10,000.00 for each day during which the violation continues (415 ILCS 5/42). Any person who knowingly makes a false material statement or representation, orally or in writing, in any label, manifest, record, report, permit, or license, or other document filed, maintained or used for the purpose of compliance with Title XVI commits a Class 4 felony. Any second or subsequent offense after conviction hereunder is a Class 3 felony (415 ILCS 5/44 and 57.17). This form has been approved by the Forms Management Center.

Leaking Underground Storage Tank Program
Corrective Action Plan

A. Site Identification

IEMA Incident # (6- or 8-digit): 20131026 IEPA LPC# (10-digit): 1990400008

Site Name: J.D. Streett & Company, Inc. (Herrin #233)

Site Address (Not a P.O. Box): 701 South Park Ave.

City: Herrin County: Williamson ZIP Code: 62948

B. Site Information

1. Will the owner or operator seek reimbursement from the Underground Storage Tank Fund? ⊘ Yes ○ No
2. If yes, is the budget attached? ⊘ Yes ○ No
3. Is this an amended plan? ○ Yes ⊘ No
4. Identify the material(s) released: Gasoline
5. This Corrective Action Plan is submitted pursuant to:
   - ○ a. 35 Ill. Adm. Code 731.166
   - ○ b. 35 Ill. Adm. Code 732.404
   - ⊘ c. 35 Ill. Adm. Code 734.335

C. Proposed Methods of Remediation

1. Soil Removal and replacement of contaminated soils
2. Groundwater City ordinance

D. Soil and Groundwater Investigation Results

(for incidents subject to 35 Ill. Adm. Code 731 only or 732 that were classified using Method One or Two, if not previously provided)

Provide the following:

1. Description of investigation activities performed to define the extents of soil and/or groundwater contamination;
2. Analytical results, chain-of-custody forms, and laboratory certifications;
3. Tables comparing analytical results to applicable remediation objectives;

4. Boring logs;
5. Monitoring well logs; and
6. Site maps meeting the requirements of 35 Ill. Adm. Code 732.110(a) or 734.440 and showing:
    a. Soil sample locations;
    b. Monitoring well locations; and
    c. Plumes of soil and groundwater contamination.

E. Technical Information - Corrective Action Plan

Provide the following:

1. Executive summary identifying the objectives of the corrective action plan and the technical approach to be utilized to meet such objectives;
    a. The major components (e.g., treatment, containment, removal) of the corrective action plan;
    b. The scope of the problems to be addressed by the proposed corrective action; and
    c. A schedule for implementation and completion of the plan;
2. Identification of the remediation objectives proposed for the site;
3. A description of the remedial technologies selected:
    a. The feasibility of implementing the remedial technologies;
    b. Whether the remedial technologies will perform satisfactorily and reliably until the remediation objectives are achieved; and
    c. A schedule of when the technologies are expected to achieve the applicable remediation objectives;
4. A confirmation sampling plan that describes how the effectiveness of the corrective action activities will be monitored during their implementation and after their completion;
5. A description of the current and projected future uses of the site;
6. A description of engineered barriers or institutional controls that will be relied upon to achieve remediation objectives:
    a. an assessment of their long-term reliability;
    b. operating and maintenance plans; and
    c. maps showing area covered by barriers and institutional controls;
7. The water supply well survey:
    a. Map(s) showing locations of community water supply wells and other potable wells and the setback zone for each well;
    b. Map(s) showing regulated recharge areas and wellhead protection areas;
    c. Map(s) showing the current extent of groundwater contamination exceeding the most stringent Tier 1 remediation objectives;
    d. Map(s) showing the modeled extent of groundwater contamination exceeding the most stringent Tier 1 remediation objectives;
    e. Tables listing the setback zone for each community water supply well and other potable water supply wells;
    f. A narrative identifying each entity contacted to identify potable water supply wells, the name and title of each person contacted, and any field observations associated with any wells identified; and
    g. A certification from a Licensed Professional Engineer or Licensed Professional Geologist that the survey was conducted in accordance with the requirements and that documentation submitted includes information obtained as a result of the survey (certification of this plan satisfies this requirement);

8. Appendices:
    a. References and data sources report that are organized; and
    b. Field logs, well logs, and reports of laboratory analyses;
9. Site map(s) meeting the requirements of 35 Ill. Adm. Code 732.110(a) or 734.440;
10. Engineering design specifications, diagrams, schematics, calculations, manufacturer's specifications, etc.;
11. A description of bench/pilot studies;
12. Cost comparison between proposed method of remediation and other methods of remediation;
13. For the proposed Tier 2 or 3 remediation objectives, provide the following:
    a. The equations used;
    b. A discussion of how input variables were determined;
    c. Map(s) depicting distances used in equations; and
    d. Calculations; and
14. Provide documentation to demonstrate the following for alternative technologies:
    a. The proposed alternative technology has a substantial likelihood of successfully achieving compliance with all applicable regulations and remediation objectives;
    b. The proposed alternative technology will not adversely affect human health and safety or the environment;
    c. The owner or operator will obtain all Illinois EPA permits necessary to legally authorize use of the alternative technology;
    d. The owner or operator will implement a program to monitor whether the requirements of subsection (14)(a) have been met;
    e. Within one year from the date of Illinois EPA approval, the owner or operator will provide to the Illinois EPA monitoring program results establishing whether the proposed alternative technology will successfully achieve compliance with the requirements of subsection (14)(a); and
    f. Demonstration that the cost of alternative technology will not exceed the cost of conventional technology and is not substantially higher than at least two other alternative technologies, if available and technically feasible.

F. Exposure Pathway Exclusion

Provide the following:

1. A description of the tests to be performed in determining whether the following requirements will be met:
    a. Attenuation capacity of the soil will not be exceeded for any of the organic contaminants;
    b. Soil saturation limit will not be exceeded for any of the organic contaminants;
    c. Contaminated soils do not exhibit any of the reactivity characteristics of hazardous waste per 35 Ill. Adm. Code 721.123;
    d. Contaminated soils do not exhibit a pH $\leq$ 2.0 or $\geq$ 12.5; and
    e. Contaminated soils which contain arsenic, barium, cadmium, chromium, lead, mercury, or selenium (or their associated salts) do not exhibit any of the toxicity characteristics of hazardous waste per 35 Ill. Adm. Code 721.124.
2. A discussion of how any exposure pathways are to be excluded.

G. Signatures

All plans, budgets, and reports must be signed by the owner or operator and list the owner's or operator's full name, address, and telephone number.

UST Owner or Operator

Name J.D. Streett & Company, Inc.
Contact James A. Schuering, CFO
Address 144 Weldon Parkway
City Maryland Heights
State Missouri
Zip Code 63043
Phone (314) 432-6600
Signature
Date 3/16/17

Consultant

Company CSD Environmental Services, Inc.
Contact Shane A. Thorpe
Address 2220 Yale Boulevard
City Springfield
State Illinois
Zip Code 62703
Phone (217) 522-4085
Email sthorpe@csdenviro.com
Signature
Date 3-23-2017

I certify under penalty of law that all activities that are the subject of this plan were conducted under my supervision or were conducted under the supervision of another Licensed Professional Engineer or Licensed Professional Geologist and reviewed by me; that this plan and all attachments were prepared under my supervision; that, to the best of my knowledge and belief, the work described in this plan has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 731, 732 or 734, and generally accepted standards and practices of my profession; and that the information presented is accurate and complete. I am aware there are significant penalties for submitting false statements or representations to the Illinois EPA, including but not limited to fines, imprisonment, or both as provided in Sections 44 and 57.17 of the Environmental Protection Act [415 ILCS 5/44 and 57.17].

Licensed Professional Engineer or Geologist

Name Joseph W. Truesdale
Company CSD Environmental Services, Inc.
Address 2220 Yale Boulevard
City Springfield
State Illinois
Zip Code 62703
Phone (217) 522-4085
Ill. Registration No. 062-056797
License Expiration Date Nov 30, 2017
Signature
Date 3/24/17

L.P.E. or L.P.G. Seal

RECEIVED
MAR 24 2017
IEPA/BOL

JOSEPH W. TRUESDALE
062-056797
LICENSED
PROFESSIONAL
ENGINEER
OF
ILLINOIS

D. Soil and Groundwater Investigation Results

Provide the following:

1. Description of investigation activities performed to define the extent of soil and/or groundwater contamination;

CSD Environmental Services, Inc. (CSD) and Heartland Drilling & Remediation, Inc. (HDR) installed soil boring B-1 just west of the underground storage tank (UST) field, to a depth of twelve feet below ground surface on September 17, 2013. The work was performed as part of a site assessment being completed on behalf of the owner/operator. Based upon elevated organic vapor measurements detected within the soil cores from B-1, a release of petroleum was reported to the Illinois Emergency Management Agency (IEMA) at 11:39 am on September 17, 2013. IEMA assigned incident number 20130126 to the release.

Once it was determined that a release had occurred, the owner evaluated their options and decided to remove the USTs and close the facility. A permit to remove the USTs was submitted to the Illinois Office of the State Fire Marshal (OSFM) on September 24, 2013. The permit was approved by the OSFM the same day. UST removal was scheduled for October 22, 2013.

For clarification, two 8,000 gallon gasoline USTs were present at the subject site. A release of gasoline from Tank #1 was reported to IEMA by the owner on June 27, 2008. Incident number 20080942 was assigned to that release. Tank #1 was abandoned-in-place using inert materials on September 8, 2008. The Illinois Environmental Protection Agency (IEPA) issued a non-LUST letter to the owner for IEMA #20080942 on September 19, 2008. Since the IEPA determined that a LUST release did not occur from Tank #1, it is assumed that all subsurface gasoline contamination present at the site is a result of the release reported from Tank #2 (IEMA #20130126), since Tank #1 was abandoned-in-place before the IEPA issued the non-LUST letter.

According to the OSFM database, both USTs were installed in 1961. Both tanks were removed from the site by Robt. L. Ellis & Sons of Murphysboro, Illinois on October 22, 2013, under OSFM permit #00972-2013REM. CSD personnel were on-site to provide oversight for the owner and collect soil samples from the excavation. Mr. Louis Hertter, OSFM Tank Specialist, was present to ensure safe conditions were maintained during tank removal activities. Mr. Robert Mileur, an Environmental Protection Specialist from the IEPA's Marion office, made a site visit as well.

Backfill removed from the tank field to access the USTs was stockpiled adjacent to the excavation and returned upon removal of the USTs. One soil sample (BF-1) was collected from the backfill material that was returned to the excavation, pursuant to 35 IAC Part 734.210(h)(1)(D).

Both tanks were inspected upon their removal from the excavation. Tank #1 was found to be in fairly sound structural condition, though one spot on the bottom of the tank's west end appeared to have been plugged when the tank interior was lined with fiberglass. Tank #2 had several holes in the bottom of the tank. However, because the tank had been abandoned-in-place since 2008, it's not possible to determine how much of the corrosion occurred before and/or after the abandonment.

Both tanks were buried deeper than normal, though it's possible that this was standard practice at the time they were installed. The depth to the top of each tank was approximately four feet below ground surface. Each tank measured 8 feet in diameter and 21 feet in length. Upon removal of tank #1, backfill beneath the tank was relocated in order to obtain soil samples from native material beneath the UST. However, a concrete pad was found to exist beneath the USTs. Therefore, floor samples were not collected from the excavation.

A sidewall sample could not be obtained from the west wall of the excavation due to caving soils and the presence of the backfill stockpile along that wall. However, boring B-1 was placed in this same vicinity. The laboratory report from sample B-1A had previously verified contamination is present along the west wall of the tank excavation. Two soil samples were collected from the north wall (NW-1 and NW-2) and south wall (SW-1 and SW-2), while one sample was collected from the east wall (EW-1). Each of the soil samples collected from the excavation exceeded one or more applicable Tier 1 soil remediation objective (SRO).

The product piping connected to Tank #1 was a flexible, double walled piping. The inner piping had been pulled from the ground and cut up by the contractor the previous day. Inspection of the pipe pulled from the ground revealed that it was in sound structural condition. There was not any sort of excavation made in order to remove the product piping, therefore samples could not be obtained from the piping "trench".

Each sidewall sample was collected from a depth of approximately six feet below surface, since boring B-1 encountered groundwater in native soils at a depth of 6.5 feet. There was some water present in the UST excavation when the tanks were uncovered. However, groundwater was not infiltrating the excavation while it was open, indicating the water observed in the excavation was at least partially attributable to trapped surface water runoff. Free product was not observed in the excavation, though significant organic vapors were present.

CSD, on behalf of the UST owner, submitted a 45-Day Report to the IEPA on November 1, 2013. The 45-Day Report included a Professional Engineer Certification for a Stage 1 Site Investigation Plan and Budget. The IEPA approved the 45-Day Report and the Stage 1 Site Investigation Plan and Budget in a letter to the owner dated January 2, 2014.

CSD and HDR mobilized to the site on July 1, 2015 to begin the Stage 1 investigation. A total of fourteen soil borings (MW-1 through MW-5 and B-2 through B-10) were installed as part of the Stage 1 investigation. A total of twenty-five soil samples were collected from the Stage 1 boring and monitoring well locations. The soil samples were submitted to Teklab, Inc. for

analysis of benzene, toluene, ethylbenzene and total xylenes (BTEX) and methyl-tertiary butyl ether (MTBE). CSD personnel returned to the site on July 13, 2015 to survey elevations and collect depth to groundwater measurements and samples from MW-1 through MW-5. The groundwater samples were also submitted to Teklab, Inc. for BTEX and MTBE analysis.

The results of the Stage 1 investigation were provided, along with a proposal for additional on-site investigation, within the Stage 2 Plan and Budget submitted by CSD on August 4, 2015. The Stage 2 Plan and Budget was approved by the IEPA in a letter to the owner dated October 15, 2015.

CSD and HDR again mobilized to the site on November 12, 2015 to begin the Stage 2 site investigation. A total of nine soil borings (B-11 through B-13, MW-6 through MW-10 and Tier 2) were installed as part of the Stage 2 investigation. Fourteen soil samples were collected for laboratory analysis of BTEX and MTBE. In addition, one soil sample (Tier 2A) was submitted to Geotechnology, Inc. in Fairview Heights, Illinois for physical analysis necessary to develop site-specific Tier 2 soil remediation objectives (SROs).

A Stage 3 Site Investigation Plan and Budget documenting the investigation work completed during Stage 2, along with a proposal to define the extent of off-site soil (above the groundwater table) and groundwater contamination was submitted to the IEPA on December 22, 2015. The IEPA approved the Stage 3 Site Investigation Plan and Budget in a letter to the owner dated February 11, 2016.

The City of Herrin was contacted in order to obtain access to the locations of the off-site borings and monitoring wells. Specifically, Mr. Tom Somers, City of Herrin Director of Public Works, was contacted and provided the proposed locations and an explanation of why the work was necessary. Mr. Somers gave approval for all of the proposed borings and monitoring wells, provided that best efforts were made to avoid damage to underground utilities.

Prior to beginning field activities, CSD provided notification to the IEPA Project Manager (Mr. Brad Dilbaitis) and to Mr. Robert Mileur, an Environmental Protection Specialist from the IEPA's Marion office. These notifications were made in accordance with the IEPA's requirement contained in the February 11, 2016 approval letter. Mr. Mileur was present during the majority of the drilling work completed as part of Stage 3.

CSD and HDR mobilized to the site on September 14, 2016 to begin the Stage 3 investigation. A total of nine soil borings (B-14 through B-17 and MW-11 through MW-15) were advanced on September 14 and 15, 2016. Boring locations MW-11 through MW-15 were completed as two-inch PVC monitoring wells in order to define the extent of off-site groundwater contamination.

A total of sixteen soil samples were collected from the Stage 3 boring locations and submitted to Teklab, Inc. for laboratory BTEX and MTBE analysis. Each sample was collected from a location above the depth where groundwater was noted within the soil cores,

in accordance with the approved plan and budget.

CSD personnel returned to the site on September 21, 2016 to survey elevations of the new monitoring wells, collect depth to groundwater measurements from all wells and to collect groundwater samples from the five new monitoring well locations (MW-11 through MW-15). The groundwater samples were also submitted to Teklab, Inc. for laboratory analysis of BTEX and MTBE.

Based upon the results of the Stage 3 Investigation, a Site Investigation Completion Report (SICR) was submitted to the IEPA on October 26, 2016. The IEPA approved the SICR in a letter to the owner dated December 20, 2016.

Figure 1.0 shows the location of the site plotted on a portion of the USGS 7.5-minute topographic map of Herrin, Illinois. **Figure 2.0** provides the locations of the former USTs and all Early Action and Site Investigation soil samples. **Table 1.0** summarizes the soil borings advanced at the site to date.

Table 1.0 - Summary of Soil Borings Completed to Date

Soil Sample	Soil Sample Depth	Boring Name	Boring Depth	GW Depth in Boring	Date / Stage
B-1A	4 ft.	B-1	12.0 ft.	6.5 ft.	9/17/2013 – Early Action
MW-1A	3 ft.	MW-1	13.0 ft.	5.5 ft.	07/01/2015 – Stage 1
MW-1B	5.25 ft.				
MW-2A	2.5 ft.	MW-2	12.0 ft.	7.0 ft.	07/01/2015 – Stage 1
MW-2B	6.5 ft.				
MW-3A	4 ft.	MW-3	12.0 ft.	6.5 ft.	07/01/2015 – Stage 1
MW-3B	6 ft.				
MW-4A	2.5 ft.	MW-4	12.0 ft.	5.0 ft.	07/01/2015 – Stage 1
MW-5A	2.5 ft.	MW-5	13.0 ft.	6.5 ft.	07/01/2015 – Stage 1
MW-5B	6.0 ft.				
B-2A	4.0 ft.	B-2	8.0 ft.	5.0 ft.	07/01/2015 – Stage 1
B-3A	3.0 ft.	B-3	8.0 ft.	7.5 ft.	07/01/2015 – Stage 1
B-3B	6.0 ft.				
B-4A	5.0 ft.	B-4	8.0 ft.	6.5 ft.	07/01/2015 – Stage 1
B-4B	6.0 ft.				
B-5A	4.0 ft.	B-5	8.0 ft.	6.5 ft.	07/01/2015 – Stage 1
B-5B	6.0 ft.				
B-6A	3.0 ft.	B-6	8.0 ft.	6.5 ft.	07/01/2015 – Stage 1
B-6B	6.0 ft.				
B-7A	4.0 ft.	B-7	8.0 ft.	6.5 ft.	07/01/2015 – Stage 1
B-7B	6.0 ft.				
B-8A	5.0 ft.	B-8	8.0 ft.	6.5 ft.	07/01/2015 – Stage 1
B-8B	6.0 ft.				
B-9A	5.0 ft.	B-9	8.0 ft.	6.5 ft.	07/01/2015 – Stage 1
B-9B	6.0 ft.				

Soil Sample	Soil Sample Depth	Boring Name	Boring Depth	GW Depth in Boring	Date / Stage
B-10A	4.0 ft.	B-10	8.0 ft.	5.0 ft.	07/01/2015 – Stage 1
Tier 2A*	3.0 – 4.0 ft.	Tier 2	4.0 ft.	None	07/01/2015 – Stage 1
MW-6A	3.0 ft.	MW-6	12.0 ft.	6.0 ft.	11/12/2015 – Stage 2
MW-6B	5.5 ft.				
MW-7A	3.5 ft.	MW-7	13.0 ft.	4.5 ft.	11/12/2015 – Stage 2
MW-8A	3.5 ft.	MW-8	12.0 ft.	7.5 ft.	11/12/2015 – Stage 2
MW-8B	7.0 ft.				
MW-9A	4.0 ft.	MW-9	13.0 ft.	7.0 ft.	11/12/2015 – Stage 2
MW-9B	6.5 ft.				
MW-10A	4.0 ft.	MW-10	11.0 ft.	6.0 ft.	11/12/2015 – Stage 2
MW-10B	5.5 ft.				
B-11A	2.5 ft.	B-11	8.0 ft.	7.0 ft.	11/12/2015 – Stage 2
B-11B	6.5 ft.				
B-12A	4.0 ft.	B-12	8.0 ft.	6.5 ft.	11/12/2015 – Stage 2
B-12B	6.0 ft.				
B-13A	3.0 ft.	B-13	8.0 ft.	5.0 ft.	11/12/2015 – Stage 2
MW-12A	2.5 ft.	MW-12	12.0 ft.	7.0 ft.	09/14/2016 – Stage 3
MW-12B	6.5 ft.				
MW-13A	2.5 ft.	MW-13	12.0 ft.	8.5 ft.	09/14/2016 – Stage 3
MW-13B	7.5 ft.				
MW-14A	2.5 ft.	MW-14	12.0 ft.	7.5 ft.	09/14/2016 – Stage 3
MW-14B	6.5 ft.				
MW-15A	4.0 ft.	MW-15	15.0 ft.	6.5 ft.	09/15/2016 – Stage 3
MW-15B	6.0 ft.				
B-14A	3.5 ft.	B-14	12.0 ft.	8.5 ft.	09/14/2016 – Stage 3
B-14B	7.5 ft.				
B-15A	3.5 ft.	B-15	12.0 ft.	8.5 ft.	09/14/2016 – Stage 3
B-15B	7.5 ft.				
B-16A	3.5 ft.	B-16	12.0 ft.	9.0 ft.	09/14/2016 – Stage 3
B-16B	7.5 ft.				
B-17A	2.5 ft.	B-17	12.0 ft.	9.0 ft.	09/14/2016 – Stage 3
B-17B	7.5 ft.				

*-sample was analyzed for geotechnical parameters only

2. Analytical results, chain-of-custody forms, and laboratory certifications;

Copies of analytical results, chain-of-custody forms and laboratory certifications for all sample results have been provided in previous reports. They have not been duplicated for this Corrective Action Plan, although the results are summarized in **Tables 2.0** and **3.0**.

3. Tables comparing analytical results to applicable remediation objectives;

Table 2.0 - Summary of Soil Results Compared to Tier 1 SROs (mg/kg)

Sample ID	Depth (ft.)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
September 17, 2013 (Early Action)						
B-1A	4	**15.400**	**94.300**	**125.000**	**742.000**	<0.213
October 22, 2013 (Early Action)						
BF-1	N/A	**0.937**	0.855	5.750	**7.410**	<0.0795
SW-1	6	**0.872**	0.162	3.550	**11.900**	<0.0465
SW-2	6	**2.910**	**21.300**	**15.200**	**68.500**	<0.166
EW-1	6	**27.000**	**105.000**	**116.000**	**532.000**	<0.938
NW-1	6	**8.830**	**71.900**	**69.500**	**312.000**	**<1.890**
NW-2	6	**2.140**	**13.500**	**14.100**	**67.700**	<0.0943
July 1, 2015 (Stage 1 Site Investigation)						
MW-1A	3	<0.0008	0.0009	0.0013	0.0081	<0.0016
MW-1B	5.25	0.0009	0.0022	0.0012	0.0067	<0.0016
MW-2A	2.5	<0.001	<0.0052	0.001	0.0063	<0.0021
MW-2B	6.5	<0.0211	0.022	<0.105	0.096	**0.515**
MW-3A	4	**14.900**	**113.000**	**99.400**	**450.000**	<0.185
MW-3B	6	**10.800**	**65.200**	**22.200**	**109.000**	**1.750**
MW-4A	2.5	<0.0005	0.0011	<0.005	0.0053	0.0018
MW-5A	2.5	<0.0015	<0.0076	<0.0076	0.005	<0.003
MW-5B	6	<0.0008	<0.004	<0.004	0.0021	<0.0016
B-2A	4	**3.030**	4.460	**23.900**	**115.000**	**1.110**
B-3A	3	**2.700**	**25.400**	**15.400**	**76.000**	**0.498**
B-3B	6	**12.300**	6.990	**45.800**	**217.000**	<0.175
B-4A	5	**2.830**	<1.160	**37.500**	**51.400**	**<0.462**
B-4B	6	**1.130**	0.0039	3.090	4.470	<0.0017
B-5A	4	**5.980**	**34.400**	**29.000**	**132.000**	**<0.842**
B-5B	6	**3.160**	2.590	8.110	**35.600**	**1.660**
B-6A	3	**0.535**	0.037	1.060	0.444	0.116
B-6B	6	**1.070**	0.117	1.800	**5.640**	**0.614**
B-7A	4	**0.218**	0.879	**33.800**	**180.000**	<0.181
B-7B	6	**0.760**	**17.100**	7.070	**34.700**	<0.0414
B-8A	5	**0.238**	0.243	8.790	**24.200**	0.138
B-8B	6	**0.202**	0.056	**19.500**	**39.300**	<0.0852
B-9A	5	**0.615**	0.477	7.250	**17.000**	0.306
B-9B	6	**1.150**	0.630	10.000	**40.300**	**0.380**
B-10A	4	**0.105**	0.331	0.369	2.560	<0.0605
November 11, 2015 (Stage 2 Site Investigation)						
B-11A	2.5	<0.001	<0.0048	<0.0048	<0.0048	0.0005
B-11B	6.5	<0.0008	<0.0041	<0.0041	<0.0041	0.0023
B-12A	4	**0.111**	<0.242	2.380	0.110	<0.0967
B-12B	6	<0.0008	<0.004	0.0012	<0.004	0.0157
B-13A	2.5	<0.0009	<0.0044	<0.0044	<0.0044	<0.0018

Sample ID	Depth (ft.)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MW-6A	3	0.002	<0.0047	0.0013	0.0023	<0.0019
MW-6B	5.5	<0.0008	<0.004	<0.004	<0.004	<0.0016
MW-7A	3.5	0.0062	0.0063	0.0066	0.0432	<0.0018
MW-8A	3.5	0.0017	0.0045	<0.0044	0.0025	<0.0018
MW-8B	7	**<0.0912**	<0.456	10.400	**11.700**	<0.182
MW-9A	4	**1.090**	0.060	0.863	1.790	**0.997**
MW-9B	6.5	**4.940**	0.270	**36.000**	**43.300**	<0.180
MW-10A	4	**0.0978**	0.0044	0.186	0.0026	0.171
MW-10B	5.5	**0.048**	0.0008	0.138	0.0052	**0.322**
September 14 & 15, 2016 (Stage 3 Site Investigation)						
B-14A	3.5	<0.0009	<0.0043	<0.0043	<0.0043	<0.0017
B-14B	7.5	<0.0009	<0.0045	<0.0045	<0.0045	<0.0018
B-15A	3.5	<0.0009	<0.0043	<0.0043	<0.0043	<0.0017
B-15B	7.5	<0.0009	<0.0044	<0.0044	<0.0044	0.0012
B-16A	3.5	<0.0009	<0.0044	<0.0044	<0.0044	<0.0018
B-16B	7.5	<0.0008	<0.0040	<0.0040	<0.0040	0.0009
B-17A	2.5	<0.0009	<0.0044	<0.0044	<0.0044	<0.0017
B-17B	7.5	<0.0008	<0.0041	<0.0041	<0.0041	<0.0016
MW-12A	2.5	0.0005	<0.0043	<0.0043	<0.0043	<0.0017
MW-12B	6.5	<0.0008	<0.0040	<0.0040	<0.0040	<0.0016
MW-13A	2.5	<0.001	<0.0049	<0.0049	<0.0049	<0.0020
MW-13B	7.5	<0.0008	<0.0040	<0.0040	<0.0040	0.0015
MW-14A	2.5	<0.0008	<0.0041	<0.0041	<0.0041	<0.0016
MW-14B	6.5	<0.0008	<0.0038	<0.0038	<0.0038	<0.0015
MW-15A	4	<0.0009	<0.0045	<0.0045	<0.0045	<0.0018
MW-15B	6	<0.0008	<0.0042	<0.0042	<0.0042	<0.0017
Tier 1 SRO		**0.030**	**13.0**	**12.0**	**5.60**	**0.320**

Samples exceeding Tier 1 SROs are shown in bold & highlighted.

Table 3.0 - Summary of Site Investigation Groundwater BTEX & MTBE Results (mg/L)

Well ID	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
July 13, 2015 (Stage 1 Site Investigation)					
MW-1	<0.002	<0.005	<0.005	<0.005	0.0012
MW-2	<0.002	<0.005	<0.005	<0.005	**0.304**
MW-3	**11.900**	**23.700**	**4.290**	**20.500**	**7.270**
MW-4	<0.002	0.0011	<0.005	<0.005	<0.002
MW-5	<0.002	<0.005	<0.005	<0.005	<0.002
November 19, 2015 (Stage 2 Site Investigation)					
MW-6	<0.002	<0.005	<0.005	<0.005	<0.002
MW-7	<0.002	<0.005	<0.005	<0.005	**0.331**
MW-8	<0.002	<0.005	<0.005	<0.005	**0.0788**
MW-9	**0.126**	0.0028	0.0466	0.159	**0.224**
MW-10	**0.103**	0.0016	0.103	0.0169	**2.020**
September 21, 2016 (Stage 3 Site Investigation)					
MW-11	<0.002	<0.005	<0.005	<0.005	0.0045
MW-12	<0.002	<0.005	<0.005	<0.005	<0.002
MW-13	<0.002	<0.005	<0.005	<0.005	0.0049
MW-14	<0.002	<0.005	<0.005	<0.005	0.0026
MW-15	<0.002	<0.005	<0.005	<0.005	0.0005
Class I GRO	**0.005**	**1.000**	**0.700**	**10.000**	**0.070**
Class II GRO	**0.025**	**2.500**	**1.000**	**10.000**	**0.070**

Samples exceeding Class I GROs are shown in bold. Samples exceeding Class II GROs are shown in bold & highlighted.

Table 4.0 - Summary of On-Site Soil Results Compared to Tier 2 SROs (mg/kg)

Sample ID	Depth (ft.)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
September 17, 2013 (Early Action)						
B-1A	4	**15.400**	**94.300**	**125.000**	**742.000**	<0.213
October 22, 2013 (Early Action)						
BF-1	N/A	**0.937**	0.855	5.750	**7.410**	<0.0795
SW-1	6	**0.872**	0.162	3.550	**11.900**	<0.0465
SW-2	6	**2.910**	**21.300**	**15.200**	**68.500**	<0.166
EW-1	6	**27.000**	**105.000**	**116.000**	**532.000**	<0.938
NW-1	6	**8.830**	**71.900**	**69.500**	**312.000**	**<1.890**
NW-2	6	**2.140**	**13.500**	**14.100**	**67.700**	<0.0943
July 1, 2015 (Stage 1 Site Investigation)						
MW-1A	3	<0.0008	0.0009	0.0013	0.0081	<0.0016
MW-1B	5.25	0.0009	0.0022	0.0012	0.0067	<0.0016
MW-2A	2.5	<0.001	<0.0052	0.001	0.0063	<0.0021
MW-2B	6.5	<0.0211	0.022	<0.105	0.096	**0.515**
MW-3A	4	**14.900**	**113.000**	**99.400**	**450.000**	<0.185
MW-3B	6	**10.800**	**65.200**	**22.200**	**109.000**	**1.750**
MW-4A	2.5	<0.0005	0.0011	<0.005	0.0053	0.0018
MW-5A	2.5	<0.0015	<0.0076	<0.0076	0.005	<0.003
MW-5B	6	<0.0008	<0.004	<0.004	0.0021	<0.0016
B-2A	4	**3.030**	4.460	**23.900**	**115.000**	**1.110**
B-3A	3	**2.700**	**25.400**	**15.400**	**76.000**	**0.498**
B-3B	6	**12.300**	6.990	**45.800**	**217.000**	<0.175
B-4A	5	**2.830**	<1.160	**37.500**	**51.400**	**<0.462**
B-4B	6	**1.130**	0.0039	3.090	4.470	<0.0017
B-5A	4	**5.980**	**34.400**	**29.000**	**132.000**	**<0.842**
B-5B	6	**3.160**	2.590	8.110	**35.600**	**1.660**
B-6A	3	**0.535**	0.037	1.060	0.444	0.116
B-6B	6	**1.070**	0.117	1.800	**5.640**	**0.614**
B-7A	4	**0.218**	0.879	**33.800**	**180.000**	<0.181
B-7B	6	**0.760**	**17.100**	7.070	**34.700**	<0.0414
B-8A	5	**0.238**	0.243	8.790	**24.200**	0.138
B-8B	6	**0.202**	0.056	**19.500**	**39.300**	<0.0852
B-9A	5	**0.615**	0.477	7.250	**17.000**	0.306
B-9B	6	**1.150**	0.630	10.000	**40.300**	**0.380**
B-10A	4	**0.105**	0.331	0.369	2.560	<0.0605
November 11, 2015 (Stage 2 Site Investigation)						
B-11A	2.5	<0.001	<0.0048	<0.0048	<0.0048	0.0005
B-11B	6.5	<0.0008	<0.0041	<0.0041	<0.0041	0.0023
B-12A	4	**0.111**	<0.242	2.380	0.110	<0.0967
B-12B	6	<0.0008	<0.004	0.0012	<0.004	0.0157
B-13A	2.5	<0.0009	<0.0044	<0.0044	<0.0044	<0.0018
MW-6A	3	0.002	<0.0047	0.0013	0.0023	<0.0019
MW-6B	5.5	<0.0008	<0.004	<0.004	<0.004	<0.0016
MW-7A	3.5	0.0062	0.0063	0.0066	0.0432	<0.0018
MW-8A	3.5	0.0017	0.0045	<0.0044	0.0025	<0.0018
MW-8B	7	**<0.0912**	<0.456	10.400	**11.700**	<0.182
MW-9A	4	**1.090**	0.060	0.863	1.790	**0.997**
MW-9B	6.5	**4.940**	0.270	**36.000**	**43.300**	<0.180
MW-10A	4	**0.0978**	0.0044	0.186	0.0026	0.171

Sample ID	Depth (ft.)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MW-10B	5.5	**0.048**	0.0008	0.138	0.0052	**0.322**
Tier 2 I/C Inhalation		**6.0**	**650.0***	**400.0***	**280.0[1]**	**8800.0***
Tier 2 I/C Migration to GW (Class I)		**0.10**	**54.0**	**74.0**	**110.0[1]**	**0.45**
Tier 2 Construction Worker Inhalation		**9.0**	**860.0**	**237.0**	**116.0**	**140.0***
Csat (Inhalation)		**800**	**580**	**350**	**280**	**8400**
Csat (Mig. to GW)		**580**	**290**	**150**	**110**	**11000**

*-Tier 1 SRO was not exceeded, therefore a Tier 2 SRO is not proposed.
1 – Calculated Tier 2 SRO exceeds Csat, therefore Csat will be used as the Tier 2 SRO (35 IAC 742.220)
Samples exceeding Tier 1 SROs are shown in bold. Samples exceeding one or more Tier 2 SROs are shown in bold and highlighted. Default Csat listed is the value for outdoor inhalation listed in 35 IAC Part 742, Appendix A, Table A for each applicable indicator contaminant.

4. Boring logs;

Boring logs from previous investigations are provided in **Appendix A.**

5. Monitoring well logs;

Monitoring well completion reports from previous investigations are provided in **Appendix B.**

6. Site maps meeting the requirements of 35 Ill. Adm. Code 732.110(a) or 734.440 and showing:

   a. Soil sample locations;
   b. Monitoring well locations;
   c. The plume of soil and groundwater contamination based on analytical results.

Refer to **Figures 2** through **13.**

E. Technical Information - Corrective Action Plan

Provide the following:

1. Executive summary identifying the objectives of the corrective action plan and the technical approach to be utilized to meet such objectives;

   a. The major components (e.g., treatment, containment, removal) of the corrective action plan;

Early Action and Site Investigation soil and groundwater samples have confirmed that significant contaminant mass remains on the property. This Corrective Action Plan (CAP) proposes excavation and disposal of on-site source soils exceeding Tier 2 SROs for industrial/commercial and/or construction worker inhalation, in order to reduce contaminant mass and promote natural attenuation of residual soil and groundwater contamination.

