

SECTION 33 24 00

GROUNDWATER WELLS

1.01 DESCRIPTION

- A. Groundwater well - this term is inclusive of an artesian well, dewatering well, exploratory well, extraction well, geotechnical well, monitoring well, horizontal remediation well, piezometer, production well, recharge well, water table well, water well, water supply well, water observation well, well, or wick drain.
- B. In the event that a groundwater well is encountered in the alignment, the Contractor shall be responsible for its preservation or destruction (if destruction is called for).
- C. If such a well was not installed by the Contractor as part of its work under this Contract, but is identified in the contracts plans and specifications to be destroyed, then such work will be considered as Incidental Work.
- D. If such a well was installed by the Contractor as part of its initial work under this Contract, and has to be destroyed at the end of the work, then such the destruction of the well will be considered as Incidental Work.
- E. If such a well was not installed by the Contractor as part of its work under this Contract, and it was encountered as a differing site condition then the destruction of the well (if destruction is called for) will be considered as change order work.

1.02 DAMAGE TO GROUNDWATER WELLS

- A. Should the groundwater well be left intact, it is critical that the well seal and well head not be damaged. The purpose of the well seal consisting of a bentonite seal and a cement grout seal is to isolate the filter pack around the slotted well casing from the surface. Consequently, any physical movement of the well casing or sufficient removal of adjacent supporting material can damage the seal. A damaged seal would result in the necessary destruction of the well to limit surface access to the underlying ground water.
- B. Should the Contractor damage or displace any groundwater well, the Contractor shall immediately suspend the work in the immediate area, and notify the Resident Engineer. In such a case, the Contractor (at no cost to the City) shall be responsible for its removal and destruction, and replacement according to the procedures of this specification.

1.03 DESTRUCTION, REPLACEMENT, INSTALLATION/CONSTRUCTION OR DECOMMISSIONING OF GROUNDWATER WELLS

- A. For the destruction, or replacement, or installation/construction or decommissioning of a groundwater well, or to operate a groundwater well the Contractor shall follow the procedures of:
 - 1. The California State Department of Water Resources Bulletin 74 Water Well Standards (74-81 and 74-90).

http://www.water.ca.gov/pubs/groundwater/water_well_standards_bulletin_74-90/_ca_well_standards_bulletin74-90_1991.pdf

2. The San Francisco Department of Public Health (DPH), Environmental Health Services, Water Quality Unit (DPH EHS).
- B. To install/construct, destroy, replace, decommission or operate a groundwater wells and drill a soil borings, the Contractor shall complete and submit a permit application to the San Francisco Department of Public Health (DPH). The Contractor shall pay for all fees (including but not limited to the application, preparation of the work plan, and filing fee, as well as any DPH consulting, oversight, inspection hourly rates and deposit fees), at least fifteen (15) working days in advance of the well destruction. The application and work plan shall be submitted to the:
- City and County of San Francisco
Department of Public Health (SFDPH)
Environmental Health Services
Water Quality Program-Monitoring Wells Section
1390 Market Street, Suite 210
San Francisco, CA 94102
(415) 252-3954
- <https://www.sfdph.org/dph/EH/Wells/default.asp>
- C. For the destruction, decommissioning, replacement, or installation/construction of a groundwater well, the Contractor (or its specialty subcontractor) shall possess a State of California C-57 (Well Drilling) license.

1.04 GROUNDWATER WELL REPORT

- A. Within thirty (30) calendar days of completion of the destruction, or replacement, or installation/construction of a groundwater well, the Contractor shall submit three (3) copies of a draft report documenting the destruction or replacement of the well, for the review by the Resident Engineer and SFDPH. After which, the Contractor shall submit three (3) copies of a final report, three (3) electronic copies on CD's. The report shall be prepared by a State - Certified Engineering Geologist (CEG) or a State-Registered Civil Engineer (RCE). The report shall include but not be limited to the following:
1. permit application
 2. well location
 3. method of destruction or construction
 4. total well depth
 5. well diameter (hole diameter if over drilled)
 6. depth to water
 7. grout composition
 8. volume of grout used
 9. depth to casing separation and length removed
 10. surface restoration
 11. photographs
 12. the California Department of Water Resources (DWR), Well Drillers Report, Form 188
 13. disposal records

END OF SECTION