Schoenstein & Co.,
Benicia, California
Fordham University Church,
New York City

Behind the Scenes in the Drafting Room

But Will It Fit?

The plan was to design an organ that would fit in approximately the space occupied by the original 1879 Roosevelt organ, the façade of which remained. Despite trying every layout trick we could think of, we couldn't find room for a stop list large enough to satisfy the musical requirements of this major university program. (See *The American Organist*, May 2013.) Working with Robert Minotti (music director) and Richard Alexander (consultant), a stop list that would get the musical job done without any frills and that would fit the acoustic of this large church was agreed on with nothing but great expectations that we could figure some way to make it fit! When a builder is faced with this, he can either squeeze everything in and hope he is gone before the next generation of organ tuners and mechanics throw epithets at him, or figure out a way to expand the space. Having seen far too many organs that die prematurely because no one could reach things that needed fixing, we chose the latter.

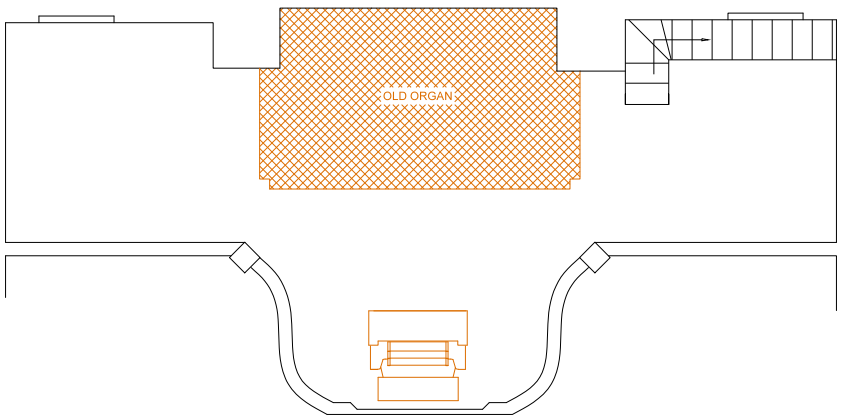
Here is how the layout design process worked. As seen in the photo of the Roosevelt façade and the old gallery layout, there was little space, if any, to expand the organ forward. Choir space was already constricted around the console and to the sides, with some extra space at the left for a few instrumentalists. Furthermore, there were clear glass windows on either side of the organ case. These were not original to the building, but were old and let in a fair amount of light. They were not to be disturbed. Hopeless, right? Well, not quite. Our first thoughts were to offset bass pipes at the sides of the case and at both side walls of the gallery and to bring the case forward a bit. We kept trying rearrangements and didn't get very far. Then, we employed the most important of all engineering techniques—power from the top. Fortunately, this project was under the personal supervision of the President of the University, Fr. Joseph McShane and the Vice President for University Mission and Ministry, Msgr. Joseph Quinn. The project also had full support from the administrative offices under Vincent Burke. Our direct project manager, Aldo Di Vitto, who is a trained architect, lived with this project almost as a member of our team from beginning to end. After learning the specifics of the situation, they cleared the way for blocking the windows and using the space at either end of the balcony, provided we could retain enough space for a small choir and possibly some instrumentalists.

Our design director, Glen Brasel, in conjunction with plant superintendent Louis Patterson, developed a layout placing the Swell at the far left of the balcony, the Great on the far right with the Choir and Pedal in the center. All chorus work for flues and reeds is on the second level. Flutes, mutations, and most of the color reeds and strings are on the first level. The Vox Humana, which is in its own expression box, is also on the first level but on the right-hand side.

When we outlined the planned structure of the organ in blue masking tape on the floor, it became terribly obvious that although enough room remained for choir and instrumentalists, it would be an unpleasant ordeal for them. Fr. McShane and Msgr. Quinn immediately recognized the problem and solved it by authorizing an enlargement of the gallery as shown in the final layout plan. One problem remained—the Roosevelt case. We needed a wider central case and the opportunity for more front pipes to help relieve the space constraints inside the instrument. It was finally agreed that if we could retain the spirit of the old case in a new one, then the old one would be sold.

