

The Chapel Bell

Presented by the Maple Street Chapel Preservation Society, Inc. Volume 14, Issue No. 2 spring, 2013

IT'S LILAC TIME!

Lilac Princesses' Tiara Presentation held at Maple Street Chapel on April 4

The Lombard Junior
Women's Club sponsored
the annual Tiara Presentation
for the five Lilac Princesses
of the 2013 Lilac Court.
Pictured are:
Princess Jennifer Ruhl,
Princess Laura LoVetere,
Princess Taylor Godbey,
Princess Megan Cotterill, and
Princess Claire Castelli.

Princess Megan Cotterrill (2nd from the right) was crowned Lilac Queen at the annual coronation ceremonial in Lilacia Park on May 4, 2013.

(Continued on page 6.)



Photo by Steve Spoden, courtesy of the Lombardian

Docent Chapel Tour Calendar 2013

Third Sunday of each month, 2:00 to 4:00PM

March, 17, April, 21, May 15, (Wednesday for June 23, (4th Sunday) July, 21, "Lilac Time in Lombard") August, 18, September, 15, October, 20,

Closed: November 2013 through February 2014.

Docent Committee

Joann Richardson, Docent Chair

Barb Barta Ken Bohl Betty Meyer Jan Kreichelt Claire Loudon Doris Schertz

Tom Scott

Tom Scott, President

We invite you to join us in this endeavor. If you are interested in being trained as a docent, call 630-627-0171.

The Chapel Bell is a newsletter presented by the Maple Street Chapel Preservation Society, Inc., published quarterly in Lombard, Illinois 60148.

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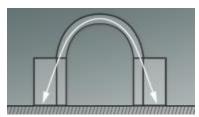


The Origin of Gothic Architecture

You've heard that the Chapel's architecture is "American Gothic". This style is more commonly known as "Gothic Revival", a style born in the 19th century, seeking to revive medieval Gothic architecture, both for its intrinsic appeal and its association with religion. Whereas the style was primarily used in masonry buildings in Europe, the American version tended to be a wood structure and hence is often referred to as "Carpenter Gothic".

But the original medieval Gothic architecture was not a "style" and was not an aesthetic preference. Many of you have travelled to Europe and visited the great cathedrals, and wondered "How did they make these incredible skyscrapers out of stone, without the assistance of anything more than a very small amount of metal?" Not to mention "How did they do it with 15th-century technology and tools?". The challenges of constructing ceilings over 225 feet wide, supported on walls also over 225 feet high, completely out of a hundred million pounds of stone, are awesome. We should have the deepest of respect for the skills and achievements of medieval architects who found ways to accomplish this.

The Romans were actually the first to design a way to bridge a span with a structure of stone, with the arch. A "flat ceiling" or even a structure with a slight arch would have a very short life, probably not stand at all. In a "Roman arch", the "keystone", the final piece inserted at the top center of the arch, is the critical link that causes all the forces to press outward to the supporting structure:





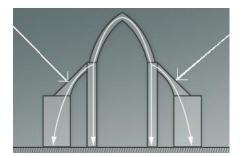
This is the basic element of all Roman architecture. These arches form the entire façade of the Coliseum. The limitation of the Roman arch is that the wider the arch, the greater the outward force on the sides, so the proportion of open arch to supporting structure had to be small, providing a limited amount of natural light.

How to improve the opening-to-side ratio and open the arch to a proportion that would create a large unsupported ceiling, as well as open the walls up with natural light? Medieval architects found that by raising the arch to a point, the forces supporting the arch were redirected downward, to a more nearly vertical direction:





The Gothic arch design allowed the walls to have a much larger proportion of window opening, allowing the cathedrals to be lit up with the spectacular light of those glorious stained glass windows. But when this arch is widened to 225′, and when the walls are made 225′ tall, even the near-vertical stress pushes outward on the walls with an overwhelming force. In order to support this outward force, anchored legs called flying buttresses were added to the outsides of the walls:





The graceful arched windows and doorways of our Maple Street Chapel give it its lovely "carpenter Gothic" façade, but centuries ago, the design was created by master architects and masons out of necessity.



