CHAPTER 4

Cathedral of Ica

4.1 Summary

Ica is the largest and most important modern city on the coast of Peru between the cities of Arequipa and Lima. Located at the corner of the city's main plaza, the Cathedral of Ica was originally built in 1759 by the Society of Jesus, but its ownership was transferred to the Mercedarian Order in 1780 after the expulsion of the Jesuits from the Viceroyalty of Peru in 1767 (Figs. 4.1, 4.2). Presently owned by the Roman Catholic Diocese of Ica, the cathedral was used as a place of worship until it was damaged in the 2007 Pisco earthquake. The former Jesuit church follows the Jesuit typology established by the Church of the Gesù in Rome and is structurally similar to the Cathedral of Lima after its reconstruction in the latter half of the eighteenth century. The cathedral plan consists of a choir loft, one central nave with four structural bays, a transept, and an altar that are all covered with barrel vaults. Either side of the nave is flanked by an aisle covered with a series of small domes, and the crossing of the nave and transept is covered by a large dome with a lantern. The thick lateral walls are constructed with mud brick masonry over a fired brick base course and stone foundations. The side aisles are separated from the central nave by a series hollow quincha pillars and arches covered with painted mud and gypsum plaster. The barrel vault and domes are also constructed with wood arches or ribs and quincha. The Cathedral of Ica was severely damaged during the

FIGURE 4.1
Satellite image showing the location of the Cathedral of Ica in relationship to the main square of Ica.
Image: © 2013 Google. Image © 2013 Digital Globe.

FIGURE 4.2
The Cathedral of Ica, as viewed from the main plaza to the northeast.
Image: Sara Lardinois.

FIGURE 4.3
View of damages to the dome and vault resulting from the 2007 earthquake.
Image: Sara Lardinois.

1813 and 1942 earthquakes, which led to the rebuilding of its façade, including the two bell towers, in fired brick masonry. The structure has been at risk since the 2007 earthquake, which led to the collapse of sections of the barrel vault near the façade, partial collapse of the central dome, total collapse the roof over one bay of the south side aisle, and loss of plaster at the pillar and pilaster bases (Fig 4.3).

4.2 Historical Background, Context, and Significance

4.2.1 Historical background and context[1]

The city of Ica is the capital of the Ica region in southern Peru. While the area had long been inhabited by varying pre-Inca and Inca cultures, the Spanish conquistador Gerónimo Luis de Cabrera claims to have founded the city in 1563. As of 2005, the city had an estimated population of 219,856. The cathedral is located at the southwest corner of the Ica's main plaza and is considered one of the most important buildings in the city (Fig.4.4). The cathedral is housed in an eighteenth century building that was originally constructed for the Jesuit College of San Luis Gonzaga[2] and is representative of a typical Baroque Jesuit church. Following the expulsion of the Jesuits from the Viceroyalty of Peru in 1767, the church was later occupied, renamed, repaired, and altered by a number of different religious orders, including the Mercedarians, who were responsible for rebuilding the façade following the earthquake of 1813. Since 1946, it has served as the cathedral for the Roman Catholic Diocese of Ica.

Soon after the arrival of the Spanish in Peru, the King of Spain and Holy Roman Emperor Charles V authorized four religious orders to come to Peru—the Dominicans, Franciscans, Mercedarians, and Augustinians—with the purposes of leading evangelical and educational efforts and promoting the development of cities in the New World. All four of these groups were Christian mendicant orders of friars, which first appeared in Europe at the end of the Middle Ages and spent their time preaching the Gospel and serving the poor. Monastic orders were never allowed to come to Peru.[3]

The first members of the Society of Jesus (*Compañía de Jesús* in Spanish) arrived in Peru in 1567–1568. Created by Ignatius of Loyola and six other students at the University of Paris in 1534, the Jesuits were neither monks nor friars, but rather a priestly order. The Jesuits were devoted to education, often operating and living in urban colleges.[4] In order to maintain these colleges, the Jesuits invested in farms outside the cities, which also allowed them to interact with the rural population. The Jesuits were involved in several farms in the Ica region,[5] including those at Mamacona, Belén, Caucato, and San Jerónimo, as well as those at San Javier and San José, both in Nazca[6]. The Jesuits would be expelled from the Spanish colonies, including the Viceroyalty of Peru, in 1767 for political reasons.

