GRAND VALLEY STATE UNIVERSITY:
EXAMPLES OF EXISTING SUSTAINABLE STORM WATER MANAGEMENT ALTERNATIVES:

POROUS ASPHALT PAVEMENT – LOT R.

Storm water infiltrates through the pavement layer and is stored in the stone base layer prior to being released at a controlled rate. Pervious pavement promotes infiltration and reduces the peak runoff rate and volume during storm events.

POROUS CONCRETE PAVEMENT – MACKINAC HALL COURTYARD

Porous Pavement promotes infiltration of stormwater and reduces peak runoff from storm events. Storm water in this courtyard is captured through the pavement and a system of underdrains and underground cisterns. The storm water is then pumped into the drip irrigation system which serves the courtyard landscape.

GREEN ROOF – 2010 LIVING CENTER

Green roofs promote infiltration of storm water and reduce peak runoff from storm events. The sedum plants absorb and uptake storm water runoff and reduce pollutant loadings. GVSU has installed green roofs on several building construction projects on campus.

RAIN GARDEN – LAKER TURF BUILDING

Rain Gardens are non-structural systems that promote infiltration and reduce pollutant loadings to storm water discharges. This rain garden captures and treats a large portion of the Laker Turf Building and Site. Any excess storm water is captured by a detention pond which is then reused for irrigation needs of the campus. The rain garden reduces the storm water rate and volume from the site during rain events. Rain gardens have been incorporated into several building construction projects on campus.

STORMWATER REUSE POND (FOR IRRIGATION)

This detention/reuse pond captures storm water from a large portion of campus which previously drained directly into the ravines. Storm water is captured, stored and reused in the campus athletic field irrigation system. The reuse pond reduces the runoff rate and volume and associated erosion in ravines.

WETLAND SYSTEM CONSTRUCTION (PHASE 1 & 2)

The wetlands system captures, stores and treats storm water from several areas of the campus that previously drained directly into the ravines. The wetlands system includes sediment forebays and several wetland cells in series. The wetlands system reduces the runoff rate and volume and associated erosion in ravines and provides storage, infiltration and treatment opportunities.