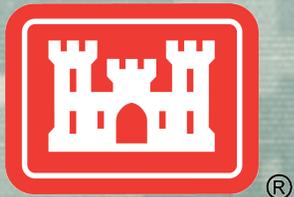


Lock and Dam 52, 2015 Work

Kevin Vessels

Louisville District

February 2016





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What all happened in the fall of 2015 at L&D 52?

- Lower Guide Wall Repair (Contractor)
- Replaced Wickets (L&D 52 personnel and LRS)
- 1,200' Upper and Lower Miter Gate Machinery
- 1,200' Lower Hydraulic Piping Replacement (Contractor)
- 1,200' Upper Guard Cell Replacement (Nashville Dist.)
- 1,200' Cell Fill With Concrete
- 600' Lower Sill Repair
- 600' Rub Fender and Concrete Repair

We had two 12 day closures of the 1,200' chamber to accomplish the miter gate machinery repair, hydraulic piping, upper guard cell replacement and cell fill with concrete.



Lower 600 ft Guide Wall Stabilization and part of monolith 6 pulled and replaced (Contractor, Massman)

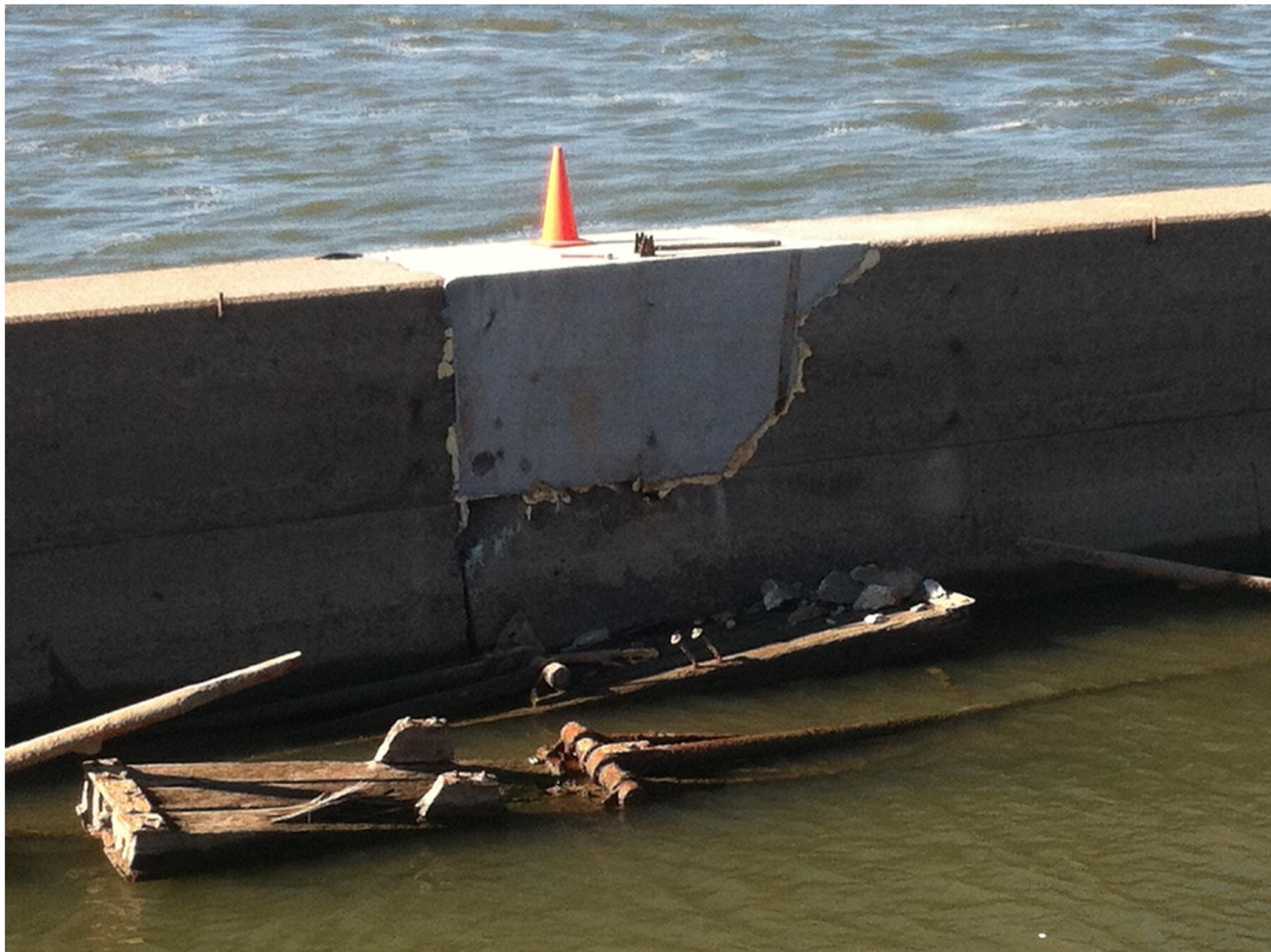


