

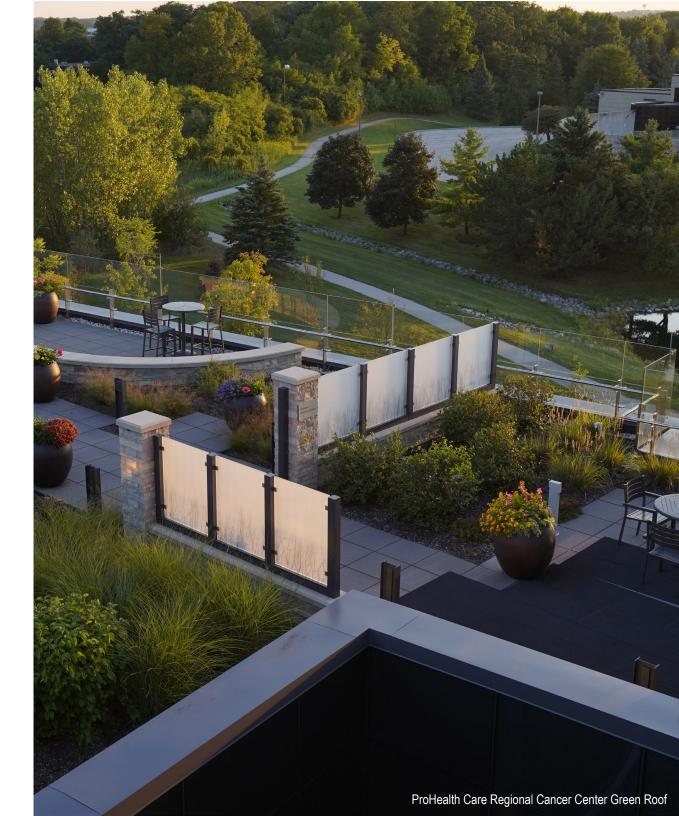
2022 | MMSD

Green Infrastructure Green Vendor List Qualifications



(414 / 259 1500 www.graef-usa.com

275 West Wisconsin Avenue, Suite 300 Milwaukee, WI 53203



Executive Summary

Resilient infrastructure is a priority at GRAEF. Our team is passionate about green infrastructure to manage water quality and quantity – from education facilities, commercial town centers, to industrial campuses. Our team can help you with determine the best green infrastructure features for your project.

WE NEED BOTH GRAY & GREEN

While traditional gray stormwater infrastructure is designed to move stormwater from hard surfaces, green infrastructure can manage stormwater volumes and treat the water at its source, with additional community benefits. Green infrastructure manages water where if falls by slowing it down, retaining it, filtering it, and allowing it to infiltrate into the ground instead of entering the sewer system – mimicking nature and with many community benefits.

GRAEF CAN BE YOUR GUIDE TO GREEN INFRASTRUCTURE

Our team can help you organize your project from start to finish. We build capacity with your partners, plan green infrastructure on your site, determine what types are most applicable for your project or stormwater needs, pursue funding as possible, and guide your implementation, maintenance, and monitoring. Our experienced team of planners, engineers, and landscape architects will help you get your project in the ground.

TRIPLE BOTTOM LINE OF SUSTAINABILITY CONSIDERATIONS

The GRAEF team integrates the triple bottom line of sustainability (ecological, social, and economic) into all projects, and the associated co-benefits. This includes stormwater requirements in terms of water quality and quantity improvement, but also recreation and education opportunities, workforce development, habitat improvements, and the overall cost of the infrastructure, from start to the ongoing maintenance. Green infrastructure is unique infrastructure in that it can increase community connectedness and be directly integrated into urban design (e.g. bioswales and porous pavement), but also into nature (e.g. wetlands and greenways).

Table of Contents

1 | FIRM INTRODUCTION 1

2 | GREEN INFRASTRUCTURE EXPERIENCE 2 FEATURED QUALIFICATIONS WORKSHEETS... 3

UW-Madison Union South Porous Pavement & Native Landscaping



FIRM INTRODUCTION

GRAEF is a multi-discipline, planning, design, and engineering firm dedicated to serving public and private clients throughout the United States. GRAEF began as an individual partnership structural engineering firm in 1961 and our ability to excel has been driven by integrity, quality, and our commitment to customer service. Today, GRAEF offers our clients a full range of consulting services nationwide.

