

When large loads travel local roads: tips for managing big projects



Crane hoisting turbine blades into position.

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PICTURE A FLATBED SEMI

170 feet long maneuvering along rural roads hauling a 120-foot turbine blade. Imagine a truck loaded with a huge generator and weighing in excess of 170,000 pounds covering the same route—a class B highway where the maximum weight limit without permit is 48,000-pound.

Multiply trips like these hundreds of times over consecutive months and you have a large-scale construction project that puts stress on the transportation infrastructure and strains local resources.

Dodge County Highway Commissioner Brian Field understands this challenge firsthand. He explains how officials in the southeastern Wisconsin county handled an onslaught of large projects last year requiring permits to move lots of oversized and overweight loads. Two wind farm developments and a major natural gas pipeline construction project, all happening in close succession, prompted them to develop a better way to process requests.

With the future potential for other energy-related projects on tracts of open land, local officials throughout the state can learn from the proactive approach Dodge County adopted, after a rocky start, for managing the safe transport of large loads along its roads. Towns affected by the project did their own permitting but generally followed the county's lead.

First project overwhelms the system

Once the initial wind farm project began, Field says the county realized the implications of having so many oversized and heavy loads traveling on its roads. Contractors and trucking firms from all over the country inundated East Side Patrol Superintendent Chuck Bernhard, the county contact for the project, almost daily with individual requests for what amounted to hundreds of permits.

The project had 48 tower sites in Dodge County (another 18 in neighboring Fond du Lac County) that needed access permits and authorization for six or seven oversized/overweight loads coming into each site. They also requested multiple utility permits. Demand soon threatened to overwhelm the system.

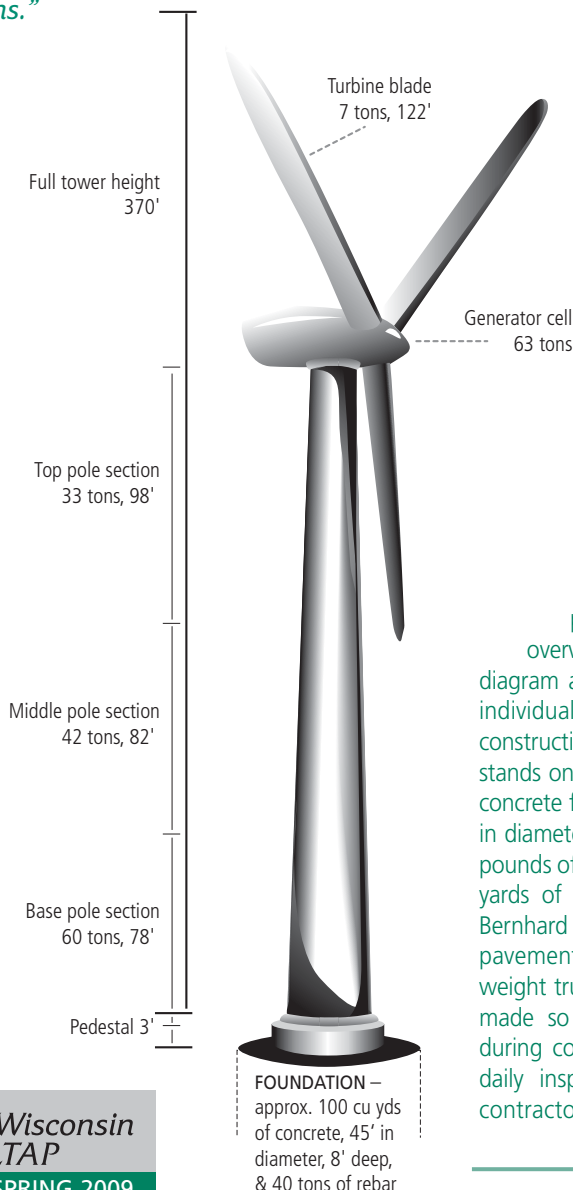
"It took a while to develop a better way to handle permitting on such a scale without sacrificing normal operations," notes Field. It was "learn as you go," but it prepared local officials to rethink how to handle the projects that followed.

BREAKING DOWN THE LOADS

Each of the wind turbine towers erected for the first Dodge County wind farm project arrived onsite in seven overweight and/or oversized loads. The diagram at left illustrates the dimensions of individual tower elements and the final construction height. The tower additionally stands on a 3-foot-high pedestal bolted to a concrete foundation 8 feet deep and 45 feet in diameter. The foundation contains 80,000 pounds of rebar and approximately 100 cubic yards of concrete. Patrol Supervisor Chuck Bernhard says he recorded some of the worst pavement damage from the regulation-weight trucks hauling concrete because they made so many trips over the local roads during construction. Thanks to the county's daily inspections and record-keeping, the contractor covered all costs of repair.

