



AGRICULTURAL – CLINTON FARMS

The dairy farm underwent exciting new updates including :

- New rotary milking parlor with basement tunnel that connects to the center rotary.
- Direct load milk room and tanker pad
- Cow holding area with concrete footbaths
- Free stall barn
- Concrete manure storage facilities

The challenging winter project required the use of ground thaw units, concrete curing blankets and specialty concrete mixes.

The milking parlor runs on a circular concrete wall and metal I-beam with rollers. Precision with the concrete was important, as the I-beam had to be within 1mm on the radius through the complete circumference, and within 0.5mm in height.

Extrutech Concrete Form Wall System was utilized throughout the milking parlor, basement tunnel, and curved cow entrance to the parlor. The form wall encapsulates the concrete, protecting it from the harsh environment where manure is cleaned with detergents and acids used for sanitation.

The 6-row free stall barn measures 133x220 feet with 212 stalls and an automated manure cleaning system. Approaching the milking parlor, stamped concrete is at the front entrance, along with an artistically curved apron wrapping the front of the building, extending to the milk tanker loading pad.

The manure pit faced weather challenges. It was to be installed in the fall of 2018 but due to weather, excavating was shut down. In July 2019, with a break in the weather, excavating continued. By using macro fibers, instead of rebar reinforcement, time was saved placing the concrete.

The project started in the fall of 2018 and was completed mid-summer 2019 with a total of 4,375 cubic yards of concrete.

Project Team Members

Owner: Clinton Farms LLC

Concrete Supplier: MCC, Inc.

Architect/Engineer/Contractor: Fox Cities Builders



COMMERCIAL – C.D. SMITH CONSTRUCTION **NEW HEADQUARTERS**

In response to continued growth, it was decided to move the corporate headquarters away from its location of more than 80 years.

The 50,000 square foot building offers greater employee amenities, a more collaborative work environment, better highway accessibility for visitors and a wide range of sustainability features. The concrete walls were built with architectural concrete to showcase a building material that is a large component of the company's business.

Self-consolidating concrete was selected using a mix consisting of 846pds of cementitious material; 10% fly ash and 40% slag. A high range water reducer was used to get the spread up to 30 inches to make the concrete flow as needed. A special pea gravel was used for the coarse aggregate. A viscosity modifier was used to keep the aggregate in suspension and a hydration stabilizer was added to keep the slump consistent. The 28-day breaks came in around 12,000-psi.

The main 2-story atrium walls and concrete around the entrance were board finish to simulate how concrete was formed in an era dating back to the early 20th century before plywood and modern metal forming systems were used. Pine boards were placed inside the forms as form liners to get the desired look. This feature is the focal point of the office.

The concrete floors in the 1st floor atrium have a "salt and pepper finish" that exposes the fine aggregate. A special high gloss sealer was added to create a beautiful low maintenance floor. In the basement, the concrete floors were ground deeper, exposing more aggregate to provide a second finish option when showcasing the building to clients. Overall, 2,094 cubic yards of concrete were poured.

Project Team Members

Owner/Contractor: C.D. Smith Construction

Concrete Supplier: Carew Concrete & Supply Co., Inc.

Architect: Kahler Slater



CONCRETE OVERLAY – ONEIDA STREET PARKING LOT

The owner of the parking lot called the ready-mix producer looking for a curb and gutter contractor. The owner planned to put in a new asphalt parking lot. The ready-mix producer asked if he would ever consider a concrete overlay as you can pour over the existing asphalt.

The owner was interested in learning more about an overlay and after telling him how it works, he was very excited to do it. Not only did the cost come in less than asphalt, but it would be done in a week using the existing asphalt as the base.

The old concrete sidewalk in front of the building that was poured in 1980 was removed and replaced. This gave the entrance a fresh, new look. The mix used was 4500-psi concrete with 3 pounds of fiber. The contractor placed the concrete at a 4-5-inch slump in two pours. The concrete slab is brighter at night and gives the appearance of a white snow-covered lot.

Now customers are raving over how nice the new parking lot looks. The owner never thought he would get so many compliments on a parking lot. The 460 cubic yard parking lot is a great success story for our industry and will serve the businesses for many years to come.

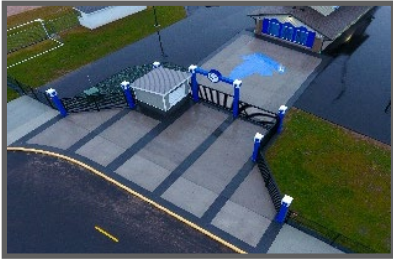
Project Team Members

Owner: McKinnon Dental

Owner: Sagemark Consulting

Concrete Supplier: Carew Concrete & Supply Co., Inc.

