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Memo

Date: September 24, 2010
To: Dennis Foltz, Town Manager
Organization: Town of Oakland
From: Scott A. Breitenstein, P.E., CPH Engineers
Re: Alternative Sites for Water System Improvements
CPH Job No.: O4602.1

The Town of Oakland has requested CPH to evaluate two additional sites as alternative locations for the necessary water system improvement. This evaluation is needed because the originally approved "Charter School Site" is no longer an option. The sites evaluated include the Town owned Speer Park location, where the Town's Well No.2 exists, and a proposed site located on the Turnpike Authority's land. The latter location was proposed because of a citizen's concern about water source redundancy.

It is intended that the result of this evaluation will help guide the Town in deciding if either of these locations are logical and cost effective locations for the proposed water system improvements.

SPEER PARK SITE

CPH has prepared the attached Figures 1 and 2 to show how the potential water system improvements could be configured on the Speer Park site. The location selected on site includes consideration of the existing park amenities, future park usage, and potential constraints for site access. Figure 1 shows the preliminary design concept that will allow site access off of Tubb Street. This alternative includes the original recommended 500,000 gallon ground storage tank and high service pumping. Figure 2 is provided to show how the recommended improvements could be connected to the existing 12-inch water main in the Town's water distribution system.

There appears to be some cost saving with this site over the Charter School site, which includes removing the need for auxiliary power (generator), and the need for a new chlorination system. In addition, the site is closer to the existing water system, so the proposed new raw water line is now only 320 linear feet, as oppose to over 2,300 linear feet that would have been needed for the Charter School site.

The opinion of probable construction cost of the improvements shown in Figures 1 and 2 for the Speer Park Site is approximately **\$1.56 Million**, including engineering for the project.

As a separate matter, it is understood that the existing 1,415 linear feet of eight-inch raw water line has had some recent issues. As such, the Town's Consultant Engineer has requested that the project include the replacement of the raw water main with a new raw water main, as necessary. This will increase the opinion of probable construction cost to approximately **\$1.67 Million**, including engineering and surveying.

TURNPIKE AUTHORITY SITE

CPH prepared Figure 3 as a location map for the Citizen's proposed Turnpike Authority Site. The concern voiced during the previous Commission meeting was relative to a new well to meet water source redundancy, with source location influencing the storage and pumping site decision. The figure shows a general location of where the water system improvement and new well could be located on the Turnpike Authority's land. The location was selected based on the best site access and proximity to the existing 12-inch water line.

Please note that CPH's initial evaluation of this site excludes this site from further consideration based on the following issues:

- Based on information in the 2008 Master Water Plan, additional wells will not be required during the 20 year planning horizon.
- The proposed well location is located within an EDB contaminated area, as delineated by the Florida Department of Environmental Protection.
- The St. Johns River Water Management District (SJRWMD) Consumptive Use Permit (CUP) would need to be modified. Typically, a modification of this nature would cause significant time and effort to get approval, with the modified CUP having potential new conditions required of the Town.
- There could be a lengthy process to get approval by the State to use this land, with a cost associated, as necessary.
- The cost of a new well could be as high as \$500,000, depending on the depth of the well and the aquifer performance testing and approval by SJRWMD.

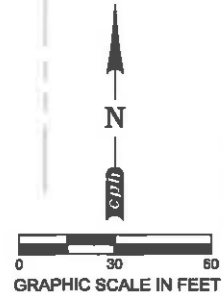
Therefore, based on the above noted issues, this alternative site is not recommended.

ATTACHEMENTS

FIGURE 1

SPEER PARK WTP SITE LAYOUT

TOWN OF OAKLAND PROPOSED WTP LOCATIONS



DANIELS ST.

VICK AVE.

BRILEY AVE.

TUBB ST.

