

**STAFF REPORT FOR CALENDAR ITEM NO.: 8
FOR THE MEETING OF: October 11, 2012**

TRANSBAY JOINT POWERS AUTHORITY

BRIEF DESCRIPTION:

Amending Contract No. 07-04-TTC-000, Professional Design Services for the Transbay Transit Center Building and Related Structures, with Pelli Clarke Pelli Architects, Inc. to increase the Additional Services amount under Paragraph 8.2 by \$14,014,222 from \$35,985,778 to \$50,000,000.

SUMMARY:

- On June 2, 2006, the Transbay Joint Powers Authority Board of Directors (“TJPA Board”) adopted the phasing strategy for the Transbay Program and construction of the Transbay Transit Center.
- On May 15, 2008, the TJPA Board adopted Resolution No. 08-025, which authorized the TJPA Executive Director to execute on behalf of the TJPA Agreement No. 07-04-TTC-000 with Pelli Clarke Pelli Architects, Inc. (“PCPA”) for design services in connection with the design and construction of the Transbay Transit Center Building and Related Structures (the "Agreement").
- The Agreement contemplated a "top-down" construction methodology to make maximum utility of the funding available at the time. The above-grade levels would be constructed on a pile supported foundation to allow for initial bus operations, and the below-grade levels for rail operations would be excavated and constructed beneath the structure in a second phase.
- On November 18, 2008, voters in California approved Proposition 1A establishing \$9.95 Billion in funding for the development of High Speed Train (“HST”) service under the California High Speed Rail Authority (“CHSRA”).
- On December 18, 2008, the TJPA convened a Structural and Seismic Review Committee (“SSRC”), an independent panel of structural, geotechnical, and seismic experts, to provide oversight of the structural design of the Transbay Transit Center and to provide input and guidance to the Department of Building Inspection (“DBI”) in their review of the Transbay Transit Center design for code compliance. Over the course of design, the SSRC has requested the design team provide additional studies and analyses to demonstrate the performance of the structural design.
- In 2008-2009, URS Corporation (“URS”) performed a project Risk and Vulnerability Assessment (“RVA”) for the Transbay Transit Center. The RVA established security Design Guidance Criteria (“DGC”) for the Transbay Transit Center.

- On April 9, 2009, the TJPA Board approved Amendment No. 1 to the Agreement to evaluate drilled piers and alternate means of constructing the shoring walls which form the perimeter of the excavation for the train levels of the Transbay Transit Center in an amount not to exceed \$5,000,000.
- On July 31, 2009, the TJPA Board approved Amendment No. 1A to the Agreement to reduce the scope of Amendment No. 01 to planning, monitoring, and analyzing the test results for an amount not to exceed \$850,000. The construction of the test structures was performed by Webcor/Obayashi, JV, the Construction Manager/General Contractor for the Transbay Transit Center construction, as a preconstruction service.
- On January 28, 2010, the Federal Railroad Administration (“FRA”) announced the award of \$2.25 billion in ARRA funding to the State of California including \$400 million to the TJPA for the construction of the rail levels of the Transbay Transit Center.
- On October 14, 2010, the TJPA Board approved Amendment No. 2 to the Agreement to incorporate the "bottom-up" sequence for design and construction, to clarify the scope of Phase I and Phase II construction and to increase the Additional Services amount to \$30,000,000 to reflect these and other known additional services.
- Subsequent design reviews by the SSRC, DBI, Caltrans and the operators have entailed further study and required design and program revisions beyond those anticipated at the time of Amendment No. 2.
- Between February and May 2011, TJPA reviewed the layout and organization of retail programs in the Transbay Transit Center to improve the program massing and circulation through the Transbay Transit Center. The retail revenues will help to support the future costs of operating the Transbay Transit Center.
- In July 2011, the TJPA initiated an update of the RVA documents.
- On April 12, 2012, the TJPA Board approved Amendment No. 3 to the Agreement amending specific contract language to require that the geotechnical consultant of PCPA be directly liable to TJPA for “negligent” errors and omissions, as opposed to directly liable to TJPA for “any” errors and omissions.
- On June 29, 2012, the Executive Director executed Amendment No. 4 to the Agreement to increase the Additional Services amount by \$5,985,778 to address specific changes in the basis of design arising from the SSRC, retail and operator reviews and to provide capacity for ongoing studies and analyses in support of the RVA process to continue on a Time and Materials (“T&M”) basis.
- On September 14, 2012, URS finalized its RVA update that will allow PCPA to complete the construction documents for the Transbay Transit Center. TJPA Staff and PCPA have been negotiating a fee adjustment for these and other additional services.

- The current schedule calls for completion of the Construction Documents by May 2013. The IT network, video surveillance, and signage specifications will be completed in 2014 to ensure that those trade packages reflect the most current technology when bid.
- The Phase 1 Program budget for Transit Center design services provides for \$50,000,000 in Additional Services.
- TJPA Staff has prepared, and recommends that the TJPA Board authorize, an amendment to the Agreement to increase the Additional Services amount under Paragraph 8.2 by \$14,014,222 to the budgeted amount of \$50,000,000 so that the effort to incorporate the RVA changes can proceed on a T&M basis and to allow for the authorization of fee adjustments when negotiations with PCPA are finalized.

BACKGROUND:

Amendment No. 2

The Agreement with PCPA contemplated the construction of the Transbay Transit Center would pursue a "top-down" approach in which the above-grade levels would be constructed prior to the below-grade levels. This strategy would have leveraged the available funding to construct the above-grade elements of the Transbay Transit Center, supporting bus operations while providing for the subsequent excavation of the below-grade levels in a second phase.

After ARRA funding was secured to incorporate the train box into Phase 1, Amendment No. 2 modified the scope of design to pursue a conventional construction approach in which the below-grade structure would be constructed along with the above-grade facilities. To address this revised design approach, allow for two additional years of Construction Administration services, provide for additional studies and analyses requested by the SSRC, and in anticipation of incorporation of design requirements being provided by CHSRA, Amendment No. 2 also increased the Additional Services amount under Paragraph 8.2 of the Agreement to \$30 million.

Amendment No. 4

Incorporating the design and construction of the rail levels and the requirements of the CHSRA had secondary design impacts not fully appreciated at the time of Amendment No. 2; for example, it was determined through further analysis that the increase in track radii entering the station would require the introduction of the cable-supported bus ramp span where the ramps connect to the Transbay Transit Center.

Coordination with and design review by Caltrans necessitated further changes to the bus ramp design, including modification of the existing Fremont Street off-ramp where the bus ramps will connect to the existing structure. The SSRC also requested additional studies and analyses be prepared by Thornton Tomasetti, the structural designer, and ARUP, the geotechnical engineer, to quantify and illustrate the performance of the structural design for the Transbay Transit Center and bus ramps, including soil-structure interaction analyses, finite element analysis, cyclic load testing, and additional and expanded seismic analyses.

Amendment No. 4 increased the Additional Services amount under Paragraph 8.2 of the Agreement by \$5,985,778 to \$35,985,778 to account for these services, modifications to the retail program, and other program changes, and to allow PCPA, on a T&M basis, to perform

additional engineering analysis, studies, and cost estimating services in support of the RVA update process.

EXPLANATION:

Amendment No. 5

Amendment No. 5 would increase the Additional Services amount to address anticipated costs for Additional Services, if and to the extent such Additional Services are authorized in writing by the TJPA, that are associated with the revised Design Guidance Criteria of the updated RVA and with other items not related to the RVA.

Federal Emergency Management Administration (“FEMA”) and the Department of Homeland Security (“DHS”) establish guidelines for Risk and Vulnerability Assessments for facilities with the significance and importance of the Transbay Transit Center. RVAs are regularly updated every 2-3 years.

In July 2011, the TJPA initiated an update of the original 2009 RVA to inform the completion of the Construction Documents. The update was finalized in September 2012 and PCPA submitted estimates of the design effort required to address the recommendations of the updated RVA in completing the Construction Documents. The TJPA and PCPA are negotiating the fees appropriate to make the indicated design changes.

The Construction Documents are scheduled to be completed in May of 2013. In order to complete the design by that date, meet interim milestones, and support the overall schedule for packaging and bidding construction trade packages, it is necessary for the design team to begin incorporating the DGC recommendations by the updated RVA into the design documents. TJPA staff and PCPA are actively negotiating a fee adjustment to make these changes, and TJPA proposes to authorize PCPA to begin implementing the changes on a T&M basis while continuing to pursue a lump sum fee adjustment.

An increase to the Additional Services amount under Paragraph 8.2 by \$14,014,222 from \$35,985,778 to \$50,000,000 is recommended to initiate the process of implementing the recommendations of the updated RVA and to allow sufficient contractual capacity to authorize the full scope of additional services when fee negotiations are completed. This increase in the Additional Service amount would be within the budgeted amount for Additional Services and within the overall Phase 1 Program budget for Transit Center.

RECOMMENDATION:

Staff recommends that the TJPA Board authorize amending Contract No. 07-04-TTC-000, Professional Design Services for the Transbay Transit Center Building and Related Structures, with Pelli Clarke Pelli Architects, Inc. (the “Agreement”), pursuant to the terms and conditions of proposed Amendment No. 5 to increase the Additional Services amount under Paragraph 8.2 of the Agreement by \$14,014,222 from \$35,985,778 to \$50,000,000.

ENCLOSURES:

1. Resolution
2. Amendment

**TRANSBAY JOINT POWERS AUTHORITY
BOARD OF DIRECTORS**

Resolution No. _____

WHEREAS, The Transbay Transit Center will be a landmark intermodal transit center supporting rail and bus operations; and

WHEREAS, On June 2, 2006, the Transbay Joint Powers Authority Board of Directors (the "TJPA Board") adopted the phasing strategy for the construction of the Transbay Transit Center; and

WHEREAS, On May 15, 2008, the TJPA Board adopted Resolution No. 08-025, which authorized the TJPA Executive Director to execute on behalf of the TJPA Agreement No. 07-04-TTC-000 with Pelli Clarke Pelli Architects, Inc. ("PCPA") for design services in connection with the design and construction of the Transbay Transit Center Building and Related Structures (the "Agreement"); and

WHEREAS, On November 18, 2008, voters in California approved Proposition 1A establishing \$9.95 Billion in funding for the development of High Speed Train ("HST") service under the California High Speed Rail Authority ("CHSRA"); and

WHEREAS, On December 18, 2008, the TJPA convened a Structural and Seismic Review Committee ("SSRC"), an independent panel of structural, geotechnical, and seismic experts, to provide peer review and oversight of the structural design of the Transbay Transit Center; and

WHEREAS, On April 9, 2009, the TJPA Board approved Amendment No. 1 to the Agreement for physical tests to evaluate drilled piers and to evaluate means of constructing the shoring walls which form the perimeter of the excavation for the Transbay Transit Center in an amount not to exceed \$5,000,000; and

WHEREAS, On July 31, 2009, the TJPA Board approved Amendment No. 1A to the Agreement to reduce the scope of Amendment No. 1 to plan, monitor, and analyze the test results in an amount not to exceed \$850,000; and

WHEREAS, The August 25, 2009 Risk and Vulnerability Assessment ("RVA") prepared by URS Corporation ("URS") established Design Guidance Criteria for the Transbay Transit Center design; and

WHEREAS, On January 28, 2010, the Federal Railroad Administration ("FRA") announced the award of \$2.25 billion in ARRA funding to the State of California including \$400 million to the TJPA for the construction of the rail levels of the Transbay Transit Center; and

WHEREAS, On October 14, 2010, the TJPA Board approved Amendment No. 2 to the Agreement to incorporate the ARRA scope and modify the Fixed Budget Limit; and

WHEREAS, In the Spring of 2011, TJPA reviewed the layout and organization of retail programs in the Transbay Transit Center to improve the program massing and circulation through the Transbay Transit Center; and

WHEREAS, In July 2011, the TJPA initiated a review and update of the project RVA;
and

WHEREAS, On April 12, 2012, the TJPA Board approved Amendment No. 3 to the Agreement to add specific contract language to require that the geotechnical consultant be directly liable to TJPA for negligent errors and omissions; and

WHEREAS, On June 29, 2012, the Executive Director executed Amendment No. 4 to the Agreement to increase the Additional Services amount by \$5,985,778 to address specific changes in the basis of design arising from review comments from transit operators, the SSRC, and retail consultants and for studies and analyses by PCPA and its design team in support of the RVA update process; and

WHEREAS, On September 14, 2012, URS finalized the update of the 2009 RVA and PCPA submitted estimates of the design effort required to address the recommendations of the updated RVA in completing the Construction Documents; and

WHEREAS, TJPA Staff and PCPA are negotiating a fee adjustment for these and other additional services; and

WHEREAS, The Construction Documents are to be completed by May 2013 and the information technology, network, video surveillance, and signage specifications are to be completed in 2014 to reflect the most current technology; and

WHEREAS, Completing the Construction Documents by May 2013, meeting interim milestones, and maintaining the schedule for packaging and bidding construction trade packages requires PCPA and its design team to immediately commence incorporating the recommended RVA Design Guidance Criteria into their design and the Construction Documents; and

WHEREAS, Increasing the Additional Services amount under Paragraph 8.2 of the Agreement by \$14,014,222 from \$35,985,778 to \$50,000,000 would be within the Phase 1 Program budget for Transit Center design services; now, therefore, be it

RESOLVED, That the TJPA Board authorizes the Executive Director to execute Amendment No. 5 to the Agreement to increase the Additional Services amount by \$14,014,222 from \$35,985,778 to \$50,000,000 to address anticipated costs for Additional Services, if and to the extent such Additional Services are authorized in writing by the TJPA, that are associated with the revised Design Guidance Criteria of the updated RVA and with other items not related to the RVA.

