

Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4L - Vicksburg Lane Reconstruction - Plymouth
BCWMC February 19, 2015 Meeting Agenda
Date: February 11, 2015
Project: 23270051 2015 2032

4L Vicksburg Lane Reconstruction - Plymouth

Summary:

Proposed Work: Reconstruction and expansion of Vicksburg Lane

Basis for Commission Review: Linear Project Disturbing Over 5 Acres

Impervious Surface Area: Increase 2.04 acres to 7.14 acres

Recommendation: Conditional Approval

General Background & Comments

The proposed project includes work on Vicksburg Lane from Old Rockford Road to Schmidt Lake Road. The project includes expanding the roadway from 2 to 4 lanes, installation of concrete curb and gutter, storm sewer improvements, replacement of a bituminous trail and installation of a concrete sidewalk. The project will result in a 2.04-acre increase in impervious surface from the current conditions. The total proposed impervious area is 7.14 acres. The site is in the Plymouth Creek and Turtle Lake Subwatersheds, which are tributary to Medicine Lake.

Since the area to be graded is greater than 10,000 square feet, the proposed project must meet the BCWMC erosion control requirements.

Floodplain

N/A

Wetlands

It does not appear that there is any work in wetlands as a part of this project. Plymouth is the LGU for administering the WCA.

Stormwater Management

Under existing conditions, four drainage subcatchments collect the runoff from the impervious areas from the site. The northern subcatchment (1) drains to a pond east of the project area. Subcatchment

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2 extends from 46th Avenue to north of 48th Avenue and drains to a pond south of 48th Avenue and west of Vicksburg Lane. Subcatchment 3 includes the area from the midpoint between 43rd Avenue and 46th Avenue to 46th Avenue and drains to a wetland west of the Fawn Creek subdivision. Subcatchment 4 includes the area north of 43rd Avenue to Old Rockford Road and drains east to Turtle Lake. Runoff is currently conveyed through a combination of storm sewer and ditch drainage. Under proposed conditions, the drainage divides will remain the same and runoff will be mostly conveyed through storm sewer.

Water Quality Management

There is currently no water quality treatment provided on the site. The BCWMC requires that project applicants consider installation of permanent water quality treatment permanent best management practices for road construction and reconstruction projects. Proposed permanent best management practices include installation of three SAFL baffles. The city has also reduced the impervious area by installing a 5 ft. sidewalk in lieu of a 10 ft. trail along the east side of Vicksburg Lane. The city considered including ponding, infiltration BMPs, rain gardens, a Stormceptor, and porous trails, but determined they were not feasible.