OUR CORE PURPOSE

To improve the physical environment for the benefit of society in a sustainable manner.

EMPLOYEES

280+

YEARS IN BUSINESS

61 (founded in 1961)

OFFICES

Chicago, IL; Green Bay, WI; Madison, WI; Miami, FL; Milwaukee, WI (HQ); Minneapolis, MN; Orlando, FL; Sarasota, FL

SERVICES

Commissioning, Electrical Engineering, Environmental Engineering, Landscape Architecture, Mechanical Engineering, Parking Consulting, Planning + Urban Design, Plumbing and Fire Protection Engineering, Site/ Civil Engineering, Structural Engineering, Surveying and Field Services, Sustainable Design, Traffic/Transportation Engineering, Urban Resilience

SCALE OF WORK

Commercial/Industrial; Multifamily

SPECIALTIES

Design; Engineering

GREEN INFRASTRUCTURE TYPES

Bioswales; Cisterns; Constructed Wetlands; Green Roofs;.Native Landscaping; Porous Pavement; Rain Barrels; Rain Gardens; Soil Amendments; Stormwater Trees; Other: Greenways - Planning, Design, and Engineering, Grant Funding



Green Infrastructure Experience

		Тур	be of	Gre	en Ir	nfrast	tructu	ure li	nstal	led	
Project Name	Green Roofs	Constructed Wetlands	Native Landscaping	Porous Pavement	Rain Barrels	Cisterns	Stormwater Trees	Bioswales	Rain Gardens	Soil Amendments	OTHER: Grant Funding
Milwaukee School of Engineering Diercks Computational Science Hall						х	х			Х	х
Komatsu South Harbor Campus			x			х	х	х		Х	
Wauwatosa McKinley Elementary School			Х	Х				Х			х
Wauwatosa Underwood Elementary School			Х	Х							х
Wauwatosa Wilson STEM Elementary School			Х	Х				Х			х





GRaEF

Project Name: Milwaukee School of Engineering Diercks Computational Science Hall Address/City/State/Zip: 1025 N Milwaukee St, Milwaukee, WI 53202

Type of green infrastructure installed (check all that apply):

Green Roofs	Rain Barrels	Rain Gardens
Constructed Wetlands	⊠ Cisterns	Soil Amendments
Native Landscaping	Stormwater Trees	⊠ Other; Grant Funding
Porous Pavement	Bioswales	

Area of specialty for this project (check all that apply):

🗵 Design	Landscaping	Downspouts and Gutters
Engineering	Maintenance	□ Inspection
Construction	Plumbing	

PROJECT (PROPERTY) OWNER INFORMATION:

Owner's Name: Milwaukee School of Engineering, Thomas Barsokine Address/City/State/Zip: 1025 North Broadway, Milwaukee WI 53202 Phone: 414 / 277 7165 Email: barsokine@msoe.edu

PROJECT CONSTRUCTION INFORMATION:

Construction Management Vendor: Mortenson Project Manager Name: Rob Myers Project Manager's Vendor history: ⊠ currently employed □ no longer employed □ other Email: rob.myers@mortenson.com Contract information (if applicable): NA Final Contract Amount (contracted and amended if applicable): NA

Construction Start date (contracted): 2018 Construction Start date (actual): 2018 Construction End date (contracted): 2019 Construction End date (actual): 2019 Was the project completed on time? ⊠ Yes □ No; Explanation Was the project completed on budget? ⊠ Yes □ No; Explanation Was the project completed to the owner's satisfaction? ⊠ Yes □ No; Explanation

Project Description (Be sure to include cost information, photos, and a detailed description of the work performed by the Vendor applicant):

Dwight and Dian Diercks Computational Science Hall is the new home to Milwaukee School of Engineering (MSOE)'s Computer Science students. The 81,000-square-foot, four-story building features a 256-seat auditorium, six contemporary classrooms, eight innovative teaching laboratories, 32 faculty and staff offices and 18,000 square feet of underground parking.

Recycled Heat | Diercks Hall is also home to a NVIDIA supercomputer, named "Rosie." Housed in a state-of-the-art data center, the supercomputer is a high-performance processor that is fueling advancements in AI, which impacts multiple areas of business, including graphics, robotics, data centers and self-driving cars. The heat generated by the supercomputer within the building will be reused for a snow-melt system for nearby sidewalks and parking lots, which reduces the need for shoveling and salt usage.

