



# Presentation to CAC Establish Phase 2 Budget

April 8, 2008

## Transbay Transit Center

**TJPA**





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# Agenda

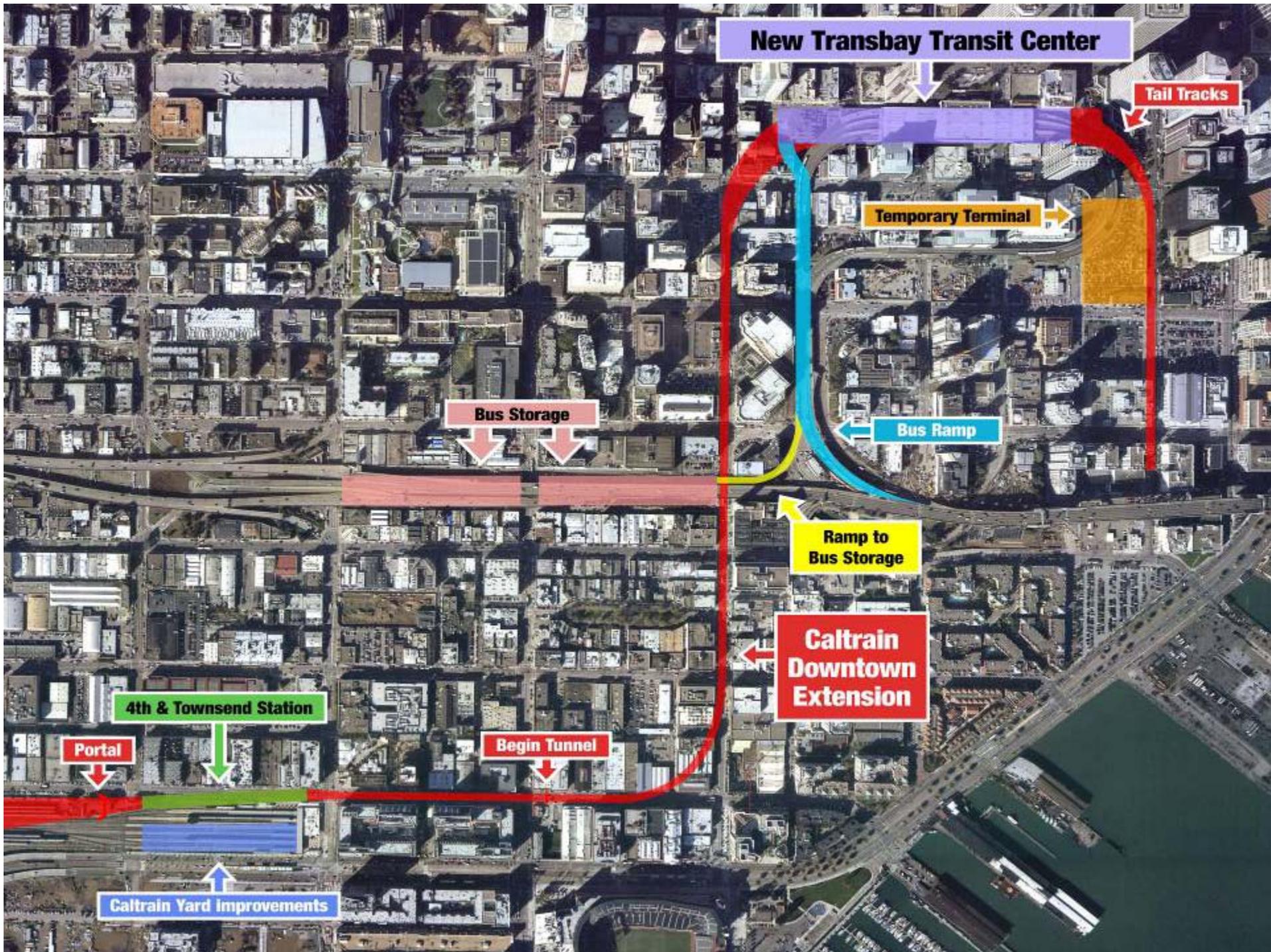
## Agenda:

- Phasing Strategy Recap
- Budget Development Process
- Establishing Phase 1 Baseline Budget
- Phase 2 Cost Estimate Development
- Establishing Phase 2 Baseline Budget
- Phase 2 Funding Plan