The City of Herrin has adopted an ordinance prohibiting the installation of wells for potable use, which would be used to eliminate the groundwater ingestion pathway. Therefore, the limits of the proposed excavation were designed to eliminate all Tier 2 SRO exceedences for inhalation in soils above the water table (as currently defined by the Illinois EPA). Several soil samples exceeded Tier 2 SROs for industrial/commercial and/or construction worker inhalation for benzene and xylenes. These locations are all within the proposed excavation limits.

Highway authority agreements (HAAs) may ultimately be necessary for a portion of the City alleyway adjacent to the western property line as well as a portion of Ash Street right-of-way adjacent to the northern property line. Soil samples collected from borings (B-14 through B-17) along the western edge of the city alleyway, indicate that contamination is not present above the water table in that area. Review of the boring logs from B-14 through B-17 also indicate that organic vapors were absent below the water table to a depth of twelve feet, where the borings were terminated. However, sample results from borings (B-2, B-3 & MW-9) completed along the western property line of the site indicate that contamination may be present above Tier 1 SROs at the property line. Results of excavation sidewall samples will be used to determine if a HAA will be necessary for the alleyway.

Likewise, each of the monitoring wells (MW-12 and MW-13) installed within the northern right-of-way of Ash Street were also void of any organic vapor readings. Analytical results from the soil samples collected above the water table in that area were below Tier 1 SROs for all applicable indicator contaminants. The limits of the HAAs will be based upon analytical results collected on-site to date, along with the results of excavation sidewall samples obtained during corrective action. Contamination does not appear to have migrated off-site to the east or south as a result of the release. Therefore, a HAA will not be necessary for Park Avenue right-of-way.

The area proposed for excavation is shown on **Figure 10**. AutoCAD calculates the surface area of the excavation to be 3,726 ft.^{2}. Contaminated soil samples have been collected from depths as shallow as three feet below ground surface, although significant organic vapor measurements have been observed at two feet below ground surface. Therefore, there is not any clean overburden material proposed for excavation and replacement.

One soil boring (B-1) was advanced during Early Action. Groundwater was noted at a depth of 6.5 feet below ground surface in boring B-1. A total of fourteen soil borings were advanced during the Stage 1 site investigation. The average depth groundwater was noted in the soil cores from the Stage 1 borings was 6.21 feet.

A total of eight soil borings were advanced during both the Stage 2 and Stage 3 site investigations. During Stage 2, the average depth that groundwater was noted in the soil cores was 6.19 feet. During Stage 3, the average depth that groundwater was noted in the soil cores was 8.06 feet. Therefore, the proposed depth of the excavation is nine feet below ground surface to account for water table fluctuations.

Based upon observations made when the underground storage tanks were removed, groundwater infiltration is not expected to be a concern. While some water was observed in the tank field when the USTs were uncovered, groundwater was not infiltrating the excavation following tank removal. It is believed that the water observed when the tanks were uncovered was the result of surface water infiltration trapped within the porous backfill material. Therefore, disposal of contaminated groundwater is not proposed.

The following quantities are proposed for budgetary purposes:

Contaminated Soil for Landfill Disposal
3726 ft.^{2} x 9 ft. = 33,534 ft.^{3} ÷ 27 ft.^{3}/yd.^{3} = 1242 yd.^{3} x 1.05 (fluff factor) = 1304 yd.^{3}

For budgetary purposes, the quantity of clean backfill material to be placed in the excavation is equal to the quantity of contaminated soil proposed for landfill disposal.

The majority of the proposed corrective action excavation area is (or was) paved with concrete. Pavement replacement is proposed for the area where pavement was previously removed during Early Action (covering the USTs) and additional concrete that will be removed to access the excavation area. A portion of the corrective action excavation is covered with aggregate. Pavement is not proposed in this area. AutoCAD calculates the area proposed for pavement replacement at 2,703 square feet. Photographs provided in the 45-Day Report and soil boring logs provided in **Appendix A** document the presence of concrete where it is being proposed for replacement (see **Figure 12**).

b. The scope of the problems to be addressed by the proposed corrective action plan; and

The activities proposed in this CAP have been designed to eliminate on-site exceedences of site-specific Tier 2 SROs for all pathways with the exception of the soil component of the groundwater ingestion pathway, which has effectively been eliminated by a City ordinance prohibiting the installation of groundwater wells for potable use. Any off-site soil contamination (above the "groundwater table") remaining after completion of excavation activities will be addressed through a highway authority agreement with the City of Herrin.

The groundwater ingestion exposure route is eliminated by the City of Herrin's groundwater ordinance (No. 11-2010), which prohibits use of groundwater as a potable supply. A copy of the ordinance was provided in the Site Investigation Completion Report (SICR). A certified copy of the groundwater ordinance will be provided within a future Corrective Action Completion Report (CACR). The ordinance has previously been approved by the Agency for use as an institutional control.

Preliminary groundwater modeling has been completed using Equation R26 contained in 35 IAC Part 742 Appendix C, Table C. The predicted maximum extent of groundwater contamination based upon the highest historical concentrations of dissolved phase

contaminants is 1,185 feet downgradient of monitoring well MW-3. A conservative hydraulic conductivity value of 3.81 x 10^{-4} cm/sec was used in the preliminary R26 analysis (**Appendix C**). This value was derived from the results of the particle size distribution completed on sample Tier 2A, which determined the soils were classified as Silt Loam. However, the Tiered Approach to Corrective Action Objectives (35 IAC Part 742) regulations require a site-specific value obtained from one of a Flexible Wall Permeameter, Pump Test or Slug Test.

In order to meet regulatory requirements, an in-situ hydraulic conductivity test is proposed as part of corrective action activities. The in-situ hydraulic conductivity value would be used within Equation R26 to finalize groundwater modeling and determine which properties within the area of the groundwater ordinance will need to be notified of potential groundwater contamination.

c. A schedule for implementation and completion of the plan;

The owner estimates that the proposed excavation activities would begin within 90 days of receipt of a letter approving the corrective action plan and budget. This timeframe would allow for selection and scheduling of excavation and trucking contractors, landfill disposal sample collection and landfill arrangements. In addition, monitoring wells (MW-3 and MW-9) located within the proposed excavation would be properly abandoned prior to excavation activities to avoid contaminant migration.

It is estimated that the proposed excavation and backfilling activities would be completed within two to three weeks of commencing work. An additional two week period would be necessary to allow the laboratory sufficient time to provide results of soil floor and sidewall samples.

A revised Corrective Action Plan and Budget documenting the work, summarizing the results of excavation samples and proposing any necessary Environmental Land Use Controls would be submitted within 90 days of the receipt of analytical results from the excavation. Therefore, it is estimated that the revised Corrective Action Plan and Budget would be submitted approximately 8 months from the date of approval.

Factors such as weather and subcontractor availability may alter the proposed corrective action schedule.

2. Identification of the remediation objectives proposed for the site;

On-site remediation objectives are Tier 2 Industrial/Commercial for soil (see **Table 4.0**) and Class I (by default) for groundwater (see **Table 3.0**). Off-site remediation objectives are Tier 1 for soil (see **Table 2.0**) and Class I for groundwater (see **Table 3.0**).

3. A description of the remedial technologies selected:

a. The feasibility of implementing the remedial technologies;

The soils proposed for off-site disposal consist mainly of fine-grained silts and clays, which are well suited for excavation. Dig and haul is generally accepted as the most feasible remediation strategy for these types of soils.

b. Whether the remedial technologies will perform satisfactorily and reliably until the remediation objectives are achieved; and

Removal and off-site disposal provides an immediate means of reaching applicable soil remediation objectives for that material which is accessible. This reduction in contaminant mass will also eliminate the possibility of additional contaminant migration from the source.

c. A schedule of when the technologies are expected to achieve the applicable remediation objectives.

Removal and off-site disposal provides an immediate means of reaching applicable soil remediation objectives for that material which is accessible. Remaining soil and/or groundwater contamination will be addressed with a Highway Authority Agreement (HAA) and the City of Herrin's existing groundwater ordinance.

4. A confirmation sampling plan that describes how the effectiveness of the corrective action activities will be monitored during their implementation and after their completion;

In order to verify that remaining soil concentrations are below applicable Tier 2 industrial/commercial SROs on-site and Tier 1 residential SROs off-site, soil sampling is proposed from the floor and sidewalls of the excavation. Each soil sample would be analyzed for BTEX and MTBE by an accredited laboratory. The proposed excavation sampling plan is provided in **Figure 11**. Given that the corrective action has not been designed to remediate groundwater contamination, additional groundwater monitoring is not proposed.

The results of the excavation soil sampling will be evaluated to determine what environmental land use controls (ELUCs) are necessary to obtain a No Further Remediation (NFR) letter.

5. A description of the current and projected future uses of the site;

The property is currently vacant and listed for sale. Therefore, a description of future property use cannot be provided.

6. A description of engineered barriers or institutional controls that will be relied upon to achieve remediation objectives;

Remaining on-site soils that exceed only Tier 2 SROs for the migration to groundwater exposure route would be addressed by utilizing the existing City of Herrin groundwater ordinance. Off-site properties that exceed Tier 1 SROs for the migration to groundwater exposure route or applicable GROs would be provided notice pursuant to 35 IAC Part 742.1015(c). The proposed corrective action has been designed to remediate all on-site, Tier 2 remediation objectives for construction worker and industrial/commercial inhalation.

a. an assessment of their long-term reliability;

Any restrictions relied upon would remain effective in perpetuity or until a satisfactory demonstration is made to the Illinois EPA that the restriction is no longer necessary.

b. operating and maintenance plans; and

N/A

c. maps showing area covered by barriers and institutional controls;

N/A at this time.

7. The water supply well survey;

a. Map(s) showing locations of community water supply wells and other potable wells and the setback zone for each well;

Site reconnaissance did not identify any water supply wells in the immediate vicinity of the tank system. Information regarding the number and locations of surrounding water supply wells was obtained from the Source Water Assessment Program (SWAP) ArcIMS Mapping tool (prepared cooperatively by the United States Geologic Survey (USGS) and the IEPA), Illinois State Geological Survey (ISGS) online digital water well records and the Illinois State Water Survey (ISWS) private well database.

The closest identified water supply well (ISGS #23506) is mapped approximately ¾ mile south/southwest of the site. The driller's log for this well indicates that the well obtains water from limestone at approximately 131 feet below ground surface. The well was installed in 1991 and appears to be located within the limits of the City of Herrin. Due to its distance from the site, the depth of the well and the direction of groundwater flow observed in the area of the site, it would not appear that the release of petroleum at the site would impact this well in any way.

One water well (ISGS #22666) was mapped within one mile of the site, approximately 0.9 mile to the southwest. The driller's log only states that the well was installed to a depth of 35 feet below ground surface on March 1, 1974. One additional water well (ISGS #22605) is mapped approximately 1.1 miles to the southwest. Again, the driller's log only states that it was installed to a depth of 33 feet below ground surface on September 1, 1973. Both of these water wells are located outside of the city limits of Herrin. Both wells are outside of the observed plume and maximum predicted plume and should not be impacted by the release.

The City of Herrin uses surface water as its source of potable water. City residents are prohibited from installing private wells for use as a potable supply. The City receives its water supply from the Rend Lake Inter-City Water System. This facility draws water from Rend Lake through a surface water intake. Rend Lake is located approximately 16 miles north/northeast of Herrin.

The City of Herrin currently has an ordinance in place that has been approved by the IEPA for use as an institutional control. The ordinance prohibits the use of groundwater as a potable water supply, except in those instances in existence before the ordinance became effective in 2010. A copy of the ordinance as well as information related to the water supply well survey is provided in **Appendix D**.

b. Map(s) showing regulated recharge areas and wellhead protection areas;

Not applicable.

c. Map(s) showing the current extent of groundwater contamination exceeding the most stringent Tier 1 remediation objectives;

A map showing the horizontal extent of groundwater contamination exceeding Class I Groundwater Remediation Objectives (GROs), as determined during Site Investigation, is provided in **Figure 9**.

d. Map(s) showing the modeled extent of groundwater contamination exceeding the most stringent Tier 1 remediation objectives;

A map showing preliminary modeling of the extent of groundwater contamination exceeding the most stringent Tier 1 remediation objectives is provided as **Figure 13** (and within Appendix C).

e. Tables listing the setback zone for each community water supply well and other potable water supply wells;

Not applicable.

f. A narrative identifying each entity contacted to identify potable water supply wells, the name and title of each person contacted, and any field observations associated with any wells identified; and

Not applicable.

g. A certification from a Licensed Professional Engineer or Licensed Professional Geologist that the survey was conducted in accordance with the requirements and that documentation submitted includes information obtained as a result of the survey (certification of this plan satisfies this requirement);

A P.E. Certification of this CAP has been included.

8. Appendices:

a. References and data sources report that are organized; and

The following appendices are included as part of this CAP:

Appendix A: Soil Boring Logs
Appendix B: Monitoring Well Completion Reports
Appendix C: Preliminary Groundwater Modeling (R26)
Appendix D: Water Supply Well Survey Information
Appendix E: Proposed Corrective Action Budget

b. Field logs, well logs, and reports of laboratory analyses;

Please refer to the information listed above in item (8)(a). No new laboratory reports have been generated since the submission of the Site Investigation Completion Report (SICR). Please refer to Appendix C of SICR submitted on October 26, 2016 for copies of the laboratory data generated during Site Investigation. Early Action laboratory reports were provided in the 45-Day Report submitted on November 1, 2013. The results of all laboratory analysis are summarized in Tables 2.0 through 4.0.

9. Site map(s) meeting the requirements of 35 Ill. Adm. Code 732.110(a) or 734.440;

Please refer to **Figures 1** through **13**.

10. Engineering design specifications, diagrams, schematics, calculations, manufacturer's specifications, etc.;

N/A

11. A description of bench/pilot studies;

N/A

12. Cost comparison between proposed method of remediation and other methods of remediation;

N/A

13. For the proposed Tier 2 or 3 remediation objectives, provide the following:

    a. The equations used;

    b. A discussion of how the input variables were determined;

    c. Map(s) depicting distances used in equations; and

    d. Calculations; and

Tier 2 soil remediation objectives and analysis were provided within the Stage 3 Site Investigation Plan and Budget (Appendix D) submitted on December 22, 2015, which was approved by the Agency on February 11, 2016. Tier 2 SROs are summarized in **Table 4.0**.

14. Provide documentation to demonstrate the following for alternative technologies:

    a. The proposed alternative technology has a substantial likelihood of successfully achieving compliance with all applicable regulations and remediation objectives;

    b. The proposed alternative technology will not adversely affect human health and safety or the environment;

    c. The owner or operator will obtain all Illinois EPA permits necessary to legally authorize use of the alternative technology;

    d. The owner or operator will implement a program to monitor whether the requirements of subsection (14)(a) have been met;

    e. Within one year from the date of Illinois EPA approval, the owner or operator will provide the Illinois EPA monitoring program results establishing whether the

proposed alternative technology will successfully achieve compliance with the requirements of subsection (14)(a); and

f. Demonstration that the cost of alternative technology will not exceed the cost of conventional technology and is not substantially higher than at least two other alternative technologies, if available and technically feasible.

N/A. Alternative technologies are not being proposed.

F. Exposure Pathway Exclusion
Provide the following:

1. A description of the tests to be performed in determining whether the following requirements will be met:

a. Attenuation capacity of the soil will not be exceeded for any of the organic contaminants;

The highest concentration of total BTEX and MTBE observed was from sample B-1A, which was collected at a depth of four (4) feet below ground surface. The total of the BTEX and MTBE concentrations at this sampling point was 977 mg/kg, which is below the default value of 2,000 mg/kg listed in 35 IAC Part 742.215(b)(1)(A). Additionally, this sample location is within the area that proposed for excavation.

b. Soil saturation limit will not be exceeded for any of the organic contaminants;

The soil saturation limit for xylenes has been exceeded at several sample locations. However, all of these locations are within the proposed corrective action excavation. Excavation sidewall and floor samples will be collected to ensure that all remaining soils are below saturation limits.

c. Contaminated soils do not exhibit any of the reactivity characteristics of hazardous waste per 35 Ill. Adm. Code 721.123;

Contaminated soils at the site do not exhibit any of the reactivity characteristics of hazardous waste per 35 Ill. Adm. Code 721.123.

d. Contaminated soils do not exhibit a pH ≤ 2.0 or ≥ 12.5; and

Soil samples to date have not been analyzed for pH, as this would have exceeded the minimum requirements necessary to comply with the Act. There is no reason to believe that the pH of the soils would be ≤ 2.0 or ≥ 12.5.

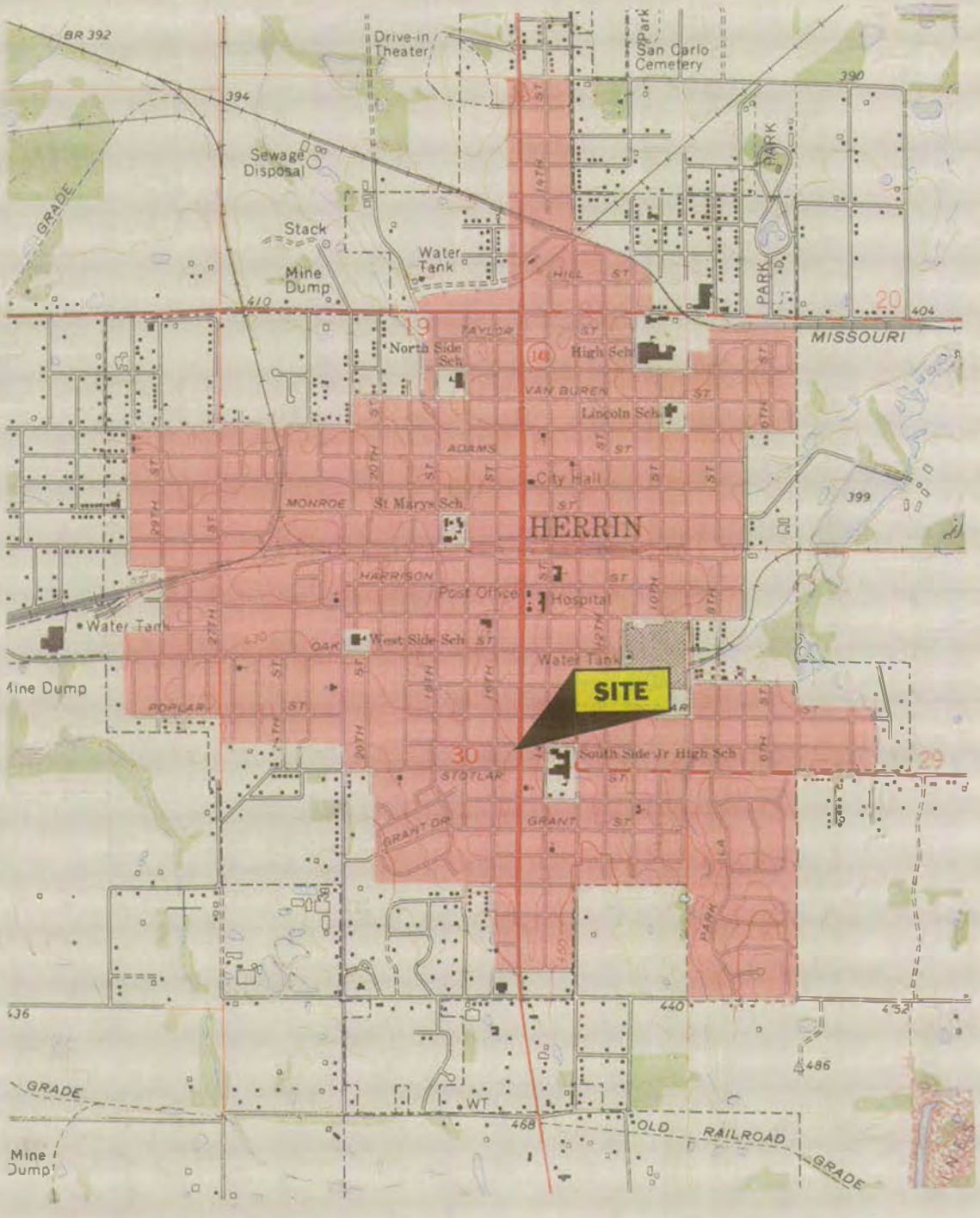
e. Contaminated soils which contain arsenic, barium, cadmium, chromium, lead, mercury, or selenium (or their associated salts) do not exhibit any of the toxicity characteristics of hazardous waste per 35 Ill. Adm. Code 721.124.

Metals are not an indicator contaminant for the gasoline release associated with incident number 20131026.

2. A discussion of how any exposure pathways are to be excluded.

The proposed corrective action excavation would remediate exceedences of the inhalation exposure route for industrial/commercial and construction worker populations. The soil component of the migration to groundwater exposure route and the groundwater ingestion exposure route are excluded by the City of Herrin groundwater ordinance, as previously discussed within this plan.

FIGURES



0 1000' 2000'

NORTH

SOURCE: USGS 7.5' TOPOGRAPHIC MAP OF HERRIN, IL

FIGURE 1: SITE LOCATION	
SCALE: 1" = 2000'	DATE: 9-18-2013

J.D. STREETT & COMPANY, INC. (#233)
701 S. PARK AVE. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

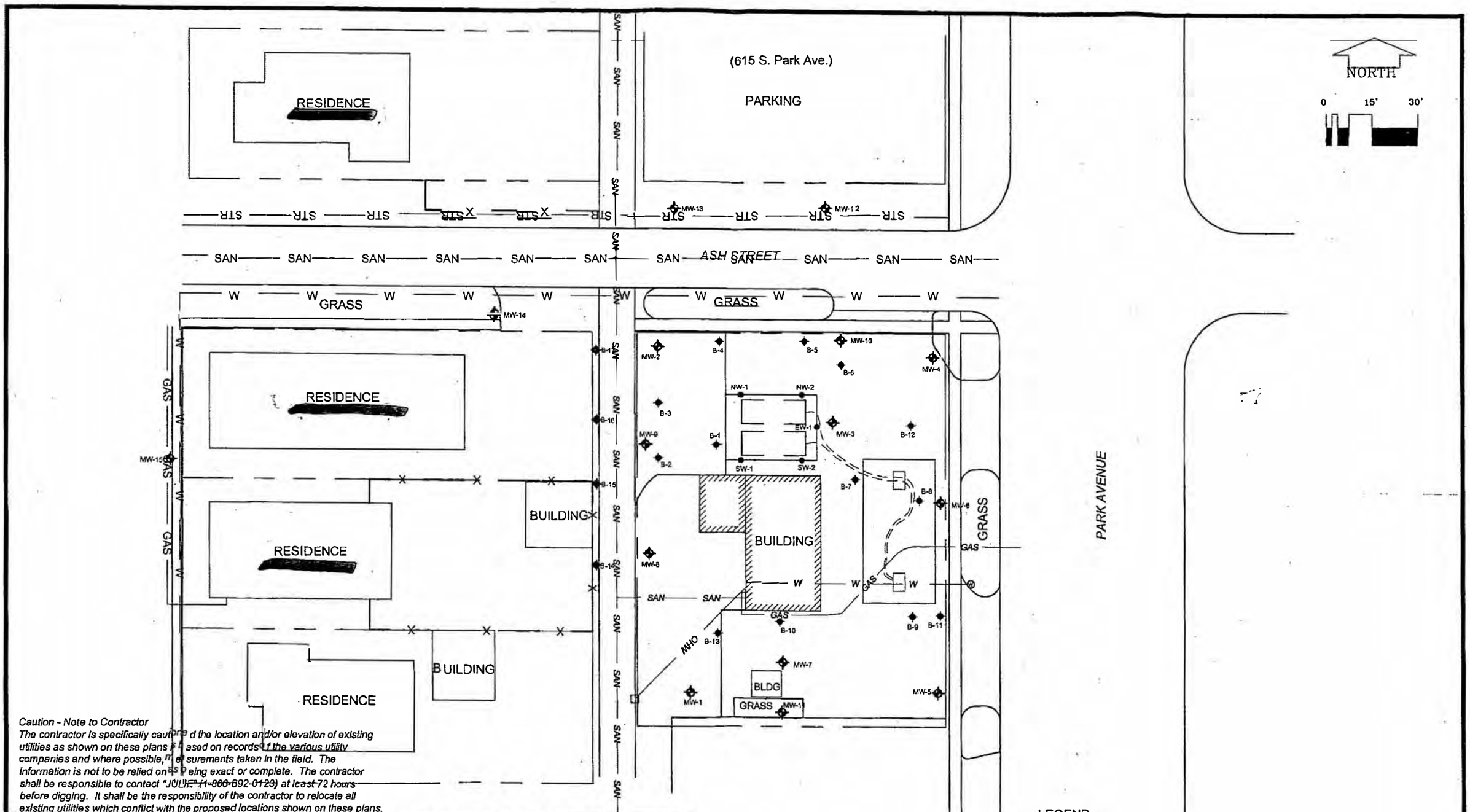


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FIGURE 2: SITE LAYOUT

SCALE: 1" = 30'	DATE:9-20-16

J.D. STREETT & CO. (HERRIN #233)
701 S. PARK AVE. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

LEGEND

- MONITORING WELL
- STR — BURIED STORM SEWER LINE
- SOIL BORING
- EXCAVATION SAMPLE
- UTILITY POLE
- WATER METER
- W — BURIED WATER LINE
- SAN — BURIED SANITARY SEWER
- GAS — BURIED GAS LINE
- OHW — OVERHEAD WIRE

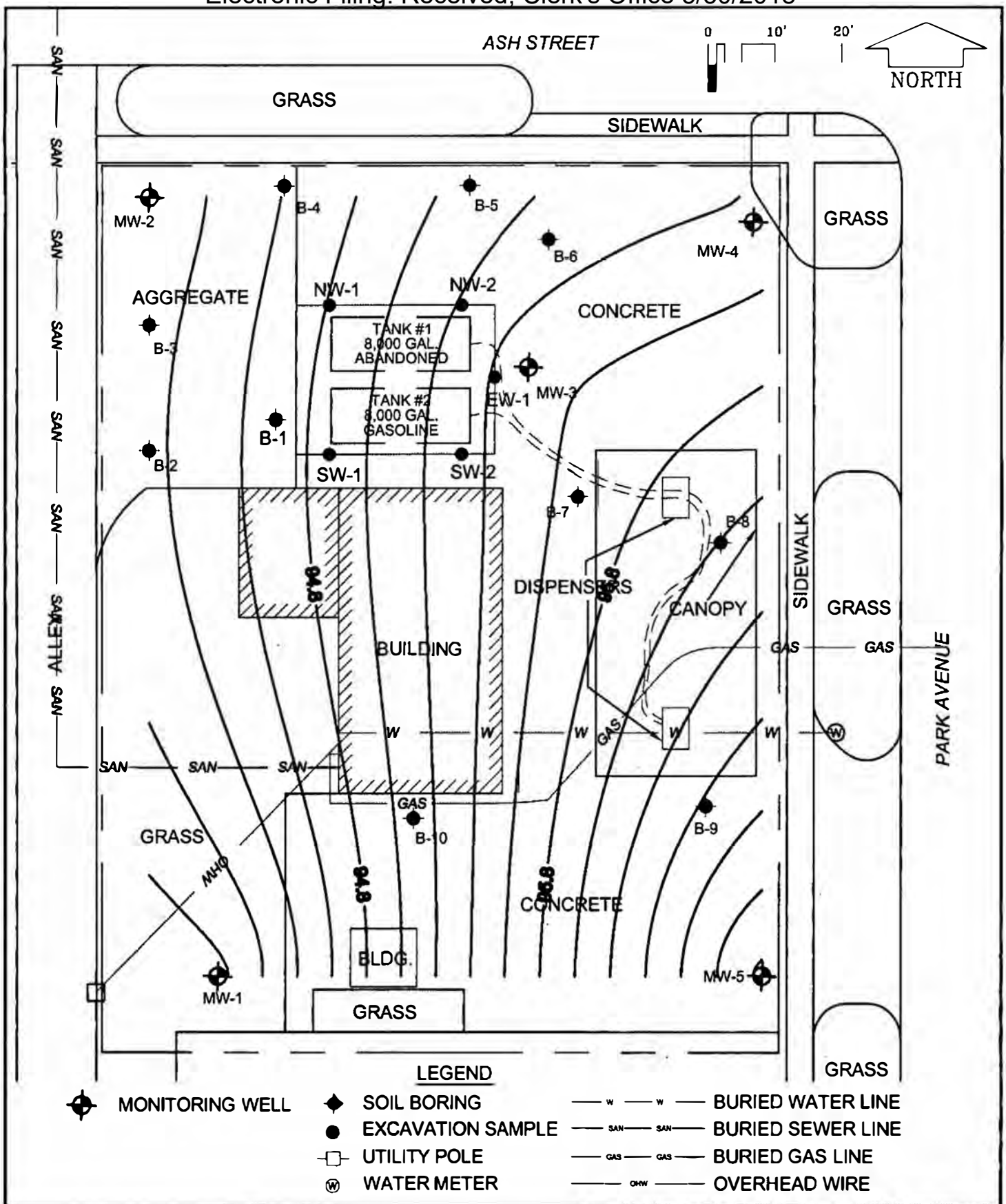

FIGURE 3: Groundwater Contour 7-13-15

SCALE: 1" = 20'	**DATE: 7-22-15**

J.D. STREETT & COMPANY, INC.

701 S. PARK ST. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-622-4085 FAX: 217-622-4087

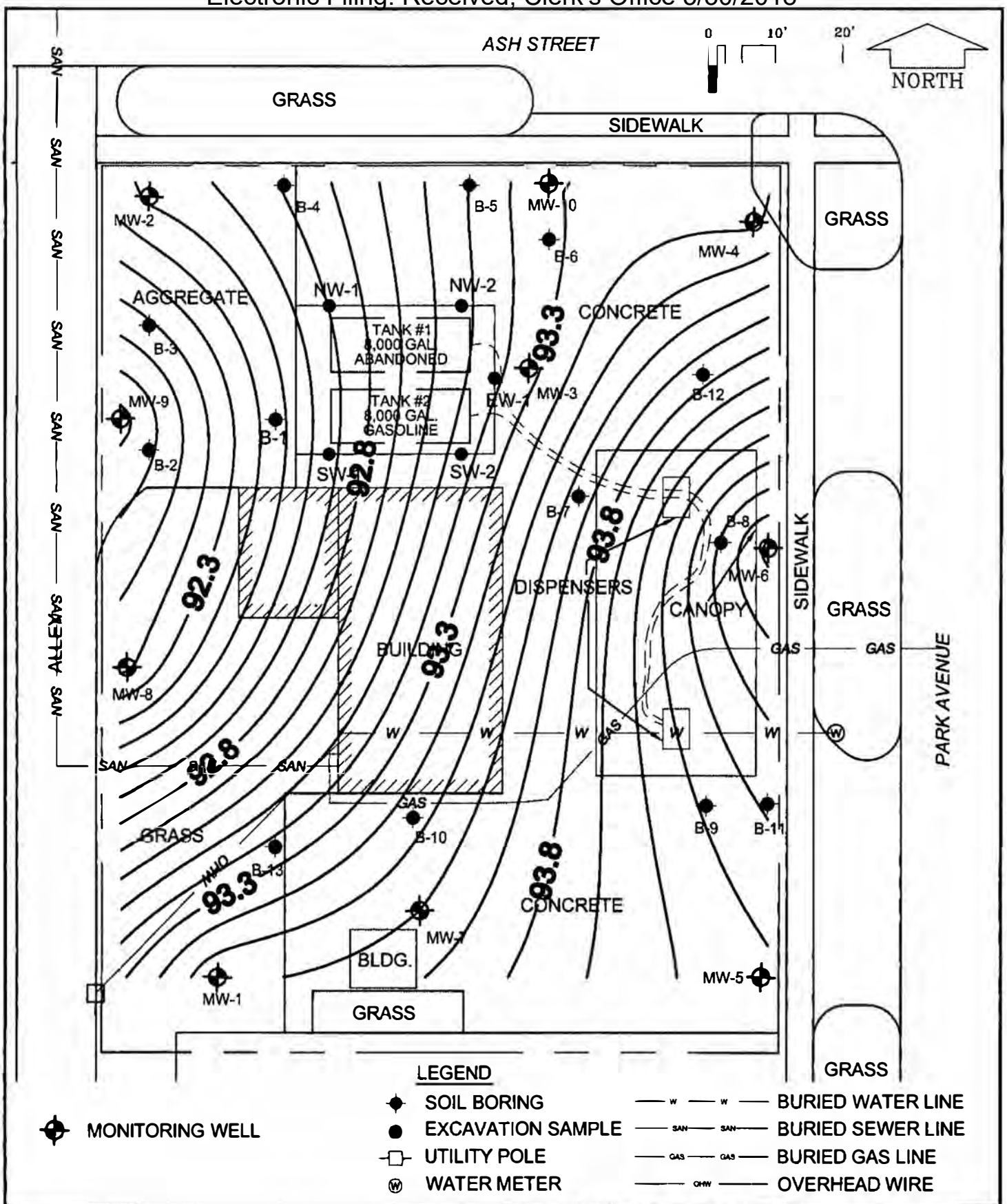

FIGURE 4: Groundwater Contour 11-19-15

SCALE: 1" = 20'	**DATE: 11-19-15**

J.D. STREETT & COMPANY, INC.