Next Generation Technologies | The new science hall positions MSOE at the forefront of artificial intelligence education. The next-generation technologies in the building will have an impact on all areas of MSOE's curriculum, including the way engineers design and optimize, the way construction projects are planned and managed, the way actuaries calculate risk, and the way nurses care for patients.

Rainwater Detention and Harvesting | The project was recognized by MMSD as a Green Luminary for its successful installment of an underground cistern and irrigation system. The underground cistern helps manage storm water and divert it from the sewerage system. Water is pumped out of the cistern and used to irrigate the green space surrounding the building. These sustainability efforts were funded by a \$75,000 grant.

GRAEF Services: Civil Engineering; Landscape Architecture; Structural Engineering **Project Data:** 81,000 SF; \$35 Million













Project Name: Komatsu South Harbor Campus Address/City/State/Zip: 401 E. Greenfield Avenue, Milwaukee, WI 53204 Type of green infrastructure installed (check all that apply):

Green Roofs	Rain Barrels	Rain Gardens
Constructed Wetlands	⊠ Cisterns	Soil Amendments
☑ Native Landscaping	Stormwater Trees	Other; Grant Funding
Porous Pavement	⊠ Bioswales	

Area of specialty for this project (check all that apply):

🖾 Design	⊠ Landscaping	Downspouts and Gutters
☑ Engineering	Maintenance	Inspection
Construction	Plumbing	

PROJECT (PROPERTY) OWNER INFORMATION:

Owner's Name: Komatsu Mining Corporation Address/City/State/Zip: 4400 W. National Avenue, Milwaukee, WI 53214 Phone: 414 / 670 8476 Email: doug.kiser@mining.komatsu

PROJECT CONSTRUCTION INFORMATION:

Construction Management Vendor: Hunzinger Costruction Project Manager Name: Jon Jansen Project Manager's Vendor history: ⊠ currently employed □ no longer employed □ other Email: jjansen@hunzinger.com Contract information (if applicable): NA Final Contract Amount (contracted and amended if applicable): NA

Construction Start date (contracted): 2019 Construction Start date (actual): November 2019 Construction End date (contracted): September 2019 Construction End date (actual): In Progress Was the project completed on time? Yes No; Explanation: <u>Still in Progress</u> Was the project completed on budget? Yes No; Explanation: <u>Still in Progress</u> Was the project completed to the owner's satisfaction? Yes No; <u>Still in</u> Progress

Project Description (Be sure to include cost information, photos, and a detailed description of the work performed by the Vendor applicant):

Komatsu Mining Corp., one of the world's largest manufacturers of construction and mining equipment, is developing a 60-acre vacant brownfield site overlooking Milwaukee's inner harbor on Lake Michigan. The new corporate campus will include:

- A 185,000-square-foot, three-story office building that will be connected to a museum, a laboratory and a training center.
- A four-story, 650-space parking structure and a 250-space surface parking lot.
- A 440,000-square-foot manufacturing plant.

This development will allow Komatsu to move and consolidate its manufacturing operations and offices from West Milwaukee and Milwaukee's far west site. Ultimately, the company plans to employ about 1,000 people at the South Harbor site, which will manufacture giant shovels and other mining equipment. The manufacturing building consists of structural slabs, pile foundations and a superstructure supporting large overhead bridge crane and a solar PV.

Sustainability Features | Sustainability is a top priority of the project, as well as the ongoing operation of the facility. Due to the condition of the site as a former gas company, the U.S. Environmental Protection Agency (EPA) and the Wisconsin Department of Natural Resources oversaw the hazardous waste cleanup and remediation. Solar panels will be installed on the roof of the manufacturing plant, which will be a "net zero" facility that will create more electricity than it consumes. The plant also will reclaim 40 percent of all water it consumes. Additionally, the office building plans to achieve a LEED Silver certified rating.

The campus will become a public destination featuring an outdoor plaza with equipment on display including a giant P&H-branded electric mining shovel, the company's flagship product, as well as a large Komatsu dump truck also will be on display. The plaza will also include educational kiosks, interactive displays, canoe launches, a public park and a riverwalk that will extend from the end of Greenfield Avenue up the Kinnickinnic River to South Kinnickinnic Avenue on the city's near south side.