The Jesuits arrived in Ica in 1739 to open the College of San Luis Gonzaga, which included the church that would later become the Cathedral of Ica.[7] Work on the college began in 1746 and was completed in 1759, according to the date inscribed on the cathedral dome. It would seem that work continued after this date, as it is known that the master mason Gaspar Urrunaga was working at the Jesuit college in Ica from 1762 to 1767 (the year of the expulsion).[8]

Most Jesuit churches in the New World, including the former Jesuit church of Ica, have similar floor plans that are based upon the Church of the Gesú in Rome.

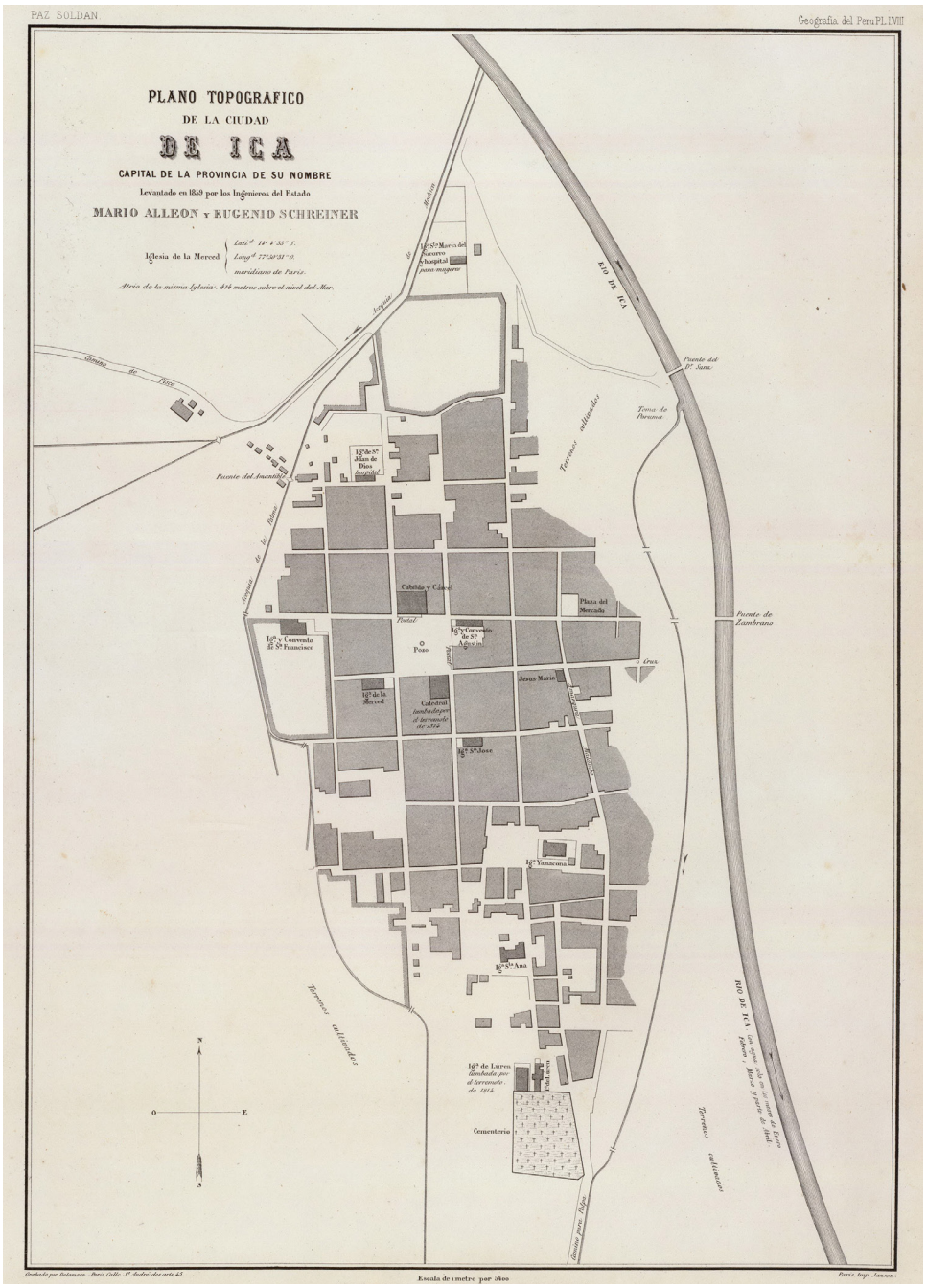

FIGURE 4.4
The 1859 *Plano topographic de la Ciudad de Ica*, showing the Cathdral of Ica, then called the Church of the Merced, at the lower left corner of the plaza. The former location of the city's main church (the original Iglesia Matriz de San Jerónimo), which was damaged in the 1813 earthquake, is shown at the lower right corner of the plaza.
Image: David Rumsey Historical Map collection, © 1985.

The typical plan has a cruciform or rectangular shape with a high barrel-vaulted nave flanked by low side aisles, which consist of a series of square spaces each covered by a dome. The shallow transept is essentially a continuation of the side aisles and is also covered by a barrel vault. A large dome with a lantern tops covers the crossing of the church. As at the Gesú, the presbytery/altar at Ica is flanked by chapels at either side; however, unlike the Gesú where the presbytery/altar terminates with a semi-circular apse, at Ica there is only a flat wall. As originally constructed, the church at Ica exhibited three of the unique Jesuit church characteristics identified by Father Rubén Vargas Ugarte:[9]

- Lack of a choir loft over the main entrance. As Jesuits were not friars and thus did not pray the Liturgy of the Hours together as a choir, there was no need for a choir loft. It is unclear if the choir loft at the Cathedral of Ica is original to the building or is a later addition made by the Mercedarians.[10]
- A corridor running along the sides of the upper nave, above the entablature. Where it was not possible to include a corridor within the church, as was the case at Ica, it was located outside, at the base of the barrel vault. Windows, with integral balustrades or balconies, allowed for communication between the central nave and exterior corridors. Exterior corridors are present in the former Jesuit church at Ica, as well as in other regional churches such the Hacienda San Regis, also in Ica.
- A profusion of art pieces, including paintings and sculptures, primarily intended for didactic purposes. After the expulsion of the Jesuits in 1767, many of these art pieces were given to other churches.