There were plenty of other technical issues. For example, the blower had to be located in the bell tower behind the gallery, which was somewhat open to the elements. This was cleverly solved with the architect's suggestion of a prefabricated walk-in refrigerator box—one of the most perfect blower rooms we have ever seen. Another problem was re-routing vents from rooms below the gallery and removing other obstructions in order to provide a clear floor on which we could install the organ. A major concern was maintaining the stairway access on the right-hand side of the balcony. Our idea of having people walk through the organ was greeted with skepticism, but was accepted when we assured the lawyers that people wouldn't have to climb over wind conductors or trip on cables!

Sanctuary organ case



Old gallery layout

Schoenstein & Co.

Gallery Organ
(3 manuals, 35 ranks)

GREAT (I)

Unenclosed Stops

16′	Diapason (Ext. Choir)	12 pipes
8′	Grand Diapason (Ext. Ped)	17 pipes
8′	Diapason (Choir)	
8′	Harmonic Flute (Choir)	
8′	Chimney Flute (Choir)	
4′	Principal (Choir)	
2⅔′	Twelfth (Choir)	
2′	Fifteenth (Choir)	
8′	Tuba Major (Choir)	
	Tremulant (Choir)	

Enclosed Stops

8′	Cello	61 pipes
8′	Cello Céleste	61 pipes
4′	Grand Octave	61 pipes
4′	Viola	12 pipes
4′	Viola Céleste	7 pipes
2′	Grand Chorus (IV)	217 pipes
16′	Bombarde	12 pipes
8′	Harmonic Trumpet	61 pipes
8′	Corno di Bassetto	61 pipes
	Chimes (digital)	
	Tower Bells (digital)	

CHOIR (II)

Unenclosed Stops

16′	Bourdon (TC)	
8′	Diapason	61 pipes
8′	Harmonic Flute	61 pipes
8′	Bourdon	61 pipes
4′	Principal	61 pipes
4′	Chimney Flute	61 pipes
2⅔′	Twelfth	61 pipes
2′	Fifteenth	61 pipes
8′	Tuba Major (FF#)	43 pipes
	Tremulant	
8′	Corno di Bassetto (Great)	
	Celesta Sub (digital, enclosed)	
	Celesta (digital, enclosed)	

Sanctuary Stops

8′	Open Diapason (unenclosed)
8′	Harmonic Flute (unenclosed)
4′	Principal (unenclosed)
16′	Bourdon
8′	Salicional
8′	Stopped Diapason
8′	Echo Gamba
8′	Vox Angelica
4′	Salicet
4′	Flute
2′	Salicetina
1⅓′	Mixture (II–V)
16′	Double Trumpet (TC)
8′	Trumpet
8′	Rohrschalmei (TC)
	Tremulant

SWELL (III—Enclosed)

16′	Echo Bass	12 pipes
8′	Diapason	61 pipes
8′	Concert Flute	61 pipes
8′	Voix sérénissime	61 pipes
8′	Voix céleste	61 pipes
4′	Gemshorn	61 pipes
4′	Silver Flute	61 pipes
2⅔′	Nazard (TC)	49 pipes
2′	Piccolo	12 pipes
1⅗′	Tierce (TC)	42 pipes
1′	Fife	
2′	Mixture (III–V)	263 pipes
16′	Trombone	12 pipes
16′	Fagotto (TC)	
8′	Trumpet	61 pipes
8′	Oboe	61 pipes
8′	Vox Humana *f* & *p*	61 pipes
4′	Clarion	61 pipes
	Tremulant	
8′	Tuba Major (Choir)	
	Orchestral Harp (digital)	