EXISTING 8" WATER LINE

EXISTING PLAYGROUND

EXISTING GAZEBO

500,000 GALLON
GROUND STORAGE TANK
75' DIAMETER, 15.16' HEIGHT

ELECTRICAL/
PUMP BUILDING

EXISTING TENNIS COURT

EXISTING 6" WATER LINE

EXISTING WELL NO. 2

EXISTING BUILDING

320 LF 12" RAW WATER

EXISTING 6" WATER LINE

EXISTING 8" RAW WATER
(RECOMMENDED FOR
REPLACEMENT)

740 LF 16" DISCHARGE

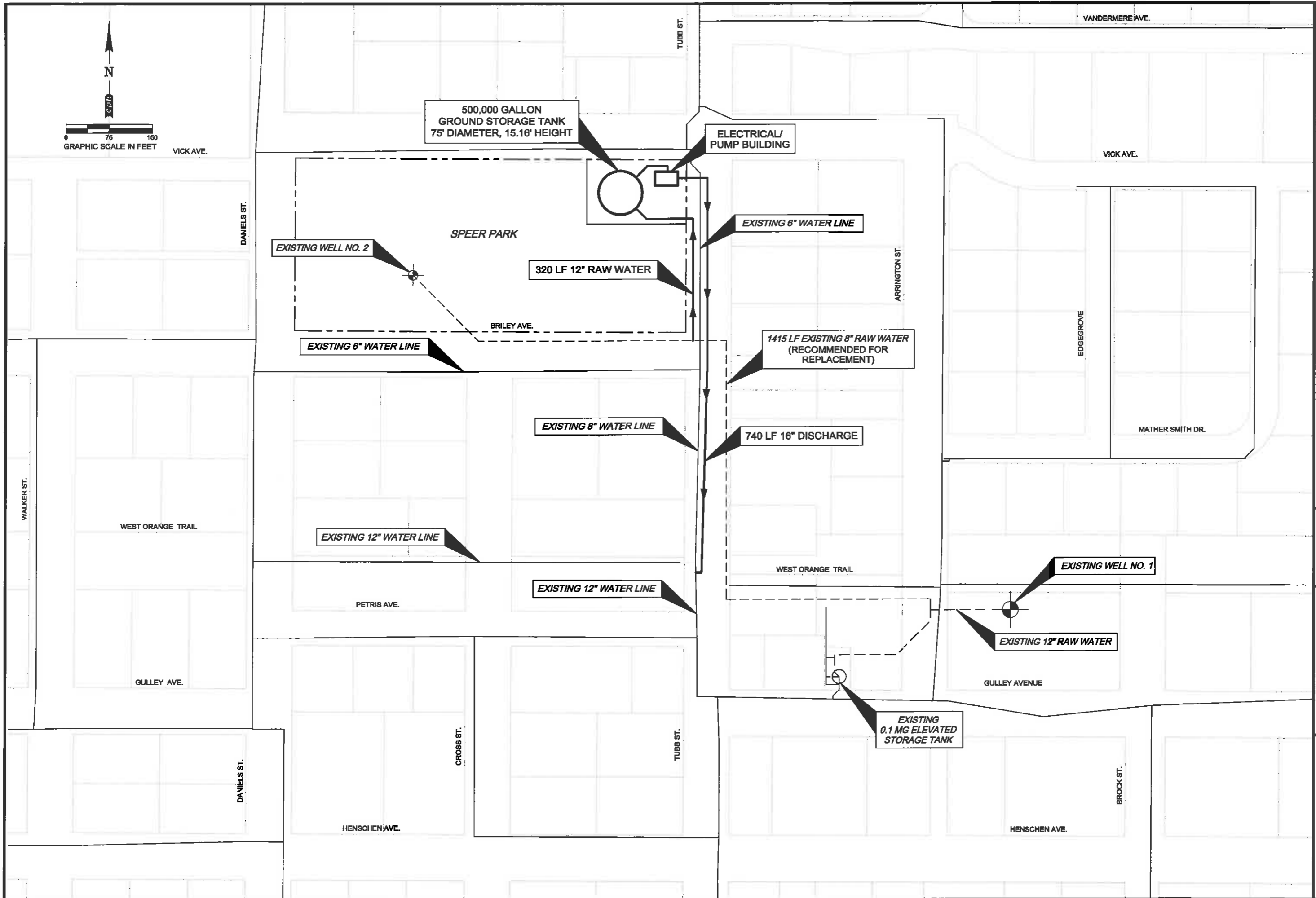
Date: 9-24-2010
Job No. O4602.1
Scale: 1" = 60'
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SPEER PARK WTP SITE OFFSITE PIPING PLAN

