

Prepared by  
The Pacific Telephone and Telegraph Company  
Southern California Area

BELL SYSTEM PRACTICES  
Outside Plant Construction  
and Maintenance

SECTION G10.906  
Issue A, May, 1950-S  
T. P. T. & T. Co.

GENERAL INSTRUCTIONS

USE OF CORROSION - RESISTANT

CR MATERIAL

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1. GENERAL

1.01 This Section covers the use of the corrosion-resistant "CR" line hardware and strand that has been developed for use in highly corrosive locations, such as are encountered along the sea coast where moisture is present over protracted periods.

1.02 The corrosion-resistant "CR" line hardware and strand are made of high chromium content steel and may acquire a brownish or even black appearance during the manufacturing process or after installation, however such discoloration is superficial and has not been found to affect the service life of the material.

1.03 The following CR line hardware and strand has been made available and additional items may be supplied as the need arises.

- Bolts, Carriage
- Bolts, Crossarm
- Bolts, Guy
- Bolts, Suspension
- Braces, Crossarm
- Clamps, Guy
- Clamps, Suspension
- Screws, Drive
- Steps, Pole
- Strand, Steel (For use as 6M and 10M only)
- Straps, Reinforcing

1.04 In view of the high cost of the corrosion-resistant CR material (3 to 6 times that of similar galvanized items) and the general favorable experience with the galvanized coating that has been employed on line hardware and strand, the use of CR material in this area shall be confined to the locations shown on the attached maps and with the further restrictions as covered in Parts 2 and 3 of this Section.

## 2. USE OF CR LINE HARDWARE

2.01 CR line hardware should be used in the shaded areas noted on the attached maps to replace existing material that requires replacement due to corrosion.

2.02 It is impractical to select locations where one can expect corrosion of the various items of galvanized line hardware, therefore the CR hardware shall not be used on new construction except where its use is specified on the detail plans by the District Plant Engineer.

2.03 The above exception is made as the engineer may find places where he is placing a new CR strand on the same side of a pole line and under the same environment as an existing messenger and the condition of the existing supporting hardware (suspension clamps, guy clamps, etc.) indicates that some of the line hardware placed should be of the CR type.

### **3. USE OF CR STRAND**

**3.01 CR strand shall be used when replacing existing 6M or 10M messengers and guys in the shaded areas noted on the attached maps where the replacement is due to corrosion.**

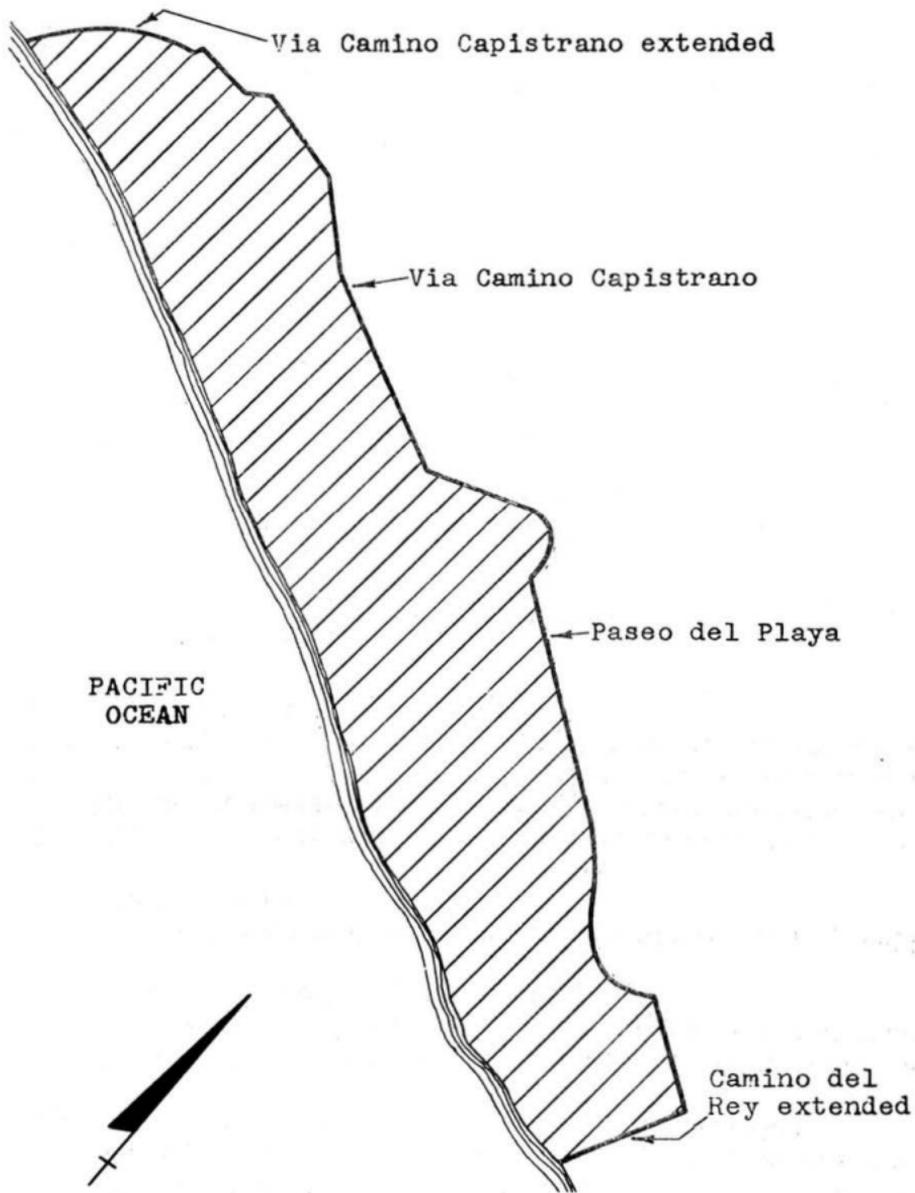
**3.02 CR strand shall be used when placing new 6M or 10M cable messengers and guys in the areas noted on the attached maps only when specified on the detail plans.**