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# Phasing Strategy





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## Adopting Phasing Plan

- To commence final design and construction under FTA guidelines we must have a fully funded, fully functional project segment
- Phasing Plan adopted by TJPA Board in March 2006
  - Identified fully funded Phase 1 scope
  - Bus operations facilities constitute a fully functional scope
  - Allows project design and construction to continue without delay
- Phase 2 is scheduled to begin construction prior to completion of Phase 1



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# Phased Construction Plan

## Two Phase Program to Match Funding

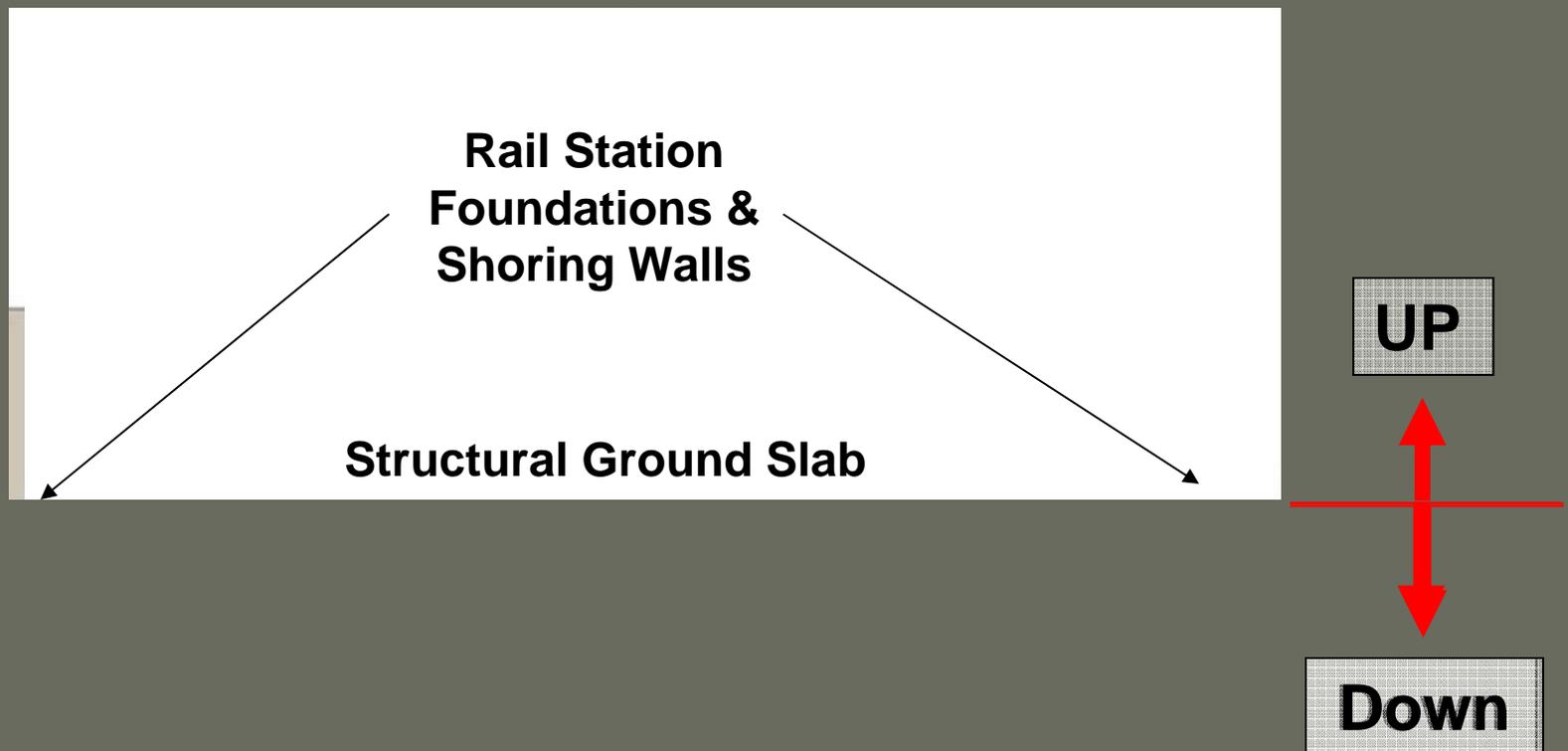
Phase 1: Elevated Regional Bus Facility at  
Transit Center Building & Foundations for  
future Rail System Train Station

Phase 2: DTX Extension and Below Grade  
Train Station at Transit Center Building



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# Phasing Strategy Use “Up/Down” Construction