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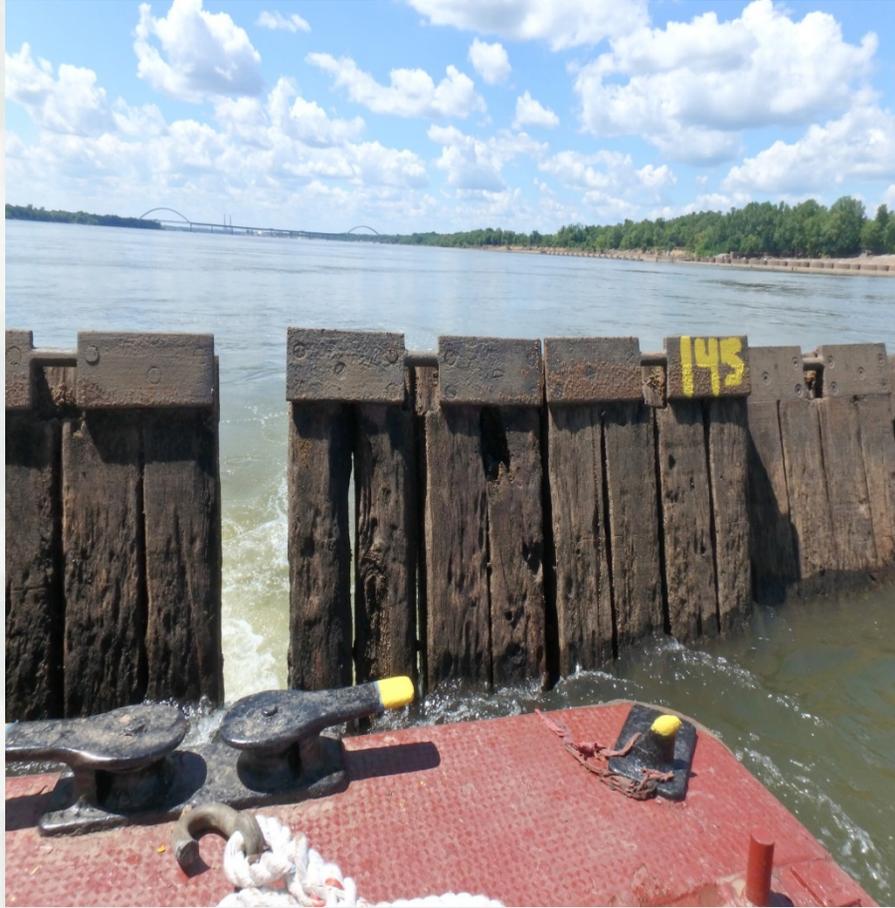
Downstream View



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Replacing Wickets



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Contractor barge and crane to handle the dive box and wickets for L&D 52



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1,200' Upper and Lower Miter Gate Machinery Repair



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Pay no attention to the painted gear teeth, the paint was removed prior to greasing



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Lower 1,200' Hydraulic Miter Gate Controls and Piping Replacement

(MATOC Contractor, T&T Construction, they subbed the work to Rend Lake Plumbing and Heating). The sub did a great job. A lot of the piping was pre-fabricated and trucked in.