**Note: C Steel Lashing wire shall be used when lashing cable to CR strand.**

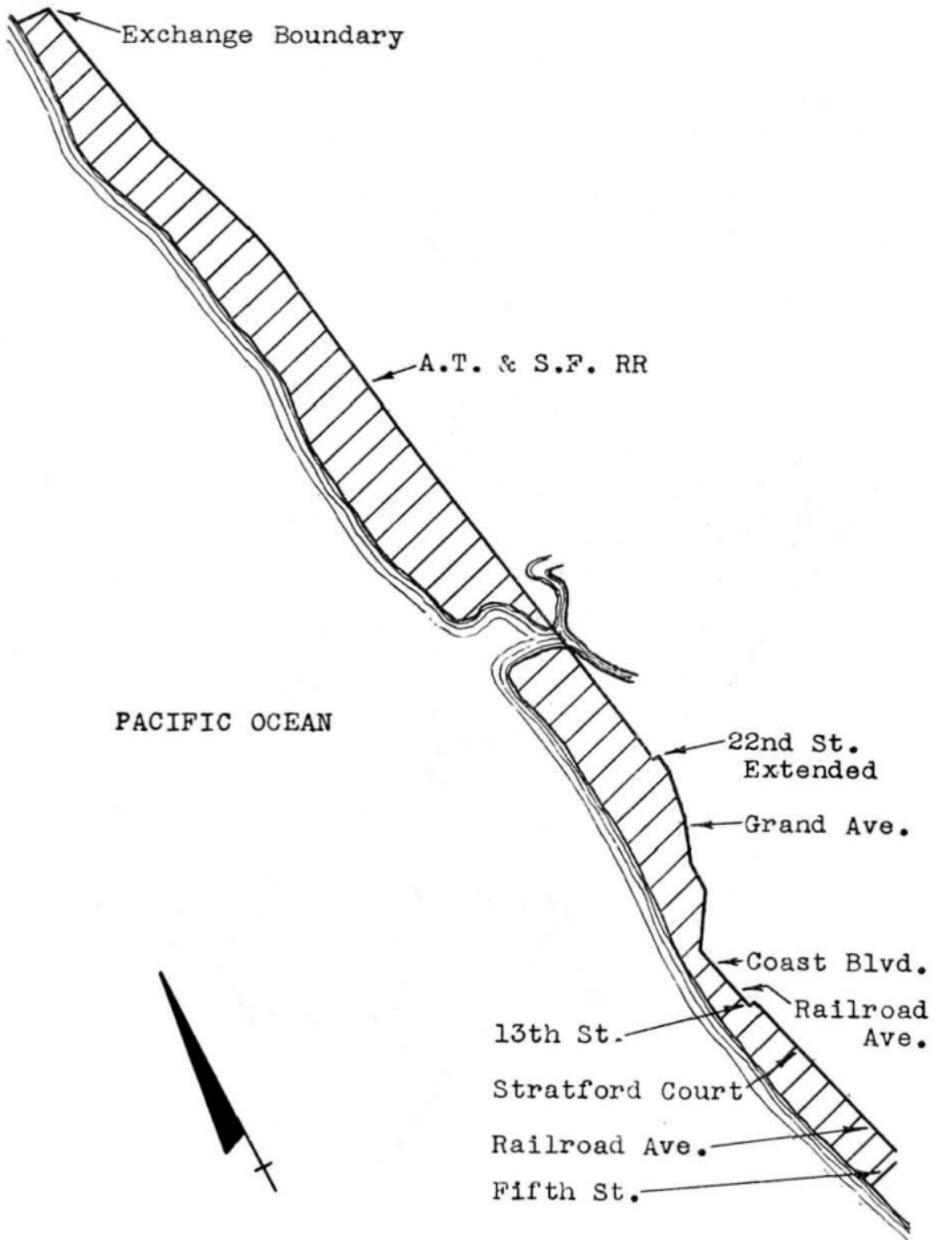
**3.03 Corrosion of strand is more uniform than corrosion of line hardware therefore after a review of past experience with galvanized strand in a particular location or under the same, or similar environment, the plant engineer shall specify the use of CR strand as required.**

