

June 13, 2016

**DEPARTMENT OF VETERAN AFFAIRS
SAN DIEGO HEALTHCARE SYSTEM**

Final Narrative

Schwab Project #S214.770.00



FULL SERVICE ENGINEERING & CONSTRUCTION SUPPORT SERVICES

INTRODUCTION

The following narrative describes the intent of the contractual scope of work to replace and upgrade existing interior sanitary sewer, associated piping, mechanical fittings and related hangers and supports in Building No. 1 at the VA Medical Center in La Jolla, CA.

The intent is to replace the risers in Pod B and Pod C for the West Tower from the basement through the 4th floor interstitial space.

The intent in the basement is to replace some selective portions of horizontal sewer lines and the first five feet of the horizontal sewer line from the riser. The extent of the replacement is to be approved by the Facility.

The intent on the first floor is to replace all the horizontal sewer lines in Pod B for the West Tower from the riser to the fixtures.

The intent on the first floor of the West Tower, Pod C, is to replace the first five feet of the horizontal sewer lines after the chase.

The intent on the second floor is to replace all the horizontal sewer lines in Pod B and Pod C for the West Tower from the riser to the fixtures.

The intent on the second floor of the West Tower, Pod D, is to replace the horizontal sewer lines to a point five feet outside the chase wall.

The intent on the third floor is to replace all the horizontal sewer lines in Pod A, Pod B and Pod C for the West Tower from the riser to the fixtures.

The intent on the fourth floor is to replace all the horizontal sewer lines in Pod B for the West Tower from the riser to the fixtures.

The intent on the fourth floor of the West Tower, Pod C, is to replace the horizontal sewer lines to a point five feet outside the chase wall.

The following items are to be Deductive Bid Alternate No. 1:

- Remove from the scope of work all work described in the construction documents (including but not limited to drawings, specifications, addenda and contract documents) for the removal of (1) vertical riser scope of work in the west tower.

The following items are to be Deductive Bid Alternate No. 2:

- Remove from the scope of work all work described in the construction documents (including but not limited to drawings, specifications, addenda and contract documents) for the removal of (2) vertical riser scope of work in the west tower.

APPLICABLE CODES, REFERENCES AND STANDARDS

Upgrades of sanitary piping and design revisions will conform to the applicable codes and standards, and authorities having jurisdiction, including the following:

- VA Plumbing Design Manual
- VA Fire Protection Manual – Sept. 2011
- International Plumbing Code 2012 Edition

METHODOLOGY ANALYSIS

Discussions with maintenance personnel revealed that some sanitary piping has been modified to suit remodel projects over the years, but record drawings were not preserved.

The intent of this project is to indicate all sanitary piping noted on the record drawings in the areas which the sanitary piping will be replaced. Verify existing drainage lines in the field and update documents to match field locations. Subsequently, proceed with phasing of the work to replace all piping as required by contractual documents. Phasing of work as proposed will be discussed with VAMCSD to establish a replacement program to ensure minimum interference and disruption to medical care departments, administrative spaces and ancillary support areas.

EXISTING SEWER SYSTEM

Sanitary sewer system of Building No. 1 has provided approximately 43 years of service and reaching life expectancy of 50 to 75 years of normal operation. Piping consists of hub and spigot cast iron pipe and lead and oakum packed joint that remain original with the building in those areas that have not been subject to upgrades or maintenance replacement. The building consist of six (6) occupied floors and a Basement floor. The building is shaped into four (4) medical care quadrants. Each quadrant includes four (4) utility shafts that includes a single drainage riser in each shaft. Risers are collected in the ceiling space of the Basement level into drainage mains and dispersed into seven (7) sanitary sewer collection systems.

Horizontal drainage mains are provided in the interstitial ceiling space of each floor collecting drainage with branch piping from existing plumbing fixtures of various departments and discharge to respective risers.

Building sewer systems are routed to the West, South and East sides of the building to discharge into southerly sloping site sewers that connect to trunk site sewer leading to public sewer located in Villa La Jolla Drive.