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Contractor removed 600 Gallons of fluid and replaced everything with SS piping



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Upper 1200' 3rd cell build by Nashville Fleet



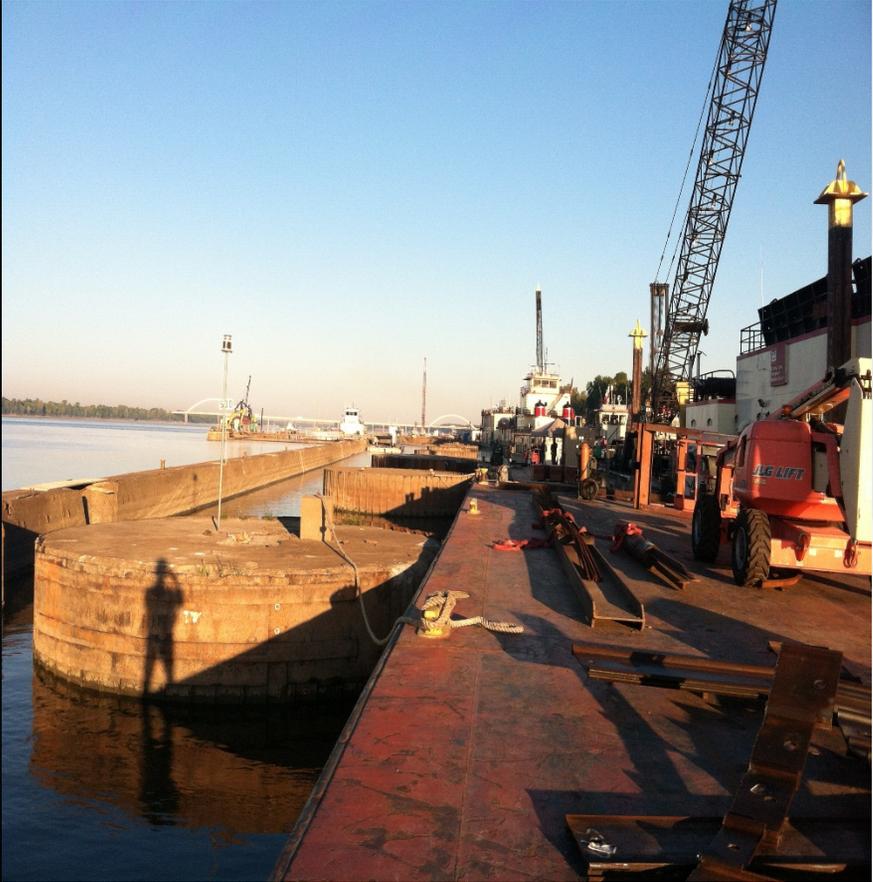
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This is why it was removed by contract and replaced by Nashville District



