

Draft

**ORMOND BEACH WETLANDS
RESTORATION FEASIBILITY STUDY
INFRASTRUCTURE INVESTIGATION**

Prepared for:

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1. EXISTING CONDITIONS - INFRASTRUCTURE

1.1 TRANSPORTATION INFRASTRUCTURE

The railroads and roads in the vicinity of the study area are shown in Figure 1 below. Figure 2 shows the transportation infrastructure within the study area.

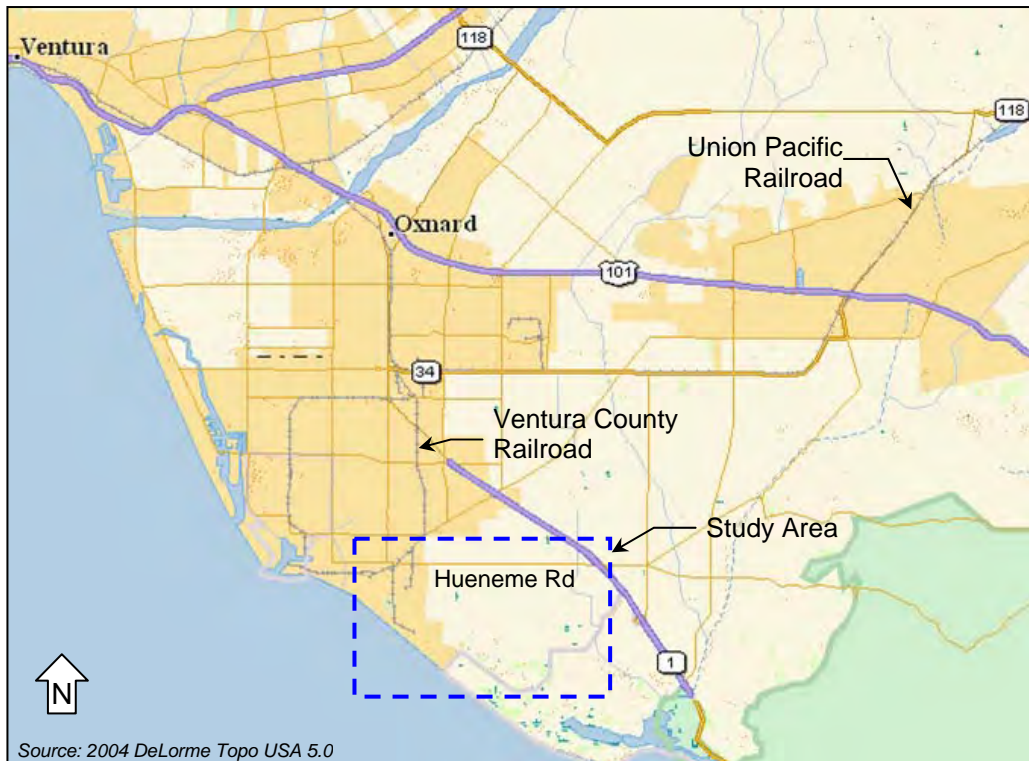


Figure 1. Railroads and Roads in the Study Area Vicinity

Railroads

The Union Pacific railroad that runs along the Ventura County coastline passes through the City of Oxnard with an interchange station. At the interchange station, the Ventura County Railroad branches from the Union Pacific railroad and runs southward parallel to San Simeon/Edison Drive, then crosses Hueneme Road, where it turns westward to Port Hueneme.

