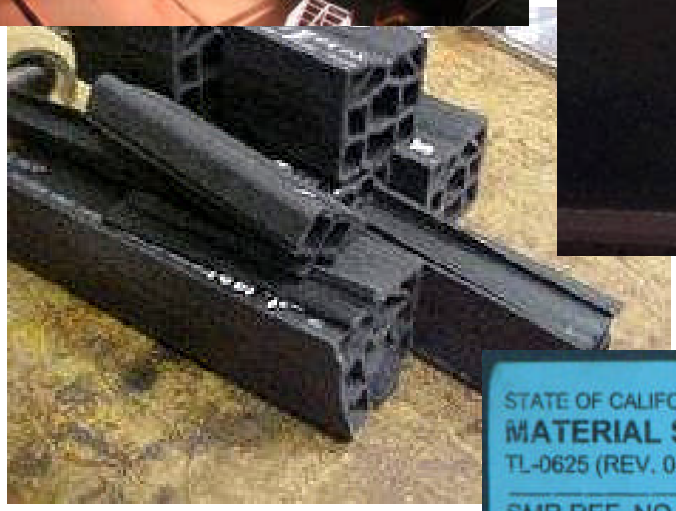
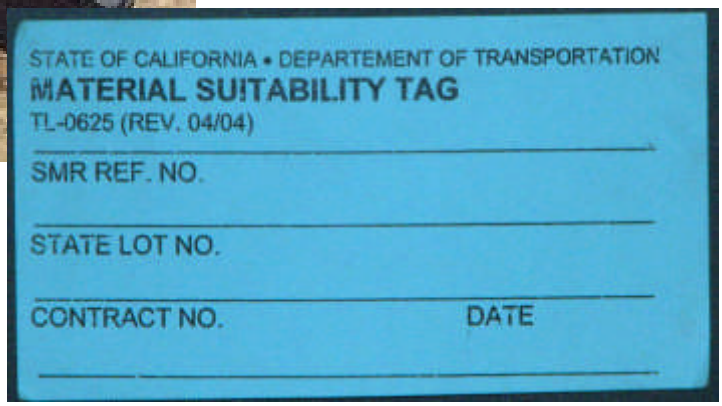
BLUE TAG:
New Material Release Procedures
BRIEFING PACKAGE





Caltrans

What is Blue Tagging?

- Mechanism to keep critical path items on schedule
- Procedures to provide documentation and accountability for materials engineering decisions
- An alternate release procedure that ensures METS engineers make timely engineering decisions

Why Change?

- New Procedures Accelerate Project Delivery
  - Issues and problems resolved remotely
  - METS ensures Contractor notified in a timely manner
  - METS assumes responsibility for formal notifications
- Dealing with NCRs Take Time
  - Communication with Contractor
  - Administrative Backlogs
  - Distances and Differing Time zones
- Schedule Often a Controlling Factor
  - NCRs ignored and issues not addressed until material is on critical path
  - Ensures the right people get involved with material issues
- Improves Quality Control at the source
  - Immediate consequences for non-conforming work
  - Establishes formal and consistent mechanism for suitable material to be accepted
- Allows Acceptance of Fit-for-Purpose Material
  - Quarterly management review of decisions
  - Initiates specification changes for reoccurring issue

Major Concerns Addressed

- ✖ Nonconforming material will be incorporated into projects
  - ✓ Primary purpose is to document and highlight issues that are already happening
- ✖ Contractors will begin expecting a Blue Tag
  - ✓ Contractors already expect Orange Tags for suitable material
- ✖ Procedures give METS too much authority
  - ✓ Decisions still require concurrence from Construction
  - ✓ No change to jobsite inspection procedures
- ✖ Procedures create a contract administration nightmare
  - ✓ CCOs and administrative deductions handled by Construction

Summary of Benefits

- ☆ Resolves issues quickly!
- ☆ Identifies contract issues
- ☆ Properly documents Engineering decisions

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
MATERIALS ENGINEERING AND TESTING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection
Bay Area Branch
690 Walnut Ave., St. 150
Vallejo, CA 94592-1133
(707) 649-5453
FAX: (707) 649-5493