701 S. PARK ST. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-622-4085 FAX: 217-622-4087

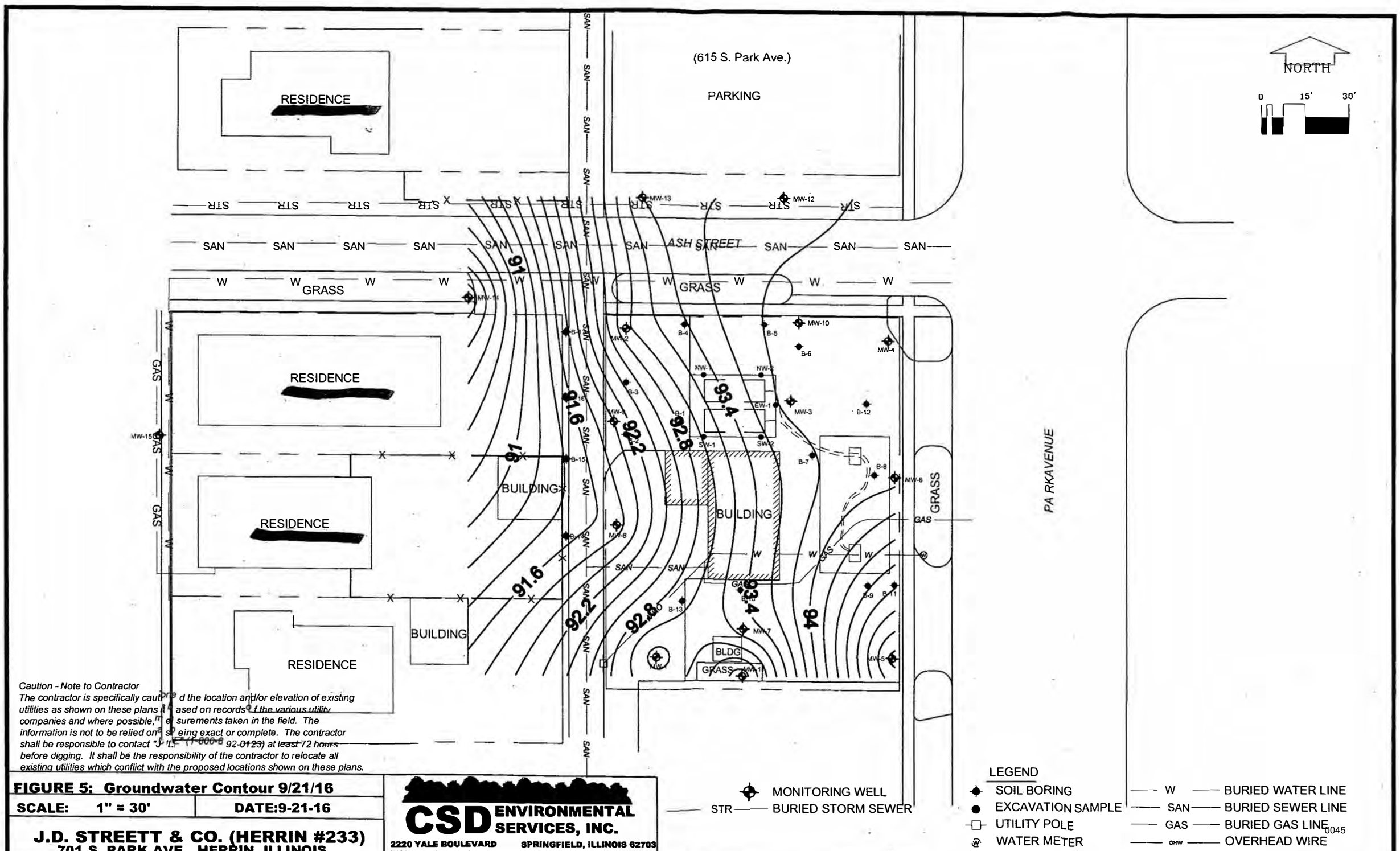

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FIGURE 5: Groundwater Contour 9/21/16

SCALE: 1" = 30'	DATE:9-21-16

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701 S. PARK AVE. HERRIN, ILLINOIS

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2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

LEGEND
- MONITORING WELL
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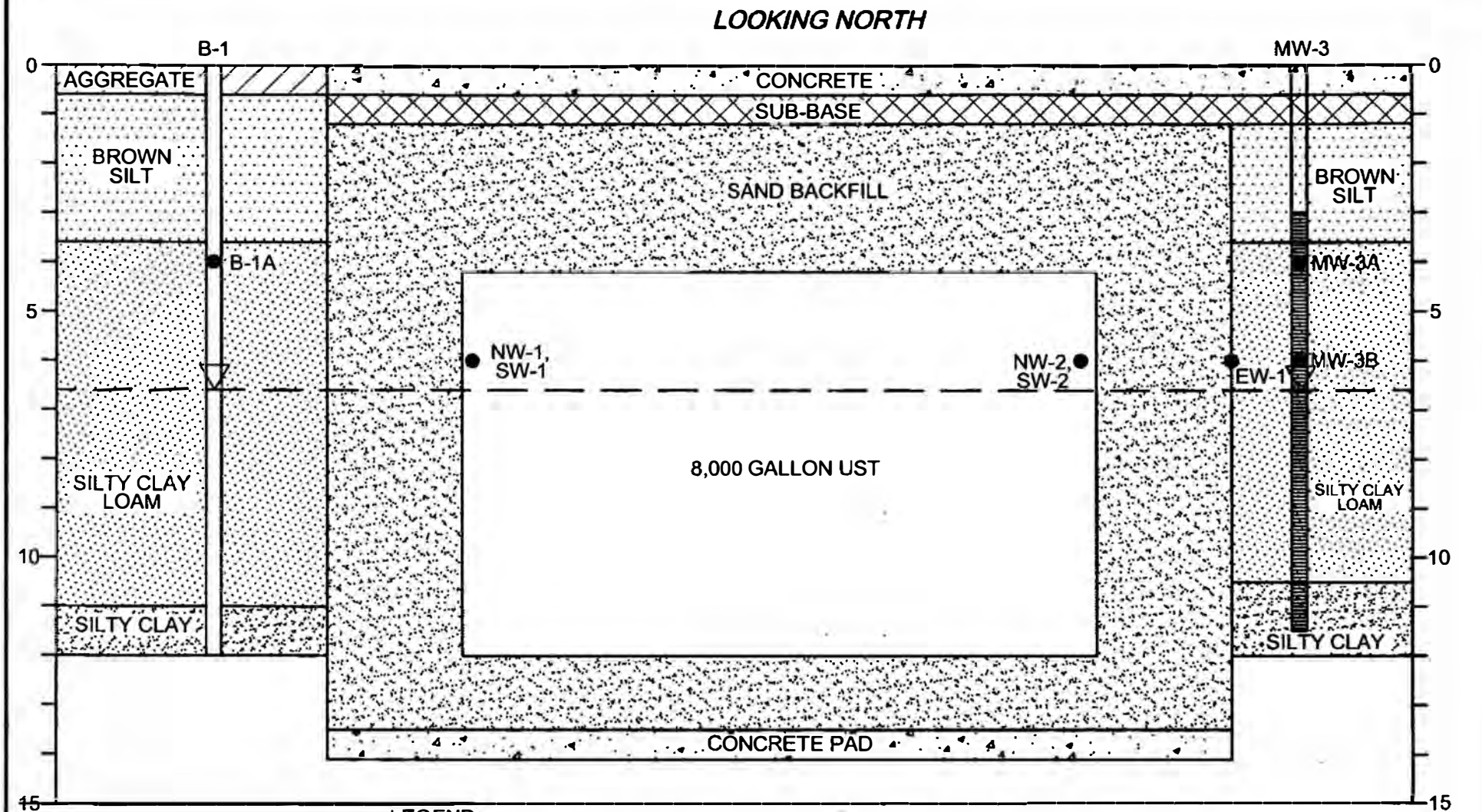

LOCATIONS APPROXIMATE

FIGURE 6: SUB-SURFACE CROSS SECTION	
SCALE: SEE LEGEND	DATE: 7-29-15
J.D. STREETT & COMPANY, INC. 701 S. PARK ST. HERRIN, ILLINOIS	

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2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

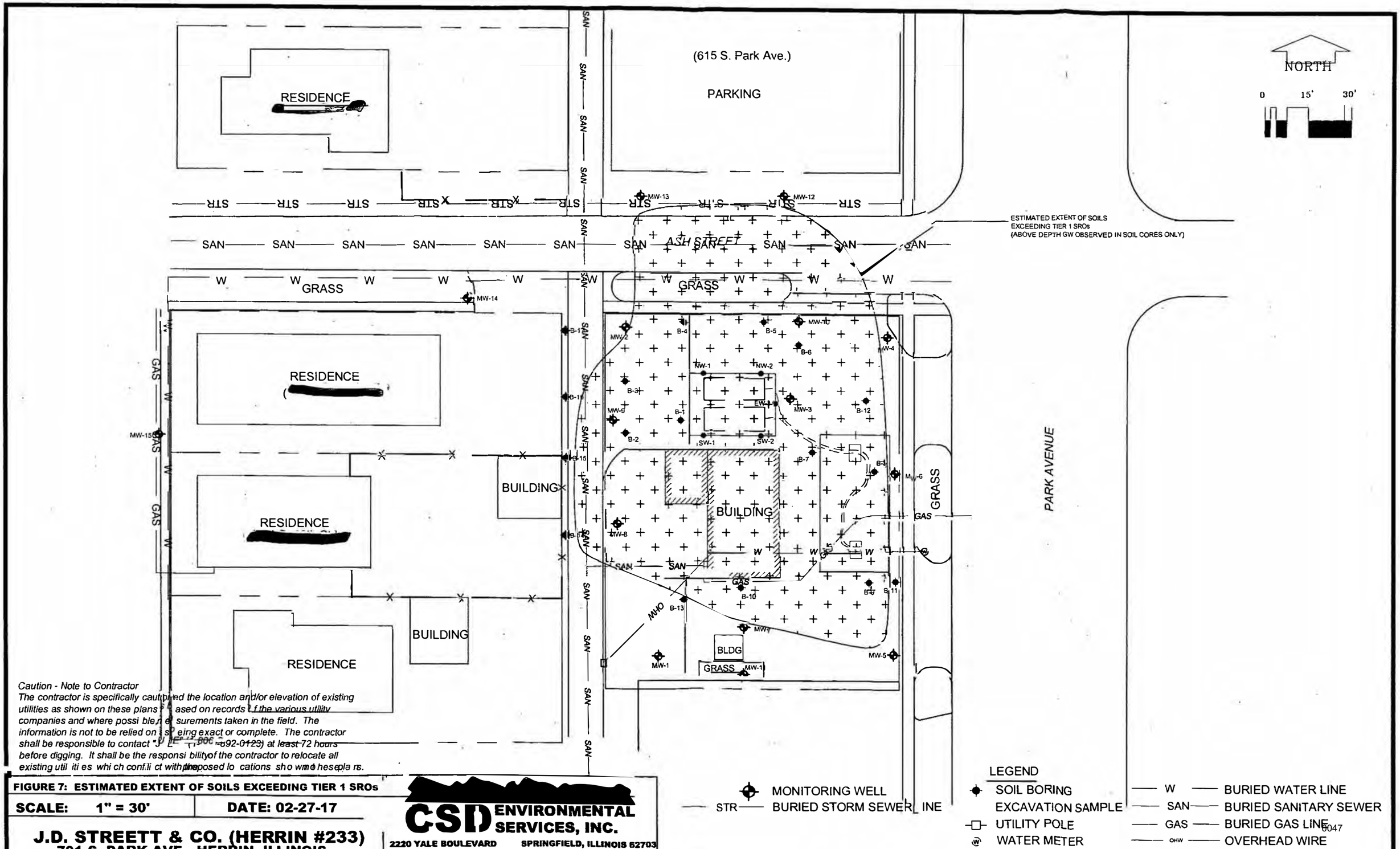

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FIGURE 7: ESTIMATED EXTENT OF SOILS EXCEEDING TIER 1 SROs

SCALE: 1" = 30' | **DATE: 02-27-17**

J.D. STREETT & CO. (HERRIN #233)
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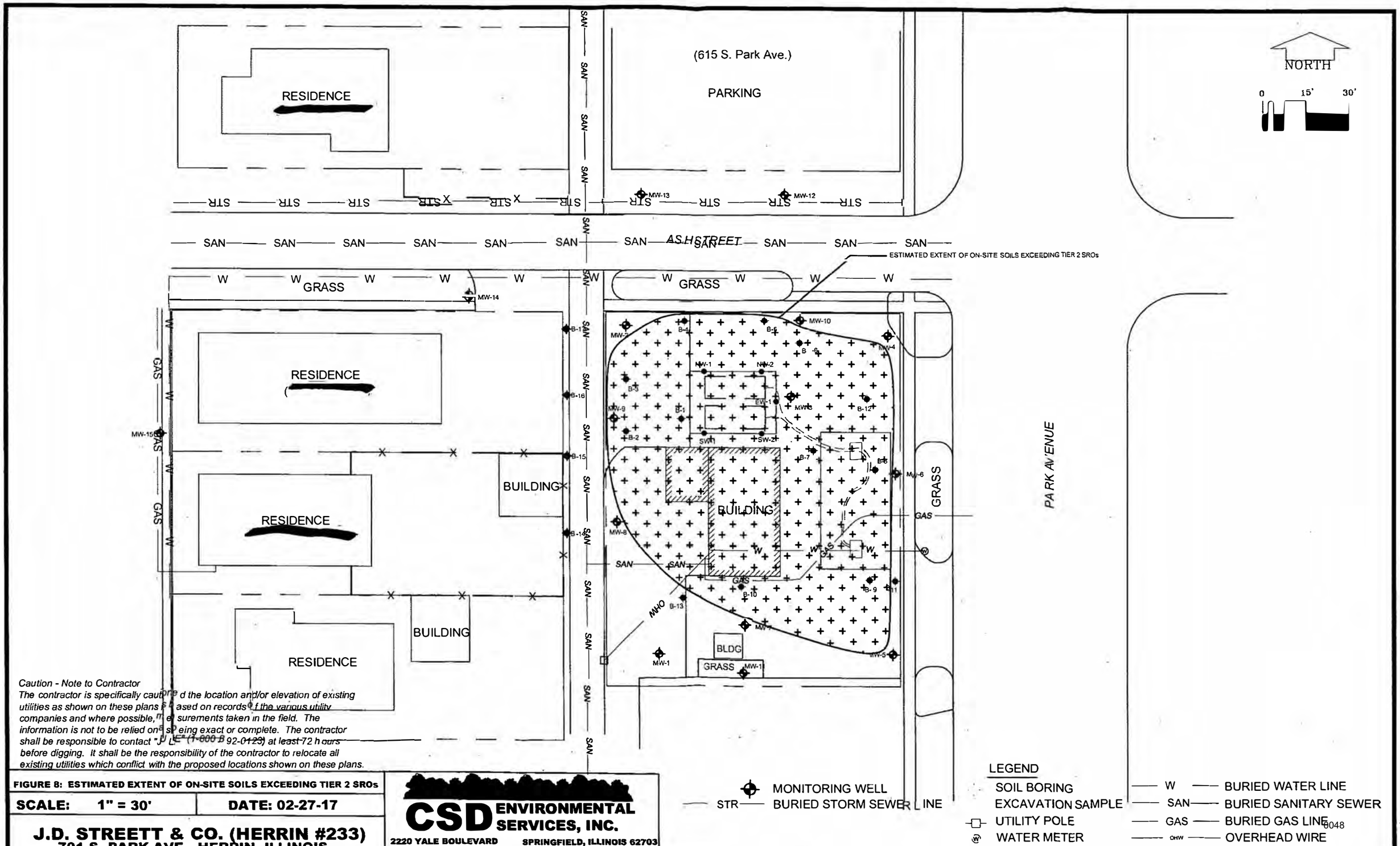
- STR — BURIED STORM SEWER LINE



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LEGEND

SOIL BORING	W — BURIED WATER LINE
EXCAVATION SAMPLE	SAN — BURIED SANITARY SEWER
UTILITY POLE	GAS — BURIED GAS LINE
WATER METER	OHW — OVERHEAD WIRE
MONITORING WELL	
STR — BURIED STORM SEWER LINE	

FIGURE 8: ESTIMATED EXTENT OF ON-SITE SOILS EXCEEDING TIER 2 SROs

SCALE: 1" = 30' | **DATE: 02-27-17**

J.D. STREETT & CO. (HERRIN #233)
701 S. PARK AVE. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

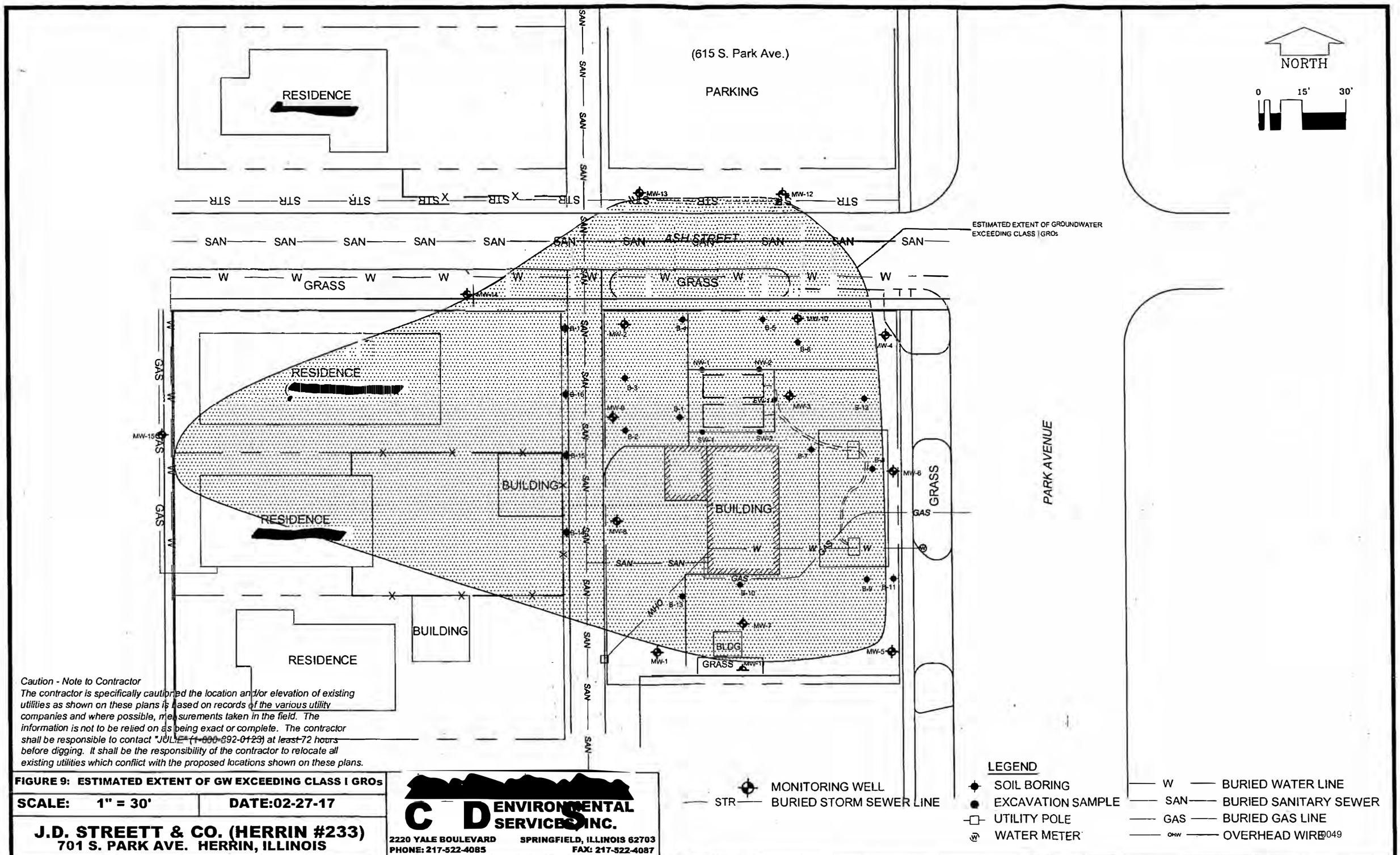

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FIGURE 9: ESTIMATED EXTENT OF GW EXCEEDING CLASS I GROs

SCALE: 1" = 30'	**DATE:02-27-17**

J.D. STREETT & CO. (HERRIN #233)
701 S. PARK AVE. HERRIN, ILLINOIS

C D ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

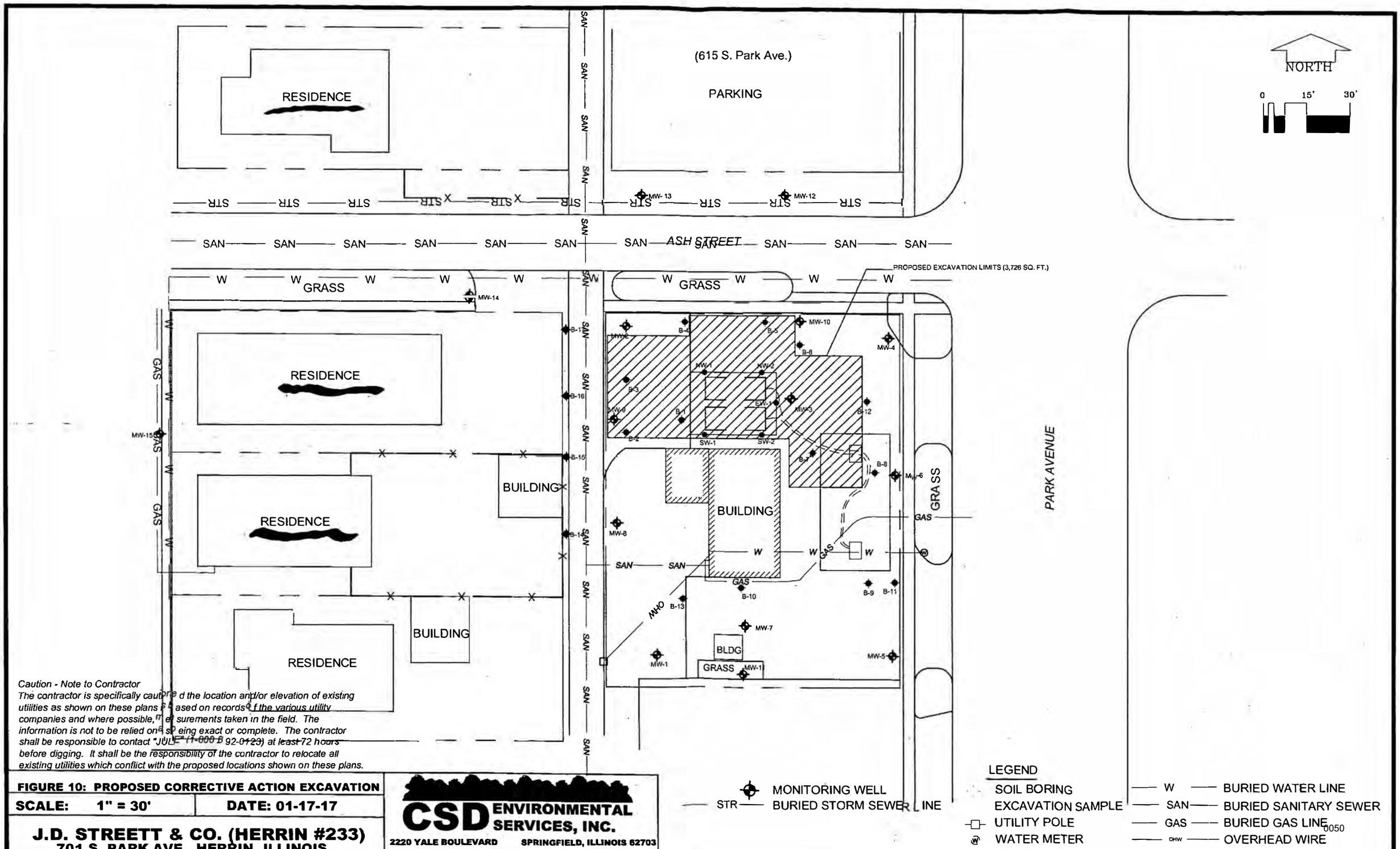

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FIGURE 10: PROPOSED CORRECTIVE ACTION EXCAVATION

SCALE: 1" = 30'	DATE: 01-17-17

J.D. STREETT & CO. (HERRIN #233)
701 S. PARK AVE. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

LEGEND

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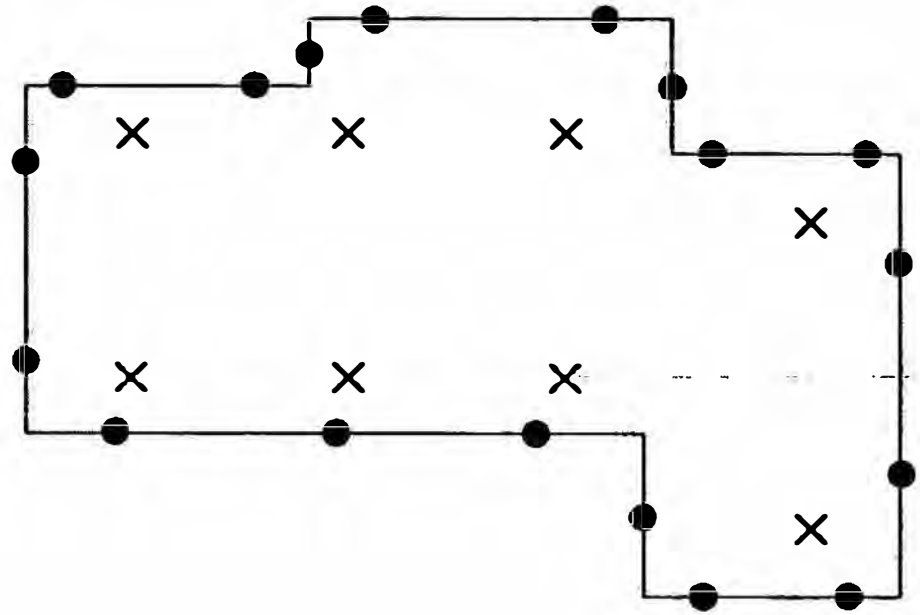

● = WALL SAMPLE

X = FLOOR SAMPLE

FIGURE 11: PROPOSED EXCAVATION SAMPLING PLAN

SCALE: 1" : 20' | DATE: 2-28-17

J.D. Streett & Co.
Herrin, IL

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

0 10' 20'

NORTH

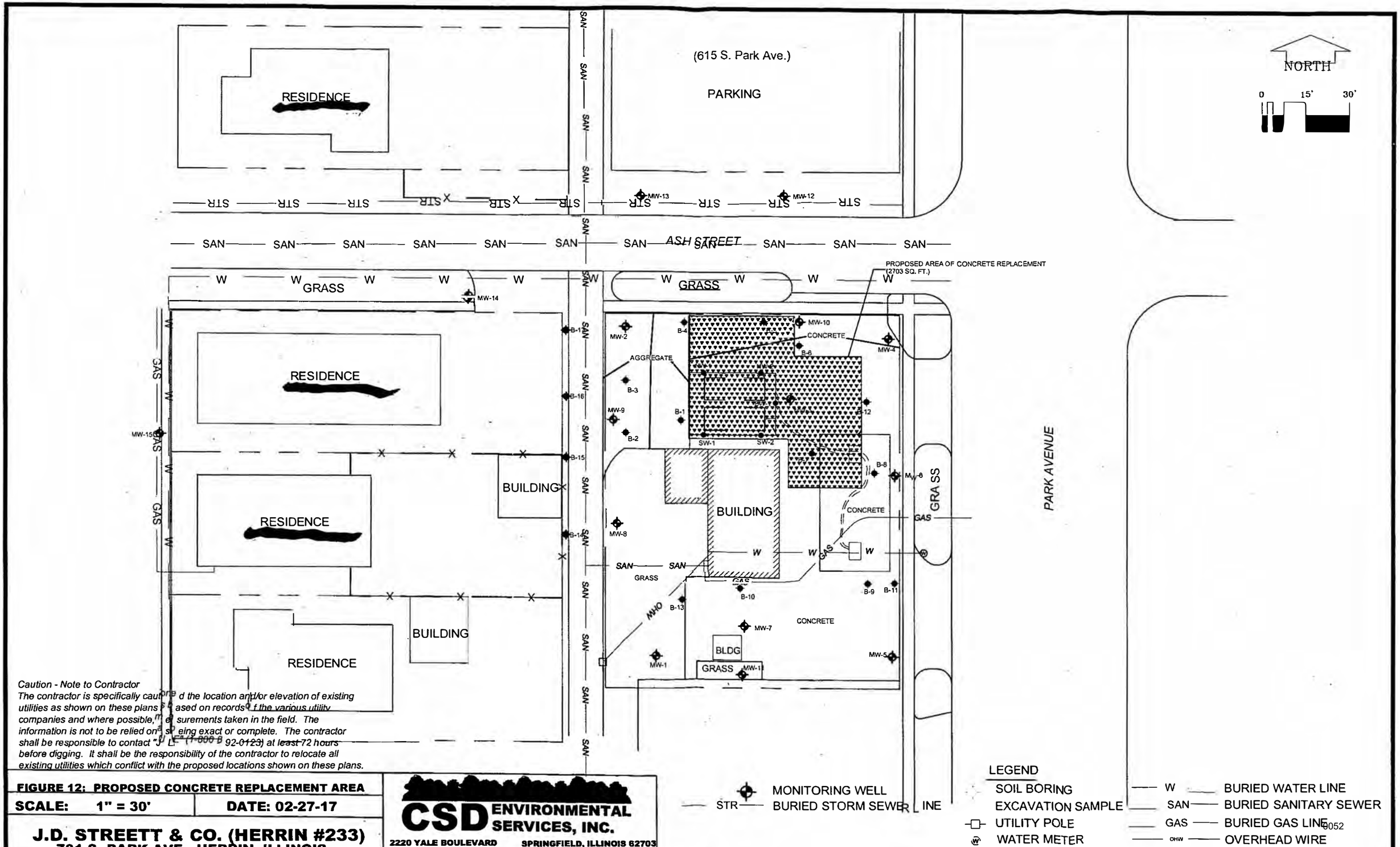

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FIGURE 12: PROPOSED CONCRETE REPLACEMENT AREA

SCALE: 1" = 30'	**DATE: 02-27-17**

J.D. STREETT & CO. (HERRIN #233)
701 S. PARK AVE. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

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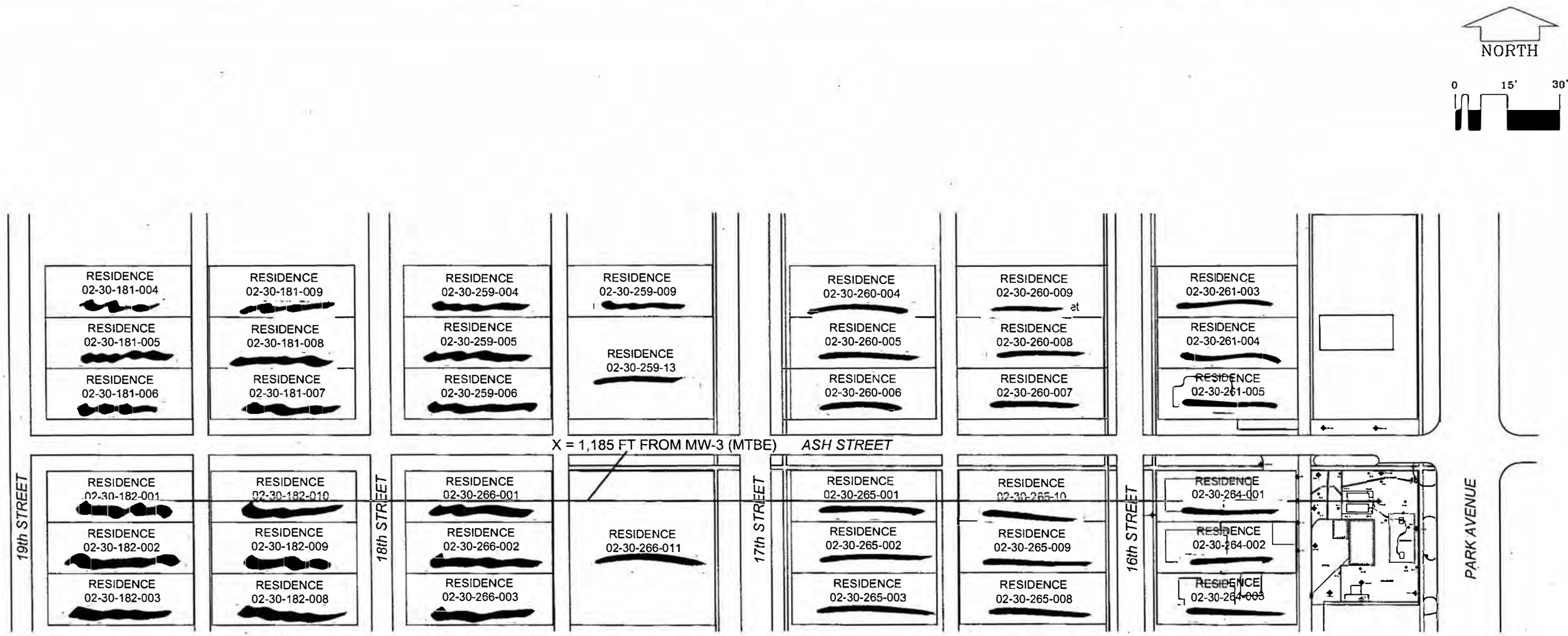

PROPOSED GW NOTIFICATION AREA INCLUDES
39 INDIVIDUAL PROPERTIES AND CITY OF
HERRIN RIGHT-OF-WAY

Caution - Note to Contractor
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FIGURE 13: PROPOSED GW NOTIFICATION AREA BASED ON R-26

SCALE: 1" = 30'	**DATE: 02-27-17**

J.D. STREETT & CO. (HERRIN #233)
701 S. PARK AVE. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

LEGEND

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- UTILITY POLE
- WATER METER
- BURIED WATER LINE
- BURIED SANITARY SEWER
- BURIED GAS LINE
- OHW — OVERHEAD WIRE

APPENDIX A

SOIL BORING LOGS

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 9/17/2013
701 S. Park Avenue, Herrin IL, 62948	B-1	GROUND ELEV:

Water Level	Recovery	Sample ID	Depth (feet)	DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
	X			Gravel				
	X		1	Brown Silt, Dry				
			2					
			3		20			
		B-1A	4	Brown and Grey Sandy Loam, Wet at 6.5 feet,	995			BTEX/MTBE at 4 feet
	X			thin (2-3 inches) lenses of sand intermttent				
	X		5	from 3.5 - 11 feet	792			
			6		193			
			7		725			
			8		248			
	X		9					
	X							
	X		10		52			
			11		87			
			12	Reddish-Brown SiC, Plastic	25			
			13					
				Boring terminated at 12 Feet				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; In-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth: N/A	Rig type: AMS
▽ Depth While Drilling:	6.5ft	Driller: HDR	Geologist: ST
▼ Depth After Drilling:		Coordinates:	

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4303

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	B-2	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Gravel over dry, brown Silt / Silt Loam				
			2		0			
			3		8			
▽		B-2A	4	Brown & Grey Silt Loam	300			
			5	wet at approximately 5 ft.	36			
			6		43			
			7		254			
			8	Brown & Grey Silty Clay, plastic	28			
			9	Boring terminated at 8 feet				
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; In-situ transition between soil types may be gradual.

