

5 Replacement Schedule

5.1 System Priorities

After review of record drawings and construction documents for the campuses of the HCSD, there are no recommendations for immediate replacement of system utilities. Within the time horizon of the Master Plan Implementation, replacement of site utilities are only proposed for the purpose of relocation in the vicinities of new building locations at each campus.

5.2 Replacement Triggers

Replacement triggers are proposed construction events at a particular school campus that result in removal or addition of utility infrastructure. New buildings typically demand several combinations of utilities that must be effectively routed to connection points determined during the design phase. These new utility runs must also accommodate existing utility alignments and may trigger relocation or replacement of these adjacent services as well. The following sub-sections describe some of the additional utilities, removals, and relocations that should be taken into consideration during the construction events listed. Figures illustrating the utility modifications required in the vicinity of building improvements are shown in Figures 3 through 7 of each school appendix.

5.2.1 Crocker Middle School

With the proposed classroom and CPAE buildings, two new hydrants will be needed at the site. One hydrant near the Future Arts Tower could be installed on the New Place Road system with a minimum of new pipe by relocating a valve that currently isolates the New Place zone from the Ralston zone. A second hydrant along the Crocker/North school boundaries near North School Buildings H and G would complete coverage requirements discussed during informal meetings with the Central County Fire Marshal for adjacent buildings at both schools.

The CPAE construction will involve removal of about 1300 feet of existing water lines and installation of about 130 feet of new lines. A well site that is identified in record drawings should be investigated as part of the site development work. Most of the water lines displaced by the CPAE construction are irrigation lines or aging 6-inch water mains. The new 3-inch lines will restore main line flows throughout the campus grid.

The two story classroom building has a well shown on the record drawing ((24) - 2 detailed site plan, 1957). As reported by HCSD staff, there is seepage in the bottom floor art room in proximity to the location of this well. Any improvements for the seepage will be conducted under separate review.

The CPAE construction will also require:

- removal of about 60 feet of sanitary sewer lines
- a new storm sewer alignment that removes and relocates about 350 feet of piping

- removal of about 290 feet of gas lines and installation of about 170 feet of new piping
- removal of about 900 feet of electrical conduits and installation of about 400 feet of new lines. The proposed classroom addition to the main classroom building will have minimal impacts on the existing site utilities. A small amount of water and gas lines will need to be removed.

The Office construction will require:

- removal of about 1000 feet of primarily irrigation lines and an addition of 153 feet of 2.5-inch of new lines
- removal and relocation of about 250 feet of 12-inch storm drain lines
- installation of about 40 feet of gas lines

The Tech Center will trigger:

- relocation of about 250 feet of 12-inch storm drain lines
- installation of about 70 feet of a 1.5-inch gas line

The Future Arts building will trigger:

- removal of about 200 feet of electrical conduit

5.2.2 North School

Proposed construction at North School will require additional fire hydrant coverage as discussed in Section 5.4. Since the proposed hydrant improvement will be located between Crocker and North, it will be able to serve several buildings from both campuses.

The Office construction will trigger:

- removal of about 100 feet of 1.5-inch water line
- removal of about 100 feet of aging sanitary sewer pipe.

Although Office construction will only require removal of about 200 feet of electrical conduit, the utility survey and on-site observations noted a large electrical vault along the southwest end of the proposed building. HCSD maintenance personnel have determined that this is a high voltage splice box. Relocation will likely be necessary to accommodate the Office footprint.

The Computer Lab addition will require:

- removal and replacement of about 170 feet of 4-inch sewer line
- removal and replacement of about 50 feet of gas line
- removal and replacement of about 180 feet of telephone line

5.2.3 South School

Proposed construction at South School will require additional fire hydrant coverage. Based on informal discussions with the Central County Fire Marshal, a campus hydrant placed in the vicinity of the existing Boiler Room and connected off the city main on El Cerrito Avenue would provide adequate fire protection for the proposed Multi-Purpose Building.

The Multi-Purpose Building will require modification to existing utilities based on projected usage. Since water, sewer, gas, and electrical utilities are all located near the proposed Multi-Purpose Building site, only minor changes are anticipated in order to accommodate construction of this improvement.

Construction of the Multi-Purpose Building will also entail:

- removal of about 300 feet of electrical lines and installation of less than 100 feet

5.2.4 West School

No new hydrants are anticipated as a condition of approval for the proposed campus improvements.

Classrooms will trigger:

- removal and replacement of about 480 feet of 6-inch sanitary sewer main
- removal and replacement of about 350 feet of 12-inch storm drain line

The Exploratorium will require:

- removal of about 70 feet of 12-inch storm drain
- removal and replacement of about 125 feet of electrical conduit

There are no projected triggers that should require the renovation or replacement of the existing sanitary lift station at West. Sewage from the east side of campus is currently pumped to the west side, where a gravity system conveys flows off site. However, the condition of electrical controls and the mechanical systems (pump sump, piping, etc.) are deficient and should be upgraded to improve system reliability.