



ŞADIRVAN AL-JAZZAR

Architectural Documentation and Conservation Report
of the Ablutions Fountain of al-Jazzar Mosque

Alison Hortig
July 2010

International Conservation Center

TABLE OF CONTENTS

INTRODUCTION	3
HISTORICAL BACKGROUND	6
HISTORICAL DOCUMENTATION	7
MAPS AND LOCATION	13
GENERAL DESCRIPTION	15
COMPARATIVE ANALYSIS	16
ASSESSMENT OF SIGNIFICANCE	18
PHYSICAL SURVEY	19
ARCHITECTURAL DRAWINGS	24
PATHOLOGIES	27
RECOMMENDATIONS	34
BIBLIOGRAPHY	35

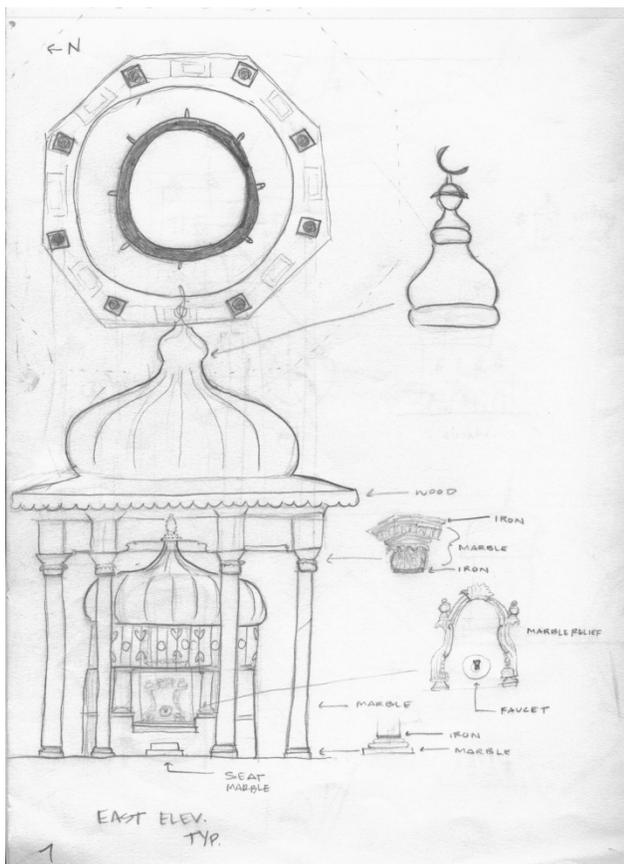
INTRODUCTION

As requested by the waqf, the architectural documentation and conservation report of the courtyard ablutions fountain (herein referred to by the Turkish term of “şadırvan”) at al-Jazzar mosque will serve as the continuation of the documentation of fountains owned and managed by them.

The mosque and its associated structures are of high importance to the Muslim community of Israel, and the complex is one of the most recognizable landmarks of Akko.

The courtyard ablutions fountain is currently still utilized in its original function and requires proper documentation prior to any conservation interventions. The objectives of the following report are to provide complete documentation of the current physical state of the structure, as well as a report on the state of pathologies and conservation.

Methodology



Researching this structure has presented significant limitations. The waqf no longer retains records of the construction of the complex nor were documentations undertaken throughout the life of the structure. Historical photographs also provide limited information, as there are so few which clearly show the structure, which can be seen in the report.

All measurements and documentation were conducted by the writer of this report on site, with a basic tape measure and laser. Extensive photographic and sketch documentation was also conducted.

Terminology

Şadırvan: fountain located in the courtyard of a mosque used exclusively for ritual ablutions (Formal architectural term, utilized throughout this report)

Sabil: public water fountain placed along roads to provide water to travelers

Sabil Tahara: şadırvan (Informal term)

Wudu: Islamic ritual cleansing and purification prior to prayer

(Denny, 2007).

PRIORITIZED TABLE OF PATHOLOGIES

#	Damage	Cause	Sum	Treatment
1	Unstable wood elements	Degradation	5%	Stabilized and replace as needed
2	Damaged wood frame	Missing panels	70%	Explore interior of frame to determine extent of damage, treatment TBD
3	Missing wood panels	Degradation	2%	Replace panels
4	Disintegrated joints	Modern interventions, degradation	5%	Remove existing pointing, replace with lime mortar
5	Rust	Environmental	5%	Clean rusted areas
6	Metal disintegration	Rust, degradation	2%	Disassemble affected pieces (interior cupola), intervention TBD based on damage
7	Cracks	Varies	3%	Clean areas. Fill utilizing lime mortar injection, or dutchwork.
8	Biological	Dark damp conditions	1%	Clean localized areas and regular preventative maintenance
9	Modern additions	Necessity of lighting, plumbing	5	Remove modern additions; assemble alternative solutions as noted in recommendations.
10	Missing stone	Varies	1%	Clean areas of foreign materials (concrete etc), repair using dutchwork. Certain areas require dismantling.
11	Coloring	Rust staining	1%	Clean localized areas
12	Coloring	Paint overspray	2%	Clean localized areas
13	Coloring	Biological staining	1%	Clean localized areas
14	Warping of metal roof material	Under frame disintegration/ varies	30%	Relative to needs of wood frame

HISTORICAL BACKGROUND

As all mosque records are destroyed or no longer accessible, tracing the history of the şadırvan is an arduous task. Part of the larger mosque complex built by the ruler al-Jazzar Pasha in 1781-1782 C.E. The mosque itself is built on a raised platform above a large Crusader period barrel vaulted cistern used to distribute water to the residents of the Ottoman city, and remains to be the most conspicuous building in the whole city (Dichter, 2000).

The aqueduct built by Jazzar carried fresh water from the spring of Kabri, approximately 15km away, to fill the cisterns beneath the mosque. Traditionally, the şadırvan central well was manually filled daily with water from the cisterns, and drained through the floor into a reservoir below. Functioning since its conscription as an ablutions fountain, the structure is accessed by worshippers multiple times daily, consequently, as needed maintenance and repairs have been performed throughout the life of the structure.

Ablutions

Ablutions is a state that must be achieved as a prerequisite prior to Muslim prayer, in order to do so, one must perform “wudu” or ritual cleansing and purification, often performed at a designated fountain called a “şadırvan”, the ritual includes:

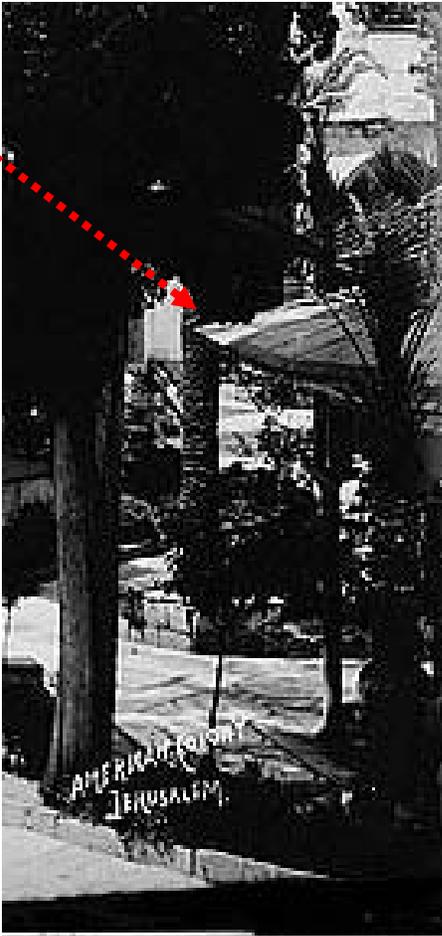
- ❑ *rinsing palms*
- ❑ *rinsing mouth*
- ❑ *washing nose by sniffing*
- ❑ *washing face*
- ❑ *wiping hair with wet hands*
- ❑ *rubbing ears with wet hands*
- ❑ *washing each arm up to the elbow*
- ❑ *washing the feet up to the ankle*

All steps in the process are required to be performed with fresh running water, which furthers the importance of individual taps and drains for each ablution unit of the şadırvan. While the appearance and aesthetic of the structure is important, the significance of the act performed takes precedence (Mokhtar, 2005).