4. MAPS

4.01 Dana Point Exchange



# 4.02 Del Mar Exchange

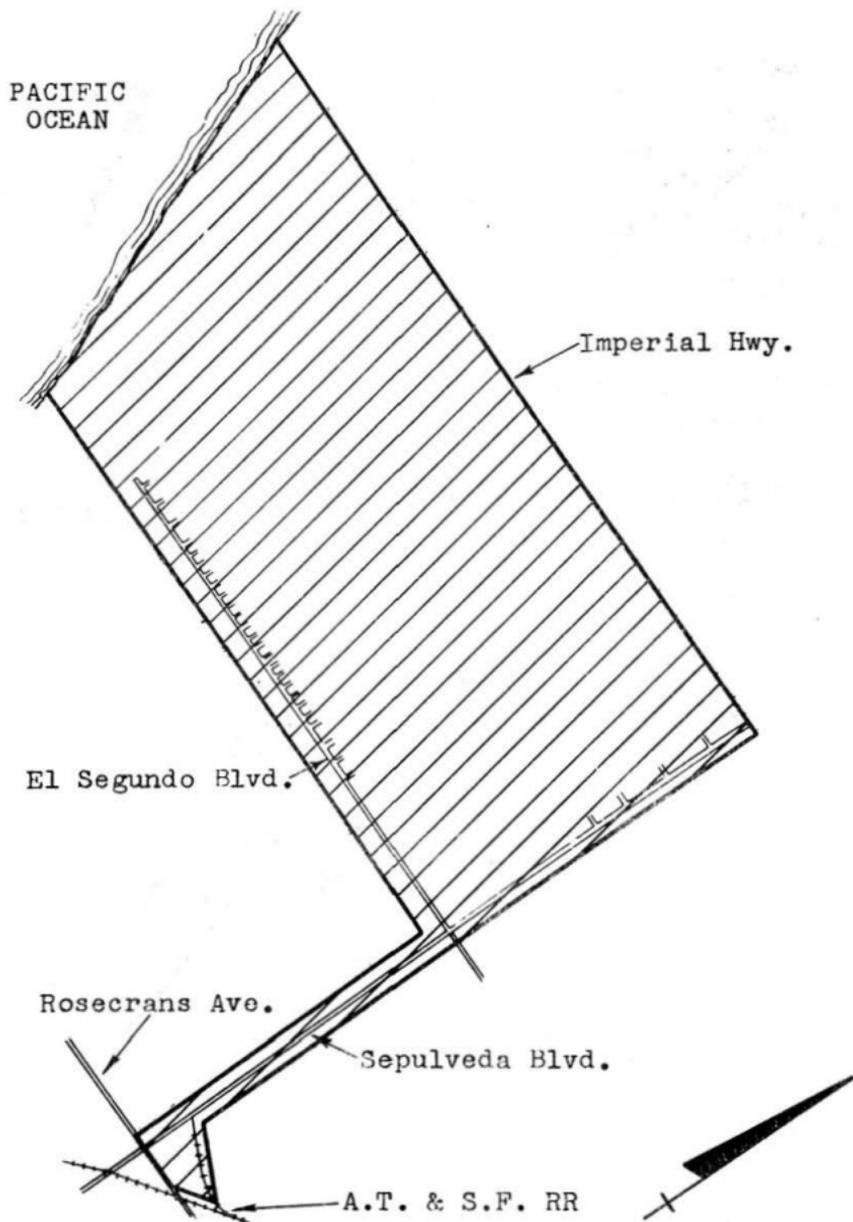


PACIFIC OCEAN

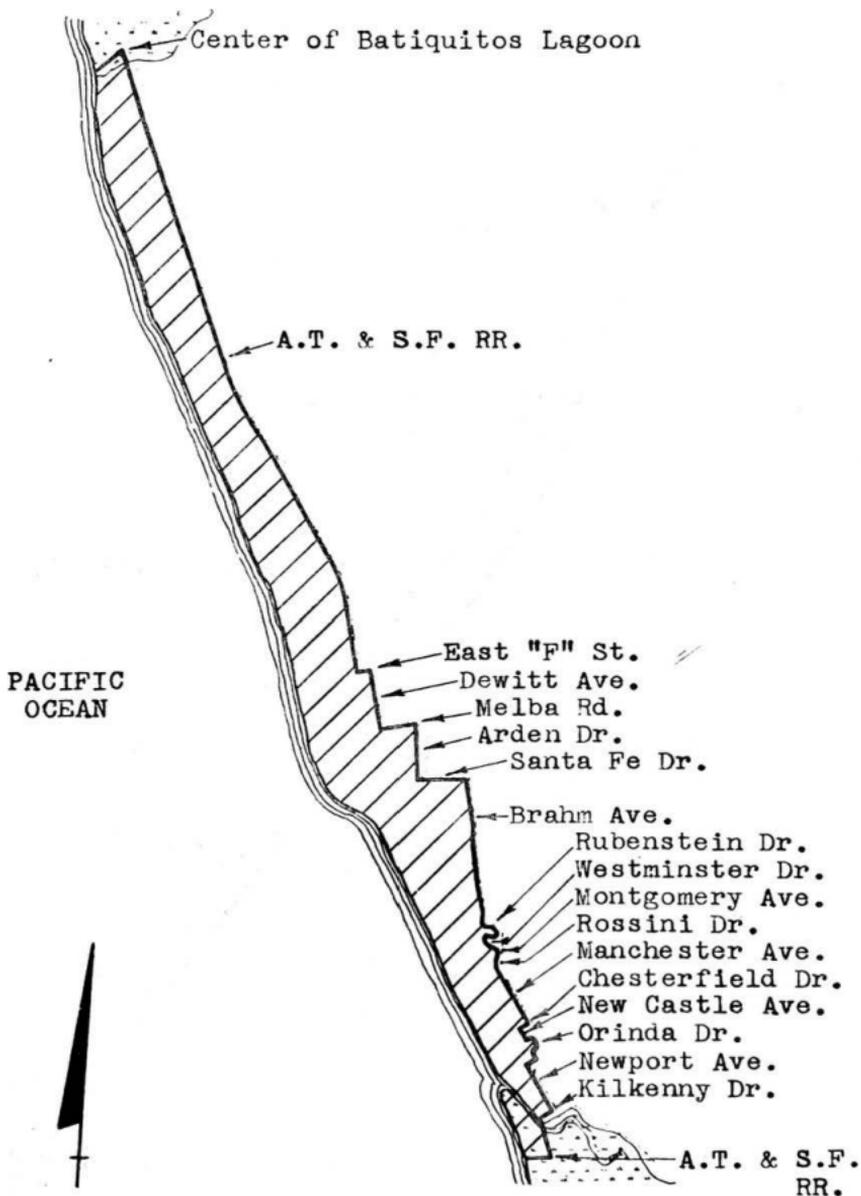