I hereby certify that the foregoing resolution was adopted by the Transbay Joint Powers Authority Board of Directors at its meeting of October 11, 2012.

Secretary, Transbay Joint Powers Authority

AGREEMENT
AMENDMENT NO. 5 BETWEEN
TRANSBAY JOINT POWERS AUTHORITY
AND
PELLI CLARKE PELLI ARCHITECTS, INC.

This Amendment is entered into as of October ____, 2012, by and between the Transbay Joint Powers Authority (the "TJPA") and Pelli Clarke Pelli Architects, Inc. (the "Architect"). By this Amendment No. 5, the TJPA and the Architect hereby modify Agreement No. 07-04-TTC-000, dated May 15, 2008 (the "Agreement"), as previously amended by Amendments 1A through 4, only to the extent expressly provided in this Amendment No. 5. All other terms and conditions of the Agreement shall remain in full force and effect.

Recitals

- A.** On May 15, 2008, the TJPA Board adopted Resolution No. 08-025, which authorized the TJPA Executive Director to execute on behalf of the TJPA the Agreement, Agreement No. 07-04-TTC-000, with the Architect for design services in connection with the design and construction of the Transbay Transit Center Building and Related Structures (the "Project").
- B.** On April 9, 2009, the TJPA Board approved Amendment No. 1 to the Agreement, for services associated with prototype testing of the shoring wall and buttress ("SW/B Tests").
- C.** On July 31, 2009, the TJPA Board approved Amendment No. 1A to the Agreement, clarifying roles and responsibilities among the TJPA, the Architect, the Architect's subconsultant Arup, and the Construction Manager/General Contractor Webcor/Obayashi for the SW/B Tests.
- D.** The August 25, 2009 Risk and Vulnerability Assessment ("RVA") prepared for the TJPA by its consultant, URS Corporation ("URS"), established Design Guidance Criteria for the Transbay Transit Center design.
- E.** On October 14, 2010, the TJPA Board approved Amendment No. 2 to the Agreement, incorporating the "bottom-up" construction sequence into the schedule, scope, and Fixed Budget Limit for the design, and increasing the Additional Services amount to \$30,000,000.
- F.** On April 12, 2012, the TJPA Board approved Amendment No. 3 to the Agreement, to clarify that the Architect's subconsultant Arup is directly liable to TJPA for negligent errors and omissions for its provision of geotechnical services under the Agreement.
- G.** On June 29, 2012, the Executive Director executed Amendment No. 4 to the Agreement to increase the Additional Services amount by \$5,985,778 from \$30,000,000 to \$35,985,778.
- H.** On September 14, 2012, URS finalized its update of the 2009 RVA document.
- I.** By this Amendment No. 5, the TJPA and the Architect propose to increase the Additional Services amount by \$14,014,222 from \$35,985,778 to \$50,000,000 to address anticipated costs for Additional Services, if and to the extent such Additional Services are

authorized in writing by the TJPA, that are associated with the revised Design Guidance Criteria of the updated RVA and with other items not related to the RVA.

J. Other than the provisions expressly modified by this Amendment No. 5, or any prior Amendment, all terms and conditions of the Agreement remain in full force and effect.

Modified Terms and Conditions

ARTICLE 8. COMPENSATION.

8.2. Additional Services.

Paragraph 8.2 of the Agreement (as previously modified by Amendments 2 and 4) is hereby further modified to increase the Additional Services amount by \$14,014,222 from \$35,985,778 to \$50,000,000.

IN WITNESS WHEREOF, the parties hereto have executed this contract Amendment No. 5 on the day first mentioned above.

TRANSBAY JOINT POWERS AUTHORITY

Maria Ayerdi-Kaplan
Executive Director

Transbay Joint Powers Authority

Transbay Joint Powers Authority
Board of Directors
Resolution No. _____
Adopted: _____
Attest:

Secretary, TJPA Board

Approved as to form:

TJPA Legal Counsel

PELLI CLARKE PELLI ARCHITECTS, INC.

Architect

By signing this Agreement, I certify that I comply with the requirements of the Minimum Compensation Ordinance, which entitle Covered Employees to certain minimum hourly wages and compensated and uncompensated time off.

I have read and understood paragraph 55, San Francisco's statement urging companies doing business in Northern Ireland to move towards resolving employment inequities, encouraging compliance with the MacBride Principles, and urging San Francisco companies to do business with corporations that abide by the MacBride Principles.

Authorized Signature

Fred W. Clarke, III

Printed Name

Executive Vice President and Senior Principal

Title

Pelli Clarke Pelli Architects, Inc.

Company Name

1056 Chapel Street

Address

New Haven, CT 06501

City, State, ZIP

203-777-2515

Phone Number

06-1228461

Federal Employer ID Number



Design Update and PCPA Agreement Amendment 5

October 11, 2012

Transbay Transit Center

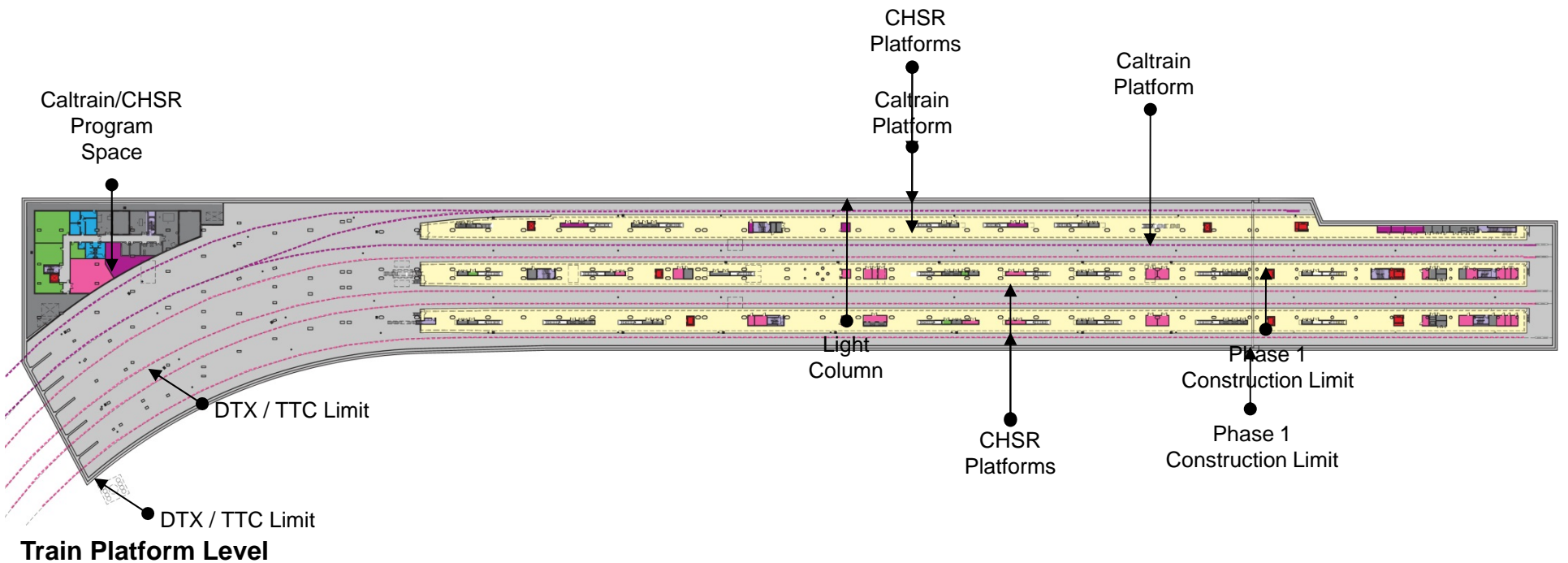
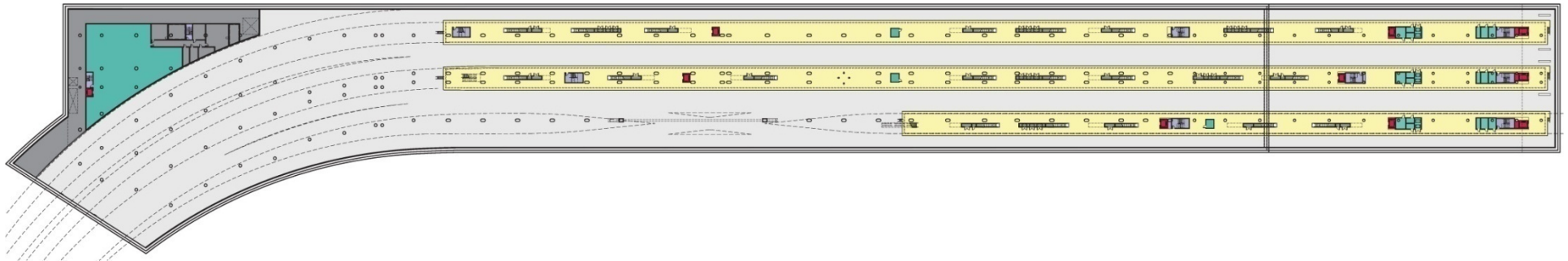
TJPA





Transbay Transit Center

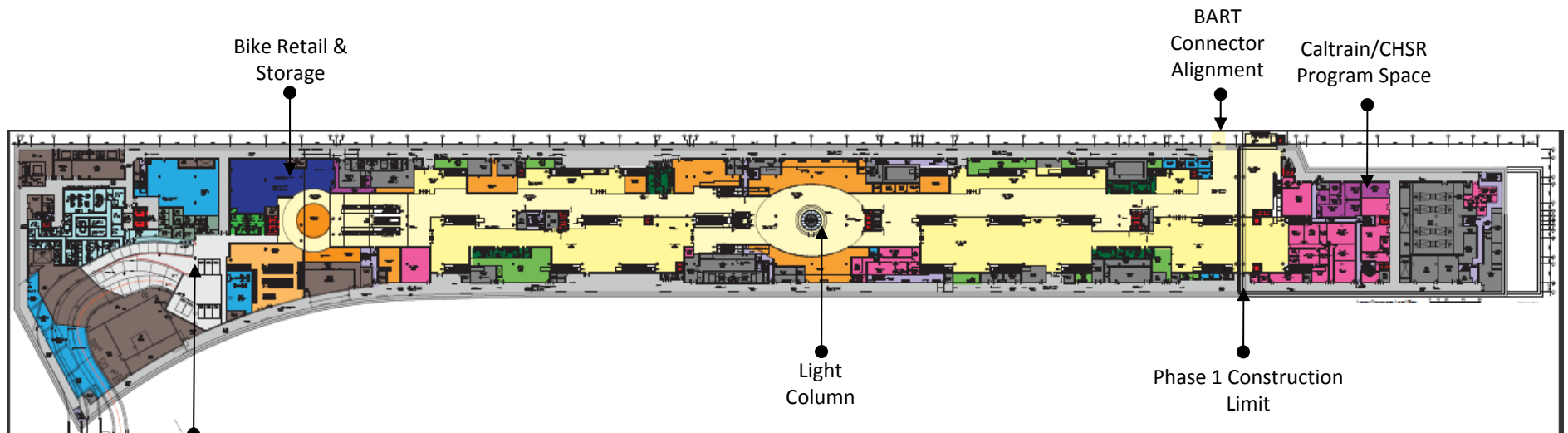
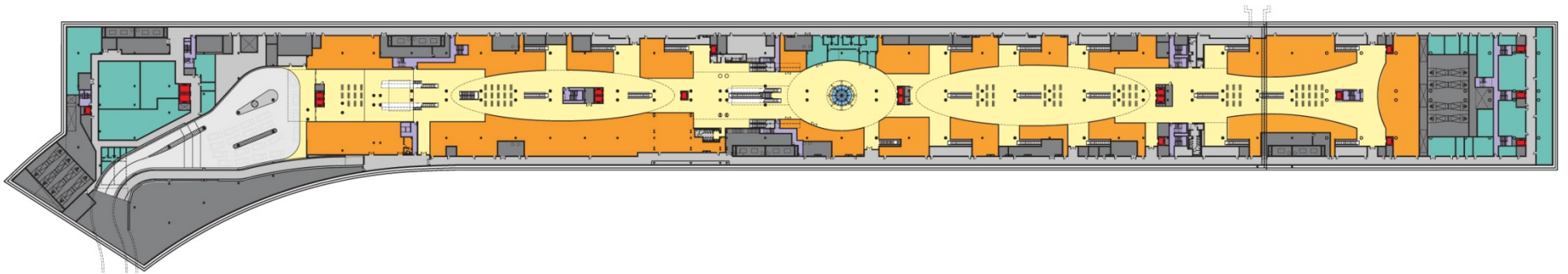
Platform Refinements





