

## 5.4 COMMON INFRASTRUCTURE / MAINLINE TRACK CONFIGURATION

The primary study area for the analysis was composed of the mainline segment of the LOSSAN Corridor between Redondo Junction and Anaheim. In addition, all passenger trains operating west of Redondo Junction were assumed to be operating either to or from LAUS. The terminal station for the HST in Orange County was assumed to be the proposed Anaheim Regional Transportation Intermodal Center (ARTIC) configured with four tracks and two platforms.

## 6.0 SIMULATION MODEL CASES – OPERATIONS ANALYSIS

The Model was developed to represent the service attributes and physical characteristics of the portion of the LOSSAN Corridor between LAUS and Anaheim, focusing on the mainline capacity requirements of the rail network between Redondo Junction and Fullerton, and between Fullerton and Anaheim. This section describes the conceptual track configurations and assumptions applied to each specific simulation Model Case and summarizes the results of each scenario. The Model Cases which are documented in Section 6 of this report include:

### Case 1 - "Two and Two"

- Total of Four Mainline Tracks from Redondo Junction to Fullerton
  - Two interconnected tracks exclusively for freight trains
  - Two interconnected tracks exclusively for passenger trains
    - "Shared use" for conventional passenger trains (Amtrak, Metrolink) and the HST
- The two interconnected freight tracks and two interconnected passenger tracks are completely separated from each other with no physical connection (between the freight tracks and passenger tracks).
- Two tracks from Fullerton to Anaheim
  - Passenger trains during public service hours
  - Freight trains time separated to nighttime

### Case 2 - "Three and Two"

- Total of Five Mainline Tracks Redondo Junction to Fullerton
  - Three interconnected tracks exclusively for freight trains
  - Two interconnected tracks exclusively for passenger trains
    - "Shared use" for conventional passenger trains (Amtrak, Metrolink) and the HST
- Three interconnected freight tracks and two interconnected passenger tracks are completely separated from each other with no physical connection (between the freight tracks and passenger tracks).
- Two Tracks from Fullerton to Anaheim
  - Passenger trains during public service hours
  - Freight trains time separated to nighttime

Case 3 – “Three and Two” with Shared Use

- Total of Five Mainline Tracks from Redondo Junction to Fullerton
  - Three interconnected tracks for the operation of freight trains and conventional passenger trains
  - Two interconnected tracks exclusively for passenger trains only
    - “Shared use” for conventional Metrolink trains and the HST
- The two exclusive passenger tracks for “shared use” of Metrolink and the HST are physically separated from the three tracks for combined operation of freight trains and other conventional passenger trains (Amtrak and Metrolink 91-Line).
- Dedicated passenger double track joins two tracks east of Fullerton Junction
  - Two Tracks continue to Anaheim
  - Passenger trains during public service hours
  - Freight trains time separated to nighttime

Case 4 – “Four and Two” with Shared Use and Exclusive Tracks for High Speed Train

- Total of Six Mainline Tracks from Redondo Junction to Fullerton
  - Four interconnected tracks for the operation of freight trains and conventional passenger trains
  - Two interconnected (physically separated) tracks exclusively for the HST
- The two exclusive HST tracks are physically separated from the four tracks for combined operation of freight trains and conventional passenger trains.
- Total of Four Mainline Tracks from Fullerton to Anaheim
  - Two tracks for the combined operation of freight trains and conventional passenger trains
  - Two tracks (physically separated) exclusively for the HST

Case 5 – “Four Track No-Build”

- Total of Three Mainline Tracks from Redondo Junction to Fullerton (Step 1)
  - Three interconnected tracks for the operation of freight trains, Amtrak and Metrolink.
- Total of Four Mainline Tracks from Fullerton to Anaheim (Step 2)
  - Four interconnected tracks for the operation of freight trains, Amtrak and Metrolink.

Details and results of the operations analysis associated with each one of the Model Cases outlined above are presented in the following sub-sections.

**6.1 LOSSAN CORRIDOR MODEL CASE 1 – “TWO AND TWO”**Assumptions

The LOSSAN Corridor Model Case 1 assumed:

- Train Characteristics: As described in Section 5.1 for Freight trains, the HST and Amtrak plus:
  - Metrolink: AEM-7 with 5 coaches