Contractor: Mark Cardinal Concrete Construction



DECORATIVE COMMERCIAL – TOMORROW RIVER SCHOOL DISTRICT

Ready-mix concrete was an integral element in creating a high-quality entrance, donor recognition, and sports champion recognition plaza for the new Tomorrow River School District's Athletic Complex Stadium in Amherst. The contractor developed the stadium entry plaza concept.

From the column bases integrated in the charcoal-colored concrete banding of the entry plaza, to the charcoal-colored/textured knee wall on the ticket booth, and the pewter-colored frame for the 23x14 foot blue/slate-textured concrete "Falcon" in the Donor Recognition Plaza, ready-mix concrete set the stage.

Design skill revolved around the challenge of integrating various materials. The focus was creating a three-dimensional space that invited fans to enter the stadium, recognizing the donors who made the space possible, and acknowledging current and past athletic champions.

Creating a gateway entrance that flowed through a celebration space to the concession and seating area required the use of contrasting concrete bands and areas. Through the artful use of ready-mix concrete, the space became welcoming, instilling pride in the involvement and accomplishments of the community.

The schedule for the athletic stadium project was based on a spring start, with the facility to be ready for the fall football and soccer seasons. An exceptionally wet, rainy spring and summer created a challenging situation for all and stands as a testament to the teamwork of all involved.

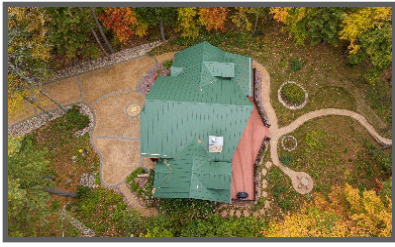
Project Team Members

Owner: Tomorrow River School District

Concrete Supplier: County Materials Corporation

Contractor/Landscape Architect: Alchemy Concrete Inc.

Engineer: Point of Beginning, Inc.



DECORATIVE RESIDENTIAL – WESLASKI: LEGACY AT THE LAKE

The contractor was tasked with creating the “Legacy at the Lake.” The mission was to establish a visual and physical sense of place for the Weslaski lakeside retreat. The use of ready-mix concrete became the base, frame, and canvas by which this tapestry was established.

This project featured specialty concrete uses in the following:

- Stone-veneered concrete entry columns with brass-inlaid name and date-inset panels
- Entry drive with slate-textured, stamped contrasting borders and in-concrete lighting
- Slate-textured stamped contrasting borders and stamped slate panel motor court
- Embossed, colored-concrete Weslaski medallion at the house entry
- Micro-topping /texturing of existing steps
- Addition of front/side yard steps and stepping-stone connection
- A connecting walk to the rear gathering area
- Artisan-poured concrete dragonfly table with stools
- Slate-textured colored walkway to the lakeside
- Stone-veneered concrete wall to the lake with steps and lighting

Reaching a sense of place that secured the “Legacy at the Lake” required the contractor to work closely with the client to define the visual and physical elements of “Legacy” through the lens of site compatibility, ecologic imperatives and sustainability. The design implementation process was a continuous problem-solving effort of weaving all elements of the tapestry that is the “Legacy at the Lake.”

Project Team Members

Owners: Kevin & Claire Weslaski

Concrete Supplier: County Materials Corporation

Contractor/Landscape Architect: Alchemy Concrete Inc.



EDUCATION, HEALTHCARE & PUBLIC – SAINT JOHN'S ON THE LAKE

The newest high rise building along the Milwaukee lakefront is the 22-story Saint John's On The Lake senior living center expected to be completed in 2020. This \$123 million-dollar North Tower is joining a recent trend in high-rise senior living facilities.

From a construction standpoint, this building had everything from mat foundation pours, high strength columns and core walls, and critical deck pours that required the concrete to meet 3000-psi in 24 hours or less.

On Saturday, September 8th, 2018, the first concrete trucks began delivering a 7-hour continuous mat foundation pour. The 40x120-foot area took over a month to prepare and 100 tons of steel to reinforce. The concrete used was a 4000-psi mix with a high replacement of fly-ash and slag to keep the internal temperature of the concrete as low as possible, preventing overheating. Concrete was supplied in spec and on time eclipsing rates of over 200 cubic yards an hour.

The backbone of the building otherwise known as "The Core Wall" runs the vertical height of the building. This exposed wall plays a critical role in the buildings structural integrity while doubling as its elevator system. Depending on the location in the building, the concrete consisted of an 8000-10,000 psi mix. Over 4,000 cubic yards of concrete were placed in the core wall system.

The new *Saint John's On The Lake* North Tower is not only transforming the city's skyline but also the perception of Milwaukee. This new 420,000 square foot facility provides high-end senior living on par with any major city in the country. In total, over 20,000 cubic yards of concrete were poured on this impressive project.