**GENERAL INSTRUCTIONS  
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CR MATERIAL**

4.03 El Segundo Exchange

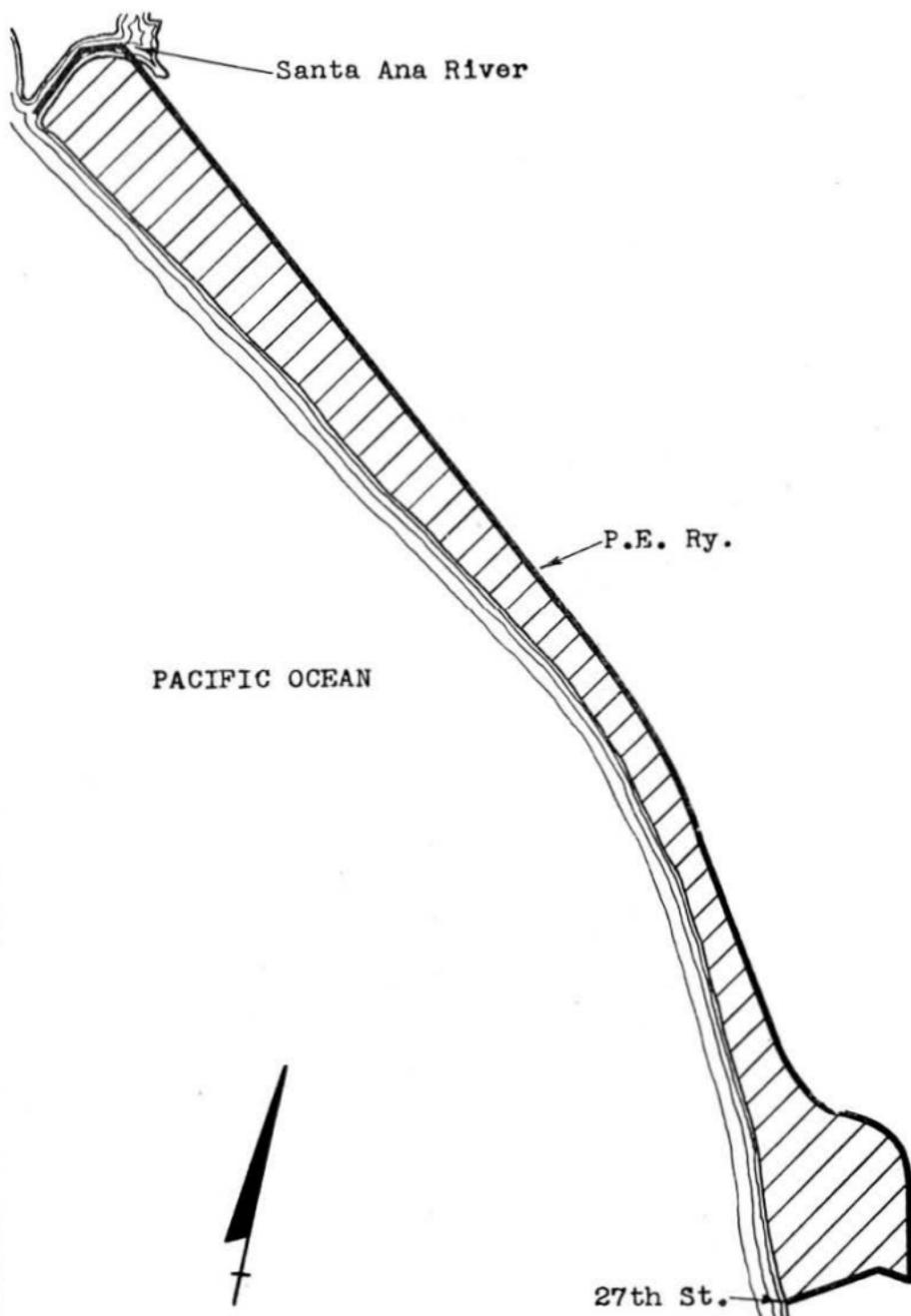


# 4.04 Encinitas Exchange

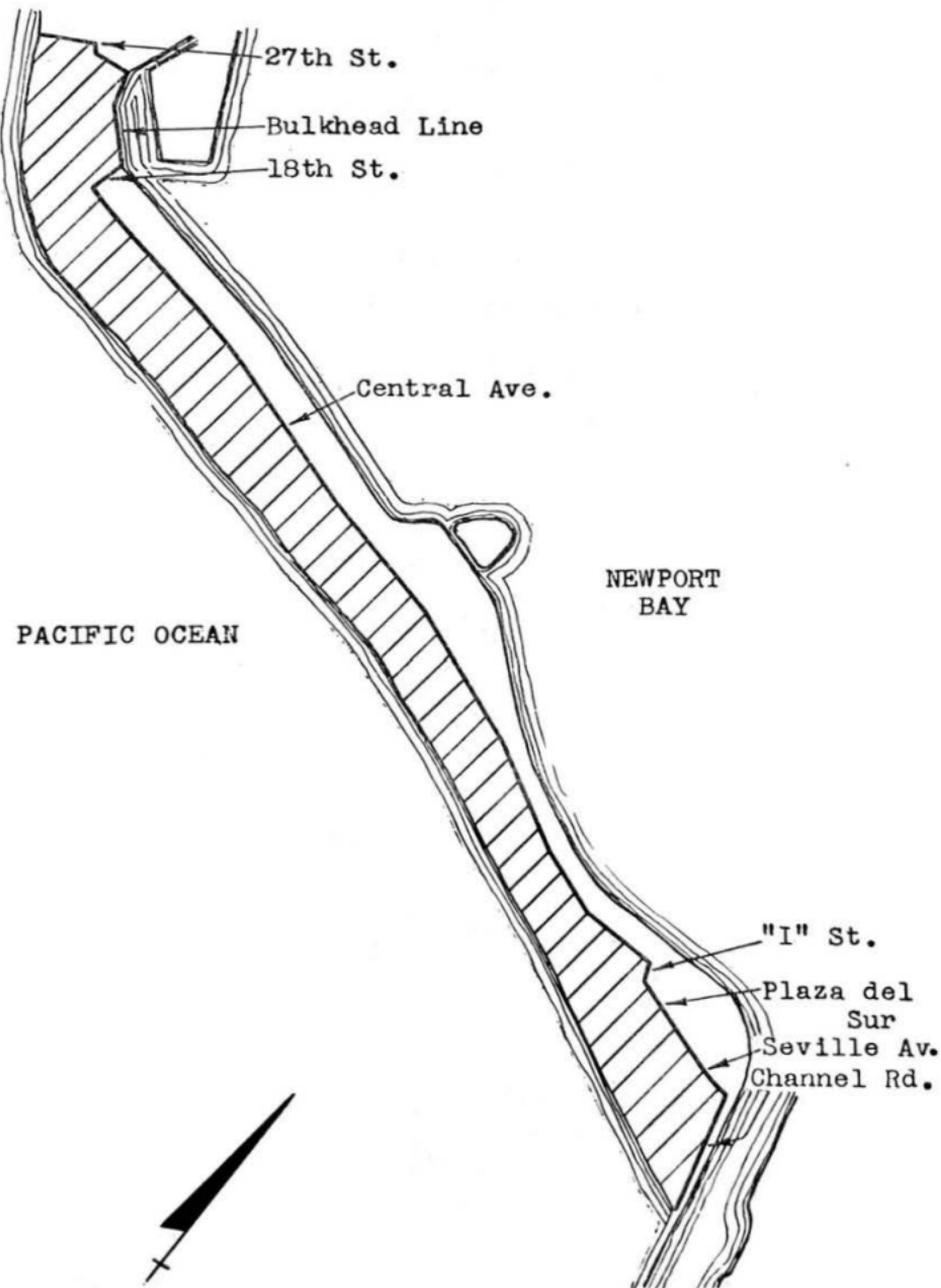