PEDAL

32′	Diapason (resultant)	
32′	Echo Bass (resultant)	
16′	Contra Bass (wood)	12 pipes
16′	Diapason (Great)	
16′	Echo Bass (Swell)	
8′	Octave	32 pipes
8′	Principal (Swell)	
8′	Harmonic Flute (Choir)	
8′	Celli (II, Great)	
8′	Concert Flute (Swell)	
8′	Bourdon (Choir)	
4′	Super Octave	12 pipes
4′	Fifteenth (Swell)	
4′	Harmonic Flute (Choir)	
2′	Piccolo (Swell)	
1′	Fife (Swell)	
32′	Harmonics (V, Swell)	
32′	Contra Trombone (Swell)	12 pipes
16′	Bombarde (Great)	
16′	Trombone (Swell)	
8′	Harmonic Trumpet (Great)	
8′	Trumpet (Swell)	
4′	Harmonic Clarion (Great)	
4′	Corno di Bassetto (Great)	
	Tower Bells (Great)	

Sanctuary Stops

32′	Bourdon (resultant)
16′	Double Bass
16′	Bourdon
8′	Harmonic Flute
8′	Stopped Diapason
8′	Echo Gamba
4′	Harmonic Flute
8′	Trumpet
4′	Rohrschalmei

The layout has a few interesting features to make it serviceable despite fairly tight quarters, such as spring-loaded walkboards that lift out of the way when climbing between levels, and an L-shaped Swell box that provides just enough extra room for the last Swell stop. The 32′ reed in the Swell, by the way, is full length and is located at the back of the Swell box along the left-hand side wall.

Organs Are Vertical—Not Horizontal!

All the cleverness created a thoroughly horizontal instrument stretching from wall-to-wall, so our next challenge was to give it some sense of verticality and pay homage to the Roosevelt's 19th-century style. The obvious answer was to feature the center portion of the organ and, even though it was a bit wider than normal, emphasize height by selecting narrower scale pipes and also making them overlength, thus appearing taller. The overreach of center pipes in each flat, as well as the tall finials, adds to this impression.

The next problem was de-emphasizing the side sections. Our first thought was to use grille work only, but that just made the side sections of the instrument appear to be more massive. The small, narrow-scale pipes at the forward corners of each side were added to provide a bit of interest and an explanation as to why there were large boxes on either side of the organ!

As can be seen from the cover photo and from the plan of the enlarged balcony, there is now adequate room for a choir, and instrumentalists are not stuck back in the corner.

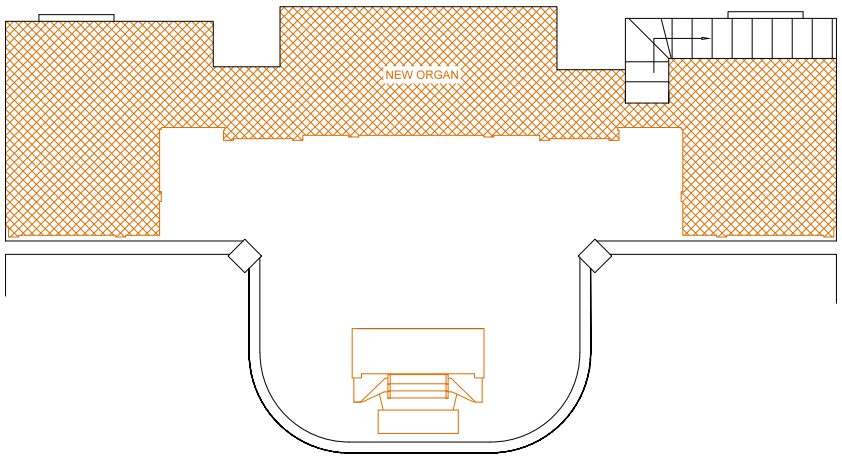
How Can We Dress It Up?