Transbay Transit Center

Concourse Refinements

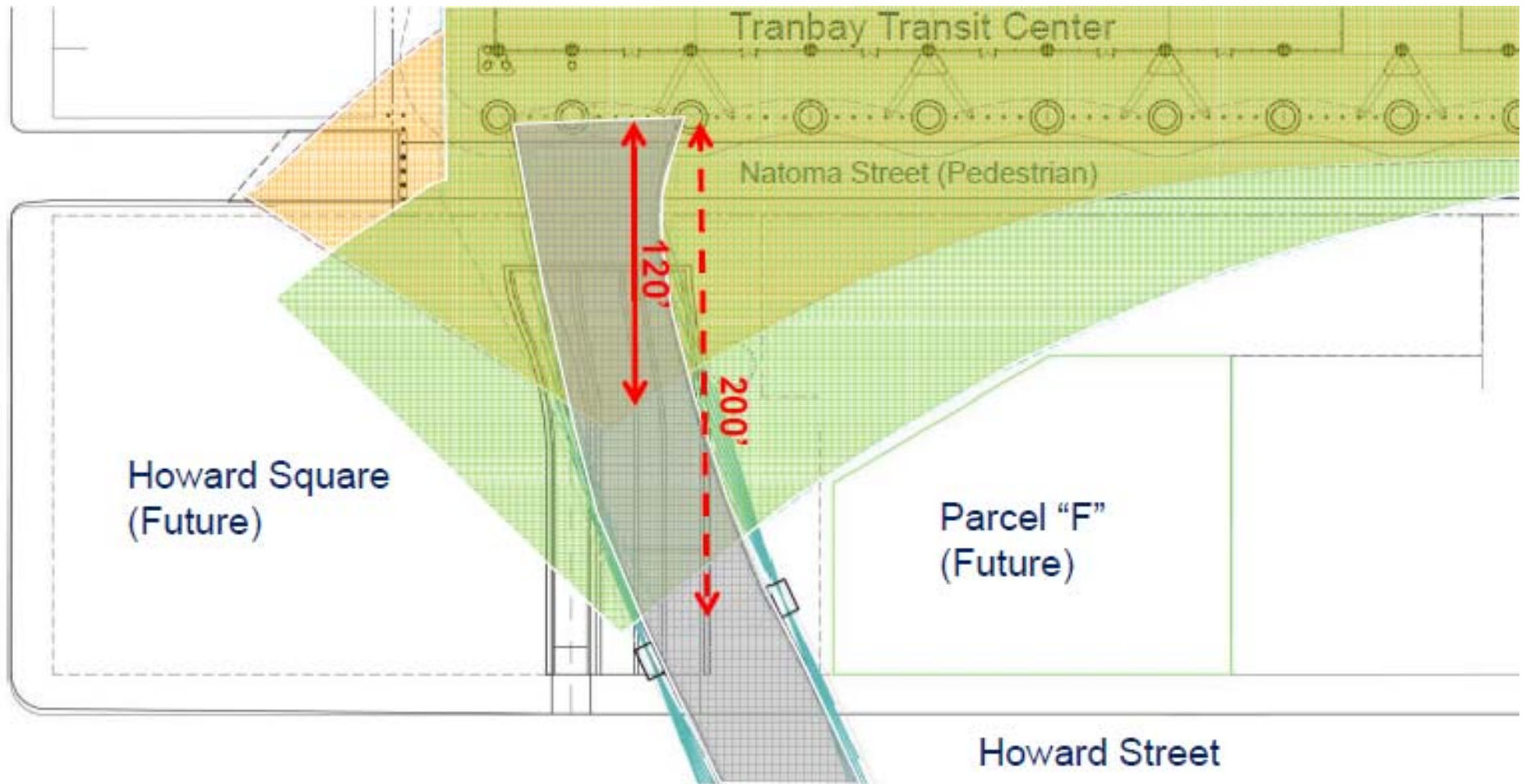


Lower Concourse Level



Transbay Transit Center

Viaduct Structure





**Cantilevered
Span**

**Widened
Span**

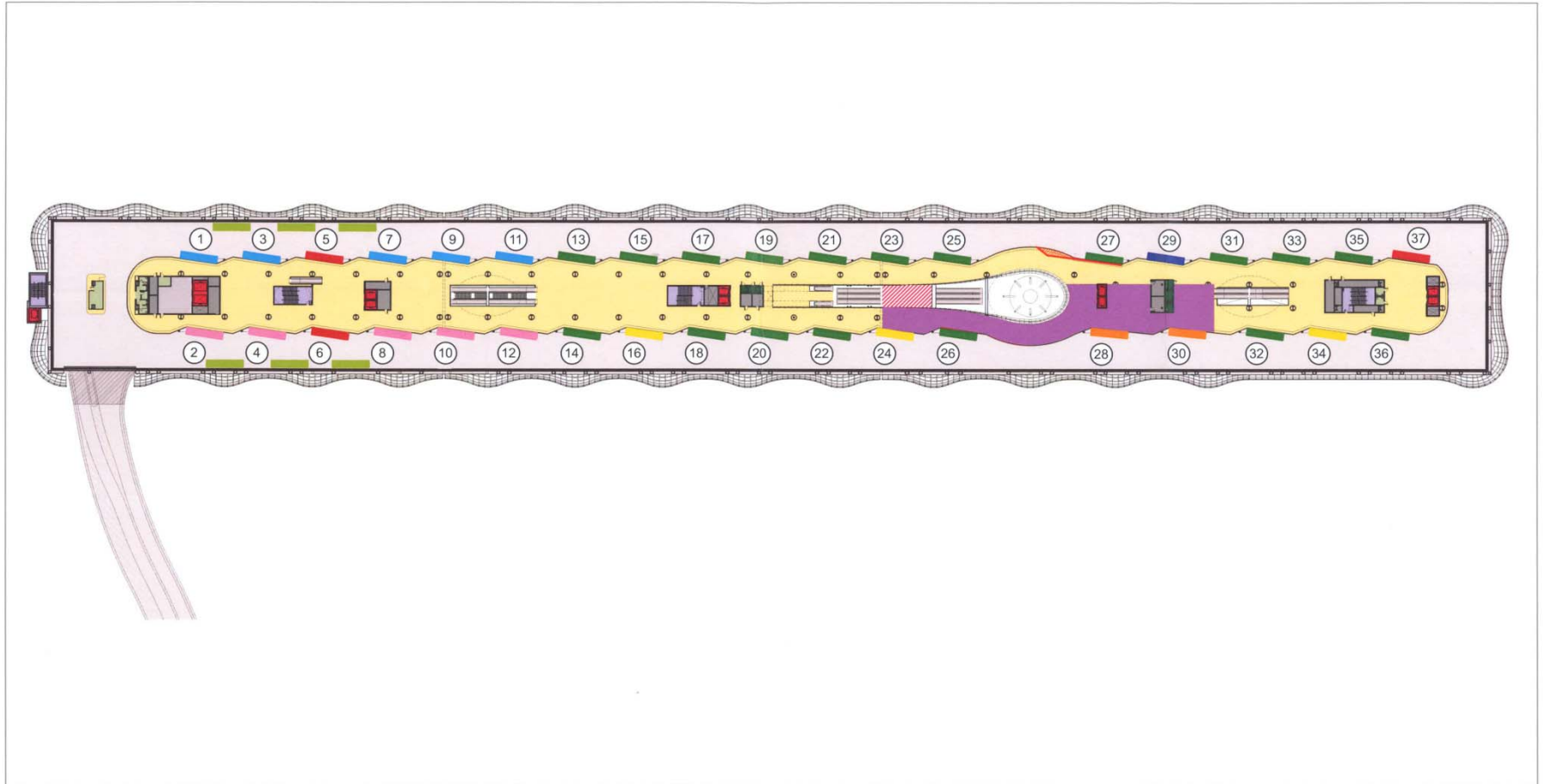
View of Steel Girder Bridge Option





Transbay Transit Center

Bus Deck Operations

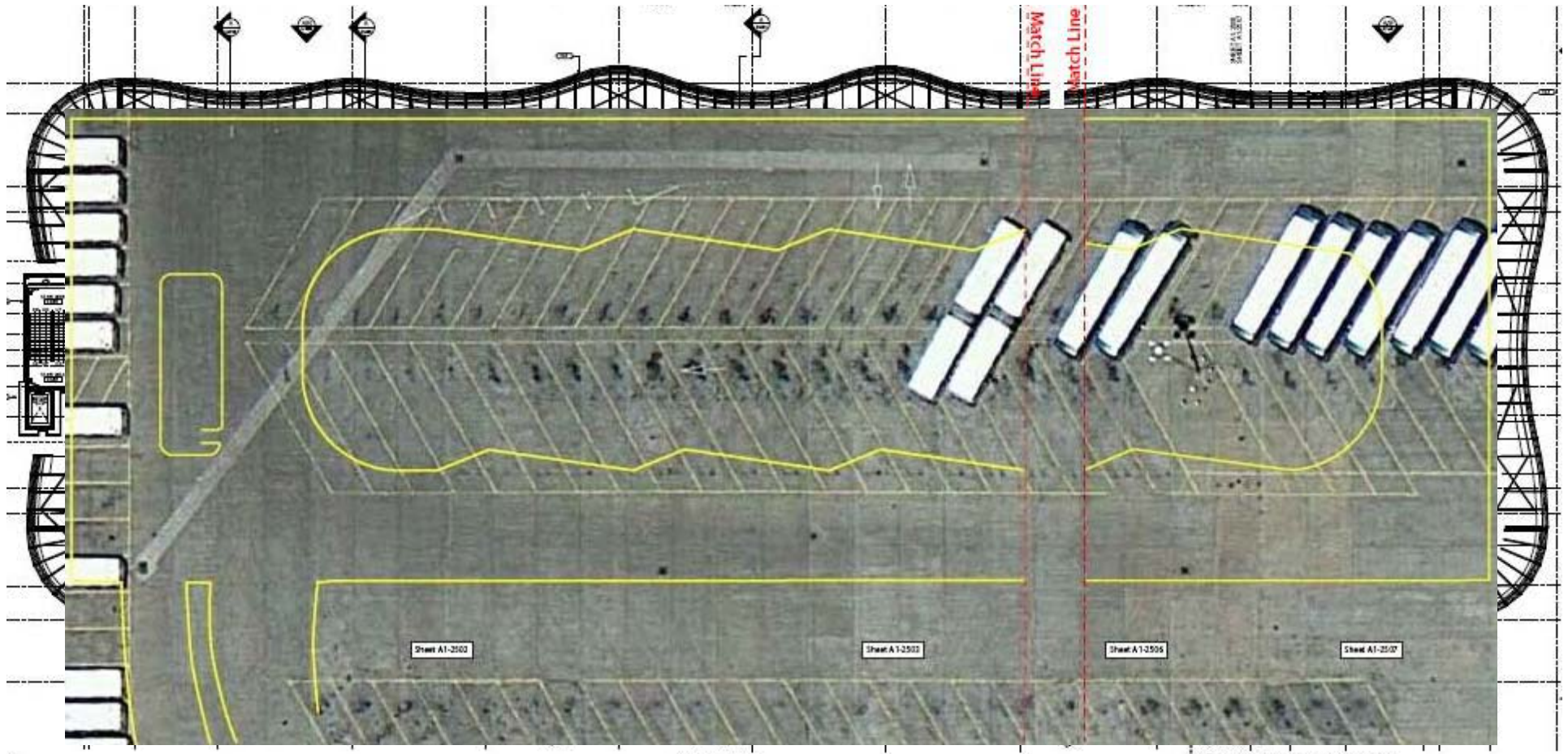


- AC Transit
- Amtrak
- Greyhound
- Westcat
- Muni
- Surge
- Drop-off
- Muni Circulation Zone (Muni Fares Valid Here)
- No Fare Enforcement (Park Access)
- Staged Buses



