DBI SERVICES – BACKGROUND

- Founded 1978 – 35 years in business
- Fortune 500 Transportation Infrastructure Services company
- Multiple Business Units
- Over 60 office locations world-wide
- Over 1,500 employees
- Over 2,000 trucks & pieces of equipment
25 years of bridge cleaning/maintenance experience

Successfully completed bridge cleaning contracts in 15 States and Canada

Experienced in all types of contracting methods, utilizing wide variety of specifications

Performing bridge washing alone and in combination with many other bridge maintenance and preservation services
Observations

- Cleaning programs that address only specific parts of bridge don’t provide optimal long-term benefits
- Deck cleaning/flushing only—although effective for salts, chlorides, etc., does not really address proper function of bridge components
- Shoulder cleaning only does not address expansion joints packed with debris
- Cleaning only substructure provides short term benefits, but subsequent weather/rain events hasten the transfer of deck debris to substructure
ESSENTIAL ELEMENTS

• Total approach- cleaning of complete bridge structure and associated bridge ROW
• Utilize “dry” cleaning methods
• Ability to greatly vary water pressure & volume
• Clearing of bridge ROW by mechanical and/or chemical methods
• Properly service drainage/storm water systems
• Address flow blockage/scour issues
RECOMMENDATION: THE TOTAL APPROACH

- **Deck/Superstructure Washing**
  - Crucial part of cleaning sequence due to winter sand/salt road treatments

- **Deck Sweeping**
  - “Dry” clean the deck before pressure washing
  - Most efficient method of for removing heavy amounts of debris

- **Expansion Joint Cleaning**
  - Ensures proper functions of expansion and finger joints
  - Ease of expansion joint system inspection
RECOMMENDATION: THE TOTAL APPROACH

Drain Cleaning

- All drains and catch basins cleaned while working on deck and superstructure
  - Clean out drain pans to open blocked drains
  - Inspect conditions of total drainage system
  - Use Vactor-type truck for complex drainage systems
Vegetation and Brush Clearing

- Clear, cut and remove all vegetation in contact with bridge structure through mechanical and/or chemical methods
  - Mechanical methods initially eliminate heavy vegetation
  - Chemical (herbicide) methods ensure long-term brush control and minimal re-growth
  - Diminishes the damaging effect on wing walls, slope walls, piers, etc.
  - Provides for safe work environment for maintenance, repairs and inspection
**RECOMMENDATION: THE TOTAL APPROACH**

Substructure Cleaning

- Complete all deck cleaning prior to cleaning substructure
- Wet down larger deposits of debris, and manually clean before washing under pressure
- Must use bucket-truck or snooper inspection crane for efficient and thorough substructure cleaning
**Flow Blockage/Scour Issues**

- Clear any/all items stuck or wedged against piers or abutment walls
- Additional rip-rap rocks should be added if scour issues are noted
- “Clam” truck can be used to remove debris or add material as needed in hard to access areas
ESSENTIAL EQUIPMENT

• Street sweeper/mechanized debris removal
• Specialized access equipment- “Snooper” under bridge access crane, purpose-built bucket trucks
• Vactor trucks, video inspection equipment
• Variable rate/flow pressure washers
• “Clam” type crane/dump trucks
Herbicide use for longer term control of vegetation
- GPS real-time tracking systems
- GPS real-time video recording systems
- Video inspection for drainage systems
- GPR or other technologies for deck condition inspection/evaluation
- Bundling of additional services to take full advantage of maintenance/preservation items that can be performed in conjunction with washing
Additional Services

- Expansion joint repair or replacement
- Spall repair/concrete patching
- Bearing lubrication
- Graffiti removal and anti-graffiti coatings
- Protective/rehabilitative treatments or coatings
- Scour maintenance & rip-rap repair
- Pest deterrent measures
- Inspection work
IN CLOSING

• These are suggested additions or changes to existing bridge preservation programs
• We will be around until the end of conference and open for further discussion
• Questions??

• THANK YOU VERY MUCH FOR YOUR TIME!!