Contract # : 04-0120E4
Cty SF Rte 80 PM 13.4,13.8
File # xx .25 B xxx

MATERIAL SUITABILITY DOCUMENTATION REPORT

Prime Contractor: KIEWIT, FCI, and Manson, a Joint Venture (KFM) **Date:** 06/20/06

Submitting Contractor: Trans Bay Steel **Blue Tag Log No.:** #22, 27, 37, 39, 41, 42, 43, and 73

Location: Napa, California **SMR No.:**07-014,07-015,07-018,07-021,07-022,07-025,07-030,07-031

Initiated By/Why: NCR's 23, 29, 39, 41, 43, 44, 47, 79, and 85

Description of Issue: Unqualified apprentice welders were observed practicing on production material

METS Discussion: Since November 2005, Trans Bay Steel (TBS) has been training new employees on production material. These new employees operate the welding equipment under the supervision and direction of a qualified welding operator. The Contractor believes their training program complies with the contract requirements because a qualified welder is "performing" the welding. This qualified welder is present the entire time that the welding is being performed. The Contractor also maintains that their trainee program does not affect the quality of the product. TBS informed the Department that the welding rejection rate of production welding completed during training (1-2%) is less than the rejection rate of a newly qualified welder operating without supervision (4-5%).

METS maintains that TBS's training program violates the contract requirements. AWS D1.1-2002 code defines the definition of a welder as "one who operates adaptive control, automatic, mechanized, or robotic welding equipment". As such, the contract requires that any welding operator be qualified if they operate welding equipment during production. To date, sixteen (16) nonconformance reports (NCRs) have been generated to document the use of unapproved and/or unqualified welders on the project. METS has resolved three (3) of these NCRs after the Contractor completed Ultrasonic Testing of the welds completed by previously qualified welders who were later approved by the Engineer.

TBS has informed the Department that they will not stop training welders on production material. They also intend to resolve any future NCRs written by METS by performing UT to demonstrate weld quality meets the contract requirements. Given the Contractor's stance, METS has recommended the Department inform the Contractor that future material produced with unqualified welder will be rejected. Construction personnel have informed METS that rejecting material would not benefit the Department and expressed concern about the taking this issue to the Dispute Review Board.

Recommended Action: METS recommends the Department inform the Contractor that any work performed by unqualified welders will be rejected. METS also proposes that the Department remind the Contractor of their option to qualify welders on production material. Section 4.19.1.1 of the AWS D1.1-2002 code allows the Contractor the option to qualify welders on a production groove provided that the initial 380 mm is examined by radiographic testing (RT).

Date and Time discussed with Construction Engineer: Various dates and meetings

Name of Construction Engineer Involved: Mark Woods/Mark Vilcheck (Structure Representative)

Construction Agrees with METS Recommendation?: ☐YES ☒NO

Hardcopy Routing Instructions:
1. Resident Engineer 2. Inspecting Branch Contract File 3. Responsible Branch Contract File (with supporting documentation)
4. Dispatcher/Reviewer for each OSM Branch 5. Quality Assurance Management Branch

MATERIAL SUITABILITY DOCUMENTATION REPORT

Recommendation from Construction (If NO checked above): Construction agrees with METS that the use of welder trainee's is not acceptable and violates the contract specifications. However, Construction has made it clear that they do not feel that rejecting material is the best decision for the project/schedule and that other alternatives need to be explored.

Contract Change Order Required: ☐YES ☒NO If YES, CCO Number: CCO 039

Name of Design Engineer Involved (if applicable): Ade Akinsanya

Recommendation from Design (if applicable): Mr. Akinsanya participated as a member of the Screening Team. See comments below.

Issue Requires OSM and Construction Senior's Resolution: ☒YES ☐NO

Decision by OSM and Construction Seniors (if YES checked above): The Senior's have agreed that METS and Construction have reached impasse regarding the decision of how to best move forward. The Seniors recommends the discussion be elevated to the OSM Chief and Area Construction Manager. The OSM Chief and ACM have agreed that a CCO should be issued in order to address the use of a Welder Trainee Program at TBS. This CCO will also be used to limit the use of this program to only the E2/T1 and Skyway contracts.