Transbay Transit Center

Bus Deck Studies





Transbay Transit Center

Bus Deck Studies





Transbay Transit Center

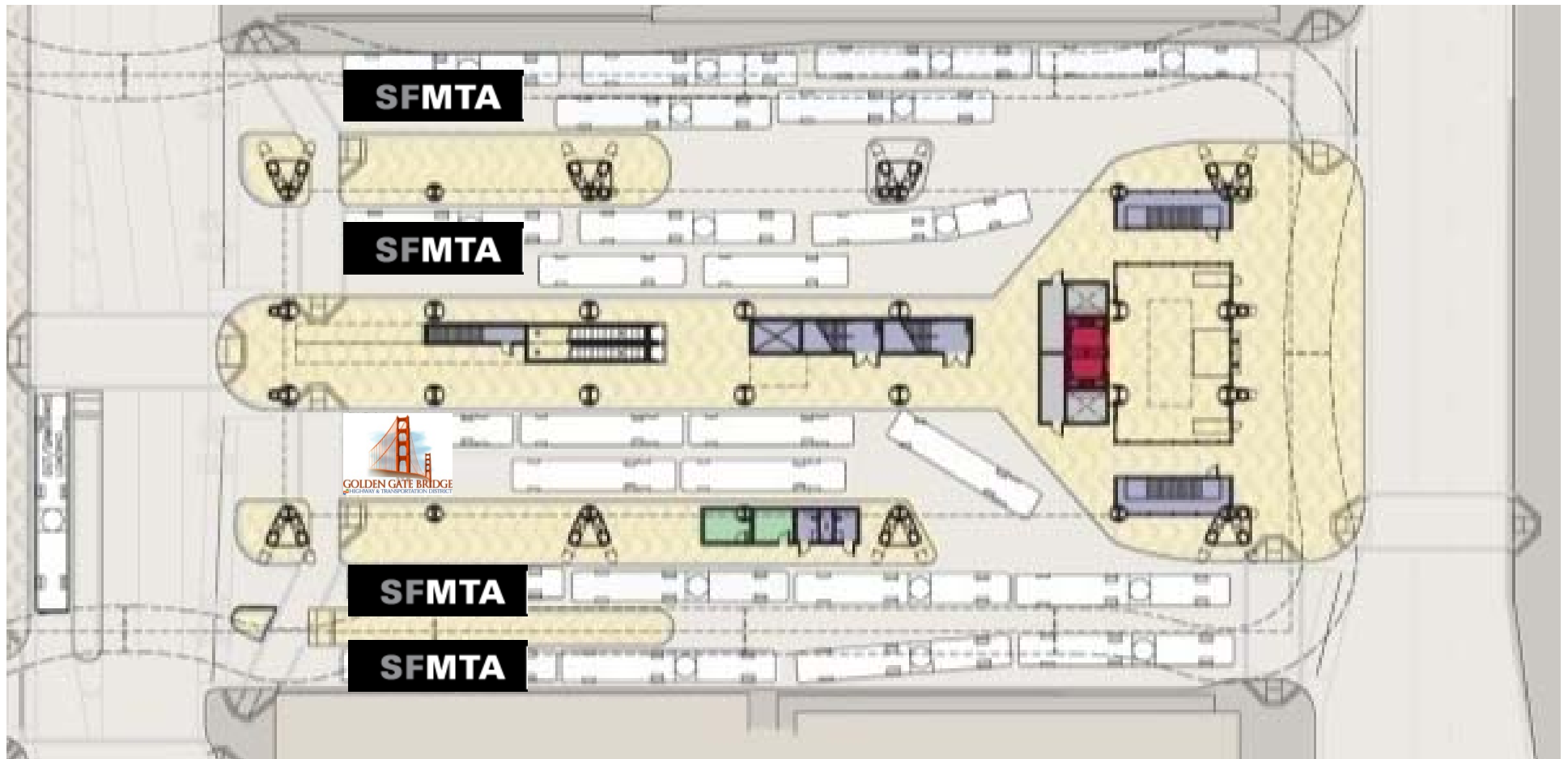
Bus Deck Studies





Transbay Transit Center

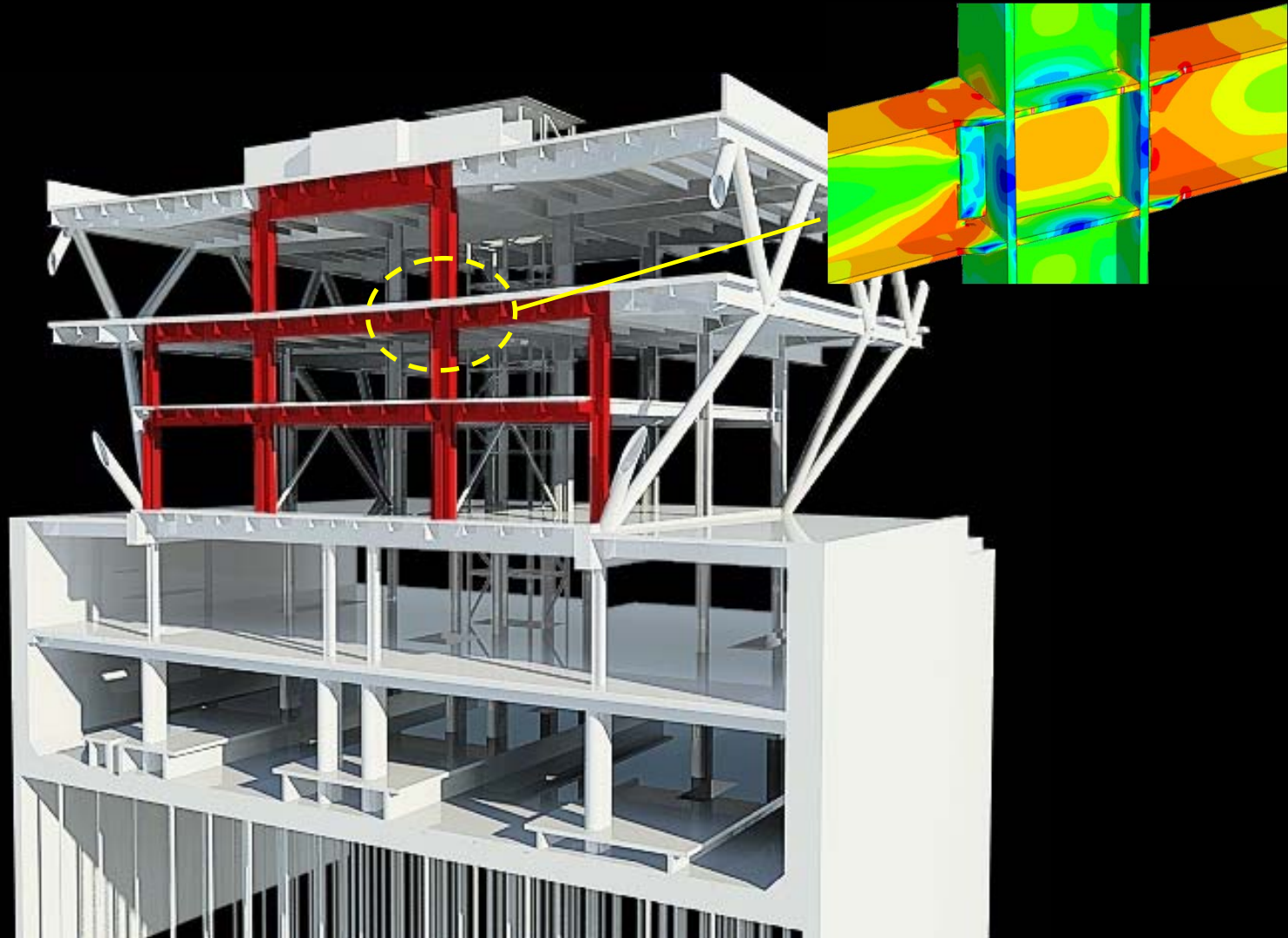
Bus Plaza Refinements





Transbay Transit Center

Steel Moment Frame





Transbay Transit Center

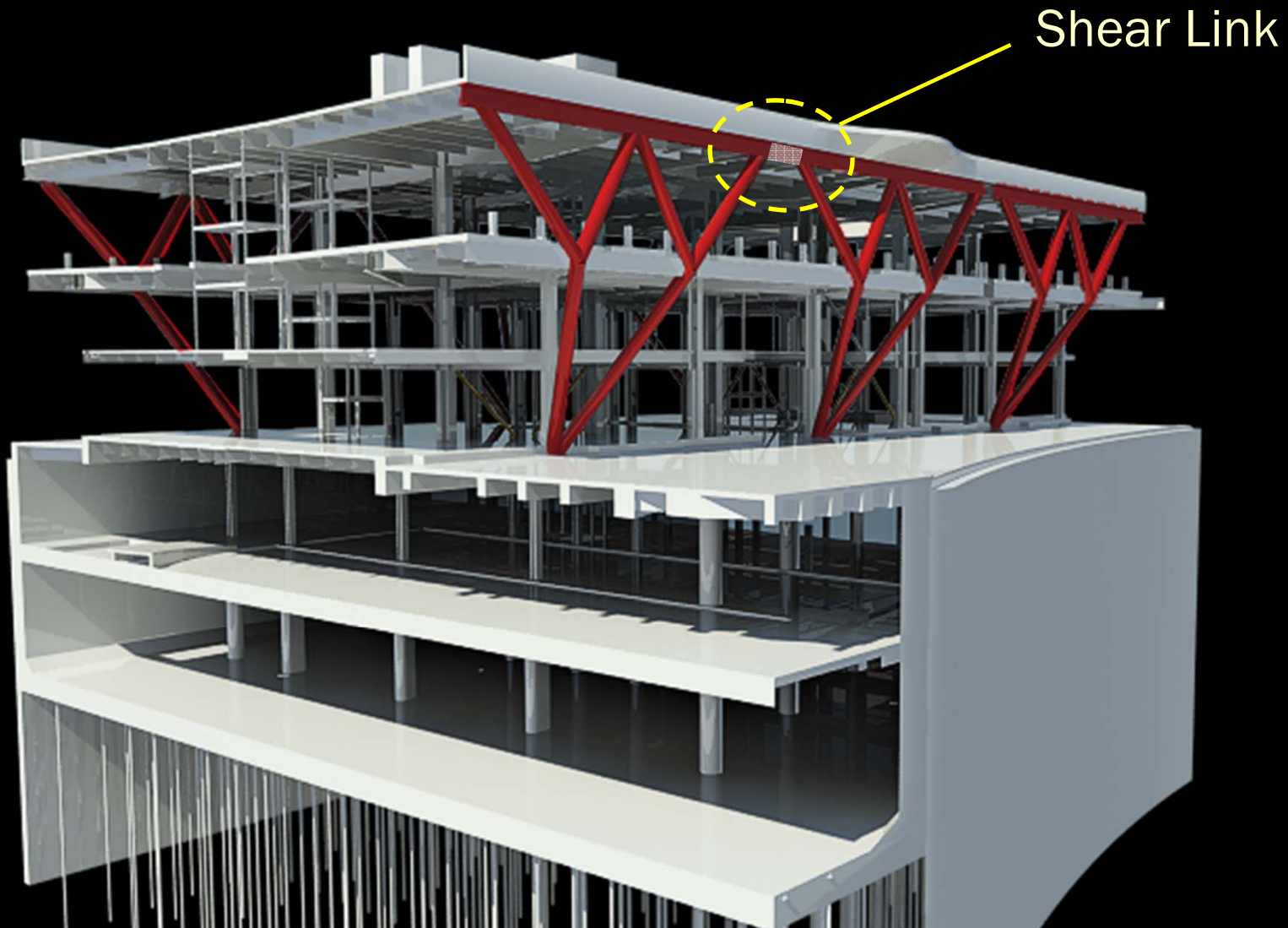
Steel Moment Frame Test





Transbay Transit Center

Eccentric Brace Frame

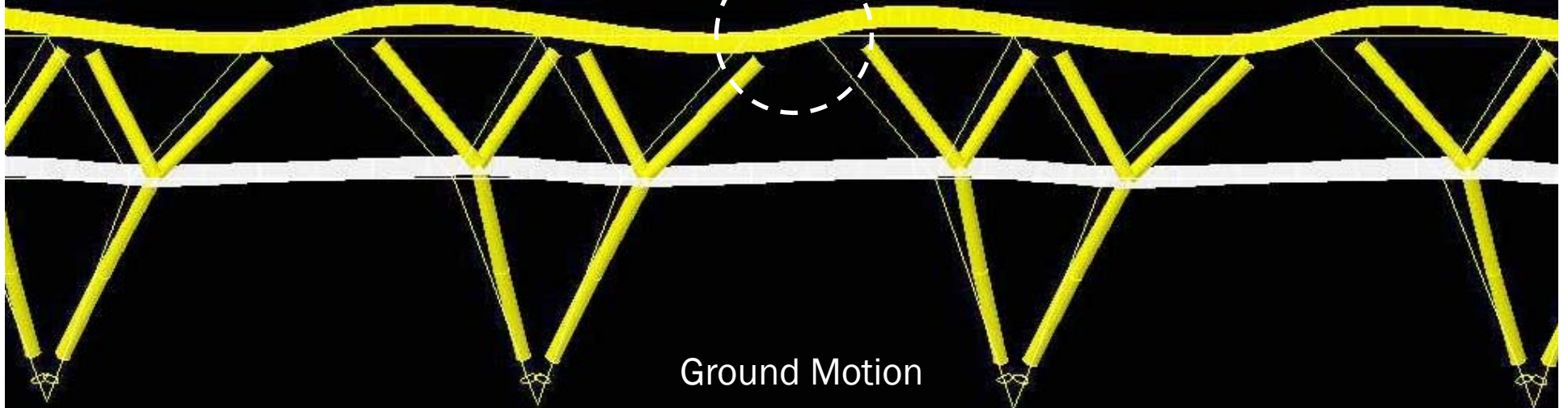
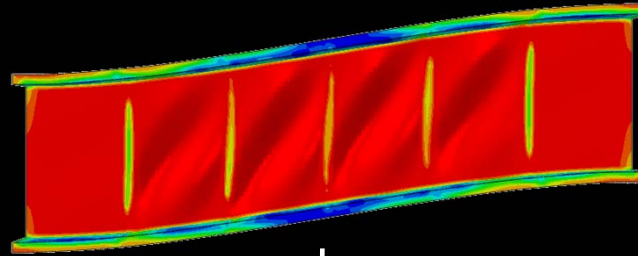




Transbay Transit Center

Eccentric Brace Frame

Shear Link



Ground Motion





Transbay Transit Center

EBF Test Results



at $\gamma_{total} = +0.08$ rad.



