

**APPENDIX S**  
**WATER SERVICE OVERVIEW**

DEXTER S. WILSON, P.E.  
ANDREW M. OVEN, P.E.  
STEPHEN M. NIELSEN, P.E.  
NATALIE J. FRASCHETTI, P.E.  
STEVEN J. HENDERSON, P.E.

**MEMORANDUM**

**952-002**

**TO:** Dan Niebaum, A.I.C.P., Lightfoot Planning Group

**FROM:** Andrew M. Oven, P.E., Dexter Wilson Engineering, Inc. *AD*

**DATE:** October 6, 2020

**SUBJECT:** North River Road Planned Block Development Overlay  
District – Water Service Overview

**Introduction**

The proposed North River Road Planned Block Development Overlay District includes two separate parcels located at 4665 North River Road (Parcel A, APN 157-060-40) and 4617 North River Road (Parcel B, APN 157-060-17). These properties comprise approximately 25.6 acres of land located on the south side of North River Road generally between Avenida Descanso and Calle Montecito in the North Valley Neighborhood of the City of Oceanside. Parcel A consists of a total land area of 9.7 acres; however, approximately 1.8 acres are composed of existing roadway and emergency access rights-of-way. Thus, Parcel A contains 7.9 gross developable acres of land which reduces the total developable acreage for both parcels to 23.8 acres.

The purpose of this technical memorandum is to address water service to the proposed project. This memorandum will outline the existing water facilities in the vicinity of the proposed project and qualitatively comment on the ability of the existing facilities to provide adequate water service.

### **Land Use**

The Planned Block Development Overlay District property is currently designated as Light Industrial (LI) by the City of Oceanside General Plan, and as Limited Industrial (IL) under the City's Comprehensive Zoning Ordinance. The project proponent is planning to make application to amend the current land use designation to Medium Density - C Residential (MDC-R) and rezone the property to Medium Density Residential C (RM-C) to allow for future residential development of the site.

The North River Road PBD property is including in its re-zoning proposal a maximum cap of 400 dwelling units for the combined two parcels. This results in dwelling unit density of 16.8 units/acre.

### **Water Demand**

As stated above, the existing land use for the project site is Light Industrial. Water demand based on this land use is calculated using the water demand factor for Industrial Land Use from Table 3.5 Water Demand Factors, Water Master Plan, City of Oceanside, June 2015 – Final.

Here is the calculation for water use for the project site based on existing land use.

$$23.8 \text{ acres} \times 2,500 \text{ gpd/ac} = 59,500 \text{ gpd average (66.7 AFY)}$$

The proposed land use for the project site is Medium-Density Residential. From the Water Master Plan cited above, the water demand factor for Medium-/High-Density Residential is 3,000 gpd/acre. The water use expected for the proposed project is calculated below.

$$23.8 \text{ acres} \times 3,000 \text{ gpd/ac} = 71,400 \text{ gpd average (80.0 AFY)}$$

Based on the change in land use, the proposed project is estimated to increase the water use for this site by 11,900 gpd, or 13.3 AFY.

From the Water, Sewer, and Recycled Water Design and Construction Manual (August 2017), the Maximum Day peaking factor is 2.0 and the Peak Hour peaking factor is 3.0. Using these factors Table 1 below provides as summary of the changes in water demand due to the proposed change in land use for the proposed project.

<b>TABLE 1 COMPARISON OF WATER DEMANDS</b>			
<b>Land Use</b>	<b>Average Demand</b>	<b>Maximum Day Demand</b>	<b>Peak Hour Demand</b>
Current	59,500 gpd	119,000 gpd	178,500 gpd
	41.3 gpm	82.6 gpm	124 gpm
Proposed	71,400 gpd	142,800 gpd	214,200 gpd
	49.6 gpm	99.2 gpm	149 gpm
Difference	11,900 gpd	23,800 gpd	35,700 gpd
	8.3 gpm	16.5 gpm	24.8 gpm

**Fire Flow Needs**

The existing Land Use designation of Light Industrial equates to a planning level fire hydrant flow of 4,000 gpm per the Water, Sewer, and Recycled Water Design and Construction Manual (August 2017), Table 2-1. For the proposed Land Use designation of Medium Density Residential, the planning level fire flow reduces to 3,000 gpm.