Project Team Members

Owner: Saint John's Communities, Inc.
Concrete Supplier: Riv/Crete Ready Mix
Contractor: VJS Construction Services
Architect: Eppstein Uhen Architects
Architect: Blich Knevel Architects
Engineer: GRAEF



INDUSTRIAL – VERITIV CORPORATION

The 320,000 square foot project used concrete in all aspects of it including the 205,000 square foot building. The footings used were a 4000-psi binary mix. The exterior footings were placed in November 2018 and were large trench footings using the ground as forms for the concrete. This made for some large pours, including one placement of 522 yards placed in 2 ½ hours.

The interior floors were 7" thick. These were placed in March and were approximately 50,000 square feet per pour, with the largest pour at 65,000 square feet. All the interior concrete was a 4000-psi ternary mix with a mid-range water reducer used for ease of placement.

The floor pours were started at 5:00a.m. to help keep the project on schedule. There were two access doors for most of the interior pours to make entrance and exit easier with the large number of trucks needed to supply the concrete. Everything went flawlessly throughout the interior pours due to pre-pour meetings and having traffic flows all pre-planned.

Following the interior, the exterior was specified for asphalt, but since the owner was so happy with the interior, it was possible to convert all of the exterior to concrete. The exterior concrete was placed at 6 inches thick with a monolithic curb.

This project was a great example of the owner, contractor, and supplier working together to get the best and most cost-effective outcome.

Project Team Members

Owner/Developer: Becknell Industrial

Concrete Supplier: MCC, Inc.

Contractor: Milis Flatwork



PARKING LOT – NORTHERN OZAUKEE SCHOOL DISTRICT

This concrete parking lot is a success story of converting an asphalt parking lot to concrete after the design process. Northern Ozaukee school district was in need of updating and maintaining their school facilities including the parking lot. The General Contractor was adamant that concrete would be too expensive.

After some strong persuasion by a concrete educated school board member, the General Contractor did solicit bids for a concrete alternate. The concrete alternate bid came in very competitive to asphalt and the school district realized the long-term benefits and value of concrete over asphalt.

The parking lot was built utilizing a 4000-psi concrete mix. The parking lot was designed unreinforced at 5 inches thick while the drive lanes are 6 inches thick reinforced with 3 pounds of macro fiber. A laser screed was used to level and screed the pour.

The largest pour was 648 yards. A telebelt conveyor was used to place concrete where the subgrade was susceptible to truck tire ruts. This project is a great testament that it is never too late to ask for a concrete alternate on a parking lot.

Project Team Members

Owner: Northern Ozaukee School District

Concrete Supplier: Schmitz Ready Mix

Contractor: Mark Cardinal Concrete Construction

Architect/Engineer: Bray Architects



SOUTHWEST REGION – TONYAWATHA TRAIL

The homeowners of this historic masterpiece on Lake Monona wanted beautiful exterior surfaces to match their impressive home. Built in 1933 and formerly owned by famous American artist Aaron Bohrod, this grand residence was in need of modern upgrades without sacrificing the historic integrity of the property.

Working closely with the contractor, the homeowners were able to realize their dream concrete exterior.

Using colored concrete and an intricate stamping design, the front entrance, patio and walkways were brought to life. The design includes natural colors in a reddish hue that compliments the landscaping and artwork found on the home's exterior.

Beautiful craftsmanship on the concrete slabs and stairs provide enhancement to the property while allowing the quiet grace of the old home to remain the focal point.

The project consisted entirely of air entrained, 4,000-psi concrete and was completed in the summer of 2019.

Project Team Members

Concrete Supplier: LYCON INC.

Contractor/Engineer: Chris Foss Contractor, Inc.



SOUTHEAST REGION – DAYTON FREIGHT **CONCRETE PARKING LOT**

The recently completed Dayton Freight distribution facility located in Sturtevant is one of the most impressive distribution centers in the state. What sets it apart from other facilities is the use of ready-mix concrete in its parking lot and high traffic areas.

The scope of this project was so massive it could not be completed in a single construction season. The work on the 550,000 square foot parking area began in September 2018 and was completed in the fall of 2019. Most of the concrete poured was 7" thick using a State approved AFA 30% concrete mix. The air entrained mix contained a combination of mid-range and high-range water reducers to enable the contractor to pour at a higher slump and meet strength requirements in less than 28 days.

In total, over 13,000 cubic yards of concrete were poured in the parking area alone. The largest single day concrete pour was 940 cubic yards while average placements were 300-500 Cubic yards a day. Cutting edge technology was used to pour the concrete islands around the property. A stringless GPS curb & gutter machine was used to pour and maneuver around the countless curbs. Utilizing this type of technology reduced setup time.