### 4.05 Newport Beach Exchange

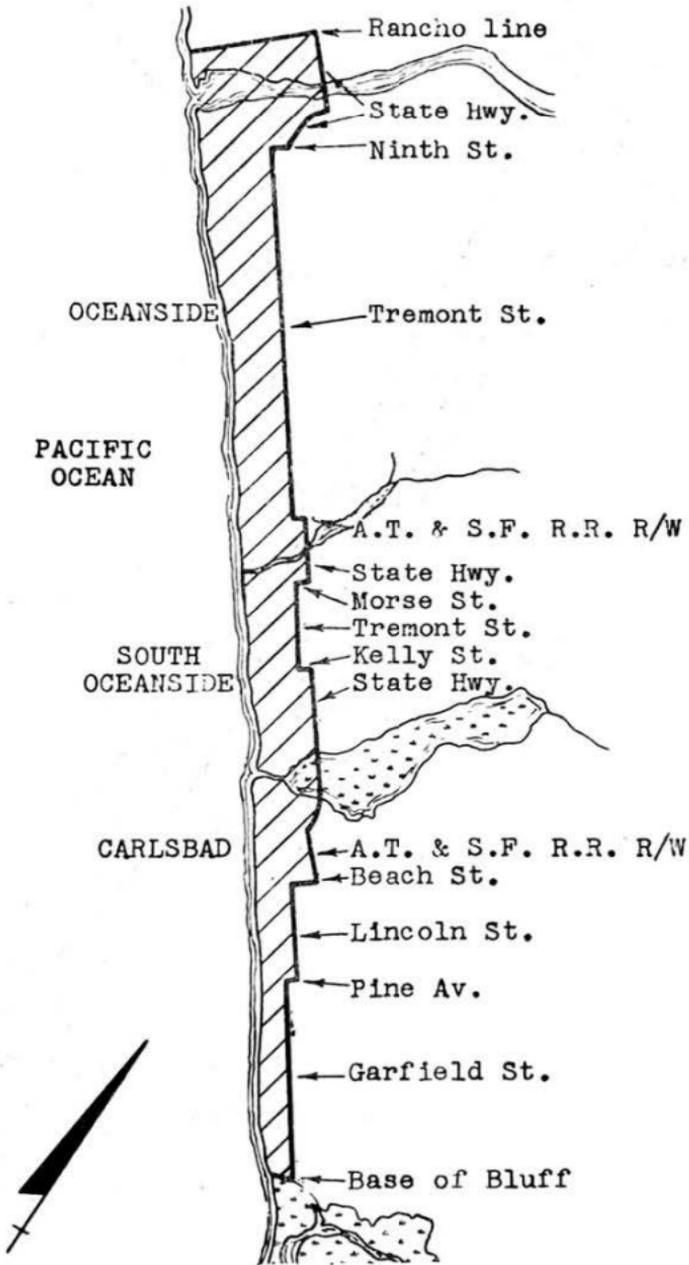
#### (a) Beacon C.O. Area



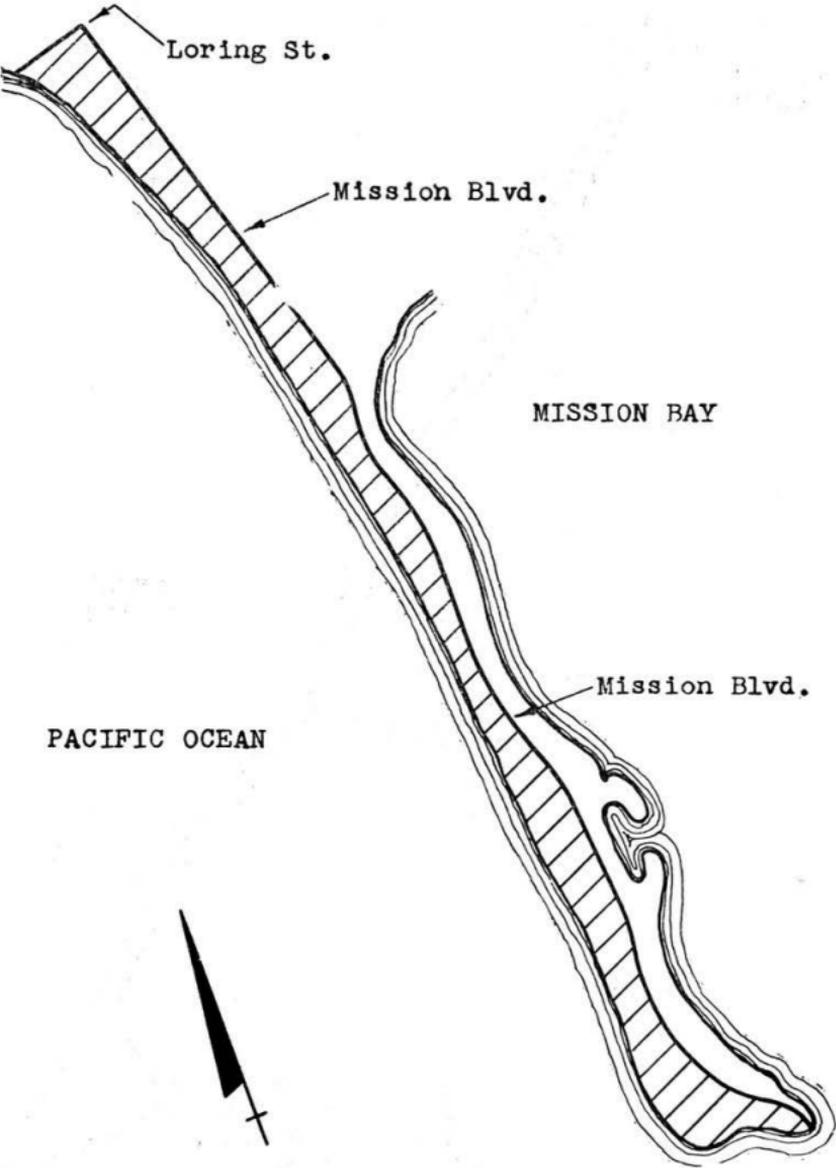
(b) Harbor C.O. Area