**Existing Water System**

Exhibit A presents the existing water system in the vicinity of the proposed project. The proposed project fronts North River Road between Avenida Descanso and Calle Montecito. There are existing potable water lines in North River Road, Calle Montecito, and Calle Joven. Calle Joven extends along the south side of the eastern parcel.

The proposed project site is within the Talone 320 Pressure Zone with the local water piping connected to the 5.0 million gallon Pilgrim Creek Reservoir. In North River Road is a 14-inch 320 Pressure Zone water main which extends west to Douglas Drive and then south to Mission Avenue where it connects to a 24-inch transmission main. The 14-inch water line in North River Road extends east and continues north in Vandegrift Boulevard increasing in size to 18-inch and 24-inch as it works its way to Pilgrim Creek Reservoir off of Douglas Drive east of Vandegrift Boulevard.

There is an existing 16-inch cast iron pipe in North River Road along the project frontage. This is a non-potable water line which may at one time have been used for ground water. No connections are intended to be made to this pipeline.

### **Available System Pressure**

Based on approximate elevations on the proposed project site ranging from 65 feet to 70 feet, the maximum static pressure within the site will be 110 psi. This is in conformance with the Water, Sewer, and Recycled Water Design and Construction Manual (August 2017).

### **Potential Water System Improvements**

The potential water system improvements discussion will be divided into two basic components: water system piping and water storage.

**Water System Piping.** The June 2015 Water Master Plan does not identify any Talone 320 Pressure Zone improvements needed for the piping serving the proposed project. Since the current Land Use for the site is designated Light Industrial, it is expected that the water system is capable of delivering 4,000 gpm fire flow. With the proposed change in Land Use, the fire flow will decrease by 1,000 gpm. Even though the Maximum Day Demand for the proposed project will increase by 16.5 gpm, the overall Maximum Day Demand plus Fire Flow for the proposed project will be less than the current Land Use

because of the reduction in fire flow from 4,000 gpm to 3,000 gpm. Therefore, the existing potable water piping in the vicinity of the project will be adequate to serve the project.

**Water System Storage.** The June 2015 Water Master Plan addresses water storage in the Talone Pressure Zone. It identifies a water storage shortfall of 7.04 million gallons in the Talone Pressure Zone and identifies two four-million-gallon tanks to be constructed to eliminate the storage deficit. The Master Plan also states that 88 percent of the new storage capacity is attributed to existing users. Therefore, the proposed project will need to contribute its share of the future users' storage capacity based on the additional average water demand of 11,900 gpd.

