# Oyster Point Phase 2,3, & 4 Precise Plan 03 Foundation Narrative

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## **03** Foundation Narrative

#### 04.0 Structural Systems Description

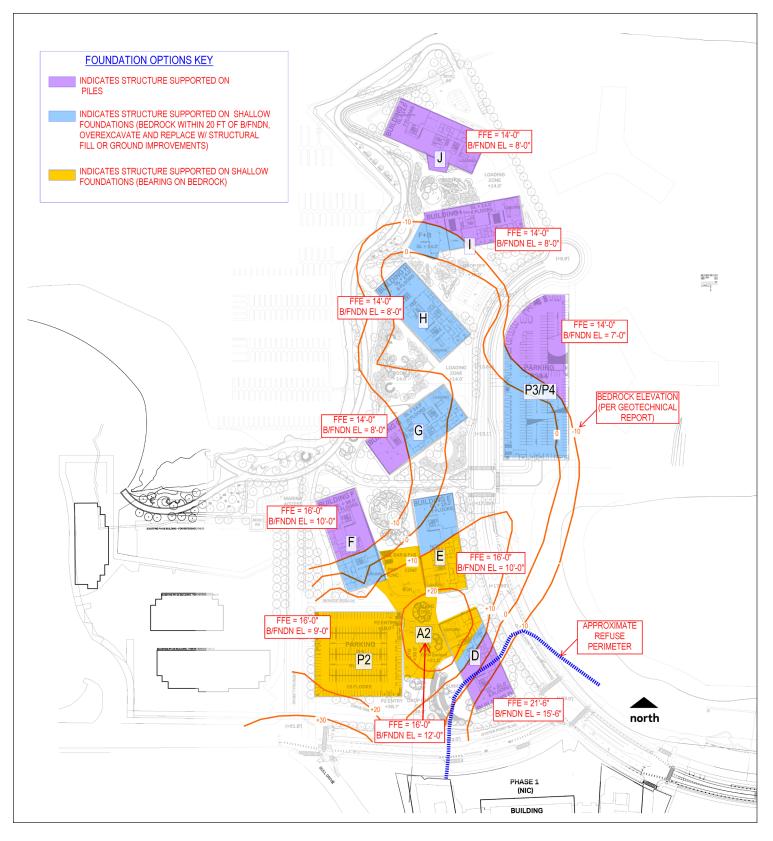
The Oyster Point Development - Phases 2-4 project is located in South San Francisco, California. The project consists of seven laboratory buildings of varying heights (6-story, 7-story, and 8-story), three 1-story amenity buildings, and two 10-story parking garages. The structural systems for the various building components are summarized below.

#### 04.1 Foundations

Per the available geotechnical investigation report prepared by Langan ("Oyster Point Development Phase III - Buildings 8,9, and 10"), the site is underlain by fill and Bay Mud over bedrock. The elevation of the bedrock varies significantly across the site, between elevations +30ft at the south end of the site to -10ft and below at the north, east and west edges of the site. It is anticipated that the foundations will consist of isolated spread footings and mat foundations where the bedrock is shallow enough to be reached during excavation. Where bedrock is within 20ft-30ft of the bottom of foundation, ground improvements may be utilized to improve soil conditions for supporting shallow foundations. Elsewhere, deep foundation elements (i.e. steel H-piles, auger-cast pile) driven to bedrock will support the buildings. Auger-cast piles may be utilized at non-refuse area at the north end of the site. Refer to Figure 1 which indicates foundation options for the site based on estimated bedrock elevations provided by Langan.

Per Langan recommendations, potential ground improvement systems include compacted aggregate piers (CAPs) and drilled displacement columns (DDCs). Ground improvement systems serve to strengthen and densify the surrounding soil. The CAPs system is typically installed with an auger or vibration tool and will consist of 24- to 33-inch diameter compacted aggregate shafts. The DDCs system consists of 18- to 30-inch diameter shafts which are installed using a displacement auger to inject low strength flowable material into the soil.

Where steel H-piles are utilized as deep foundation elements, it is anticipated that corrosion protection will be provided by a combination of thickening of material and cathodic protection. This was the strategy employed for Phase 1D immediately to the south of this site.



### Figure 1 - Foundation Options