

# Stressing and Anchorage System Hardware Checklist:

Bridge #: \_\_\_\_\_ Transmittal (Reference) #: \_\_\_\_\_

Post-Tensioning Company Name: \_\_\_\_\_

System Name: \_\_\_\_\_ System Location: \_\_\_\_\_

Tendon size: \_\_\_\_\_ Strand diameter (in.): \_\_\_\_\_

The proposed anchorage system is listed on the Caltrans website of METS Authorized  
 Prestress/Post-Tensioning Strand Systems. YES \_\_\_\_\_ NO \_\_\_\_\_

## 1. General Strength Parameters Check

	Authorized (Listed) Value	Actual (Shop Drawing) Value	YES	NO
Pjack force (Kips)				
Min. Concrete Strength (PSI)				

## 2. Anchor Head Check

	Authorized (Listed) Value	Actual (Shop Drawing) Value	YES	NO
Anchor Size				
Material				

## 3. Bearing Plate Check

	Authorized (Listed) Value	Actual (Shop Drawing) Value	YES	NO
Bearing plate size (in.)				
Bearing plate material				

## 4. Wedge Check

	Authorized (Listed) Value	Actual (Shop Drawing) Value	YES	NO
Wedge material				

## 5. Duct Size ID Check

	Required Value per AASHTO	Actual (Shop Drawing) Value	YES	NO
Duct Size ID				

Note: Per AASHTO 5.4.6.2, the inside cross-sectional area of the duct shall be:  
 Push System (common)  $\geq 2.0$  times the area of the total strands.  
 Pull System  $\geq 2.5$  times the area of the total strands.

## 6. Spiral Check (if shown)

	Authorized (Listed) Value	Actual (Shop Drawing) Value	YES	NO
Spiral rebar size				
Pitch				
No. turns				
O.D.				

**The proposed anchorage system qualifies as an authorized Caltrans METS Pre-approved  
 Prestress/Post-Tensioning Strand System.**

YES \_\_\_\_\_ NO \_\_\_\_\_

\_\_\_\_\_  
 (Reviewed By)

\_\_\_\_\_  
 (Date)

Note:

Any additional information shown on the shop drawings that cannot be verified by the Caltrans METS authorized hardware listing is to be used only at the discretion of the Contractor.

## **Instructions/Notes for: “Stressing and Anchorage System Hardware *Checklist*”**

### **Purpose:**

To provide the Designer with a convenient checklist to help expedite the check of the Prestressed/Post-Tensioned anchorage hardware as part of the Bridge Structure Prestress Shop Drawing review.

### **Checklist Steps:**

Once the PS/PT system is located on the authorized Caltrans METS list, gather the information for the following as listed on the *Checklist*. Fill out a separate checklist for each tendon size.

1. General Strength Parameters
  - Pjack force: Usually listed in “Prestressing Calculations” in terms of force per tendon.
  - Min. Concrete Strength: Concrete compressive strength behind bearing hardware.
2. Anchor Head (aka “Wedge Plate”(DSI), “Anchor Head” (Schwager Davis Inc.))
  - Size: Head geometry can be round or square.
  - Material: AISI or ASTM approved.
3. Bearing Plate
  - Size: Plate geometry can be round or square.
  - Material: AISI or ASTM approved.
4. Wedge
  - Material: AISI or ASTM approved.
5. Duct Size
  - Size: Check inside diameter to ensure it meets AASHTO requirements
6. Spiral
  - Rebar Size: Specified for transverse tension in local anchorage zone.
  - Pitch: To insure uniform distribution of bursting/cracking stresses.
  - No. Turns: To insure uniform distribution of bursting/cracking stresses.
  - Outside Diameter: For check of adequate clearance/cover of reinforcement.

This checklist should be kept by the Project Engineer and filed with the project records.

### **References:**

- Caltrans *Internet* Authorized Material List (AML), Post Tensioning Systems The internet web link is as follows:  
[http://www.dot.ca.gov/hq/esc/approved\\_products\\_list/pdf/PTSystems\\_approved.pdf](http://www.dot.ca.gov/hq/esc/approved_products_list/pdf/PTSystems_approved.pdf)
- MTD 11-1 “Prestressed Concrete – Shop Drawing Review”
- DES Structure Construction, Prestress Manual, February 2014