GRAEF Services: Civil Engineering; Electrical Engineering; Industrial Architecture; Landscape Architecture; Mechanical Engineering; Plumbing/Fire Protection Engineering; Structural Engineering; Traffic Engineering; Transportation Engineering

Project Data: LEED Silver Certified (proposed); \$300 Million















Project Name: McKinley Elementary School Address/City/State/Zip: 2435 N 89th St, Wauwatosa, WI 53226

Type of green infrastructure installed (check all that apply):

Green Roofs	Rain Barrels	🗆 Rain Gardens
Constructed Wetlands	Cisterns	Soil Amendments
☑ Native Landscaping	Stormwater Trees	☑ Other; Grant Funding
⊠ Porous Pavement	⊠ Bioswales	

Area of specialty for this project (check all that apply):

🖾 Design	⊠ Landscaping	Downspouts and Gutters
☑ Engineering	Maintenance	Inspection
Construction	Plumbing	

PROJECT (PROPERTY) OWNER INFORMATION:

Owner's Name: Wauwatosa School District Address/City/State/Zip: 2121 W North Ave, Wauwatosa, WI 53226 Phone: 414 / 773 1000 Email: choinsgr@wauwatosa.k12.wi.us

PROJECT CONSTRUCTION INFORMATION:

Construction Management Vendor: VJS Construction Services Project Manager Name: Ryan Kaplanek Project Manager's Vendor history: ⊠ currently employed □ no longer employed □ other Email: RKaplanek@vjscs.com Contract information (if applicable): NA Final Contract Amount (contracted and amended if applicable): NA

Construction Start date (contracted): May 2020 Construction Start date (actual): May 2020 Construction End date (contracted): September 2021 Construction End date (actual): September 2021 Was the project completed on time? If Yes I No; Explanation Was the project completed on budget? If Yes I No; Explanation Was the project completed to the owner's satisfaction? If Yes I No; Explanation

Project Description (Be sure to include cost information, photos, and a detailed description of the work performed by the Vendor applicant):

The Wauwatosa School District reconstructed the existing parking lots and installed a synthetic turf field at McKinley Elementary School, located at 2435 N. 89th Street, in the City of Wauwatosa, Wisconsin. Demolition activities included the removal of a portion of the existing building, pavement, landscaping, and utilities. Development activities included construction of sidewalk, access drives, parking areas, a synthetic turf playground area, landscaping, fencing, athletic field accessories, and utilities.

Sustainability Features |

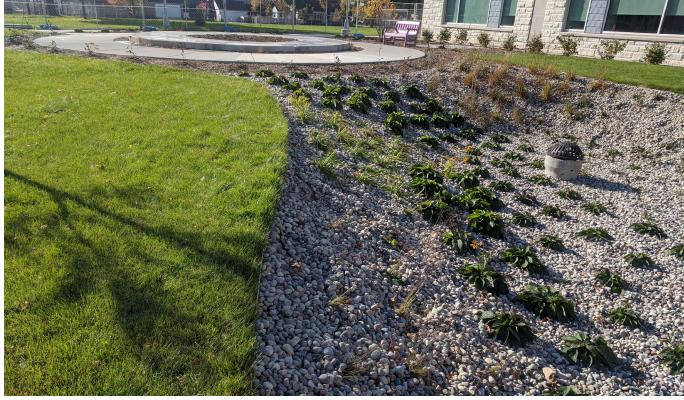
Green infrastructure improvements were incorporated into the site design, and included the following items: synthetic turf with a stone storage layer and an underdrain system, permeable pavement and a bio-filtration basin with an underdrain system. All of these green infrastructure practices provide both water quality and water quantity benefits and collectively aid in the project's compliance with the post-construction storm water management requirements of the City of Wauwatosa and MMSD.

GRAEF Services: Permeable Parking Lot & Biofiltration Basins Design; Civil/Site Engineering; Stormwater Management; Landscape Architecture

Project Data: Green Infrastructure Improvement Costs: \$225,000













Project Name: Underwood Elementary School Address/City/State/Zip: 11132 W Potter Rd, Wauwatosa, WI 53226

Type of green infrastructure installed (check all that apply):

 □ Green Roofs
 □ Rain Barrels
 □ Rain Gardens

 □ Constructed Wetlands
 □ Cisterns
 □ Soil Amendments

 □ Native Landscaping
 □ Stormwater Trees
 □ Other; Grant Funding

 □ Porous Pavement
 □ Bioswales
 □ Hender

Area of specialty for this project (check all that apply):