Following the expulsion of the Jesuits, the Mercedarian Order, which had been in Ica since the seventeenth century, took over the former Jesuit college and church. They first asked for the building in 1774 and took possession of the complex around 1780, operating under the name of Colegio Mercedario de San José. The church itself was devoted to Our Lady of the Mercy. One of the first alterations carried out by the Mercedarians was an elaboration of the main altarpiece by the master Joseph Carlo Conti in 1802. In 1813 an earthquake damaged the church as well as several other buildings in Ica including the city's main church, the Iglesia Matriz de San Jerónimo, in the nearby plaza. The Mercedarians set about repairing the church the following year. As part of this work, the front façade was rebuilt in the Neoclassical style, and the choir loft over the main entrance may have been added at this time. The decorative scheme for the front façade incorporates a number of allegorical figures which are described in greater detail in section 4.3.

Following the independence of Peru (1821–1824), religious orders with less than eight members were suppressed, and the Mercedarians left Ica. The former Jesuit church took the name of Iglesia Matriz de San Jerónimo from the damaged church in the plaza, and the college took back its former name of San Luis Gonzaga. Several alterations and repairs to the church were carried out in the nineteenth century. In 1830 a new bell was made for the church. The church suffered damages during the 1868 earthquake but was repaired in 1874.

An inventory carried out in 1878 noted the church had two bell towers (one with a clock), three bells, and several altarpieces. The German doctor and explorer Ernst Middendorf visited Ica in 1887 and reported that the church was in good condition and noted there were two altarpieces. A report made in 1900 by the archbishop of Lima describes both fixed and movable altarpieces in the church. The five fixed altarpieces included the main altarpiece, as well as lesser ones devoted to the Sacred Heart, Our Lady of the Rosary, The Nazareno, and Our Lady of the Carmel. The movable altarpieces included those devoted the Immaculate Conception of Our Lady, the Sacred Family, and Saint Ramón. The inventoried images included Our Lady of Mercy, Our Lady of the Rosary, Our Lady of Carmel, the Immaculate Conception, Saint Rose of Lima, the Holy Family, Our Lady of the Sorrows, Saint Catherine, Saint Raymond, Saint Roch, and Saint Cajetan. The report also noted the pulpit and, in front of it, a small structure with a stone sculpture depicting Christ on the Cross with Our Lady and Saint John.

