Attachment 2

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 Aformentioned Issues**
- ❑ **Include Updated Project Risk Register During General Plan Distribution**