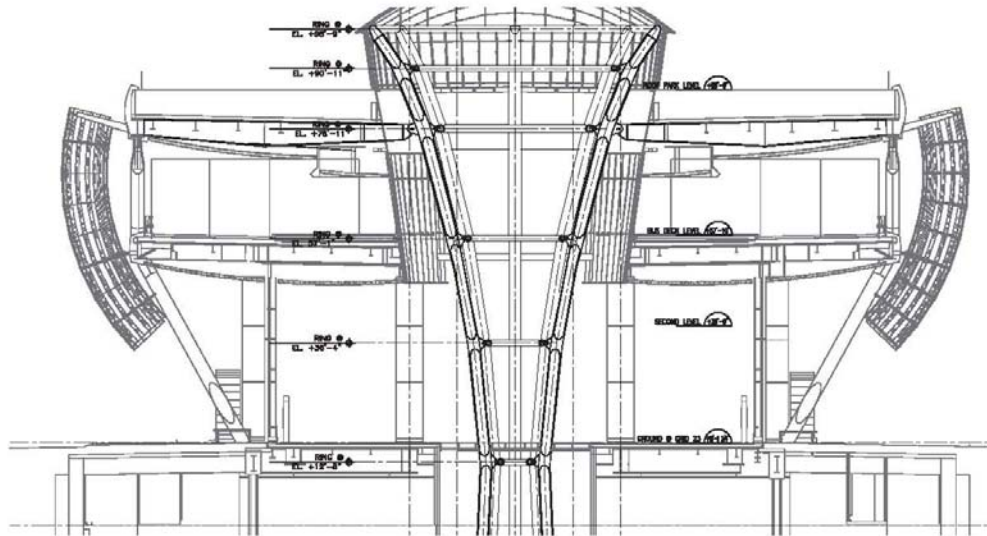
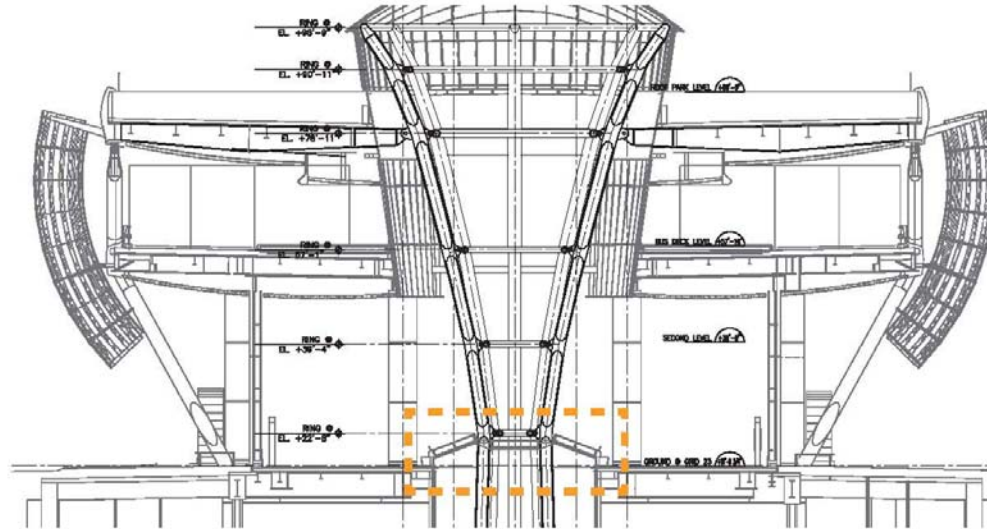
at $\gamma_{total} = -0.08$ rad.

Image s courtesy of UCSD



Transbay Transit Center

Light Column





Transbay Transit Center

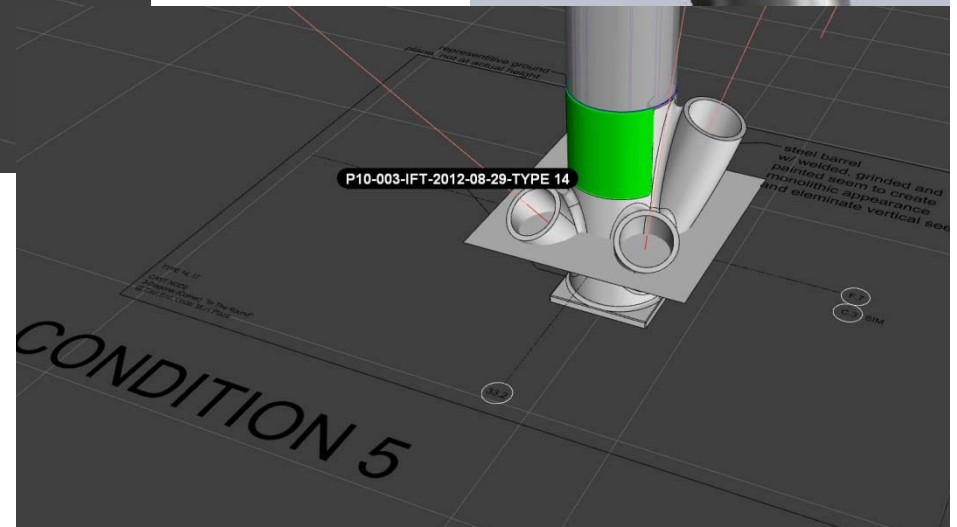
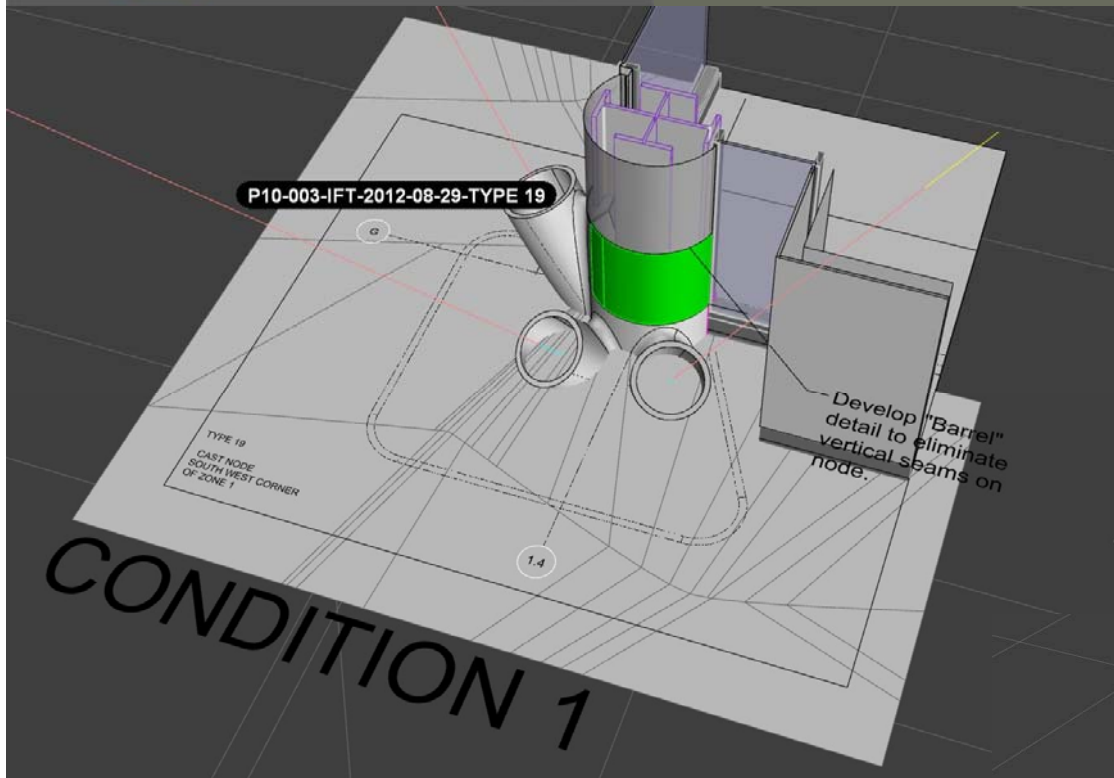
Light Column





Transbay Transit Center

Cast Node Detailing





Transbay Transit Center

Ground Level Retail Examples





Transbay Transit Center

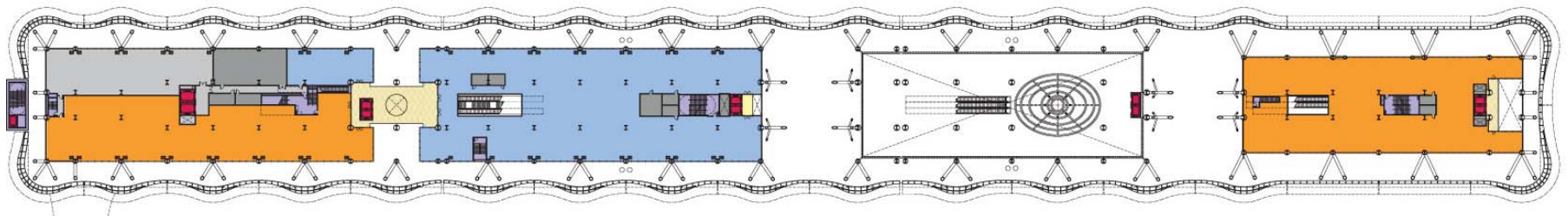
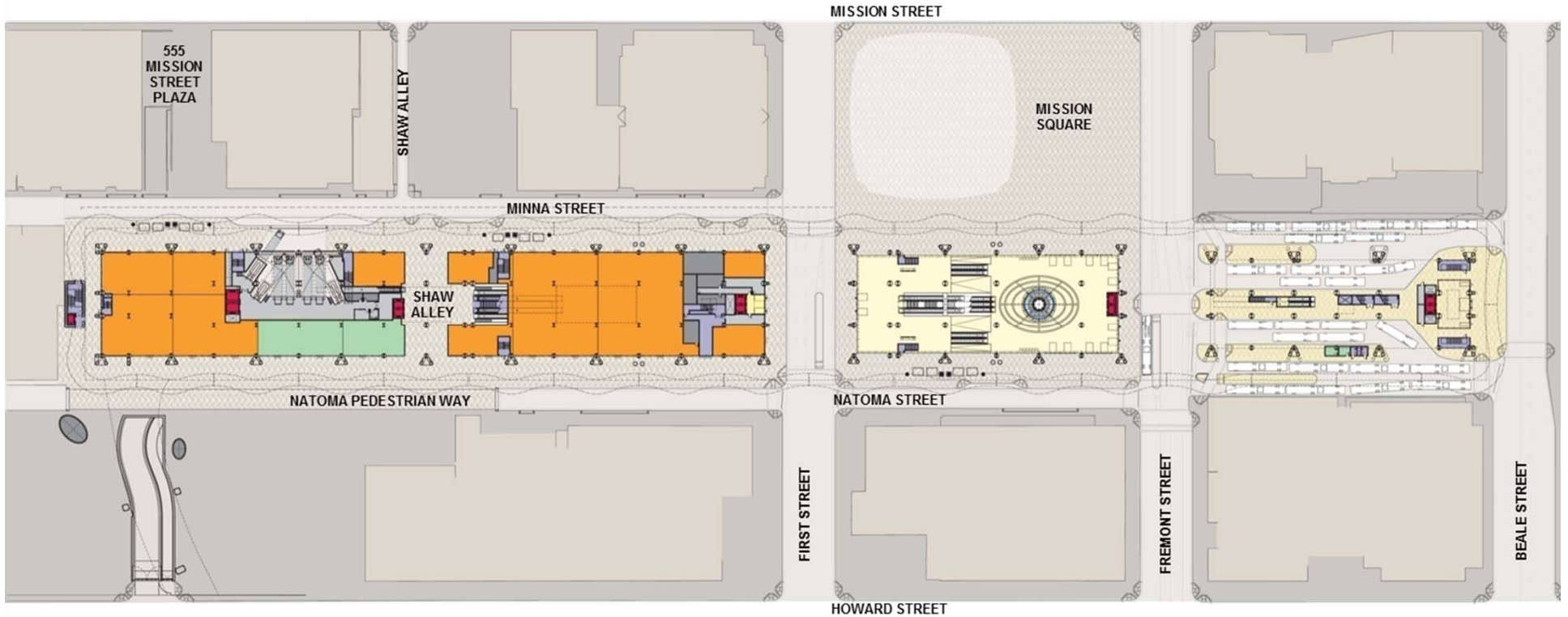
Mezzanine Retail Examples