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## Phase 1 Scope

### **Build Above Ground Bus Facility**

- Phase 1 Land Acquisition
- Demolition & Utility Relocations
- Temporary Terminal
- Bus Storage Facility
- Transit Center Rail Station Foundations
- Transit Center Bus Facility
- Bus Ramps



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## Phase 2 Scope

- Build Below Ground Rail Station
- Build Downtown Rail Extension
  - Mined Tunnel and Cut & Cover Sections
  - 4th & Townsend Station and Caltrain Yard
  - Rail Track & Systems



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# Construction Milestones

Phase 1	Phase 2
June 2008 Advertise Temporary Terminal	
2009 Advertise Bus Storage	
2010 Begin Transit Center Construction	2010 Begin DTX Final Design
	2012 Initiate Advance Contracts
	2013 Begin Construction of Major Civil Contracts
2014 Complete Phase 1 Construction Open TTC for Bus Operations	
	2018 Complete DTX Begin Rail Revenue Service



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# Budget Development Process



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## Budget Definitions

- Budget:
  - TJPA Board approved amount to execute scope of work
  - Includes contingencies & reserves appropriate to level of design development
- Baseline Budget:
  - Initial TJPA Board approved budget
- Baseline Budget Changes:
  - Require TJPA Board approval



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# Budget Development

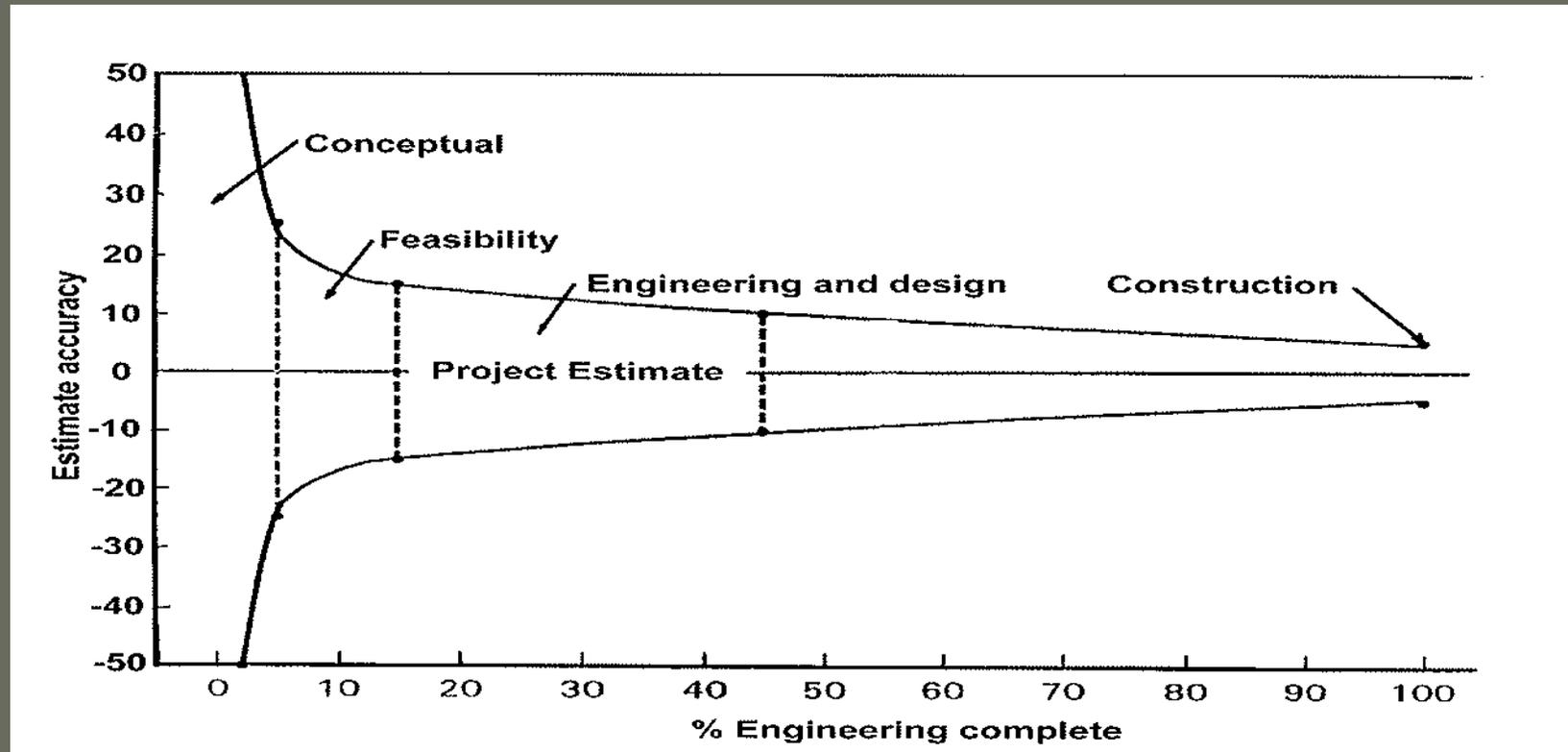
Scope definition and cost estimate are refined until a reliable and achievable budget can be developed