🖾 Design	⊠ Landscaping	Downspouts and Gutters
☑ Engineering	Maintenance	Inspection
Construction	Plumbing	

PROJECT (PROPERTY) OWNER INFORMATION:

Owner's Name: Wauwatosa School District Address/City/State/Zip: 2121 W North Ave, Wauwatosa, WI 53226 Phone: 414 / 773 1000 Email: choinsgr@wauwatosa.k12.wi.us

PROJECT CONSTRUCTION INFORMATION:

Construction Management Vendor: VJS Construction Services Project Manager Name: Ryan Kaplanek Project Manager's Vendor history: ⊠ currently employed □ no longer employed □ other Email: RKaplanek@vjscs.com Contract information (if applicable): NA Final Contract Amount (contracted and amended if applicable): NA

Construction Start date (contracted): April 2019 Construction Start date (actual): April 2019 Construction End date (contracted): August 2020 Construction End date (actual): August 2020 Was the project completed on time? ⊠ Yes □ No; Explanation Was the project completed on budget? ⊠ Yes □ No; Explanation Was the project completed to the owner's satisfaction? ⊠ Yes □ No; Explanation

Project Description (Be sure to include cost information, photos, and a detailed description of the work performed by the Vendor applicant):

The Wauwatosa School District constructed a new school facility at the Underwood Elementary School site, located at 11132 W. Potter Road, in the City of Wauwatosa, Wisconsin. Demolition activities included the removal of existing structures, pavement, and utilities. Development activities included construction of a new school building, sidewalk, playground areas, access drives, parking areas, landscaping, and utilities.

Sustainability Features |

Green infrastructure improvements were incorporated into the site design and included the following items: porous asphalt pavement with a stone storage layer and an underdrain system, synthetic turf with a stone storage layer and an underdrain system, and a dry detention basin. All of these green infrastructure practices provide both water quality and water quantity benefits and collectively aid in the project's compliance with the post-construction stormwater management regulatory requirements of the City of Wauwatosa and MMSD.

GRAEF Services: Porous Pavement & Biofiltration Basins Design; Civil/Site Engineering; Stormwater Management; Landscape Architecture

Project Data: Green Infrastructure Improvement Costs: \$198,000











Project Name: Wilson STEM Elementary School Address/City/State/Zip: 1060 Glenview Ave, Wauwatosa, WI 53213

Type of green infrastructure installed (check all that apply):

Green Roofs	Rain Barrels	Rain Gardens
Constructed Wetlands	Cisterns	Soil Amendments
☑ Native Landscaping	Stormwater Trees	⊠ Other; Grant Funding
⊠ Porous Pavement	⊠ Bioswales	

Area of specialty for this project (check all that apply):

⊠ Design	⊠ Landscaping	Downspouts and Gutters
⊠ Engineering	□ Maintenance	Inspection
Construction	Plumbing	

PROJECT (PROPERTY) OWNER INFORMATION:

Owner's Name: Wauwatosa School District Address/City/State/Zip: 2121 W North Ave, Wauwatosa, WI 53226 Phone: 414 / 773 1000 Email: choinsgr@wauwatosa.k12.wi.us

PROJECT CONSTRUCTION INFORMATION:

Construction Management Vendor: VJS Construction Services Project Manager Name: Dan Nash Project Manager's Vendor history: I currently employed I no longer employed I other Email: DNash@vjscs.com Contract information (if applicable): NA Final Contract Amount (contracted and amended if applicable): NA

Construction Start date (contracted): June 2020 Construction Start date (actual): June 2020 Construction End date (contracted): September 2021 Construction End date (actual): September 2021 Was the project completed on time? If Yes I No; Explanation Was the project completed on budget? If Yes I No; Explanation Was the project completed to the owner's satisfaction? If Yes I No; Explanation

Project Description (Be sure to include cost information, photos, and a detailed description of the work performed by the Vendor applicant):

The Wauwatosa School District reconstructed the existing parking lots and installed a synthetic turf field at Wilson WSTEM Elementary School, located at 1060 Glenview Avenue, in the City of Wauwatosa, Wisconsin. Demolition activities included the removal of a portion of the existing building, pavement, landscaping, and utilities. Development activities will included construction of sidewalk, access drives, parking areas, a synthetic turf playground area, landscaping, fencing, athletic field accessories, and utilities.

