

Work Plan for Well/Boring

Pall Life Sciences proposes to install a test boring/nested well near the intersection of Bernice and Center. The general location of the well is shown on the attached figure, and is subject to finding a suitable site in that area. The following describes the methods to be used to install this boring/well.

Well Boring/Well Installation Methods

Using a hollow-stem auger drilling method, the proposed test borings will be drilled to a depth sufficient to encounter bedrock. The proposed sampling methods are split spoon and Simulprobe for collection of soil and soil/groundwater, respectively.

Soil samples will be collected as split-spoon samples at 10-foot intervals, beginning at ground surface and ending at the bedrock surface. Starting at a depth approximately 10 feet below the uppermost water-bearing zone, soil/groundwater samples will be collected using Simulprobe techniques and continue through water-bearing deposits capable of providing adequate sample. In water-bearing units, Simulprobe sampling will be performed at a maximum frequency of every 10 feet. Split-spoon sampling will not be collected at the Simulprobe intervals, as the Simulprobe will account for the soil sampling. During the drilling of each boring, all soil samples will be described/classified based on their physical characteristics by an onsite geologist.

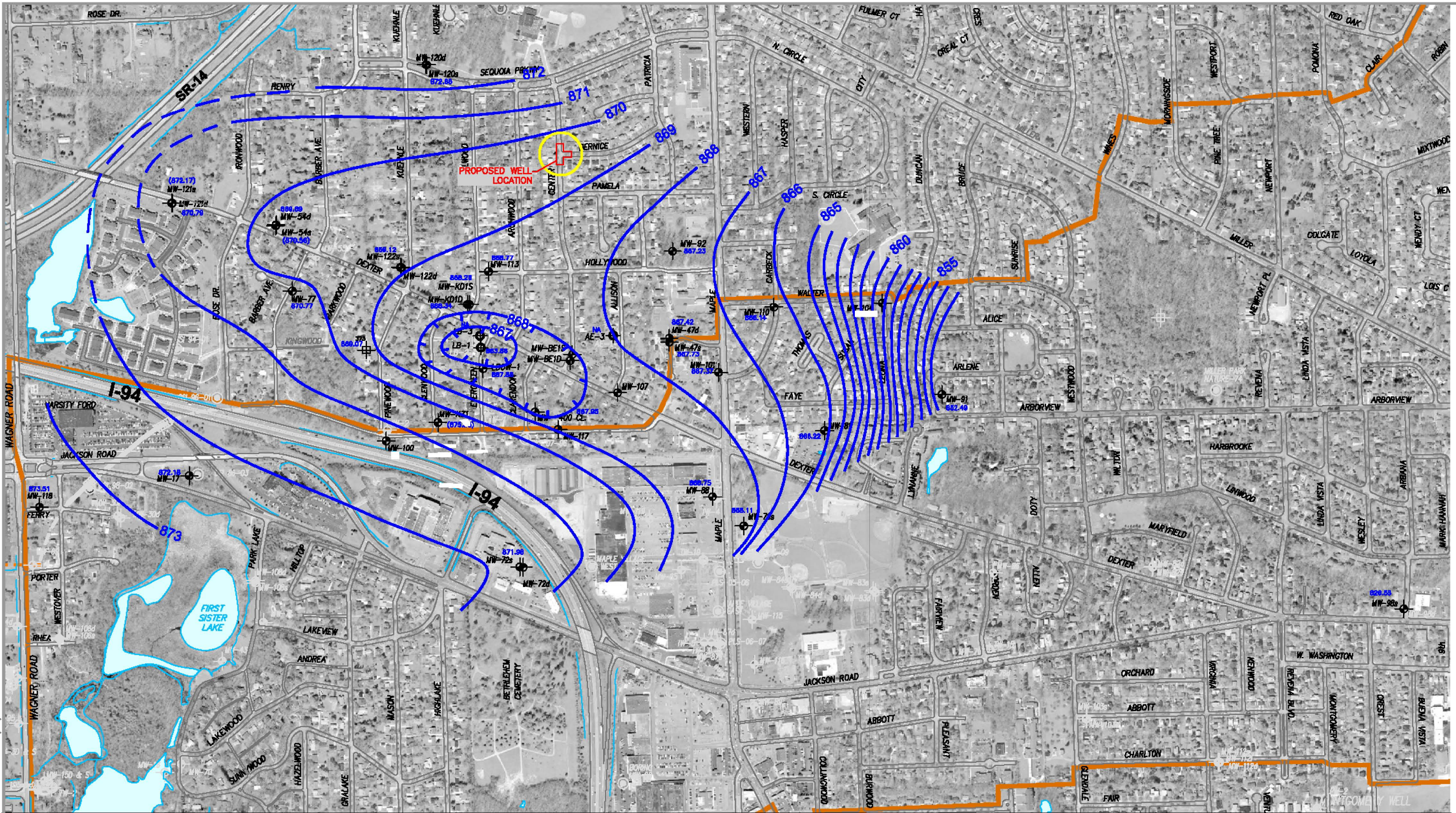
Groundwater samples will be collected using a Simulprobe and analyzed for 1,4-dioxane by PLS.

Upon reaching the total depth of the boring, as determined by the onsite geologist, the borehole will be geophysically logged using a natural gamma tool. This data will supplement the formation samples and provide additional information regarding site geological conditions.

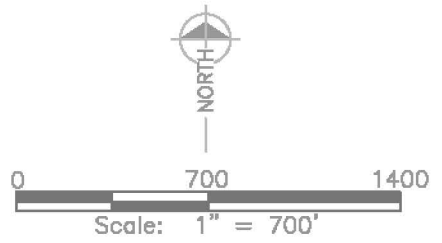
A well or nested wells will be installed for the primary purpose of obtaining representative water quality and level data. The intent is to install one well in the shallow (D2) aquifer and one in the lower (E) aquifer, assuming each of these deposits are encountered at the boring location. If a lower aquifer is not encountered, PLS will install one well in the shallower aquifer. Such decisions will be at the discretion of PLS. PLS will discuss all well installation plans with the MDEQ. Water quality data will also be considered screen zone collection.

Wells will be constructed of galvanized steel casing and equipped with a 5-foot stainless-steel well screen. The well will be gravel packed and grouted. The wells will likely be completed as flush mounts, equipped with locking caps and locks.

Soil cuttings derived from the drilling and development water will be transported back to PLS for appropriate management.



- LEGEND**
- ⊕ - MONITOR WELL USED FOR STUDY
 - ⊕ - MONITOR WELL
 - ⊕ - RESIDENTIAL WELL
 - ⊕ - PURGE WELL
 - ⊕ - HYDROGEOLOGIC TEST BORING
 - ⊕ - UV/OX TREATMENT SYSTEM
 - ⊕ - TEMPORARY PURGE WELL
 - ▲ - SURFACE WATER ELEVATION POINT
 - - POTENTIOMETRIC CONTOUR (Feet NAVD 88)
 - (875.83) - DATA NOT CONTOURED



PUMPING CONDITIONS	
LB-1:	100 GALLONS PER MINUTE
LB-3:	85 GALLONS PER MINUTE
AE-3:	15 GALLONS PER MINUTE

PROPOSED MONITOR WELL LOCATION

PROJECT NO.
F96502
FIGURE NO.

M:\CUSTOM\ACAD2008\SYMBOLS\B-18X24.DWG R:\96502\18 PUMP PUMP SURF.DWG U:\CADD\96502\DWG\AERIAL.DWG U:\CADD\96502\MASTER LANDSYSTEMS.JPG
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