1. Initial Estimate
2. Scope Development & Cost Validation
3. Value Management
4. Cost Management
5. Iterate 2-4 if necessary
6. Establish Budget



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# Budget Development



Typical Bounds of Estimate Accuracy vs Project Development



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# Establishing Phase 1 Budget



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## Establishing Phase 1 Budget

- TTC initially estimated in 2003 EIS/EIR
- 2005 value management exercise reconfigured structure and enabled phasing strategy
- Initial Phase 1 construction cost estimate prepared in 2006
- Cost management exercise in 2006-2007 identified scope and cost exposures to establish appropriate contingencies and reserves



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## Establishing Phase 1 Budget

- Phase 1 baseline budget adopted in November 2007 based on:
  - Fiscally conservative estimates
  - Sound planning and engineering work completed during the prior 2 years
  - A developed contracting strategy
- Proposed Phase 1 budget is fully funded at \$1,189 million



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# Phase 2 Cost Estimate Development



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## Initial Cost Estimate

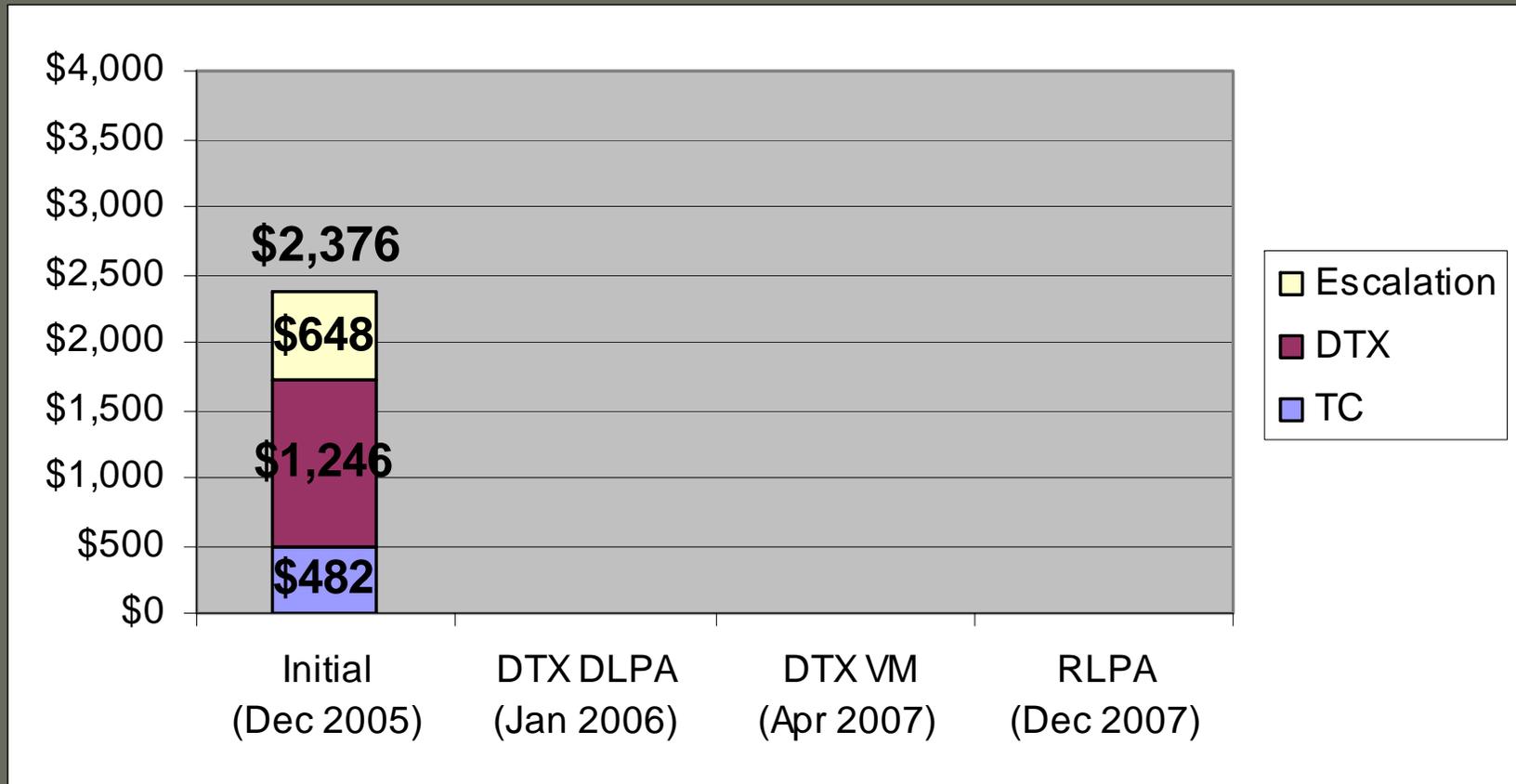
- Initial Cost Estimate prepared in conjunction with the EIS/EIR in 2003 based on conceptual scope with limited engineering development
- Escalated in December 2005 without refinement