Sustainability Features |

Green infrastructure improvements were incorporated into the site design, and included the following items: synthetic turf with a stone storage layer and an underdrain system, and two bio-filtration basins with an underdrain system. All of these green infrastructure practices provide both water quality and water quantity benefits and collectively aid in the project's compliance with the post-construction storm water management requirements of the City of Wauwatosa and MMSD.

GRAEF Services: Permeable Parking Lot & Biofiltration Basins Design; Civil/Site Engineering; Stormwater Management; Landscape Architecture

Project Data: Green Infrastructure Improvement Costs: \$135,000

















Stephanie Hacker AICP, LEED AP

PRACTICE AREA LEADER | PLANNING + URBAN DESIGN | PRINCIPAL

Professional Certifications: American Institute of Certified Planners; LEED Accredited Professional

Education: M.U.P, University of Wisconsin-Milwaukee, Milwaukee, WI; B.A. Geography, Augustana College, Rock Island, IL

Professional Affiliations: American Planning Association (APA); Wisconsin Chapter of the American Planning Association (APA-WI)

Stephanie's experience spans comprehensive and master planning, economic development and market assessment, public participation strategies, municipal code review, neighborhood revitalization, grant writing, and ongoing services for urban, suburban, and rural communities. At the core of Stephanie's work lies her dedication to building a central vision and establishing systems that kick-start physical and systems change. She cares deeply about using urban design and planning to enhance the nexus of community and neighborhood vitality, public health, and the triple bottom line (environment, equity, economics). Stephanie works with business, nonprofit, and government clients to implement vital enhancements in our physical and social environment.



Craig Huebner AICP PLANNER & URBAN DESIGNER | ASSOCIATE

Professional Certification: American Institute of Certified Planners

Education: Master of Architecture, 2012, Master of Urban Planning, 2012, Certificate in Real Estate Development, 2012, University of Wisconsin-Milwaukee, Milwaukee, Milwaukee

Craig's academic background is in both architecture and urban planning, and he has several years of experience working in both fields. His work experience includes neighborhood master planning, commercial redevelopment, streetscape corridor planning/design, site plan review, urban design, site and building design, park and open space planning, and design guidelines.





Dominic Marlow

PLANNER & URBAN DESIGNER

Education: Master of City Design, University of Illinois at Chicago; BA Urban Studies; BA Architectural Studies, University of Illinois at Chicago **Professional Affiliations:** American Planning Association (APA); Illinois Chapter of the American Planning Association (APA-IL)

Dominic's experience sits at the intersection of urban planning and architectural design, ranging from research and demographic studies to spatial planning, mapping, and architectural rendering. Following his Master's in City Design, Dominic has developed environmentally focused research on hydrological and stormwater planning and its intersection with the physical environment, social benefits, and the vibrancy of public spaces. Dominic's work seeks to manage the complexities of systems in the physical environment to improve public spaces and help cities become adaptable to new or unforeseen changes. He is passionate about using design as a communication tool to help cities and communities envision the future they want to build.



Joseph Pepitone *PLA, LEED AP* SENIOR LANDSCAPE ARCHITECT | PRINCIPAL

Professional Registrations/Certifications: Registered Landscape Architect – CA, MN, WI; CLARB National Certification; LEED Accredited Professional

Education: B.S., Landscape Architecture, 1986, University of Wisconsin-Madison, Madison, WI

Professional Affiliations: American Society of Landscape Architecture (ASLA); Council of Landscape Architects Review Board (CLARB); Society for College and University Planning (SCUP); American Sports Builders Association (ASBA)

Joe is a licensed landscape architect who brings 30 years of professional experience in project management and landscape architectural design and planning. During his tenure at GRAEF, Joe's projects have won numerous design awards. Joe has been involved in master planning and design for corporate office, industrial, commercial/retail, recreational facilities, urban design, multi-family residential, senior housing, healthcare and educational campuses of all sizes. His expertise includes master planning to incorporate building(s) and site program elements in a functional and cohesive manner. His thorough knowledge of all aspects of site development allow him to provide complete and thorough documentation which includes site planning, detailed design, landscape design and details, planting design, construction documentation, specifications and on-site construction administration.





