

**STAFF REPORT FOR CALENDAR ITEM NO.: 7
FOR THE MEETING OF: March 25, 2013**

TRANSBAY JOINT POWERS AUTHORITY

BRIEF DESCRIPTION:

Requesting that the TJPA Board of Directors authorize the Executive Director to direct architectural consultants Pelli Clarke Pelli Architects to:

1. Redesign the W-1 System of the Transbay Transit Center from glass to perforated metal panels to improve the protective and life safety designs of the facility and reduce the cost of construction; and
2. Implement design changes in the Phase I Construction Documents in accordance with the Design Guidance Criteria contained in the 2012 update of the Risk and Vulnerability Assessment and the Addendum documentation associated with the W-1 System for the Transbay Transit Center Program.

REPORT:

W-1 System

On September 20, 2007, the TJPA Board, in Resolution 07-034, approved Pelli Clarke Pelli Architects (PCPA) as the design architect for the Transbay Transit Center. The architect's design concept, as shown in initial renderings presented during the TJPA's Design and Development Competition, featured extensive use of glass, including a glass awning system which formed the primary façade around the perimeter of the building. The awning system around the primary facade of the building is referred to as the "W-1 System."

PCPA began design following the Board's approval of Resolution 08-025 on May 15, 2008, authorizing the Executive Director to execute an agreement with PCPA for design and construction administration services for the Transit Center Building.

In 2010, the decision was made to procure the W-1 System for the Transit Center as part of a trade package comprising five separate specialty glazing systems. TG08.1, Glazing Design-Build, was issued for bid on June 3, 2011.

A comprehensive update of the project Risk and Vulnerability Assessment (RVA) began in late 2011, concurrent with the bidding period for the TG08.1 package. As part of the RVA update, the security subject matter experts recommended pre-bid blast testing of the W-1 System in order to provide enhanced information to the bidders. In January 2012, the bidding process for package TG08.1 was suspended to allow for the fabrication and testing of prototypes for the W-1 System to evaluate the performance of alternative glazing materials and attachment designs.

After the completion of the prototype process and subsequent analysis, the RVA team finalized their update of the RVA Design Guidance Criteria (DGC). The design team estimated the cost of

meeting the DGC requirements relating to the W-1 System would increase the cost of the W-1 System by approximately \$7.5 million.

Because of the W-1 System's large area and proportionately large cost, as well as the estimated increased cost to implement the DGC recommendations for a glass W-1 System, the TJPA and the design team identified the W-1 System as a potential area for cost reduction through Value Engineering. In particular, the program team recommended alternative materials be studied for the W-1 System and gave the design team a target of reducing the total cost of the W-1 System of \$17.5M, inclusive of avoided RVA costs.

The design team has recommended that perforated metal panels replace the glass in the W-1 System. Under the design team's proposal, other aspects of the W-1 (geometry, panel size, and substructure) are expected to stay consistent with the current design.

Staff has concluded that substituting perforated metal panels for glass in the W-1 System will result in substantial cost savings. The RVA team has evaluated the proposed material substitution, concluded that it would mitigate potential hazards under some conditions, and provided revised DGC for the proposed metal panels. In light of these considerations, Staff recommends that the Board authorize this change to the design of the W-1 System.

Risk and Vulnerability Assessment

During Schematic Design in 2009, the TJPA engaged URS security specialists to prepare a Risk and Vulnerability Assessment (RVA) identifying the site-specific hazards and threats – both natural and manmade (design basis threats) -- potentially facing the Transit Center and its related infrastructure and to establish appropriate mitigation measures.

Prior to finalizing the construction documents, the RVA effort was updated in 2011-12. The 2012 update was initiated on PCPA's Phase 1 50% Construction Documents. The update was necessary and appropriate to address the significantly more advanced design of the Transit Center, and changes that had been made to the phasing of the Program and its components. The update was also required because the operational needs of the transit agencies that will use the Transit Center, the requirements of local police, fire, and emergency services, and the threat environment and industry best practices and standards for protective guidance had all evolved since 2009. Updated performance criteria were also developed following best practice federal guidelines and a methodology widely used and accepted to evaluate high-profile critical infrastructure like the Transit Center.

After rigorous review, the final RVA report, including updated DGC, was completed in October 2012. The recommendations call for increased safety and security measures to be incorporated into the design. The updated DGC are consistent with federal guidance and industry best practice, and were thoroughly vetted to confirm the value of the recommendations. TJPA and PMPC Staff, our security consultants, peer review subject matter experts, and the design team have worked together to develop optimal protective design solutions conforming to the DGC and to identify DGC whose implementation can be feasibly and appropriately deferred until Phase 2 of the program. The design team has estimated that the DGC that are recommended for implementation in Phase 1 will increase the cost of construction by \$58.6 M.

