

# Planning & Design for Hazardous Materials on Bridge Projects



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# Hazardous Materials on Bridges

Asbestos & Lead

# Directive from Amadeo Saenz:

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- Per CCAM, Ch. 12, Sect 1: mitigation or abatement of hazardous materials should be performed by a separate contractor
- Goal is to mitigate or abate before construction
- If prior mitigation is not possible, plans should include requirements for coordination

## Directive – cont'd

- Not a new policy
- Gave info on contracting options
- Provided a list of specialty contractors
- Provide contract requirements for specialty contracts
- Joint effort by BRG, CST, & ENV
- Available at:  
<http://crossroads/org/env/nrmintranet/HazmatContracting.pdf>

# Policy Applies to:

- Construction Projects
  - Replacing bridges
  - Widening bridges
  - Rehabilitating bridges

# May Apply to:

- Maintenance Contracts
  - Repairs
  - Rehabilitation

# I. What Does TxDOT need to do?

- A. Review structures in advance
- B. Test/quantify suspicious materials
  1. Test in-house for lead
  2. Use DSHS consultant for ACM - \$500/str
- C. Select mitigation method (A, B, or C)
- D. Prepare mitigation contract for lead or asbestos

# Methods for Handling Asbestos or Lead

- A. TxDOT abates in advance
- B. TxDOT abates during construction
- C. Prime contractor arranges for abatement during construction

Which will we use? All of them\*

# Method A: TxDOT abates in advance

- 2x traffic control = 2x impact to public
- Access issues
- May not be possible

# Method B: TxDOT abates during construction

- Procurement issues
  - Can't use consultant \$\$
  - must let another contract
- Coordination issues
- Impact to project schedule

# Method C: Prime Contractor abates

- Specialty subcontractor
- Easier coordination
- Less impact on schedule
- Insurance/Bonding issue
- Administration approval required prior to project development
- Minimize risk to contractor

# Basis for Administration Approval

- Asbestos work not easily separated from construction work
- Excessive lane closures/impact to public prevents advance abatement
- Risk to Dept with 2 contractors working in same area – coordination,...

**No Approvals to date**

# What do Designers need to do?

1. Collect info from TxDOT on test results
2. Include appropriate SP's and General Notes (contact BRG)
3. Include notes/details for lead paint stripping for main contract. (contact BRG)
4. Identify locations with lead/asbestos on plans (Gen Notes or details)

# Where are we finding Asbestos?

- Coatings on Concrete (25%)
- Coatings on steel (mainly rails)
- Caulking/sealants
- Aluminized paint on rail posts
- Tar/mastics
- Transite pipe
- Expansion joint material

# Aluminized paint on rail posts

## Concrete coatings



# Concrete coatings



# Mastic or caulk



# Roofing Felt or Exp Jt Mat'l “bearings”



# Transite Pipe



# Lead

- Most paints prior to 1972
- Some paints between 1972 & 1993
- “No” paints after 1993?

Bottom line: Test the paint

# Asbestos Guidance Document

- BRG, ENV and CST
- Addresses asbestos issues in
  - Planning stages
  - During PS&E
  - During construction
- Instructions on forms
- Contracting alternatives
- Resources for abatement contracts
- Testing requirements

# Case Studies

1. Widening Concrete bridge
2. Widening steel bridge, repainting exist bridge
3. Replacing steel bridge
4. Rehabilitation of a truss

# 1. Widening a Concrete Bridge

1. Test for ACM in coatings
2. If no ACM, proceed as normal
3. If ACM is present
  - a. remove ACM in separate contract (Method A or B)
  - b. Proceed with as normal if using A
  - c. Include coordination notes if using B

## 2. Widening steel bridge, repainting beams

1. Test paint for lead, test concrete coatings for asbestos
2. If ACM present, separate contract needed for abatement
3. May have sep. contract for spot paint removal for connections to the existing steel
4. If + for lead, notes in plans for prime contract
5. Set up separate contract for re-painting

## 3. Replacing Steel Bridge

1. Test paint for lead and test for asbestos
2. If + for either, set up abatement contract(s) using Method A or B
3. Plan notes for prime contract about spot painting
4. Generally, prime contractor indicates cut loc's – Spec. Contr removes paint

## 4. Truss Rehab

- Test for Lead
- Indicate on plans if Lead is present
- Can paint with this contract

# Bridge Construction & Maintenance Branch

- 6 Professional Engineers, 1 EIT
- 4 Structural Steel Field Inspectors
- Serve as in-house consultant to districts, divisions, and consultants on bridge construction and maintenance issues
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