

August 9, 2021

Ms. Cindy Koepke
Wisconsin Department of Natural Resources – South Central Region
Remediation and Redevelopment Program
3911 Fish Hatchery Road
Madison, WI 53711-5397

RE: Additional Investigation/Remediation Work Plan – Phase I
Shorewood Commons
3330 University Avenue
Shorewood Hills, WI
BRRTS # 02-13-560698

Dear Ms. Koepke:

Pursuant to our Skype discussion on June 25, 2021, Resource Engineering Associates, Inc. (REA), is proposing the following First Phase of additional investigation/remediation work at 3330 University Avenue in Shorewood Hills, Wisconsin.

Additional Monitoring Wells North of Locust Drive

As discussed, REA is proposing to install an additional monitoring well and an additional piezometer on the north side of Locust Drive in the vicinity of former soil boring B-402. This area is difficult to drill because of the setbacks from the railroad and several utilities in the area. REA have met with a few drillers who have indicated they are not comfortable drill in this area. Probe Technologies is willing to drill the wells by using QCR technology to “daylight” the utilities. We have scheduled drilling for the 26th and 27th of August. It is anticipated that the monitoring well will be screened between 15 and 25 feet below grade and the piezometer between 35 and 40 feet below grade. The bore holes will be made with 4.25 inch hollow stem augers and then will be converted to 2 inch diameter monitoring wells. Soil samples will be collected continuously until the groundwater is intersected for the monitoring well (MW-5) and recorded on the boring log. The piezometer (PZ-3) will be blind drilled. The well/piezometer will be constructed using Schedule 40 PVC riser and 0.010-inch slot PVC screen. The wells will have flush mounted covers and well caps with padlocks. The monitoring well/piezometer will be developed by surging them for a least one half hour each and then removing 10 well volumes to establish a hydraulic connection with the surrounding formation. The well casing elevations will surveyed to Mean Sea Level. Well construction and development will be recorded on WDNR Forms 4400-113A&B. All soil cuttings and purge water will be collected in 55 gallon drums and staged on site behind the building at 3330 University Avenue until arrangements can be made for proper off-site disposal.

Once installed, groundwater samples will be collected from the new, as well as the existing, monitoring wells/piezometers. Samples will be collected and submitted to TestAmerica in University Park, Illinois for laboratory analysis for VOCs. Sample results to used to “fine tune”

the location of the proposed remedial injections. The proposed locations of the new monitoring well/piezometer locations are shown on Figure 2.

Additional Vapor Sampling in the Basement of the Building at 3310 University Avenue

REA is proposing to collect two indoor air samples (AI-21 and AI-22) in the underground parking garage under the building at 3310 University Avenue, as one as one subslab air sample (SS-21). The subslab (SS-21) vapor sample will be collected from a Cox-Colvin Vapor Pin (VP-1 and VP-2) installed in the middle of the parking garage. The pin will be installed using a hammer drill. A 1.5" PVC coupler will affixed around the Vapor Pin using non-VOC containing modeling clay to provide a seal at the floor to form dam around the pin. The PVC coupler dam will then filled with water to check for leaks around the dam and to ensure no short circuiting through the vapor point during sampling. Teflon ¼" tubing will attached to the Vapor Pin hose barb and then connected to a photoionization detector (PID). The PID will be used to remove air from beneath the slab to insure the presence of undiluted soil gas. The Teflon tubing will then connected to a 6 liter Summa canister equipped with a regulator so a sample will be collected over a 30 minute period. The Summa canister will then be opened and allowed to collect a sample for 30 minutes. The initial and ending vacuums for the canister will recorded. Two additional Summa canisters, one on the west side (AI-21) and one on the east side (AI-22), will be used to collect indoor samples from the underground parking garage. The samples will be collected over a 24 hour period. The Summa canisters will returned to the Pace Analytical Laboratory in Minneapolis, Minnesota where they were analyzed for TO-15 Full Scan VOCs.

Investigation/Remediation Work Plan – Phase II

Upon completion of the work outlined above, the Work Plan for the proposed remediation at 3330 University Avenue using remedial injections, along with a waiver request to allow the injections will be submitted to the DNR.

If you have any questions concerning this work plan, or need any additional information, feel free to call me at (608) 220-3804.