HISTORICAL DOCUMENTATION



Mosque courtyard, approx. 1898-1914 (1)

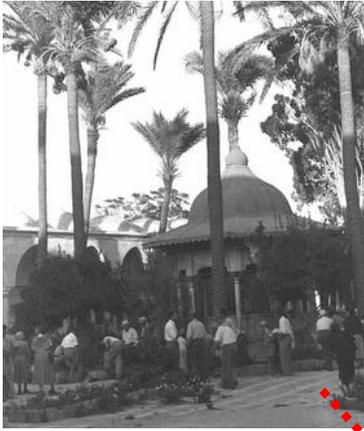




Sadirvan, 1910 (2)



Şadırvan, approx. 1938-1941 (3)



Şadırvan, 1949. Photo by Fritz Cohen (4)





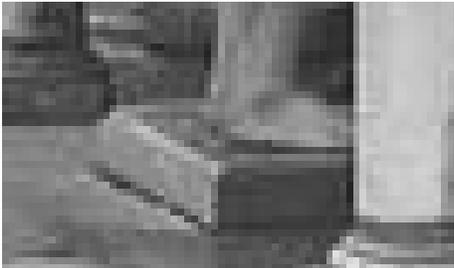
al-Jazzar Mosque courtyard, 1960. Şadırvan seen at far left (5)



Worshippers utilizing performing wudu at şadırvan, 1962. Photo by Moshe Pridan (6)



Grille, enlarged

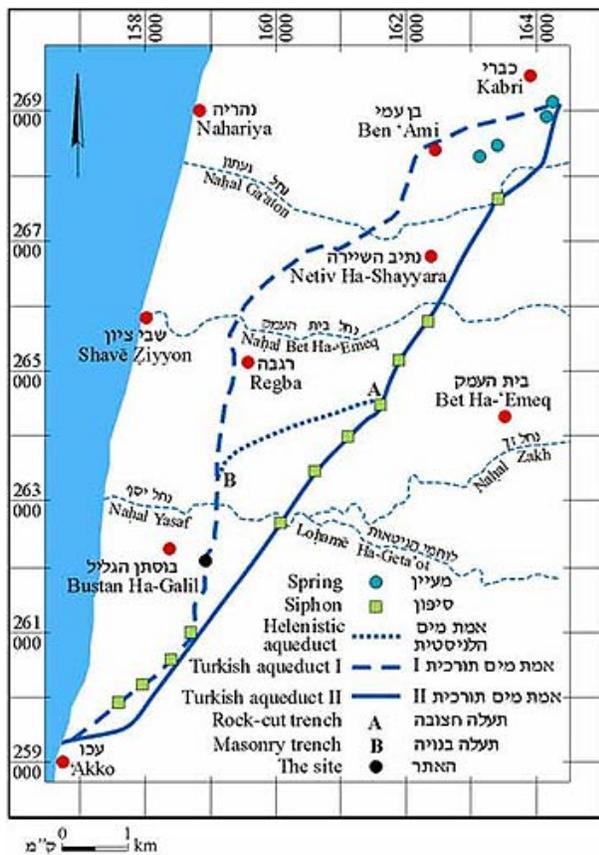


Seat, enlarged

MAPS AND LOCATION



Akko is located on the Northwestern coast of modern day Israel. (7)



Originating at the Kabri spring (see above map), approximately 15km north of Akko, water was carried by an extensive aqueduct system built by Jazzar. (8)

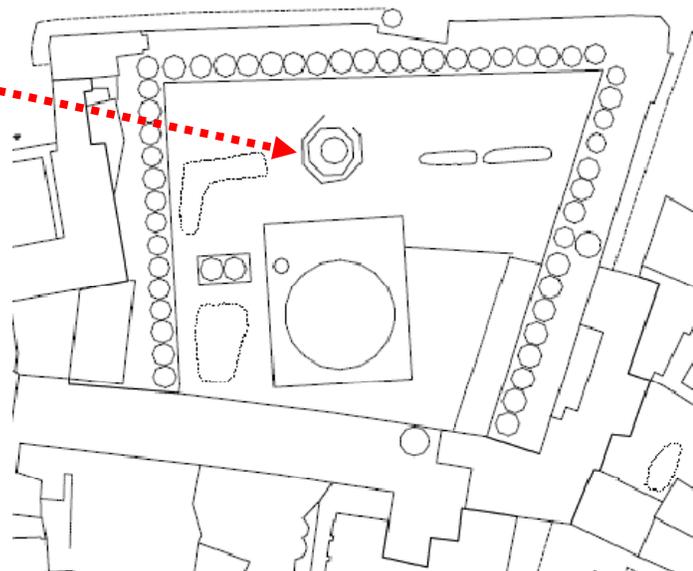


Aqueduct pictured above (9)



Aerial view of the old city of Akko. Showing the Al-Jazzar mosque and its relation to the şadırvan and the rest of the city. (10)

Mosque plan based on city survey. (11)



GENERAL DESCRIPTION OF ŞADIRVAN

The main entrance to the mosque courtyard is flanked by a series of shops and a sabil (water distribution fountain) immediately to the west of the grand staircase. Upon ascending the steps, one is greeted by an outer courtyard, cloister and cells. The courtyard currently contains, amongst impeccable landscaping: two wells which access the cisterns beneath, a sundial, and a richly decorated şadirvan (ablutions fountain). The mosque structure is square in shape, with a large cupola over its centre, and a tall, slender, minaret to its side. The exterior porch is supported by colorful granite columns taken from Caesarea, of which connects the marble path from the şadirvan.

The şadirvan by definition functions as an ablutions fountain, and is utilized by worshippers multiple times daily. It is centrally located within the mosque courtyard, strategically placed so as to enable a clean and dry circulation between the mosque entrance and the fountain, as is mandated by the laws of wudu set forth by the Qur'an. The building itself is an octagonal kiosk structure, designed in typical Ottoman Tulip style, constructed of marble columns and roofed with broad wood eaves and so called 'tulip' shaped dome topped with crescent finial. The external shell houses an interior structure that functions as a reservoir, an octagonal base of carved white marble. There are eight (8) ablutions units, each with individual taps, drains, and seats.



COMPARATIVE ANALYSIS

Laleli Mosque, Istanbul

Located in Istanbul, the Laleli mosque complex houses a şadırvan of considerable similarity to that of the al-Jazzar Mosque here in Akko. Built during the tulip period between 1760 and 1763 by the mimar Mehmed Tahir Aga, it was only to be damaged by a fire in 1783 and restored to its appearance today, which exemplifies the similarities between our two structures. It mimics the shell and form of al-Jazzar through its broad eaves, swooping cupola, elaborately painted ceiling, marble structural elements and interior well. The similarities between Laleli and al-Jazzar indicate a great amount of design influence throughout the Ottoman Empire during the time period.



Exterior Wall Sabil, al-Jazzar Mosque, Akko



Also situated as a part of the al-Jazzar Mosque complex, the exterior wall sabil built approximately 10 years following the construction of the şadırvan, it bears marked similarities however already shows signs of developing styles, with rounded upped cornice plates, and raised dome.

Assumptions about the mimar (builder) are difficult to make, however because of the stylistic changes, one could assume it were a different mimar than the şadırvan. The sabil otherwise utilizes the typical octagonal design, marble columns, pilasters, plates, and cantilevered wood domed roof. For full documentation of the sabil, please see “Architectural Documentation: Sabil al-Jazzar”, 2010.

ASSESSMENT OF SIGNIFICANCE

Historical

- With a construction date of 1782, at the writing of this report, the structure is nearly 228 years old. In a city such as Akko, the age of this structure when its relatively good condition is taken into account is highly relevant to its importance.
- Constructed by the ruler al-Jazzar Pasha as part of his reign in the region, and therefore holds important in its conscription.
- The şadirvan has been utilized continually throughout the life of the structure.

Social

- Within the mosque complex, the şadirvan provides a ritual function for those attending the mosque.

Religious/Spiritual

- By providing worshippers with the ability to perform wudu, the basic requirement for the commencing of prayer, the şadirvan's existence is necessary.

