TYPE SELECTION ISSUES, TOPICS, AND ITEMS FOR CONSIDERATION

- **Project Description**
  - EA and CO-RTE-PM
  - Structure Names and Numbers
  - Vicinity Map
  - Purpose
  - General Plans for all structures and alternatives
  - Project Engineer and Architect

- **Project Schedule**
  - Design Hours for each structure
  - Structures P&Q and PS&E dates
  - Critical dates for other functional units
  - Ability to meet schedule
  - Missing Design Data

- **Previous Advance Planning Studies**

- **Design Alternatives**
  - List Alternatives Considered
  - Structure Depth
  - Span Arrangements
  - Material Alternatives
  - Construction Alternatives
  - Describe Pros and Cons

- **Accelerated Bridge Construction (ABC)**
  - ABC Decision Making Guidance (ABC Design Impact Questionnaire & ABC Decision Flowchart)
  - (see Structure Policy and Innovation intranet site)

- **Physical Constraints**
  - Horizontal Clearance
  - Vertical Clearance

- **Loads**
  - Special Loading Requirements
  - Construction Overloads

- **Adjacent Structures**
  - Clearances
  - Transition to other structures

- **Existing Bridge**
  - Removal/Replacement
  - Strengthening
  - Widening Methods

- **Future Widening**
  - Superstructure
  - Lower Roadway
  - Impacts on Current Project

- **Frame Layout**
  - Hinge Locations
  - Selection Process

- **Abutment**
  - Embankment Slopes
  - Seat, diaphragm, bin, strutted, rigid frame
  - Embankment surcharge and settlement
  - Approach Slabs
  - Slope Protection
  - Skew
Bent/Pier Wall Types
Number of Column/Bent
Drop Cap/Integral Cap
Column Fixity
Superstructure Fixity
Outrigger/C Bents
Skew

Railing and Barriers
Type
Rail Replacement Requirements

Corrosion Issues

Signs and Lighting

Joints Seals

Deck Surfacing
Additional Thickness for Quiet Deck Retrofit
Recommended surfacing (Polyester concrete, Multi-Layer Polymer, or AC)
Removal of existing surfacing (AC and deck membrane protective system)
Condition of existing deck (have cores been taken and evaluated by Translab?)

Sidewalks/Medians

Hinge Access

Bearing Systems

Deck Drainage
Design Rainfall Intensity
Inlet/Piping/Outlet Locations
Access openings

Retaining Walls and Soundwalls
Construction Materials
Special Design Required

Utilities
Type and location of utilities carried by structure
Future Utility Opening requirements
Interfering Underground and Overhead Utilities
Soffit openings

Permits and Agreements Required

Railroad Requirements

Structure Type Recommendations
Construction Costs
User-delay Costs

DISTRICT ISSUES

ADA Compliance

Presentations required for Outside Agencies

Commitments to outside Agencies

Environmental Constraints
EIR Requirements
Protected species
Mitigation measures
Monitoring requirements
Construction Windows
Hazardous Waste

Complete Streets

Context Sensitive Solutions

Construction Noise Issue

Noise Sensitive Area
AESTHETICS ISSUES
- Requirements of EIR, District, or other Agencies
- Sketches of architectural treatment

FOUNDATION ISSUES (Bridge and Earth Retaining Structures)
- Preliminary Report
- Groundwater
- Soil Profile
- Foundation Testing Requirements
- Foundation and Pile Types
- Risks and Potential Construction Issues

SEISMIC ISSUES
- Seismic Performance Criteria
- Seismic Analysis Methods
- Fault Magnitude and Distance from structure
- PGA & ARS
- Liquefaction Potential and Design methods
- Retrofit requirements
- Isolation Systems
- Critical Seismic Issues
- Peer Review Requirements
- Proposed New Criteria

MAINTENANCE ISSUES
- Utilities
- Widen ability of existing bridges
- Repair/Rehabilitation
  - Deck Condition
  - Deck Seals
  - Joint Seals
  - Approach Slabs
  - Bearing Systems
- Hydraulics/Hydrology
  - Final Hydraulic Report
  - Waterway Area requirements
  - Scour depths and protection
  - Bank Protection
  - Construction Methods in Waterway
  - Pier Shapes, location and skew
  - Sea level Rise or Tsunami
- Special Railing Requirements
- Life-cycle Analysis

CONSTRUCTION ISSUES
- Constructability
- Stage Construction
- Storage Facilities
- Distance to Nearest Batch Plant
- Construction Sequence Access
Falsework
- Temporary Vertical Clearances
- Temporary Opening Widths
- Temporary Support Locations

Traffic Control Issues
- Detours
- Lane Reductions and Closures
- Column/Footing Construction Requirements
- K-Rail and Crash Cushions
- Stage Construction

Bridge Construction Impact
(See Attachment 3)

Possible Risk with Proposed Structure Type

Risk Register
- Update Project Risk Register (from APS Phase)
- Identify New Risk from All Aforementioned Issues
- Include Updated Project Risk Register During General Plan Distribution