GROUNDWATER DATA	Auger Depth: ____	Rig type: AMS
▽ Depth While Drilling: 5'	Driller: HDR	Geologist: ST
▼ Depth After Drilling: ____	Coordinates:	

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 523-4929

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	B-3	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Gravel over dry, brown Silt / Silt Loam some cinders				
			2		537			
				Brown & Grey Silt, dry				
		B-3A	3		575			
			4	Brown & Grey Silty Clay, stiff	106			
			5		145			
		B-3B	6	petroleum staining from approx. 6-7 ft.	92			
			7		46			
▽				v. moist @ 7.5 feet				
			8		13			
			9	Boring terminated at 8 feet				
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA	Auger Depth: ____ Rig type: AMS	CSD ENVIRONMENTAL SERVICES, INC.
▽ Depth While Drilling: 7.5'	Driller: HDR Geologist: ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 529-4555
▼ Depth After Drilling: ____	Coordinates:	

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	B-4	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Gravel over dry, brown Silt / Silt Loam				
			2		0			
			3	Brown & Grey Silt	13			
			4		95			
			5	Brown & Grey Silty Clay Loam, stiff	141			
		B-4A	6		74			
▽		B-4B	7	decreased stiffness & v. moist @ 6.5 ft.	21			
			8		15			
			9	Boring terminated at 8 feet				
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth:		Rig type:	AMS
▽ Depth While Drilling:	6.5'	Driller:	HDR	Geologist:	ST
▼ Depth After Drilling:		Coordinates:			

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4083

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	**DATE:** 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	B-5	**GROUND ELEV:**

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Concrete & gravel base				
			2	Brown Silt (dry)	0			
			3		13			
		B-5A	4	Brown & Grey Silty Clay Loam	224			
			5		99			
		B-5B	6		60			
▽			7	increased silt content & wet @ 6.5 ft.	50			
			8		9			
			9	Boring terminated at 8 feet				
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth:		Rig type:	AMS
▽ Depth While Drilling:	6.5'	Driller:	HDR	Geologist:	ST
▼ Depth After Drilling:		Coordinates:			

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4069

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	**DATE:** 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	B-6	**GROUND ELEV:**

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Concrete & gravel base				
			2	Brown & Grey Silty Clay Loam	2			
		B-6A	3		92			
			4	Brown & Grey Silty Clay	33			
			5		8			
		B-6B	6		6			
▽			7	increased Silt content, wet @ 6.5 ft.	178			
			8		12			
			9	Boring terminated at 8 feet				
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth:		Rig type:	AMS
▽ Depth While Drilling:	6.5'	Driller:	HDR	Geologist:	ST
▼ Depth After Drilling:		Coordinates:			

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4569

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	B-7	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Concrete & gravel base				
			2	Grey Silt / Silt Loam, some gravel	13			
			3		2			
		B-7A	4	Brown & Grey Silty Clay	154			
			5		120			
		B-7B	6		43			
▽			7	v. moist @ 6.5 ft.	160			
			8		192			
			9	Boring terminated at 8 feet				
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth:		Rig type:	AMS
▽ Depth While Drilling:	6.5'	Driller:	HDR	Geologist:	ST
▼ Depth After Drilling:		Coordinates:			

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 523-4569

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	**DATE:** 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	B-8	**GROUND ELEV:**

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Concrete & gravel base				
			2	Brown & Grey Silty Clay Loam				
			3		0			
			4	Brown & Grey Sand (fine-grained)	1			
		B-8A	5	Brown & Grey Silty Clay Loam	44			
		B-8B	6		29			
▽			7	v. moist @ 6.5 ft.	19			
			8		15			
			9	Boring terminated at 8 feet				
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth:		Rig type:	AMS
▽ Depth While Drilling:	6.5'	Driller:	HDR	Geologist:	ST
▼ Depth After Drilling:		Coordinates:			

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4085

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	B-9	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Concrete & gravel base				
			2	Dark Grey Silt Loam	5			
			3		5			
			4	Brown & Grey Silty Clay	9			
		B-9A	5		38			
		B-9B	6		5			
▽			7	increased silt content, v. moist @ 6.5'	4			
			8		0			
			9	Boring terminated at 8 feet				
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth:		Rig type:	AMS
▽ Depth While Drilling:	6.5'	Driller:	HDR	Geologist:	ST
▼ Depth After Drilling:		Coordinates:			

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4125

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	B-10	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Concrete & gravel base				
			2	Brown & Grey Silty Clay Loam	0			
			3		0			
		B-10A	4	Brown & Grey Silt Loam	6			
▽			5	v. moist @ 5 ft.	2			
			6		2			
			7	Brown & Grey Silty Clay, stiff	79			
			8		179			
			9	Boring terminated at 8 feet				
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA				
▽ Depth While Drilling: 5'	Auger Depth: ____	Rig type: AMS	CSD ENVIRONMENTAL SERVICES, INC.	
▼ Depth After Drilling: ____	Driller: HDR	Geologist: ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 523-4069	
	Coordinates:			

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	**DATE:** 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	Tier 2	**GROUND ELEV:**

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
	X		1	Grass & Brown Silty Clay Loam (topsoil)				
	X		2	Brown Silt, dry, some gravel				
	X		3					
			4	Brown Silty Clay / Silty Clay Loam				Sample Tier 2A (3-4') submitted for physical soil analysis
			5	Boring terminated at 4 ft.				
			6					
			7					
			8					
			9					
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; In-situ transition between soil types may be gradual.

GROUNDWATER DATA			
▽ Depth While Drilling: ____	Auger Depth: ____	Rig type: AMS	CSD ENVIRONMENTAL SERVICES, INC.
▼ Depth After Drilling: ____	Driller: HDR	Geologist: ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4049
	Coordinates:		

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	MW-1	GROUND ELEV:

Water Level	Recovery	Sample ID	Depth (feet)	DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
	X		1	Grass & Brown Silty Clay Loam (topsoil)				
	X		2	Brown Silt, dry, some gravel				
	X	MW-1A	3		0			
	X		4	Brown Silty Clay / Silty Clay Loam	0			
	X		5		0			
▽		MW-1B	6	Brown & Grey Silt Loam / Silt, wet @ 5.5 ft.	0			sample MW-1B collected at approx. 5.25 ft. (just above "water table")
			7		0			
			8	Brown Silty Clay, hard, plastic	0			
			9		0			
			10	increasing Silt content, less stiff	0			
			11		0			
			12		0			
			13	Sampling terminated at 12 ft. Augered to 13 feet for installation of MW-1				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA				
▽ Depth While Drilling: 5.5'	Auger Depth: 13 ft.	Rig type: AMS	CSD ENVIRONMENTAL SERVICES, INC.	
▼ Depth After Drilling: ____	Driller: HDR	Geologist: ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4616	
	Coordinates:			

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	**DATE:** 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	MW-2	**GROUND ELEV:**

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Gravel over dry, brown Silt / Silt Loam				
			2		0			
		MW-2A	3		0			
			4	Brown & Grey Silty Clay Loam	0			
			5		0			
			6		0			
		MW-2B	7	v. moist @ 7 ft.	0			
			8	Brown & Grey Silty Clay, plastic	0			
			9		0			
			10		0			
			11		0			
			12	Brown to Grey to Brown Sand, compacted, dry, fine to medium grained	0			
			13	Sampling terminated at 12 feet				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA				
▽ Depth While Drilling: 7'	**Auger Depth:** ____	**Rig type:** AMS	CSD ENVIRONMENTAL SERVICES, INC.	
▼ Depth After Drilling: ____	**Driller:** HDR	**Geologist:** ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4165	
	Coordinates:			

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	MW-3	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
	X		1	Concrete & gravel base				
	X		2	Brown & Grey Silty Clay Loam				
	X		3		1			
	X	MW-3A	4		399			
	X		5		310			
▽		MW-3B	6		187			
			7	increasing Silt & v. moist @ 6.5 ft.	74			
			8		80			
			9		12			
			10		12			
			11		16			
			12	Brown & Grey Silty Clay, hard	9			
			13	Sampling terminated at 12 ft. Auger refusal on hard till at 11.5 feet while installing MW-3				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth:		Rig type:	AMS
▽ Depth While Drilling:	6.5'	Driller:	HDR	Geologist:	ST
▼ Depth After Drilling:		Coordinates:			

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4069

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	MW-4	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Concrete & gravel base				
			2		0			
		MW-4A	3	Reddish-Brown & Grey Silty Clay Loam	0			
			4		0			
▽			5	v. moist at 5 feet	0			
			6		0			
			7		0			
			8		0			
			9		0			
			10		0			
			11	Reddish-Brown Silty Clay Loam w/pebbles, hard	0			
			12		0			
			13	Sampling terminated at 12 feet Auger refusal at 11 feet in hard till while installing MW-4 (well screened from 3-11 feet)				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA				
▽ Depth While Drilling: 5'	Auger Depth: ____	Rig type: AMS	CSD ENVIRONMENTAL SERVICES, INC.	
▼ Depth After Drilling: ____	Driller: HDR	Geologist: ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4569	
	Coordinates:			

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 7/1/2015
701 S. Park Avenue, Herrin IL, 62948	MW-5	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Concrete & gravel base				
		MW-5A	2	Reddish-Brown & Grey Silt Loam	0			
			3		0			
			4	Reddish-Brown & Brey Silty Clay to Silty Clay Loam	0			
			5		0			
		MW-5B	6		0			
▽				increasing Silt content & v. moist @ 6.5'				
			7		0			
			8		0			
			9		0			
			10		0			
			11	Reddish-Brown Silty Clay Loam w/pebbles, v. stiff to hard	0			
			12		0			
			13	Sampling terminated @ 12 feet. Augered to 13 feet to install MW-5				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth:		Rig type:	AMS
▽ Depth While Drilling:	6.5'	Driller:	HDR	Geologist:	ST
▼ Depth After Drilling:		Coordinates:			

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4063

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 11/12/2015
701 S. Park Avenue, Herrin, IL 62948	B-11	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Concrete & gravel base				
	50	B-11A	2	Dark grey Silt / Silt Loam		OL		
			3		0			
			4		0			
			5	Brown & Grey Silty Clay Loam	0			
	100	B-11B	6		0	CL		
▽			7	moist @ 7 ft.	0			no free water or saturated soils, depth of "water table" estimated based on amount of moisture
			8		0			
			9	Boring terminated @ 8 ft.				
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA				
▽ Depth While Drilling: 7 ft.	Auger Depth: ____	Rig type: AMS	CSD ENVIRONMENTAL SERVICES, INC.	
▼ Depth After Drilling: ____	Driller: HDR	Geologist: ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4589	
	Coordinates:			

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CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	**DATE:** 11/12/2015
701 S. Park Avenue, Herrin, IL 62948	B-12	**GROUND ELEV:**

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Concrete & gravel base				
	50		2	Dark grey Silt / Silt Loam		OL		
			3		2			
		B-12A	4		32			
			5	Brown & Grey Silty Clay Loam	3			
▽	100	B-12B	6		2	CL		
			7	v. moist @ 6.5'	1			no free water or saturated soils, depth of "water table" estimated based on amount of moisture
			8		1			
			9	Boring terminated @ 8 ft.				
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; In-situ transition between soil types may be gradual.

GROUNDWATER DATA					
▽ Depth While Drilling:	6.5 ft.	**Auger Depth:**	____	**Rig type:**	AMS
▼ Depth After Drilling:	____	**Driller:**	HDR	**Geologist:**	ST
		Coordinates:			

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 523-4385

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CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	**DATE:** 11/12/2015
701 S. Park Avenue, Herrin, IL 62948	B-13	**GROUND ELEV:**

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
	75	B-13A	1	Grass over dark brown Silt / Silt Loam				
			2	some gravel, cinders, etc. (fill)	0			
			3	Brown & Grey Silty Clay Loam (possible fill)	0			
			4		0			
▽			5		0			no free water or saturated soils, depth of "water table" estimated based on amount of moisture
	100		6	Grey Silt / Silt Loam	0	OL		
			7	Brown & Grey Silty Clay Loam	3	CL		
			8		1			
			9	Boring terminated at 8 ft.				
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; In-situ transition between soil types may be gradual.

GROUNDWATER DATA					
▽ Depth While Drilling: 5 ft.	**Auger Depth:** ____	**Rig type:** AMS	CSD ENVIRONMENTAL SERVICES, INC.		
▼ Depth After Drilling: ____	**Driller:** HDR	**Geologist:** ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 622-4625		
	Coordinates:				

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CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 11/12/2015
701 S. Park Avenue, Herrin, IL 62948	MW-6	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
	50	MW-6A	1	Concrete & gravel base				
			2	Dark grey Silt / Silt Loam		OL		
			3		0			
			4		0			
	100	MW-6B	5	Brown & grey Silty Clay Loam to Clay Loam	0			
▽			6	moist @ 6 ft.	0			no free water or saturated soils, depth of "water table" estimated based on amount of moisture
			7		0			
			8		0	CL		
	100		9	v. stiff to hard w/depth	0			
			10	large piece of gravel at 10 feet	0			
			11		0			
			12		0			
			13	Boring terminated @ 12 ft.				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth: 12 ft.	Rig type: AMS
▽ Depth While Drilling:	6 ft.	Driller: HDR	Geologist: ST
▼ Depth After Drilling:		Coordinates:	

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CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 11/12/2015
701 S. Park Avenue, Herrin, IL 62948	MW-7	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Concrete & gravel base				
	50		2	Dark grey Silt / Silt Loam				
			3		0	OL		
		MW-7A	4		0			
▽			5	v. moist @ 4.5 ft.	0			no free water or saturated soils, depth of "water table" estimated based on amount of moisture
	100		6	Brown & grey Silty Clay Loam to Clay Loam	0			
			7		0			
			8		0	CL		
			9		0			
	100		10		0			
			11	v. stiff to hard	0			
			12		0			
			13	Sampling terminated @ 12 ft. Augered to 13 feet to install MW-7				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth: 13 ft.	Rig type: AMS
▽ Depth While Drilling:	4.5 ft.	Driller: HDR	Geologist: ST
▼ Depth After Drilling:		Coordinates:	

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CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 11/12/2015
701 S. Park Avenue, Herrin, IL 62948	MW-8	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Gravel				
	75		2	Silt with cinders, etc. (Fill)	0			
			3		0			
		MW-8A	4		0			
			5	Brown & Grey Silty Clay Loam to Clay Loam increasing stiffness with depth	0			
	100		6		6			
		MW-8B	7		60	CL		no free water or saturated soils,
▽			8	moist @ 7.5 ft.	2			depth of "water table" estimated based on amount of moisture
			9		1			
	100		10		1			
			11		0			
			12		0			
			13	Boring terminated @ 12 ft.				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth: 12 ft.	Rig type: AMS
▽ Depth While Drilling:	7.5 ft.	Driller: HDR	Geologist: ST
▼ Depth After Drilling:		Coordinates:	

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CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	**DATE:** 11/12/2015
701 S. Park Avenue, Herrin, IL 62948	MW-9	**GROUND ELEV:**

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Gravel				
	75		2	Brown Silt, dry	0	OL		
			3		0			
		MW-9A	4	Brown & Grey Silty Clay Loam to Clay Loam	486			
			5		98			
	100		6		62	CL		
▽		MW-9B	7	moist @ 7 ft.	246			no free water or saturated soils, depth of "water table" estimated based on amount of moisture
			8		15			
			9		5			
	100		10		4			
			11	v. stiff to hard	0			
			12	Grey to brown fine-med compacted Sand	0			
			13	Boring terminated @ 12 ft. Augered to 13 ft. to install MW-9.				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA				
▽ Depth While Drilling: 7 ft.	**Auger Depth:** 13 ft.	**Rig type:** AMS	CSD ENVIRONMENTAL SERVICES, INC.	
▼ Depth After Drilling:	**Driller:** HDR	**Geologist:** ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 523-4085	
	Coordinates:			

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J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	**DATE:** 11/12/2015
701 S. Park Avenue, Herrin, IL 62948	MW-10	**GROUND ELEV:**

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Concrete & gravel base				
	75		2	Dark grey Silt / Silt Loam	0	OL		
			3		1			
		MW-10A	4	Brown & Grey Silty Clay Loam to Clay Loam	10			
			5		4			
▽	100	MW-10B	6	moist @ 6 ft.	2			no free water or saturated soils, depth of "water table" estimated based on amount of moisture
			7		1			
			8		0			
	70		9	v. stiff to hard	0			
			10		0			
				Compacted brown & grey Sand				
			11	Probe refusal @ 10.5'. Augered to 11 ft. to install MW-10.				
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA				
▽ Depth While Drilling: 6 ft.	**Auger Depth:** 11 ft.	**Rig type:** AMS	CSD ENVIRONMENTAL SERVICES, INC.	
▼ Depth After Drilling:	**Driller:** HDR	**Geologist:** ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4065	
	Coordinates:			

CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 9/14/2016
701 S. Park Avenue, Herrin, IL 62948	B-14	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Grass & topsoil				
	80		2	Brown Silt w/cinders, etc. (Fill)	0			
			3		0			
		B-14A	4	Grey & Brown Silt, dry, friable	0	OL		
			5		0			
	95		6	Brown & Grey Silty Clay Loam, firm, plasticity increasing w/depth	0	CL		
			7		0			
		B-14B	8		0			
▽			9	v. moist @ 8.5 ft.	0			
	100		10		0			
			11		0			
			12		0			
			13	Boring terminated at 12 feet				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth: ____	Rig type: AMS
▽ Depth While Drilling:	8.5'	Driller: HDR	Geologist: ST
▼ Depth After Drilling:	____	Coordinates:	

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CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 9/14/2016
701 S. Park Avenue, Herrin, IL 62948	B-15	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
	75	B-15A	1	Grass, Dark Grey Silt w/cinders, etc.(Fill)				
			2		0			
			3		0			
			4	Grey & Brown Silt / Silt Loam, dry	0	OL		
			5		0			
	95	B-15B	6	Brown & Grey Silty Clay / Silty Clay Loam	0	CL		
			7		0			
			8		0			
▽			9	v. moist @ 8.5 ft.	0			
	90		10		0			
			11		0			
			12		0			
			13	Boring terminated at 12 feet				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth:		Rig type:	AMS
▽ Depth While Drilling:	8.5'	Driller:	HDR	Geologist:	ST
▼ Depth After Drilling:		Coordinates:			

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CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	DATE: 9/14/2016
701 S. Park Avenue, Herrin, IL 62948	B-16	GROUND ELEV:

Water Level	Recovery	Sample ID	Depth (feet)	DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
			1	Grass, Dark Grey Silt w/rock, cinders, etc.(Fill)				
	75		2		0			
			3		0			
		B-16A	4	Grey & Brown Silt / Silt Loam	0	OL		
			5		0			
	90		6	Brown & Grey Silty Clay / Silty Clay Loam	0			
			7		0	CL		
		B-16B	8		0			
▽			9	v. moist @ 9 ft.	0			
	90		10		0			
			11		0			
			12	Brown & Grey fine-med. Compacted Sand	0			
			13	Boring terminated at 12 feet				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; In-situ transition between soil types may be gradual.

GROUNDWATER DATA				
▽ Depth While Drilling: 9'	Auger Depth: ____	Rig type: AMS	CSD ENVIRONMENTAL SERVICES, INC.	
▼ Depth After Drilling: ____	Driller: HDR	Geologist: ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4385	
	Coordinates:			

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J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 9/14/2016
701 S. Park Avenue, Herrin, IL 62948	B-17	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Grass, Dark Grey Silt w/rock, cinders, etc.(Fill)				
	90	B-17A	2	Brown & Grey Silt / Silt Loam	0			
			3		0			
			4		0	OL		
	90		5	Brown & Grey Silty Clay / Silty Clay Loam	0			
			6		0			
		B-17B	7		0	CL		
			8		0			
▽			9		0			
	100		10		0			
			11		0			
			12	Brown & Grey fine-med. Compacted Sand	0			
			13	Boring terminated at 12 feet				
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA				
▽ Depth While Drilling: 9'	Auger Depth: ____	Rig type: AMS	CSD ENVIRONMENTAL SERVICES, INC.	
▼ Depth After Drilling: ____	Driller: HDR	Geologist: ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4589	
	Coordinates:			

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J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 9/14/2016
701 S. Park Avenue, Herrin, IL 62948	MW-11	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Grass & topsoil				raining at time of boring installation
	50		2	Brown Silt / Silt Loam				
			3		0			No soil samples for laboratory analysis in accordance with approved Stage 3 Plan
			4		0	OL		
			5					
	50		6	Brown & Grey Silty Clay w/pebbles				
			7	approx. 6" of compacted sand from 6.5-7 ft.	0	CL		
▽			8		0			
	95		9		0			
			10		0			
			11		0			
			12		0			
			13	Sampling terminated at 12 feet				Augered to 14 ft., MW-11 screened from 3.5 - 13.5 ft.
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth: ____	Rig type: AMS
▽ Depth While Drilling:	8.5'	Driller: HDR	Geologist: ST
▼ Depth After Drilling:	____	Coordinates:	

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CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	**DATE:** 9/14/2016
701 S. Park Avenue, Herrin, IL 62948	MW-12	**GROUND ELEV:**

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
	80	MW-12A	1	Grass, Dark Brown Silt / Silt Loam				
			2		0			
			3		0			
			4	Light Brown & Grey Silt / Silt Loam	0	OL		
	80	MW-12B	5		0			
			6	increasing Clay content w/depth	0			
▽			7	v. moist @ 7 ft.	0	CL		
			8		0			
	100		9		0			
			10	Reddish-brown Silty Clay, v. stiff to hard	0			
			11		0			
			12	Brown & grey compacted Sand	0			
			13	Sampling terminated at 12 feet (refusal)				Auger refusal @ 11 ft. while installing MW-12, well screened 3.5 - 11 ft.
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA				
▽ Depth While Drilling: 7'	**Auger Depth:** ____	**Rig type:** AMS	CSD ENVIRONMENTAL SERVICES, INC.	
▼ Depth After Drilling: ____	**Driller:** HDR	**Geologist:** ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4185	
	Coordinates:			

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J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	DATE: 9/14/2016
701 S. Park Avenue, Herrin, IL 62948	MW-13	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
	60	MW-13A	1	Grass, Dark Grey Silt / Silt Loam w/rock (Fill)				
			2					
			3	Brown Silt / Silt Loam	0			
			4		0	OL		
	100	MW-13B	5	Brown & Grey Silty Clay / Silty Clay Loam	0			
			6		0			
			7		0	CL		
			8		0			
▽			9	moist @ 8.5' (not very)	0			
	100		10		0			
			11		0			
			12	Brown & grey compacted Sand	0			
			13	Sampling terminated at 12 feet				Auger refusal @ 12 ft. while installing MW-13, well screened 3.5 - 12 ft.
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA				
▽ Depth While Drilling: 8.5'	Auger Depth: ____	Rig type: AMS	CSD ENVIRONMENTAL SERVICES, INC.	
▼ Depth After Drilling: ____	Driller: HDR	Geologist: ST	2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4089	
	Coordinates:			

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J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	**BORING #:**	**DATE:** 9/14/2016
701 S. Park Avenue, Herrin, IL 62948	MW-14	**GROUND ELEV:**

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
	90	MW-14A	1	Grass, Dark Brown Silt / Silt Loam w/roots (Topsoil)	0			
			2	Grey to Brown & Grey Silt / Silt Loam	0			
			3		0			
			4		0	OL		
	90		5		0			
		MW-14B	6		0			
▽			7	Brown & Grey Silty Clay / Silty Clay Loam	0			
			8	v. moist @ 7.5 ft.	0	CL		
	80		9		0			
			10		0			
			11		0			
			12		0			
			13	Sampling terminated at 12 feet				Auger refusal @ 12 ft. while installing MW-13, well screened 3.5 - 12 ft.
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; In-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth:		Rig type:	AMS
▽ Depth While Drilling:	7.5'	Driller:	HDR	Geologist:	ST
▼ Depth After Drilling:		Coordinates:			

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CLIENT:	PROJECT:	PAGE: 1 of 1
J.D. Streett & Company, Inc.	Herrin #233	
LOCATION:	BORING #:	DATE: 9/15/2016
701 S. Park Avenue, Herrin, IL 62948	MW-15	GROUND ELEV:

SAMPLING				DETAILED SOIL & ROCK DESCRIPTION	OVA / PID	ASTM CL.	WELL DETAILS	REMARKS:
Water Level	Recovery	Sample ID	Depth (feet)					
			1	Grass, Dark Brown Silt / Silt Loam w/roots (Topsoil)				
	90		2	Grey to Brown & Grey Silt / Silt Loam	0			
			3		0			wet from approx. 2-3 ft. (not water table, possilby leaky water main under adjacent sidewalk)
		MW-15A	4		0	OL		
			5	Brown & Grey Silty Clay / Silty Clay Loam	0			
▽	90	MW-15B	6		0			
			7	moist @ 6.5 ft.	0			
			8		0	CL		
			9		0			
	80		10		0			
			11		0			
			12		0			
			13	Sampling terminated at 12 feet				Augered to 15 ft., MW-15 screened from 5 - 15 ft.
			14					
			15					
			16					
			17					
			18					
			19					
			20					

NOTE: Stratification lines are approximate; in-situ transition between soil types may be gradual.

GROUNDWATER DATA		Auger Depth:		Rig type:	AMS
▽ Depth While Drilling:	6.5'	Driller:	HDR	Geologist:	ST
▼ Depth After Drilling:		Coordinates:			

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD - SPRINGFIELD, ILLINOIS - (217) 522-4385

S:\CSD Projects\LUST (Illinois)\J.D. Streett\Herrin\Boring Logs\Stage 3 logs.xlsx

APPENDIX B

MONITORING WELL COMPLETION REPORTS

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-1
Date Drilled Start: 07/01/15
Date Completed: 07/01/15
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

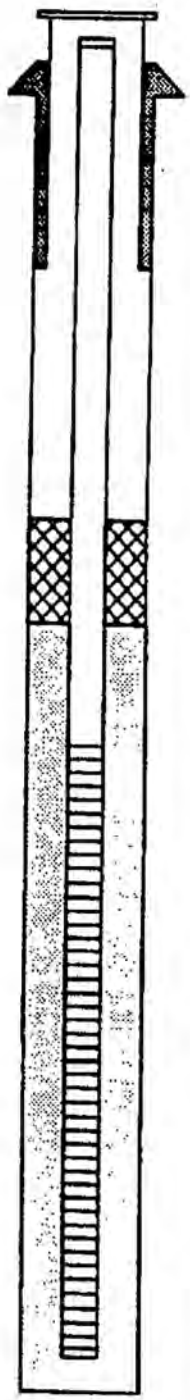
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	3.00
Screen Length	10.00
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	3.97
Elevation of water	93.94
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

98.29 Top of Protective Casing
97.91 Top of Riser Pipe
98.29 Ground Surface
97.41 Top of Annular sealant
____ Casing Stickup

97.41 Top of Seal
2.00 Total Seal Interval
95.41 Top of Sand

94.91 Top of Screen

10.00 Total Screen Interval

84.91 Bottom of Screen
84.91 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-2
Date Drilled Start: 07/01/15
Date Completed: 07/01/15
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

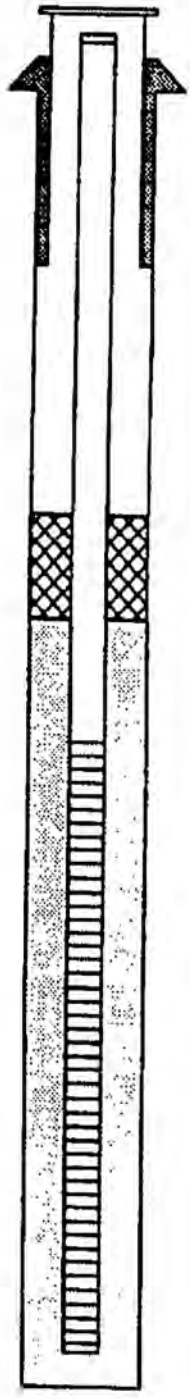
Measurements

to .01 ft (where applicable)

Riser Pipe Length	3.00
Screen Length	8.50
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	0.74
Elevation of water	94.25
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe

Elevations - .01 ft.



95.25 Top of Protective Casing
94.99 Top of Riser Pipe
95.25 Ground Surface
94.49 Top of Annular sealant
____ Casing Stickup

94.49 Top of Seal
2.00 Total Seal Interval
92.49 Top of Sand

91.99 Top of Screen

8.50 Total Screen Interval

83.49 Bottom of Screen
83.49 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-3
Date Drilled Start: 07/01/15
Date Completed: 07/01/15
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

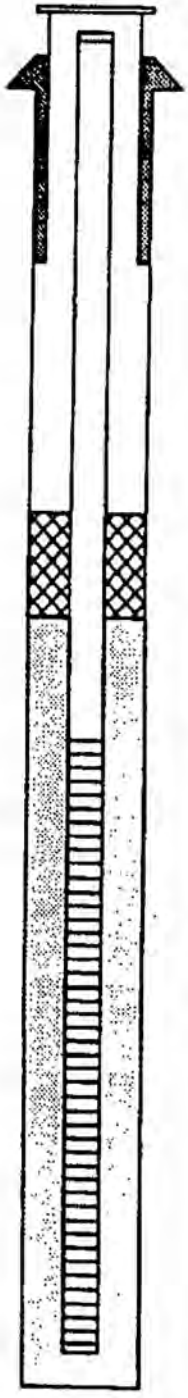
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	3.00
Screen Length	8.50
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	2.08
Elevation of water	95.53
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

98.02 Top of Protective Casing
97.61 Top of Riser Pipe
98.02 Ground Surface
97.11 Top of Annular sealant
____ Casing Stickup

97.11 Top of Seal
2.00 Total Seal Interval
95.11 Top of Sand

94.61 Top of Screen

8.50 Total Screen Interval

86.11 Bottom of Screen
86.11 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-4
Date Drilled Start: 07/01/15
Date Completed: 07/01/15
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

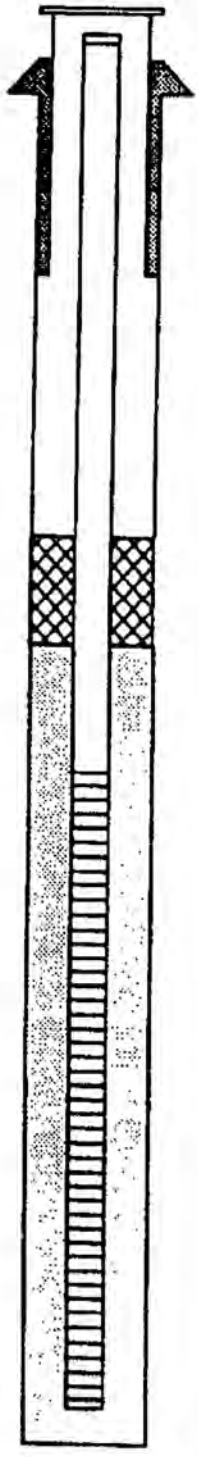
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	3.00
Screen Length	8.50
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	2.24
Elevation of water	95.43
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

98.25 Top of Protective Casing
97.67 Top of Riser Pipe
98.25 Ground Surface
97.17 Top of Annular sealant
____ Casing Stickup

97.17 Top of Seal
2.00 Total Seal Interval
95.17 Top of Sand

94.67 Top of Screen

8.50 Total Screen Interval

86.17 Bottom of Screen
86.17 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-5
Date Drilled Start: 07/01/15
Date Completed: 07/01/15
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

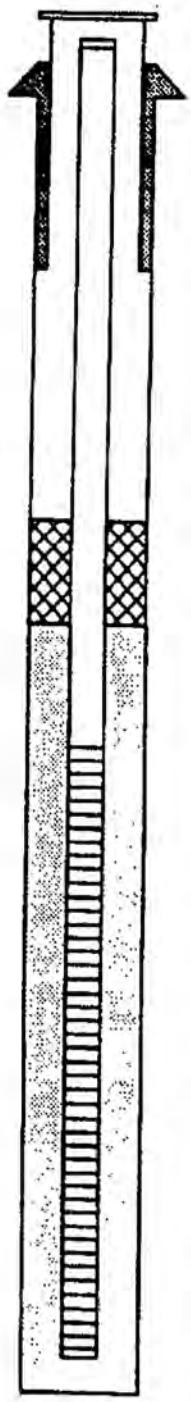
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	3.00
Screen Length	10.00
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	1.37
Elevation of water	97.05
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

98.75 Top of Protective Casing
98.42 Top of Riser Pipe
98.75 Ground Surface
97.92 Top of Annular sealant
____ Casing Stickup

97.92 Top of Seal
2.00 Total Seal Interval
95.92 Top of Sand

95.42 Top of Screen

10.00 Total Screen Interval

85.42 Bottom of Screen
85.42 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-6
Date Drilled Start: 11/12/15
Date Completed: 11/12/15
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

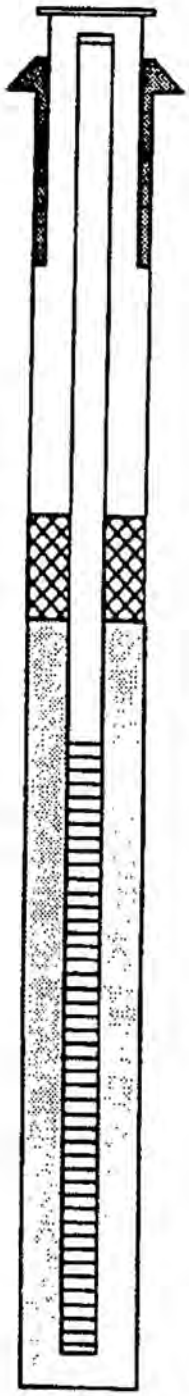
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	3.00
Screen Length	8.00
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	3.63
Elevation of water	94.53
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

98.60 Top of Protective Casing
98.16 Top of Riser Pipe
98.60 Ground Surface
97.66 Top of Annular sealant
____ Casing Stickup

97.66 Top of Seal
2.00 Total Seal Interval
95.66 Top of Sand

95.16 Top of Screen

8.00 Total Screen Interval

87.16 Bottom of Screen
87.16 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-7
Date Drilled Start: 11/12/15
Date Completed: 11/12/15
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

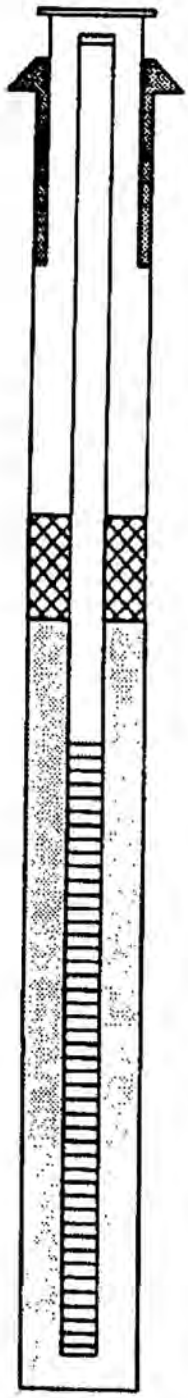
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	3.00
Screen Length	10.00
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	4.69
Elevation of water	93.60
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

98.99 Top of Protective Casing
98.29 Top of Riser Pipe
98.99 Ground Surface
97.79 Top of Annular sealant
_____ Casing Stickup

97.79 Top of Seal
2.00 Total Seal Interval
95.79 Top of Sand

95.29 Top of Screen

10.00 Total Screen Interval

85.29 Bottom of Screen
85.29 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-8
Date Drilled Start: 11/12/15
Date Completed: 11/12/15
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

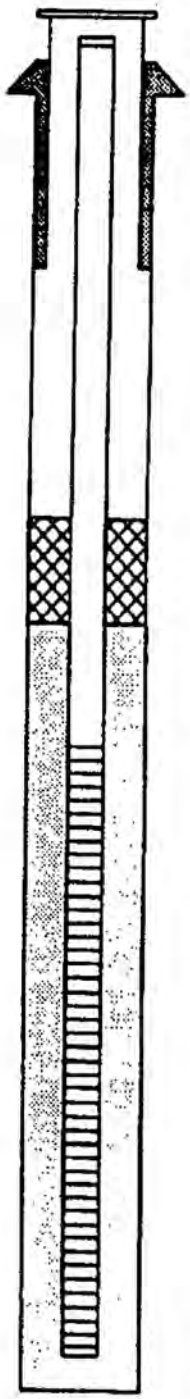
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	3.00
Screen Length	9.00
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	4.05
Elevation of water	92.18
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

96.91 Top of Protective Casing
96.23 Top of Riser Pipe
96.91 Ground Surface
95.73 Top of Annular sealant
____ Casing Stickup

95.73 Top of Seal
2.00 Total Seal Interval
93.73 Top of Sand
93.23 Top of Screen
9.00 Total Screen Interval
84.23 Bottom of Screen
84.23 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-9
Date Drilled Start: 11/12/15
Date Completed: 11/12/15
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

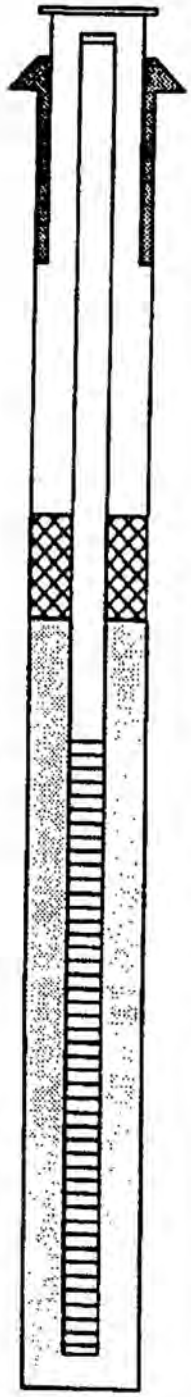
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	3.00
Screen Length	10.00
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	4.00
Elevation of water	91.86
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

96.36 Top of Protective Casing
95.86 Top of Riser Pipe
96.36 Ground Surface
95.86 Top of Annular sealant
_____ Casing Stickup