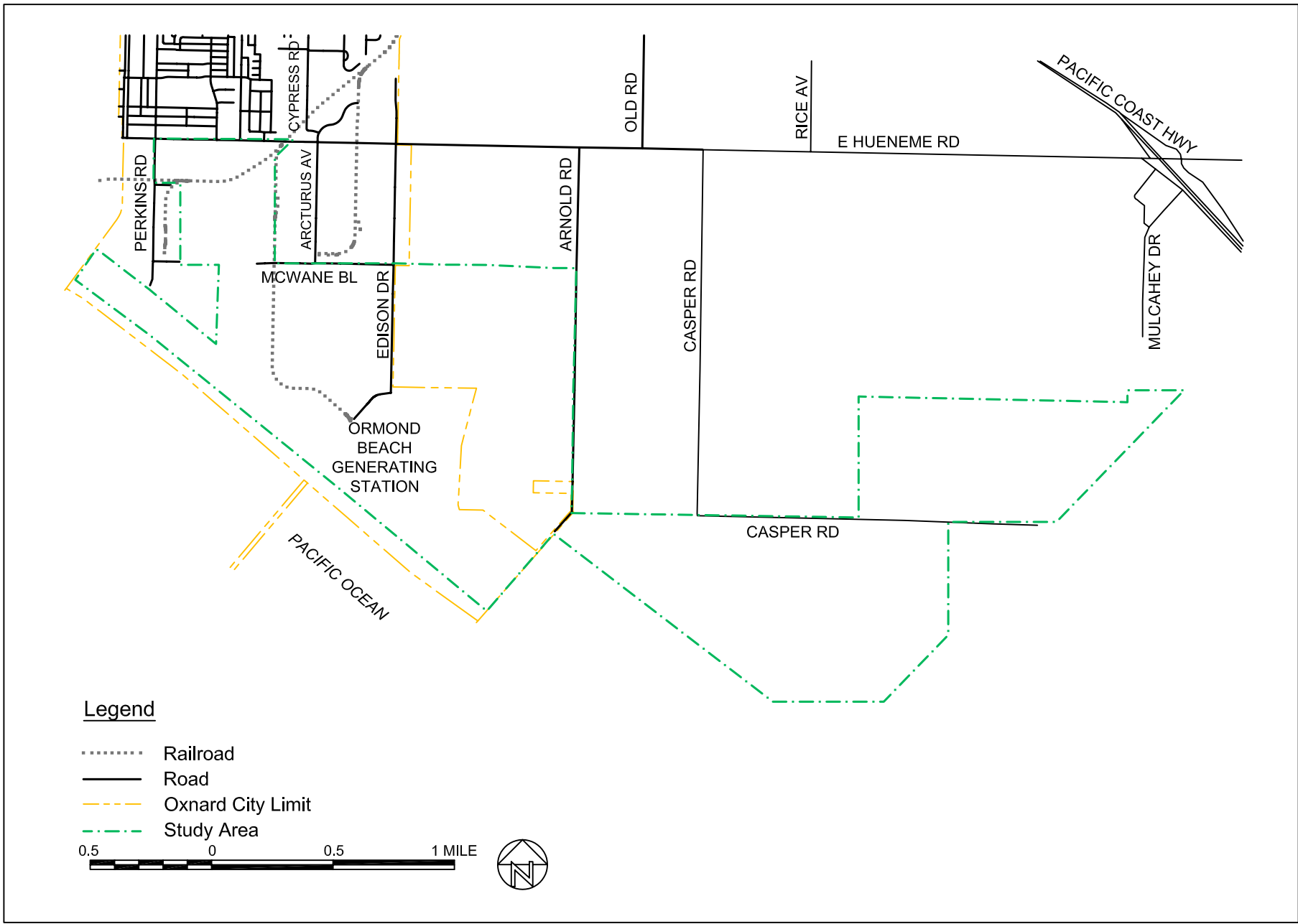


Figure 2. Existing Roads and Railroads

The railroads in the study area are shown in Figure 2. In the study area, the main line travels northeast to southwest, crosses Hueneme Road, and turns west toward Port Hueneme about halfway between Arcturus Avenue and Perkins Road. One spur splits off the main line north of Hueneme Road, continues southward parallel to San Simeon/Edison Drive, and terminates at Arcturus Avenue and McWane Boulevard. A second line splits off just south of the main line's crossing over Hueneme Road, continues south, turns east then southeast, and terminates at the Oxnard Beach Generating Station (OBGS). The third line splits off just east of Perkins Road, continues south, and terminates just north of McWane Boulevard.



The north-south running spur terminates at the Oxnard Beach Generating Station (viewing north near McWane Boulevard)

Roads

The major roads in the study area are shown in Figure 2. The nearest freeway corridor serving the study area is the Pacific Coast Highway (State Highway 1), which runs north-south a few miles east of the study area. The major road in the study area is Hueneme Road, which is an east-west running arterial located on the northern side of the study area. Some traffic signals are found along Hueneme Road within the study area. These roads are located at the intersections of Hueneme Road with J Street, Perkins Road, and Saviers Road. Other major roads in the study area include the following north-south running roads: J Street, Perkins Road, Arcturus Avenue, Edison Drive, Arnold Road and Casper Road.

1.2 UTILITY INFRASTRUCTURE

Gas and Oil Pipelines

Information for existing gas facilities within the study area was obtained from the Southern California Gas Company. The existing gas facilities in the study area are shown in Figure 3. Underground gas lines are found along sections of Perkins Road, Arcturus Avenue, Edison Drive, and McWane Boulevard.