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# Phase 2 Estimate History (In \$Year of Expenditure)

Phase 2 Program Cost (\$m)



Cost Estimate



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## DLPA Estimate

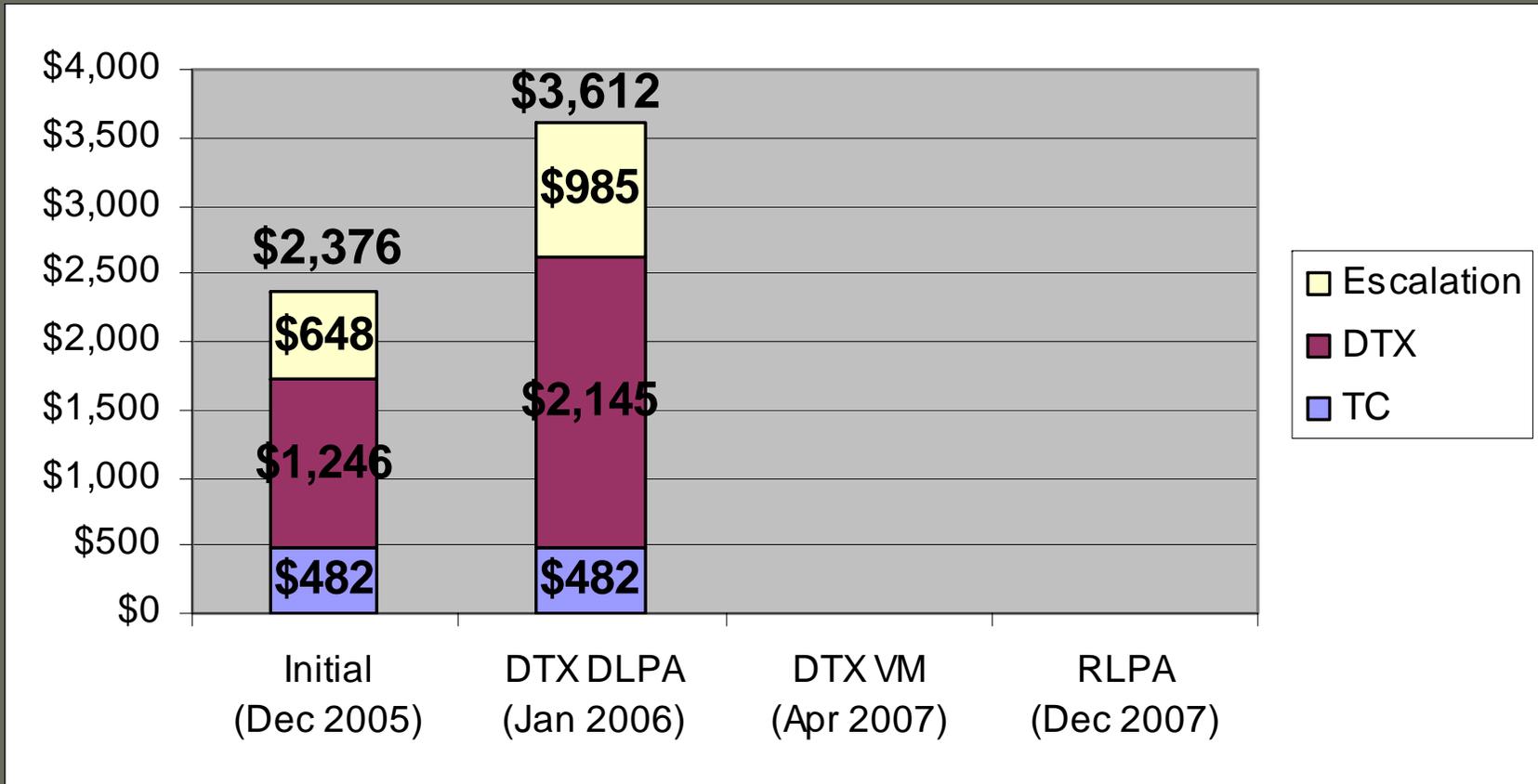
- Developed Locally Preferred Alternative Estimate Prepared in January 2006
- Fully independent estimate
- Principal elements of cost differential between the Initial and DLPA estimates include:
  - 2- versus 3-track estimate
  - Inclusion of underground storage structure
  - Deepening of alignment
  - Hazmat quantity and disposal costs
  - More comprehensive scope coverage: support of excavation elements, waterproofing, etc.



