

## SECTION 34 11 30

### EMBEDDED TRACK

#### PART 1 - GENERAL

##### 1.01 SECTION INCLUDES

- A. Forms.
- B. Track concrete.
- C. Rails.

##### 1.02 RELATED SECTIONS

- A. Refer to Section 34 05 17 - Common Work Results for Trackway, for related requirements.

##### 1.03 MEASUREMENT AND PAYMENT

- A. General: Embedded track will not be measured separately for payment. All costs in connection therewith will be considered as included in the applicable Contract lump sum price or the Contract unit price per linear foot for trackwork of the different types indicated as listed in the bid item in the Bid Schedule of the Bid Form.

##### 1.04 SUBMITTALS

- A. Refer to Section 01 33 00 - Submittal Procedures, and Section 01 33 23 - Shop Drawings, Product Data, and Samples, for submittal requirements and procedures.
- B. Work Plans: Submit construction work plans for Embedded Track. Plans shall be prepared and sealed by a civil engineer currently registered in the State of California.
- C. Provide additional submittals as required herein.
- D. All submittals shall be prepared, reviewed, signed, and sealed by a qualified California Registered Professional Engineer, experienced in the design of the item being submitted. This engineer shall include a certification with each submittal that all contract requirements are met for the submittal.

##### 1.05 WORK PLAN

- A. In addition to the other requirements herein the Contractor shall prepare and submit to the Engineer a separate construction work plan for embedded track in accordance with the track requirements and tolerances specified herein. If the work plan is acceptable, the Engineer will issue permission to proceed with construction.
- B. Each work plan shall, at a minimum, include the following items.
  - 1. Step by step construction sequence.
  - 2. Survey control plan.

3. Material handling procedure.
4. Special equipment and tools.
5. Shop Drawings of forms, jigs and supports.
6. Method of protecting any supports to allow removal after concrete installation.
7. Method of treating holes in the concrete created by any temporary supports.
8. Concrete surface and dowel preparation.
9. Methods of protecting existing drainage from deleterious material during construction.
10. Methods of collected and removing washed material, debris and dust.
11. Forming, placing, finishing, and curing of track concrete.
12. Repair procedures for non-conforming concrete.
13. Coordination between the installation of other various track types at interfaces.
14. Repair procedures for deviations in track gage, surface, rail cant, and alignment.
15. Shop drawings of purpose manufactured gauge supports to support track, fasteners and/or rail hold-downs prior to and during concrete placement.
16. CWR handling and installation.
17. CWR adjusting, rail welding, and anchoring to conform to the neutral rail temperature requirements.
18. Field testing and inspection to conform to the quality requirements and tolerances specified herein.
19. Rail boot product information and manufacturers installation instructions.
20. Method of joining rail boot at rail boot joints.

## **1.06 QUALITY ASSURANCE AND CONTROL**

- A. Install materials according to manufacturer's requirements and the requirements specified herein.

## **PART 2 - PRODUCTS**

### **2.01 DISTRICT-FURNISHED MATERIALS**

- A. Refer to Section 01 64 13 - District-Furnished Materials and Equipment, of the Contract Specifications for description and quantity of District-furnished materials.

**2.02 CONTRACTOR-FURNISHED MATERIALS**

- A. All products, tools, materials, equipment and labor required to complete all aspects of the work shall be furnished by the Contractor, and the following.
- B. Provide continuous rubber rail boot as manufactured by Iron Horse Engineering Co., L. B. Foster Co. or equal.
- C. Provide L2 X 3 X 1/4 inch continuous nosing strip along flangeway corner.
  - 1. Nosing strip shall be welded as one continuous piece along each rail.
  - 2. Nosing strip shall have integral 1/2 inch X 4 inch concrete anchors, located on 6 inch minimum centers.
  - 3. Holes, countersinks or screw-type anchors are not acceptable.
- D. Rail anchor bolts shall be provided at 36 inch spacing along each rail.
- E. Rail Clips, purpose designed for rail hold-down, and anchor bolt locations.
- F. Provide other materials as shown on the Contract Drawings.

**PART 3 - EXECUTION**

**3.01 REQUIREMENTS**

- A. Construct embedded track in accordance with all applicable requirements herein and as indicated on the Contract Drawings.

**3.02 EXISTING FACILITIES**

- A. Protect all dowels, drainage facilities, and electrical conduits from damage and plugging. Repair promptly all damage due to Contractor's operations.

**3.03 FORMS**

- A. Design and install forms in accordance with Section 03 11 00 - Concrete Forming.

**3.04 CONCRETE**

- A. Concrete shall be in accordance with Sections 03 20 00 - Concrete Reinforcing, 03 30 00 - Cast-In-Place Concrete, and 03 05 15 - Portland Cement Concrete.
- B. Concrete and concrete reinforcement shall not come into contact with the running rail.

**3.05 PRE-POUR SURVEY**

- A. Immediately prior to pouring track concrete the formwork and supporting jigs shall be surveyed for readiness.
- B. The survey shall take place no more than 4 hours prior to placing track concrete.

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- C. The survey shall be performed by, or under the direction of, a professional land surveyor or civil engineer currently licensed or registered in the State of California.
- D. Measurements shall be taken at each support location and shall include, at a minimum, alignment, surface and elevation and cant of both rails, gage, and crosslevel.
- E. No track concrete may be placed prior to repairing any deviations found during the inspection.
- F. All measurements shall be recorded and submitted to the Engineer on the same day that the measurements are made.

**3.06 RAIL**

- A. Rail shall be protected for damage, nicks, and cuts.
- B. Upon completion, the running surface of the rail shall be clean and free of all dirt, mortar, paint and other substances. .
- C. Rail grinding is not required on embedded track.
- D. All rail testing shall be performed prior to placing track concrete.

**END OF SECTION 34 11 30**