### **Recycled Water Service**

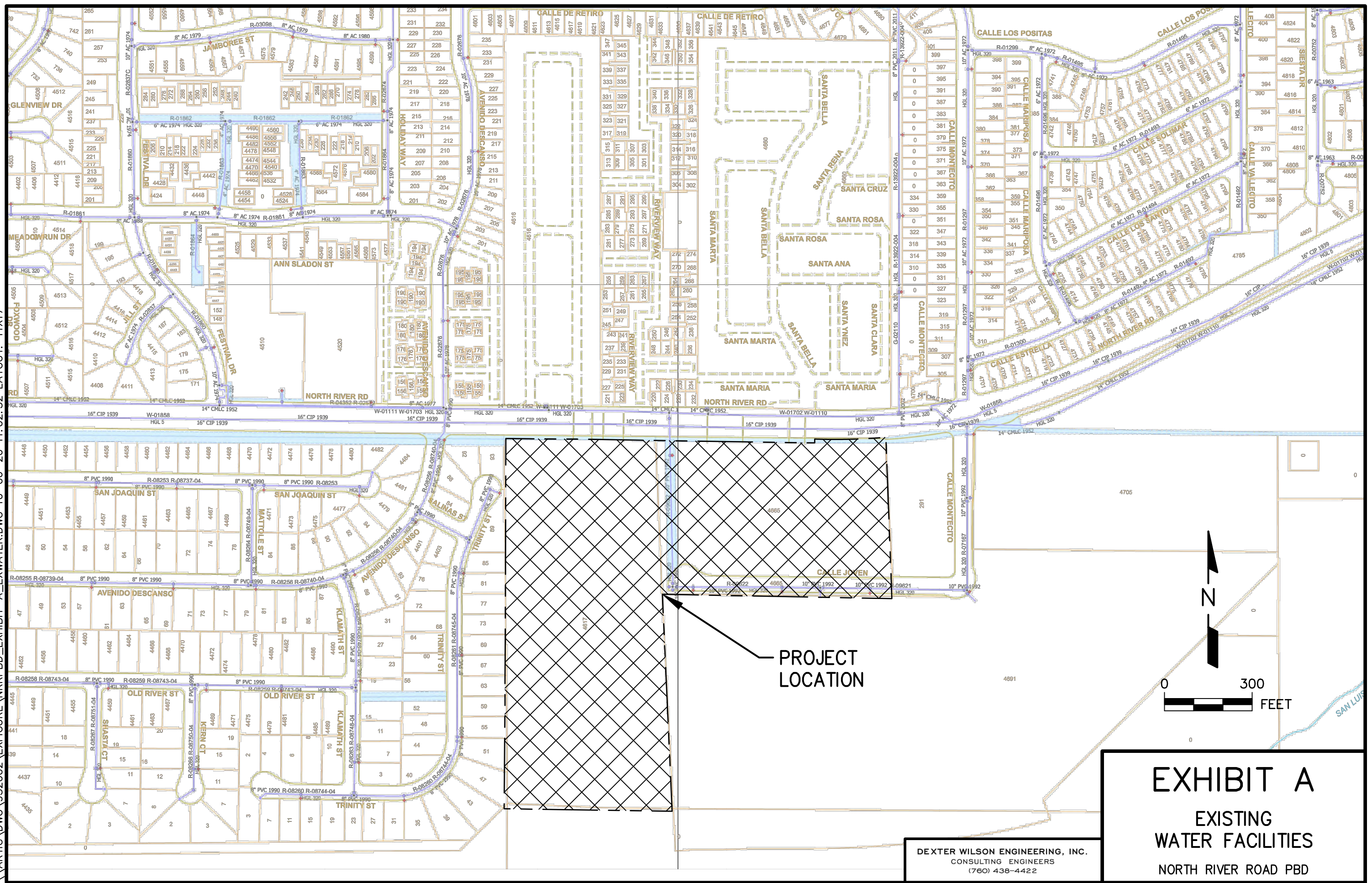
The City of Oceanside is undertaking an expansion of their recycled water distribution system. A new recycled water distribution pipeline is scheduled to be installed in North River Road from the San Luis Rey Wastewater Treatment Plant to points east of the project property. The timeline for construction of this recycled water main is late 2020 to the end of 2022. Development of the proposed project would include connecting to the recycle water distribution main for irrigation services.

### **Ground Water Wells**

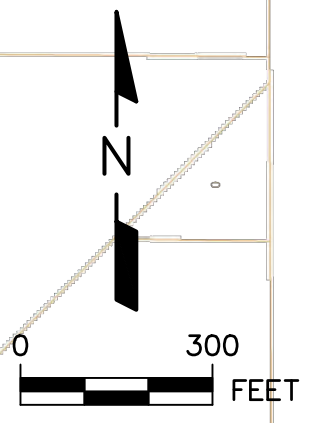
The City of Oceanside Water Utilities Department requires that any ground water wells that are on the property must be identified on proposed development plans. As a condition of providing water service the City will require that any ground water rights associated with an existing well or associated with the property be ascribed to the Water Utilities Department.

**EXHIBIT A**

**EXISTING WATER FACILITIES**



PROJECT LOCATION



**EXHIBIT A**  
**EXISTING**  
**WATER FACILITIES**  
**NORTH RIVER ROAD PBD**

DEXTER WILSON ENGINEERING, INC.  
 CONSULTING ENGINEERS  
 (760) 438-4422