Transbay Transit Center

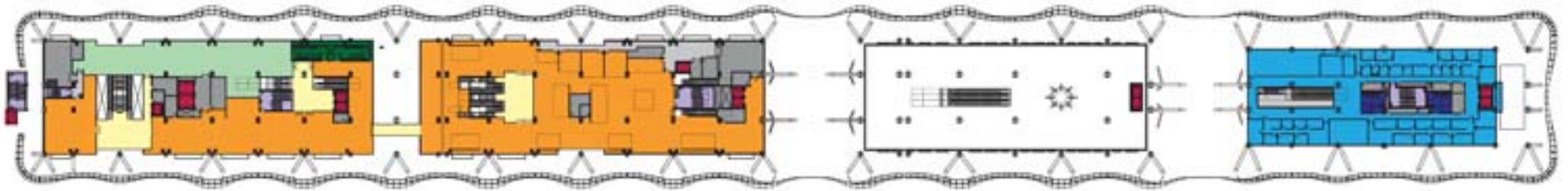
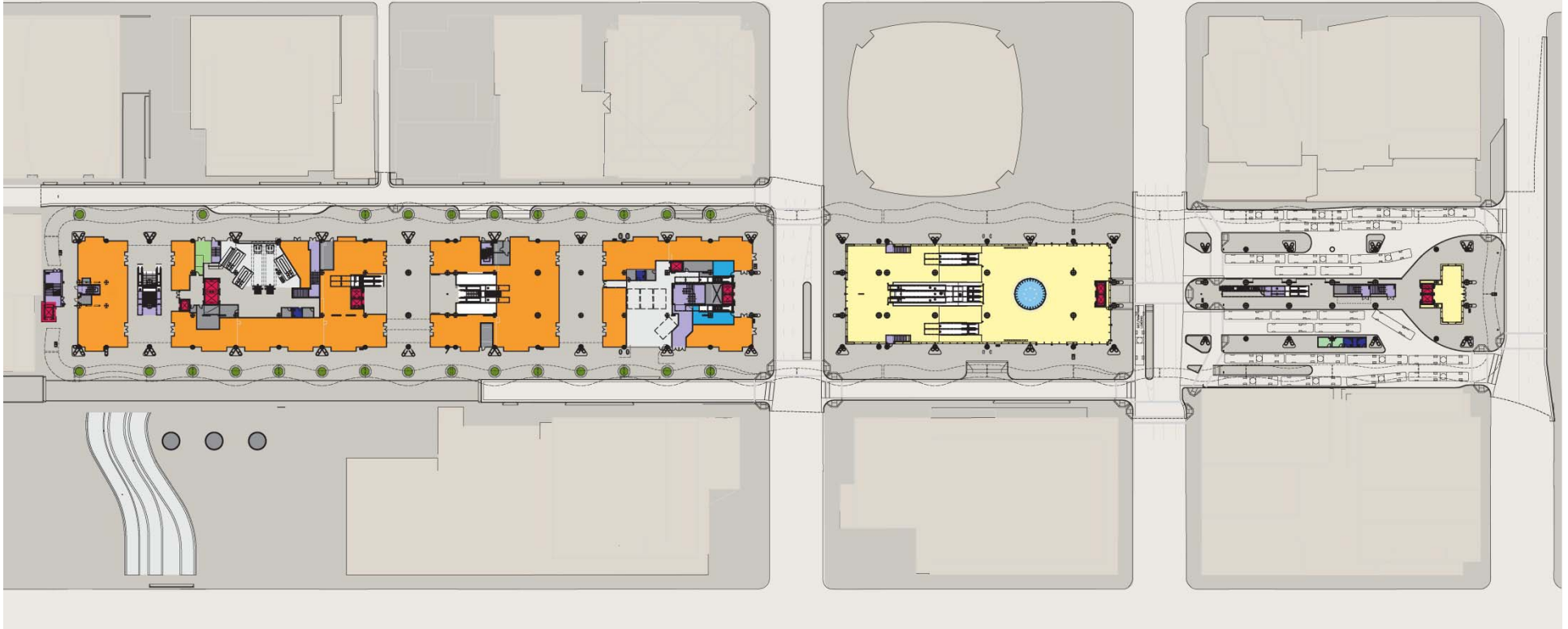
Ground & Mezzanine Retail





Transbay Transit Center

Ground & Mezzanine Retail

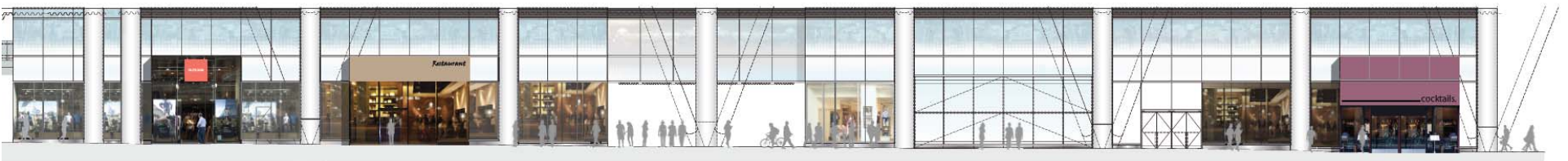




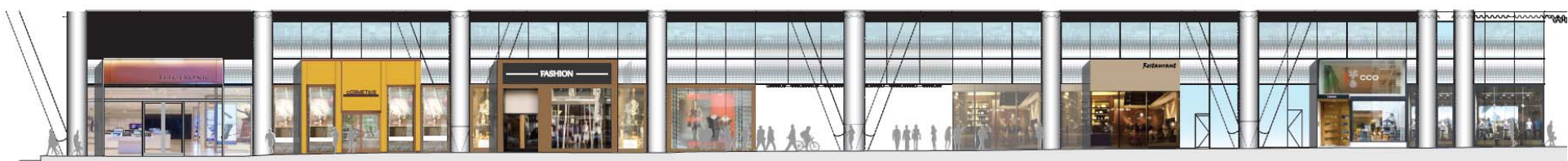
Ground & Mezzanine Retail



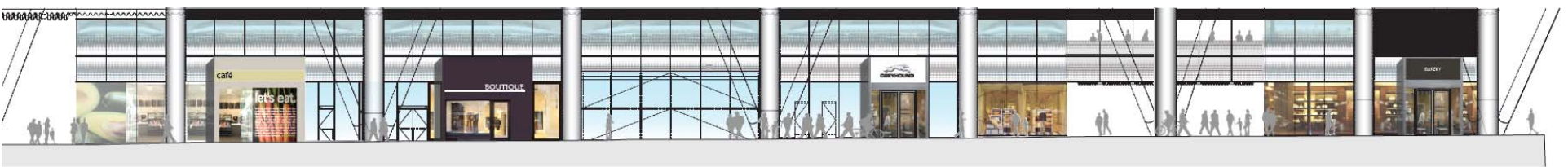
Natoma Street Storefront Elevation from West to Shaw Alley



Natoma Street Storefront Elevation from Shaw Alley to First Street



Minna Street Storefront Elevation from First Street to Shaw Alley



Minna Street Storefront Elevation from Shaw Alley to West



Transbay Transit Center

Ground & Mezzanine Retail





Transbay Transit Center

Ground & Mezzanine Retail





Transbay Transit Center

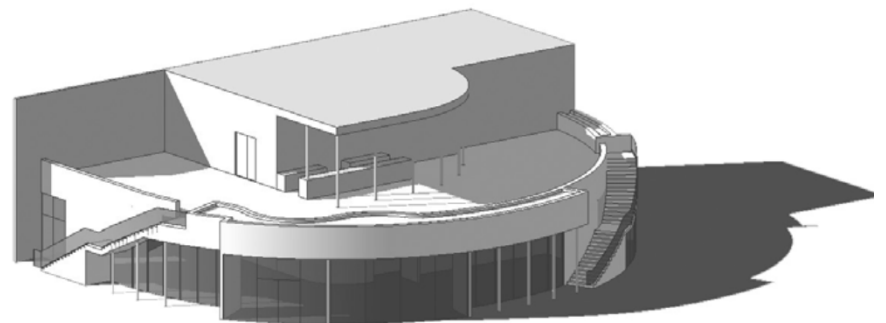
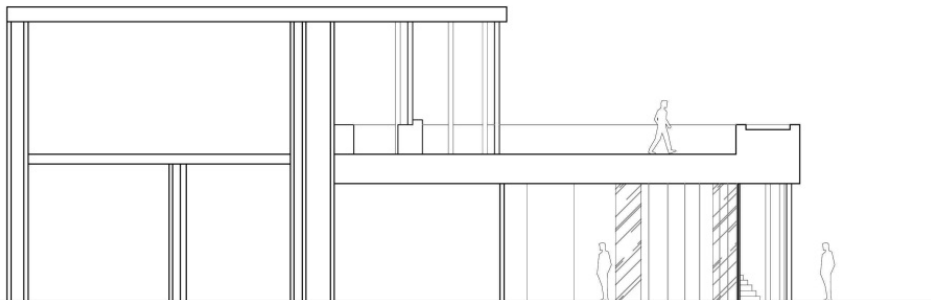
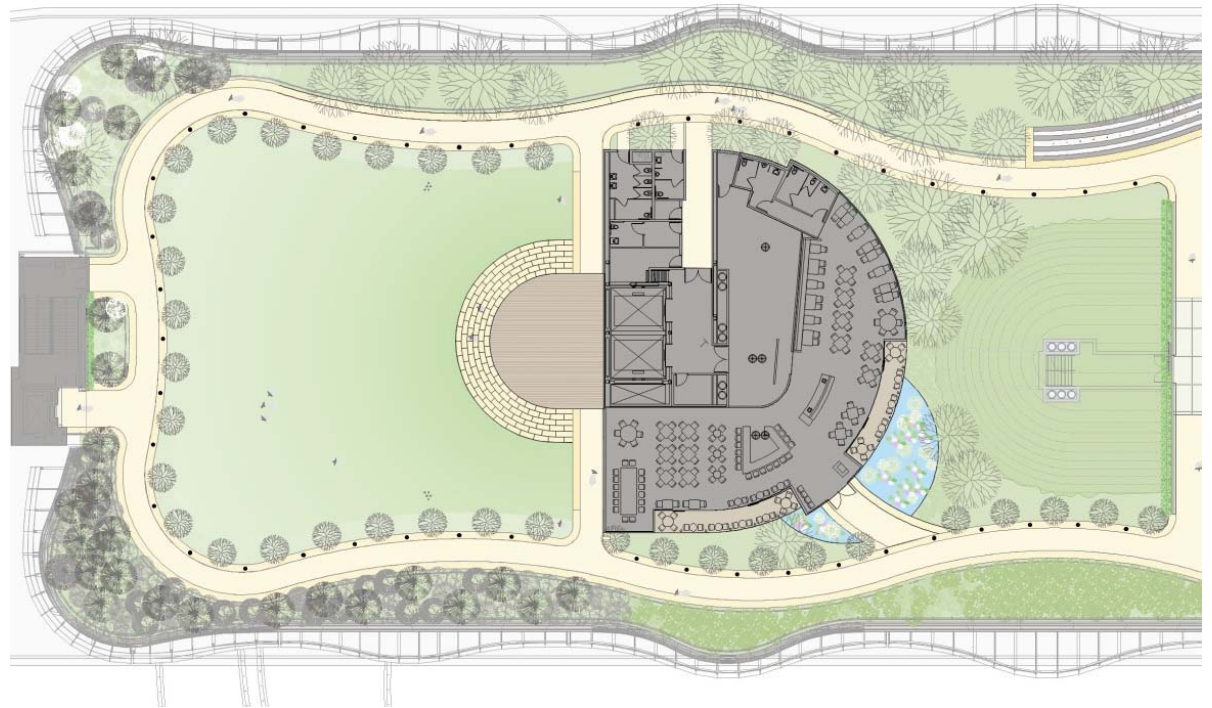
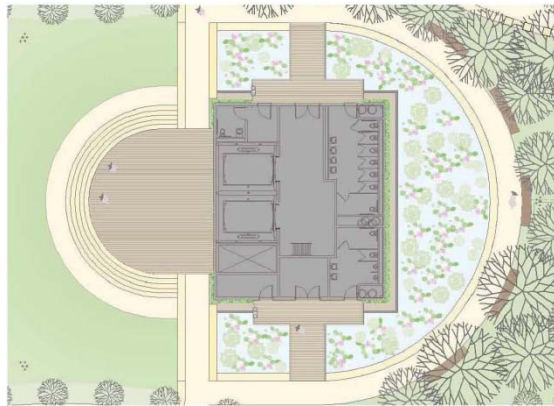
Park Restaurant





Transbay Transit Center

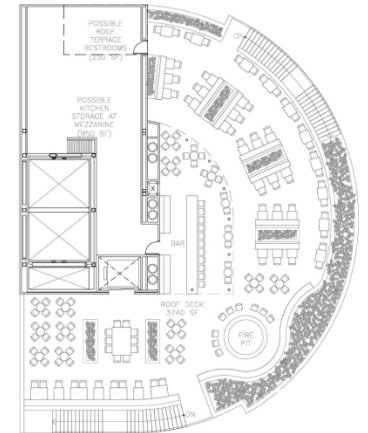
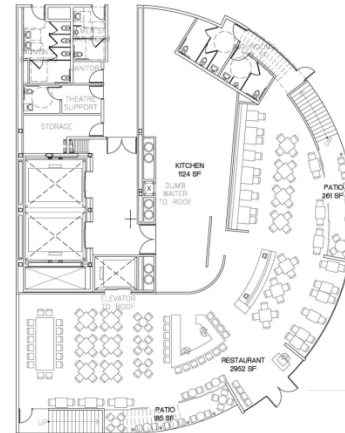
Park Restaurant