The speed and efficiency of this project met the owner's aggressive construction schedule, allowing it to open ahead of expectations. The Dayton Freight facility is operating two shifts a day as 50 different drivers load and unload cargo. The ownership team is thrilled they now have a state-of-the art distribution center.

Project Team Members

Owner: Dayton Freight Lines

Concrete Supplier: Riv/Crete Ready Mix

Contractor: Stark Pavement Corporation

Architect: Architectural Alliance

Engineer: EM Engineering Group

Engineer: EMH&T Engineering

Engineer: Schaefer



NORTHEAST REGION – CLOVER VIEW DAIRY

The Clover View Dairy had a 4-5 million gallon holding reservoir that needed to be completed in a short period of time. It was created behind the barns to contain the manure until it could be placed on the fields. The pour took place on September 18th, 2019 starting at 4:00a.m. The contractor and supplier agreed to pour the entire pit in one day since it was supposed to rain the next day which would have set the project back another week.

The 1,218 cubic yards were poured with a NRCS mix. The contractor had six conveyers on the job. Because of the long reach, and not wanting to drive the trucks down to the reservoir, the contractor had two of the conveyers up on the side bank which all of the trucks fed into. Those conveyers fed two conveyers in the bottom which fed two more conveyers to reach the high bank pours.

The pour was coordinated with three dispatch centers. The loading came from four different plants to start the job. After the first round, it was hauled from two plants. The haul time was about 20-25 minutes. The contractor poured around 200 yards an hour.

The coordination of supplying concrete on such a large scale all in one day was a big accomplishment. The use of concrete in the holding tank was the only viable choice. A total of 123 loads of concrete were delivered to this job. Everyone worked together to create a successful result.

Project Team Members

Owner: Clover View Dairy

Concrete Supplier: Carew Concrete & Supply Co., Inc.

Contractor: Bill Lorrigan Construction Inc

Architect/Engineer: Natural Resources Conservation Service



NORTH CENTRAL REGION – SOUTH CENTRAL AVENUE OVERLAY

A heavily cracked and pothole laden parking lot means two things to a business. First, it means that traffic into the business is heavy and as a result, its parking lot is wearing. Additionally, a damaged surface doesn't reflect well on the business's image and likely means the parking lot was originally constructed with an inferior product.

While asphalt may be a more cost-effective material at installation, in the long run, a business is going to invest more money in repairs and maintenance over the life cycle of the pavement. Ready-mix is proven to be a longer lasting option and requires less maintenance over its lifetime.

The business owner had several considerations to make for reviving the parking lot. Beyond quality of product, the owner also wanted the least amount of disruptions in order to keep the business open during construction.

The option selected was to have a bonded concrete overlay. Ready-mix was poured over the top of the existing asphalt and cured to create one bonded structure. It covered and filled in the damaged asphalt while leaving a fresh layer of durable concrete on top.

In total, the concrete overlay covered 224,916 square feet of asphalt. The largest pour totaled 46,000 square feet of the parking lot in one day. Upwards of ten ready-mix trucks at a time were staged onsite. The expansive lot was brushed-finished to provide a textured surface for additional traction and scored with control joints.

Project Team Members

Owner: Nelson-Jameson, Inc.

Concrete Supplier: County Materials Corporation

Contractor: Milis Flatwork



NORTHWEST REGION – MILTRIM FARMS ROBOTIC DAIRY

Miltrim Dairy is located in Athens, WI. The project used ready mixed concrete in a variety of ways. The structures ranged from a 180,000 square foot steel frame Butler building to a 10,000 square foot Lester building.

A challenge on this project was the amount of precipitation. The timeline for Phase 1 was January 1st through September 30th. Due to weather, it was not completed until October 14th. Phase 2 was completed November 15th.

What makes this truly a one-of-a-kind facility are unique features including automation from fans, manure flush system, Laylee A5 Robots and Laylee feed pushers. Both buildings used concrete as the structural foundation. A 3,500-psi foundation mix for the cow alleys and a 5,000-psi mix for the sand curbs provide a durable product.

The ten robot rooms are constructed with Extrutech plastic walls that are filled with a 4,000-psi exterior mix design with 3/8th inch stone and super plasticizer for flowability. The 12,000 square foot Sand Separator Lester building used NRCS spec'd 4,000-psi concrete. Overall, 5,750 cubic yards of concrete were used which was well over half the size of the project.

Another unique part of this project is the Education Center which will educate people in the dairy industry. The center has hydronic heat in the colored and stamped concrete and used a 4,000-psi fully air entrained concrete mix. It has a conference center and a viewing area for people to watch the robots' milk.

Project Team Members

Owner: Miltrim Farms Inc.

Concrete Supplier: John S. Olynick Inc.

Contractor: S.D. Ellenbecker, Inc.

Building Engineer: Marathon Technical Services

Civil Engineer: Auth Consulting & Associates