Although not the reason for updating the RVA, the updated document and the implementation of the DGC would allow the TJPA to seek designation and certification under the Support Anti-terrorism by Fostering Effective Technologies Act of 2002, known as the SAFETY Act. Such designation and certification would provide significant liability protection to the TJPA.

Staff is in the process of evaluating all of the issues impacting the Phase 1 budget – including the impacts of the RVA, but also including, most notably, the recent bid received for the TG07.1 the Structural Steel package – with the intention of recommending changes to the Phase 1 budget.

In advance of a recommendation for a revised Phase 1 budget, and based on the recommendations of the subject matter experts advising the TJPA, Staff recommends that the Board authorize TJPA staff to direct the design team to incorporate into the 100% CDs the necessary design changes to meet the updated RVA Design Guidance Criteria. The current schedule for completion of the Phase 1 Construction Documents is May 31, 2013. Authorizing this direction now will allow PCPA to continue incorporating recommended mitigation measures into the design and maintain the current delivery schedule of May 31, 2013. Staff will need to bring a revised budget to the TJPA Board for adoption before additional trade packages incorporating these changes could be awarded.

RECOMMENDATION:

The TJPA Executive Director and Staff recommend that the TJPA Board of Directors authorize the Executive Director to direct architectural consultants Pelli Clarke Pelli Architects to:

1. Redesign the W-1 System of the Transbay Transit Center from glass to perforated metal panels to improve the protective and life safety designs of the facility and reduce the cost of construction; and
2. Implement design changes in the Phase I Construction Documents in accordance with the Design Guidance Criteria contained in the 2012 update of the Risk and Vulnerability Assessment for the Transbay Transit Center Program.

Providing this direction will allow the Architect to prepare appropriate W-1 design documents to be issued as an addendum to trade package TG08.1 and resume the bidding process and to maintain the May 31, 2013 schedule for delivery of the Construction Documents package.

ENCLOSURES:

1. Resolution

**TRANSBAY JOINT POWERS AUTHORITY
BOARD OF DIRECTORS**

Resolution No. _____

WHEREAS, On September 20, 2007, the TJPA Board, in Resolution 07-034, approved Pelli Clarke Pelli Architects (PCPA) as the design architect for the Transbay Transit Center; and

WHEREAS, On May 15, 2008, The TJPA Board, in Resolution 08-025, authorized the Executive Director to execute an agreement with PCPA for design and construction administration services for the Transit Center Building; and

WHEREAS, The Architect's design concept featured glass awning system which formed the primary façade around the perimeter of the building which has come to be referred to as the "W-1 System"; and

WHEREAS, In 2009 during the Transit Center Schematic Design Phase the TJPA engaged URS security specialists to prepare a Risk and Vulnerability Assessment (RVA) identifying the site-specific hazards and threats – both natural and manmade – potentially facing the Transit Center and its related infrastructure and to establish appropriate mitigation measures; and

WHEREAS, In 2011 the TJPA engaged URS security specialists to update the Risk and Vulnerability Assessment (RVA) based upon the 50% Construction Documents and changes in protective guidance practices and industry best practices since the preparation of the original RVA; and

WHEREAS, The RVA update was completed in October 2012 and included revised Design Guidance Criteria (DGC) for the design of the Transit Center; and

WHEREAS, The 100% Construction Documents are to be delivered on May 31, 2013, and if that deliverable is to address the DGC, the Architect must be directed to incorporate the recommendations in finalizing the package; and

WHEREAS, The design team must prepare and issue an addendum to update the plans and specifications for Trade Package TG08.1 to resume the schedule for bidding that package; and

WHEREAS, Reducing the cost of the W-1 System by changing the panels from glass to perforated metal requires that design change be incorporated into the addendum that is being prepared; now, therefore, be it

RESOLVED, That the TJPA Board authorizes the Executive Director to direct architectural consultants Pelli Clarke Pelli Architects to redesign the W-1 System from glass to perforated metal panels to improve the protective and life safety designs of the facility and reduce the cost of construction, improve facility safety, and to implement changes to the Phase 1 Construction Documents in accordance with the Design Guidance Criteria of the 2012 Update to the Risk and Vulnerability Assessment.

I hereby certify that the foregoing resolution was adopted by the Transbay Joint Powers Authority Board of Directors at its meeting of March 25, 2013.

Secretary, Transbay Joint Powers Authority