

Maintenance Memorandum

Date: February 17, 1999

Subject: **Movable Bridge Maintenance Responsibilities**

Attached is the updated schedule of responsibilities and duties of various agencies and personnel responsible for maintenance of the trunkline movable bridges. The last time this schedule was distributed was in 1995 and there have been some minor changes in the duties and the personnel to contact in case of an emergency. These revisions are noted in bold type in the text, reflects recent organizational changes consistent with responsibilities originally performed by Regions/Lansing staff.

We are requesting your assistance to insure that schedules are posted in all bridge houses and to instruct all personnel to become familiar with the schedule of duties.

If you have any questions, please contact Christopher Idusuyi at 517-322-3398.

Calvin Roberts
Engineer of Maintenance
(Signature on File)

Attachment

“Movable Bridge Maintenance Responsibilities” October 16, 1998; 3 pgs.

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Duties of Statewide Crews

1. Perform all mechanical maintenance including alignment and adjustment of, repairs to and replacement of bearings, shafts, shaft housings, gears, gear reducers, roll racks, and the entire drive train. Grease and repairs to center locks. Maintain brake adjustments, brake thrusters, and brake repair items such as replacing linings and re-machining brake wheels. Grease all gears and bearings bi-weekly or more often if needed. Clean off excess grease and oils.
2. Perform all hydraulic repairs and changing the hydraulic fluid and filters, when needed.
3. Perform minor repairs and services as needed to the auxiliary engine and generator.
4. Perform all electrical repairs, including replacing and restoring parts of 110, 220, and 440 volt systems, repair, clean and adjust all limit switches, circuit breakers, relays, contacts, motors, heaters, solenoids, and related wiring, and accessories.
5. Repair water and sewer systems on these structures.
6. Weld bridge decks (open grating) and curb fenders, deck aprons, and most other miscellaneous welding required.
7. Instruct the bridge tenders on the operations of the bridges, both on regular power and auxiliary power, how to trouble shoot problems, and keeping of logs. Also, instruct them as to their routine maintenance duties at the bridges. Have an operational procedure sheet prepared on how to open and close the bridge on both normal and auxiliary power. This would normally be attached to the operator's panel.
8. All electric motors are to be greased and serviced by the electrical crew only.
9. Clean counterweight pits as required. **Region/TSC** resource specialist to arrange for disposal of collected material.
10. **Wash bridge elements not accessible by the Region/TSC bridge crew such as girders, floor beams, stringers (bottom and sides), and substructures.**

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Duties of Bridge Tender *

1. See Item #7 above referring to **technical** training of bridge tenders.
2. Operate the bridge under normal power as required. Operate the bridge on auxiliary power once a month with each tender. Know the necessary emergency procedures to follow in case of malfunctions. The auxiliary engine shall be run once a week.
3. Inspect and clean horizontal and curved treads and **other machineries not housed** must be kept clear of sand and debris including **pigeon debris**.
4. Each week, clean catwalks and stairways, and the floors, walls, and windows of bridge house and machine rooms. Paint when necessary and approved by **Region/TSC** supervisor.
5. Electrical - change blown fuses and light bulbs.
6. Check hydraulic systems DAILY for leaks and reservoir tanks for proper level of fluid.
7. Pump counter balance pits when approved by **Region/TSC** resource specialist. Advise **Region/TSC** supervisor when pit cleaning is required.
8. Remove snow when necessary on sidewalks of lift spans and around bridge house and far side entrance.
9. Daily during shift change, walk through both machinery rooms and visually inspect all equipment such as the main gears, shafts, bearings, motors, pumps, pits, and also visually inspect the navigation lights, and traffic gates.
10. Paint bridge railings when directed by **Region/TSC** supervisor. Paint steel gate mechanisms and weight counter arms when needed.
11. The chief bridge tender will "ride" each machine room during operation of bridge once a month to check for defects.
12. Maintain a log of all openings of the bridge and of work performed.
13. Keep an operating procedure sheet posted at the operator's panel.
14. Work with the bridge inspectors during bridge inspections. Inform the inspector of any strange new sounds, cracks, or holes in the steel.

* **It is the responsibility of the Region/TSC office to insure that the duties of the bridge operator and Region's bridge crew are being properly performed.**

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Duties of Region/TSC Bridge Crews at Movable Bridges

1. Wash bridge decks, stringers, floor beams, gutters, **other elements accessible from the deck surface** and wash walkways below deck (SEMIANNUALLY).
2. **MDOT Standards require** structural welding on MDOT bridges must be performed by certified welders. Welders on the statewide bridge crew have all been certified. Miscellaneous non-structural welding can be done by an experienced **Region/TSC** welder who has not yet been certified but such welding must be approved by the **Region/TSC** supervisor.
3. Perform concrete repair work.
4. Spot paint any corroded or repaired areas.
5. Assist **Lansing** bridge inspectors and/or **consultants** during bridge inspections.

Emergencies

Emergencies are to be handled without delay. Bridge tenders are to notify the chief bridge tender when any emergencies arise. In case of extreme emergencies, which require the immediate services of the statewide crew, calls should be made immediately to the Lansing office. Persons to contact in Lansing are:

Name & Title	Area	Office Phone	Home Phone	Cellular Phone	Pager Number
Vacant Foreman	Statewide Bridge Crew	517-322-1590		517-242-5783	517-228-9894
Steve Poyhonen Foreman	Statewide Electrical Crew	517-322-1601	517-548-9294	517-331-1761	517-374-5049
Carl Horning Superintendent	Statewide Bridge Crew	517-322-3321	517-764-0441	517-242-2099	517-232-1724
Christopher Idusuyi Structure Specialist and Emergency Bridge Coordinator	Bridge Section	517-322-3398	517-327-5303	-	517-229-6786