95.86 Top of Seal
2.00 Total Seal Interval
93.86 Top of Sand

93.36 Top of Screen

10.00 Total Screen Interval

83.36 Bottom of Screen
83.36 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-10
Date Drilled Start: 11/12/15
Date Completed: 11/12/15
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

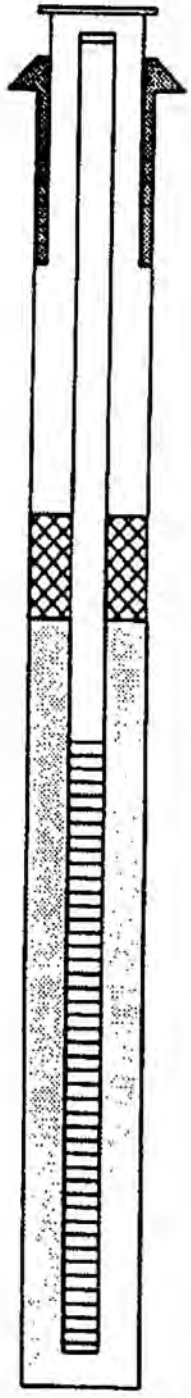
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	2.58
Screen Length	8.00
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	3.65
Elevation of water	93.29
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

97.36 Top of Protective Casing
96.94 Top of Riser Pipe
97.36 Ground Surface
96.86 Top of Annular sealant
____ Casing Stickup

96.86 Top of Seal
2.00 Total Seal Interval
94.86 Top of Sand

94.36 Top of Screen

8.00 Total Screen Interval

86.36 Bottom of Screen
86.36 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-11
Date Drilled Start: 09/14/16
Date Completed: 09/14/16
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

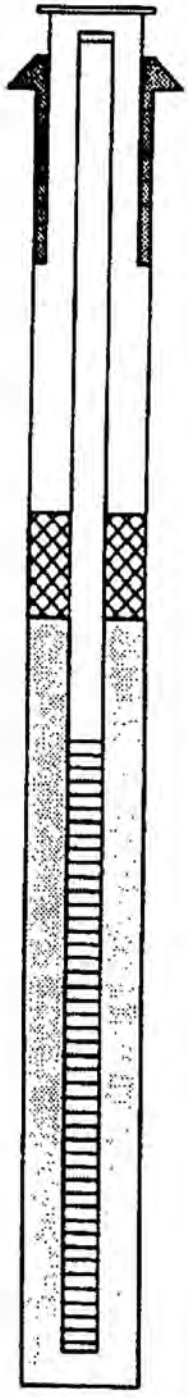
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	2.96
Screen Length	10.00
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	5.81
Elevation of water	92.45
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

98.80 Top of Protective Casing
98.26 Top of Riser Pipe
98.80 Ground Surface
97.80 Top of Annular sealant
_____ Casing Stickup

97.80 Top of Seal
2.00 Total Seal Interval
95.80 Top of Sand

95.30 Top of Screen

10.00 Total Screen Interval

85.30 Bottom of Screen
84.80 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-12
Date Drilled Start: 09/14/16
Date Completed: 09/14/16
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

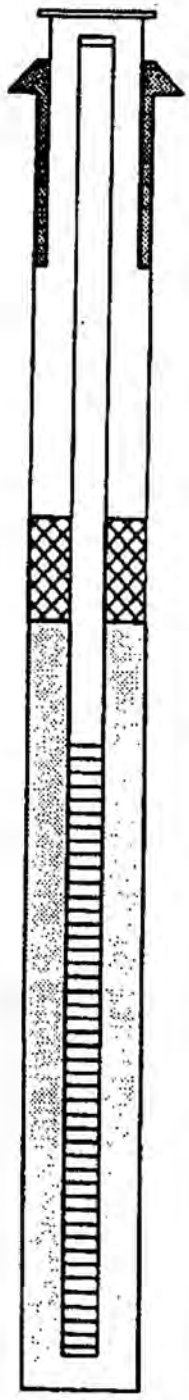
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	2.93
Screen Length	7.50
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	2.60
Elevation of water	93.67
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

96.84 Top of Protective Casing
96.27 Top of Riser Pipe
96.84 Ground Surface
95.84 Top of Annular sealant
____ Casing Stickup

95.84 Top of Seal
2.00 Total Seal Interval
93.84 Top of Sand

93.34 Top of Screen

7.50 Total Screen Interval

85.84 Bottom of Screen
85.84 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-13
Date Drilled Start: 09/14/16
Date Completed: 09/14/16
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

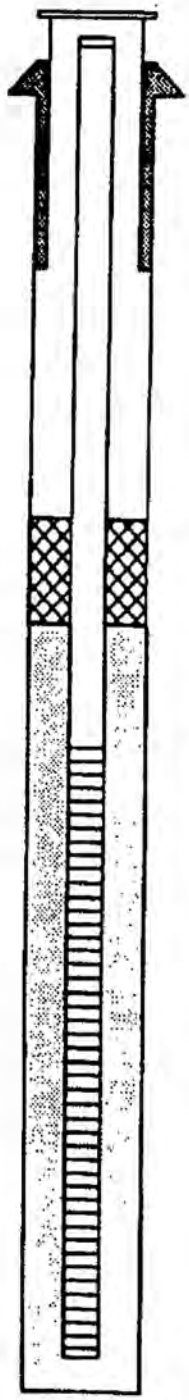
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	3.11
Screen Length	8.50
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	2.08
Elevation of water	93.40
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

95.87 Top of Protective Casing
95.48 Top of Riser Pipe
95.87 Ground Surface
94.87 Top of Annular sealant
____ Casing Stickup

94.87 Top of Seal
2.00 Total Seal Interval
92.87 Top of Sand

92.37 Top of Screen

8.50 Total Screen Interval

83.87 Bottom of Screen
83.87 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-14
Date Drilled Start: 09/14/16
Date Completed: 09/14/16
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

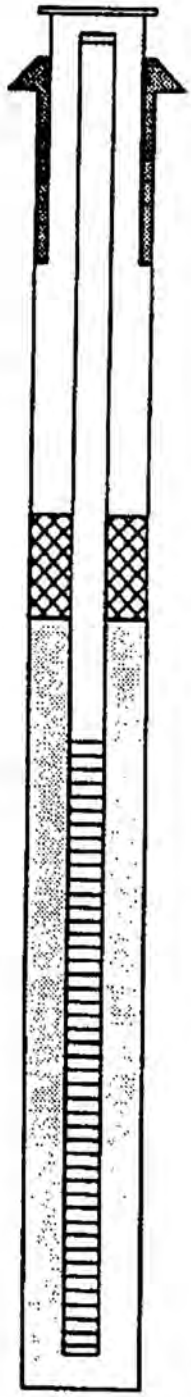
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	3.12
Screen Length	8.50
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	3.58
Elevation of water	89.84
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

93.80 Top of Protective Casing
93.42 Top of Riser Pipe
93.80 Ground Surface
92.80 Top of Annular sealant
____ Casing Stickup

92.80 Top of Seal
2.00 Total Seal Interval
90.80 Top of Sand

90.30 Top of Screen

8.50 Total Screen Interval

81.80 Bottom of Screen
81.80 Bottom of Borehole

Illinois Environmental Protection Agency

LUST Well Completion Report

Incident No.: 20131026
Site Name: J.D. Streett & Co. (Herrin #233)
Drilling Contractor: Heartland Drilling & Rem.
Driller: Frank Pinkley
Drilling Method: 4 1/4" HSA

Well No.: MW-15
Date Drilled Start: 09/15/16
Date Completed: 09/15/16
Geologist: Shane Thorpe
Drilling Fluids (Type): N/A

Annular Space Details

Type of Surface Seal: Concrete
Type of Annular Sealant: Bentonite
Type of Bentonite Seal (Granular, Pellet): 3/8" chips
Type of Sand Pack: Washed Silica

Well Construction Materials

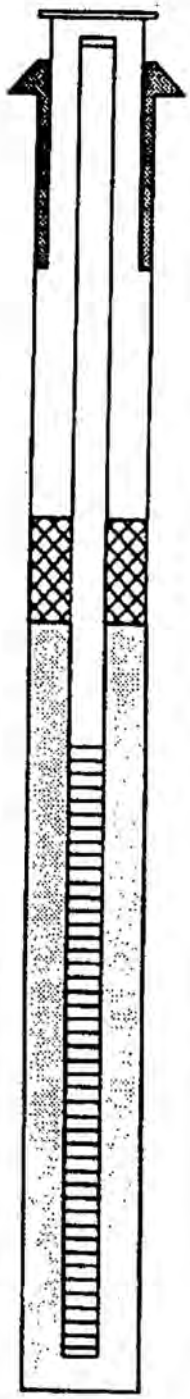
	Stainless Steel Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint		Sch. 40	
Riser pipe above w.t.		Sch. 40	
Riser Pipe below w.t.		Sch. 40	
Screen		Sch. 40	
Coupling joint screen to riser		Sch. 40	
Protective casing	8" Skirt		

Measurements

to .01 ft (where applicable)

Riser Pipe Length	4.72
Screen Length	10.00
Screen Slot Size	0.01
Protective casing length	0.75
Depth to water	0.25
Elevation of water	91.44
Free Product thickness	0.00
Gallons removed (develop)	5.00
Gallons removed (purge)	5.00
Other	

Completed by: Shane Thorpe



Elevations - .01 ft.

91.97 Top of Protective Casing
91.69 Top of Riser Pipe
91.97 Ground Surface
90.47 Top of Annular sealant
____ Casing Stickup

90.47 Top of Seal
3.00 Total Seal Interval
87.47 Top of Sand

86.97 Top of Screen

10.00 Total Screen Interval

76.97 Bottom of Screen
76.97 Bottom of Borehole

APPENDIX C

PRELIMINARY GROUNDWATER MODELING

INPUT				
Contaminant of Concern:				Benzene
PARAMETER		VALUE	UNITS	DEFAULT
C source	=	11.9	mg/L	-
S_w	=	5120.64	cm	168.00 ft.
S_d	=	200	cm	default
K	=	32.9184	cm/d	3.81E-04 cm/s
i	=	0.042	-	-
λ	=	0.0009	1/d	
ρ_b	=	1.62	g/cm^3	
ρ_s	=	2.71	g/cm^3	
θ_τ	=	0.40	-	0.43 (General) 0.25 (Gravel) 0.32 (Sand) 0.40 (Silt) 0.36 (Clay)
X	=	22098	cm	725.00 ft.

OUTPUT				
U	=	3.437405769	cm/d	
αX	=	2209.80	cm	
αY	=	736.60	cm	
αZ	=	110.49	cm	
$\beta 1$	=	0.317301344	erf =	0.346375
$\beta 2$	=	0.063997356	erf =	0.072115

Contaminant Concentration @ Distance X from Source				
C x	=	0.00491	mg/L @	725.00 ft.

0.005

INPUT				
Contaminant of Concern:				Toluene
PARAMETER		VALUE	UNITS	DEFAULT
C source	=	23.7	mg/L	-
S_w	=	5120.64	cm	168.00 ft.
S_d	=	200	cm	default
K	=	32.9184	cm/d	3.81E-04 cm/s
i	=	0.042	-	-
λ	=	0.011	1/d	
ρ_b	=	1.62	g/cm^3	
ρ_s	=	2.71	g/cm^3	
θ_T	=	0.40	-	0.43 (General) 0.25 (Gravel) 0.32 (Sand) 0.40 (Silt) 0.36 (Caly)
X	=	1249.68	cm	41.00 ft.

OUTPUT				
U	=	3.437405769	cm/d	
αX	=	124.97	cm	
αY	=	41.66	cm	
αZ	=	6.25	cm	
$\beta 1$	=	5.610816443	erf =	1.000000
$\beta 2$	=	1.131660555	erf =	0.890492

Contaminant Concentration @ Distance X from Source				
C x	=	0.98788	mg/L @	41.00 ft.

LPC # 1990400008 - Williamson County
J.D. Streett Company, Inc.
LUST Incident # 20131026

INPUT				
Contaminant of Concern:				Ethylbenzene
PARAMETER		VALUE	UNITS	DEFAULT
C source	=	4.29	mg/L	-
S_w	=	5120.64	cm	168.00 ft.
S_d	=	200	cm	default
K	=	32.9184	cm/d	3.81E-04 cm/s
i	=	0.042	-	-
λ	=	0.003	1/d	
ρ_b	=	1.62	g/cm^3	
ρ_s	=	2.71	g/cm^3	
θ_τ	=	0.40	-	0.43 (General) 0.25 (Gravel) 0.32 (Sand) 0.40 (Silt) 0.36 (Caly)
X	=	1920.24	cm	63.00 ft.

OUTPUT				
U	=	3.437405769	cm/d	
αX	=	192.02	cm	
αY	=	64.01	cm	
αZ	=	9.60	cm	
$\beta 1$	=	3.651483717	erf =	1.000000
$\beta 2$	=	0.736477504	erf =	0.702373

Contaminant Concentration @ Distance X from Source				
C x	=	0.69829	mg/L @	63.00 ft.

0.7

INPUT				
Contaminant of Concern:				**Xylenes**
PARAMETER		**VALUE**	**UNITS**	**DEFAULT**
C source	=	**20.5**	mg/L	-
S_w	=	**5120.64**	cm	168.00 ft.
S_d	=	**200**	cm	default
K	=	**32.9184**	cm/d	3.81E-04 cm/s
i	=	**0.042**	-	-
λ	=	**0.0019**	1/d	
ρ_b	=	**1.62**	g/cm^3	
ρ_s	=	**2.71**	g/cm^3	
θ_τ	=	**0.40**	-	0.43 (General) 0.25 (Gravel) 0.32 (Sand) 0.40 (Silt) 0.36 (Caly)
X	=	**1219.2**	cm	40.00 ft.

OUTPUT				
U	=	**3.437405769**	cm/d	
αX	=	**121.92**	cm	
αY	=	**40.64**	cm	
αZ	=	**6.10**	cm	
$\beta 1$	=	**5.751086854**	**erf =**	1.000000
$\beta 2$	=	**1.159952069**	**erf =**	0.899082

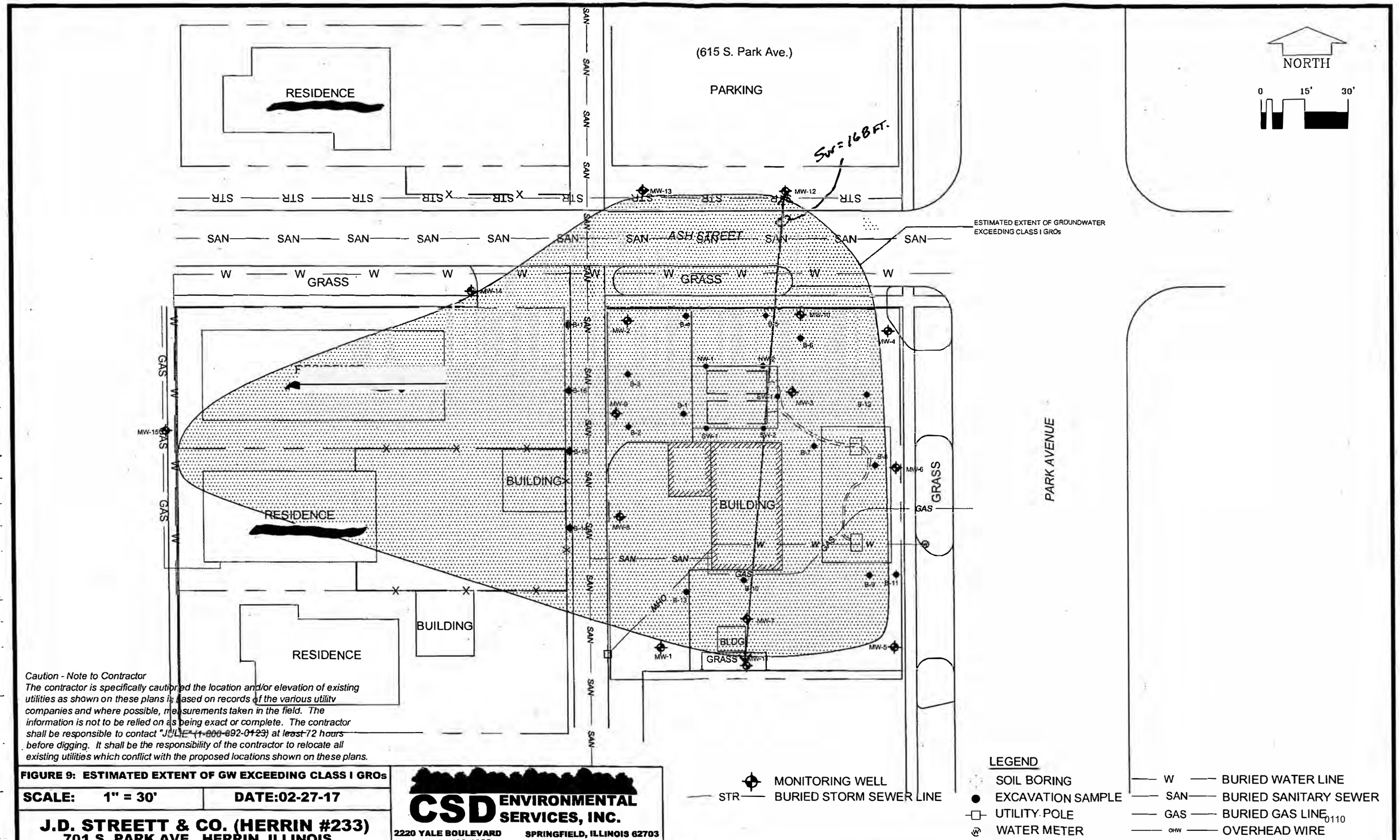
Contaminant Concentration @ Distance X from Source				
C x	=	**9.77964**	**mg/L @**	**40.00 ft.**

LPC # 1990400008 - Williamson County
J.D. Street Company, Inc. - Herrin
LUST Incident # 20131026

INPUT				
Contaminant of Concern:				MTBE
PARAMETER		VALUE	UNITS	DEFAULT
C source	=	7.27	mg/L	-
S_w	=	5120.64	cm	168.00 ft.
S_d	=	200	cm	default
K	=	32.9184	cm/d	3.81E-04 cm/s
i	=	0.042	-	-
λ	=	0	1/d	
ρ_b	=	1.62	g/cm^3	
ρ_s	=	2.71	g/cm^3	
θ_T	=	0.40	-	0.43 (General) 0.25 (Gravel) 0.32 (Sand) 0.40 (Silt) 0.36 (Caly)
X	=	36118.8	cm	1185.00 ft.

OUTPUT				
U	=	3.456432	cm/d	
αX	=	3611.88	cm	
αY	=	1203.96	cm	
αZ	=	180.59	cm	
$\beta 1$	=	0.194129514	erf =	0.216331
$\beta 2$	=	0.0391545	erf =	0.044159

Contaminant Concentration @ Distance X from Source				
C x	=	0.06945	mg/L @	1185.00 ft.
		0.07		



Caution - Note to Contractor
The contractor is specifically cautioned the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor shall be responsible to contact "JULIE" (1-800-892-0123) at least 72 hours before digging. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed locations shown on these plans.

FIGURE 9: ESTIMATED EXTENT OF GW EXCEEDING CLASS I GROs

SCALE: 1" = 30'	**DATE:02-27-17**

J.D. STREETT & CO. (HERRIN #233)
701 S. PARK AVE. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

LEGEND

- MONITORING WELL
- STR — BURIED STORM SEWER LINE
- SOIL BORING
- EXCAVATION SAMPLE
- UTILITY POLE
- WATER METER
- W — BURIED WATER LINE
- SAN — BURIED SANITARY SEWER
- GAS — BURIED GAS LINE
- OHW — OVERHEAD WIRE

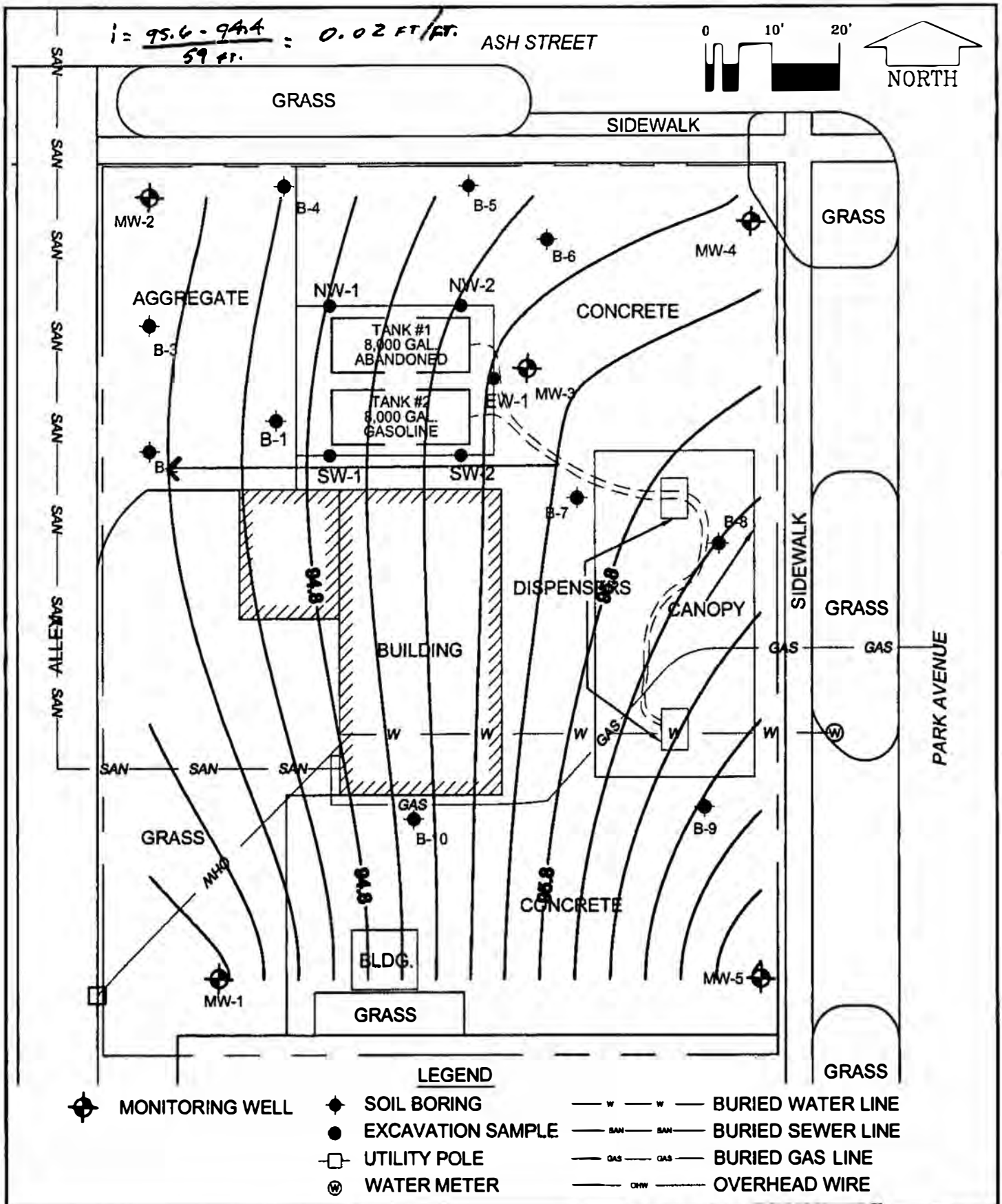


FIGURE 3: Groundwater Contour 7-13-15

SCALE: 1" = 20'	DATE: 7-22-15

J.D. STREETT & COMPANY, INC.

701 S. PARK ST. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

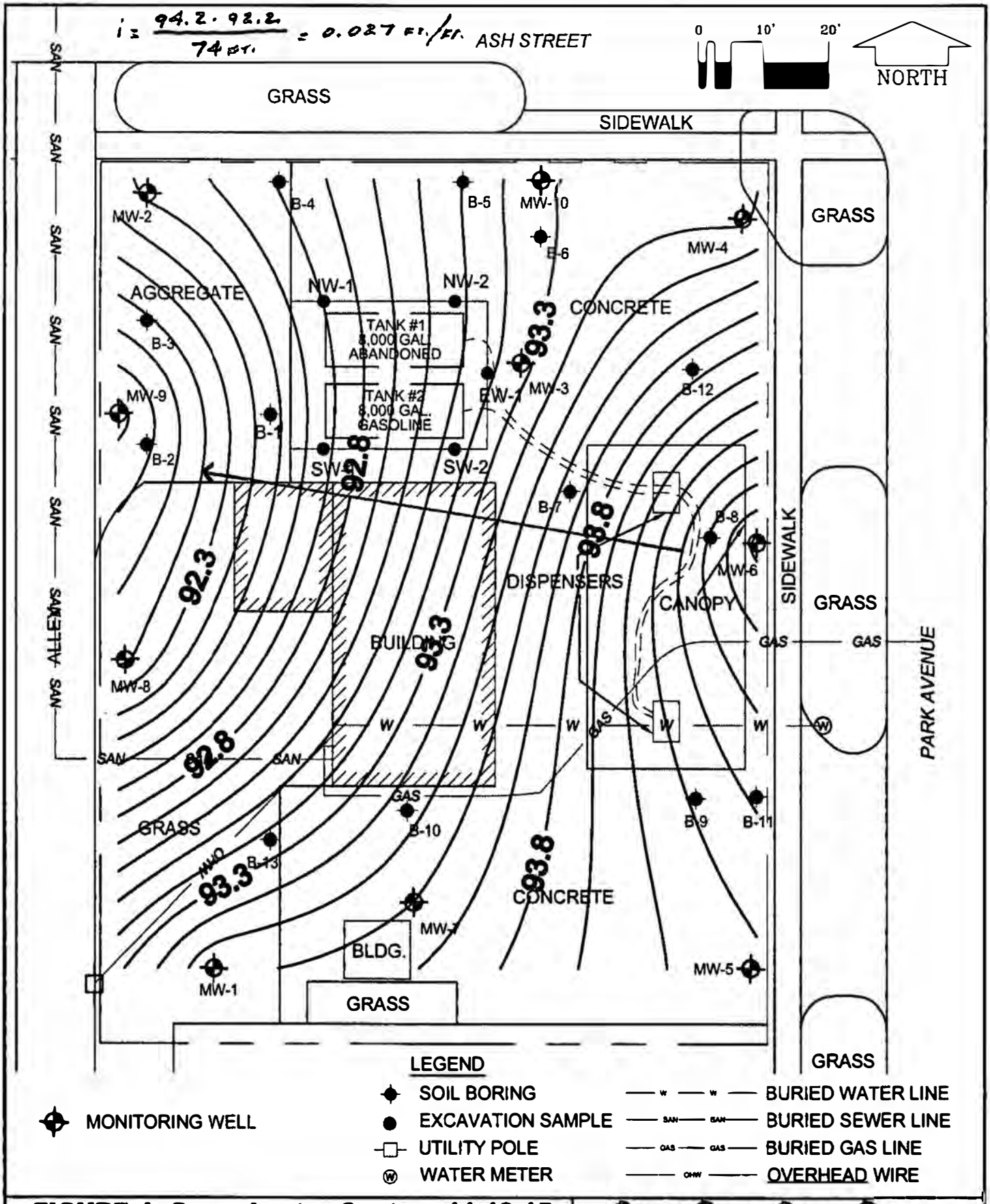


FIGURE 4: Groundwater Contour 11-19-15

SCALE: 1" = 20'	DATE: 11-19-15

J.D. STREETT & COMPANY, INC.

701 S. PARK ST. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

(615 S. Park Ave.)

PARKING

RESIDENCE

RESIDENCE

RESIDENCE

RESIDENCE

BUILDING

BUILDING

BUILDING

BLDG

ASH STREET

PARK AVENUE

GRASS

GRASS

GRASS

NORTH

0 15' 30'

$i = \frac{93.2 - 90.0}{40 ft.} = 0.08$

0.02
0.027
0.08
0.127/3 = 0.042
AVERAGE HYD. GRADIENT

Caution - Note to Contractor
The contractor is specifically cautioned the location and/or elevation of existing utilities as shown on these plans are based on records of the various utility companies and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor shall be responsible to contact "J.U.L.I.E." (1-800-892-0123) at least 72 hours before digging. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed locations shown on these plans.

FIGURE 5: Groundwater Contour 9/21/16

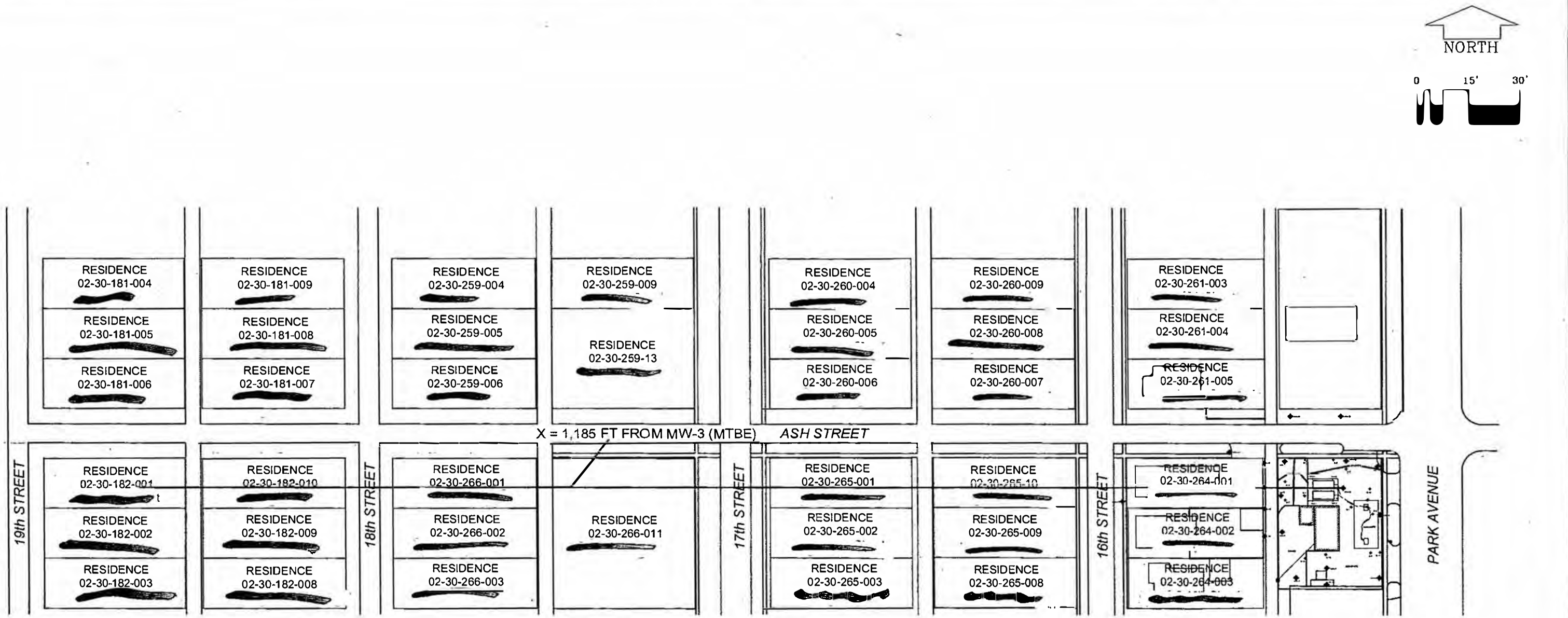
SCALE: 1" = 30' | **DATE:9-21-16**

J.D. STREETT & CO. (HERRIN #233)
701 S. PARK AVE. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

LEGEND

- MONITORING WELL
- STR — BURIED STORM SEWER
- SOIL BORING
- EXCAVATION SAMPLE
- UTILITY POLE
- WATER METER
- W — BURIED WATER LINE
- SAN — BURIED SEWER LINE
- GAS — BURIED GAS LINE
- OHW — OVERHEAD WIRE



PROPOSED GW NOTIFICATION AREA INCLUDES
39 INDIVIDUAL PROPERTIES AND CITY OF
HERRIN RIGHT-OF-WAY

Caution - Note to Contractor
The contractor is specifically cautioned the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor shall be responsible to contact "JULIE" (1-800-892-0123) at least 72 hours before digging. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed locations shown on these plans.

FIGURE 13: PROPOSED GW NOTIFICATION AREA BASED ON R-26

SCALE: 1" = 30' | **DATE: 02-27-17**

J.D. STREETT & CO. (HERRIN #233)
701 S. PARK AVE. HERRIN, ILLINOIS

CSD ENVIRONMENTAL SERVICES, INC.
2220 YALE BOULEVARD SPRINGFIELD, ILLINOIS 62703
PHONE: 217-522-4085 FAX: 217-522-4087

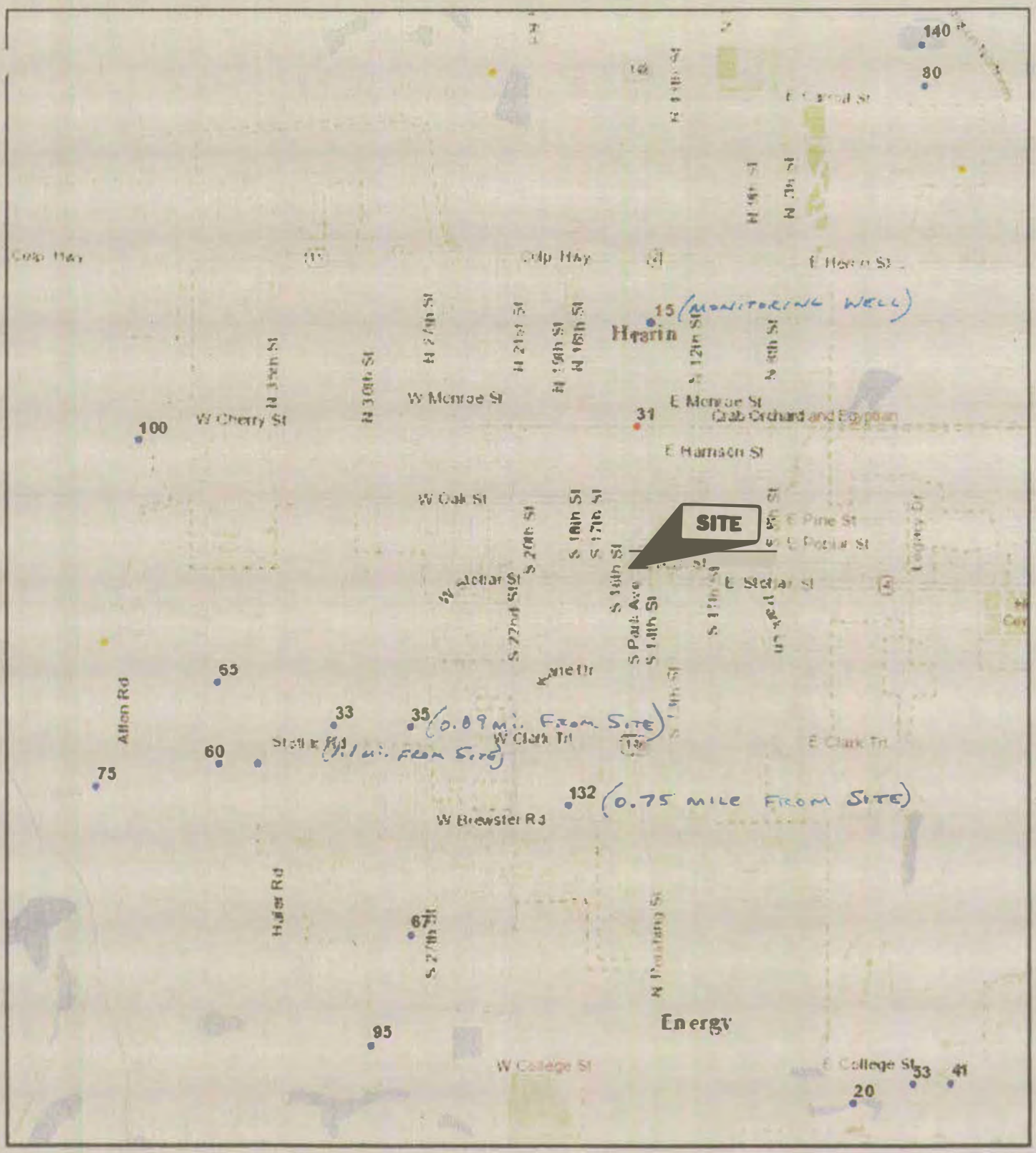
LEGEND

- MONITORING WELL
- BURIED STORM SEWER LINE
- SOIL BORING
- EXCAVATION SAMPLE
- UTILITY POLE
- WATER METER
- BURIED WATER LINE
- BURIED SANITARY SEWER
- BURIED GAS LINE
- OHW — OVERHEAD WIRE

APPENDIX D

WATER SUPPLY WELL SURVEY INFORMATION

ArcGIS Web Map



October 12, 2016

1:36,112

0 0.3 0.6 1.2 mi

0 0.35 0.7 1.4 km

Labels - Total Depth

Water and Related Wells

- Water
- Dry
- Engineering
- Stratigraphic
- Observation
- Mineral Test
- Outcrop
- Mine-related
- Hazardous Waste or Leaking Tank
- Counties

ILLINOIS STATE GEOLOGICAL SURVEY

Private Water Well	Top	Bottom
dirt & clay	0	34
yellow sandstone & shale	34	51
limestone	51	58
gray sandstone & sandy shale	58	85
gray & white sandstone	85	124
gray limestone & slate	124	132
Total Depth		132

Casing: 6" SDR 21 from -1' to 55'

Grout: BENSEAL/CEMENT from 0 to 55.