Sincerely,

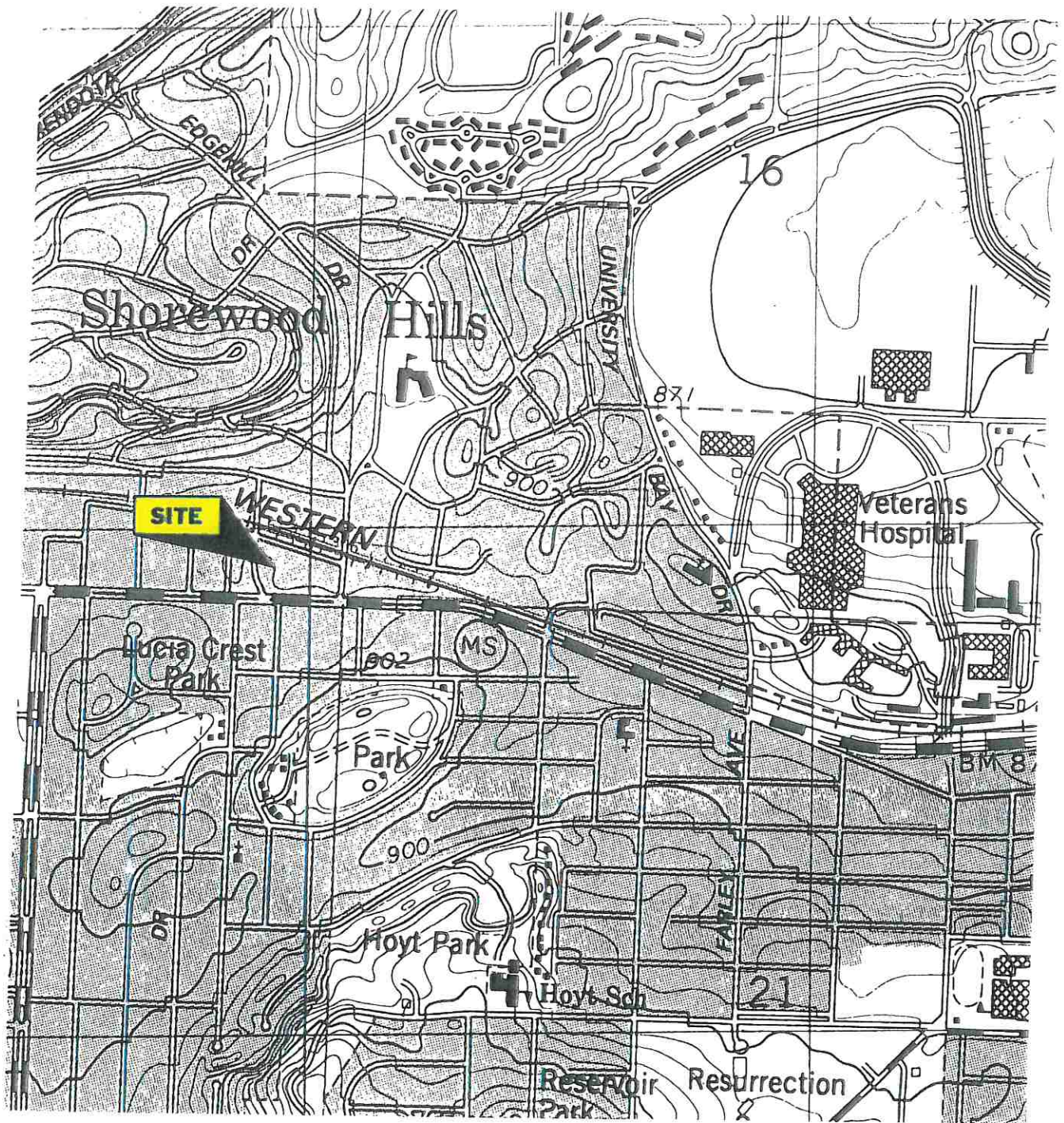


William W. Buckingham, P.E.
Senior Engineer

Attachments:

Figure 1: Vicinity Map

Figure 2: Proposed Monitoring Well/Piezometer Map



NOTES

Site is located in the SE1/4 of the SE1/4 of Section 17, T7N, R8E, City of Madison, Dane County, Wisconsin.

Base map from Madison West, Wisconsin 7.5 minute USGS topographic quadrangle map (1852).

See Figure 2 for Site Features and Building Layout Map.



QUADRANGLE LOCATION



SCALE: 1" = 100'

REA RESOURCE ENGINEERING ASSOCIATES, INC.
 8505 University Green, Suite 200
 Middleton, Wisconsin 53562-2507
 608-831-6563 (Fax 631-6564)