The process of case design usually starts with a simple pencil sketch just to get an idea of the general proportion and massing of elements, the number of front pipes, etc. Usually this is given to the church architect who makes comments and suggestions. Sometimes, many levels of approval are involved and the sketch becomes more-and-more elaborate until a full mechanical drawing is made. When this is accepted, we often have the specialist pipe organ renderers, Pipeshaders of Orem, Utah, do their magic to interpolate our mechanical drawing into a photograph of the church. The mechanical drawing and rendering are shown at right, for comparison with the final product shown on the cover.

This project involved a second completely separate but inter-connected organ in the sanctuary. The design process was much simpler with the exception that we had to develop a design within two arches set at a 90° angle with the face of the organ projecting diagonally across the church, so that the case would be attractive from many perspectives.

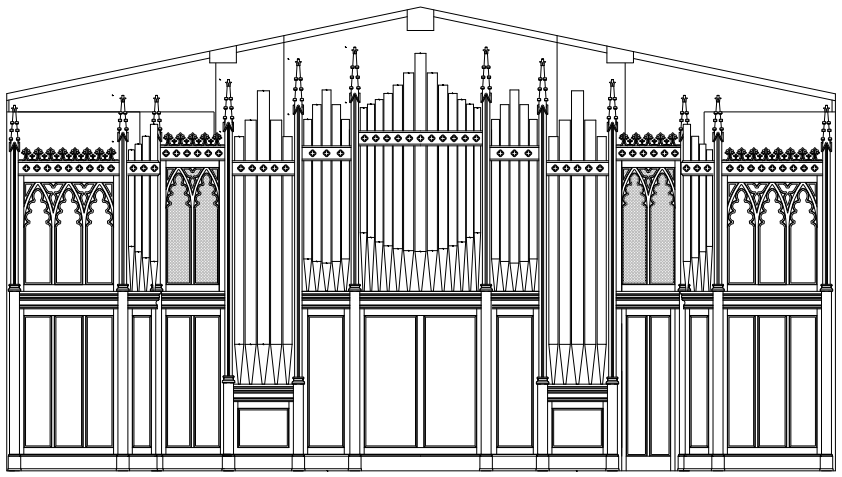
The organs were dedicated in a Mass of Dedication and Celebration on April 21, 2013. The inaugural recital with Ken Cowan playing the works of Bach, Reger, Willan, Vierne, Widor, Laurin, and Wagner was played to a very large and appreciative audience on September 8, 2013.

—Jack M. Bethards
President and Tonal Director
Schoenstein & Co.
Photo credit: Louis Patterson
Rendering by Pipeshaders



New layout, showing enlarged gallery

Fordham University Church, gallery with 1879 Roosevelt organ



Mechanical drawing, gallery organ case

Rendering, gallery organ case

Sanctuary Organ
(2 manuals, 14 ranks)

GREAT (I)

8′	Open Diapason	61 pipes
8′	Harmonic Flute	61 pipes
4′	Principal	61 pipes
16′	Bourdon (Extend Choir)	12 pipes
8′	Stopped Diapason (Choir)	
2′	Mixture (II–V, Choir)	
16′	Double Trumpet (TC, Choir)	
8′	Trumpet (Choir)	
8′	Rohrschalmei (TC, Choir)	37 pipes
	Tremulant (Choir)	

CHOIR (II)

8′	Salicional (common bass)	49 pipes
8′	Stopped Diapason	61 pipes
8′	Echo Gamba	61 pipes
8′	Vox Angelica	61 pipes
4′	Salicet	12 pipes
4′	Flute	12 pipes
2′	Salicetina	12 pipes
2′	Mixture (II–V)	206 pipes
8′	Trumpet	61 pipes
8′	Tuba Major (Gallery Choir)	

PEDAL

16′	Double Bass (Harm. Flute)	12 pipes
16′	Bourdon (Choir)	
8′	Harmonic Flute (Great)	
8′	Stopped Diapason (Choir)	
4′	Harmonic Flute (Great)	
8′	Trumpet (Choir)	
4′	Rohrschalmei (Great)	

Full array of couplers and mechanicals on both consoles
Manual I/II Transfer and Pedal Divide on Gallery console

Gallery console