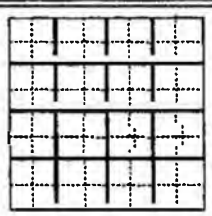
Size hole below casing: 6"

Water from limestone at 131' to 132'.
Static level 68' below casing top which is 1' above GL
Pumping level 90' when pumping at 0 gpm for 12 hours
Permanent pump installed at 120'
on December 13, 1991, with a capacity of 18 gpm

Owner Address: P.O. Box #67 Herrin, IL
Address of well: Brewster
Location source: Location from permit

Permit Date: November 7, 1991 **Permit #:** 021277

COMPANY Beanland, Leonard Ralph
FARM [redacted]
DATE DRILLED November 20, 1991 **NO.**
ELEVATION 0 **COUNTY NO.** 23506
LOCATION SE NE NW
LATITUDE 37.785768 **LONGITUDE** -89.031712
COUNTY Williamson **API** 121992350600 **31 - 8S - 2E**



ILLINOIS STATE GEOLOGICAL SURVEY

	Top	Bottom
Total Depth		35
Driller's Log filed		

Permit Date: **Permit #:**

COMPANY Geer, James A.

FARM

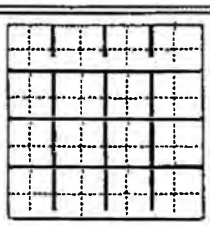
DATE DRILLED March 1, 1974 **NO.**

ELEVATION 0 **COUNTY NO.** 22666

LOCATION SE SE SE

LATITUDE 37.789377 **LONGITUDE** -89.041338

COUNTY Williamson **API** 121992266600 **25 - 8S - 1E**



ILLINOIS STATE GEOLOGICAL SURVEY

	Top	Bottom
Total Depth		33
Driller's Log filed		

Permit Date: Permit #:

COMPANY Geer, James A.

FARM [redacted]

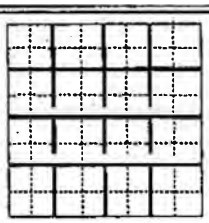
DATE DRILLED September 1, 1973 NO.

ELEVATION 0 COUNTY NO. 22605

LOCATION SE SW SE

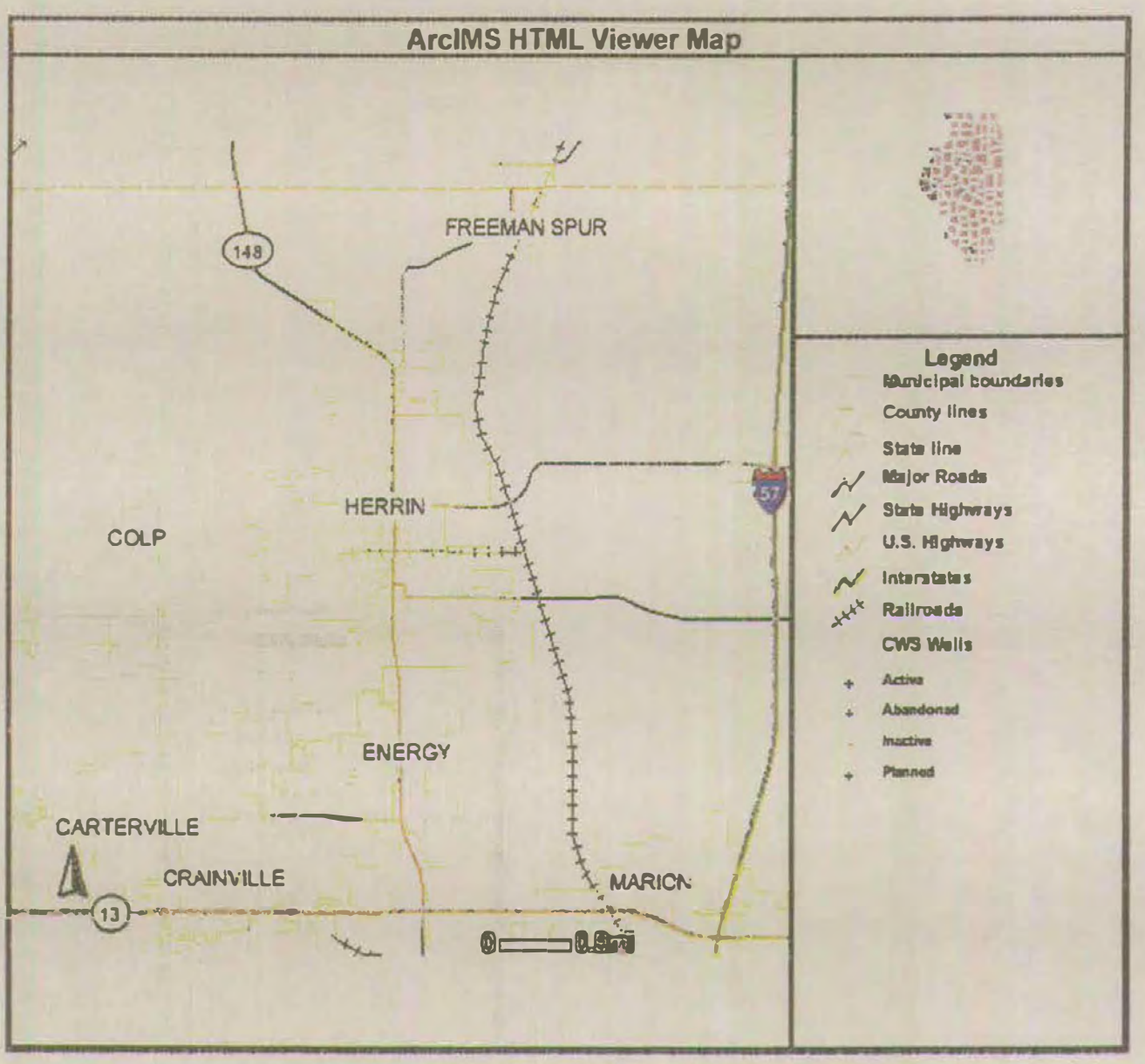
LATITUDE 37.789436 LONGITUDE -89.045943

COUNTY Williamson API 121992260500 25 - 8S - 1E



1	121990020600	160		413	COAL	3130171
2	121990103800	170	Ly-Mar Hotel	0	COAL	3135828
3	121990103900	180	Marlow'S Theatre	0	COAL	3135829
4	121990104000	359		0	COAL	3140758
5	121992266600	35 0.89 miles SW	[redacted]	0	WATER	3131875
6	121992352700	14	Ware, C.R. Oil Co. #MW-1	0	MONIT	3136023
7	121992352800	15	Ware, C.R. Oil Co. #MW-2	0	MONIT	3136023
8	121992352900	15	Ware, C.R. Oil Co. #MW-3	0	MONIT	3136023
9	121992353000	18	Ware, C.R. Oil Co. #MW-4	0	MONIT	3136023
10	121990204000	103		430	COAL	3140433
11	121990204100	175		430	COAL	3134987
12	121990181300	130		0	COAL	3141091
13	121990181900	135		431	COAL	3139438
14	121992260500	33 1.13 miles SW	[redacted]	0	WATER	3130551
15	121992363600	31	SBI 148 at ICC RR Subway	441	ENG	3135782

Information and data presented were obtained from various Federal, State, and local agencies and are subject to revision.



Illinois
Environmental Protection Agency

Source Water Assessment Program Factsheets

Select Water System Type

Community

Select County

Williamson

Search County

-- Or --

Enter any part of a Facility Name

Search Facility Name

Search Results

HERRIN

Select Water System

To view a summary version of the completed Source Water Assessments, you may search our records by county or public water supply name. This summary information describes pertinent sub-sections of each completed assessment including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts. However, summaries of Source Water Protection Efforts have not been documented for non-community water supplies. It should be noted that these Source Water Assessment summaries are presented in strict compliance with Illinois EPA's security policy on the release of sensitive information. Therefore, all locational data and maps pertaining to wells, aquifers and/or surface water intakes have been removed. To obtain a complete version of the Source Water Assessment Report, please contact your local water supply officials.

Water Percentages:

Surface Water %	Surface Water Purchase %	Ground Water %	Ground Water Purchase %	Ground Water UDI %	Ground Water UDI Purchase %
0.00	100.00	0.00	0.00	0.00	0.00

Importance Of Source Water:

Source Of Water Supply:

Well Data For This Facility:

No Data

Intake Details:

No Data

Source Water Quality:

Finished Water Quality:

Potential Sources Of Contamination:

Site Data For This Facility:

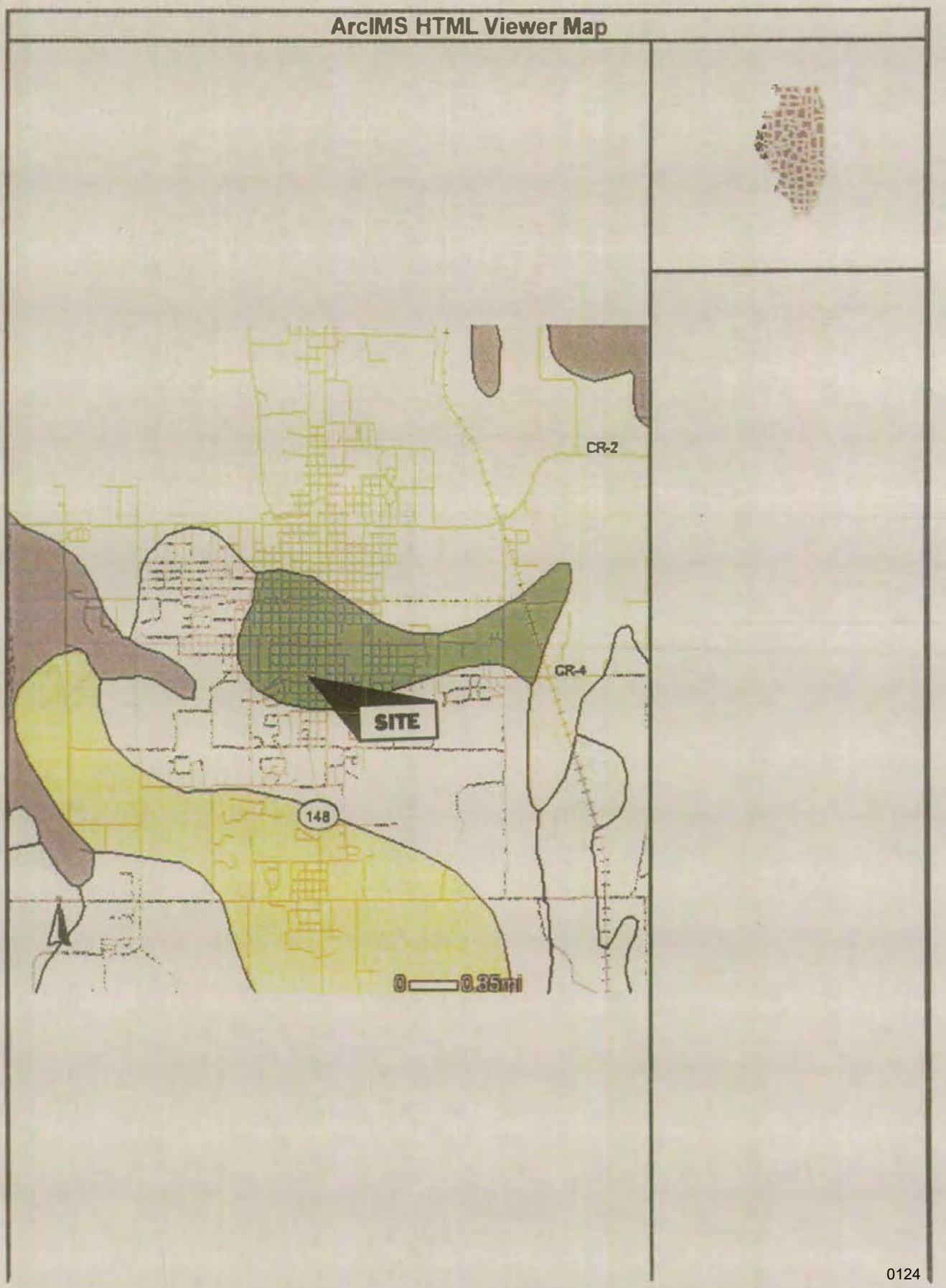
No Data

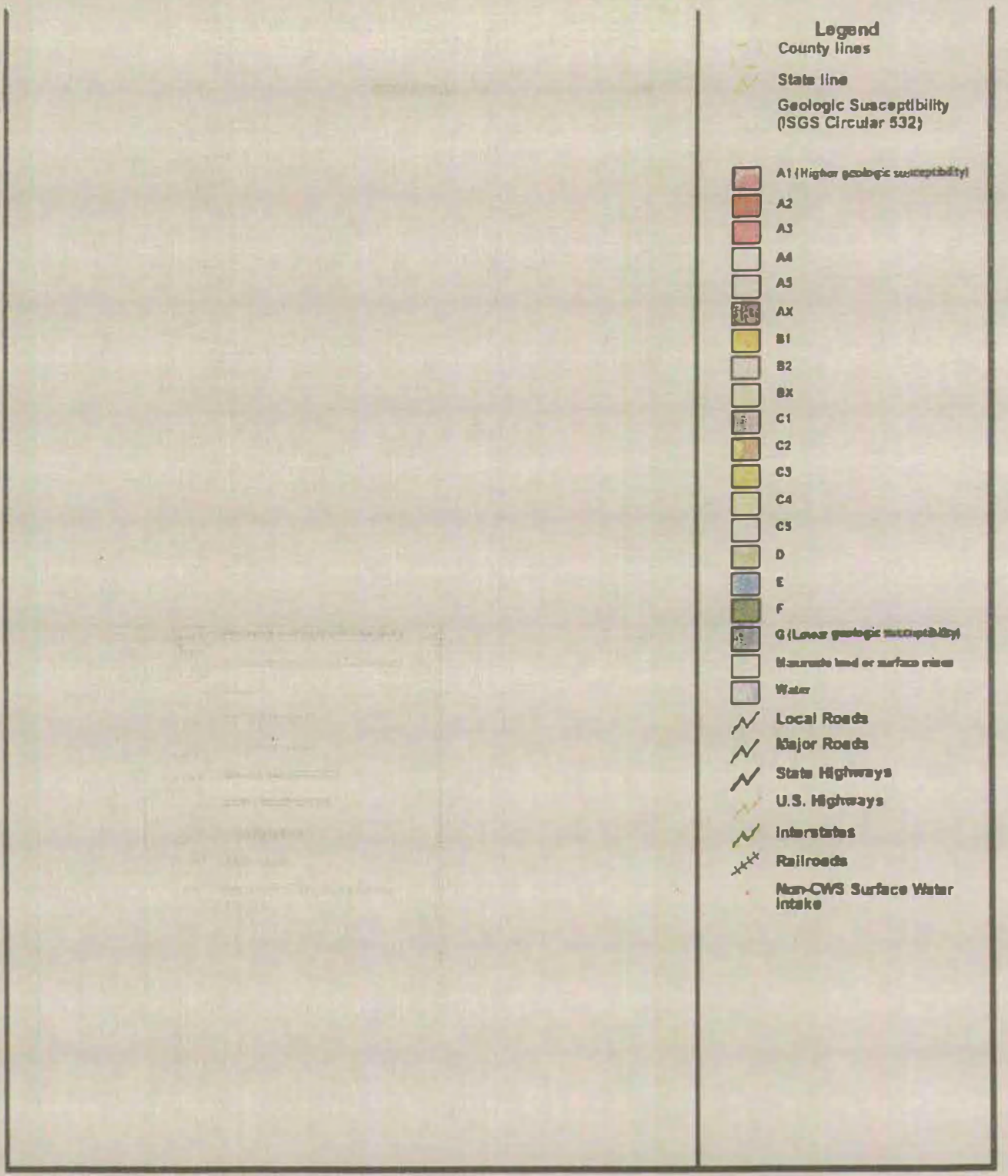
Susceptibility To Contamination:

Source Water Protection Efforts:

Report a Problem

Information and data presented were obtained from various Federal, State, and local agencies and are subject to revision.




Legend
County lines
State line
Geologic Susceptibility
(ISGS Circular 532)
A1 (Higher geologic susceptibility)
A2
A3
A4
A5
AX
B1
B2
BX
C1
C2
C3
C4
C5
D
E
F
G (Lower geologic susceptibility)
Water
Local Roads
Major Roads
State Highways
U.S. Highways
Interstates
Railroads
Non-CWS Surface Water Intake

Run Date :8/24/2010

DLC Assignment Form

Assignment ID :7403
Subject :Herrin/Odum Concrete
Subject Type :Ordinance Review
DLC In Date :8/24/2010
DLC File No. :
Correspondence No. :R10082402

DLC Completed Date. :

Assigned Staff:
Wight, Mark Attorney
Kershaw, Jody Bureau Requestor

Project Details:
Status Issued Date: 8/24/2010 Due Date: 9/24/2010
Please review ordinance 11-2010 for City of Herrin

Comments:

ORDINANCE NO. 11-2010

PUBLISHED IN PAMPHLET FORM
BY THE CITY COUNCIL OF
HERRIN, ILLINOIS

Marlene Simpson
City Clerk

ORDINANCE NUMBER 11-2010

AN ORDINANCE PROHIBITING THE USE OF GROUNDWATER AS A POTABLE WATER SUPPLY BY THE INSTALLATION OR USE OF POTABLE WATER SUPPLY WELLS OR BY ANY OTHER METHOD; AMENDING CHAPTER 38, ARTICLE III, OF THE HERRIN REVISED CODE BY ADDING SECTION 38-3-24 THERETO

WHEREAS, certain properties in the City of Herrin, Illinois have been used over a period of time for commercial/industrial purposes; and

WHEREAS, because of said use, concentrations of certain chemical constituents in the groundwater beneath the City may exceed Class I groundwater quality standards for potable resource groundwater as set forth in *35* Illinois Administrative Code 620 or Tier 1 remediation objectives as set forth in *35* Illinois Administrative Code 742; and

WHEREAS, the City of Herrin desires to limit potential threats to human health from groundwater contamination while facilitating the redevelopment and productive use of properties that are the source of said chemical constituents;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF HERRIN, ILLINOIS:

Section One. Chapter 38, Article III ("Water System"), is hereby amended by inserting Chapter 38, Article III, Section 38-3-24, thereto, containing the following language:

38-3-24 USE OF GROUNDWATER AS A POTABLE WATER SUPPLY PROHIBITED.

(A) Prohibition. Except for such uses or methods in existence before the effective date of this ordinance, the use or attempt to use groundwater from within the corporate limits of the City of Herrin as a potable water supply, by the installation or drilling of wells or by any other method is hereby prohibited. This prohibition expressly includes the City of Herrin.

(B) Penalties. Any person violating the provisions of this ordinance shall be subject to a fine of up to $750.00 for each violation.

(C) Definitions.

"Person" is any individual, partnership, co-partnership, firm, company, limited liability company, corporation, association, joint stock company, trust, estate, political subdivision, or any other legal entity, or their legal representatives, agents or assigns.

"Potable water" is any water used for human or domestic consumption, including, but not limited to, water used for drinking, bathing, swimming, washing dishes, or preparing foods.

(D) Repealer. All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed insofar as they are in conflict with this ordinance.

(E) **Severability.** If any provision of this ordinance or its application to any person or under any circumstances is adjudged invalid, such adjudication shall not affect the validity of the ordinance as a whole or of any portion not adjudged invalid.

Section Two. Effective date.

This ordinance shall be in full force and effect from and after its passage, approval and publication as required by law.

PASSED BY THE CITY COUNCIL OF THE CITY OF HERRIN, ILLINOIS, THIS 12TH DAYOF JULY, 2010.

Marlene Simpson, City Clerk

NAME	AYE	NAY	ABSTAIN	ABSENT
Alderman Ernie Gwaltney	X			
Alderman Liz Issler	X			
Alderman Robert Craig	X			
Alderman Deon McGuire	X			
Alderman Marilyn Orso	X			
Alderman Marilyn Ruppel	X			
Alderman Bill Sizemore	X			

APPROVED BY THE MAYOR OF THE CITY OF HERRIN, ILLINOIS, THIS 12TH DAY OF JULY, 2010.

Victor M. Ritter, Mayor

Attest:

Marlene Simpson, City Clerk

CITY OF HERRIN
MARLENE SIMPSON, *CITY CLERK*
300 NORTH PARK AVENUE
HERRIN, ILLINOIS 62948
(618) 942-3175 • Fax (618) 942-2296

STATE OF ILLINOIS
WILLIAMSON COUNTY
CITY OF HERRIN

I, MARLENE SIMPSON, DO HEREBY CERTIFY that I am the duly qualified City Clerk of the City of Herrin, Illinois, Williamson County, and as such clerk I am the keeper of the records and files of the City Council of said City.

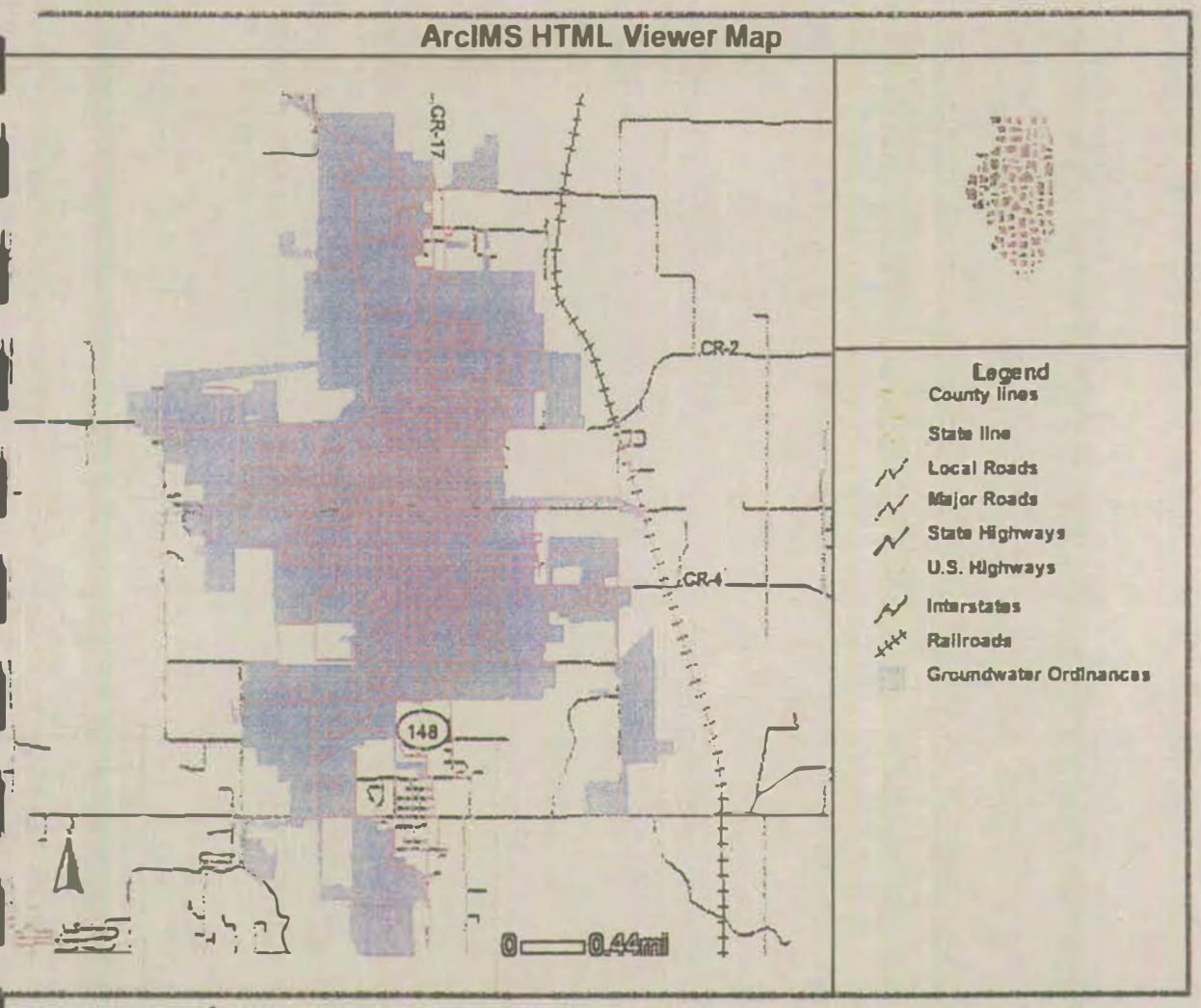
I further certify that on July 12, 2010 the Corporate Authorities of the above municipality passed and approved Ordinance #11-2010 An Ordinance Prohibiting the Use of Groundwater as a Potable Water Supply by the Installation or Use of Potable Water Supply Wells or by Any Other Method; Amending Chapter 38, Article III, of the Herrin Revised Code by Adding Section 38-3-24 Thereto.

IN WITNESS WHEREOF, I have hereunto set my hand and the official seal of the City of Herrin, Illinois at my office this 12th day of July, 2010.

MARLENE SIMPSON, CITY CLERK
HERRIN, ILLINOIS

SEAL

Information and data presented were obtained from various Federal, State, and local agencies and are subject to revision.



APPENDIX E

PROPOSED CORRECTIVE ACTION BUDGET

Illinois Environmental Protection Agency

Bureau of Land • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

General Information for the Budget and Billing Forms

LPC #: 1990400008 County: Williamson

City: Herrin Site Name: J.D. Streett & Company, Inc. (Herrin #233)

Site Address: 701 South Park Avenue

IEMA Incident No.: 20131026

IEMA Notification Date: 9-17-13

Date this form was prepared: March 16, 2017

This form is being submitted as a (check one, if applicable):

- ☒ Budget Proposal
- ☐ Budget Amendment (Budget amendments must include only the costs over the previous budget.)
- ☐ Billing Package

Please provide the name(s) and date(s) of report(s) documenting the costs requested:

Name(s):

Date(s):

This package is being submitted for the site activities indicated below:

35 Ill. Adm. Code 734:

- ☐ Early Action
- ☐ Free Product Removal after Early Action
- ☐ Site Investigation . . . . . Stage 1: ☐ Stage 2: ☐ Stage 3: ☐
- ☒ Corrective Action Actual Costs

35 Ill. Adm. Code 732:

- ☐ Early Action
- ☐ Free Product Removal after Early Action
- ☐ Site Classification
- ☐ Low Priority Corrective Action
- ☐ High Priority Corrective Action

35 Ill. Adm. Code 731:

- ☐ Site Investigation
- ☐ Corrective Action

General Information for the Budget and Billing Forms

The following address will be used as the mailing address for checks and any final determination letters regarding payment from the Fund.

Pay to the order of: J.D. Streett & Company, Inc.

Send in care of: CSD Environmental Services, Inc.

Address: 2220 Yale Boulevard

City: Springfield State: Illinois Zip: 62703

The payee is the: Owner ☒ Operator ☒ (Check one or both.)

Signature of the owner or operator of the UST(s) (required)

W-9 must be submitted.
Click here to print off a W-9 Form.

Number of petroleum USTs in Illinois presently owned or operated by the owner or operator; any subsidiary, parent or joint stock company of the owner or operator; and any company owned by any parent, subsidiary or joint stock company of the owner or operator:

Fewer than 101: ☒ 101 or more: ☐

Number of USTs at the site: 2 (Number of USTs includes USTs presently at the site and USTs that have been removed.)

Number of incidents reported to IEMA for this site: 3

Incident Numbers assigned to the site due to releases from USTs: 851220* 20131026

Please list all tanks that have ever been located at the site and tanks that are presently located at the site.

Product Stored in UST	Size (gallons)	Did UST have a release?	Incident No.	Type of Release Tank Leak / Overfill / Piping Leak
Gasoline	8,000	Yes ☐ No ☒	N/A	
Gasoline	8,000	Yes ☒ No ☐	20131026	
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		
		Yes ☐ No ☐		

Add More Rows | Undo Last Add

Owner/Operator and Licensed Professional Engineer/Geologist Budget Certification Form

I hereby certify that I intend to seek payment from the UST Fund for costs incurred while performing corrective action activities for Leaking UST incident 20131026. I further certify that the costs set forth in this budget are for necessary activities and are reasonable and accurate to the best of my knowledge and belief. I also certify that the costs included in this budget are not for corrective action in excess of the minimum requirements of 415 ILCS 5/57, no costs are included in this budget that are not described in the corrective action plan, and no costs exceed Subpart H: Maximum Payment Amounts, Appendix D Sample Handling and Analysis amounts, and Appendix E Personnel Titles and Rates of 35 Ill. Adm. Code 732 or 734. I further certify that costs ineligible for payment from the Fund pursuant to 35 Ill. Adm. Code 732.606 or 734.630 are not included in the budget proposal or amendment. Such ineligible costs include but are not limited to:

Costs associated with ineligible tanks.
Costs associated with site restoration (e.g., pump islands, canopies).
Costs associated with utility replacement (e.g., sewers, electrical, telephone, etc.).
Costs incurred prior to IEMA notification.
Costs associated with planned tank pulls.
Legal fees or costs.
Costs incurred prior to July 28, 1989.
Costs associated with installation of new USTs or the repair of existing USTs.

RECEIVED
MAR 24 2017
IEPA/BOL

Owner/Operator: J.D. Streett & Company, Inc.

Authorized Representative: James A. Schuering Title: CFO

Signature: James A Schuering Date: 3/16/17

Subscribed and sworn to before me the 16th day of March, 2017

Kristine M. Pedroli (Notary Public) Seal:

KRISTINE M. PEDROLI
Notary Public - Notary Seal
State of Missouri
Commissioned for Jefferson County
My Commission Expires: March 22, 2020
Commission Number: 12318802

In addition, I certify under penalty of law that all activities that are the subject of this plan, budget, or report were conducted under my supervision or were conducted under the supervision of another Licensed Professional Engineer or Licensed Professional Geologist and reviewed by me; that this plan, budget, or report and all attachments were prepared under my supervision; that, to the best of my knowledge and belief, the work described in the plan, budget, or report has been completed in accordance with the Environmental Protection Act [415 ILCS 5], 35 Ill. Adm. Code 732 or 734, and generally accepted standards and practices of my profession; and that the information presented is accurate and complete. I am aware there are significant penalties for submitting false statements or representations to the Illinois EPA, including but not limited to fines, imprisonment, or both as provided in Sections 44 and 57.17 of the Environmental Protection Act [415 ILCS 5/44 and 57.17].

L.P.E./L.P.G.: Joseph W. Truesdale, P.E., P.G. L.P.E./L.P.G. Seal:

062-056797
JOSEPH W. TRUESDALE
LICENSED
PROFESSIONAL
ENGINEER
OF
ILLINOIS

L.P.E./L.P.G. Signature: Joseph W. Truesdale Date: 3/24/17

Subscribed and sworn to before me the 24TH day of MARCH, 2017

Shane A Thorpe (Notary Public) Seal:

OFFICIAL SEAL
SHANE A. THORPE
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES SEPT. 14, 2018

The Illinois EPA is authorized to require this information under 415 ILCS 5/1. Disclosure of this information is required. Failure to do so may result in the delay or denial of any budget or payment requested hereunder.

Budget Summary

Choose the applicable regulation: (•) 734 ( ) 732

734	Free Product	Stage 1 Site Investigation	Stage 2 Site Investigation	Stage 3 Site Investigation	Corrective Action
Drilling and Monitoring Well Costs Form	$	$	$	$	$ 1,501.84
Analytical Costs Form	$	$	$	$	$ 3,148.83
Remediation and Disposal Costs Form	$	$	$	$	$ 125,666.48
UST Removal and Abandonment Costs Form	$	$	$	$	$
Paving, Demolition, and Well Abandonment Costs Form	$	$	$	$	$ 13,914.35
Consulting Personnel Costs Form	$	$	$	$	$ 63,927.70
Consultant's Materials Costs Form	$	$	$	$	$ 4,245.15
Handling Charges Form	Handling charges will be determined at the time a billing package is submitted to the Illinois EPA. The amount of allowable handling charges will be determined in accordance with the Handling Charges Form.				
Total	$	$	$	$	$ 212,404.35

Drilling and Monitoring Well Costs Form

1. Drilling

Number of Borings to Be Drilled	Type HSA/PUSH/ Injection	Depth (feet) of Each Boring	Total Feet Drilled	Reason for Drilling
1	PUSH	8.00	8.00	Landfill acceptance soil sample

☒ Subpart H minimum payment amount applies.

