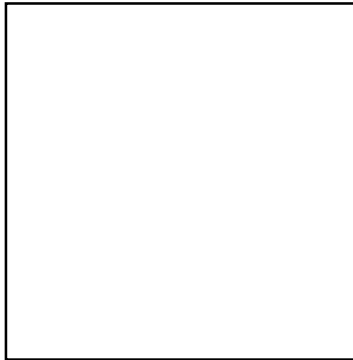


Retirement — Thank you for 32 years

by Lloyd W. Darg, P.E.

It doesn't seem that long ago when I opened my office in April 1966, but now it is time to retire. (I do plan to work a few hours a week to finish my present projects and, maybe, take on some small jobs until the year's end.) Gene and Harry and the rest of our great staff will continue to take care of your structural engineering needs. The engineering business has



Lloyd W. Darg, P.E.

changed greatly in the last few years with the advent of the computer and

e-mail and fax. Information transfer is now immediate. DBM will now be completely computer literate.

One of the best things about being around so long is that one gets to meet and work with many people. Some we have worked with for 32 years. I wish to thank everyone that we have done business with. That includes architects, other consulting engineers, contractors, developers, fabricators, suppliers, owners, property managers and all others. It has been a pleasure.

Twisters

Although severe tornadoes are the most violent windstorms on earth with wind speeds of 250-300 MPH, the vast majority are of much smaller intensity. Tornadoes are classified

according to the F - Scale (Fujita) as is indicated below, with their relative frequency.

The March St. Peter and Comfrey tornadoes were classified as an F3 and F4 respectively. The structural design wind pressure for most of Minnesota is 80 mph, but the actual failure wind load for most buildings is higher than that due to the factors of safety that are used. Most of the property losses from windstorms are directly related to roof loss. In many cases, the roof is either

blown off or peeled back from a corner, causing a breach in the structural envelope. Without lateral support, the walls of these structures

frequently collapse. It should be noted that many of the above mentioned losses could be prevented with better roof-to-wall connections.

Class	Description	Relative Frequency
F0	Light Damage (40-72 MPH): Some damage to chimneys or television antennae, branches broken off from trees, shallow rooted trees pushed over, signboards damage.	23%
F1	Moderate Damage (73-112 MPH): Surface peeled off roofs, windows broken, manufactured homes pushed or overturned, some trees snapped, moving automobiles pushed off road.	35%
F2	Considerable Damage (113-157 MPH): Roofs torn off frame houses leaving strong upright walls standing, weak structures or outbuildings and manufactured homes demolished, masonry block structures and walls badly damaged, large trees uprooted.	28%
F3	Severe Damage (158-206 MPH): Roofs and some walls torn off well-constructed frame houses; block structures often leveled; most trees uprooted, snapped or leveled.	10%
F4	Devastating Damage (207-260 MPH): Well-constructed frame houses leveled; structures with weak foundations lifted, torn and blown off some distance; large missiles generated; trees debarked by small flying debris.	3%
F5	Incredible Damage (261-318 MPH): Strong frame houses lifted clear off foundations and carried considerable distance to disintegrate, steel reinforced concrete structures badly damaged, trees completely debarked, automobile-sized missiles carried 100 yards or more.*	1%

* Information from "Wind Commentary to the Uniform Building Code," 1991 Ed., © 1993 by the Structural Engineers Association of Washington.

DBM Projects

These are some projects that are in design or under construction:

- .. Public Schools in Spring Green, Onalaska, and Arcadia, Wisconsin and Le Center, Minnesota
- .. Conference Center/Resort in Biwabik, Minnesota
- .. Golf Clubhouses in Arkansas, Wisconsin and metro Minnesota
- .. Hospital Addition in southwestern Wisconsin
- .. Office Building in Bloomington, Minnesota

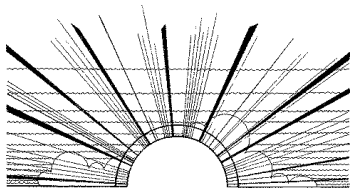
Earth As Insulation

It takes about two feet of earth to provide the same insulating properties as one inch of rigid insulation.



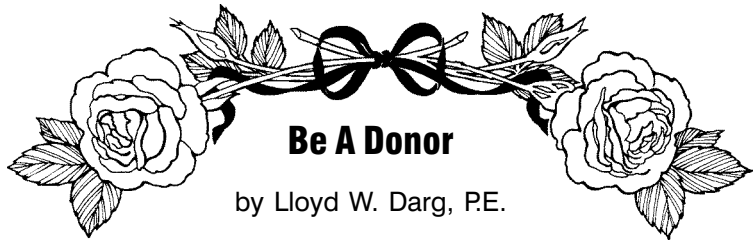
Elected CASE President

Gene Bolgrean, P.E., principal, has been elected President of the Minnesota Chapter of The Council of American Structural Engineers (CASE). CASE represents about 40 structural engineering firms and departments in Minnesota.



Thank You!

Your business is greatly appreciated!



by Lloyd W. Darg, P.E.

Many of you know that I had a kidney transplant about a year ago. My wife Carol and I took my unrelated donor Ken and his wife Mary to dinner the other night to celebrate the first anniversary. We talked about why he would donate a kidney. Basically, he said, "It seemed like the thing to do." Another comment was "Sometimes you get an opportunity to do something very meaningful." Ken seized the opportunity and gave me a kidney. Can you imagine what a gift that was for me? It freed me from the four hour, three times a week dialysis. It was like a halftime job. Also, I feel much better. There is no greater gift.

Have you seen the Michael Jordan TV ad about being a donor? It shows him mirrored several times, then he asks people to become donors. I say, "Be like Mike" or, better yet, be like Ken. BE A DONOR!!!

Elected To Board

Siobhan Cahill, P.E., Structural Engineer, has been elected to the young member position on the Board of Directors of the Consulting Engineers Council of Minnesota. The Council is an association of over 150 consulting engineering firms in Minnesota. Ms. Cahill was also the 1997 recipient of the "Minnesota Section ASCE Young Civil Engineer of the Year" award.

Direct Dial Option

If you prefer to dial in direct to the DBM staff person with whom you would like to speak, just dial 544-8457 and when you hear the recorded message enter the extension number, which is listed below. If you would prefer to continue to go through Jan, our main number remains 544-8456.

Name	Extension #
Lloyd Darg, P.E.	17
Harry Menk, P.E.	16
Gene Bolgrean, P.E.	15
Siobhan Cahill, P.E.	13
Dale Urevig	12
James Fixsen, EIT	11
Janet Bank	10



Our e-mail address is **DARG@WORLDNET.ATT.NET**