



MOUSE
RIVER
PLAN

Mouse River Plan PROGRESS was developed by the Souris River Joint Board and its' partners to keep project stakeholders, constituents, and the region updated on the progress of the Mouse River Enhanced Flood Protection Project (MREFPP). The MREFPP is a basin-wide endeavor focusing on flood risk reduction along the Mouse River. The estimated \$1 billion project was initiated following the devastating 2011 flood and is anticipated to be completed in 20 years.

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PROGRESS



THIS PUBLICATION IS A PERIODIC UPDATE PROVIDED BY THE SOURIS RIVER JOINT BOARD





PHASE MI-1 CONSTRUCTION UPDATE 4TH AVE/PUMP STATION

A number of project milestones were hit over the past month on the Phase MI-1 Fourth Avenue floodwall project in Minot.

The first vertical portions of the floodwall between Fourth Avenue and the Souris River were poured in the middle of June. When added to the horizontal footings, the vertical portion will form an exposed floodwall height that will range from 14 to 17 feet along the Phase MI-1 Fourth Avenue project. In total, nearly 10,000 cubic yards of concrete will be needed to form this portion of the floodwalls. The plan is to continue these pours throughout the summer and into fall. The contractor for the flood protection project switched traffic at the Broadway/Fourth Avenue intersection from the east side over to the west side of the road in late June. Park Construction anticipates reopening the road to all north/south traffic (two lanes in each direction) toward the end of July. This goal is weather dependent as they need to finish the permanent surface of Broadway through this intersection.



385 cubic yards OF CONCRETE WERE PLACED TO FORM THE ROOF OF THE MAIN STRUCTURE

And on June 27, 385 cubic yards of concrete were placed to form the roof of the main structure that makes up the underground portion of the Broadway Pump Station. This roof will double as the floor of the visible aboveground primary building for the pump station. The Broadway Pump Station is a key component of the Phase MI-1 Fourth Avenue flood protection project and will handle the storm water runoff during times of high-water levels on the Mouse River. This big piece of infrastructure will keep the wet side of the levees/floodwalls wet, and the dry side dry during tough times.





PHASE MI-2 & MI-3 CONSTRUCTION UPDATE NAPA VALLEY/FOREST ROAD

Wagner Construction continues to make progress on multiple portions of work for Phase MI-2 and MI-3. Levee fill has continued throughout the project with the recent focus being the areas near the Bark Park Gatewell and Perkett Ditch Pump Station. These areas have since been completed and topsoil has been placed. The focus will now turn to the Phase MI-3 levee section on the east side of 16th Street. Rip rap placement continues along the riverbank in the area around Wee Links Golf Course and the 16th Street bridge. Earthwork related to levee construction is anticipated to be completed in July, with only small sections remaining near flood protection structures.

Construction of the 16th Street closure structure continues. A temporary bypass for 16th street was constructed in order to allow the contractor to excavate, form, and pour the concrete footings and floodwall. The first footing section was poured in late June and will continue through the next several weeks. Permanent relocation of several critical water lines has begun. A controlled penetration will be cast into the floodwall that will allow for the waterlines to cross the flood protection system. New storm sewer along 16th Street has also been installed to facilitate drainage along the revised roadway. Two significant portions of utilities were completed over the last several weeks and include directional bores beneath the river for the 10" sanitary sewer and the 30" raw water line.

The Perkett Ditch Pump Station, Bark Park Gatewell, and Wee Links Irrigation building are all undergoing final finishes that mainly include electrical and mechanical items. Site work around the buildings is being completed with landscaping to follow shortly afterwards. These facilities are tentatively scheduled for start up in later July or early August.

Restoration work for the Wee Links Golf Course is underway. The holes impacted by levee construction have been relocated and are being shaped by the golf course subcontractor. Once the new holes are shaped, irrigation lines will be installed to replace the sections that were removed for levee construction. Final seeding will occur later this summer to allow for an adequate grow in period that will permit for the course to be open for the summer of 2020.





BU-1A BURLINGTON COLTON AVENUE BRIDGE

June was a busy month for the BU-1A Burlington Colton Avenue Bridge Replacement Project. A groundbreaking ceremony was held at the site on June 11 to kick-off the project. Initial work included the clearing of vegetation and relocation of utilities located within the construction boundaries. Demolition of the existing bridge began the week of June 17 and is nearly complete. Once all bridge demolition is done, crews will begin work on the pilings, foundation and abutments.



PUBLIC MEETING FOR PHASE SA-1 SAWYER BRIDGE REPLACEMENT

THURSDAY, JULY 18, 2019



Erosion PREVENTION

A layer of stones, also known as riprap, is many times installed along riverbanks or lake shores to prevent erosion. The larger the stones the more resistant the stones are to movement and therefore can protect a riverbank from flood events or a lake shore from waves.

The current work on the Mouse River requires large quantities of riprap and riprap filter (gravel separation layer) to prevent erosion of the riverbanks, levees, and floodwalls. Approximately 44,000 tons of riprap and 20,000 tons riprap bedding has been/will be used on Phases MI-2 and MI-3. This amount of riprap required approximately 2,300 truckloads of riprap and riprap filter. This is enough to fill approximately 5 hockey rinks.

The ability of large stones to prevent erosion may be intuitively obvious, but the purpose of the riprap bedding is more subtle and requires some explanation. As a river flows by a layer of riprap, the flow can draw particles of soil through the spaces between the stones and carry the soil away, thus causing erosion of the river bank the riprap is intended to protect. Overtime, the stones have the appearance of sinking into the underlying soils. A method to prevent this riprap failure, is to provide a separation layer between the stones and underlying soils. The method chosen for the MREFPP projects uses a layer of gravel of specific sizes for separation between the soil and larger riprap stones. The gravel particles are too large to be draw through the spaces between the stones of the riprap and the spaces between the gravel particles are too small to allow the underlying soil to be drawn through the gravel layer thus preventing erosion of the riverbank.