TOWN OF OAKLAND PROPOSED WTP LOCATIONS

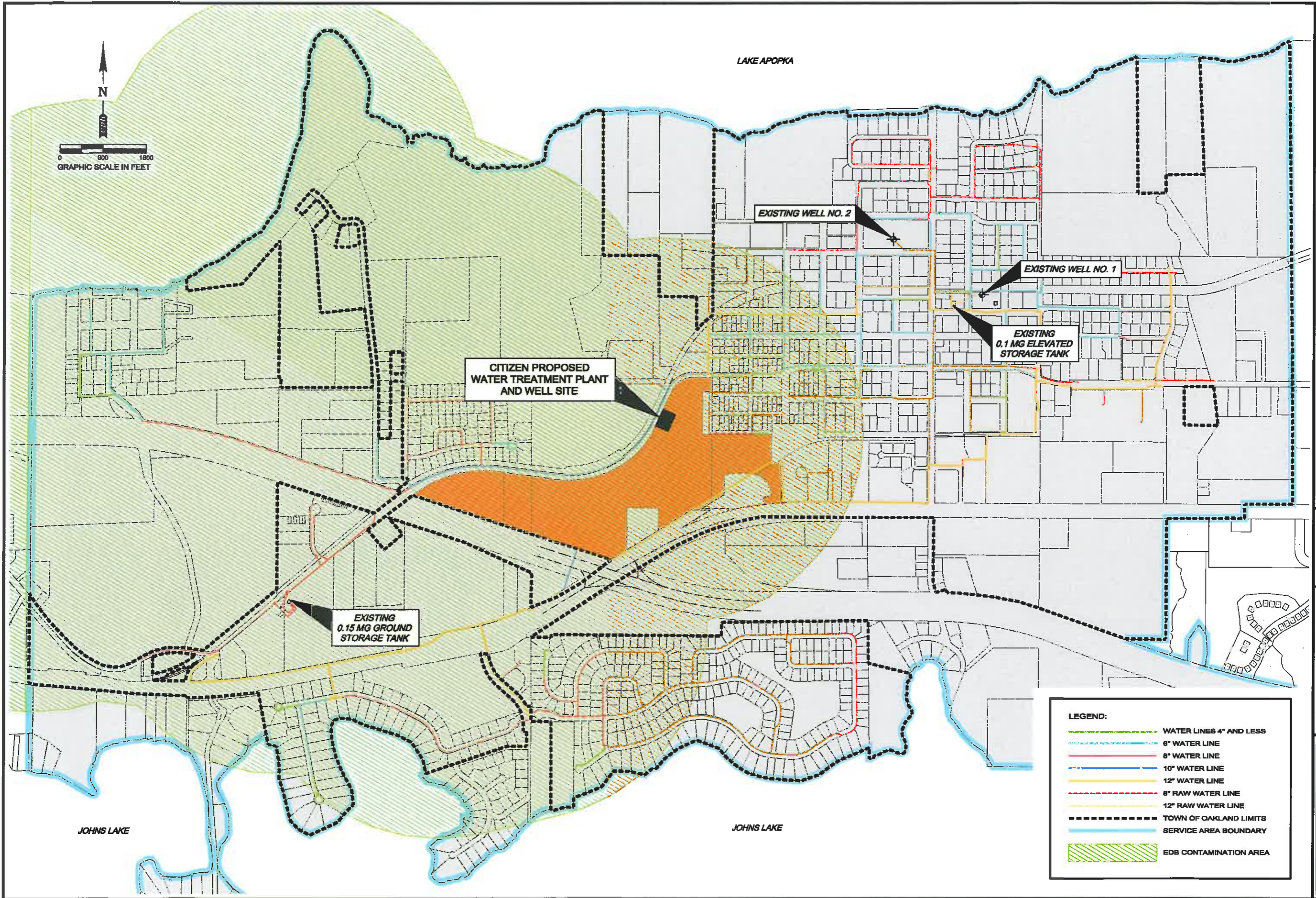


Date: 9-24-2010
 Job No. O4802.1
 Scale: 1" = 150'
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F.D.O.T. PROPERTY WTP AND WELL LOCATION

TOWN OF OAKLAND PROPOSED WTP LOCATIONS

Date: 9-24-2010
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LEGEND:

- WATER LINES 4" AND LESS
- 6" WATER LINE
- 8" WATER LINE
- 10" WATER LINE
- 12" WATER LINE
- - - - 8" RAW WATER LINE
- - - - 12" RAW WATER LINE
- TOWN OF OAKLAND LIMITS
- SERVICE AREA BOUNDARY
- EDB CONTAMINATION AREA