SHOREWOOD COMMONS
 3330 & 3416 University Avenue
 Shorewood, Wisconsin

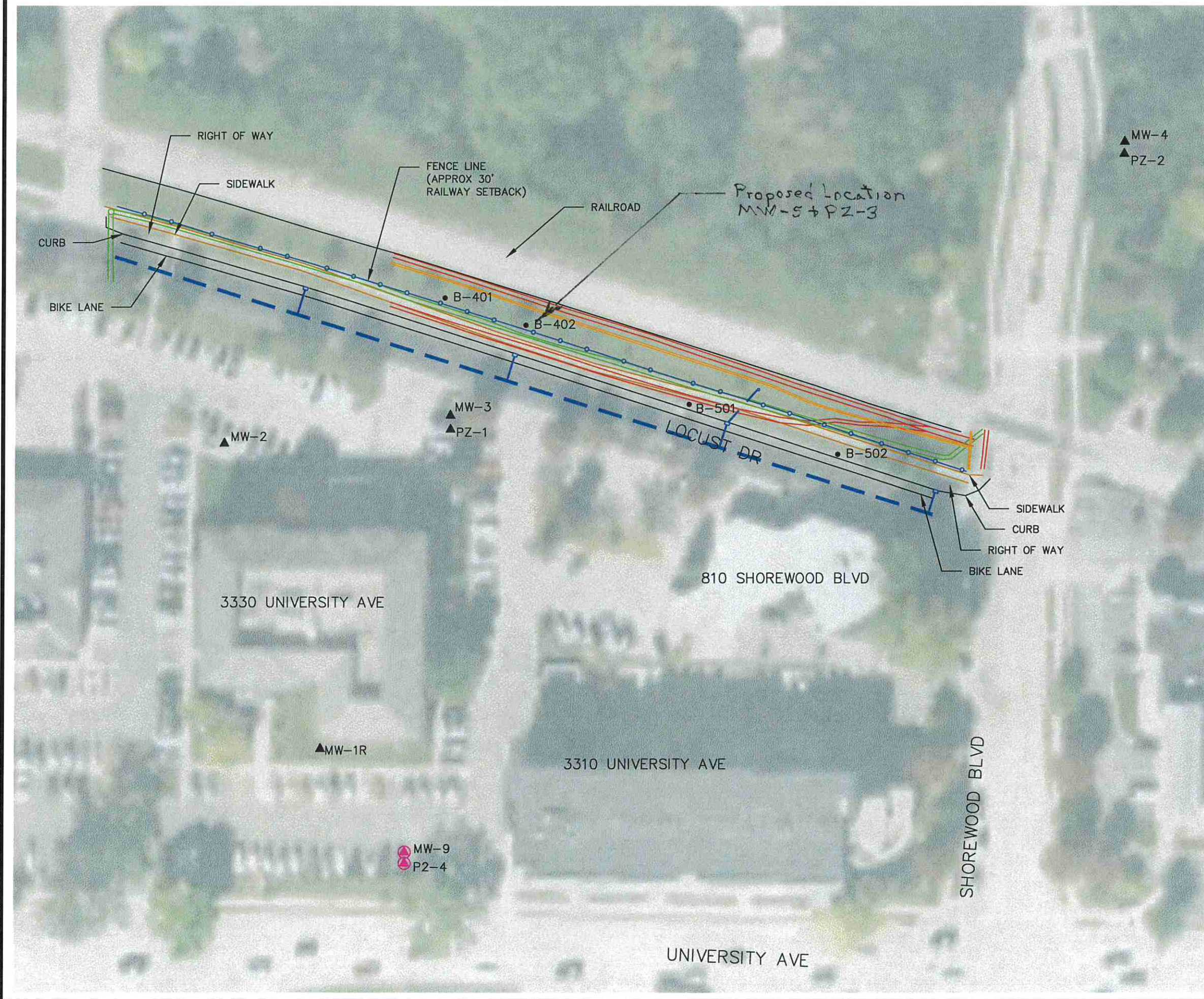
SITE VICINITY MAP

Date: DEC 1999
 Drawn: SKB
 Ck'd: WWB
 Proj #990084.1

FLADKOH1.DWG

FIGURE 1

N:\REA13\PhaseII\Flad3330UAve\1358boring.dwg

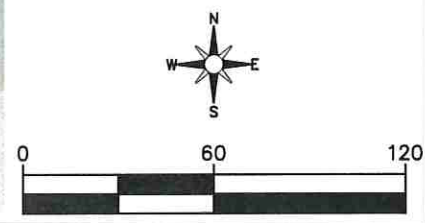


LEGEND

- Existing Wells
- ▲ MW-1 Monitoring well location constructed on 11/23/13 & 5/1/18
- B-1 Geoprobe borings made by Soil Essentials on: 12/20/14 (401-402) 9/26/15 (501-502)

UTILITY KEY

- ELECTRIC
- FIBER OPTIC
- SANITARY
- - - STORM SEWER



REVISIONS:

6/2/15	DATE
	DATE
	DATE

Resource Engineering Associates, Inc
 3510 Parkmer Street, Suite 100
 Middleton, Wisconsin 53562-2507
 Phone: 608-831-5522
 Fax: 608-831-0504
 Web: www.reaeng.com



LOCUST DRIVE UTILITY MAP
 PHASE II INVESTIGATION
 SHOREWOOD COMMONS
 3330 UNIVERSITY AVENUE
 SHOREWOOD, WI 53705

DATE: FEB, 2015
DRAWN: RAN
CHECKED: WWB
APPROVED: WWB
DRAWING NAME: 1358boring.dwg
PROJECT NUMBER: 130058.1