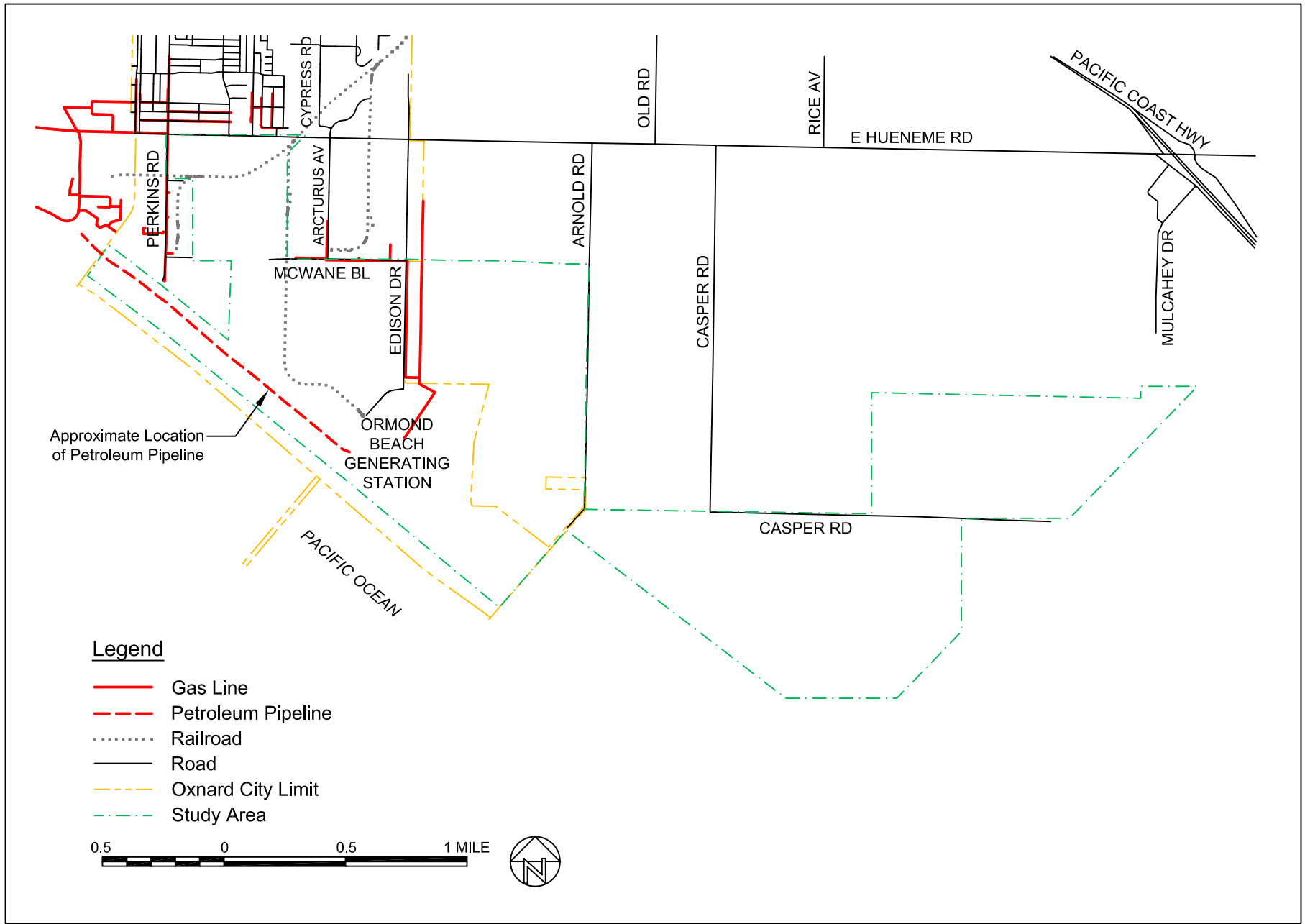


Figure 3. Existing Gas and Petroleum Pipelines

The Shell Pipeline Company indicated that they did not have any facilities in the study area. Other information about oil pipelines was not available at the time when this report was prepared. However, markers indicating an underground petroleum pipeline were observed during field visits. One was located in the wetland area about three hundred feet south of the southern border of the existing Halaco Engineering Company and East Hueneme Drain. It belongs to the Edison Pipeline & Terminal Company. There were a few other markers found to the northwest of this marker. It is not known if the pipeline is active or abandoned. The potential location of this petroleum pipeline was estimated from field observations and the resulting alignment is shown in Figure 3.



Edison Pipeline & Terminal Company petroleum pipeline marker

Power Lines

Atlases showing existing power lines were obtained from the Southern California Edison Company. This information is summarized in Figure 4. The Oxnard Beach Generating Station is located at the southern end of Edison Drive just north of the beach. From the power station, a major power line of overhead cables extends northward along Edison Drive supported by structural towers. Two other overhead power lines run east and west



Power lines along Edison Drive (looking north)

parallel to the main line. These three sets of power lines are all found on the east side of Edison Drive. Overhead power lines are also found along sections of the key roads in the study area, including Hueneme Road, Perkins Road, Arcturus Road, Arnold Road, Casper Road and McWane Boulevard. As shown in Figure 4, there are some cables located off the roads in the agricultural area,

such as the east-west line between Arnold Road and Casper Road, and the north-south line between Hueneme Road and McWane Boulevard.

