

Kurt M. Baumann, PE, CFM

Senior Water Resources Engineer



EDUCATION

B.S., Civil Engineering,
Marquette University, 1985

Joined Firm in 2003

Years of Experience: 40

REGISTRATIONS

Licensed Professional
Engineer: Illinois

Licensed Professional
Engineer: Wisconsin

Certified Floodplain Manager:
Illinois

Certified Lake County
Watershed Development
Enforcement Officer

Qualified Engineer Review
Specialist, Kane County
Stormwater Management
Commission

ASSOCIATIONS

American Society of Civil
Engineers

Illinois Association for
Floodplain and Stormwater
Management



Kurt provides a wide range of engineering planning, design, and construction services. His experience includes water resources, transportation, site development, and municipal engineering projects. He is also adept in hydrologic and hydraulic stormwater modeling, including the use of FEQ. He has completed numerous hydraulic reports for bridge waterway projects, location drainage studies coinciding with highway improvements, drainage investigations, flood insurance studies as part of a Letter of Map Amendment or Letter of Map Revision, storm sewer design and analyses, and numerous other stormwater projects.

REPRESENTATIVE PROJECTS

WATERSHED DEVELOPMENT OFFICER/PLAN REVIEWS

Grayslake, IL

Assistant Village Engineer and Watershed Enforcement Officer Duties

The Village of Grayslake teamed with Baxter & Woodman for many years to provide Village Engineering services. As a senior municipal engineer, Kurt provides backup duties for the Village. He attends regular project meetings and responds to requests from the Village Manager.

DRAINAGE STUDIES/MASTER PLANS

Grayslake, IL

Avon-Fremont Ditch Restudy/LOMA

Project Manager for the review of all information related to a recent restudy of the Avon-Fremont Ditch. The purpose was also to complete the remaining analyses required to update floodplain and floodway maps of the ditch from Atkinson Road to the Wisconsin Railroad and submit them for review and approval to the appropriate regulatory agencies, including Lake County Stormwater Management Commission, Illinois Department of Natural Resources, and the Federal Emergency Management Agency.

Gurnee, IL

Oakwood Drainage Study

As Project Manager, Kurt assisted the Village in identifying possible improvements to alleviate neighborhood flooding in the sub-basin bounded by Grandview Avenue on the south, Delany Road on the west, and US 41 on the east, an area historically prone to shallow ponding in the streets and yards.

STORMWATER INFRASTRUCTURE

Grayslake, IL

Parker Metra Station Site Improvements

Baxter & Woodman provided design and construction engineering and inspection services for a new METRA commuter rail station and parking improvements. The project required coordination with the Village, Lake County, METRA, utility companies, railroad, and Lake County Stormwater Management Commission (LCSMC). Parking design included capacity for 150 vehicles. Kurt assisted in preparing

CONTINUING EDUCATION

FHWA seminar "Stream Stability & Scour at Highway Bridges" by the National Highway Institute

IDOT seminar on "Bridge Scour Evaluation"

PRESENTATIONS

"Case Study of Moffet Road" for Lake County SMC DECI Workshop (February 2021)

"Regional Stormwater Storage for the Village of Round Lake – A Case Study" IAFSM Annual Conference (March 2015)

"Riverside Avenue Floodway – A Case Study in Creative Floodplain Management" Illinois Association for Floodplain and Stormwater Management Annual Conference (March 2010)

Designated Erosion Control Inspector (DECI) Workshop Lake County Stormwater Management Commission (March and June 2007)

NPDES Phase II Workshop Lake County Stormwater Management Commission/APWA Chicago Metro Chapter (May 2007)

"Map Mod in Illinois: A Community's Perspective" Illinois Association for Floodplain and Stormwater Management Annual Conference (March 2006)

the hydrologic analysis to determine the regulatory depressional floodplain elevations, and preparing the stormwater permits for the LCSMC. Final site improvements included floodplain compensatory storage, a retention facility with wetland plantings, vegetated swales, and incorporated other site best management practices.

Round Lake, IL

Cedar Valley Park Pond Regional Stormwater Basin Study

Project Manager for the project which refined the potential stormwater storage volume available; evaluated various options to maximize the storage with relative costs; and also identified jurisdictional authority, permitting constraints, and regulatory requirements. The project included a Threatened and Endangered Species Survey, wetland delineation, hydrologic and hydraulic analysis using XP-SWMM, and agency coordination. A new larger pond outfall, bypassing the stormwater lift station, was constructed in conjunction with the Hart Road improvements. The improvements facilitate the future development of Cedar Valley Park Pond for regional stormwater storage.

TRANSPORTATION

Grayslake, IL

IL 120 and Alleghany Road Intersection Improvements

Lead Drainage Engineer for intersection improvements, including traffic signals, storm sewer design, pavement marking plans, erosion control plan, permit approvals, and bidding documents. Included in the scope of work was a Location Drainage Study, Intersection Design Study, topographic survey, and geometric alternatives. A restricted stormwater outlet resulted in detention being required. Widening of the roadway impacted a depressional storage area that required compensatory storage under the Lake County Watershed Development Ordinance. Coordination with Lake County Division of Transportation, IDOT, and the Lake County Stormwater Management Commission was necessary to complete the project.

STRUCTURAL

North Barrington, IL

Woodland Drive Culvert Design

Senior Drainage Engineer for the update of the hydraulic computer model (HEC-RAS) to reflect the design conditions. The existing hydrologic conditions in pre-approved FEMA models were used. The project included an evaluation of the potential flood benefits on private property and whether a LOMR was warranted. Meetings were held throughout the project with the Illinois Department of Natural Resources, Federal Emergency Management Agency, US Army Corps of Engineers, and Lake County Stormwater Management Commission to obtain environmental approvals and discuss design concerns for permit approvals.

CLIENT SERVICES MANAGER

Lake Zurich, IL

Client Services Manager

Kurt has been serving the Village for many years and is responsible for communicating with staff regarding the municipal engineering services we provide.