Do you find this topic interesting? The PBS program *Nova* had a fascinating episode, *Building the Great Cathedrals* in which these design principles are demonstrated with small-scale models. They show real-life cathedrals, including a couple in which design errors were made and the modern-day fixes that saved the cathedrals. They explain the impact these magnificent buildings had on the worshipers of the time, and even show the Biblical references from which the dimensions of the cathedrals were derived. On the internet, you can access

http://www.pbs.org/wgbh/nova/ancient/building-gothic-cathedrals.html which presents much of this information. It also allows you to play the episode online. Or, you may purchase the DVD of the episode for \$20 online, or by calling PBS at 800-531-4727.

Sump Pump (How Exciting!)

By Ken Bohl, Facilities Chairman

We have mentioned several times our hope to waterproof the Chapel's basement. Actually, "waterproof" is a slightly misleading term. A *true* waterproofing would be to prevent water from moving from the surrounding ground through the foundation wall at all. But the only really practical thing to do is to just "manage" the water that comes in, by making a perimeter trench with a drainage pipe that efficiently channels the water into the sump pit. So you can see that the only way to guarantee that there will never be water in the basement is to guarantee that the sump pump will always dispose of the water that comes in.

This is a bit more challenging in the Chapel than in the average home because of the fact that nobody lives there, so we can't depend on anybody to notice a developing problem (much like if you were a "snow bird" and lived in Florida for several months of the winter).

Consider the consequences of a flooded basement. Not only would anything stored on the floor be damaged. Over 15 years ago, the impossible happened. The boiler room flooded. This flooding put out the fire of the heating boiler. It was cold that night, and the water froze and cracked the boiler. Its replacement was a major expense. This is the kind of special hazard you get with an unoccupied building, with nobody to notice the lack of heat. Today, however, we do have two sensors on the security system, one to tell us if there is standing water, and one to tell us if the temperature drops below 32 degrees.

We came up with a three-pronged approach to this. In seeking advice from experts, we were asked "Are you *looking* for trouble?. The answer is that that is exactly what we are doing. There would be no point in doing the waterproofing project if we couldn't absolutely guarantee that the sump pump would always do its job.

1. The first step is that we installed a battery-backup pump. This is a very popular solution in homes. A battery is constantly charged up. If the main sump pump fails, a secondary 12-volt pump kicks in and pumps the water. This is about as exciting-looking as you would expect:

2. The shortcoming of this is that it only works as long as the battery lasts on its charge - as little as 8 hours. So what happens if there is a power failure of a day or two? We purchased a small portable generator:



We *hope* that it we will never need to use this. It would be a very manual process of bringing over a can of gas, taking the generator outside, starting it up, and plugging things into it. And the gas tank would need to be filled periodically. Because we think it's not likely to be used, we purchased the most inexpensive one we could find. But if it did come into play, it would not only power the sump pump, it would also keep the heating system running.

- 3. The third protection has not been done yet, and will be done completely with volunteer labor. This is a situation unique to the Chapel in its "unoccupied" state. Through the use of electrical relays, we can leverage off of the existing security system and establish a "zone" that tells us::
 - if the battery-backup pump comes into play. This would make us aware if something is wrong with the main pump.
 - if the sump's electrical circuit is live. Suppose the circuit breaker for that circuit trips. The main pump would not work, and the battery for the backup pump would no longer be charging. So we want to be notified.

So, are we *looking* for trouble? Yes, we most certainly are, to protect our beloved Maple Street Chapel!

Continued from page 1

After the Tiara Presentation, Doris Schertz, Grants Chair, presented each Princess with a Chapel postcard and a collectable Chapel ornament in recognition of their support. It is fitting that the Maple Street Chapel is involved with the Lilac celebration festival since the Chapel has the distinction of being the oldest building in Lombard.

Meet More friends of the Maple Street Chapel*

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In Honor of.....

For:Lorraine Hoffman for Exceptional Service for the Bereaved Jeanie McCoy

The Maple Street Chapel Preservation Society is grateful and thanks all the Donors for their support. All monies are used for the up-keep and on going preservation of the Chapel.

Editor's note: There are no paid salaries or compensation paid to the officers, chairpersons, or volunteers who manage and execute the directives of the Maple Street Chapel Preservation Society, Inc., a 501 (3C) organization.

^{*} Yearly Memberships.

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