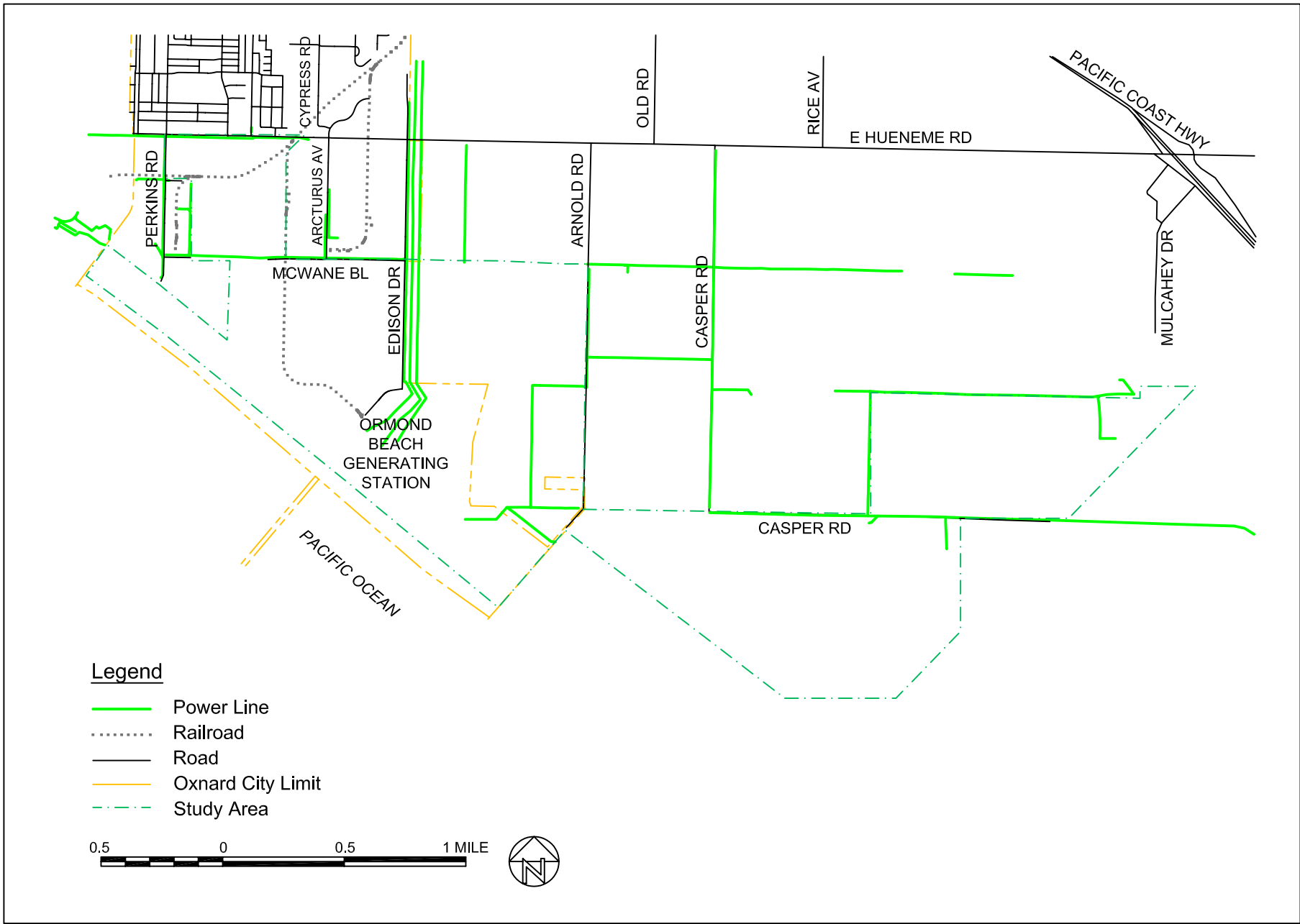


Figure 4. Existing Power Lines

Communications

Several communication companies were contacted to obtain information for communication facilities (e.g., lines and stations) in the study area. Responses were received from Verizon and SBC. SBC indicated that they do not have any facilities in the study area, while Verizon indicated that they do have facilities in the study area. The information received from Verizon was utilized to summarize the communication facilities in the study area and the results are shown in Figure 5.

Storm Drains and Open Channels

GIS data of existing storm drains and open channels were obtained from the City of Oxnard and County of Ventura. The information is presented in Figure 6. Storm drains are found in sections of Hueneme Road, Arcturus Avenue, and Edison Road. As shown in Figure 6, there are a few open channels in the vicinity of the study area also. The major ones include the open channel along J Street (J Street Drain) that discharges into the wetland along the beach, industrial drain that runs parallel to the Ventura County Railroad and then crosses Hueneme Road to continue southward to the Pacific Ocean (Oxnard Industrial Drain), and channel that runs parallel to the beach (East-Hueneme Drain).

