

FULL REPORTS OF THE ORGAN COMMITTEE
to accompany power point presentation

Reports included:

Organ Evaluation, Lawless and Associates
(mechanical)

Organ Evaluation, Lawless and Associates
(tonal)

Organ Criteria

List of pipe organs visited by the committee

ORGAN EVALUATION – 1/18/2014
Mechanical assessment – Lawless and Associates

Great Division – (exposed pipes on both sides of chancel)

1) Pipes are worn largely due to the frequent need of tuning and re-tuning caused by the air conditioning vents blowing directly on pipes. Remedy needs to be sought.

In general, ranks of organ pipes should not need complete tuning 2 or more times per year. However, they have had to be completely re-tuned when the air conditioning is turned on in the summer and off in the spring for many years now, and the slide tuners on the tops of each pipe are badly worn. The result is that the tuners slip down easily causing the pipe to be out of tune again. Refurbishing needed.

Swell Division – (enclosed division above the organ console)

1) Contains some of the oldest pipes of the organ, from 1930 or earlier. They are in need of restoration. The reed pipes especially have become very unstable and require complete rebuilding or replacement. Many of the tuner scrolls have broken off.

2) Swell contacts are breaking at increasing intervals, causing dead notes on the given stop and note. Patched for many years, complete restoration is needed.

Choir Division – (enclosed division opposite the organ console)

1) This division shares many of the same age related problems as the swell division. It does contain parts from the older organ and was pieced together in an awkward fashion. Thus, some of it is inaccessible for service. Pipes and working parts in need of restoration.

2) This division is especially important for use in accompanying the choir. The higher pitched ranks very difficult to keep in tune, and often unusable – reason unable to be determined – likely the result of several factors working against it, i.e. age, air leaks, layout of wind chests.

Pedal Division – (located throughout the organ)

The placement of the pedal ranks wherever room could be managed makes them difficult to maintain, and these pipes show the same signs of age and wear as the other divisions do. The pedal reed (at 16', 8', and 4'), in addition to being too small for the room, has become unstable and unable to be regulated resulting in a very uneven and problematic tone.

Expression Shades – (louvered panels that control volume of enclosed divisions)

The expression shades, also called swell shades, were improperly rebuilt in the past and some of the pneumatics have destroyed themselves because of this. When the affected shades do not open or close the control and range of volume is reduced.

Console – (where the organist plays)

1) The console's combination action has outdated pneumatic switching. Many of the switches leak causing a sluggish, unreliable action and louder than normal noises. Eventually, the couplers will need attention as well.

2) The console's contacts (for every key and foot pedal) are old and at risk of breaking off.

3) The keyboards have a lot of play and need rebuilding or replacing.

4) Pedal board needs new felt, and key tops need sanding and refinishing.

5) Toe studs are sticking and lacking in number for playing efficiency.

ORGAN EVALUATION – 1/18/2014
TONAL ASSESSMENT
(Lawless and Associates)

Great division – most responsible for leading congregational singing - has serious voicing problems [voicing means that each pipe is designed so its sound is appropriate for the room in which it will be played, and the harmonics created by the air flowing through the pipe are in-tune]. We feel this pipework, even if well voiced, would never fill the room with sound because of the 1970's pipe scaling. These pipes need a fuller, warmer scale [scale is the ratio of the pipe's diameter to its length] to allow for a more pleasing and encouraging tone to support congregational singing.

Because the pipes are on two different sides of the chancel, they do not speak at exactly the same time, creating a problem with unity. When possible, the Great division should be on one side of the chancel.

As long as the air conditioning vents blow directly on the exposed pipes, there will be problems with this division.

Swell division – has several nice voices that we feel might be of good musical value once refurbished and re-voiced. Additions through the years have limited access for properly servicing the organ as well as placing wind chests on three different levels. This has created issues with temperature zones and tuning.

These pipes should also be placed on chests in certain order with the most important stops forward in the chamber. Because Moller had fit additions wherever they could find room, many of the sounds cannot get out into the room with the presence they should have.

The pedal 16' Open Diapason, located in the swell chamber, takes up a lot of room. Other options should be explored.

Overall, the swell organ is not cohesive with the rest of the organ, and we would recommend at least some pipe changes.

There is a radiator to one side of the chamber which can cause the pipes closet to it to heat up creating tuning problems with the pipes farther away. We have had to "re-pitch" one side of the chamber in an effort to maintain a reasonable tuning of this division.

Choir division – like the swell division, this division has had stops added through the years that have made access for tuning and maintenance very difficult. Chest on several levels create different temperature zones, making tuning difficult and nearly impossible to keep in tune with rest of the organ.

Anemic pipe scales keep this division from being part of the full ensemble. The Choir organ should complement the Great division as a secondary chorus, but that is lacking here.

