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To: Urban Design Committee  
From: Planning and Preservation Division  
Date: May 9, 2019  
RE: **Final location, character, and extent review of Wastewater Treatment Plant Screening and Grit Facility, 1400 Brander Street; UDC 2019-15**

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**I. APPLICANT**

Robert W. Stone, City of Richmond, Department of Public Utilities

**II. LOCATION**

1400 Brander Street

**Property Owner:**

City of Richmond

**III. PURPOSE**

The application is for final approval of exterior screening equipment and grit isolation gates, a new climate controlled structure containing grit removal and processing equipment with truck loading and a modular electrical enclosure. These improvements will enable the Wastewater Treatment Plant (WWTP) facility to be in compliance with the State Water Control Board mandate to increase the flow through the WWTP to 140 MGD (million gallons per day) during rainfall events while also carrying out other sustainability initiatives.

**IV. SUMMARY & RECOMMENDATION**

The Special Order No. 15 Project, Screen and Grit Removal Facilities, will include a new Headworks housing Grit and Screening infrastructure, a new climate controlled structure containing grit removal and processing equipment with truck loading and modular electrical enclosure. Equipment being installed in existing buildings, structures or tanks includes: replacement screens, channel isolation gates, and electrical upgrades. Additionally, the applicant has accommodated Staff's request to provide a segment of landscaping, which can be replicated in future projects, as screening between the WWTP and Brander Street.

Therefore Staff recommends that the Urban Design Committee recommend that the Planning Commission approve the final design, as presented.

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**V. FINDINGS OF FACT**

**a. Site Description and Surrounding Context**

The site is located at 1400 Brander Street and lies within the M-2 (Heavy Industrial) zoning district. The property is over one hundred fifty (150) acres in size and is surrounded by other industrial sites, bordered by Brander Street to the North and East, and Interstate 95 to the West.

There are around 40-50 employees working on site, with very limited public access, the exception being occasional staff-facilitated tours of the WWTP. These tours showcase prominent buildings such as the main Pumping Station.

**b. Scope of Review**

The improvements associated with this project are subject to location, character, and extent review as a “public building or structure” in accordance with Section 17.07 of the Richmond City Charter.

**c. UDC Review History**

At the regular March 2016 meeting of the UDC, the final location, character, and extent review of the CSO Control Program – Special Order 15A, Division 47 – Screenings and Grit Removal Facilities (UDC 2016-07) was recommended for approval and subsequently approved at the regular March 21, 2016 meeting of the Planning Commission.

At the regular December 2016 meeting of the UDC, the project was recommended for conceptual approval by the UDC.

The project was canceled in November 2018 due to lack of funding.

In addition:

To be in accordance with State Law that called for reducing the concentration of nitrogen and phosphorous that is discharged into the James River, a project was proposed that would be implemented through several contracts. The UDC reviewed several submittals under the project number UDC 07-37 (2,3,4,5,6,7) between 2007-2010 for the construction of new buildings and infrastructure on site that would bring the plant into compliance.

Final location, character, and extent review of the installation of a double-wide modular unit at 1400 Brander Street was approved as submitted at the February 2006 regular meeting of the UDC.

**d. Project Description**

The CSO Control Program – Special Order 15A, Division 47 – Screenings and Grit Removal Facilities was originally submitted to the Urban Design Committee for final review on March 10, 2016 and approved. The approved project included four process trains housed in a reinforced concrete, brick and block masonry building. The project was cancelled on November 29, 2018 because it was over the City’s allotted funds. The Screening and Grit Removal Facilities are currently in the process of being redesigned. This includes a reduction in process trains to three and an industrial-looking reinforced concrete and steel supported structure with a metal sided building.

The architectural style of the existing plant is industrial, informed by large process mechanical equipment, tanks, channels, stop logs, and other equipment associated with wastewater treatment. Where equipment and services require conditioned space, the building envelope is traditional masonry although a few examples of metal enclosures exist.

For the revised Headworks Project, the City has elected to pursue an aesthetic that utilizes an industrial language of concrete, steel and metal siding. As such,

the building will embrace its industrial systems as part of the design, a modern approach that departs from traditional brick and block. The revised Headworks Project screening equipment will be visible, providing a kinetic sculptural feature along Brander Street, compatible with similar views of the plant.

The new Headworks/ Grit and Screening Facility will be constructed to the East of the Administrative Building where the current parking lot exists. A new parking lot will be constructed to the south of the new Headworks in the location of the current supplementary Grit and Screening Facility after demolition of that structure is completed.

The Special Order No. 15 Project, Screen and Grit Removal Facilities, will include exterior screening equipment and grit channel isolation gates, a new climate controlled structure containing grit removal and processing equipment with truck loading and modular electrical enclosure. Equipment being installed in existing buildings, structures or tanks includes: replacement screens and channel isolation gates and electrical upgrades. The existing temporary construction manager's office and the City's collection personnel building will be demolished and removed from the plant site. At the end of construction the existing Screen and Grit Facilities will be demolished and a parking area constructed.

The primary objective of this project is to comply with the State Water Control Board mandate to increase flow through the WWTP to 140 MGD (million gallons per day) during rainfall events. Compliance with this mandate will result in a healthier James River and an improved quality of life for residents of the Greater Richmond Region. Other sustainability initiatives include directing storm water from the new facility to adjacent open spaces and to the Headworks channels. Although the adjacent open spaces had included extensive plant species in the originally approved design, budgetary constraints resulted in their elimination.

However, the green spaces remain. Much of the proposed existing horizontal surfaces will be light grey concrete. Additional sustainable features of the redesigned Headworks include the use of a steel frame and steel enclosure in lieu of brick and concrete, resulting in a much lower life-cycle environmental impact of materials than the originally approved design. Pedestrian access to and around the redesigned project remains unchanged.

The UDC and CPC reviewed this project and granted conceptual approval in November of 2007. Since that time, The UDC and CPC have granted final approval of Contracts 1, 2, 3 and 4 which are a portion of the total proposed improvements. This application pertains to the improvements associated with Contract 5.

**e. Master Plan**

This property is within the Old South Planning District. The current Master Plan calls for industrial uses at this location. It is appropriate for a wastewater treatment facility to be located at this site.

**f. Urban Design Guidelines**

In matters of public facilities the Urban Design Guidelines encourage consistency with the existing architectural massing, character and materials. Building colors

should be coordinated and compatible with adjacent buildings. Staff finds that the new construction component of this project aligns with these criteria.

The Urban Design Guidelines state that, “Facilities required for the ongoing operation of the building, such as loading docks, maintenance sheds, or HVAC equipment” should be screened from view or located in the rear. For this project, these facilities will be screened, and any machinery or loading docks that are visible have been thoughtfully incorporated into the design of the new construction in a way that creates a dynamic, modern structure.

## **VII. ATTACHMENTS**

- a. Vicinity Map**
- b. Application**
- c. Plans**