The historic records indicate that the northeast bell tower, which houses the clock, was under repair in 1919, but it was later destroyed by the 1942 earthquake.

In 1946 the Roman Catholic Diocese of Ica was created and the former Jesuit church was declared the cathedral of the new diocese. The building continued to function as a cathedral until it was damaged during the 2007 earthquake. Today, the cathedral is largely unused, although diocese priests continue to celebrate mass within the damaged structure.

4.2.2 Significance

On May 30, 1958 the cloister of the old Jesuit college of San Luis Gonzaga, adjacent to the Cathedral of Ica, was registered as a national monument; however, the cathedral itself would have to wait until December 15, 1982 to be registered as a national monument. The significance of the cathedral was questioned after it incurred severe damages during the 2007 earthquake; however, the possibility of delisting the structure generated a controversy among the citizens of Ica who requested that the former Instituto Nacional de Cultura retain its status as a monument and work towards its conservation.

4.3 Architectural Description

The cathedral is located at the corner of an urban block in the historic center of Ica, at the intersection of Jirón Cajamarca and Jirón Bolívar. The cathedral is preceded by a 280 m^2 *atrio* (walled forecourt) and is adjacent to its original one-story mud brick Jesuit college—now housing a university—to the south and three-story modern concrete structures to the west. It is built over the remains of vaulted fired brick catacombs, which were observed when the building was opened up for the prospections. These vaulted structures can also be seen in an archaeological excavation in the cloister of the adjacent Jesuit college.

The one-story, 1,075 m^2 church has a rectangular floor plan oriented along an east–west axis, with a 1:2 proportion and overall dimensions of 22.5 × 48.5 m. It contains 10 different functional spaces: a *sotacoro* (area under the choir loft), choir loft, central nave, two side aisles, a crossing, transept, altar, and two side chapels flanking the altar (Fig. 4.5). Changes in floor level and interior pillars, pilasters, and piers are used to separate the different spaces (Fig. 4.6). The church is accessed through a large pair of arched doors at the front façade to the east, and the altar is located at the far west end of the building. A lateral entrance, with a pair of large doors that often remain closed, at the north wall along Jirón Cajamarca also provides access to the nave. A 195 m^2 sacristy, which is not the subject of this construction assessment, is located to the west of altar and can be accessed through an independent entrance at Jirón Cajamarca. A wood spiral staircase, located in the base of the southeast bell tower, provides access to the wood-framed choir loft above the sotacoro and to the roof (Fig 4.7).

The exterior appearance of the church is largely defined by its front façade and long lateral wall (Figs. 4.8, 4.9). Renovated in a Neoclassical style following damages incurred in the 1813 earthquake, the horizontal three-part front façade has base, a monumental pair of arched doors flanked by engaged Corinthian columns and pilasters, and a pediment, all constructed with fired brick masonry. The decorative motif for the front façade incorporates a number of allegorical figures, including a coat of arms with a lamb in the pediment and an image of Our Lady of