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# Phase 2 Estimate History (In \$Year of Expenditure)

Phase 2 Program Cost (\$m)



Cost Estimate



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## Value Management RLPA Recommendation

April 2007 TJPA Board-Approved RLPA Refined Configuration included the following:

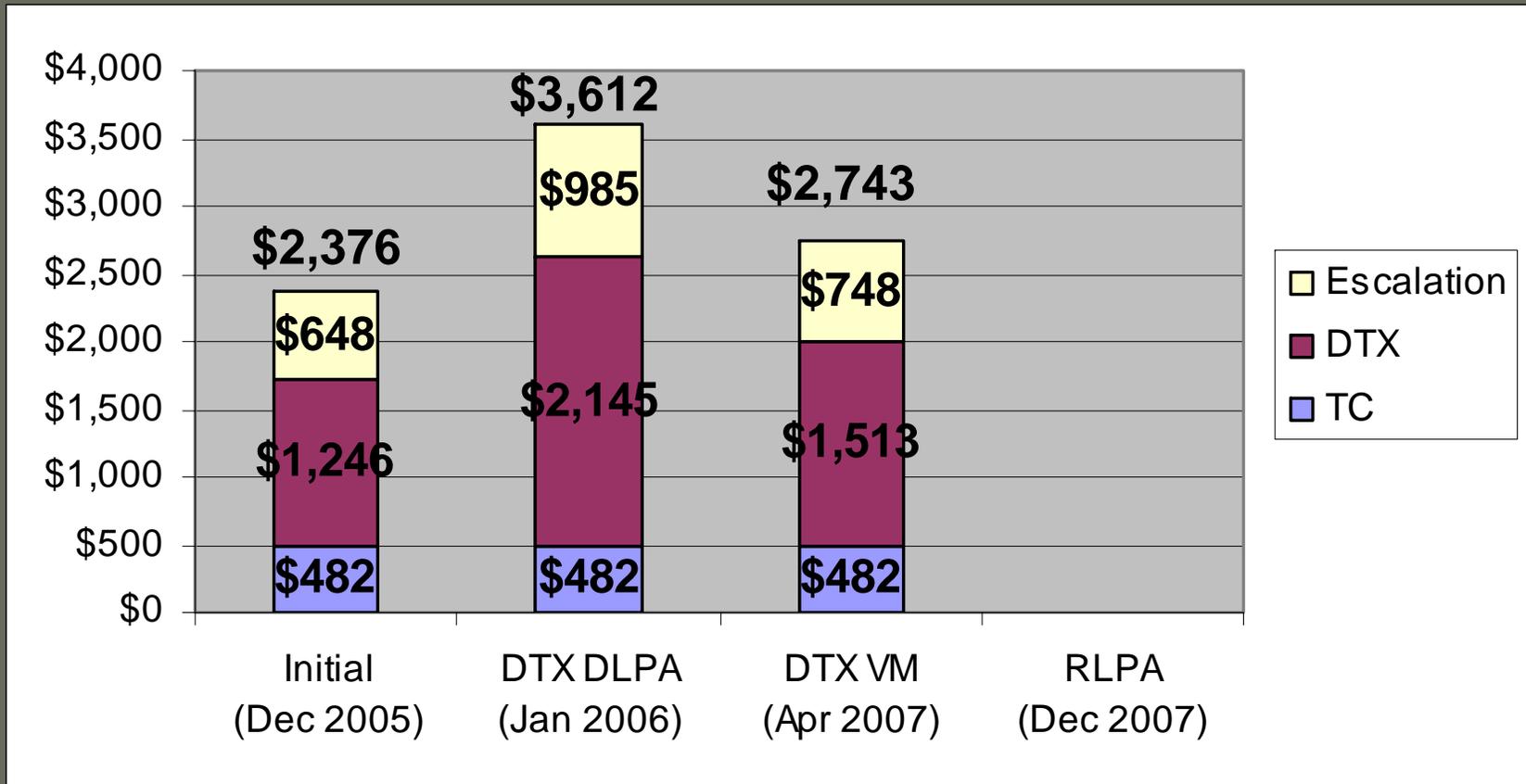
- 2-track lead to DTX tunnel system
- Fourth and Townsend underground station
- 3-track tunnel on Townsend and Second streets
- Transit Center with 3 platforms and 6 tracks
- Tail Tracks deferred until operationally required
- At-grade rail car storage within Caltrain Yard