Aesthetic

- One of few examples of Tulip Period architecture in Israel.
- Currently, the structure is seen by any number of thousands of visitors to Akko each year, and photographed by many. The visual aesthetic is pleasing in its detail, symmetry, and uniqueness compared to other structures on a national level.

PHYSICAL SURVEY

Description

The overall edifice is constructed of an octagonal colonnade composed of eight marble columns, each topped with capitals composed of three distinct pieces. Columns are monolithic; however a few have been pieced together through dutchwork methods, and adhered with glues or mortars. The upper and lower ends of the columns are capped with copper rings. Adjoining contiguous capitals are iron bars which serve as tensors. Atop the capitals sit surrounding monolithic marble beams which act to close off the exterior from interior, at which four additional tensors connect through to the centre of an interior well, there are visible repairs in some areas of the beams.

Set upon the beams, is an interior wood frame which serves as the base of a zinc cupola dome and cantilever wood roof. The interior of the cupola is covered with a decorated wood ceiling.

In the centre of the structure is set a marble well, constructed of pilasters and adjoining wall plates. Attached to the top of the well is a modern steel gridded balustrade, placed atop remains of iron, topped with a zinc cupola, which serves to hide a modern plumbing system inside the well.

Note: all marble is white Marmara, except where dutchwork repairs occur, utilizing grey marble.

Existing Situation



Site location: arcade and main entrance to courtyard (left) and mosque entrance (right).



Şadırvan as seen from the mosque entrance, looking north.



An octagonal marble floor with geometric patterns floor space beneath the şadırvan.



Eight marble columns support the exterior cupola and shell. Each is capped with an elaborately carved capital. The capitals are assembled with lead pins between each element, and copper rings on the ends of the column.

Marble beams and cornice above columns act to add structural support. Cantilevered octagonal roof extends beyond the beams.





A zinc cupola dome with tiered finials caps the structure, and defines it as representative of Tulip period style.





Interior well, constructed entirely of white marble, incorporates pilasters and carved detailing to identify each individual ablutions unit.

The interior well is surrounded by a modern steel grille, which appears to have replaced one that was originally of iron. A smaller cupola dome caps the well to protect where the water once would have sat.



The ceiling above the cupola is elaborately designed and painted.



ARCHITECTURAL DRAWINGS



ALISON HORTIG

INTERNATIONAL CONSERVATION CENTRE
WEIZMAN I
OLD AKKO 24110
ISRAEL

SADIRVAN AL-JAZZAR

AKKO, ISRAEL

PROJECT NAME AND ADDRESS:

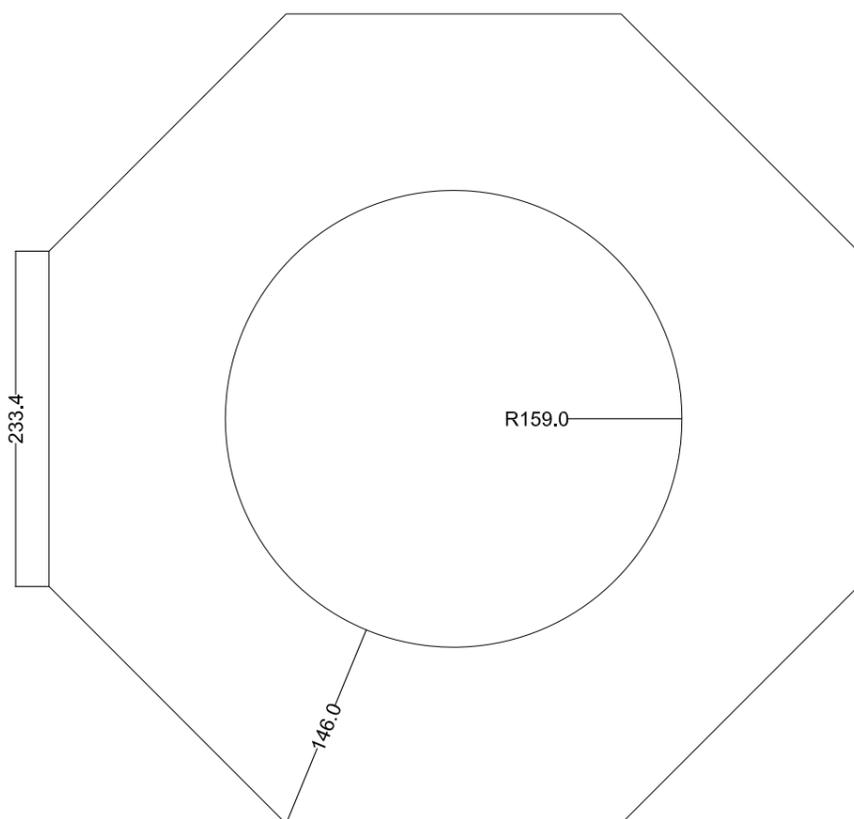
SADIRVAN AL-JAZZAR
AL-JAZZAR ST.
AKKO, ISRAEL

DATE:
03.7.2010

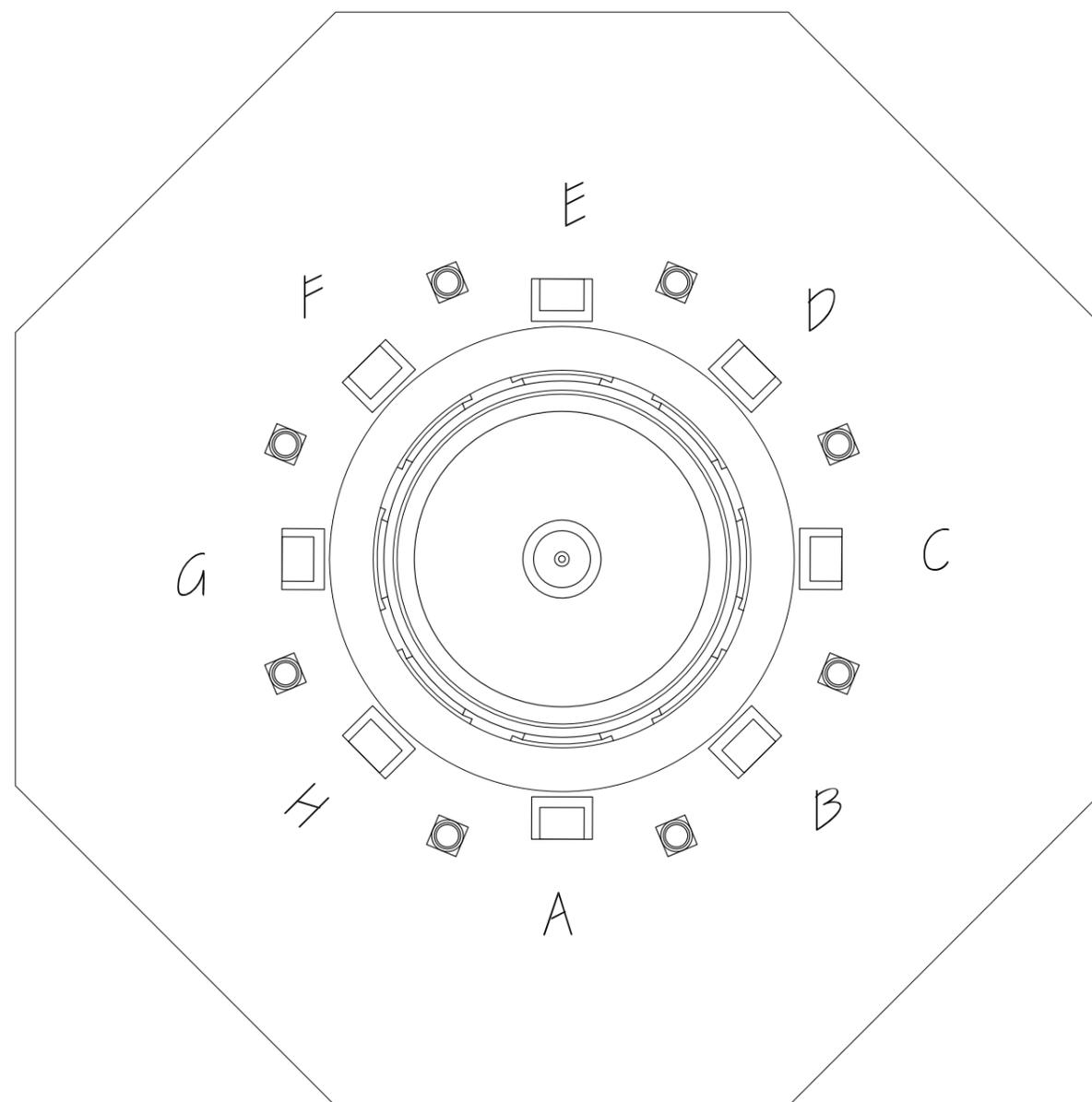
SHEET:

TITLE:
PLANS

AI.O



2 ROOF PLAN
AI.O SCALE 1:125



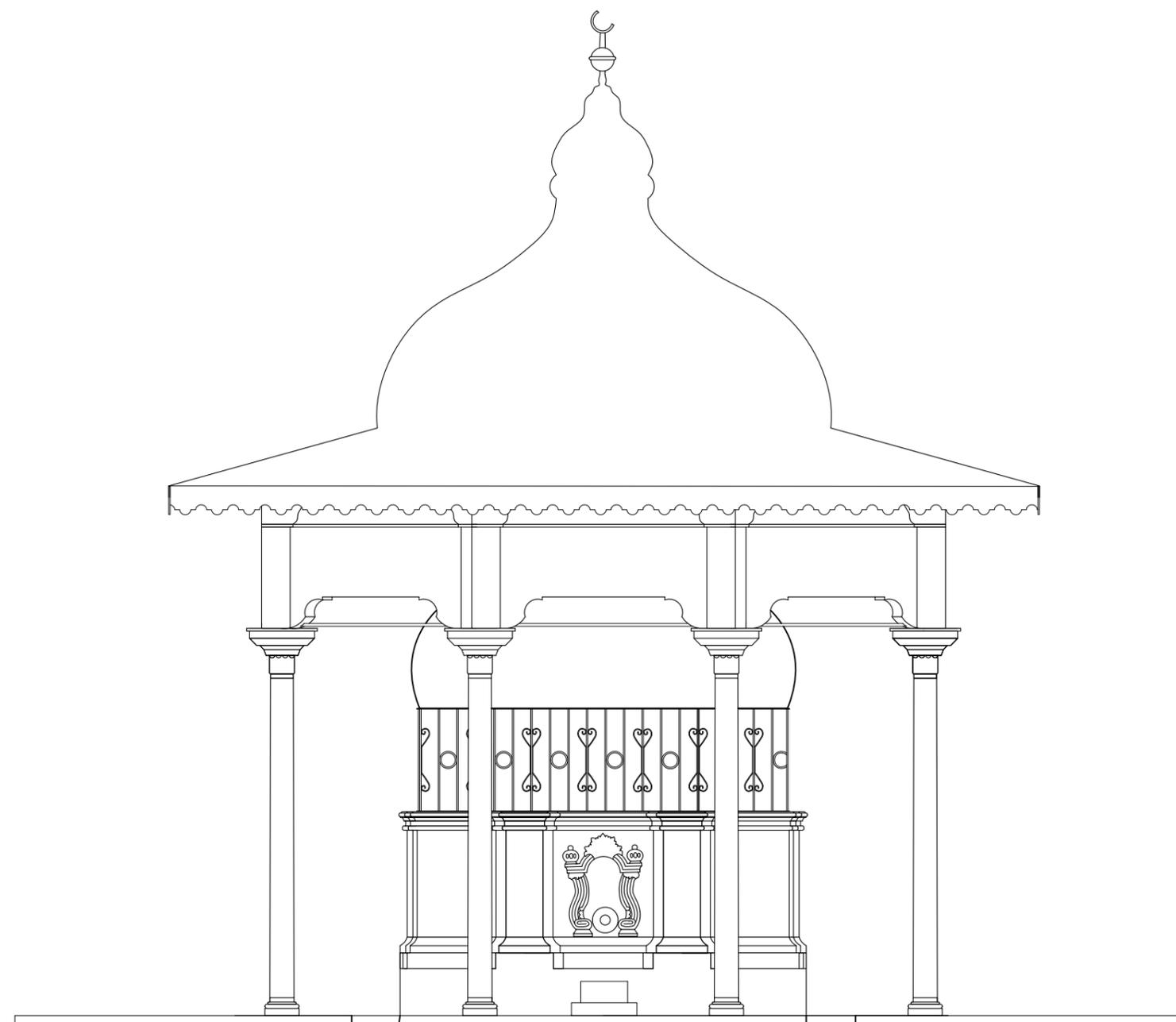
1 FLOOR PLAN
AI.O SCALE 1:125





ALISON HORTIG

INTERNATIONAL CONSERVATION CENTRE
WEIZMAN 1
OLD AKKO 24110
ISRAEL



1 ELEVATION
A2.0 SCALE 1:100

SADIRVAN AL-JAZZAR

AKKO, ISRAEL

PROJECT NAME AND ADDRESS:

SADIRVAN AL-JAZZAR
AL-JAZZAR ST.
AKKO, ISRAEL

DATE:

03.7.2010

SHEET:

A2.0

TITLE:

ELEVATION



ALISON HORTIG

INTERNATIONAL CONSERVATION CENTRE
WEIZMAN I
OLD AKKO 24110

SADIRVAN AL-JAZZAR

AKKO, ISRAEL

PROJECT NAME AND ADDRESS:

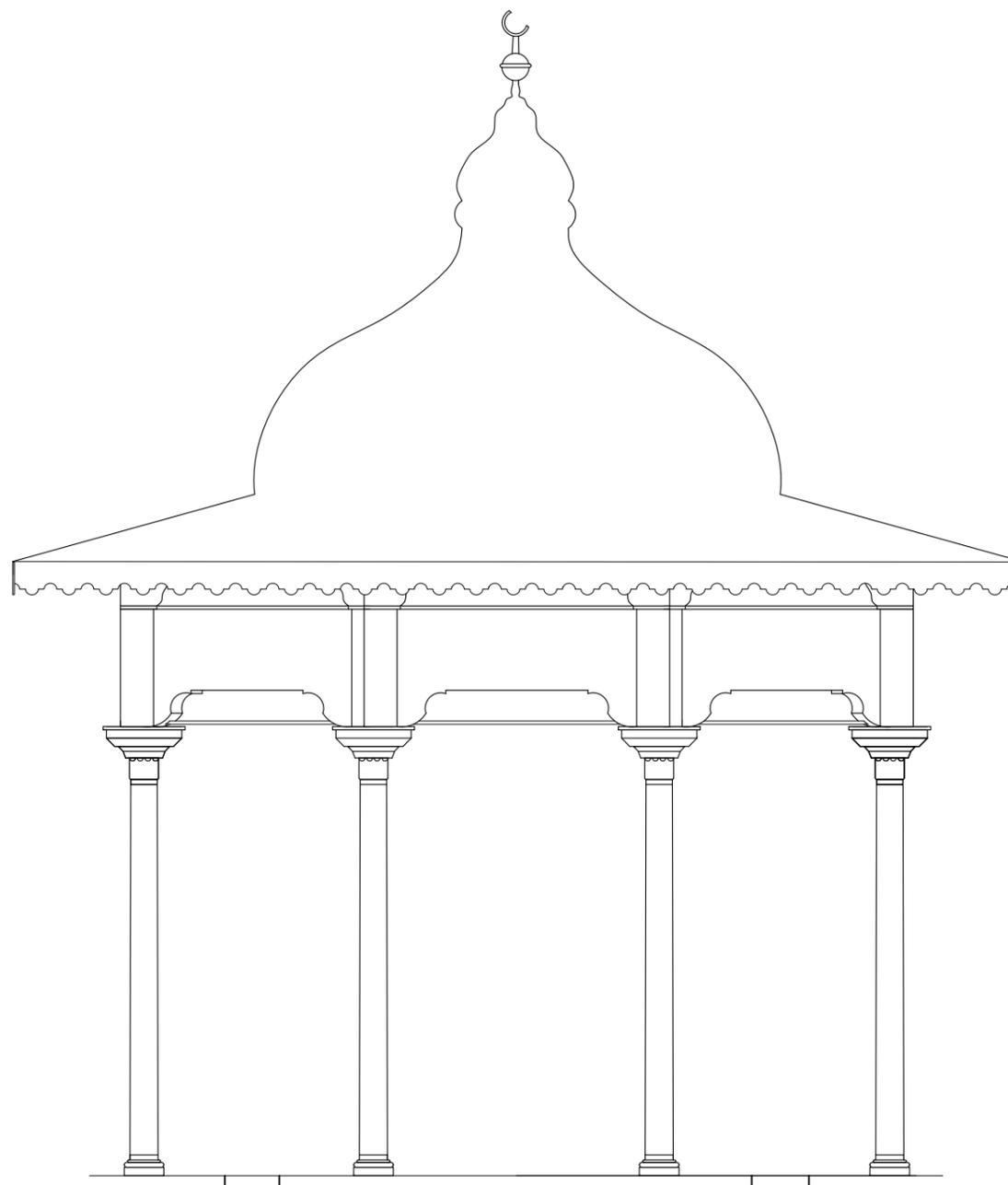
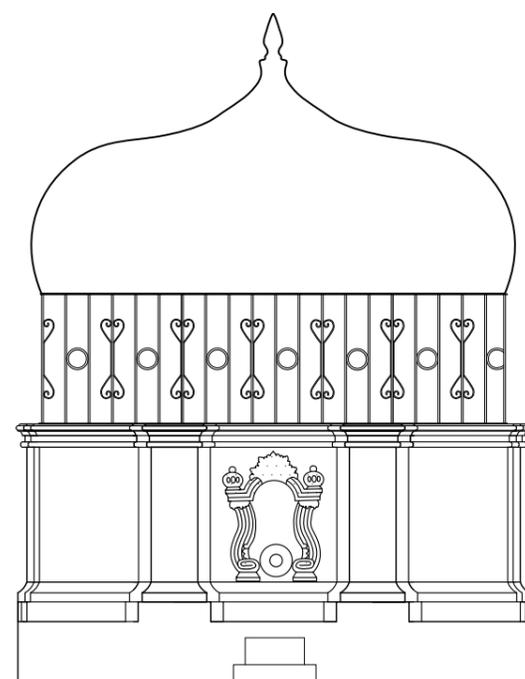
SADIRVAN AL-JAZZAR
AL-JAZZAR ST.,
AKKO, ISRAEL

DATE:
03.7.2010

TITLE:
EXTRACTED

SHEET:

A2.1



1 EXTRACTED ELEVATIONS
A2.1 SCALE 1:100



ALISON HORTIG

INTERNATIONAL CONSERVATION CENTRE
WEIZMAN I
OLD AKKO 24110
ISRAEL

SADIRVAN AL-JAZZAR

AKKO, ISRAEL

PROJECT NAME AND ADDRESS:

SADIRVAN AL-JAZZAR
AL-JAZZAR ST.,
AKKO, ISRAEL

DATE:

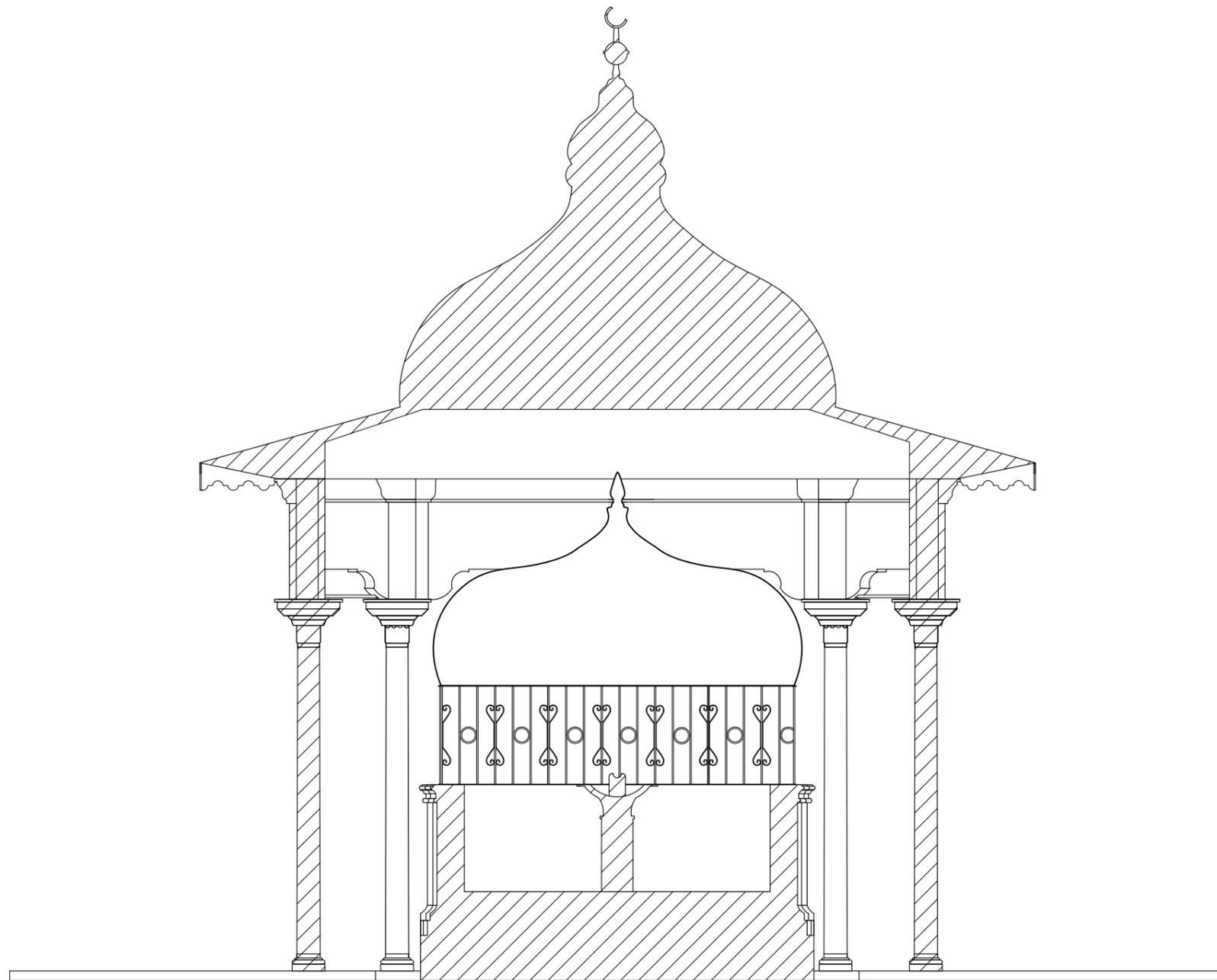
03.7.2010

SHEET:

A3.0

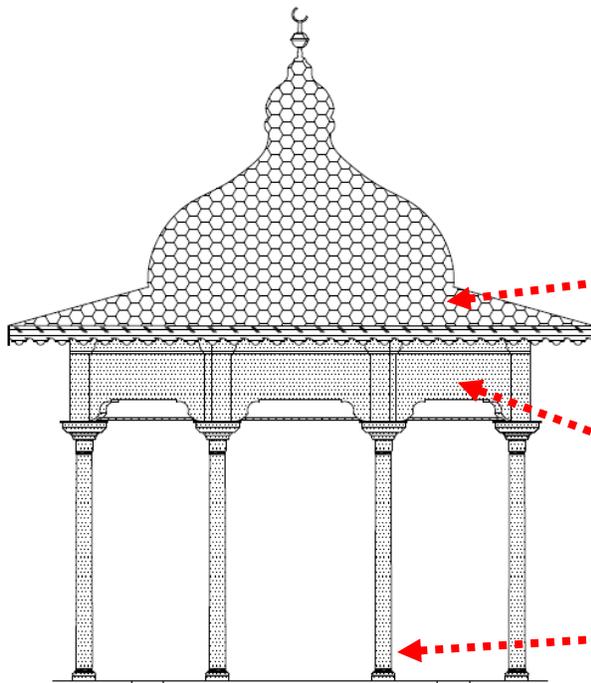
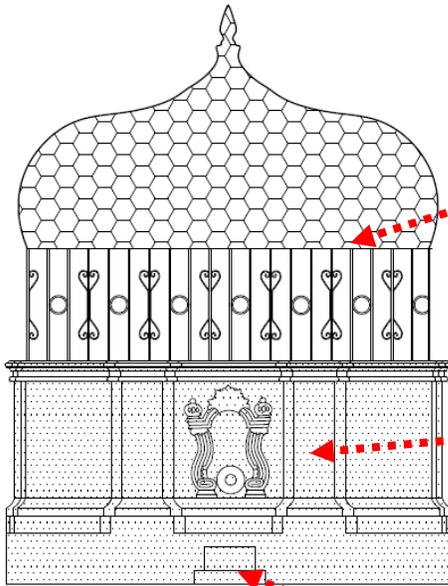
TITLE:

N. SECTION



1 NORTH SECTION
A3.0 SCALE 1:100

Elements as shown on Materials Plan



MATERIALS DIAGRAMMING



ALISON HORTIG

INTERNATIONAL CONSERVATION CENTRE
WEIZMAN I
OLD AKKO 24110
ISRAEL

SADIRVAN AL-JAZZAR

AKKO, ISRAEL

PROJECT NAME AND ADDRESS:

SADIRVAN AL-JAZZAR
AL-JAZZAR ST.
AKKO, ISRAEL

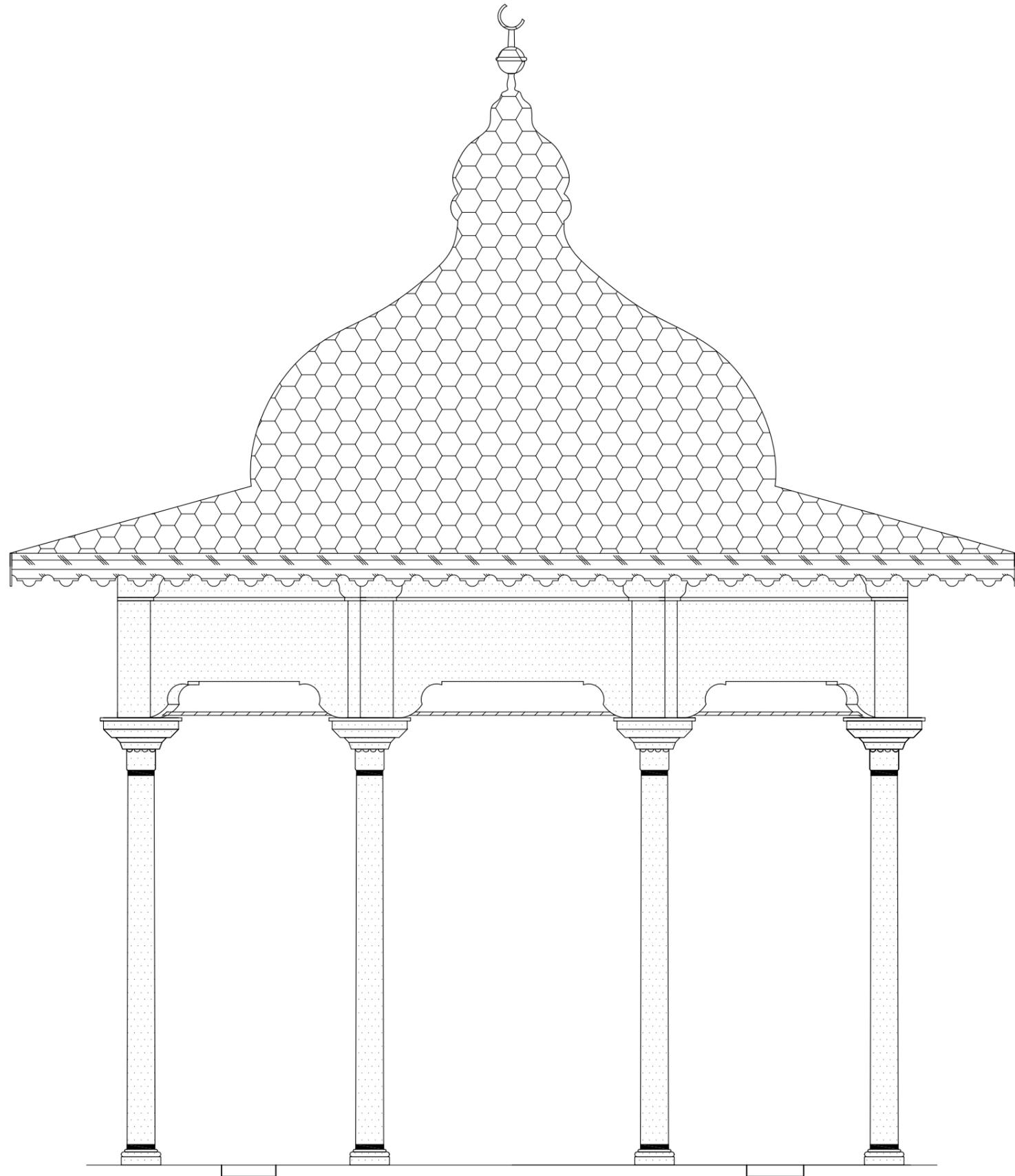
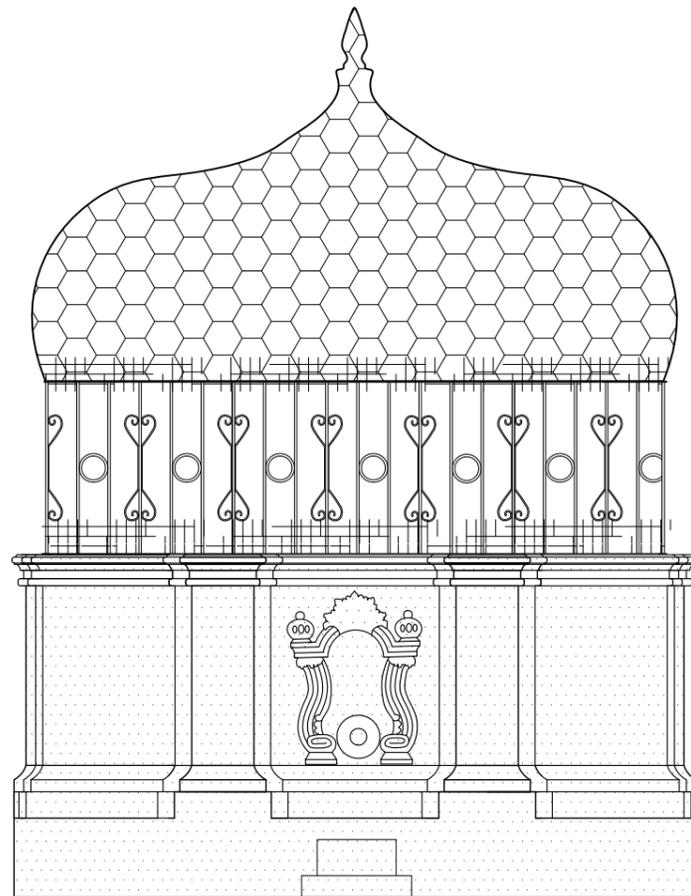
DATE:

03.7.2010

SHEET:

TITLE:

MATERIALS



MARBLE



WOOD



COPPER



ZINC



IRON



STEEL

MATERIALS

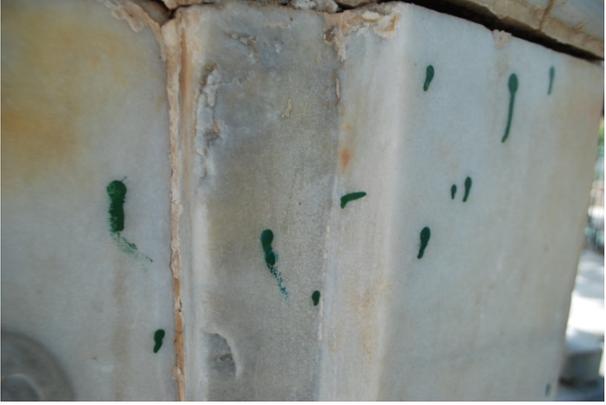
GLOSSARY OF PATHOLOGIES

Damage	Definition	Image
Unstable wood elements	Cantilevered wood roof frame unstable at areas, in danger of falling.	
Damaged wood frame	Cantilevered wood roof frame damaged by degradation. Wood splitting and paint chipped.	
Missing wood panels	Cantilevered wood roof missing panels of wood, exposing interior frame to elements and risk of birds nesting.	