There are open channels in the vicinity of the agricultural and sod farm parcels as well. In addition to data obtained from the City of Oxnard and the County of Ventura, some channel locations were also identified from aerial photos and site observations. The width of these channels is about ten to twenty feet at the top. These open channels can be found along several of the roads in the area, such as the ones east of Edison Drive, Arnold Road, and Casper Road.



East-Hueneme Drain



Open Channel on Arnold Road

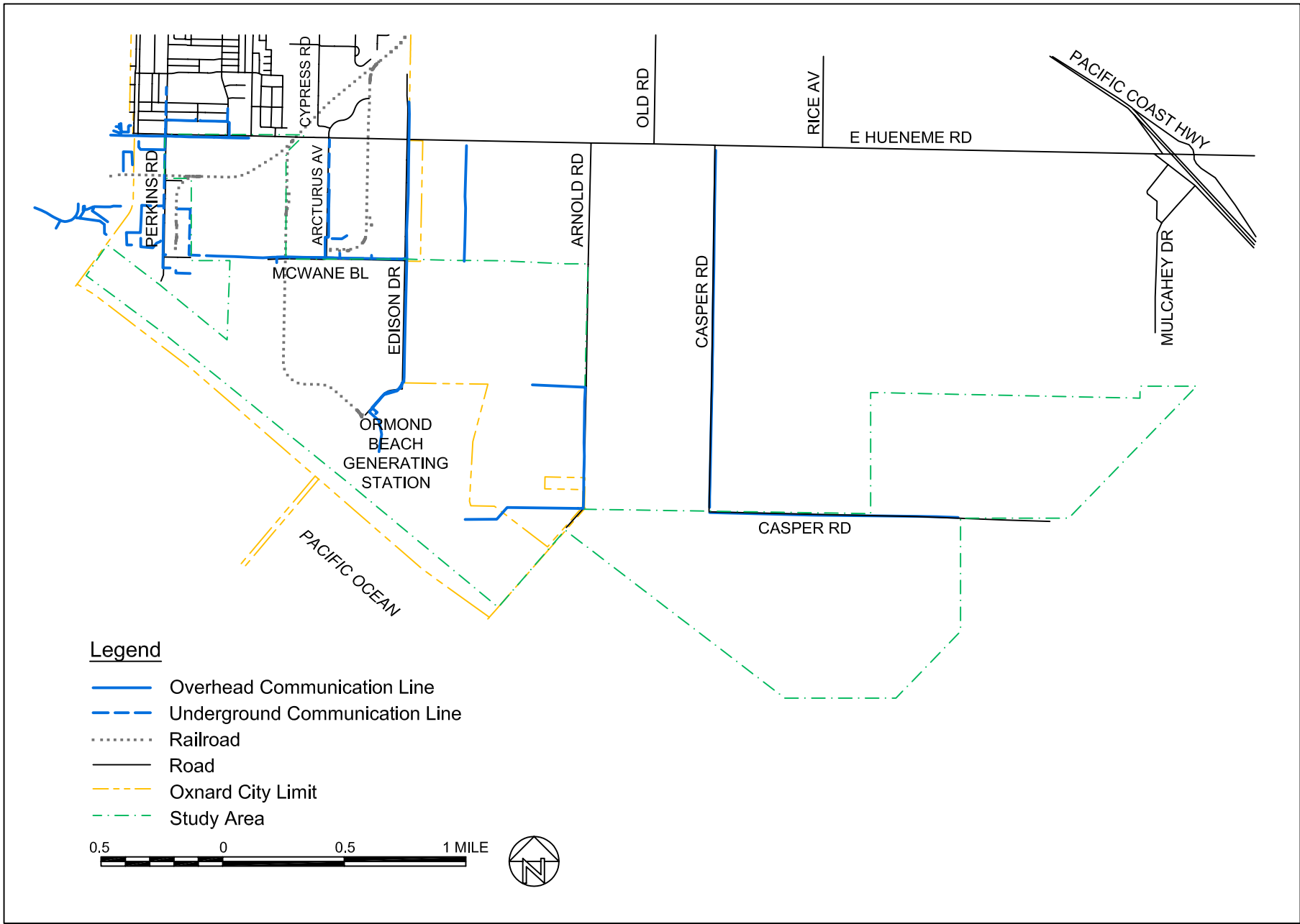


Figure 5. Existing Communication Lines

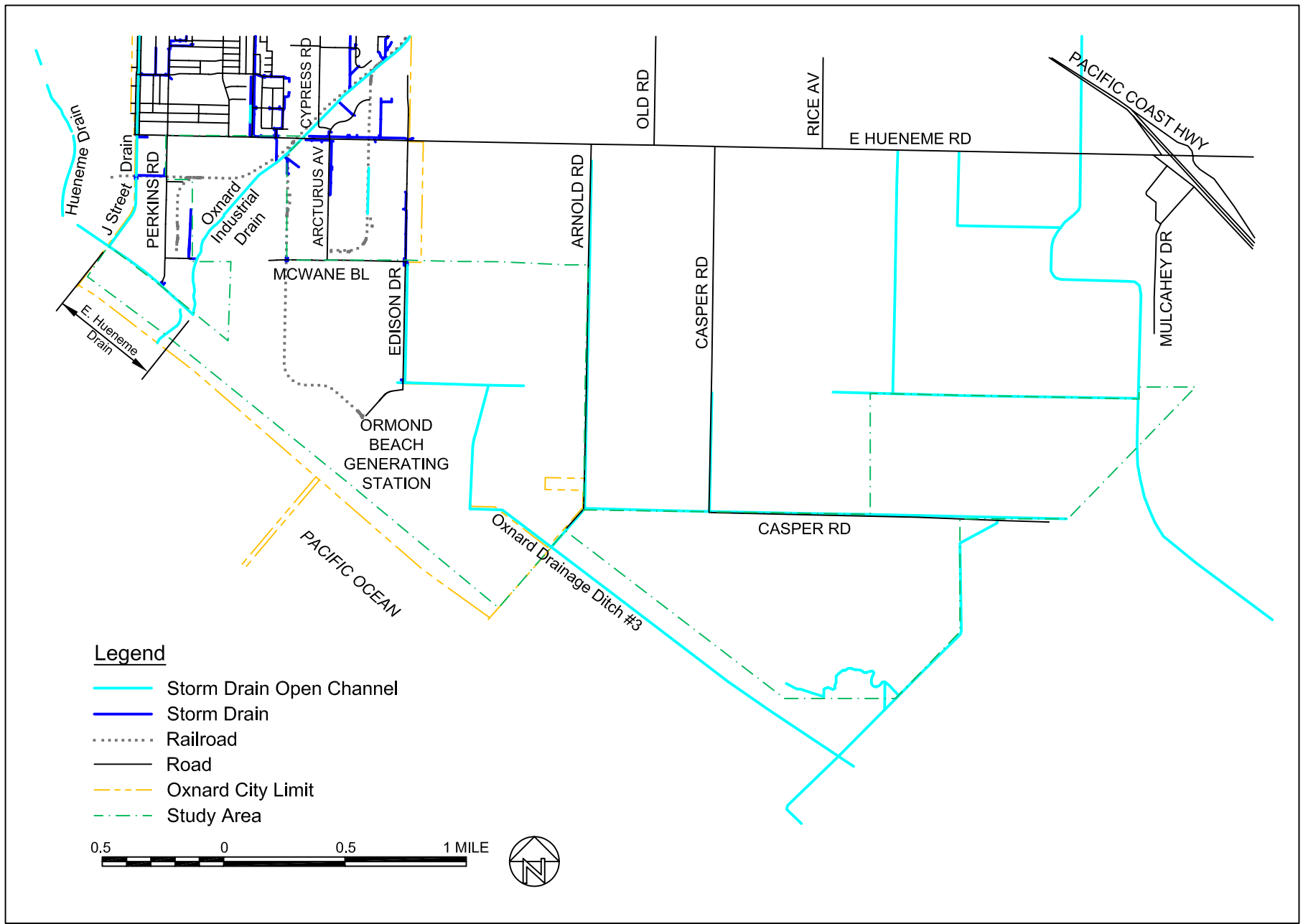


Figure 6. Existing Storm Drains and Open Channels

Water

GIS data of water facilities was obtained from the City of Oxnard. The information is shown in Figure 7. Water facility information in the study area outside the City of Oxnard was not available at the time this report was prepared. The GIS data from the City of Oxnard indicated that water pipelines and fire hydrants are present in and along all the roads within the portion of the study area located in the City of Oxnard.

Sewers

GIS data of sewer facilities was obtained from the City of Oxnard. Sewer information in the study area outside the City of Oxnard was not available from the County of Ventura at the time this report was prepared. The information obtained is shown in Figure 8. The sewer lines are mainly found in the northern part of the study area. An exception is the 30-inch/48-inch diameter sewer line that extends into the ocean along the alignment of Perkins Road.

There is an abandoned historical sewer line located in the MWD/City of Oxnard property. It is an above ground, concrete pipe approximately 4 feet in diameter. It was apparently built around the 1920s. It is in an advanced state of deterioration (e.g., broken concrete) and it appears that some segments have been removed from the area.