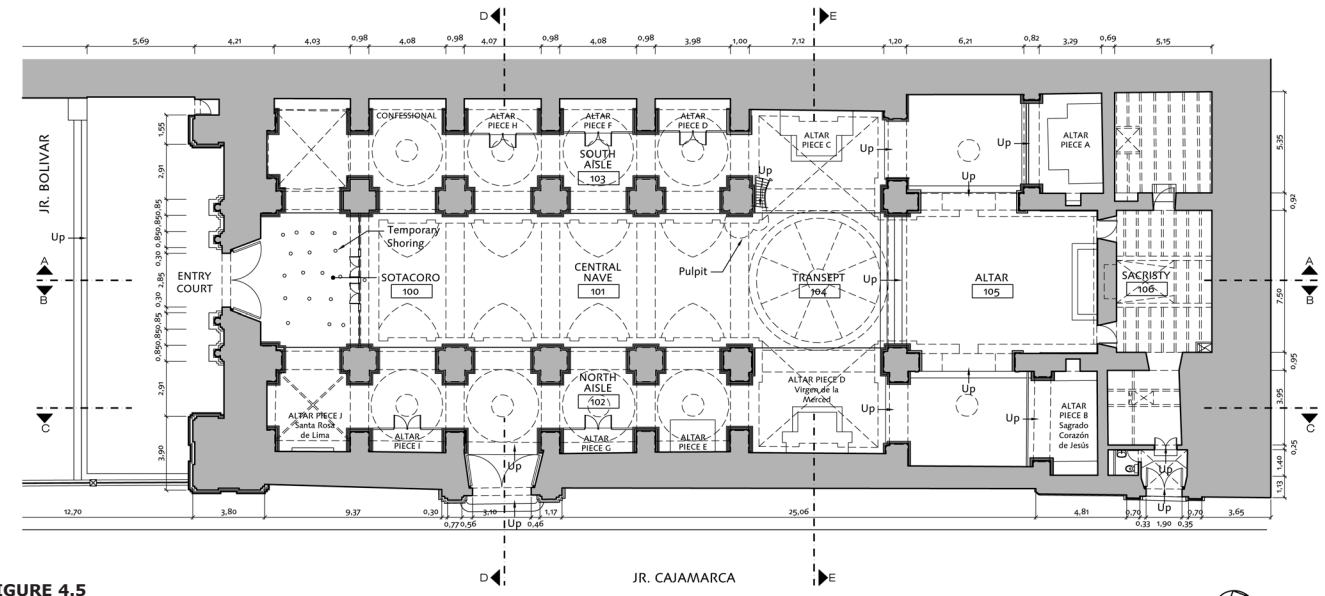

FIGURE 4.5
Floor plan, Cathedral of Ica.
Drawing: Base drawing prepared by Mirna Soto and edited by the GCI.

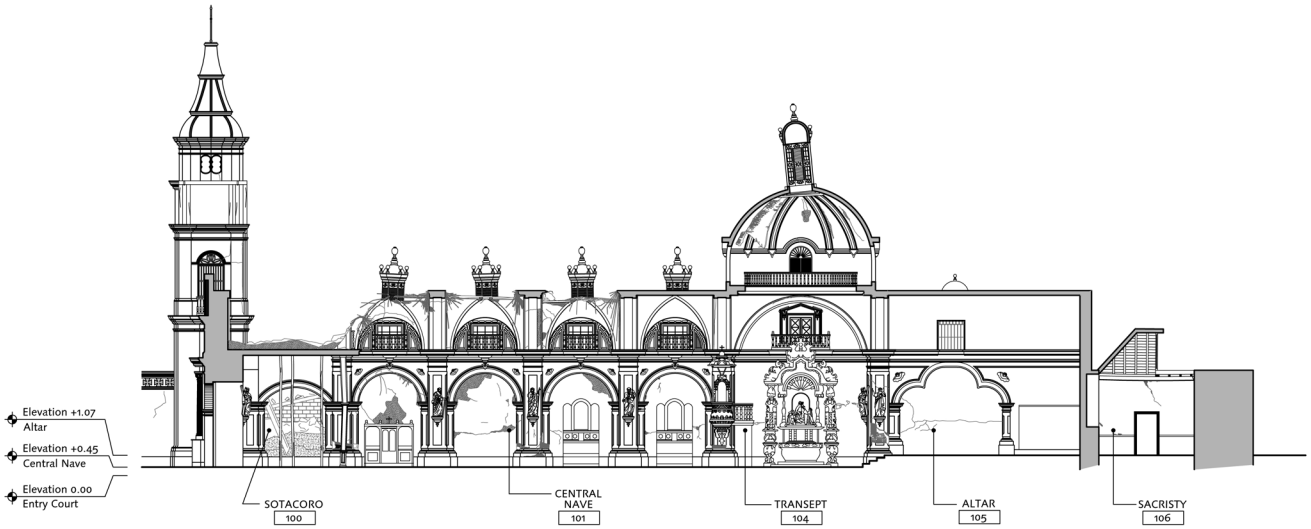

FIGURE 4.6
Cross section A-A, Cathedral of Ica.
Drawing: Base drawing prepared by Mirna Soto and edited by the GCI.