<p>Disintegrated joints</p>	<p>Mortar between joints, primarily between cornice and base of interior well, nearly completely disintegrated.</p>	
<p>Rust</p>	<p>Remaining iron rusted, at joints with marble causing cracking of stone.</p>	
<p>Metal disintegration</p>	<p>Remaining iron interior cupola disintegrating and unstable due to extensive rust and degradation.</p>	

<p>Cracks</p>	<p>Marble exhibiting cracks throughout entire structure.</p>	
<p>Biological</p>	<p>Mold and moss growing in dark areas where water is present.</p>	
<p>Modern additions</p>	<p>Modern plumbing and light fixtures have been added to assist in functioning of structure. Concrete and silicones have been used in lieu of mortar at joints.</p>	

		
<p>Missing stone</p>	<p>Pieces of marble have been chipped and gone missing throughout the life of the structure.</p>	
<p>Coloring</p>	<p>Rust staining</p>	

<p>Coloring</p>	<p>Paint overspray</p>	
<p>Coloring</p>	<p>Biological staining</p>	
<p>Warping of metal roof material</p>	<p>Zinc roof tiles have warped throughout the life of the structure</p>	

PRIORITIZED TABLE OF PATHOLOGIES

#	Damage	Cause	Sum	Treatment
1	Unstable wood elements	Degradation	5%	Stabilized and replace as needed
2	Damaged wood frame	Missing panels	70%	Explore interior of frame to determine extent of damage, treatment TBD
3	Missing wood panels	Degradation	2%	Replace panels
4	Disintegrated joints	Modern interventions, degradation	5%	Remove existing pointing, replace with lime mortar
5	Rust	Environmental	5%	Clean rusted areas
6	Metal disintegration	Rust, degradation	2%	Disassemble affected pieces (interior cupola), intervention TBD based on damage
7	Cracks	Varies	3%	Clean areas. Fill utilizing lime mortar injection, or dutchwork.
8	Biological	Dark damp conditions	1%	Clean localized areas and regular preventative maintenance
9	Modern additions	Necessity of lighting, plumbing	5	Remove modern additions; assemble alternative solutions as noted in recommendations.
10	Missing stone	Varies	1%	Clean areas of foreign materials (concrete etc), repair using dutchwork. Certain areas require dismantling.
11	Coloring	Rust staining	1%	Clean localized areas
12	Coloring	Paint overspray	2%	Clean localized areas
13	Coloring	Biological staining	1%	Clean localized areas
14	Warping of metal roof material	Under frame disintegration/ varies	30%	Relative to needs of wood frame

PATHOLOGIES DIAGRAMMING



ALISON HORTIG

INTERNATIONAL CONSERVATION CENTRE
WEIZMAN I
OLD AKKO 24110
ISRAEL

SADIRVAN AL-JAZZAR

AKKO, ISRAEL

PROJECT NAME AND ADDRESS:

SADIRVAN AL-JAZZAR
AL-JAZZAR ST.
AKKO, ISRAEL

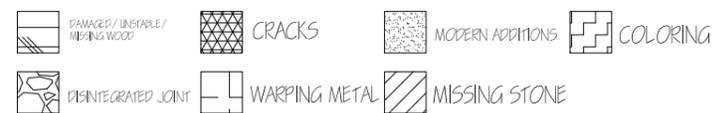
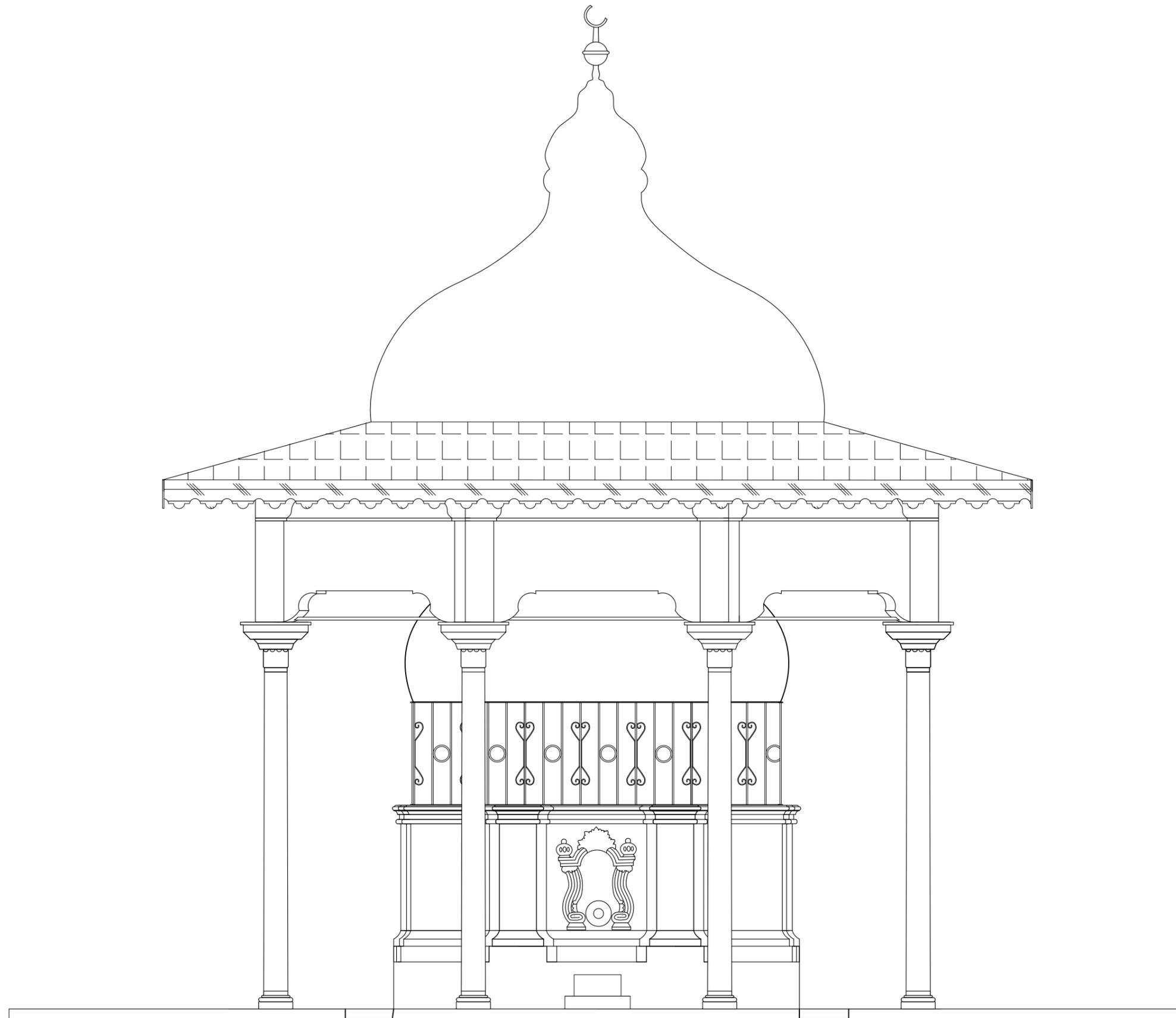
DATE:

03.7.2010

SHEET:

TITLE:

PATHOLOGIES

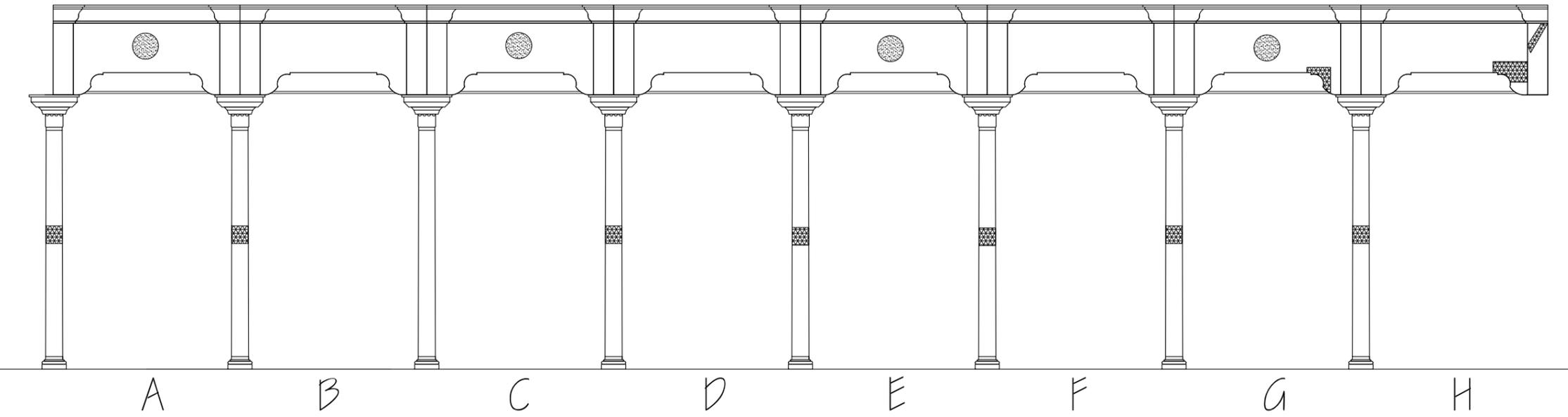


PATHOLOGIES

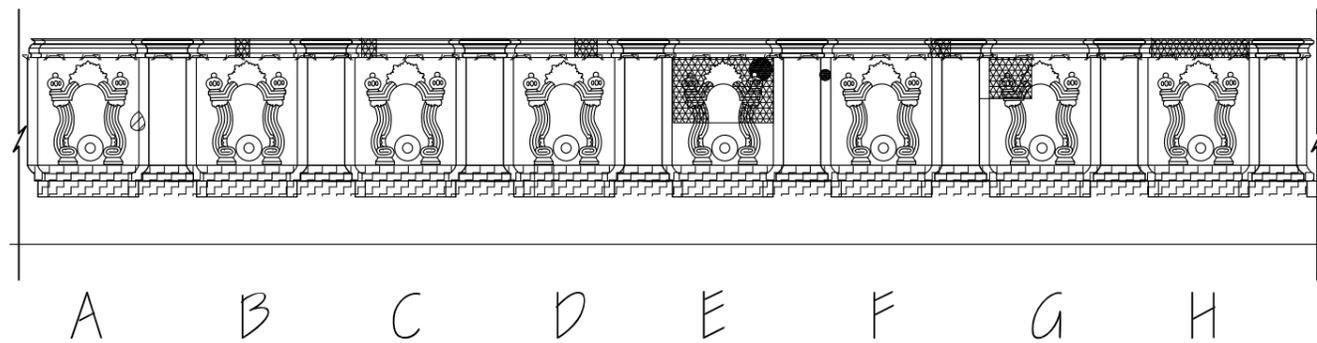


ALISON HORTIG

INTERNATIONAL CONSERVATION CENTRE
WEIZMAN 1
OLD AKKO 24110
ISRAEL



FLATTENED FACADE ELEVATION, EXTERIOR STRUCTURE



FLATTENED FACADE ELEVATION, INTERIOR STRUCTURE

SADIRVAN AL-JAZZAR

AKKO, ISRAEL

PROJECT NAME AND ADDRESS:

SADIRVAN AL-JAZZAR
AL-JAZZAR ST.
AKKO, ISRAEL

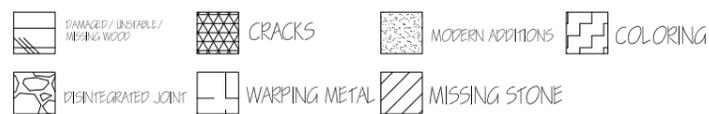
DATE:

03.7.2010

SHEET:

TITLE:

PATHOLOGIES



PATHOLOGIES

RECOMMENDATIONS

The şadırvan holds significance to both the Muslim communities of Israel as well as the tourism industry in Akko. It is recommended that pathologies be addressed by priority as stated in the previous chart.

- Regular maintenance should be performed, and more often for areas with limited sunlight to avoid further biological problems.
- Revert fixtures to supposed original form as indicated in the 1962 photograph.
- When painting, tarps and tape should be utilized to avoid splatter on structure.
- Lighting should be removed and placed outside the structure.
- Water hose (below) should be stored in alternative location



- Signage throughout the mosque is recommended to be posted in Arabic, Hebrew and English, describing significant structures and their history.



Existing signage indicating that shoes must be removed before entry to şadırvan area

BIBLIOGRAPHY

Dichter, Bernard. *Akko, Sites from the Turkish Period*. University of Haifa: Haifa. 2000.

Denny, Walter. *Influence of Water on the Art and Architecture of the Ottoman Empire*. Hamad Bin Khalifa Symposium on Islamic Art. Rivers of Paradise: Water in Islamic Art and Culture. <http://www.islamicartdoha.org/2007/speakers.html>. 2007.

Fauquir, Naser. *Water Management in Islam*. United Nations University Press: Tokyo. 2001.

Goodwin, Godfrey. *A History of Ottoman Architecture*. Thames and Hudson: London. 1971.

Hamadeh, Shirine. *Splash and Spectacle: The Obsession with Fountains in Eighteenth-Century Istanbul*. Muqarnas, Vol. 19, (2002), pp. 123-148

Kana'an, Ruba. *Two Ottoman Sabils in Jaffa (c. 1810-1815): an Architectural and Epigraphic Analysis*. Levant Vol 33, pp 189-204 (2001)

Lamei Mostafa, Saleh. *The Cairene Sabil: Form and Meaning*. Muqarnas VI: An Annual on Islamic Art and Architecture. 1989.

Makhtar, Ahmed. *Design Guidelines for Ablution Spaces in Mosques and Islamic Praying Facilities*. The American University of Sharjah.

Petersen, Andrew. *A Gazeteer of Buildings in Muslim Palestine (Part 1)*. Oxford: Oxford University Press, 2001, pp 73-76.

Sasson, Avi. *Water for the Sojourner – Introduction to the History and the Typology of Sabils (Water Fountains) in the Land of Israel in the Late Ottoman Period*. Cura Aqarum in Israel, pp. 113-25, 2001.

The Encyclopaedia of Islam: 9. Leiden: Brill. 1997.

Walls, Archie. *Ottoman Restorations to the Sabil and to the Madrasa of Qaytbay in Jerusalem*. In Muqarnas X: An Annual on Islamic Art and Architecture. Margaret B. Sevcenko (ed.). Leiden: E.J. Brill. 1993.

PHOTO CREDITS

1. American Colony Archives. *Library of Congress*.
2. Photographer unknown. *Gustaf-Dalman-Institut*. 1910
3. Photographer unknown. *Acre I Archive*.
4. Fritz Cohen. *State of Israel – National Photo Collection*. 1949
5. Fritz Cohen. *State of Israel – National Photo Collection*. 1960
6. Moshe Pridan. *State of Israel – National Photo collection*. 1962
7. Lonely Planet
8. Israel Antiquities Authority
9. Israel Ministry of Tourism
10. Historical Akko Photograph Archive of Shelley Peleg
11. Old Acre Development Company

All other photographs are the property of the author of this report.