*Historical Sewer Pipe in MWD/Oxnard Property
Source: David Pritchett*

2. OPPORTUNITIES AND CONSTRAINTS

2.1 OPPORTUNITIES

The existing transportation network provides a number of opportunities for the wetland restoration project. While the Pacific Coast Highway is not far from the study area, there are no major transportation corridors within the project area. Therefore, transportation infrastructure would not provide much obstruction to the flow of water between various portions of the wetlands. Although the major highway does not pass through the study area, the Ventura County Railroad tracks serving the area could provide convenient and economical means of transportation. This facility could be used to export and import

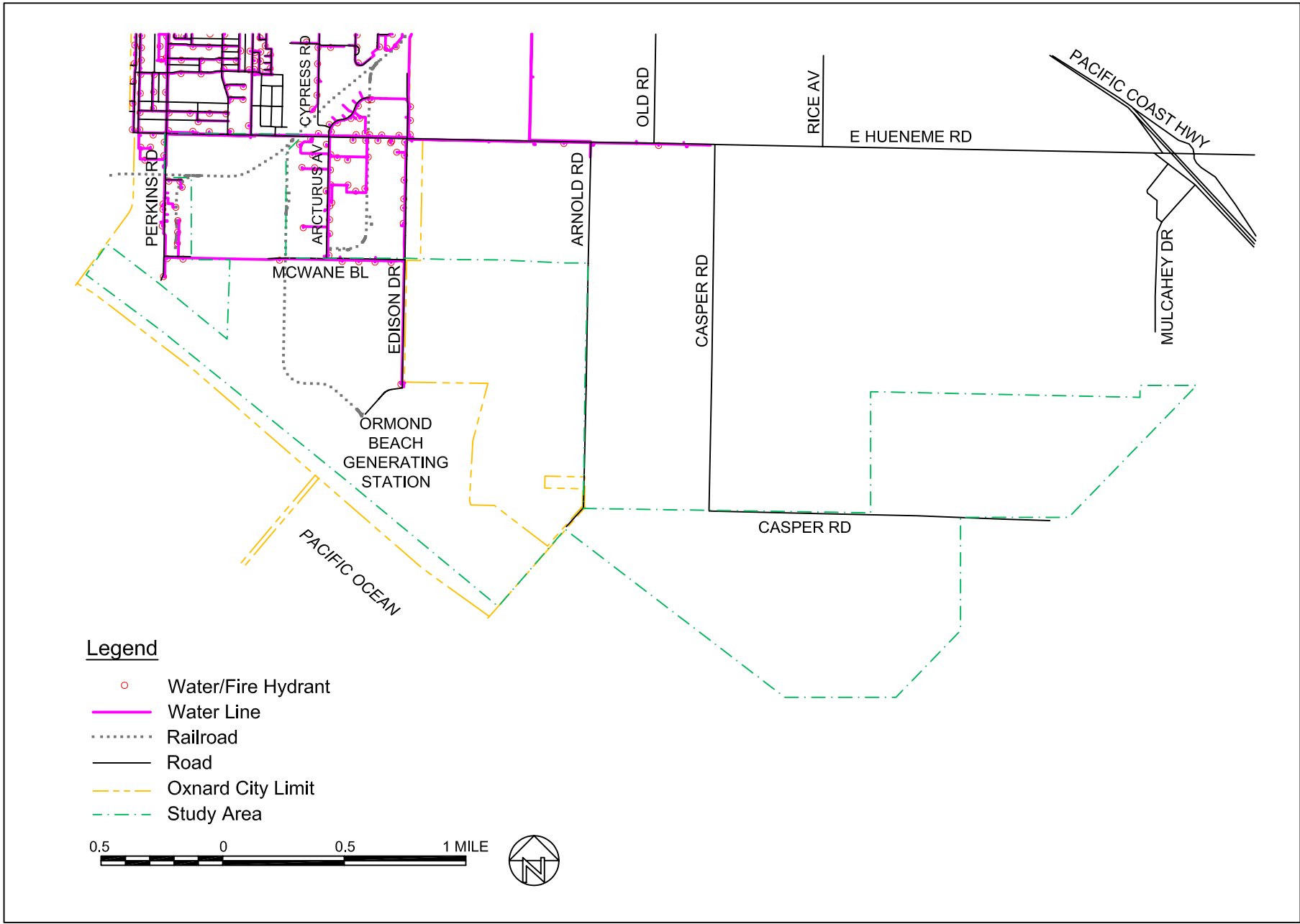


Figure 7. Existing Water Facilities

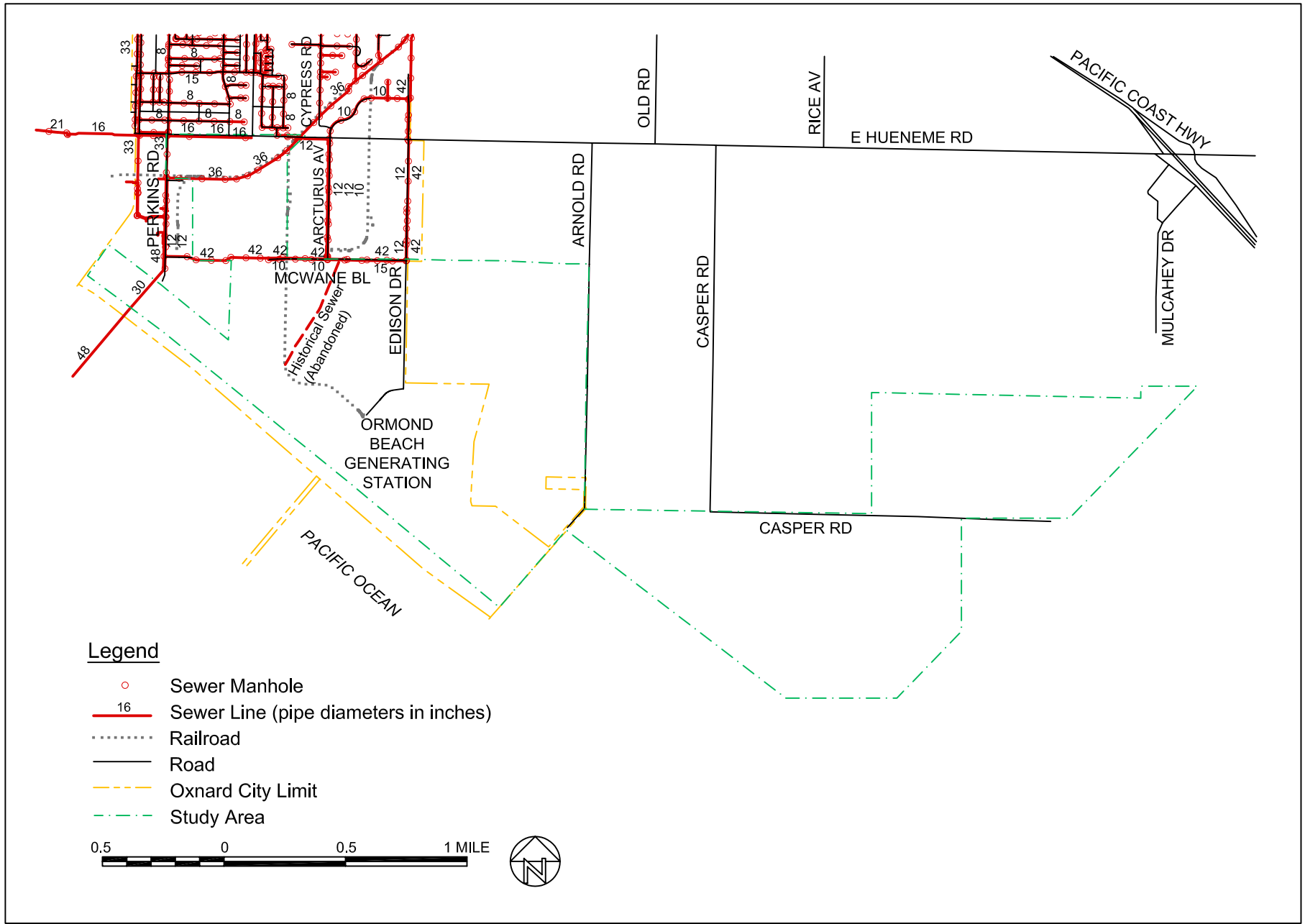


Figure 8. Existing Sewer Facilities

soil/sediment and other construction materials from and to the site during project implementation.

The existing utility facilities are not as massive as those found in a commercial or residential neighborhood. Therefore, minimum diversion, relocation, or replacement of existing utilities would be required for wetland restoration. In addition, impacts to the existing facilities during the implementation of the wetland restoration project would not be extensive.

The existence of the numerous open channels in the area creates a potentially convenient flow network for the habitat restoration. The J Street Drain or Oxnard Industrial Drain could be utilized to convey water between the ocean and restored wetland. Alternatively, these drains could be utilized to provide fresh water or brackish water for habitat restoration.

2.2 CONSTRAINTS

There are few constraints posed by the existing infrastructure to habitat restoration. Roads and railroads that are to remain in use during project implementation will have to be maintained during restoration construction. Likewise, roads and railroads that are to remain in use after project construction will have to be modified or relocated if the area is restored for wetland habitat. Road maintenance during construction may include temporary traffic diversion and closure of one or more lanes, and providing safety barricades and traffic flagman for vehicles and pedestrians. Depending on the requirements of various restoration alternatives, road and railroad modification and relocation may involve changing the vertical and/or horizontal alignment of the facilities. Although some of the roads might obstruct flow under various restoration alternatives, this could be addressed through the inclusion of open channels with bridges and/or culverts through the roads as well as through realignment of the roads.

Some utilities (e.g., oil pipeline) on or near the study area may be impacted and it is likely that the functional performance of these infrastructure components would have to be maintained, mitigated, or replaced as part of the restoration project. The existing historical sewer line in the MWD/Oxnard property may be impacted by the restoration activities. Depending on the desires of the stakeholders and the requirements of the restoration alternatives, the historical sewer line may have to be preserved in place or removed as debris.