FIGURE 4.7
Heavy timber framing at spiral staircase in southeast bell tower, 2007.
Image: Instituto Nacional de Cultura del Perú.

Mercy crowned by angels and holding prisoners' chains in the frieze. At each side of the main entry portal, between the engaged columns, there is an allegorical sculpture. The figure to the left likely represents a Virtue, while the one to the right represents Justice. A wood-framed bell tower with a fired brick base flanks either side of the front facade. A small secondary door provides access to the base of the south bell tower. The mud brick lateral façade at Jirón Cajamarca has two openings: the lateral entrance and the sacristy entrance doors. Both the fired brick masonry front façade and mud brick lateral walls are constructed over a fired brick base course and rubble stone masonry foundations and have a plaster finish.

At the interior of the cathedral, a series of pillars, spaced at approximately 5 m on center, create four bays and are used to separate the central nave from the side aisles (Figs. 4.10, 4.11). These pillars support both the central vault and the small domes over the side aisles. Similar pillars are also used to support the central dome at the crossing of the nave and transept. The pillars are constructed with wood posts which are wrapped with flattened cane reeds and finished with mud plaster and gypsum and are decorated in the Neoclassical style. This construction technique was used in churches after the 1746 Lima earthquake as a means of replacing earlier heavy fired brick and stone masonry columns and increasing the height of the nave and crossing. Some of the pillars in the cathedral also contain a tree trunk in the center, which supports the upper roof beams.

The far east end of the cathedral, which contains the choir loft, is thought to have been modified by the Mercedarians when they rebuilt the east façade following the 1813 earthquake and is structurally different from the rest of the building. It is two stories in height and contains the choir loft, the sotacoro below, and one-storey extensions of the side aisles to the north and south of the sotacoro which have rib-vaulted ceilings with flat roofs above. A choir screen, consisting of decorative wood framework with glazed insets and two pairs of doors, separates the sotacoro from the nave.

The roof consists of a series of barrel vaults and domes, with flat roof areas between them (Figs. 4.12, 4.13). The nave, transept, and altar are all covered by barrel vaults. The barrel vault over the transept is perpendicular to the nave and altar

FIGURE 4.8
Detail of front façade, showing main entry to the church.
Image: Sara Lardinois.

FIGURE 4.9
North lateral wall along Jirón Cajamarca, 2007.
Image: Phillipe Garnier.

FIGURE 4.10
View of nave, looking towards the choir loft, sotacoro, and choir screen.
Image: Sara Lardinois.

FIGURE 4.11
View of pillars between the nave and side aisles, 2007.
Image: Phillipe Garnier.

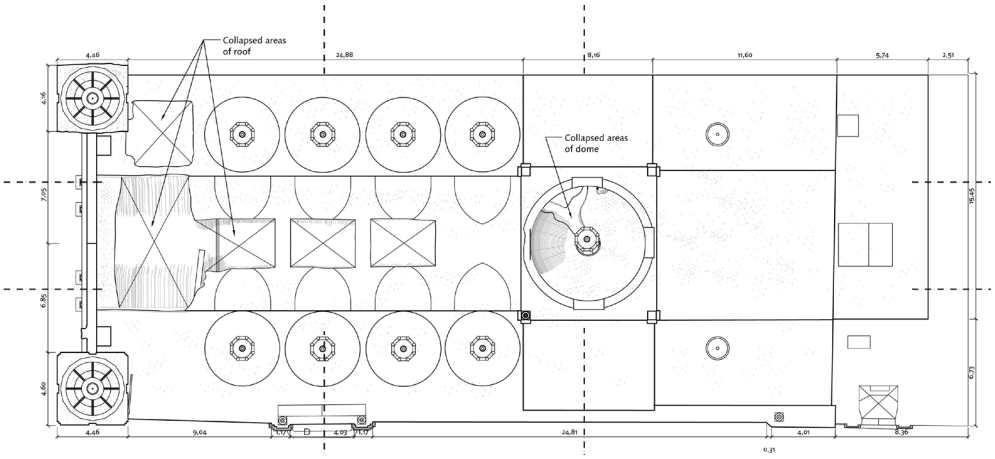

FIGURE 4.12
Roof plan.
Drawing: Base drawing prepared by Mirna Soto and edited by the GCI.

