

**STORM WATER MANAGEMENT PLAN AND EROSION CONTROL PLANS
& MAINTENANCE/OPERATION PLAN
FOR**

Brett Sawyer Apartments – City of La Crosse
1027 La Crosse Street, La Crosse, WI

BACKGROUND & GENERAL INFORMATION

This project is located in the City of La Crosse at the intersection of La Crosse Street and 11th Street N. The Property consists of approximately 0.59 acres of vacant land, although there were four houses previously on the site. There are no identified wetlands or wetland indicators within the project limits. Maps from the Wisconsin DNR Surface Water Data Viewer are included.

Existing Drainage Conditions:

The drainage for the property drains to the alley on the west and south to La Crosse Street. An inlet exists at the corner of La Crosse Street and 11th Street.

Existing Drainage Calculations Summary:

The existing drainage calculations are included at the end of this report. (1S)

Existing Off-site Drainage:

There is no off-site drainage entering onto this project site. Each adjacent lot drains along the lot lines.

Proposed Drainage Conditions:

The overall drainage pattern will continue as existing. The drainage will be directed to a series of ponding areas as shown on the grading plan. The ponding area will be expanded to maintain the 25 year rainfall.

Post-Development Runoff Summary

Proposed drainage calculations for the 2, 5, 10, and 25-year design storms have been included with this plan.

Proposed Detention Areas

Two infiltration basins are proposed for the Storm water management (4P & 5P). Ponding area one (4P) is located near the center of the project site. The discharge will be

handled by an 8” PVC pipe as shown on the grading plan. The second ponding area (5P) is located at the northeast corner of the parcel. The overflow will be handled by a 12” riser pipe that leads to an existing catch basin at the corner of La Crosse Street and 11th Street North.

Post-Development Performance Standards

Total Suspended Solids

According to NR151.122, BMPs shall be designed that the total suspended solids load from parking area and roads shall be reduced by 60 percent, based on an average annual rainfall, as compared to no runoff management controls.

The total suspended solids removal has been modeled in WinSLAMM version 10.2.

Percent removal: 87.56%

Peak Discharge

According to NR151.123(1), BMPs shall be employed to maintain or reduce the peak runoff discharge rates, to the maximum extent practicable, as compared to pre-development conditions.

The pre-development and post-development peak rates of discharge are summarized below. The HydroCAD modeling is attached to this plan.

Existing site runoff is as follows:

2 yr. Stm	1.25 cfs
5 yr stm	1.96 cfs
10 yr. Stm	2.37 cfs
25 yr. Stm	2.87 cfs

Developed site runoff is as follows:

2 yr. Stm	0.48 cfs
5 yr. Stm	0.63 cfs
10 yr. Stm	0.73 cfs
25 yr. Stm	0.98 cfs

Protective Area

According to NR151.125(4)(e), areas of post-construction sites from which the runoff does not enter the surface water, including wetlands, without first being treated by a BMP to meet the requirements of 151.122 to 151.123, are exempt from meeting the requirements of the Protective Areas performance standards.

Not applicable.

Summary

The modeling of this site shows that the requirements set by the Wisconsin Department of Natural Resources for total suspended solids, peak discharge, and infiltration can all be met with the proposed design.

The Storm Water Management Plan shows basic compliance with accepted engineering practice in hydrology planning and design. The resulting development will function as a positive addition to the community while sustaining environmental benefits in storm water management and quality.

CONSTRUCTION SITE PERFORMANCE STANDARDS

Erosion Control

The purpose of this control plan is to provide guidelines that comply with the state and local requirements, as well as to make recommendations regarding erosion control and storm water management. The construction of this development is a critical phase in terms of storm water management and runoff control. Construction site erosion control will help minimize the impact of development, enhance and protect local environment, and protect the surrounding project area by applying best management practices for erosion control at construction sites. This work shall be planned and executed in accordance with the Wisconsin Department of Natural Resources Storm Water Management Technical Standard and/or accepted local engineering practice. The owner/developer will be responsible for erosion control during the process of construction. Silt fence, site vegetation, and erosion mat will be utilized to keep sediment from leaving the construction site.

5.2 Construction Site Erosion Control Measures

The following erosion control devices may be used on the project site at any time during the construction phases to ensure the compliance with NR 216 and local erosion control requirements, as applicable.

α) Silt fence (WDNR 1056)

Continuous silt fencing will be required along all areas downstream of disturbed area, and all around the base of all stockpiles material subject to sediment transportation during rain fall events (stockpiles topsoil, gravel base, etc.). The silt fencing will provide a siltation barrier between the disturbed area and inlets and ultimately downstream water bodies. All silt fence shall be removed upon completion of the project or when disturbed areas have generated sufficient vegetation to prevent erosion and the threat of sediment reaching inlets and bodies of water.

c) Stone Tracking Pad (WDNR 1057)

Stone tracking pads will be constructed at all entrances to the construction site to minimize sediment tracking onto existing streets. A minimum of one construction entrance is required for the project site. Tracking pads are temporary and will be removed or much of the aggregate will be removed before the site is completed.

d) Waste and Material Disposal

All waste and unused building materials (including garbage, debris, cleaning wastes, or other construction materials) shall be properly disposed of and not allowed to be carried by runoff into a receiving channel or inlet.

5.3 Operation and Maintenance, Short-term

The owner of this project in the City of La Crosse, La Crosse County, Wisconsin, is directly responsible for the implementation and maintenance of the construction site erosion control measures.

The contractor shall conduct the following inspection

- Weekly inspections of implemented erosion and sediment controls.
- Inspections of erosion and sediment controls within 24 hours after precipitation events 0.5 inches or greater which results in runoff during active construction periods.

The contractor shall maintain weekly written reports of all inspections that include:

- The date, time, and exact place of inspection.
- The name of the individual who performed the inspection.
- An assessment of the condition of erosion and sediment controls.
- A description of any erosion and sediment control implementation and maintenance performed.
- A description of the present phase of construction at the site.

Repairs shall be made immediately, as required, to maintain effectiveness, until permanent vegetation is established. All repairs to erosion control devices shall be documented on the Wisconsin Department of Natural Resources Construction Site Inspection Report (form 3400-187). A copy of form 3400-187 can be found at the end of this plan.

5.4 Operation and Maintenance, Long-term

The OWNER of this project in the City of La Crosse, La Crosse County, Wisconsin, is directly responsible for the operation, inspection, and maintenance of all storm water facilities located within the project site, as described below.

- Ponding area:

Inspection: look for accumulation of sediment and/or debris. Length of time water is retained in basin. Look for erosion or damage. Look for weed growth.
Maintenance: Remove accumulated sediment deposits and/or debris and repair any eroded or damaged grass areas. If water is retained for more than 24-48 hours after a storm event replace top 6" of soil. Remove any identified weeds. Do not plow/store snow in ponding area.

The aforementioned inspection and maintenance schedule shall be performed after any rainfall event exceeding 1 inch of rainfall, and at a minimum semi-annually in early spring and fall.

All inspections and maintenance shall be documented and the OWNER shall keep all inspection and maintenance reporting/records on site and available upon request of the City and/or Wisconsin Department of Natural Resources.

Summary

General

The proposed development as outlined above meets all Wisconsin Department of Natural Resources storm water regulations pertaining to redevelopment.

For the temporary construction site scenario, sediment transport from this site to adjacent properties will be reduced by the erosion control devices and conservation practice standards.

This plan meets state storm water requirements and provides an environmentally sound and practical solution for the future storm water runoff generated from the development of this site.