Summary of Final Decision: CCO 039 has been issued as a draft to KFM. The CCO is still in negotiations as of 06/20/06.

Comments: Should you require additional information regarding the information on this form, please contact Ryan Smith (858) 232-6799, who represents the Office of Structural Materials for your project.

Issued By: Ryan Smith — Structural Materials Representative

Reviewed By: Keith Hoffman — Branch Senior

Hardcopy Routing Instructions:

1. Resident Engineer 2. Inspecting Branch Contract File 3. Responsible Branch Contract File (with supporting documentation)
4. Dispatcher/Reviewer for each OSM Branch 5. Quality Assurance Management Branch

BLUE TAG ISSUES LOG FOR DISTRICTS 04 and 05

Blue Tag Log Showing Items through 11/14/06

Document No.

BLUE TAG LOG #	DEA	DATE INITIATED	SUMMARY	MATERIAL DESCRIPTION	LOCATION	INITIATED BY	PROPOSED RESOLUTION/STATUS	CONSTRUCTION RESPONSE	DESIGN RESPONSE	Senior Involvement	CCO	Cost/Credit	MATERIAL RELEASED	SMR NUMBER
MAJOR ISSUES														
119	**04-0120E4**	10/03/06	The Contractor has discovered 16 additional anchor bolt holes are mislocated in the endplates around the center pile sleeve (PS 13). The Contractor claims these holes were previously cut by USI and are between 2-27mm out of tolerance. On 10/10/06, the Contractor notified the Department of two additional holes that are 77mm out their theoretical locations.	Anchor Rod Holes	The Fabricator Eastside, CA	RFI 308 RFI 318	The Contractor is proposing to slot the miscut holes and use a 55mm x 180mm x 180mm bearing plate in 13 of the 16 locations in Area E in order to provide proper anchor rod hole size as well as alignment. The Contractor intends to drill the corrective hole in the center of each bearing plate except for 3 of the 13 locations in Area E. Due to the proximity of the diaphragm plate to the proposed location of the bearing plate, the Contractor requests that three bearing plates contain a corrective hole that is to be drilled off center in order to aide in the alignment of the plate. However, the Contractor has also indicated that these three locations would require a partial removal of the end plate's backing bar.	Concurs with METS and Design.	The Design team has allowed the slotted hole; and the 50mm bearing plate in order to compensate for the loss in bearing surface. Additionally, the rod should have at least 50mm of stickout once the nut has been fastened.	NO			NO	
118	**05-256984**	08/31/06	The Contractor's Quality Control has allowed the welding of a complete joint penetration weld joining end plates P154-1 and P134-2 with an offset (misalignment) varying between approximately seven and ten millimeters. The misalignment is outside the tolerances set in AWS D1.5-2002, Section 3.3.3.	Plates 154 and 134	Ready-Steel, Inc., Portland OR	NCR 119 RFI 288 RFI 293 RFI 297	The Contractor has stated they can not get the plates into alignment without removing the stiffeners and removing/refitting the endplate. Thus the Contractor is requesting to build the weld at a slope after welding the two endplates together. This affects the footing in two locations (Areas C and G) where the Contractor has fit the Subassemblies that were prefabricated in the fab shop. METS approved the Contractor's request to transistion the weld at 2.5:1 provided that the area was milled to provide a flat bearing surface for the anchor rod nut and pipe sleeve guide.	Awaiting written response from The Contractor. Construction to issue a CCO to prevent future claims and this is an RFC not an RFI. CCO pending at this time.	Approved the Contractor's request to transistion the weld at 2.5:1 provided that the was milled to provide a flat bearing surface for the anchor rod nut and pipe sleeve guide.	NO	CCO ___	NO COST	NO	**N/A**