FIGURE 4.13
View of domes over south lateral aisle, with damaged main dome in the distance, 2007.
Image: Instituto Nacional de Cultura del Perú.

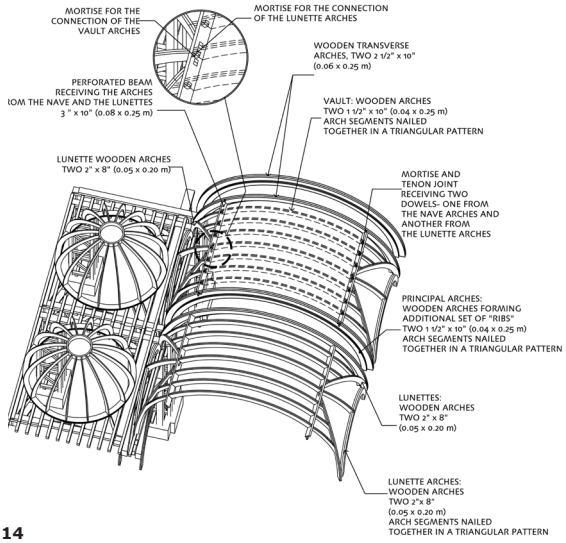

FIGURE 4.14
Detail showing the construction of the barrel vault, lunettes, and side aisle domes.
Drawing: Mirna Soto, for the GCI.

FIGURE 4.15 (LEFT)
View of main dome over the crossing of the nave and transept, with painted pendentives, 2007.
Image: Intituto Nacional de Cultura del Perú.

FIGURE 4.16 (RIGHT)
View of umbrella dome over the side aisle.
Image: Sara Lardinois.

vaults. At each side of the nave, five perpendicular vaults or lunettes, corresponding to the location of windows in the upper nave wall, intersect with the main barrel vault (Fig. 4.14). The crossing of the nave and transept is covered with a large umbrella dome, topped with a lantern and supported by a wood frame over the pillars (Fig. 4.15). Four non-structural decorative pendentives cover the internal wood structure. The aisles flanking either side of the nave are covered with eight small umbrella domes, which have a similar configuration to the central dome and are crowned with a wood lantern that illuminates the interior aisles (Fig. 4.16). These vaults and domes are constructed in quincha, with structural wood arches or ribs that are covered with canes and plaster at both the intrados and extrados.

4.4 Geological and Environmental Description

4.4.1 Geological description and seismic history

The cathedral (lat 14°3'53" S; long 75°43'47" W) is built over compacted silty sand with 1–1.5 kg/cm^2 of permissible load.[11] Although some sectors in the city of Ica are prone to liquefaction, the area where the cathedral is located is not.

The building is located in a level 3 seismic risk zone—the highest seismic level classified by the Peruvian Building Code.[12] As the church was constructed in the eighteenth century, it has been subject to a number of seismic events throughout its history, including the 2007 Pisco earthquake (M_W 8.0), approximately 65 km to the northwest; the 1942 earthquake off the coast of central Peru (M_W 8.2); the 1868 Arica earthquake (M_W 9.0); and the previously mentioned 1813 earthquake, which destroyed the original façade of the church.[13]

4.4.2 Regional climate

Ica has a warm and dry desert-like climate. While the humidity is high along the coast, it decreases in the interior. Ica is located approximately 55 km from the Pacific coast of Peru. Average temperatures are 32°C in the summer and 17°C in winter. The cathedral is located in the moderate flood zone. According to Mitma and Alva (2005), the 100-year flood is expected to generate flows of 600 m^3/s. The most recent flood of this magnitude in Ica occurred in 1998 and resulted in damage to the city. The 5-year flood is expected to generate a flow of 250 m^3/s.