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# Phase 2 Estimate History (In \$Year of Expenditure)

Phase 2 Program Cost (\$m)



Cost Estimate



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## Estimate Refinement & Cost Management Workshops

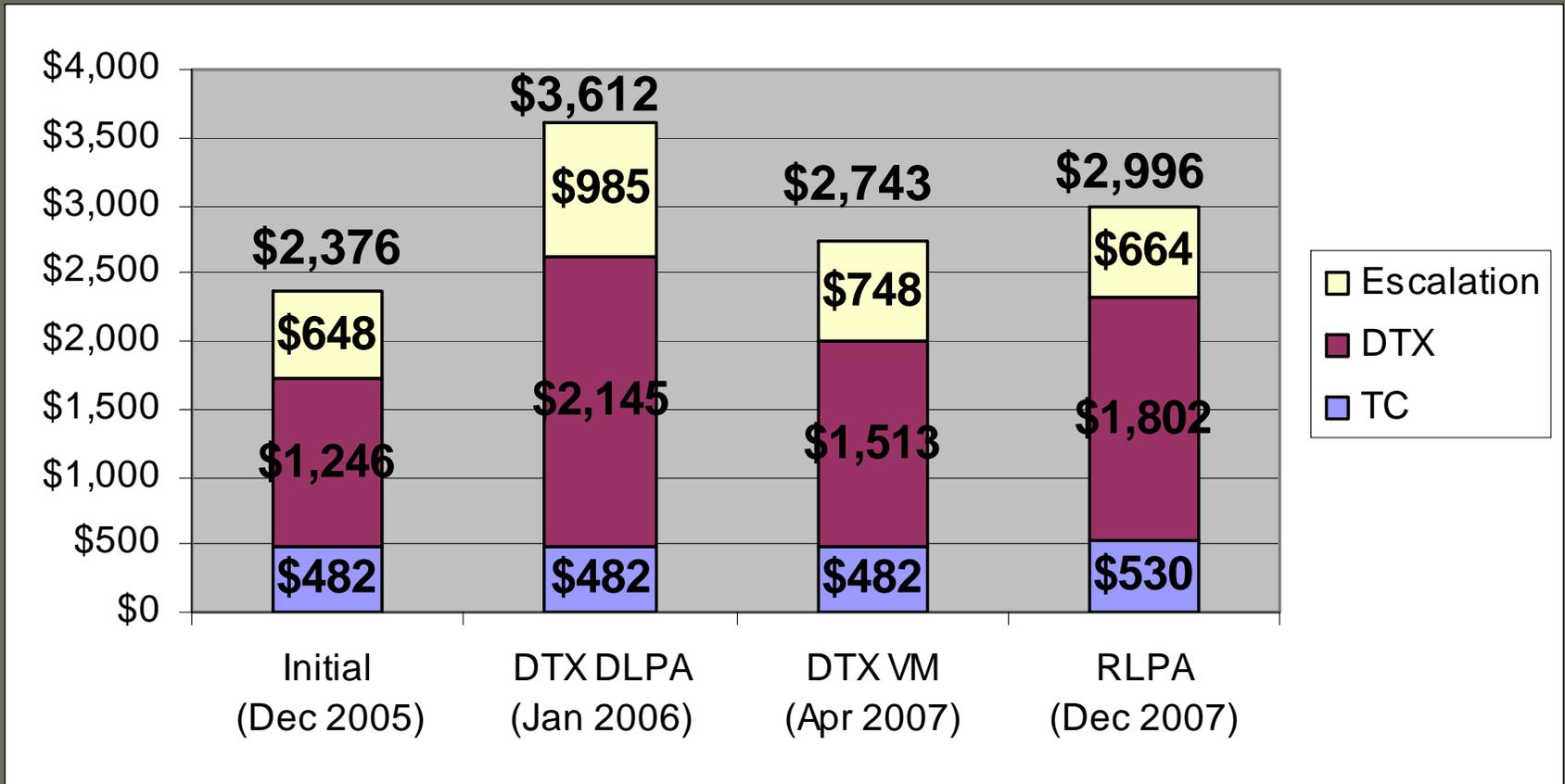
- April through December 2007:
  - DTX conceptual engineering
- October and December 2007:
  - DTX & TC Cost Management Workshops
  - Identified scope allowance items included in estimate
- December 2007:
  - updated DTX RLPA estimate
- January 2008 estimate baseline:
  - 2-year differential update Jan 2006 to Dec 2007