PROPOSED REPLACEMENT

The sanitary sewer system of building No. 1 is of such magnitude that requires partial segregation of floor areas to prevent potential interruption of medical care.

According to site reports, advanced deterioration of the piping and established replacement budget, dictates replacement priority.

IMPLEMENTATION OF WORK

The building consist of six floors and a basement level. The sixth floor to the second floor is shaped to an architectural cross design. Each segment of the cross design, for purpose of discussion, is designated as the South, West, North, East and Central Towers.

Each of the risers have been assigned a riser number. They are designated by the tower and a sequential number. The West Tower has four (4) drainage risers designated as riser no. WT/R1 through WT/R4. Each riser is located in shaft/chase space at the outer core corner of each tower (refer to floor plan for location). Each of the shaft/chase walls facing into room spaces is proposed to be removed to expose a riser from the Sixth floor to the Basement. Preparation of interstitial ceiling spaces for replacement of horizontal drainage mains will follow. Even though interstitial replacement work is confined in spaces isolated from medical areas, ceilings may need to be removed to erect scaffolds to build platforms to replace drainage mains distant from interstitial catwalks.

Means and Methods criteria would be applicable, including but not limited to, isolation of departments for potential asbestos abatement, rigging support platform, provision of temporary piping, parallel piping, replace in-place existing piping with new piping using existing pipe hangers, or sectional in-sequence piping replacement.

The Basement level and the South side of the First floor is built on grade. All drain lines from plumbing fixtures on these floors are located underground.

ESTIMATED COST

Refer to attached probable cost of construction cost estimate from Iskander Associates.

RECOMMENDATIONS

The sanitary drainage system report received from engineering personnel of the facility indicates that there are a multiple areas in which the sanitary piping has been affected by leaks at any one time or another, thus it is estimated that the piping is in advanced state of deterioration throughout all towers of the medical facility Schwab does not have the information on the frequency or severity of the leaks by floor area. As a result of this lack of information Schwab will assume that all the floor areas provided to us have equal severity and frequency.

Given the critical conditions of the piping, area upgrades would be by tower. Considering the critical areas reported by engineering personnel, the West tower requires priority upgrade.

The West tower is provided with four (4) collecting risers that extend from the 6th floor to the Basement ceiling. The arrangement of riser's permits isolation of 50% of the tower area or two (2) risers and mains at a given time, while the remaining two (2) risers and mains will be kept in service until the upgrades are completed, thus, the floors will have partial medical service at all times.

Approximately 80% of the time the floor whose sewer system will be replaced will remain operational and only 20% of the time would be required to make the final connections. It is also felt that the indicated 80% would be accomplished during normal working hours while the remaining 20% would be done during the evening or after hours. This will reduce the interruption to the facility. The final determination of the disruption time required for the floor whose sewer system is being replaced will be determined in the field by the Construction Contractor based on field conditions. The vast majority of the sewer system is not close to the catwalk system and therefore will require department closure to scaffold of the area of the floor over which the work will be performed.

The time and duration of the closures and disruptions to the sewer system would be coordinated with the facility to insure a minimum of disruption. All noise generating activities would be done during normal working hours and also coordinated with the facility.

It is expected, however, once the upgrades are programmed, all plumbing utility services will need to be shut-down in designated floor areas of the towers to replace the risers.

It is proposed that the staging area for construction contractor be located on the West side of the building, nearby the South and the West tower. Final determination must be decided by VASD Engineering department. Depending on the location of the staging area, nearest service elevator will be used to transport piping materials and equipment to the corresponding floors scheduled for replacement. Schedules for transportation of materials will be coordinated with medical department personnel with the intent to minimize disruption.

The following items are to be Deductive Bid Alternate No. 1.

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Deductive Bid Alternate No. 1 shall be identified separately.

The following items are to be Deductive Bid Alternate No. 2.

- Remove from the scope of work all work described in the construction documents (including but not limited to drawings, specifications, addenda and contract documents) for the removal of (2) vertical riser scope of work in the west tower.

Deductive Bid Alternates No. 2 shall be identified separately.