This stormwater management narrative has been prepared to accompany the preliminary plans for the proposed Copper Rocks Development which will be located at 2415 State Road. The property will be a Planned Unit Development and will need to meet the requirements of the City of La Crosse Commercial Design Standards Handbook. The project will consist of the construction of 3 mixed use multi-family apartments and 3 townhomes, along with concrete pavement, concrete walk, utilities, erosion control, stormwater management, and landscaping.

A geotechnical Investigation will be completed by Braun Intertec, Inc. to aid in the design of the stormwater management for the site.

DESIGN STANDARDS

The existing site is currently a commercial retail store and parking lot. Therefore, the project will follow redevelopment standards from NR 151 and City of La Crosse Municipal Code of Ordinances as listed in the table below.

Table 1. Design Criteria

	Performance Standard	Requirements
Wisconsin Department of Natural Resources NR 151	Total Suspended Solids NR 151.122	Redevelopment – 40% TSS reduction from parking areas and roads.
	Peak Discharge NR 151.123	Exempt per NR 151.123(2)(b) – Redevelopment Site.
	Infiltration NR 151.124	Exempt per NR 151.124 (3)(b)3 – Redevelopment Site.
	Protective Areas NR 151.125	N/A – No protective areas within proposed site.
	Fueling & Vehicle Maintenance NR 151.126	N/A – No fueling or vehicle maintenance areas within proposed site.
	Location NR 151.127	BMP's will be located on site.
	Timing NR 151.128	BMP's will be installed prior to final stabilization.
City of La Crosse Municipal Code of Ordinances Section 105-61	Total Suspended Solids Sec. 105-61(b)(4)a.	Redevelopment – 40% TSS reduction from parking areas and roads.
	Peak Discharge Sec. 105-61(b)(4)b.	Maintain or reduce 2-yr and 10-yr 24-hour post construction peak runoff to predevelopment rates
	Safe Outlet Sec. 105-61(b)(4)c.	Safe passage of 100-year storm event
	Infiltration Sec. 105-61(b)(4)d.	Redevelopment site (exempt)
	Protective Areas Sec. 105-61(b)(4)e.	N/A – No protective areas within proposed site
	Fueling and vehicle maintenance Sec. 105-61(b)(4)f.	N/A – No fueling or vehicle maintenance areas within proposed site.
	Swale Treatment for Transportation Facilities Sec. 105-61(b)(4)f.	N/A

The disturbed area for this project is 6.3 acres and will decrease the onsite impervious area by approximately 1.5 acres compared to current conditions. Due to the fact that the disturbed area for this project is over an acre, a Wisconsin DNR WPDES permit will be required along with City Stormwater Management Permits.

EXISTING CONDITIONS

The existing site consists of a commercial building and paved parking lot. The existing parking lot drains to on site storm sewer that ties into Farnam Street to the north into existing City storm sewer. The existing building roof drains also tie into the existing City storm sewer.

PROPOSED CONDISTIONS

The proposed site includes 3 townhomes, 3 apartment buildings, parking, sidewalk, and pedestrian facilities. The proposed site will drain to catch basins and storm sewer that will tie in to Farnam Street similar to existing conditions. The proposed site decreases impervious area from existing conditions by approximately 1.5 acres which is anticipated to reducing the amount of flow and volume from the site to meet peak runoff requirements.

STORMWATER MANAGEMENT SUMMARY

Proposed stormwater management facilities for the project will include underground filtration or sedimentation devices to provide TSS removal for site runoff prior to leaving the site.

Water quantity calculations will be completed using hydraulic models developed by utilizing the design data and the HydroCAD Version 10.10-6a computer modeling system. Hydrographs for existing and proposed scenarios will be generated and routed through these models using the Atlas-14 rainfall distribution. The proposed runoff from the events will be analyzed to ensure flow is maintained or reduced compared to existing conditions and the 100-year storm event is safely conveyed by the proposed stormwater management for the site.

Water quality calculations will be completed by utilizing the design data and the WinSLAMM Version 10.4.1 computer modeling system to show that the proposed conditions meet the City and State requirements to reduce total suspended solids by 40% from parking areas and road surfaces compared to no controls.

A maintenance agreement with the City will be required for the underground chambers. A maintenance plan for the permanent stormwater management facilities on site is included with the submittal.