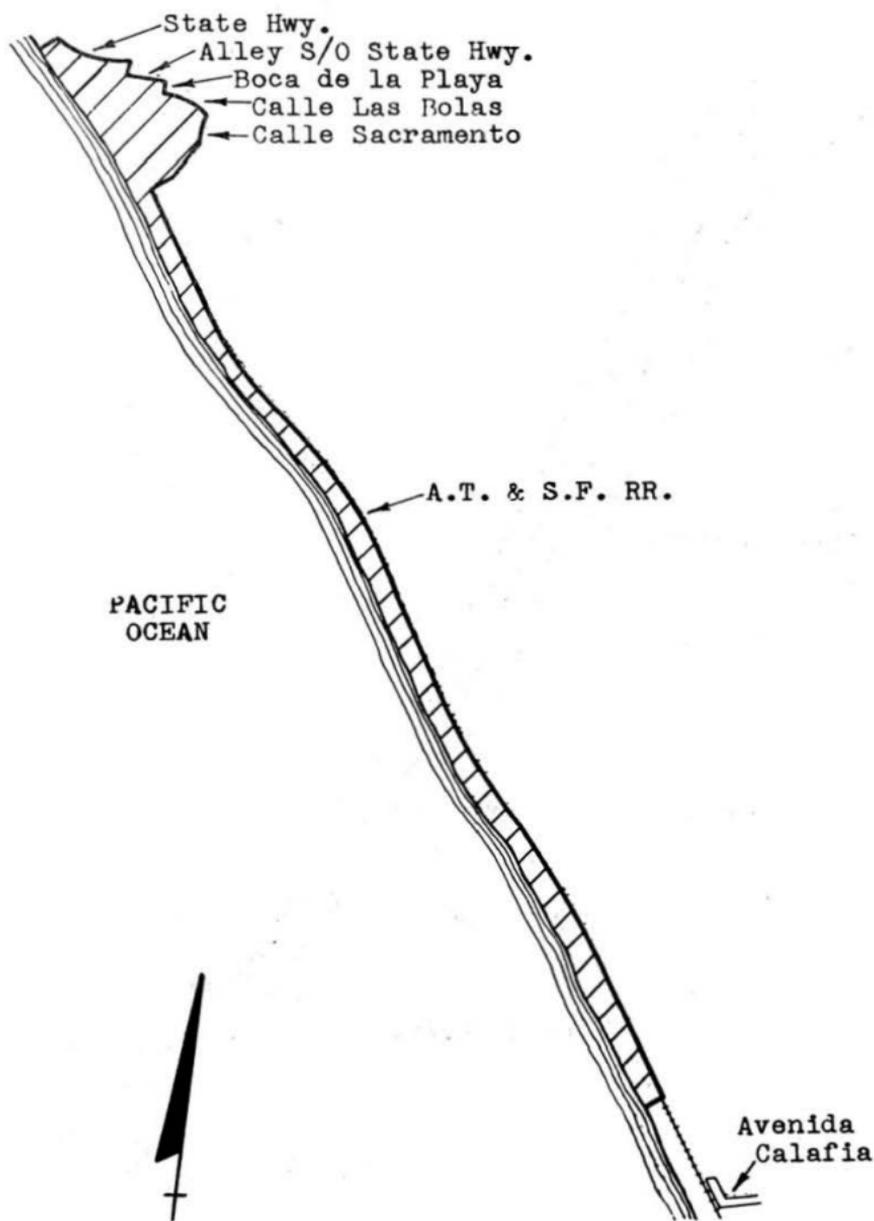
4.06 Oceanside Exchange



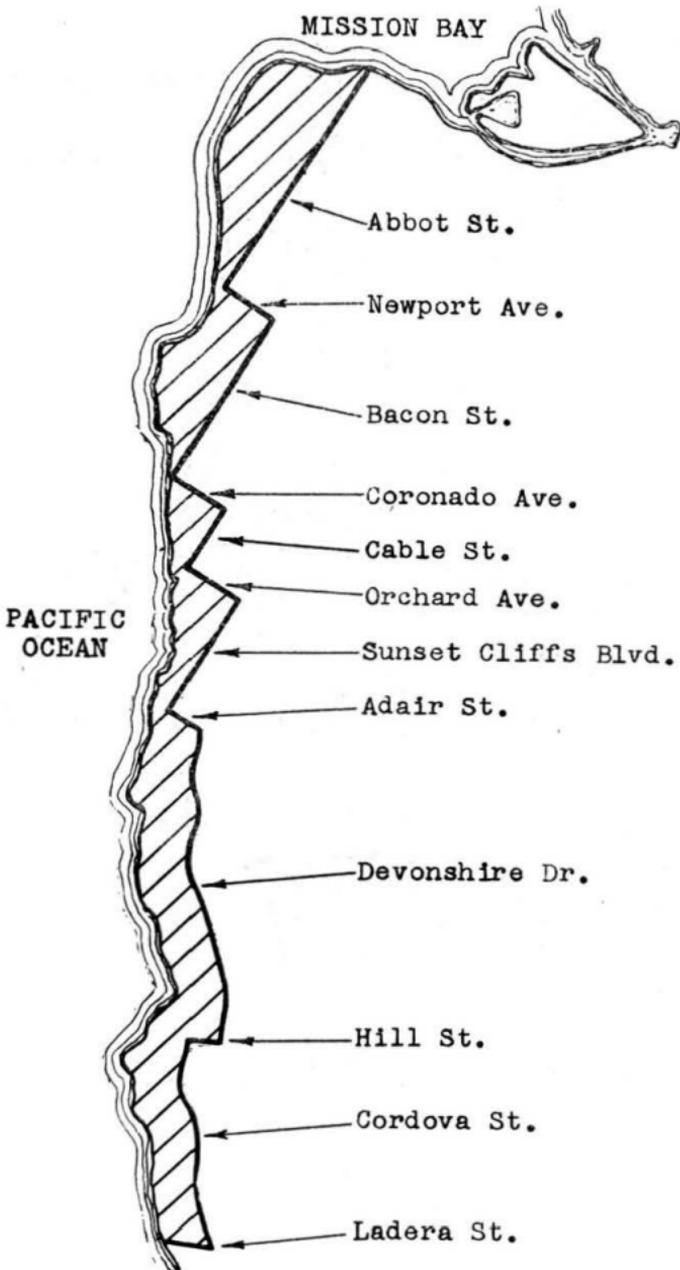
4.07 Pacific Beach Exchange



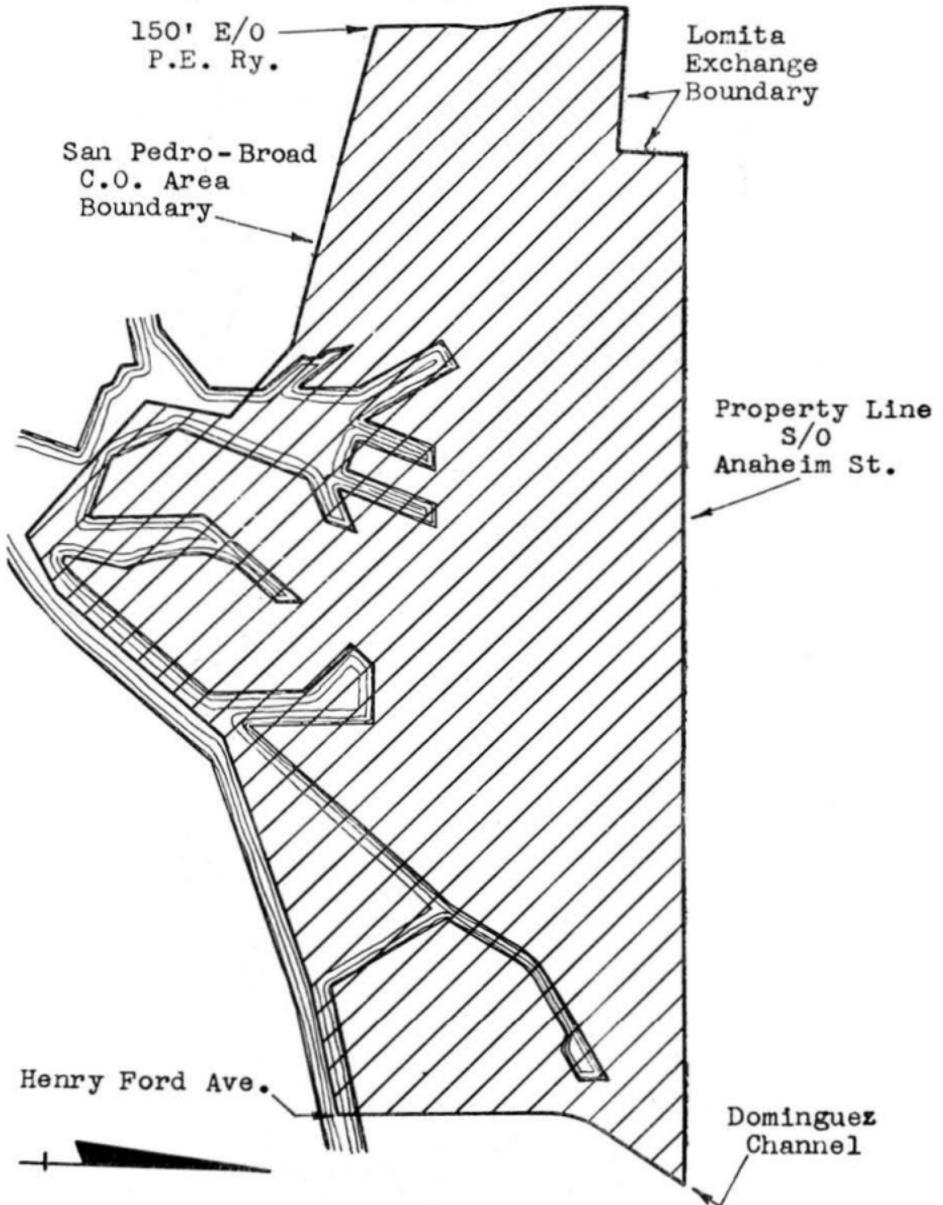
4.08 San Clemente Exchange



4.09 San Diego Exchange - Bayview C.O. Area



4.10 San Pedro Exchange - Broad C.O. Area



4.11 Ventura Exchange - The toll lead north of the bridge across the Ventura River and all plant west of the Ventura River Bridge up the Rincon Coast shall be considered as an extension of the shaded area on the following map and CR material used as covered in Parts 2 and 3 above.