Erosion and Sediment Control

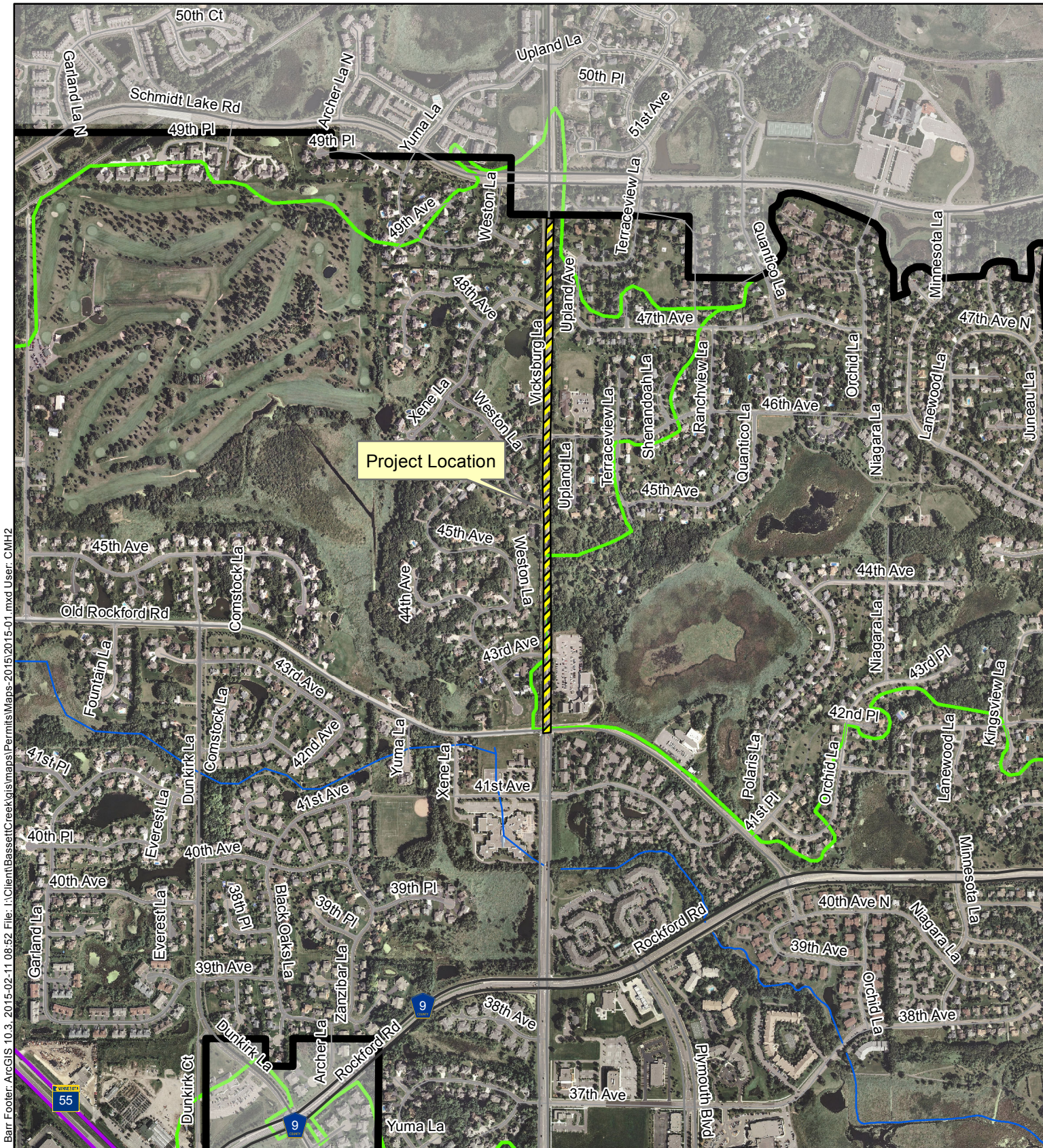
Proposed temporary erosion control features include silt fence, catch basin inlet protection, and street sweeping.

Recommendation

Conditional approval based on the following comments:







1. SAFL baffles should be located in structures with solid castings to promote maximum removal efficiency from the SAFL baffle and sump. SAFL baffles are listed in structures STMH8 and CB30, both of which are listed with a beehive type casting, rather than solid castings.
2. Outlet velocities at APR7 and APR45 exceed 7 fps when the pipes are flowing full. Adequate riprap and filter material must be placed for erosion protection at the outlet and downstream channel to the receiving waterbody.
3. Add the following erosion control note to the plans:
 - Provide a temporary vegetative cover consisting of a suitable, fast-growing, dense grass-seed mix spread at 1.5 times the usual rate per acre. If temporary cover is to remain in place beyond the present growing season, two-thirds of the seed mix shall be composed of perennial grasses.
4. Revised drawings must be provided to the BCWMC Engineer for final review and approval.

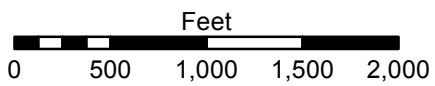
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Imagery Source: Aerial Express (2009)

-  Project Location
-  Bassett Creek
-  WMC Boundary
-  Major Subwatershed
-  Municipality
-  Stream



**LOCATION MAP
APPLICATION 2015-01
Vicksburg Lane Reconstruction
Plymouth, MN**