Transbay Transit Center

Park Restaurant





Transbay Transit Center

Park Lighting

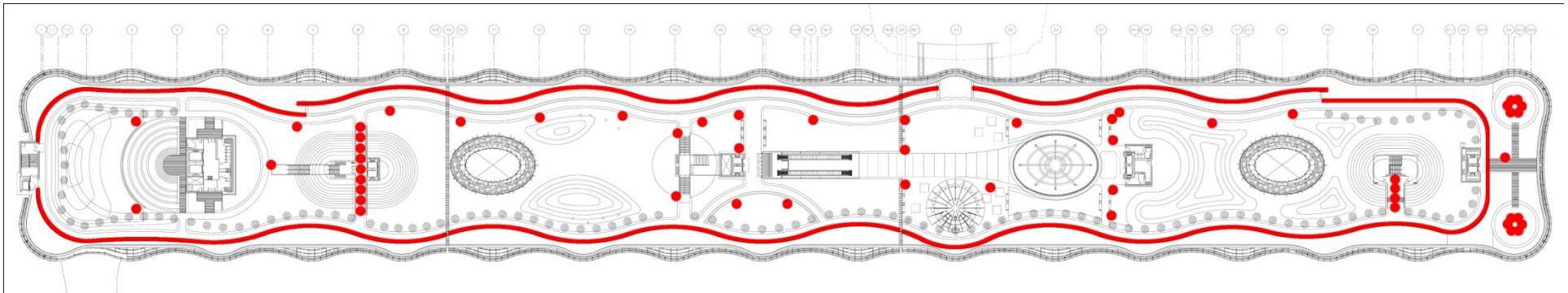
MAST LIGHTS

ILLUMINATED PATH RAIL

MOUND CUT THROUGH LIGHTING

ILLUMINATED FOUNTAIN GLASS WALL

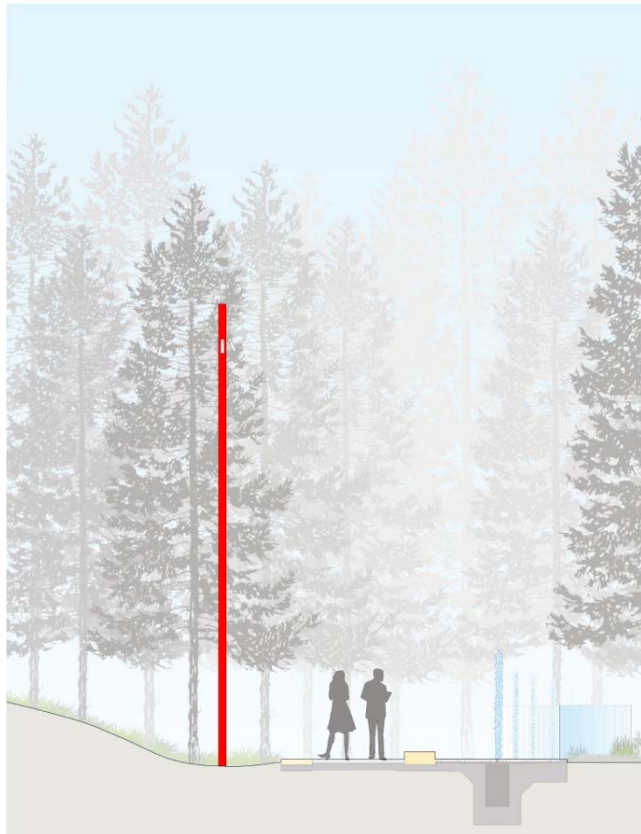
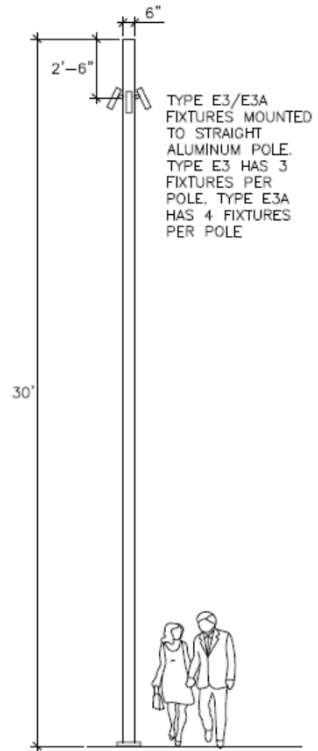
WETLAND OVERLOOK TREE DOWN LIGHTS





Transbay Transit Center

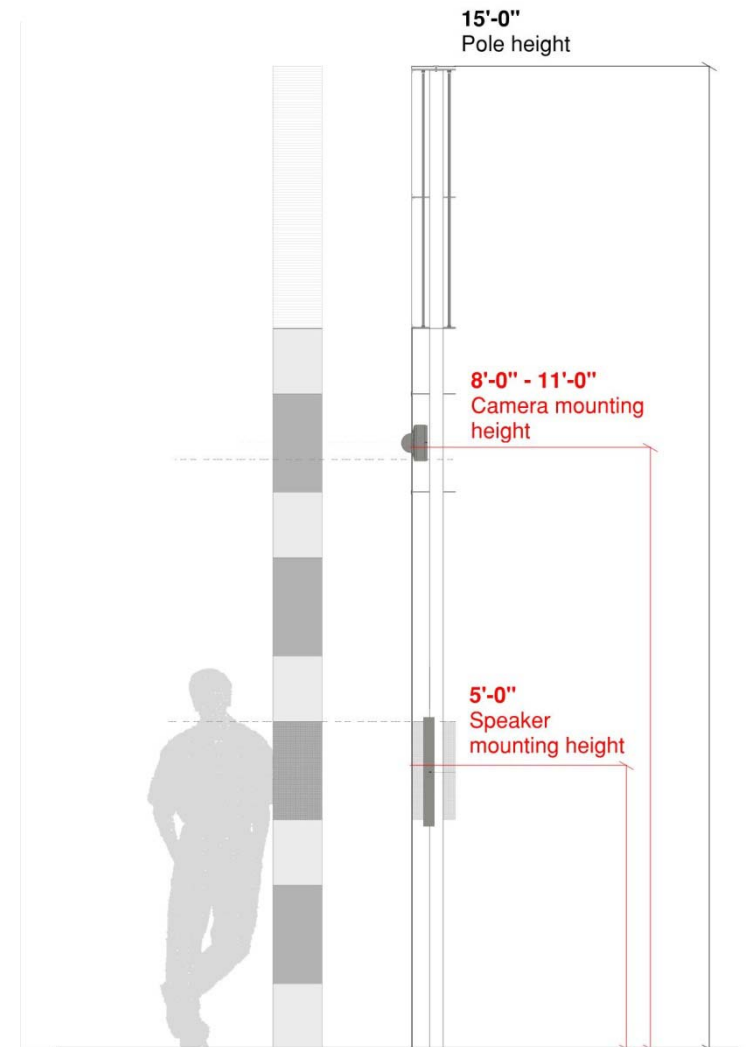
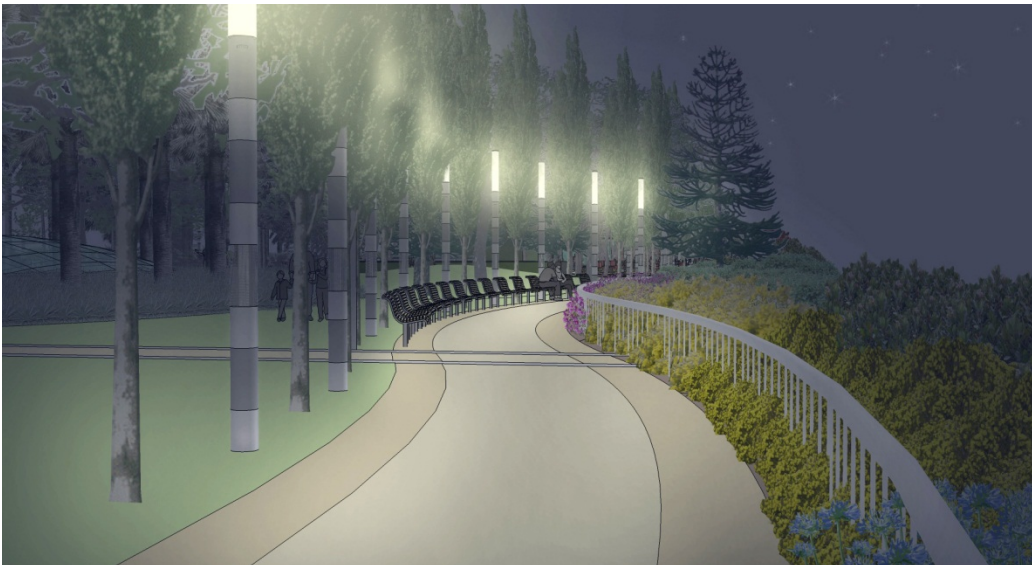
Park Lighting





Transbay Transit Center

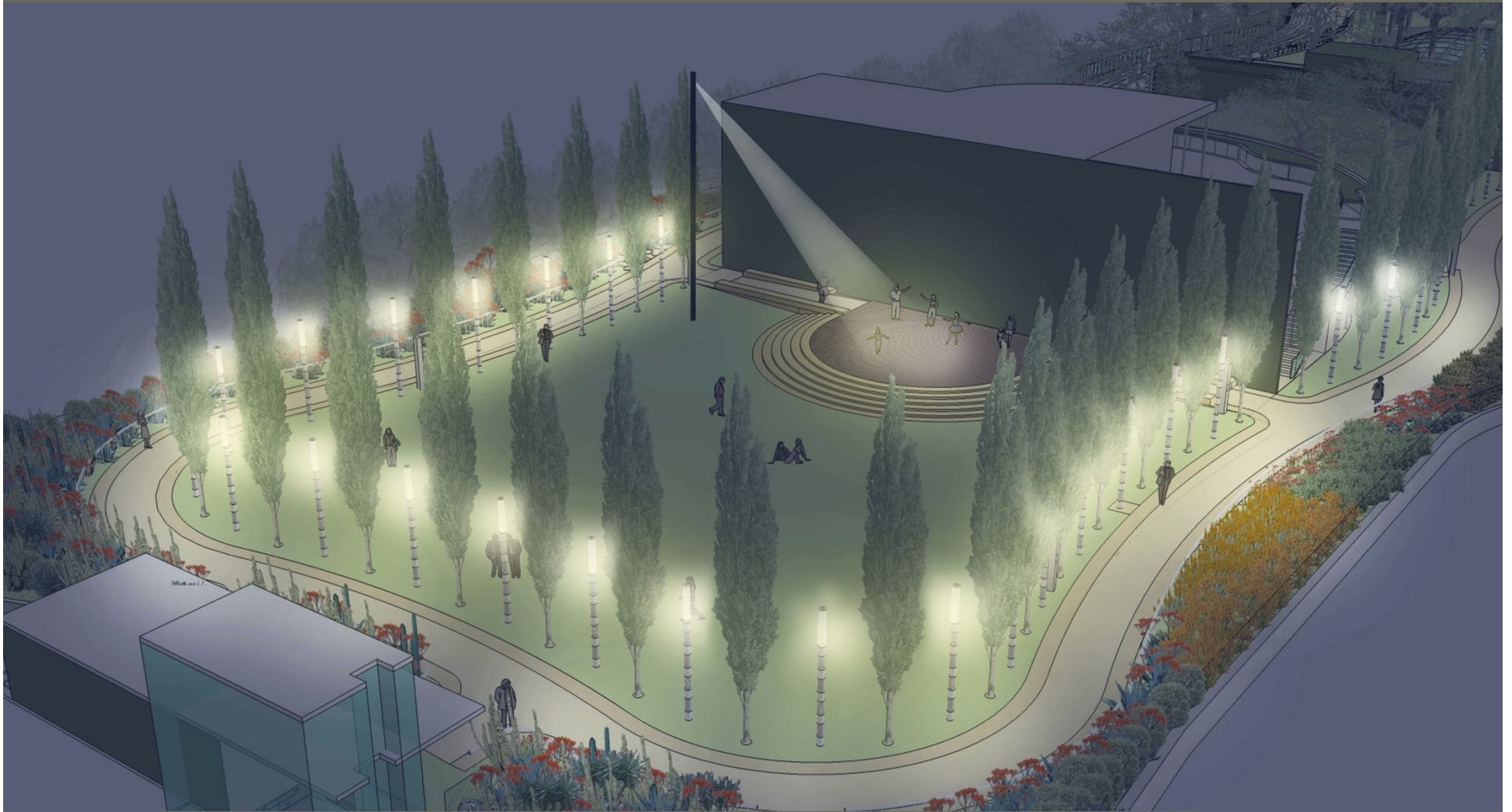
Park Lighting





Transbay Transit Center

Park Lighting



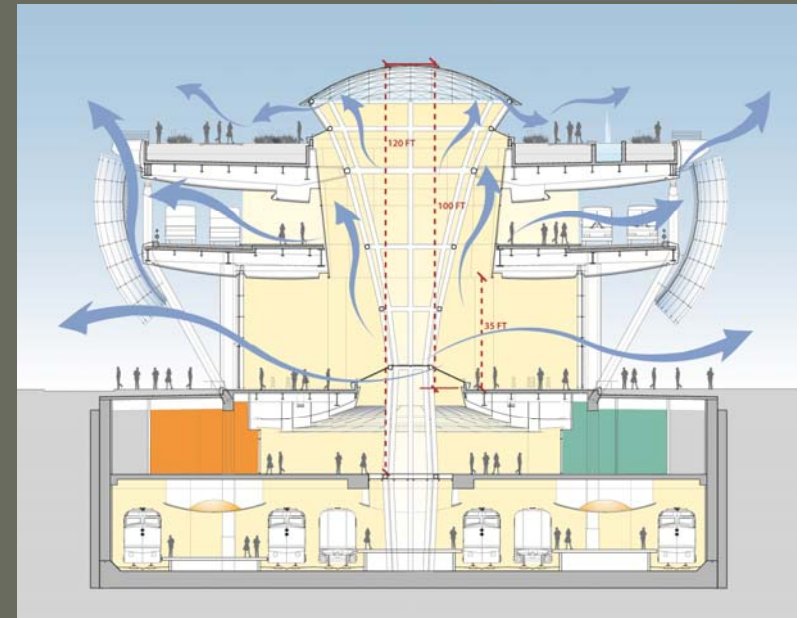


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LEED Energy Conservation

Energy Systems - Sustainable Features:

- Lighting
- Geothermal (with graywater integration)
- Natural Ventilation
- Variable Comfort Conditions
- Radiant Systems
- Daylighting Solutions
- Park provides Insulation and Mass

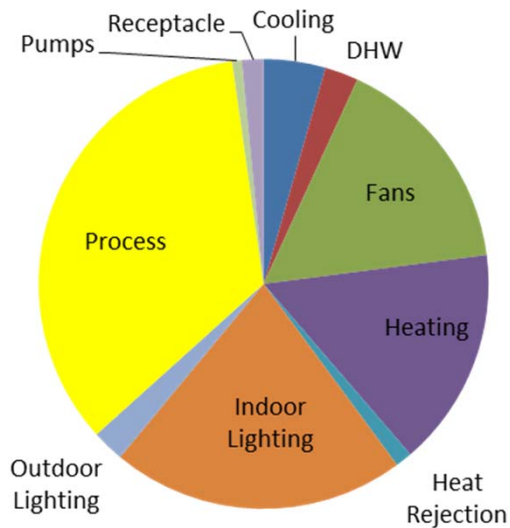




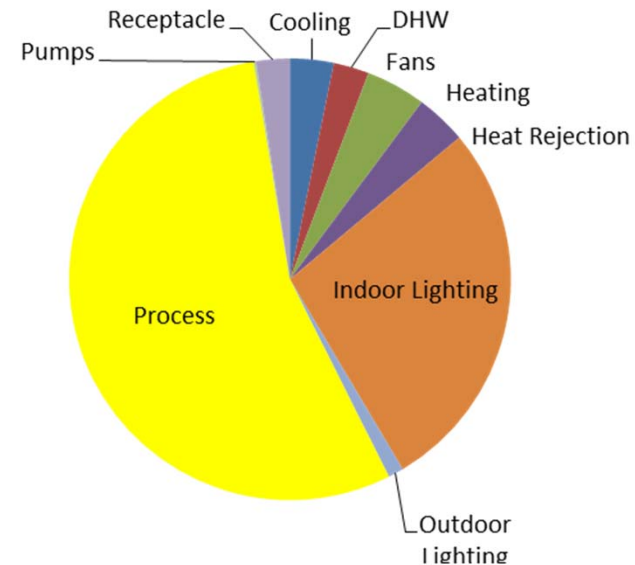
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LEED Energy Conservation

- Approximately a 30% improvement over ASHRAE base model
- 10 (+/-) LEED points
- And ...Significant opportunity to further make reductions in process loads



ENERGY USE ASHRAE BASELINE



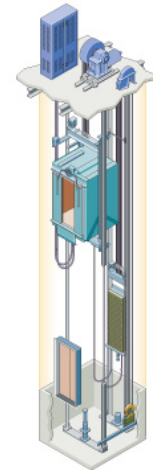
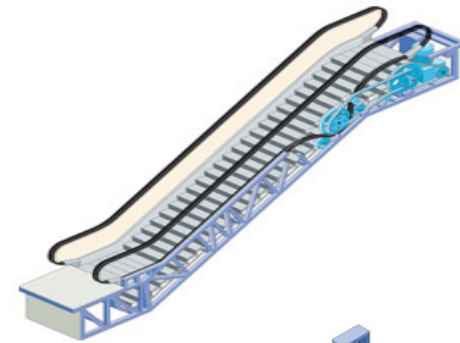
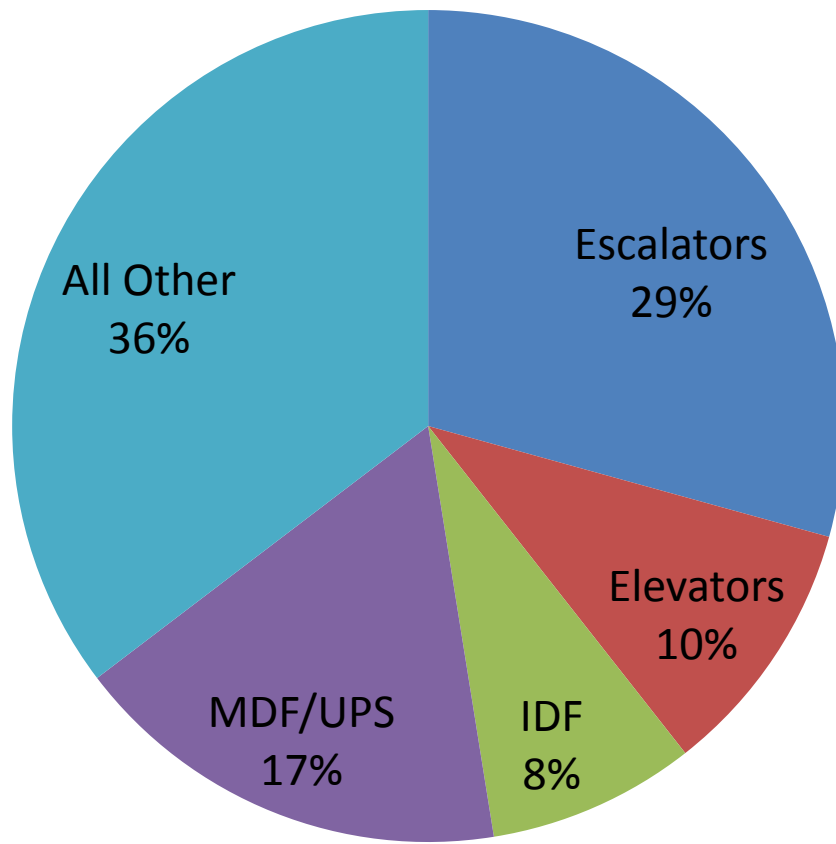
ENERGY USE PROPOSED DESIGN



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LEED Energy Conservation

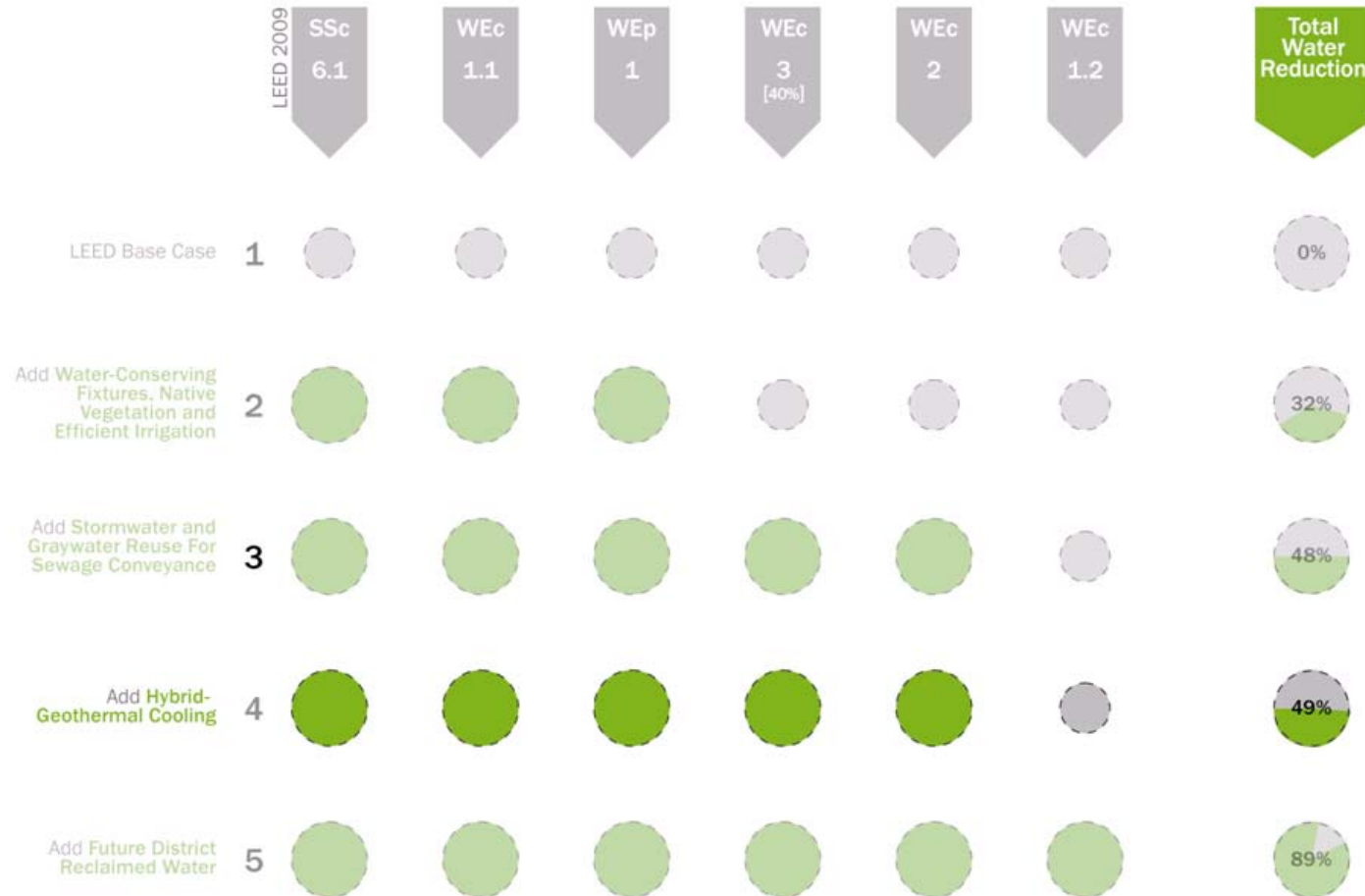
Process Breakdown





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LEED Water Conservation



Credit Achievement Likely
Credit Achievement Unlikely



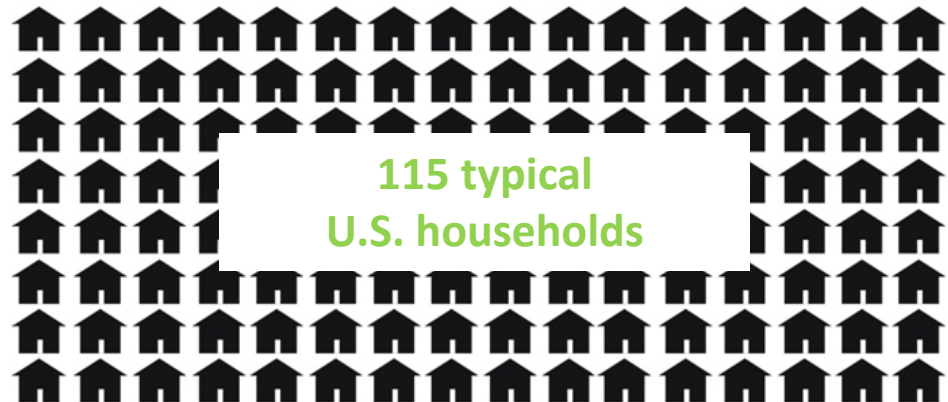


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LEED Water Conservation

	Base Case [gallons per year]	Design Case [gallons per year]	Water Savings [%]
Potable Water Use	19,458,000	10,014,000	49%
Irrigation water use	3,991,000	1,963,000	51%
Domestic water use	15,470,000	7,813,000	50%
Cooling tower water use	594,000	237,800	60%
Total volume to CSO	19,361,000	10,539,000	46%
Stormwater runoff to CSO	3,294,000	621,000	81%
Sewage to CSO	16,066,000	9,919,000	38%

annual water savings
of 9,444,000 gallons





Transbay Transit Center

Amendment 5

- The current schedule calls for completion of the Construction Documents by May 2013 with the IT network, video surveillance, and signage specifications to be completed in 2014.
- Recommend an amendment increasing the PCPA Additional Services amount by \$14,014,222 to the budgeted amount of \$50,000,000 to allow design and program changes be incorporated into the 100% Construction Documents.



Transbay Transit Center

Questions?