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Nashville Fleet

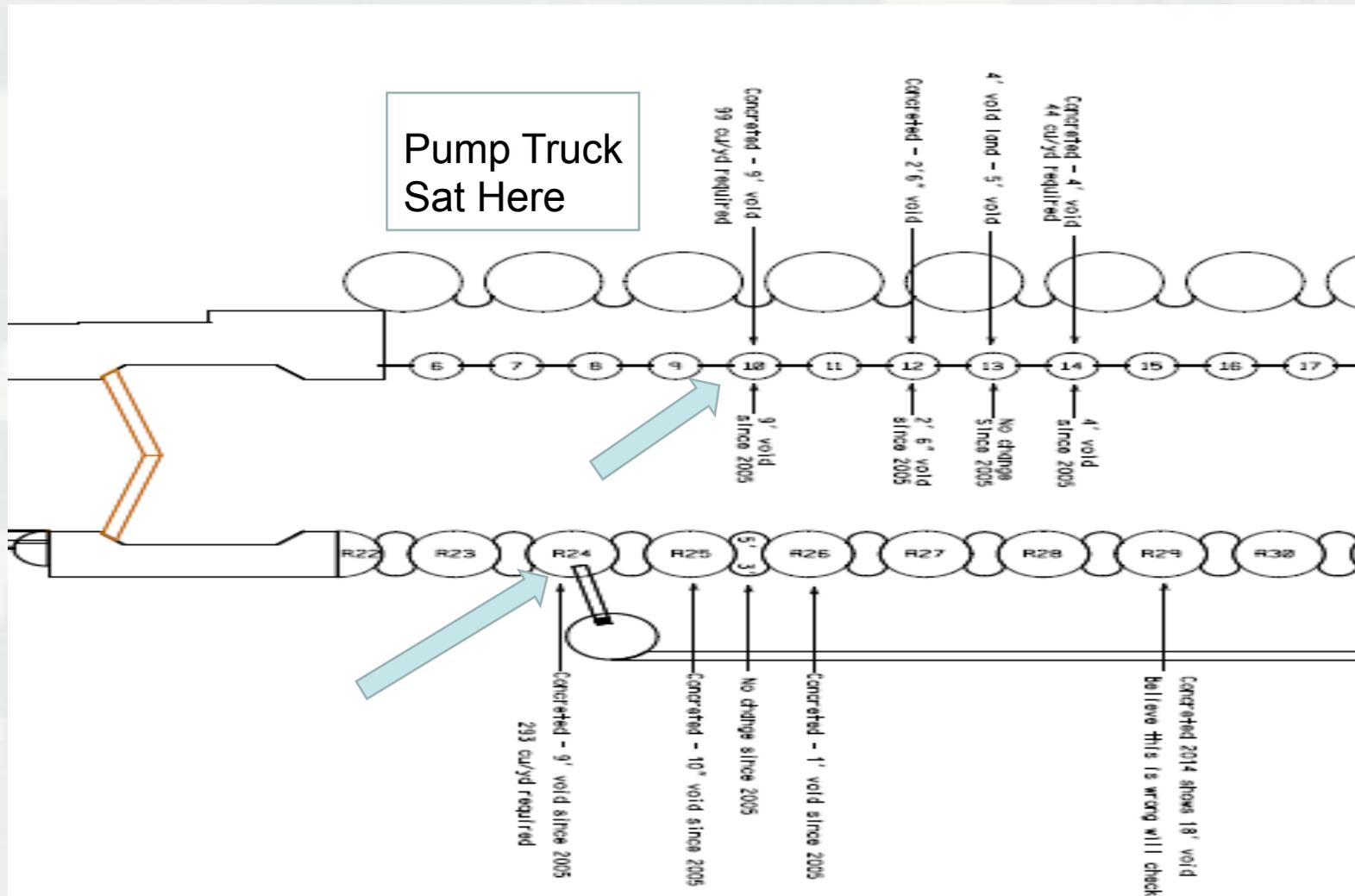


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1,200' Cell Fill With Concrete



Filled Flume Cell F 10 and River Wall Cell R 24





You have the concrete pump contractor, Massman with the 600' guide wall, LRS and the Hydraulic Piping, which you can't see, all at the same time on the lower end.



Flume Cell F 10, you can see where fill is leaking out



Divers had to install three of these concrete forms on the cell to keep the tremmie concrete from leaking out



PVC Tremmie Pipe, funnel, 8" to 6" to 4". It wasn't a good idea, it caused the rock to crush together and clog at the 4" pipe. Just a 6" reducer to insert the 4" pump pipe into would have worked.