	Total Feet	Rate per Foot ($)	Total Cost ($)
Total Feet via HSA:			
Total Feet via PUSH:	8.00	22.53	180.24
Total Feet for Injection via PUSH:			
		Total Drilling Costs:	1,501.84 *

* adjusted to reflect Subpart H minimum payment amount

2. Monitoring / Recovery Wells

Number of Wells	Type of Well HSA / PUSH / 4" or 6" Recovery / 8" Recovery	Diameter of Well (inches)	Depth of Well (feet)	Total Feet of Wells to Be Installed ($)

Well Installation	Total Feet	Rate per Foot ($)	Total Cost ($)
Total Feet via HSA:			
Total Feet via PUSH:			
Total Feet of 4" or 6" Recovery:			
Total Feet of 8" or Greater Recovery:			
		Total Well Costs:	

Total Drilling and Monitoring Well Costs:	$1,501.84

Analytical Costs Form

Laboratory Analysis	Number of Samples		Cost ($) per Analysis		Total per Parameter
Chemical Analysis					
BETX Soil with MTBE EPA 8260	26	X	106.38	=	$2,765.88
BETX Water with MTBE EPA 8260		X		=	
COD (Chemical Oxygen Demand)		X		=	
Corrosivity		X		=	
Flash Point or Ignitability Analysis EPA 1010	1	X	41.29	=	$41.29
Fraction Organic Carbon Content (f_{oc}) ASTM-D 2974-00		X		=	
Fat, Oil, & Grease (FOG)		X		=	
LUST Pollutants Soil - analysis must include volatile, base/ neutral, polynuclear aromatics and metals list in Section 732. Appendix B and 734.Appendix B		X		=	
Dissolved Oxygen (DO)		X		=	
Paint Filter (Free Liquids)	1	X	17.52	=	$17.52
PCB / Pesticides (combination)		X		=	
PCBs		X		=	
Pesticides		X		=	
pH	1	X	17.52	=	$17.52
Phenol		X		=	
Polynuclear Aromatics PNA, or PAH SOIL EPA 8270		X		=	
Polynuclear Aromatics PNA, or PAH WATER EPA 8270		X		=	
Reactivity		X		=	
SVOC - Soil (Semi-Volatile Organic Compounds)		X		=	
SVOC - Water (Semi-Volatile Organic Compounds)		X		=	
TKN (Total Kjeldahl) "nitrogen"		X		=	
TPH (Total Petroleum Hydrocarbons)		X		=	
VOC (Volatile Organic Compounds) - Soil (Non-Aqueous)		X		=	
VOC (Volatile Organic Compounds) - Water		X		=	
		X		=	
		X		=	
		X		=	
		X		=	
		X		=	
Geo-Technical Analysis					
Soil Bulk Density (p_b) ASTM D2937-94		X		=	
Ex-situ Hydraulic Conductivity / Permeability		X		=	
Moisture Content (w) ASTM D2216-92 / D4643-93		X		=	
Porosity		X		=	
Rock Hydraulic Conductivity Ex-situ		X		=	
Sieve / Particle Size Analysis ASTM D422-63 / D1140-54		X		=	
Soil Classification ASTM D2488-90 / D2487-90		X		=	
Soil Particle Density (p_s) ASTM D854-92		X		=	
		X		=	
		X		=	
		X		=	

Analytical Costs Form

Metals Analysis					
Soil preparation fee for Metals TCLP Soil (one fee per soil sample)	1	X	98.87	=	$98.87
Soil preparation fee for Metals Total Soil (one fee per soil sample)		X		=	
Water preparation fee for Metals Water (one fee per water sample)		X		=	
Arsenic TCLP Soil		X		=	
Arsenic Total Soil		X		=	
Arsenic Water		X		=	
Barium TCLP Soil		X		=	
Barium Total Soil		X		=	
Barium Water		X		=	
Cadmium TCLP Soil		X		=	
Cadmium Total Soil		X		=	
Cadmium Water		X		=	
Chromium TCLP Soil		X		=	
Chromium Total Soil		X		=	
Chromium Water		X		=	
Cyanide TCLP Soil		X		=	
Cyanide Total Soil		X		=	
Cyanide Water		X		=	
Iron TCLP Soil		X		=	
Iron Total Soil		X		=	
Iron Water		X		=	
Lead TCLP Soil	1	X	20.01	=	$20.01
Lead Total Soil		X		=	
Lead Water		X		=	
Mercury TCLP Soil		X		=	
Mercury Total Soil		X		=	
Mercury Water		X		=	
Selenium TCLP Soil		X		=	
Selenium Total Soil		X		=	
Selenium Water		X		=	
Silver TCLP Soil		X		=	
Silver Total Soil		X		=	
Silver Water		X		=	
Metals TCLP Soil (a combination of all metals) RCRA		X		=	
Metals Total Soil (a combination of all metals) RCRA		X		=	
Metals Water (a combination of all metals) RCRA		X		=	
		X		=	
		X		=	
		X		=	
		X		=	
Other					
EnCore® Sampler, purge-and-trap sampler, or equivalent sampling device		X		=	
Sample Shipping per sampling event[1]	3	X	62.58	=	$187.74

[1]A sampling event, at a minimum, is all samples (soil and groundwater) collected in a calendar day.

Total Analytical Costs: $ 3,148.83

Remediation and Disposal Costs Form

A. Conventional Technology

Excavation, Transportation, and Disposal of contaminated soil and/or the 4-foot backfill material removal during early action activities:

Number of Cubic Yards	Cost per Cubic Yard ($)	Total Cost
1,304.00	71.34	$93,027.36

Backfilling the Excavation:

Number of Cubic Yards	Cost per Cubic Yard ($)	Total Cost
1,304.00	25.03	$32,639.12

Overburden Removal and Return:

Number of Cubic Yards	Cost per Cubic Yard ($)	Total Cost

B. Alternative Technology

Alternative Technology Selected:	
Number of Cubic Yards of Soil to Be Remediated	
Total Non-Consulting Personnel Costs Summary Sheet ($)	
Total Remediation Materials Costs Summary Sheet ($)	
Total Cost of the System	

Remediation and Disposal Costs Form

C. Groundwater Remediation and/or Free Product Removal System

Total Non-Consulting Personnel Costs Summary Sheet ($)	
Total Remediation Materials Costs Summary Sheet ($)	
Total Cost of the System	

D. Groundwater and/or Free Product Removal and Disposal

☐ Subpart H minimum payment amount applies.

Number of Gallons	Cost per Gallon ($)	Total Cost ($)

E. Drum Disposal

☐ Subpart H minimum payment amount applies.

Number of Drums of Solid Waste	Cost per Drum ($)	Total Cost ($)
Number of Drums of Liquid Waste	**Cost per Drum ($)**	**Total Cost ($)**
Total Drum Disposal Costs		

Total Remediation and Disposal Costs:	$125,666.48

Paving, Demolition, and Well Abandonment Costs Form

A. Concrete and Asphalt Placement/Replacement

Number of Square Feet	Asphalt or Concrete	Thickness (inches)	Cost ($) per Square Foot	Replacement or Placement for an Engineered Barrier	Total Cost
2,703.00	Concrete	4.00	4.27	Replacement	$11,541.81

Total Concrete and Asphalt Placement/Replacement Costs:	$11,541.81

B. Building Destruction or Dismantling and Canopy Removal

Item to Be Destroyed, Dismantled, or Removed	Unit Cost ($)	Total Cost ($)

Total Building Destruction or Dismantling and Canopy Removal Costs:	

Paving, Demolition, and Well Abandonment Costs Form

C. Well Abandonment

Monitoring Well ID #	Type of Well (HSA / PUSH / Recovery)	Depth of Well (feet)	Cost ($) per Foot	Total Cost
MW-1	HSA	13.50	12.52	$169.02
MW-2	HSA	12.00	12.52	$150.24
MW-3	HSA	12.00	12.52	$150.24
MW-4	HSA	12.00	12.52	$150.24
MW-5	HSA	13.50	12.52	$169.02
MW-6	HSA	11.50	12.52	$143.98
MW-7	HSA	14.00	12.52	$175.28
MW-8	HSA	13.00	12.52	$162.76
MW-9	HSA	13.00	12.52	$162.76
MW-10	HSA	11.00	12.52	$137.72
MW-11	HSA	14.00	12.52	$175.28
MW-12	HSA	11.00	12.52	$137.72
MW-13	HSA	12.00	12.52	$150.24
MW-14	HSA	12.00	12.52	$150.24
MW-15	HSA	15.00	12.52	$187.80

Total Monitoring Well Abandonment Costs:	**$2,372.54**

Total Paving, Demolition, and Well Abandonment Costs:	**$13,914.35**

Consulting Personnel Costs Form

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Senior Project Manager	16.00	125.15	$2,002.40
CCAP	Review of analytical & exceedences, evaulate CA options, design excav. limits & est. quantities			
	Senior Project Manager	50.00	125.15	$6,257.50
CCAP	Prepare CCAP			
	Senior Project Manager	12.00	125.15	$1,501.80
CCAP	Prepare budget for CCAP			
	Senior Draftperson/CAD	8.00	75.08	$600.64
CCAP	Expand site map to west to show modeled plume extent			
	Senior Draftperson/CAD	8.00	75.08	$600.64
CCAP	Prepare AutoCAD figures for CCAP			
	Senior Admin. Assistant	4.00	56.32	$225.28
CCAP	Copy, bind, scan & distribute CCAP			
	Senior Prof. Engineer	8.00	162.70	$976.20
CCAP	Evaluate proposed CA, review & certify CAP & Budget			
	Senior Project Manager	12.00	125.15	$1,501.80
CCA-Field	Site visit, collect landfill disposal sample, complete in-situ HC test			
	Senior Project Manager	10.00	125.15	$1,251.50
CCA-Field	Schedule & coordinate disposal arrangements & CCA field work			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Geologist III	12.00	110.13	$1,321.56
CCA-Field	Site visit, assist with in-situ HC test			
	Senior Project Manager	112.00	125.15	$14,016.80
CCA-Field	Oversight of corrective action excavation & backfilling			
	Senior Project Manager	4.00	125.15	$500.60
CCA-Field	Complete & submit IDPH well abandonment forms			
	Senior Project Manager	6.00	125.15	$750.90
CCA-Field	Review & evaluate analytical data from excavation			
	Senior Project Manager	8.00	125.15	$1,001.20
CACR	R-26 calculations			
	Senior Project Manager	30.00	125.15	$3,754.50
CCAP	Prepare report documenting corrective action excavation & proposing final R-26 extent & HAA limits			
	Senior Draftperson/CAD	8.00	75.08	$600.64
CCAP	Prepare AutoCAD figures for above report			
	Senior Project Manager	20.00	125.15	$2,503.00
CACR	Procure Highway Authority Agreements (2) with City of Herrin			
	Senior Project Manager	40.00	125.15	$5,006.00
CACR	Prep. notifications to 40 off-site property owners regarding use of gw ordinance as institutional control			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Senior Project Manager	50.00	125.15	$6,257.50
CACR	Prepare Corrective Action Completion Report			
	Senior Prof. Engineer	10.00	162.70	$1,627.00
CCA-Field	Oversight/direction of corrective action			
	Senior Prof. Engineer	3.00	162.70	$488.10
CCAP	Review/certify interim report documenting excavation & proposing final R-26 extent & HAAs			
	Senior Draftperson/CAD	10.00	75.08	$750.80
CACR	Prepare AutoCAD figures for CACR			
	Senior Admin. Assistant	4.00	56.32	$225.28
CCAP	Copy, bind, scan & distribute Corrective Action Documentation Report			
	Senior Admin. Assistant	4.00	56.32	$225.28
CACR	Copy, bind, scan & distribute CACR			
	Senior Project Manager	60.00	125.15	$7,509.00
CA-Pay	Prepare Reimbursment Applications (3)			
	Senior Prof. Engineer	9.00	162.70	$1,464.30
CA-Pay	Review & Certify Reimbursement Applications (3)			
	Senior Admin. Assistant	9.00	56.32	$506.88
CA-Pay	Copy, bind, scan & distribute Reimbursement Applications			

Employee Name	Personnel Title	Hours	Rate* ($)	Total Cost
Remediation Category	**Task**			
	Senior Project Manager	4.00	125.15	$500.60
CACR	NFR filing, submit recorded NFR to IEPA			

*Refer to the applicable Maximum Payment Amounts document.

Total of Consulting Personnel Costs	$63,927.70

Consultant's Materials Costs Form

Materials, Equipment, or Field Purchase	Time or Amount Used	Rate ($)	Unit	Total Cost
Remediation Category	**Description/Justification**			
Mileage	380.00	.54	each	$205.20
CCA-Field	Site visit for landfill disposal sample, in-situ HC test			
Mileage	2,280.00	.54	each	$1,231.20
CCA-Field	Round trip mileage per week x 3 for corrective action oversight			
Hotel	12.00	91.00	each	$1,092.00
CCA-Field	Overnight stays during corrective action			
Per diem	12.00	51.00	each	$612.00
CCA-Field	Overnight stays during corrective action			
HC Test Equipment Rental	1.00	345.00	days	$345.00
CCA-Field	Complete in-situ hydraulic conductivity test for R26 extent			
Photocopies	600.00	.07	each	$42.00
CCAP	Photocopies of CAP & Budget			
Photocopies	1,000.00	.07	each	$70.00
CCAP	Photocopies of Corrective Action Documentation Report			
Photocopies	1,000.00	.07	each	$70.00
CACR	Photocopies of CACR			
Photocopies	1,500.00	.07	each	$105.00
CA-Pay	Photocopies of Reimbursement Applications (3)			

Materials, Equipment, or Field Purchase	Time or Amount Used	Rate ($)	Unit	Total Cost
Remediation Category	**Description/Justification**			
Certified Mail	40.00	10.00	each	$400.00
ELUC	Mail notifications regarding groundwater ordinance use to off-site property owners			
NFR Filing Fee	1.00	50.00	each	$50.00
CACR	File NFR letter with Williamson County			
Nitrile Gloves (per box)	1.00	22.75	each	$22.75
CCA-Field	Collect soil samples from excavation floor & sidewalls			

Total of Consultant Materials Costs	**$4,245.15**

Field Environmental Instruments Inc
301 Brushton Avenue
Suite A
Pittsburgh, PA 15221

Voice: (412) 436-2600
Fax: (412) 436-2616

INVOICE

Invoice Number: 1609537
Invoice Date: Jun 30, 2016
Page: 1

Bill To	Ship To
CSD Environmental Services 2220 Yale Boulevard Springfield, IL 62703	CSD Environmental Services c/o David Bunnetto 1612 W Plymouth Dr Arlington Heights, IL 60004

2390 S. Broadway Former ENR Coal City

Customer ID	Customer PO	Payment Terms	
CSD (IL)	ENARC	Net 30 Days	
Sales Rep ID	**Shipping Method**	**Ship Date**	**Due Date**
ILRENT	IL - FEI DELIVERY	6/27/16	7/30/16

Quantity	Item	Description	Unit Price	Amount
1.00	In-Situ	Level TROLL 700, Sensor Range 69ft (30psig) - Rental 06/28 - 06/30/16	150.00	150.00
1.00	In-Situ	Level TROLL 700, 200' Vented ETFE Cable - Rental 06/28 - 06/30/16	122.50	122.50
1.00	In-Situ	Level TROLL 700, Communications Bundle - Rental 06/28 - 06/30/16	36.75	36.75
1.00	SER	Shipping Expense Return	28.94	28.94

SCANNED
POSTED SEP 12 2016 D
PAID SEP 12 2016

Subtotal	338.19
Sales Tax	
Total Invoice Amount	338.19
Payment/Credit Applied	
TOTAL	[illegible]

Check/Credit Memo No:

LOWE'S

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Springfield Lowe's

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Print

Shopping Cart

Your purchase is always

Lowe's Of Springfield, IL | Change Store >

3101 West Wabash, Springfield, IL 62704

Products in Cart	Select a Delivery Method	Quantity	Unit Price	Total
 Blue Hawk 100-Count One Size Fits All Nitrile Cleaning Gloves Item #:332970 | Model #:NL100	**Store Pickup** Your item is available for pickup today. **Lowe's Truck Delivery** You'll be contacted within 24 hours to arrange your delivery. **Parcel Shipping** Sent by carriers like UPS, FedEx, USPS, etc.	1	$14.98	$14.98

Cart Summary

Estimate Parcel Shipping Charges

Standard 1-3 Business Days $5.99

Promotion Code

Subtotal	$14.98
Estimated Parcel Shipping	$5.99
Estimated Sales Tax	$1.78
Estimated Total	**$22.75**

Items may remain in your cart for up to 30 days.

Need Help?
Call 1-800-445-6937

Products & Sales
Call 1-877-GO-LOWES

0151

Office of the Illinois
State Fire Marshal
"Partnering With the Fire Service to Protect Illinois"

CERTIFIED MAIL - RECEIPT REQUESTED #7009 2250 0003 8632 9495

October 30, 2013

J.D. Streett & Company, Inc.
144 Weldon Parkway
Maryland Heights, MO 63043

In Re: Facility No. 7-020754
IEMA Incident No. 13-1026
Herrin BP #233
701 South Park
Herrin, Williamson Co., IL

Dear Applicant:

The Reimbursement Eligibility and Deductible Application received on October 1, 2013 for the above referenced occurrence has been reviewed. The following determinations have been made based upon this review.

It has been determined that you are eligible to seek payment of costs in excess of **$5,000**. The costs must be in response to the occurrence referenced above and associated with the following tanks:

Eligible Tanks

Tank 2 8,000 gallon Gasoline

You must contact the Illinois Environmental Protection Agency to receive a packet of Agency billing forms for submitting your request for payment.

An owner or operator is eligible to access the Underground Storage Tank Fund if the eligibility requirements are satisfied:

1. Neither the owner nor the operator is the United States Government,
2. The tank does not contain fuel which is exempt from the Motor Fuel Tax Law,
3. The costs were incurred as a result of a confirmed release of any of the following substances:

   "Fuel", as defined in Section 1.19 of the Motor Fuel Tax Law

   Aviation fuel

   Heating oil

   Kerosene

Used oil, which has been refined from crude oil used in a motor vehicle, as defined in Section 1.3 of the Motor Fuel Tax Law.

4. The owner or operator registered the tank and paid all fees in accordance with the statutory and regulatory requirements of the Gasoline Storage Act.

5. The owner or operator notified the Illinois Emergency Management Agency of a confirmed release, the costs were incurred after the notification and the costs were a result of a release of a substance listed in this Section. Costs of corrective action or indemnification incurred before providing that notification shall not be eligible for payment.

6. The costs have not already been paid to the owner or operator under a private insurance policy, other written agreement, or court order.

7. The costs were associated with "corrective action".

This constitutes the final decision as it relates to your eligibility and deductibility. We reserve the right to change the deductible determination should additional information that would change the determination become available. An underground storage tank owner or operator may appeal the decision to the Illinois Pollution Control Board (Board), pursuant to Section 57.9 (c) (2). An owner or operator who seeks to appeal the decision shall file a petition for a hearing before the Board within 35 days of the date of mailing of the final decision, (35 Illinois Administrative Code 105.504(b)).

For information regarding the filing of an appeal, please contact:

Clerk
Illinois Pollution Control Board
State of Illinois Center
100 West Randolph, Suite 11-500
Chicago, Illinois 60601
(312) 814-3620

The following tanks are also listed for this site:

Tank 1 8,000 gallon Gasoline

Your application indicates that there has not been a release from these tanks under this incident number. You may be eligible to seek payment of corrective action costs associated with these tanks if it is determined that there has been a release from one or more of these tanks. Once it is determined that there has been a release from one or more of these tanks you may submit a separate application for an eligibility determination to seek corrective action costs associated with this/these tanks.

If you have any questions, please contact our Office at (217) 785-1020 or (217) 785-5878.

Sincerely,

Deanne Lock
Administrative Assistant
Division of Petroleum and Chemical Safety

cc: IEPA
Facility File

LEAKING UST TECHNICAL REVIEW NOTES

Reviewed by: Brad Dilbaitis
Date Reviewed: 6/15/2017

Re: LPC #1990400008—Williamson County
Herrin/ J.D. Streett & Company, Inc.
701 South Park Avenue
Leaking UST Incident No. 20131026
Leaking UST Technical File

Document(s) Reviewed:
3/24/2017 Corrective Action Plan and Budget—received 3/24/17

General Site Information:

Site subject to: 734

IEMA date(s): 9/17/2013 & 12/20/1985	Payment from the Fund: eligible
UST system removed: yes—10/22/2013	OSFM Fac. ID #: 7020754
Encountered groundwater: yes	SWAP mapping and evaluation completion date: 2/8/2016
Free product: no	Site placement correct in SWAP: yes *ordinance and notification area*
Current/past land use: retail gas station—property currently for sale	MTBE > 40 ppb in groundwater: no
Size & product of USTs: (1) 8,000g gasoline UST	
Is site located in EJ area? Yes—low income	Is investigation of indoor inhalation exposure route required? Yes

Geotechnical boring results:

Hydraulic conductivity (K)	unknown
Soil bulk density (ρ_b)	1.624 g/cm^3
Soil particle density (ρ_s)	2.71 g/cm^3
Moisture content (w)	0.374 g_{soil}/g_{water}
Organic carbon content (f_{oc})	0.016 g/g (3-4')

- Particle size analysis indicates
  - 11.1% sand
  - 63.2% silt
  - 25.7% clay
- This is consistent with the soil borings
- Groundwater flow direction is from east to west—depth to water ranged from 0.74' bgs to 3.97' bgs in July 2015 and 2.47' to 4.69' bgs in the wells in November 2015

- The consultant calculated site-specific Tier 2 soil remediation objectives for:
  - **Benzene Tier 2 SROs**
    1. SCGIER (S-17) of 0.10 mg/kg (verified at 0.0980 ppm)
    2. Construction Worker Inhalation (S-7) of 9 mg/kg (verified at 9.07 ppm)
    3. Residential Inhalation (S-6) of 3.2 mg/kg (verified at 3.37 ppm)
    4. Ind/Comm Inhalation (S-6) of 6 mg/kg (verified at 6.45 ppm)
    5. C_{sat} (S-29) of 1764 mg/kg (verified at 1763.87 ppm)

- **Ethylbenzene Tier 2 SROs**
  1. SCGIER (S-17) of 54 mg/kg (verified at 54.2 ppm)
  2. Construction Worker Inhalation (S-7) of 237 mg/kg—incorrect—used RfC of 1 mg/m^3—should be 1 mg/m^3—I calculated it to be 2220 mg/kg—using site-specific Tier 2 C_{sat} of 902 mg/kg
  3. Residential Inhalation (S-4) of 23023 mg/kg (verified)—using C_{sat} of 902 ppm
  4. Ind/Comm Inhalation (S-4) of 36654 mg/kg (verified) —using C_{sat} of 902 ppm
  5. C_{sat} (S-29) of 902 mg/kg (verified at 902.37 ppm)
- **Toluene Tier 2 SROs**
  1. SCGIER (S-17) of 74 mg/kg (verified at 74.3 ppm)
  2. Construction Worker Inhalation (S-7) of 237 mg/kg—incorrect—used RfC of 1 mg/m^3—should be 1 mg/m^3—I calculated it to be 2220 mg/kg—using site-specific Tier 2 C_{sat} of 1438 mg/kg
  3. Residential Inhalation (S-4) of 83543 mg/kg—verified—using site-specific Tier 2 C_{sat} of 1438 mg/kg
  4. Ind/Comm Inhalation (S-4) of 133008 mg/kg (verified)—using C_{sat} of 1438 ppm
  5. C_{sat} (S-29) of 1438 mg/kg (verified at 1437.07 ppm)
- **Xylenes Tier 2 SROs**
  1. SCGIER (S-17) of 1311 mg/kg (verified at 74.3 ppm)
  2. Construction Worker Inhalation (S-7) of 116 mg/kg (verified at 121 ppm)
  3. Residential Inhalation (S-4) of 2824 mg/kg—verified—using site-specific Tier 2 C_{sat} of 721 mg/kg
  4. Ind/Comm Inhalation (S-4) of 4496 mg/kg (verified)—using C_{sat} of 721 ppm
  5. C_{sat} (S-29) of 721 mg/kg (verified at 720.66 ppm)
- **MTBE Tier 2 SROs**
  1. SCGIER (S-17) of 0.45 mg/kg (verified at 0.451 ppm)
  2. Construction Worker Inhalation (S-7) of 588 mg/kg—incorrect—used RfC of 3 mg/m^3—should be 2.5 mg/m^3—I calculated it to be 510 mg/kg
  3. Residential Inhalation (S-4) of 57137 mg/kg—verified—using site-specific Tier 2 C_{sat} of 16397 mg/kg
  4. Ind/Comm Inhalation (S-4) of 90967 mg/kg (verified)—using C_{sat} of 16397 ppm
  5. C_{sat} (S-29) of 16397 mg/kg (verified at 16431.42 ppm)

Proposed CAP notes:

- Proposing to excavate the on-site soil that exceeds the site-specific Tier 2 soil remediation objectives for industrial/commercial and/or construction worker inhalation
- The city of Herrin has an approved groundwater ordinance—the limits of the proposed excavation were designed to remove all Tier 2 inhalation exceedances in the soil above the water table (noted "as currently defined by the Illinois EPA")—several soil samples exceeded the calculated Tier 2 I/C and/or construction worker inhalation SROs for benzene and total xylenes
- The plan notes that Highway Authority Agreements may ultimately be necessary for a portion of the city alleyway to the west of the site as well as the Ash Street ROW to the north of the site

- The plan notes that soil samples collected from B-14 through B-17, which were collected across the alleyway did not have soil contamination exceeding Tier 1 SROs is not present in that area above the water table—the alleyway needs to be addressed—there is soil contamination exceeding Tier 1 SROs along the western property boundary of the site, bordering the alleyway, that will not be addressed (less than Tier 2 SROs)
- A Highway Authority Agreement for the Ash Street ROW is also required—the soil contamination concentrations in soil boring B-5 were some of the highest concentrations found on site—this soil is due to be excavated to the property boundary but the contamination remaining to the north in the Ash Street ROW must be addressed

- Area of proposed excavation is 3,726 square feet (verified)
- A total of 23 soil borings were advanced on site—the average depth to groundwater in the soil borings was 6.2' bgs—a total of 8 soil borings were advanced off-site—the average depth to water in the off-site soil borings was 8.06' bgs—the plan proposes to excavate down to 9' bgs, which would more than likely remove soil from the saturated zone beneath the groundwater table
- The total amount of soil to be excavated is 1,304 cubic yards—proposing to collect 18 wall soil samples and 8 floor samples for a total of 26 excavation soil samples
- Proposing to replace 2,703 square feet of concrete from the areas of the excavation that were paved—verified and will approve
- Preliminary groundwater modeling was done using a 3.81×10^{-4} cm/sec hydraulic conductivity—a site-specific hydraulic conductivity has not yet been determined but will during corrective action (required under Stage 1)—the migration calculations will be updated in the Corrective Action Completion Report
- The owner anticipates beginning the excavation within 90 days of the approval of the Corrective Action Plan to allow for scheduling for excavation and trucking contractors, landfill disposal sample collection and landfill arrangements—the estimated time to complete the excavation is 2-3 weeks, with 2 more weeks needed to get the analytical results back
- A revised Corrective Action Plan documenting the work, summarizing the results of the excavation samples and proposing any necessary ELUCs would be submitted within 90 days of the analytical results (approximately 8 months from the date of the approval)

Corrective Action Plan Budget:

Drilling and Monitoring Well Costs	$1,501.84	(approving $2,121.64)
Analytical Costs	$3,148.83	(approving $4,216.38)
Remediation and Disposal Costs	$125,666.48	(approving $126,162.15)
UST Removal & Abandonment Costs	$0.00	
Paving, Demo & Well Abandonment Costs	$0.00	
Consulting Personnel Costs	$63,927.70	(approving $27,611.48)
Consultant's Materials Costs	$4,245.15	(approving $2,448.40)

- The Consulting Personnel Costs requests 16 hours for a Senior Project Manager for "review of analytical & exceedances, evaluate CA options, design excav. Limits & est.

quantities" at a rate of $125.15 per hour for a total of $2,002.40 and 50 hours for the Senior Project Manager to prepare the Corrective Action Plan at a rate of $125.15 per hour for a total of 66 hours and a total of $8,259.90 for the preparation of the Corrective Action Plan

- The owner/operator signed the Corrective Action Plan form a week prior to the consultant's signature—would like to ensure that the owner was made aware of all options, including closure with a small excavation to remove the total xylenes Csat exceedance at B-1, an engineered barrier over the currently proposed excavation area 3,726 square feet and a construction worker caution notification (which may very well be required after the excavation is complete, total xylenes in B-5)—the budget already requests 2,703 square feet of concrete replacement—an extra 1,023 Square feet (at $4.25/sf = $4,368.21) of concrete would save the $1,501.84 Drilling Costs, the $3,148.83 in Analytical Costs, the $125,666.48 in soil disposal/backfill costs, a lot of Consulting Personnel Costs, and about $3,000.00 in Consultant's Materials Costs—saving the Fund approximately $129,000.00, excluding associated Consulting Personnel Costs—will email the consultant to ensure that the owner declined the quicker, less obtrusive, and far less costly option (would require an engineered barrier and a construction worker caution notification)—spoke with the owner, will approve
- 50 hours for the preparation of the Corrective Action Plan—the first 23 pages are associated with the form itself—it is certainly reasonable to assume that the bulk of the Corrective Action Plan preparation time deals with these pages—the next section, "Figures," includes the maps (preparation of the maps was a separate request so there should be no costs and no time spent on this section)—the next sections, "Appendices A and B," are all of the soil boring logs and monitoring well completion reports (maybe 10 minutes to print all of the boring and well logs from the SICR)—the next section is the preliminary groundwater modeling (there should be no costs or hours included for this because there is a separate request for the RBCA modeling equations)—the rest of the Corrective Action Plan is the water supply well survey information and a copy of the Herrin groundwater ordinance, which have both been submitted in previous reports, including the Site Investigation Completion Report (could possibly approve 10 minutes to print these off again as well)—so there seems to be less than an hour of work to do on the Corrective Action Plan outside of the first 23 pages, or the actual form—most of the first 7 pages of the form were taken from the Site Investigation Completion Report (with the exception of Table 1)—the next 12 pages are specific to the Corrective Action Plan (this is where the vast majority of the 50 hours of preparation time was spent on the plan—is it reasonable to assume that each of these 12 pages took approximately 4 hours to create? Will email the consultant—will deny this request—see email—the breakdown of the Corrective Action Plan does not support the total hours requested (82 total hours including design and CAD costs)

- The Consulting Personnel Costs requests 112 hours for a Senior Project Manager for oversight of the excavation and backfilling at a rate of $125.15 per hour for a total of $14,016.80—the consultant indicates that it may take 2 to 3 weeks to get the excavation

completed and backfilled, the Consultant's Materials Costs requests 12 days for a hotel—if we assume 12 days, a total of 217.33 cubic yards of soil or backfill would be moved per day to account for the 2,608 cubic yards of excavated soil/returned backfill—this amounts to 15 truckloads of soil/backfill per day, or roughly 2 truckloads per hour—why so slow?—did not get much from the consultant—if we assume an 8-hour work day the request is for 14 days, or 187 cubic yards per day—this is one truck of soil/backfill every 30 (assuming a 12-cubic yard truck) or 40 (assuming 15-cubic yard trucks) minutes—the consultant indicated that there were a few landfills in the area (saw 3 on Google, ranging from a 6 minute drive to a 16 minute drive)—the consultant will not provide an explanation as to what went into the 112-hour request after several attempts at asking how they arrived at the 112 hours (I'm not entirely sure how many days they are requesting, possibly 14 8-hour days)—will deny the 112 hours for lacking supporting documentation and being unreasonable [734.505(a) and 734.850(b)]—see emails with consultant

The Consulting Personnel Costs requests 4 hours for a Senior Project Manager to complete and submit IDPH well abandonment forms at a rate of $125.15 per hour for a total of $500.60—this cost is included in the Well Abandonment Costs ($12.52/ft.)—deducting the $500.60

The Consulting Personnel Costs requests 8 hours for a Senior Project Manager to do the R-26 calculations at a rate of $125.15 per hour for a total of $1,001.20—will approve with the assumption that this request includes both the preliminary R-26 calculations that are included in the plan and the calculations that are done after the site-specific hydraulic conductivity is determined—this seems high for what is being done but not entirely unreasonable—the consultant indicated in an email that the R-26 calculations does not describe all of the R-26 calculations—the preliminary R-26 calculations are included in the plan preparation costs (50 hours) and the R-26 calculations request includes the upcoming (updated) R-26 calculations in the CACR and also the calculations that are needed to determine the site-specific hydraulic conductivity from the slug test data—the "R-26 calculations" was broader than interpreted, a better description of the activities involved would have been preferred ("preliminary calculations," "site-specific calculations," "in-situ hydraulic conductivity calculations") to be able to accurately determine what is involved in the request in order to determine whether the request is reasonable—will approve the request for budgetary purposes to account for the what-ifs and assess what was actually done when the claim is received (assuming that I get the claim)—the consultant indicated in an email 6/5/17 that it's not unreasonable to assume that the R-26 results will change enough that revisions to maps and off-site notifications will be required (requesting 10 hours for CAD costs in the Corrective Action Completion Report, 40 hours for off-site notification)—will address these hours when the claim is submitted

The Consulting Personnel Costs requests 30 hours for a Senior Project Manager to prepare a report documenting the corrective action excavation and proposing the final R-26 extent and Highway Authority Agreement limits at a rate of $125.15 per hour for a total of 3,754.50—this extra report is not needed—the excavation, final R-26 extent and the Highway Authority Agreement limits should be presented in the Corrective Action Completion Report, but the Highway Authority Agreement limits are the property

boundaries and will not change—Highway Authority Agreements are required for both Ash Street to the north of the site and the alleyway to the west of the site (the excavation will not change the need for nor the limits of the Highway Authority Agreements)—a $3,754.50 deduction—exceeds minimum requirements, unreasonable

- The Consulting Personnel Costs requests 8 hours for a Senior Draftsperson/CAD at a rate of $75.08 per hour for a total of $600.64 for the preparation of the maps for the extra report—again, the extra report is not needed and 10 hours are being approved for CAD costs with the CACR—deducting the requested $600.64—exceeds minimum requirements, unreasonable
- The Consulting Personnel Costs requests a total of 40 hours for a Senior Project Manager to prepare the notifications to 40 off-site property owners regarding the use of the groundwater ordinance at a rate of $125.15 per hour for a total of $5,006.00—this is not a task for a Senior Project Manager as the model off-site notification letter template for use as an institutional control is provided on the Agency's website—completion of the template is not a task for a Senior Project Manager and would be more appropriate for an administrative assistant (at a rate of $31.29 per hour, a $3,754.40 deduction)—but it is also important to note that it will absolutely not take one hour per notification letter as there are only 2 entries that are changed between notifications ("Dear...affected property owner" in the greeting and the address of the off-site property in the fourth paragraph)—it will absolutely not take 40 hours to complete this task—will deduct the entire 40 hours—lack of supporting documentation and unreasonable—see emails with the consultant
- The Consulting Personnel Costs requests 10 hours for a Senior Professional Engineer for "oversight/direction of corrective action" at a rate of $162.70 per hour for a total of $1,627.00—the budget already requests 112 hours for oversight of corrective action by a Senior Project Manager—will deny this cost—exceeds minimum requirements, unreasonable
- The Consulting Personnel Costs requests 3 hours for a Senior Professional Engineer to review and certify the interim report documenting the excavation—this report is not approved but the hours will be approved for the review/certification of the Corrective Action Completion Report
- The Consulting Personnel Costs requests 4 hours for a Senior Administrative Assistant to copy, bind, scan and distribute the corrective action documentation report at a rate of $56.32 per hour for a total of $225.28—this report is not approved—deducting the $225.28—not in accordance with the approved plan, exceeds minimum requirements, unreasonable
- The Consulting Personnel Costs requests 60 hours for a Senior Project Manager to prepare 3 reimbursement claims—why the need for 3 claims? Is one associated with the extra report being denied? Will email the consultant
- The Consulting Personnel Costs requests 9 hours for a Senior Professional Engineer to review the 3 claims at a rate of $162.70 per hour for a total of $1,464.30—need to clarify the need for 3 claims
- The Consulting Personnel Costs requests 9 hours for a Senior Administrative Assistant to copy, bind, scan and distribute the 3 claims at a rate of $56.32 per hour for a total of $506.88—need to clarify the need for the 3 claims

- The Consulting Personnel Costs requests 4 hours for a Senior Project Manager to file the NFR and submit the recorded NFR to the IEPA at a rate of $125.15 per hour for a total of $500.60—this is not a job for a Senior Project Manager and should be done by a Senior Administrative Assistant—in addition, the 4 hour request is unreasonable—can efile the deed online and email the recorded copy to the Agency
- The Consultant's Materials Costs requests 1,000 copies for the corrective action documentation report at a rate of $0.07 per copy for a total of $70.00—this extra report is not approved—deducting the $70.00—not in accordance with the approved plan, exceeds minimum requirements, unreasonable
- Will also deduct the hotel and per diem costs from the Consultant's Materials Costs

Illinois EPA Recommendation/Comments:

- The site meets the criteria for a PVI investigation (no clean 5' of soil between the contaminated groundwater and the surface in MW-3, MW-9, MW-10)—will modify the plan to re-install MW-9 directly south of its current location and positioned approximately 5' south of the excavation—MW-3 will be re-installed near the northeast corner of the on-site building in native soil—groundwater samples from MW-3, MW-9 and MW-10 must be collected and analyzed to determine whether a PVI investigation is required (excavation will change the hydrogeology of the site, best to re-evaluate after the excavation is complete)
- The proposed revised Corrective Action Plan to document the work is not approved for payment
- The budget will be modified as listed above

BD\CAPnotes.docx

From: Dilbaitis, Bradley
To: Shane Thorpe (SThorpe@csdenviro.com)
Subject: J.D. Streett chain of custody
Date: Friday, October 02, 2015 8:19:00 AM

Hi Shane,

I was looking at the Chain of Custody for the labs for the Stage 1 and noticed that the Billing Instructions section indicates “2013-14 LUST Rates.” Why should that matter? Doesn’t the lab have a set price for BETX/MTBE soil analysis?