Regroup around new approach

After struggling to manage the chaos of permit requests and inspections on that first big project, Dodge County regrouped. Local officials put together a plan that simplified communication and successfully streamlined the process. Field describes their step-by-step approach as one that primarily protects local interests, but also helps project owners meet their objectives. The steps Dodge County follows now on all large permitting projects are outlined on the next page.



Public interest meets innovation

A range of large-scale permitting projects—logging operations, industrial agriculture, traditional power plants—regularly place demands on roads and local resources. Now a growing interest in alternative energy sources presents a fresh challenge to local officials. Field says the companies

building wind farms in Dodge County work all over the United States on similar projects. He was not surprised to learn that every county they go to manages the permitting/damage assessment process differently. The companies encouraged Dodge County's effort to take a uniform approach.

Finally, Field notes that while the county supports such innova-

tive projects that represent a new approach to producing energy and protecting the environment, he says their commitment to protecting the public interest comes first. Establishing an effective working relationship between local officials and the decision makers on large-load projects was an important step in doing so. ■



Wind farm tower construction.

Dodge County's step-by-step approach on large permitting projects

1 – Schedule early planning session

All groups with a stake in the outcome of the second wind farm project and the pipeline project assembled for early planning sessions. Before the trucks started to roll, Field and Bernhard called a meeting of individuals representing the general contractor, the utility coordinator, a trucking coordinator, the Wisconsin Department of Transportation and law enforcement officials. Together, they reviewed all aspects of the project and came up with strategies for minimizing disruptions and damage, and keeping things on schedule.

2 – Identify local concerns

Dodge County officials outlined their own issues of concern at the meeting, like public safety and establishing the condition of roads before, during and after the project. They explored a workable approach to damage assessments, restoration and cost recovery, and reviewed liability coverage limits and certificates of insurance requirements. The county also distributed its policies covering construction access and utility accommodation.

3 – Establish single point of contact

Insisting the general contractor name a key contact person was the change with the biggest positive impact on the process. Field says that having a single point of contact authorized to manage routes, update schedules and make damage assessments improved communication on the project tenfold. If there were problems, Bernhard knew whom to call to get action.

4 – Designate all staging areas and routes

Representatives on both sides surveyed project needs to designate best transportation routes and staging areas. For example, they reviewed how the contractor planned to prepare the route for huge cranes to cross county or town roads between tower sites. Bernhard says this involved putting down steel plates, a layer of stones and then wooden beams to carry the load and protect the roadbed. The county made a videotape record of the routes to log pre-existing conditions before the project commenced. They inspected every route with the project contact to identify hazards,

obstacles or other concerns, and determined who was responsible for addressing each one.

5 – Issue permits for all access points

Part of simplifying the process, the county worked with the project contact to identify permanent and temporary driveway entrances, and issued permits in compliance with access policy.

6 – Issue blanket permit for oversized and overweight loads

Aware of the permitting demands of a project that needs to move hundreds of large loads over many months, the county arranged to issue a blanket oversized and overweight permit to the general contractor and trucking firms. They billed the project monthly for related costs, including inspections, traffic sign removal and replacement, intersection modifications, right-of-way restoration and pavement repairs. They required the project managers to keep a daily log of the oversized/overweight loads, recording the route, the date and time, and the hauler.

7 – Conduct daily inspections

Bernhard, or someone he designated, inspected all routes used for the project every day to assess any new damage and determine responsibility. Gathering this information in a timely manner meant less confusion later over who pays for damages.

8 – Inspect all routes after project completion

The county's orderly approach to managing large-scale projects was in place by completion of the first wind farm. Bernhard retraced the construction truck routes to record the post-project condition of pavements, shoulders, ditches and access points. He used a previously shot video log for comparison. The process worked. Field says the contractor met with the county to review findings from this final inspection and paid off minor damages right away. Where it appeared stress from the loads and the volume of truck traffic shortened the expected life cycle of a pavement, the county developed a formula for compensation to offset future costs of resurfacing and billed the contractor.

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Resources

<http://www.dot.wisconsin.gov/business/carriers/osow-permits.htm>

Link to facts and figures on Wisconsin permitting guidelines.