Joe Porter PLA

LANDSCAPE ARCHITECT | SITE DEVELOPMENT TEAM LEADER

Professional Registrations: Registered Landscape Architect - WI

Education: B.S., Landscape Architecture, 2002, University of Wisconsin - Madison, Madison, WI

Joe Porter is a licensed Landscape Architect with fifteen years of experience working on academic and corporate campuses, brownfield redevelopments, green roofs, greenway corridors, mixed-use developments, parks, plazas, streetscapes, residences, resorts, and waterfronts throughout North America and the Caribbean. His involvement with these projects has included every aspect of the design process, from conception through completion. Joe is passionate about context-sensitive design, with emphasis on sustainability and the facilitation of social interaction. He enjoys creative problem solving within a collaborative team environment.



Jennifer Kelliher *PLA*, *GRP*, *LEED Green Associate* LANDSCAPE ARCHITECT

Professional Registrations/Certifications: Registered Landscape Architect – WI; Certified Construction Documents Technologist – Construction Specifications Institute

Education: B.S., Landscape Architecture, 2011, Texas A&M University, College Station, TX

Professional Affiliations: American Society of Landscape Architecture (ASLA)

Jennifer is an award-winning licensed landscape architect who brings 10 years of professional experience in landscape architectural and urban design. Her expertise includes integrating aesthetic and functional green infrastructure into the built environment, organizing spaces into the urban landscape, and preserving cultural landscapes. Jennifer has been involved in assessing and analyzing cultural landscapes to create reports and National Register of Historic Places nominations, master planning and design for corporate office, mixed-use and commercial/retail, recreational facilities, landscape preservation, urban design, and multi-family residential of all sizes. Her knowledge of all aspects of site development allows her to provide complete and thorough documentation which includes conceptual site design, landscape design and details, construction documentation, and on-site construction administration.





Jim Hansen PE, CDT

CIVIL ENGINEER | PRINCIPAL

Professional Registration/Certifications: Professional Engineer – WI; Certified Construction Documents Technologist Education: B.S., Civil Engineering, 1994, University of Wisconsin-Platteville, Platteville, WI

Professional Affiliations: American Society of Civil Engineers

Jim brings 25 years of experience to site development and public works engineering projects at GRAEF. Jim's approach to designing and managing projects ensures that clients are satisfied and projects are completed on time and within budget. His site development services includes site grading, storm water management, sanitary and storm sewers, water mains, roadways, paving, erosion control, and permitting. Jim has evaluated and designed multiple types of underground storm water best management practices (BMPs) for public and private clients to provide solutions that minimize the amount of surface required for storm water management.



Anuja Patil

CIVIL DESIGNER

Professional Certifications: Municipal Waterworks Operator Certification, WI DNR; Wasterwater Operator Certification, WI DNR; ISI Envision® Sustainability Professional

Education: M.S.E, Civil/Water Management, 2003, Swami Ramanand Teerth Marathwada University, Nanded, IDA; B.S., Engineering, 1999, Civil, Shivaji University, Kolhapur, IDA

Anuja has been involved in a wide variety of projects that center around water management and civil engineering. She has trained and assisted development teams to implement watershed projects, evaluated watershed projects with respect to government guidelines, and developed digital survey maps using GIS skills. Anuja's experience encompasses water management software, storm sewer calculations, pipe sizing, impervious area estimations, and drainage delineation.



Customer Service Approach

The GRAEF philosophy has always been oriented towards customer service. We pride ourselves on meeting our client's objectives by clear communication and a high level of responsiveness. Our goal is to avoid problems through our strong attention to detail, and a vigorous quality assurance program.

However, sometimes issues do arise. One example was a soils issue at the **UWM Innovation Campus** in the City of Wauwatosa, associated with the proposed hotel project. The proposed hotel site required a substantial amount of fill to establish a suitable building pad. The proposed hotel building was to be placed over the deepest fill area. A geotechnical analysis done for the hotel project suggested that there would be settlement of the hotel building due to the depth of fill placement; and recommended deep foundations that would add cost to the project. The site filling, done as part of the campus infrastructure work, had been designed and constructed properly, but the fill soil still required time (several years) to fully consolidate and support a slab on grade without differential settling. GRAEF worked closely with the City of Wauwatosa (our client) to resolve the situation by providing details on the design, and options to address the issue by working with the hotel team to reorient the building to an area of the site with a lower fill depth, so that the project could move forward on schedule.