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Clogged



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We ended up using 2 – 10' sections of rubber pump pipe as the Tremmie Pipe



Cut slots just below the old concrete fill to let the water out while filling with concrete



The 10" pipe was left from a previous concrete fill in 2007. This was to monitor the cell fill depth and fill with more concrete if required. We left a new sounding pipe. Will have to core drill to fill any more



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We still have serious issues with the cells at L&D 52



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600' Chamber Lower Sill Repair, buoys set by divers marking the box setting location















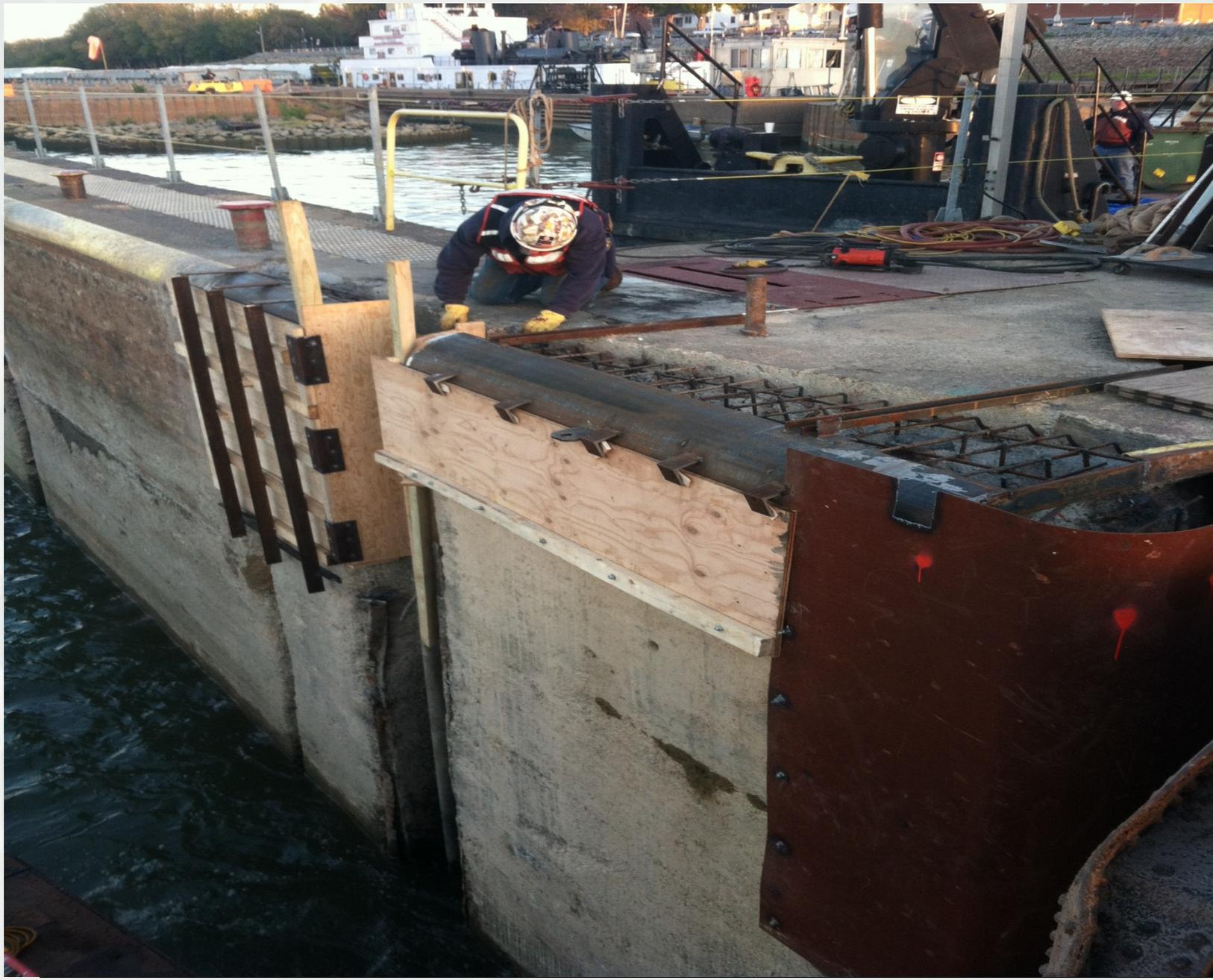
We even threw in some 600' rub fender and concrete repair



600' Upper Middle Wall Gate Area



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A lot going on at once



Questions?



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