107	**04-236894**	07/13/06	The Contractor Quality Control (QC) Inspectors have allowed 40 anchor rod holes to be out of tolerance. Of these 40 holes, 38 were cut into the endplates prior to welding into the footing (approximately 7mm to 20mm out of tolerance) and two were miscut due to layout error (approximately 1mm out of tolerance).	Anchor Rod Holes in T1 Endplates	Beams-R-Us Steeltown, CA	RFI 272	The Contractor had stopped cutting the anchor holes on the loose plate and is now cutting them after the plate has been installed and welded into the structure as this has proven to successful on the 44 of 46 holes that have been cut post welding. The Contractor has requested to repair the out of tolerance holes by slotting the hole but did not propose the addition of a bearing plate as requested by the Design Team. METS supports the response from the Design Team.	Concurs with METS and Design. Construction to issue a CCO to prevent future claims and this is an RFC not an RFI.	The Design team has allowed the slotted hole; however, a 50mm bearing plate will be necessary to compensate for the loss in bearing surface. Additionally, the rod should have at least 50mm of stickout once the nut has been fastened.	NO	CCO ___	NO COST	NO	**N/A**
SECOND TIER ISSUES														
50	**05-635894**	02/24/06	The Contractor fabricated the steel girders that do not meet contract dimensional tolerances for length and circumference.	Girder E2-4 E2-8, and T1-10	WIO, Vancouver, WA	RFI 188 RFI 192 RFI 211	The Contractor feels the material is fit for purpose and has submitted an RFI requesting the State to accept as is. The Department has issued CCO ___ and is pending approval at this time.	Concurs with METS and Design.	Designers have verified the pile sleeves can be used with the existing length and circumference.	NO	CCO ___	NO COST	YES (BLUE)	**XX-016 XX-017 XX-020**
99	**04-896574**	06/26/06	The The Contractor Quality Control (QC) Inspectors allowed the modification of the weld access openings ("snipes") on multiple Type 3 stiffener plates without prior approval. The snipes were modified into cope holes with radii varying from 65 mm to 76 mm.	Type 3 Stiffener Plates	TKX, Vallejo, CA	NCR 102 RFI 257 RFI 317	OSM takes no exception to the Contractor's request provided that the Design Team is further consulted regarding the change in weld length after the 75mm weld access hole is added.	Concurs with METS and Design response. CCO to be issued to prevent The Contractor from asking for additional money. CCO pending at this time.	Design Team has expressed concern regarding the reduction in length of the bottom stiffener welds. Existing stiffeners to remain and future cope holes (upper) approved for 60mm radius.	NO	CCO ___	NO COST	NO	**N/A**
103	**04-523644**	06/12/06	The Contractor is requesting a material substitution for the dowel bar material from an ASTM A633 Grade E to ASTM A765 Grade IV steel. The Contractor can purchase the A765 Grade IV material and meet all the required specifications for the specified material; however, The Contractor can not guarantee the tensile strength.	T1 Dowel Bars	Precision Fabrictors, Burlingame, CA	RFI 256	The specified tensile strength for the material is 80 ksi and the Contractor can provide a consistent tensile strength of 78 ksi. If the proposed ASTM A765 steel can meet the minimum yield strength of 50 ksi, METS has no objection to lowering the tensile strength requirement from 80ksi to 78 ksi provided the Design Team also agrees with the use of the A765 Grade IV material.	Concurs with METS and Design. Will issue a CCO to incorporate into the contract.	Design is ok with the proposal to substitute material provided the material meets the required yield strength and can be guaranteed to meet a minimum 78ksi tensile strength.	NO	CCO ___	NO COST	NO	**N/A**
124	**04-365494**	10/30/06	The Contractor welded the T1-5 stiffener to the GS-8 girder with a misalignment that exceeds the maximum offset allowed. Two localized areas have an offset in excess of 6mm; 490mm total length with a maximum offset measured to be 10mm and 370mm total length with a maximum radial offset measured to be 9mm.	Pile T1-5	FMT, Vancouver, WA	NCR 124	The AWS code allows for a 4:1 transition between joining members where the misalignment does not exceed 10mm. However, METS has consulted the Designer regarding the issue and have agreed that the additional 1mm of misalignment will not adversely affect the performance of the pile if transitioned at 4:1 also. METS agrees to release pile after the Contractor transitions the misalignment.	Concurs with METS and Design	Agrees that an additional 1mm of misalignment will not adversely affect the performance of the pile if the affected area is transisition at 4:1.	NO			YES (BLUE)	**07-033**