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# Phase 2 Estimate History (In \$Year of Expenditure)

Phase 2 Program Cost (\$m)



Cost Estimate



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# Establishing Phase 2 Baseline Budget



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## RLPA Development Conclusions

- March 20, 2008 TJPA Board Adopts Phase 2 Baseline Budget of \$2,996
- Estimate Confidence
  - Cost Management yields high level of confidence
    - Scope allowances
    - Detailed cost exposure analysis
- Future Project Cost Reductions Targeted
  - Major Underground Civil Structures (68% of Construction)
  - Track & Rail Systems (17% of Construction)
  - Schedule/Construction Expenditure



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## Phase 2 Budget

Item Description	Budget (\$ YOE)
Construction Cost DTX	\$1,426 m
Construction Cost TC	\$475 m
Professional Services	\$384 m
Construction Contingency & ROW	\$551 m
Programwide Costs	\$160 m
<b>Total</b>	<b>\$ 2,996 m</b>

(YOE cost calculated using escalation figure of 4% per annum)



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## Phase 2 Baseline Budget

- Budget is contingent upon the following:
  - Design-Bid-Build
  - Escalation at 4%
  - Caltrain electrification for revenue service
  - No allowance for Dual Mode Locomotives
  - Funding for Phase 2 being in place in 2010



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# Phase 2 Baseline Budget Funding Roadmap



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# Preliminary Funding Plan

## March 2008

(in Millions, YOE)	Phase 1	Phase 2
<b>Estimated Cost</b>	<b>\$1,189</b>	<b>\$2,996</b>
<b>Sources of Funds:</b>		
SF Prop K	\$98	\$50
San Mateo Sales Tax	\$7	\$22
Misc. Local	\$8	
Regional Measure 1	\$54	
Regional Measure 2	\$142	\$8
AB 1171	\$150	
RTIP	\$28	
Land Sales	\$411	\$424
Federal Earmarks	\$64	
TIFIA Loan	\$227	\$445
<b>Total Revenues</b>	<b>\$1,189 +</b>	<b>\$949 +</b>
<b>Surplus/(Deficit)</b>	<b>\$0</b>	<b>(\$2,047)</b>



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## Potential New Sources

- Public Private Partnerships
- Local Sources
  - Mello Roos/CFD Surrounding TTC
  - Upzoning Around 4<sup>th</sup> and King
  - Prop K Tier 2 Funding
  - Congestion Pricing



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## Potential New Sources

- Regional Sources
  - San Francisco Impact Developer Fee for Regional Transportation Projects
  - Regional Climate Change Fee
  - Bridge Toll Increase
- State Sources
  - High Speed Rail Bond
  - Prop 1B State Local Partnership Program
  - Prop 1C TOD and Infill Programs



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## Potential New Sources

- Federal Sources
  - Climate Change bills
  - Reauthorization of the Transportation Bill
  - Environmental legislation
  - Homeland Security
  - Rail funding



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## Approach

- Pursue multiple sources simultaneously
- Support Planning Department and other studies that could result in funding opportunities
- Work closely with stakeholders, funding partners and lobbyists to position Phase 2 for funding
- Maintain Phase 2 project readiness
- Target train box for full funding concurrent with Phase 1
- San Francisco/MTA, AC Transit, and Caltrain support Transbay as high priority for regional, state and federal funding



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# Questions?