Brad Dilbaitis
Project Manager
Illinois Environmental Protection Agency
Leaking Underground Storage Tanks
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276
phone: (217) 785-8378
fax: (217) 524-4193

From: Shane Thorpe
To: Dilbaitis, Bradley
Subject: RE: J.D. Streett - Herrin
Date: Friday, October 02, 2015 1:38:55 PM

I understand it's part of your job. Please understand that we're not all EMIs either. People do have to make a profit in order to stay in business though. That's even tougher at this point when all we get are IOUs from the state. You have a good weekend too.

-----Original Message-----
From: Dilbaitis, Bradley [mailto:Bradley.Dilbaitis@Illinois.gov]
Sent: Friday, October 02, 2015 1:06 PM
To: Shane Thorpe <SThorpe@csdenviro.com>
Subject: RE: J.D. Streett - Herrin

I didn't mean to offend you and if I have I apologize. I understand that it isn't your responsibility to try to save the LUST Fund money. But please understand that that's part of my job. Thanks for your information and have a good weekend.

-----Original Message-----
From: Shane Thorpe [mailto:SThorpe@csdenviro.com]
Sent: Friday, October 02, 2015 12:00 PM
To: Dilbaitis, Bradley
Subject: RE: J.D. Streett - Herrin

Brad,

I think I've made it clear enough that I have no idea what they charge for non-LUST work. I guess I should have originally said, why would anyone pay a driller $ 35 per foot and only be reimbursed for $ 28.50, instead of using a lab as an example. Is that better? I didn't say or imply that Teklab, specifically, charges $125/sample. What I did say, specifically, in the very first sentence of that paragraph is "I don't know what their standard rates are".

I can tell you that I've done many projects with several labs over the years and I have a comfort level with Teklab. Perhaps I could get a better rate from a different lab, as you suggest. I could also probably find a cheaper mechanic but I want my car to run when I get it back. I feel like I can trust the data that I'm getting from Teklab, which seems to me what should be most important to the Agency. There have also been several projects where they've included naphthalene analysis and only charged the BTEX/MTBE rate, rather than billing the PNA rate in addition. Are you factoring things like that into your assessment of what lab I should be using?

I'm not sure exactly what it is you're trying to accomplish here. I find this entire conversation to be rather offensive at this point.

Shane

-----Original Message-----
From: Dilbaitis, Bradley [mailto:Bradley.Dilbaitis@Illinois.gov]
Sent: Friday, October 02, 2015 11:09 AM
To: Shane Thorpe <SThorpe@csdenviro.com>
Subject: RE: J.D. Streett - Herrin

Shane,
I'm just going off of your earlier statement:

"If you want to do LUST work, you'll do it for the Subpart H rates or someone else will and you'll lose clients that

you may have had for years. The same thing applies to labs, drillers, etc. Why would anyone pay a lab $ 125 for a sample and only be reimbursed $ 100 when there are others out there that will do it for $ 100?"

I read this statement several times and this implies to me that the lab charges more per sample for Non-LUST samples. So it's possible that Teklab could be charging you more than they charge for Non-LUST work because you have no idea what they typically charge? I would think that we would have a problem with the lab if they are charging more for LUST work just because we have published maximum rates. I think it's great if they are charging less for LUST work just because the state's paying for it but I've seen far cheaper rates before. You could probably get a better rate from a different lab.

Brad

-----Original Message-----
From: Shane Thorpe [mailto:SThorpe@csdenviro.com]
Sent: Friday, October 02, 2015 10:36 AM
To: Dilbaitis, Bradley
Subject: RE: J.D. Streett - Herrin

Brad,

Again, I have no idea what the lab typically charges for a non-LUST project. I work almost exclusively on LUST projects, so what they charge for non-LUST work doesn't really concern me. My concern is that they don't charge me more than what I can get reimbursement for.

Shane

-----Original Message-----
From: Dilbaitis, Bradley [mailto:Bradley.Dilbaitis@Illinois.gov]
Sent: Friday, October 02, 2015 10:10 AM
To: Shane Thorpe <SThorpe@csdenviro.com>
Subject: RE: J.D. Streett - Herrin

Shane,

So If I understand you correctly the lab typically charges more than our Subpart H rates for their analyses. However, if they are aware that it's a LUST project then they will charge less than they would usually charge and give you a better rate (our applicable Subpart H rate) because you deal in bulk and they'll give you a better rate because they want to keep you as a client. Is this correct?

Brad

-----Original Message-----
From: Shane Thorpe [mailto:SThorpe@csdenviro.com]
Sent: Friday, October 02, 2015 9:25 AM
To: Dilbaitis, Bradley
Subject: RE: J.D. Streett - Herrin

Brad,

Again, I don't remember the last time I've sent them anything for a non-LUST project so I don't know what their standard rates are. I don't work for Teklab. I put 2013-14 LUST rates on the COC to make sure they didn't charge us more than what we could get reimbursed.

Shane

-----Original Message-----

From: Dilbaitis, Bradley [mailto:Bradley.Dilbaitis@Illinois.gov]
Sent: Friday, October 02, 2015 9:32 AM
To: Shane Thorpe <SThorpe@csdenviro.com>
Subject: RE: J.D. Streett - Herrin

Shane,

So the lab is charging you less than everyone else because they know it's LUST work? If I were to go in there with a soil sample they would charge me more than today's $105.33 rate for a BETX soil sample?

Brad

-----Original Message-----
From: Shane Thorpe [mailto:SThorpe@csdenviro.com]
Sent: Friday, October 02, 2015 9:00 AM
To: Dilbaitis, Bradley
Subject: J.D. Streett - Herrin

Brad,

Attached is the invoice for drilling and documentation for drum disposal. I didn't realize that was something that needed to be submitted with the actual costs, we've always just submitted within the reimbursement.

As for your question regarding the lab chain-of-custody, I don't remember the last time I've sent them anything for a non-LUST project so I don't know what their standard rates are. Why should they not be allowed to adjust their rates like everyone else? I can tell you that our hourly consulting fees are higher on non-LUST projects but the Agency and Board have set the market rates. If you want to do LUST work, you'll do it for the Subpart H rates or someone else will and you'll lose clients that you may have had for years. The same thing applies to labs, drillers, etc. Why would anyone pay a lab $ 125 for a sample and only be reimbursed $ 100 when there are others out there that will do it for $ 100?

Thanks,

Shane A. Thorpe
Sr. Project Manager

CSD Environmental Services, Inc.
2220 Yale Boulevard
Springfield, Illinois 62703
Phone: 217.522.4085
Fax: 217.522.4087

-----Original Message-----
From: administrator@csdenviro.com [mailto:administrator@csdenviro.com] On Behalf Of administrator@
Sent: Friday, October 02, 2015 7:55 AM
To: Shane Thorpe <SThorpe@csdenviro.com>
Subject: Scanned image from CSD ENVIRONMENTAL

Reply to: administrator@csdenviro.com <administrator@csdenviro.com> Device Name: Not Set Device Model: MX-2610N
Location: Not Set

File Format: PDF MMR(G4)
Resolution: 200dpi x 200dpi

1990400008-Williamson County
J.D. Streett & Company, Inc.
Incident #20131026
LUST Tech

Dilbaitis, Bradley

From: Dilbaitis, Bradley
Sent: Friday, June 02, 2017 2:57 PM
To: 'Shane Thorpe'
Cc: Dunn, Greg; Rominger, Kyle; Cindy Davis; Joseph Truesdale
Subject: RE: J.D. Streett - Herrin

Please don't state that I'm implying you're a criminal, and suggest this to my supervisors, no less. You're putting words in my mouth and assigning insidious reasons for my asking legitimate questions.

From: Shane Thorpe [mailto:SThorpe@csdenviro.com]
Sent: Friday, June 02, 2017 2:42 PM
To: Dilbaitis, Bradley <Bradley.Dilbaitis@Illinois.gov>
Cc: Dunn, Greg <Greg.Dunn@Illinois.gov>; Rominger, Kyle <Kyle.Rominger@Illinois.gov>; Cindy Davis <CDavis@csdenviro.com>; Joseph Truesdale <JTruesdale@csdenviro.com>
Subject: [External] RE: J.D. Streett - Herrin

Property ownership details need to be included in every report even when I don't have all the specifics, boring logs do not. Got it.

You know you could have also just asked me without implying that we are criminals.

Have a good weekend.

From: Dilbaitis, Bradley [mailto:Bradley.Dilbaitis@Illinois.gov]
Sent: Friday, June 02, 2017 1:31 PM
To: Shane Thorpe <SThorpe@csdenviro.com>
Cc: Dunn, Greg <Greg.Dunn@Illinois.gov>; Rominger, Kyle <Kyle.Rominger@Illinois.gov>; Cindy Davis <CDavis@csdenviro.com>; Joseph Truesdale <JTruesdale@csdenviro.com>
Subject: RE: J.D. Streett - Herrin

Shane,

You are correct. I did not have that information in my notes and was not aware of the property transfer. Your email stated "how would you have any idea at all what's in my client's best interest?" and I'm realizing that it isn't really wise for me as an Agency Project Manager to have such a passive role in the communication between the consultant, owner and the Agency.

The budget requests costs for a Senior Project Manager (you, I presume) to evaluate the corrective action options and this is a big part of my job in reviewing a Corrective Action Plan. I assume that you evaluated each of these two options prior to deciding on the larger excavation. You made your decision with the knowledge that J.D. Streett had sold or was selling the property and that an engineered barrier could be (or is) an issue, so you went with the option of removing all of the soil instead of using a barrier. I did not have this knowledge. Had that information been relayed in the Corrective Action Plan, the option chosen would have become the obvious choice to benefit J.D. Streett and there would have been no need to even ask. Part of my job is to ensure that the owner (or, the consultant that the owner has hired) is remediating the incident in an expeditious and cost effective manner. I called Mr. Schuering because it is becoming very obvious to me that it's not wise for me to take such a passive role in the process. I was contacted last month by an owner who

asked me how to avoid performing the Corrective Action Plan that was submitted in January because the consultant had not explained all of the available options and chose to dig up most of the site, which was certainly not what the owner wanted or what was in the owner's best interests. The owner is currently working on obtaining an ordinance from the Village without any help from the consultant. The owner called the consultant and asked the consultant for my telephone number to discuss the plan that had been submitted. The owner informed me that they were told by the consultant that it was useless to contact me because I wouldn't help anyway. I helped.

I'm sure that Mr. Schuering trusts me to consider J.D. Streett's best interests as well. I didn't see the need to have the Fund pay for a conference call when I should probably make the call myself. I understand that he may have been a bit thrown off because I hadn't previously contacted him. I will make sure to take a more active role in the future with all owners to help avoid situations like this.

Brad Dilbaitis
Project Manager
Illinois Environmental Protection Agency
Leaking Underground Storage Tanks
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276
phone: (217) 785-8378
fax: (217) 524-4193

From: Shane Thorpe [mailto:SThorpe@csdenviro.com]
Sent: Friday, June 02, 2017 11:33 AM
To: Dilbaitis, Bradley <Bradley.Dilbaitis@Illinois.gov>
Cc: Dunn, Greg <Greg.Dunn@Illinois.gov>; Rominger, Kyle <Kyle.Rominger@Illinois.gov>; Cindy Davis <CDavis@csdenviro.com>; Joseph Truesdale <JTruesdale@csdenviro.com>
Subject: [External] J.D. Streett - Herrin

Brad,

I told you in the email I sent yesterday that I'd be happy to set up a conference call with the owner. It was originally your suggestion. I guess you had a change of heart and decided to call him on your own. He indicated you said you didn't know the property had been sold. Section 3a of both the Stage 2 and Stage 3 plans and Section 2e of the SICR all reference Victoria Hartley as the owner of the property. You were the reviewer of all 3 of those reports. I guess that's not something you put in your review notes. I didn't reference Ms. Hartley specifically in the CAP because I had received a call from an attorney representing a potential buyer and couldn't be sure that the property was still under her ownership at the time the CAP was submitted.

Jim Schuering also indicated that he trusts CSD to look out for J.D. Streett's best interests, which is why he's hired us. He thought it was pretty strange that you would call and question him like that. I concur.

Shane A. Thorpe
Sr. Project Manager

CSD Environmental Services, Inc.
2220 Yale Boulevard
Springfield, Illinois 62703

1990400008 - Williamson County
J.D. Streett & Company, Inc.
Incident # 20131026
LUST Technical File

Dilbaitis, Bradley

From: Shane Thorpe <SThorpe@csdenviro.com>
Sent: Monday, June 05, 2017 2:16 PM
To: Dilbaitis, Bradley
Subject: [External] RE: J.D. Streett CAP and Budget

Brad,

TACO can't be used when Csat is exceeded. Remediation objectives can equal Csat in certain instances but there is no "remediation objective" for Csat because it's not an exposure route. I'm not sure I'm following what you're trying to get at there. Not applicable here anymore

When calculating what you consider reasonable, are you using numbers submitted by consultants or what's been approved by you? Do you look at what other project managers consider to be reasonable and take that into account at all? ?

What does it matter who is doing the CAD work? Even if it is me doing them, there would still be time associated with designing them versus doing the actual CAD work. Even if some of the figures were presented in previous reports, there's still time associated with plotting the drawings again. It's not a lot of time but all these things that you like to say the "time spent should be relatively minimal" and cut out eventually add up to something significant. "Relatively minimal" compared to what? These costs for the Sr. PM are included in the 16 hours for "...design excav limits..." → the first request → and Not the 50 hours for CAP Preparation

Where did you see a request for 8 hours to update a spreadsheet? I told you the R-26 calculations also include the analysis of the hydraulic conductivity data. It's also not unreasonable to assume that the R-26 results will change enough that revisions to maps and off-site notifications will be required. That all has to be analyzed. Is all that stuff "relatively minimal" too so we shouldn't get paid for it? address in claim ?

How many trucks are you assuming then? Have you looked at any published references for construction production rates for excavation? My numbers are not at all unreasonable, so I'm not sure why I'm having to explain anything. Why would you expect all the details to be addressed before the plan was submitted? Why would I spend a bunch of time making arrangements before knowing if you're going to approve the work? We seem to be getting more denials than approvals these days. Budgets are estimates. I prepared an estimate based upon the hundreds of sites that I've worked on previously. 4 more questions

Did you verify with the reimbursement department that the work doesn't need to be documented prior to payment? It's been an issue in the past. Y

I know you want the boring logs on the Agency forms (in those instances where I'm allowed to submit them). You've made me aware of that in the past.

I already explained what is involved in the off-site notification time. It's not limited to just looking up who owns them and changing 2 things in a letter. If it were 40 hours to look up property ownership, I'd agree that would be unreasonable. Since there's much more to it than that, I don't agree with your assessment. What is the reasonable amount of time you've come up with for that task based upon the analysis you did on the hundreds of budgets and claims you've reviewed? mailing → tracking → documenting might have to mail more than once(?)

The Board ruling was regarding the Agency reducing hourly rates for preparing a budget from a PM down to an account tech. It wasn't specific to an administrative assistant but it's the same principle. I don't recall the name of the case, it wasn't one of ours. I'm sure someone in the legal department could guide you to it. Not applicable

Can you specify which regulation is requiring the PVI? Also, what would a BCT consist of?

Can you send me the list of tasks and the reasonable number of hours for each that you've put together? It seems like it would be in everyone's best interest if I knew what was "reasonable".

Shane A. Thorpe
Sr. Project Manager

CSD Environmental Services, Inc.
2220 Yale Boulevard
Springfield, Illinois 62703
Phone: 217.522.4085
Fax: 217.522.4087

From: Dilbaitis, Bradley [mailto:Bradley.Dilbaitis@Illinois.gov]
Sent: Monday, June 05, 2017 11:36 AM
To: Shane Thorpe <SThorpe@csdenviro.com>
Subject: RE: J.D. Streett CAP and Budget

Shane,

I'm not suggesting that the owner has to choose the course of action that I personally think is best for the client. I was just asking if the owner was involved in the decision as to which course was chosen.

If you're performing an excavation to remove the soil that exceeds the total xylenes Csat exceedances then the Csat becomes the remediation objective. 734.410 states that the owner or operator must propose remediation objectives for applicable indicator contaminants in accordance with 35 Ill. Adm. Code 742. Tier 2 SROs are required to be calculated in order to determine the soil that is eligible for payment.

My experience with the time it takes to prepare a 45-Day Report, Site Investigation Plan, Corrective Action Plan, Free Product Removal Plan and Budget, Corrective Action Completion Report, etc. comes from the hundreds budgets and hundreds of claims that I have reviewed. I'd like to think I have a pretty good idea of what is reasonable. If the line item request doesn't appear to be reasonable I'll try to break it down further to try to identify the issue. Then, I'll contact the consultant to discuss the issue to see if we can figure it our prior to the letter being issued.

I agree with you about the CAD costs with the plan. It's obviously important to make sure that the maps are correct prior to submitting them. But I also don't know who does your CAD work. It could be you doing the CAD work (the person that prepared the maps is not indicated on the maps). Also, of the 13 maps that are included in this plan, 8 of them were submitted in the Site Investigation Completion Report, so there are really only 5 new maps in the Corrective Action Plan (Fig's 8, 10, 11, 12 and 13). One 8-hour request for the CAD work is for Fig's 8, 10, 11 and 12 and the other 8-hour request is for Figure 13, I presume. I'm sure that the other 8 maps were reviewed prior to their submittal in the Site Investigation Completion Report. The Senior

Project Manager time spent with the CAD figures should be relatively minimal, assuming that the Senior Project Manager does not also serve as the Senior Draftsperson/CAD.

I had also assumed that the 8 hours for the R-26 calculations included the information that was submitted here because the data was already entered into the computer program for the five R-26 calculations presented in this Corrective Action Plan. The only parameter that needs to be changed for later is the hydraulic conductivity. The bulk of the time with the R-26 calculations has already been completed unless everything is being done by hand. If the time to do the preliminary modeling was included in the Corrective Action Plan preparation request instead of the "R-26 calculations" request, I'd be curious as to how many hours it required, because the 8-hour request to update the spreadsheet is starting to look unreasonable now. I understand why the preliminary modeling was done and I don't have a problem with it being done. I was willing to approve the request under the impression that it included all of the R-26 calculations. How am I to interpret anything other than all of the modeling calculations being included in the "R-26 calculations" request? It seemed fairly straightforward. This request only included the forthcoming R-26 calculations using the site-specific hydraulic conductivity but not the ones already done?

I'm still unclear as to the length of the soil removal/backfill activities. I was trying to determine how you came up with the 112 hours for the soil excavation activities because they appear to be high. I am not assuming an infinite number of trucks are available for the excavation. That's why I inquired about the limiting factor(s) of the excavation. What details are unclear? I would have expected these issues to have already been addressed before the plan was submitted. Have you not yet decided on which landfill the soil will be taken to? I'm simply asking for clarification of the request. The owner/operator is required to provide a demonstration that the amounts sought are reasonable [734.850(b)].

You do not have to submit a report documenting the excavation to receive payment for the excavation. If the excavation was approved in the plan/budget and the activities in the claim are consistent with the activities that were proposed/approved, then the costs will be paid. An additional report is not required.

All soil boring logs and monitoring well completion reports should be submitted on Agency forms [734.425(c) and 734.430(b)]. The soil boring logs in the plan (approved in the Site Investigation Completion Report) are missing several required pieces of information. This is for use in future plans, etc.

Figure 13 (8 hours) lists 39 properties anticipated to receive a notification letter. The map includes the addresses and the PINs for the (expected) affected properties. I went on the Williamson County website (http://bbamsoft.com/williamson1/web_list.php) and was able to find the owner of one of the properties very quickly. I can't imagine that it would take much time to get each owner's name from the website. The 40 hours for notification purposes seems unreasonable.

I have not seen the Board ruling that stated that the Agency can't reimburse administrative assistant rates for the notification letters if your salary is based on being a Senior Project Manager. I'm following 734. 850(b) that states that personnel costs must be based upon the work being performed, regardless of the title of the person performing the work. I'd be happy to read the Board ruling that you refer to if you can identify it.

A PVI investigation is required by the regulations because of what I described in my original email. My only priority is to follow the regulations, not to reduce costs. You do not have to do a PVI investigation if the owner is willing to accept a BCT in that area.

Brad Dilbaitis
Project Manager
Illinois Environmental Protection Agency
Leaking Underground Storage Tanks

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phone: (217) 785-8378
fax: (217) 524-4193

From: Shane Thorpe [mailto:SThorpe@csdenviro.com]
Sent: Thursday, June 01, 2017 12:31 PM
To: Dilbaitis, Bradley <Bradley.Dilbaitis@Illinois.gov>
Cc: Dunn, Greg <Greg.Dunn@Illinois.gov>; Rominger, Kyle <Kyle.Rominger@Illinois.gov>; Joseph Truesdale <JTruesdale@csdenviro.com>; Cindy Davis <CDavis@csdenviro.com>
Subject: [External] RE: J.D. Streett CAP and Budget

Brad,

It sounds like you are accusing CSD Environmental of some sort of impropriety in the second paragraph of your email. I don't appreciate you implying that we somehow aren't looking out for our client's best interest. This isn't the first offensive email you've sent me. If it makes you feel better, when the reimbursement package comes in you will be able to do some more detective work and see that there wasn't any CAP preparation between the dates that Jim Schuering signed the report and the time that Joe & I signed the report. If you'd like to have a conference call with the owner, I can certainly arrange that too (as long as it's something that you would approve for reimbursement).

Looking back at other documents submitted for this very site, the owner signed the SICR 5 days prior to Joe & I, the Stage 3 Plan 4 days prior, the Stage 2 plan 5 days prior, the 45-Day Report 4 days prior and the 20-Day Certification 6 days prior. What was done here is nothing out of the norm. I don't know if you take this tone with all consultants or if you just have an issue with our company, in particular. Are all consultants considered guilty of something until proven otherwise?

So now not only are we required to submit a plan in accordance with the regulations, it has to be the course of action that you personally think is best for our client? Do you think the property would sell for the same price after your proposal as it would after mine? Have you thought that maybe the site was already sold and maintaining an engineered barrier in perpetuity wasn't negotiated in the purchase? How would you have any idea at all what's in my client's best interest? How long would it take for closure if we did your smaller excavation and a sample from a wall again exceeded Csat for xylenes? Would the State of Illinois be liable because you acted as a consultant and gave the owner bad advice?

Also, it looks like you must be using a xylenes Csat from Equation S29 when you indicate that only B-1 exceeds Csat. TACO (App. C, Table B) states that Csat is determined using Appendix A, Table A or Equation S29 in App. C, Table A. There is no regulatory requirement that the highest value for Csat be used that I'm aware of. If I'm mistaken, please provide a regulatory reference. The default Csat values were listed in Table 4.0 of the CAP. There are several samples that exceed those values.

I take it you were formerly employed as a consultant and have written many CAPs and observed plenty of remediations. Otherwise I'm not sure how you have such a deep knowledge of how long each task takes. I'd be willing to bet that it would take 10 random consultants 10 different amounts of time to write a CAP for the same site...so how do you come up with your numbers for what's reasonable? Does the Agency have some sort of internal guidance all project managers refer to that tells them how long each task takes or are you making your own determinations?

As far as your concerns over the number of hours, I stand by everything that was submitted. I don't get to work on these projects in a vacuum. Sometimes I may start writing a CAP and then have to tend to something else that comes up. Some days I write faster than other days. Sometimes I make a mistake and have to go back and fix it. Sometimes I'll read

back through what I've written and decide I don't like how it sounds, so I'll re-write it. Maybe I'm just slower at analyzing, typing and writing than you. How long did it used to take you to write a CAP when you were a consultant? Did they all take the same amount of time or was there variation based upon site-specific circumstances?

Your determination that a Senior Project Manager somehow should have no costs or time associated with Figures for a CAP seems completely unrealistic. I'm supposed to just tell a CAD operator "I need 13 figures for a CAP, you figure out what they're supposed to be and how they should look"? Then I should just trust that they're all correct and not look them over? I also like to review boring logs when designing an excavation, it seems prudent to me. Apparently I offended you by including them and a couple other things. I apologize. The preliminary groundwater modeling presented in the CAP was included in the CAP prep time. The separate 8 hour request in the budget would be associated with evaluating the in-situ HC test and results and finalizing modeled extent based upon the in-situ value. The preliminary modeling was done in order to estimate the number of off-site notifications that would be required. Had I just said in the CAP that there were going to be 40 off-site notifications, would you have believed me without seeing some sort of analysis?

As for the excavation and backfilling oversight, also included in there is drive time from Springfield to Herrin and back once per week (assuming it's not unreasonable to come home on the weekend?). There is also time associated with getting samples to the laboratory. Are you assuming an infinite number of trucks are available when you say that what I have proposed is too slow? There are a few landfills in the area. Which one were you assuming we would haul to? Where are you getting the backfill? How can you tell my estimate is slow without knowing any of that stuff? I don't even know some of those details yet. Are you assuming perfect weather? This is an estimate and it's not an unreasonable one.

Also requests Analytical Costs Shipping

NO

Answered with 6 questions

A report following the completion of the excavation is necessary in order to obtain reimbursement. The owner is allowed, by law, to submit reimbursement requests every 90 days. However, the costs have to be documented in order to receive payment. I've seen Highway Authority Agreements take years to procure. Are you saying that we would have to wait until the CACR is submitted to get paid for the excavation? That's not reasonable.

There is more time associated with off-site notifications than only changing a couple of entries. Ownership of each parcel has to be researched and each of the notifications is required to be sent by certified mail. Then they all have to be tracked to make sure the recipient has received and that has to be documented. Sometimes you might even have to send one out more than once. One hour each actually seems kind of low to me now that I give it more thought. Would you be able to bump that up? If not, maybe you could send them out and track it all since you're more efficient? I don't have an administrative assistant. I believe the Board recently ruled that you can't force me to be an administrative assistant if my salary is based on being a Senior Project Manager. Do you get paid like an account tech when you review a reimbursement and an environmental protection specialist when you review a plan and budget?

I'm not sending you anything else on the gloves. Again, this is an estimate and I've provided more than adequate documentation of what gloves that would typically be used approximately cost. Obviously, a receipt for any field purchase would be required within a reimbursement request. They're not required for budgets.

It seems that your main priority is to reduce costs. I'm curious then why you would require a PVI investigation based upon a sample collected at the property line where a building could never feasibly be placed? Also, if we're going to ignore all the data from the excavation samples along the property lines, why collect them in the first place?

Shane A. Thorpe
Sr. Project Manager

CSD Environmental Services, Inc.
2220 Yale Boulevard
Springfield, Illinois 62703

3 nearby landfills
1.7 mi → Herrin
6.2 mi → Marion
7.1 mi → Marion

Phone: 217.522.4085
Fax: 217.522.4087

From: Dilbaitis, Bradley [mailto:Bradley.Dilbaitis@Illinois.gov]
Sent: Thursday, May 25, 2017 2:43 PM
To: Shane Thorpe <SThorpe@csdenviro.com>
Subject: J.D. Streett CAP and Budget

Shane,

I'm reviewing the Corrective Action Plan and Budget and there are a couple of issues that we need to address. First, the plan mentions that Highway Authority Agreements might be required for Ash Street to the north of the site and the alleyway to the west of the site, depending on the excavation sample results. Highway Authority Agreements are going to be required for both of these even if all of the excavation samples come back less than Tier 1 SROs. There is soil contamination exceeding Tier 1 objectives along both property boundaries that will not be removed because it's less than the site-specific Tier 2 SROs. The limits of the Highway Authority Agreements must be the length of the property. Also, a PVI investigation is required. MW-3, MW-9 and MW-10 don't have the 5 feet of clean soil separating the groundwater contamination from the ground surface. MW-3 and MW-9 are within the proposed excavation limits but MW-10 is not, so the PVI investigation is required. If you would like to email me the expected costs of the PVI investigation, I can add them into the approved budget.

There is also a bit of an issue with the signatures on the Corrective Action Plan. I noticed that James Schuering of J.D. Streett signed the Corrective Action Plan one week prior to you and 8 days prior to the review/certification provided by Joe Truesdale. I have no idea whether the bulk of the work for the Corrective Action Plan came before or after Mr. Schuering authorized the submittal of the Corrective Action Plan. The Corrective Action Plan proposes an excavation to remove all of the soil exceeding the Tier 2 site-specific industrial/commercial inhalation and construction worker inhalation remediation objectives and the site will close with an industrial/commercial land use limitation, a possible construction worker caution notification, two Highway Authority Agreements, and the use of the city-wide groundwater ordinance. The plan also proposes submitting an extra Corrective Action Plan and Budget to document the excavation in approximately 8 months. I just want to make sure that Mr. Schuering was made aware of the option to close the incident with a limited excavation to remove the soil around B-1 to address the total xylenes Csat exceedance there, along with the industrial/commercial land use limitation, the construction worker caution notification and an engineered barrier over the proposed excavation area (excluding the limited area of soil removal) instead of the proposed excavation. The latter corrective action option is much quicker, much less obtrusive, and considerably less expensive to accomplish. Are they absolutely against using a barrier? The industrial/commercial land use limitation and the Highway Authority Agreements will be required anyway and the construction worker caution notification might be needed after this proposed excavation as well. This looks to be a difference of at least $125,000.00 and a year+ extra time to closure if the plan is completed as proposed to avoid having an engineered barrier added to the NFR letter. The proposed budget currently included Paving Costs that would probably cover the cost of the installation of the barrier.

The rest of the issues concern the budget. I'll list them in order:

1. The budget requests 16 hours for the "review of analytical & exceedances, evaluate CA options, design excav. Limits and estimate quantities" My main concern about the 16 hours concerns the evaluation of the corrective action options. There was no specific request in the budget for any correspondence with the owner and it appears as though only the last signature page of the Corrective Action Plan form was sent to the owner for his signature. Was the owner/operator

involved in the evaluation or have any input at all to determine the course of action? If not, could we hold a conference call with the owner to explain the two options?

2. The budget requests 50 hours for a Senior Project Manager for the preparation for the Corrective Action Plan.
    a. The first 4 pages are just the form itself. Two of these pages (the fist and the last) are the only ones that were manipulated at all. The completion of the site info on the first page and obtaining the owner's signature should not take that long. The one signature page of the form is mailed to the owner/operator for his signature and then mailed back to CSD for signing, judging by the dates of the signatures.
    b. The next 19 pages are the narrative specific to the Corrective Action Plan, including tables. About a third of the narrative appears to have been copy/pasted from previous reports, specifically the Site Investigation Completion Report. This is obviously where the bulk of the time preparing the plan is devoted.
    c. The next section, "Figures," includes the maps. Preparation of the maps was a separate CAD budget request so there should be no costs and no time for the Senior Project Manager spent on this section.
    d. The next sections, "Appendices A and B," are all of the soil boring logs and monitoring well completion reports. It is debatable whether these two Appendices should have even included in this Corrective Action Plan. Yes, I'm familiar with 734.335(a)(8) which states that the Corrective Action Plan must contain appendices containing references and data sources relied upon in the report that are organized and presented logically, including but not limited to field logs, well logs, and reports of laboratory analyses. We don't actually need the soil boring logs or well completion reports because there were no new borings or wells installed after the Site Investigation Completion Report. A reference to the Site Investigation Completion Report could have been made for the soil boring logs and well completion reports, the same as it was done for the lab reports mentioned in the plan. Regardless, the time to print off of the soil boring logs and well completion reports from the Site Investigation Completion Report is minimal.
    e. The next part (Appendix C) is the preliminary groundwater modeling. There is a separate 8-hour request in the budget for the groundwater modeling calculations so there should be no costs and no time for the Senior Project Manager spent on this section in this request.
    f. Appendix D is the water supply well survey information. These pages were already submitted in the 45-Day Report and I'm sure the costs associated with the water supply well survey information have already been paid in the early action claim. These were just copies from previous submittals. The time spent copying these 10 pages from the 45-Day Report is minimal.
    g. Then there's a copy of the ordinance, which has been submitted multiple times. It's not necessary to submit the ordinance now; the plan states that a certified copy of the ordinance will be submitted with the Corrective Action Completion Report. The time to copy the ordinance from previous submittals is minimal
    h. Last is the budget, which has a separate preparation request so the time is not included in this 50-hour request
    i. We can't approve this much time for the preparation of the plan. The first 16-hour request (#1) is not really separate from the completion of the plan as the review of analytical and exceedances, the excavation limits and estimated quantities are all part of the narrative for the technical information of the Corrective Action Plan (part E of the Corrective Action Plan form). The supporting technical documentation indicates that this request is unreasonable.
3. The budget requests 112 hours over 12 days for the oversight of the excavation/backfilling by a Senior Project Manager. Twelve days seems like a lot of time to move 2,608 cubic yards of contaminated soil/backfill. How was this 112 hour request determined? How many cubic yards do you expect to move in one day (217 cubic yards/day, based on 12 days)? How was this amount

determined and what was the limiting factor? This appears to be somewhere around one truckload of soil/backfill every half hour, which is extremely slow for an excavation.

4. The budget requests 30 hours for a Senior Project Manager to prepare a report documenting the corrective action excavation and proposing the final R-26 extent and Highway Authority Agreement limits. This extra report is not needed. The excavation, the final R-26 extent and the Highway Authority Agreement limits should be documented in the Corrective Action Completion Report; not an extra report. The Highway Authority Agreement limits need to be the site boundaries anyway. The costs associated with this extra report exceed the minimum requirements of the Act and are unreasonable.
5. The budget requests 40 hours for a Senior Project Manager to prepare the notifications to 40 off-site property owners regarding the use of the groundwater ordinance. First, this is not a task for a Senior Project Manager; this is for an administrative assistant. Secondly, it will not take one hour per notification letter as there are only 2 entries that are changed between notifications ("Dear...affected property owner" in the greeting and the address of the off-site property in the fourth paragraph). One hour per notification letter is unreasonable.
6. The budget requests 10 hours for a Senior Professional Engineer for "oversight/direction of corrective action." There is already a 112-hour request for a Senior Project Manager for oversight of corrective action. The Senior Professional Engineer will perform very limited fieldwork and have limited involvement in projects. The Senior Professional Engineer should review and certify the plan and budget. The Senior Project Manager provides the oversight for the corrective action.
7. The budget requests costs associated with 3 reimbursement claims. Why are 3 claims needed? At which points during the remediation are you expecting to submit the claims?
8. Please include the rental invoice for the hydraulic conductivity equipment rental in the claim that requests the cost
9. Do you have an invoice for a box of gloves that have been recently purchased? The screenprint from the Lowe's website indicates that they sell these gloves for this cost but there's no indication that these are the gloves that are used.

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