

# California High-Speed Train Project



## TECHNICAL MEMORANDUM

### Proposed Methodology for Demarcation of Territorial Subdivisions and Milepost Numerics TM 1.1.8

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Note: Signatures apply for the latest technical memorandum revision as noted above.

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## System Level Technical and Integration Reviews

The purpose of the review is to ensure:

- Technical consistency and appropriateness
- Check for integration issues and conflicts

System level reviews are required for all technical memorandums. Technical Leads for each subsystem are responsible for completing the reviews in a timely manner and identifying appropriate senior staff to perform the review. Exemption to the System Level technical and integration review by any Subsystem must be approved by the Engineering Manager.

System Level Technical Reviews by Subsystem:

Systems: Not Required \_\_\_\_\_  
Print Name: \_\_\_\_\_ Date \_\_\_\_\_

Infrastructure: Signed document on file \_\_\_\_\_  
John Chirco \_\_\_\_\_ 07 Aug 09  
Date \_\_\_\_\_

Operations: Not Required \_\_\_\_\_  
Print Name: \_\_\_\_\_ Date \_\_\_\_\_

Maintenance: Not Required \_\_\_\_\_  
Print Name: \_\_\_\_\_ Date \_\_\_\_\_

Rolling Stock: Not Required \_\_\_\_\_  
Print Name: \_\_\_\_\_ Date \_\_\_\_\_

Note: Signatures apply for the technical memorandum revision corresponding to revision number in header and as noted on cover.

## 1.0 OVERVIEW

It is important that the users of any rail system be able to identify, with the greatest degree of precision possible, their exact location on the system. This is necessary not only for daily train operations and maintenance but especially in times of emergency when there is need to dispatch response units to a specific location within the 800 mile track area that will make up the CHSTP. The safety and security of all of the users depends on the effectiveness of the designation process and the specificity of the Mile Post numbering system.

## 2.0 PURPOSE AND OBJECTIVE

The purpose of this technical memorandum is to provide the basis and rationale for defining discrete sections of the California High Speed Train Project (CHSTP) as “subdivisions” and for further refining of these “subdivisions” into mile posts with designations that will be prefaced with an alphabetic identifier to better enable the precise location of system resources and assets.

## 3.0 METHODOLOGY

It is standard practice for US. railroads that large track systems are traditionally divided into manageable sections called branches or subdivisions. This is vital in enabling the location of trains, physical plant and assets, and to define right-of-way maintenance sections. It is proposed that the CHSTP be apportioned into seven “subdivisions” approximately equivalent to several of the current “Regional Manager” section territories. They are:

- Bay Subdivision (B)- Extends from CP Divide to San Francisco
- Capital Subdivision (C) – Extends from CP Divide to Sacramento
- Desert Subdivision (D) – Extends from Los Angeles to Bakersfield
- San Jacinto Subdivision (J) – Extends from CP Inland Junction to San Diego
- Pacheco Subdivision (P) – Extends from CP Merced to CP San Joaquin.
- Sierra Subdivision (S) – Extends from Bakersfield to CP Divide
- Tongva Subdivision (T) – Extends from CP Inland Junction to Anaheim (Irvine)

The naming conventions were crafted to avoid repetition of existing railroad subdivision or branch names in California to lessen confusion. While the specific name designations are not necessarily important (they were chosen to describe the geography or the geographic areas they encompass—except for Tongva (which was the name of a local Native American Tribe native to the Orange County region), providing separate letter designations is integral in establishing the individual subdivision identities. The lettering scheme will be presented in the CHSTP System Operating Rules and Special Instructions (or equivalent) and provide correspondence with the subdivisions for the purposes of reckoning location and use in mandatory directives. In order to provide accurate locations throughout the system, letter prefixes will be “attached” to the mile posts located at prescribed distances throughout each subdivision.

### 3.1 MILE POSTS

In accordance with the majority of US railroads, the “initial” mile post (MP) on the system is designated 0.0 beginning at the initial or final terminals in the system. The CHSTP mile post designations must satisfy three criteria. The system must be a) sequential, because operating and

maintenance crews must be able to determine distances and locations within the system accurately; b) specific, because the mile posts should also indicate the specific subdivision; and c) mnemonic, because CHST personnel must be able to use the numbering system intuitively and with facility for clear and concise communication. Several alternatives were examined to determine mile post nomenclature for the CHSTP that would satisfy these criteria:

- Mile Post Numbering North to South - Sacramento to San Diego
- Mile Post Numbering South to North – San Diego to Sacramento
- Mile Post Numbering from San Francisco
- Mile Post Numbering from Los Angeles

#### *Mile Post Numbering North to South - Sacramento to San Diego*

In this scenario, MP 0.0 would be designated at Sacramento station and continue south to San Diego, branching off at Merced to cover the route to San Francisco and branching off again at Los Angeles to cover the route to Anaheim. This option was discarded for two reasons, 1) the numbering system would not be sequential because of the San Francisco and Anaheim route segments; and 2) both the Sacramento and San Diego extensions of the CHST route will not be constructed under Phase 1 of the project.

#### *Mile Post Numbering South to North- San Diego to Sacramento*

MP 0.0 would be designated at the San Diego Station. This option was discarded for the reasons described in the preceding paragraph for North to South – Sacramento to San Diego.

#### *Mile Post Numbering from San Francisco*

In this scenario, MP 0.0 would be designated at the Transbay Terminal in San Francisco. The numbering scheme would, for the most part, be sequential and the San Francisco segment is part of the Phase 1 build- out. To account for the extensions to San Diego and Sacramento, the numbering would begin again at MP 0.0 for example at CP LAD and again at CP Divide. This method of numbering mileposts assumes that any additional “extensions” from the original San Francisco-Los Angeles-Anaheim corridor (Phase 1) would initiate with a new mile post 0.0 at the junction with the original Phase 1 CHSTP system “spine”.

#### *Mile Post Numbering from Los Angeles*

MP 0.0 would be designated at Los Angeles Union Station. Los Angeles conforms to the criteria because of its identification as a major terminal central to the initial Phase 1 Service Plan that can easily allow for subsequent mile posts to radiate out and extend south to Anaheim and San Diego and north to San Francisco and Sacramento in an easily comprehensible sequential scheme. The numbering scheme compliments the Subdivision alpha tags creating a system mnemonic that accurately depicts the CHSTP for users in a practical, recognizable, configuration.

## **4.0 SUMMARY**

It is proposed that the CHSTP system be described with seven subdivisions designated as BAY, CAPITOL, DESERT, SAN JACINTO, PACHECO, SIERRA and TONGVA and that these subdivisions be further divided into Mile Posts with a numbering sequence beginning from 0.0 in San Francisco prefixed with the initial letter designation of the subdivision where the mile post is located. It is further proposed that all subsequent high-speed corridor extensions (links to Sacramento and San Diego) begin at Mile Post 0.0 to be located at the junction where the extensions connect to the primary corridor “spine” of San Francisco-Los Angeles-Anaheim.