This lack of focus is not helped by the improper placing order of ranks on the chests. Overall, the layout of the pipe chests, and placing of the **pedal ranks** on the same main chest is problematic and ought to be corrected.

Pedal division – has an inefficient chest layout on multiple levels and scattered throughout the organ. Most of the pipes are not properly scaled for the room. In particular, the lower notes are too mild for the room. The pedal reed stop is only half-length most of the way up and is under-scaled for the room as well. The pedal mixture is on two separate actions and should be corrected.

Whole organ issues – in general it does not properly promote congregational singing. As the organ increases in volume, it lacks mid-tones and resorts to shrill, high pitched tones and mixture stops in an attempt to make up for poor pipe arrangement and acoustical deficiencies in the room.

Each division is unrelated to the other, and does not communicate well as a whole. It needs properly terraced dynamics and fuller pipe voicing to create a more cohesive instrument.

Esthetically, the exposed pipes of the Great organ in their current “window box” arrangement are unattractive in your beautiful neo-gothic Sanctuary. They ought to be arranged in attractive case work with the larger pipes in the case façade.

It would be best to have chests made to fit the chambers that can have the pipework on one level, especially the stops that are currently on three different levels and locations. It would be a good idea to consider new or used pipework to replace the stops you have that are just not good, and consider re-voicing ranks you have that are good.

In thinking about solid state equipment, there are several options to consider. One option would be to install solid state relays in each division as needed. The top option, however, would be to replace all at one time. This would allow the added features of MIDI, playback, multiple combination memories and settable functions to name a few. The organ would then run by a CAT5 from the console to the organ chambers.

Again, the air conditioning (blowing directly on pipes) is another issue that needs to be addressed.

Organ Criteria

(Characteristics needed for Calvary's organ to best serve)

February 23, 2014

- 1) **Support and encourage congregational singing.**
 - a) Broader scaling (not the same as louder), warmer sounds to encourage singing. Some of these sounds were lost from the "old" organ.
 - b) Ability to "build" a hymn seamlessly from the basic organ plena to a full, inspiring forte.
 - c) More fundamental needed. (we need to hear sounds and pitches that are in the same octave as our voices, not just overtones, high pitched or shrill sounds) Must be a balanced and cohesive instrument.
 - d) Larger solo stops for singling out melody lines such as tuba, solo trumpet, etc.
 - e) Organ needs to reach out into the room. Examples: use of gallery division and/or transepts. Continue to improve and update room acoustics.
 - f) Ability to play contemporary hymns more convincingly (MIDI, and possibly some digital augmentation – depending on builder)

- 2) **Provide proper support for choral singing.**
 - a) Larger and/or properly scaled choir division to support and enhance the choirs.
 - b) Stops of a medium volume (including pedal 16's) needed – not too soft or too loud for choirs.

- 3) **Offer range and flexibility for organ use and repertoire.**
 - a) Worship - preludes postludes and offertories, including range of solo stops, for example.
 - b) Offer a complete and desirable organ specification for concert artists – ability to play all genres of organ repertoire, and to bring in the community as a means of outreach.
(note how the Sanctuary piano has enhanced both our worship experience and community/concert outreach.)
 - c) Movable console.
 - d) Longevity – an organ that will best serve now and years down the road – one that future congregation will want to restore/keep rather than replace.

- 4) **Mechanical/Design requirements.**
 - a) Visually beautiful, and in keeping with Calvary's gothic influence.
 - 1) Casework taking design cues from the gothic style reredos. Ideally, should look like it's been there from the beginning.
 - 2) "Functional" casework - the normal function of casework is to direct the organ outward.
 - 3) Must mitigate the negative effects of the A/C – this is a crucial element in the design, effect, and lifespan of the organ.
 - b) Use of current solid state technology. (currently using outdated electro-pneumatic)
 - c) Chest design (builders differ somewhat) and better layout for access.
 - d) Consider climate control in chambers for longevity and tuning stability.
 - e) Creative use of room space to allow for lack of chamber space.

PIPE ORGANS VISITED BY THE COMMITTEE

First Baptist Church, Washington DC
Austin Organ Co.

St. Paul's K Street Episcopal Church, Washington DC
Schoenstein Organ Co.

Augustana Lutheran Church, Washington DC
Letourneau Organ Co.

Second Presbyterian Church, Roanoke VA
Goulding & Wood Organ Co.

St. Mark's Lutheran Church, Baltimore MD
Patrick Murphy Organ Co.

Zion Lutheran Church, Baltimore MD
Patrick Murphy Organ Co.

Braddock Street UMC, Winchester VA
Letourneau Organ Co.

St. Luke's Episcopal Church, Atlanta GA.
Zimmer Organ Co.
(Joche visited)