Grant Number: SPK33014CA074
Grant Name: Restoration of Tombs of Sultan Ibrahim and Sultan Mohammad, Makli Date Range Covered: Date Submitted: 1 April 2015 to 30 June 2015 29 July 2015

Budget Category and Line Item		1.0		Spent										Total Spent				
	Current Approved Budget			Qu	1	Quarter 2			Quarter 3			Quarter 4			as of	Balance		
	Rate	Unit	#	Total	Rate	#	Total	Rate	#	Total	Rate	#	Total	Rate	#	Total	12/31/2014	
ERSONNEL					1		1000	nate		10101	note		10101			10101		
Personnel 1: Hon Project Director	0 m	onth	24	0.00	0.00	3	0.00	0.00	3	0.00	0.00	3	0.00				0.00	0.0
Personnel 2: Project Coordinator	750 m		24	18,000.00	500.00	3	1,500.00	500.00	3	1,500.00	600.00	3	1,800.00				4,800.00	13,200.0
Personnel 3: Senior Architect	525.00 m		24	12,600.00	566.67	3	1,700.01	600.00	3	1,800.00	496.67	3	1,490.00				4,990.01	7,609.9
Personnel 4: Field Monitoring	330.00 m		24	7,920.00	373.33	3	1,119.99	330.00	3	990.00	320.00	3	960.00				3,069.99	4,850.0
Personnel 5: Site Supervision																		
	500.00 m		24	12,000.00	330.00	3	990.00	500.00	3	1,500.00	500.00	3	1,500.00				3,990.00	8,010.0
Personnel 6: Procurement	225.00 m		24	5,400.00	235.11		705.33	250.00	3	750.00	250.00	3	750.00				2,205.33	3,194.6
Personnel 7: Site Works	250.00 m		24	6,000.00	250.00	3	750.00	250.00	3	750.00	250.00	3	750.00				2,250.00	3,750.0
Personnel 8: Field Coordination	264.00 m		24	6,336.00	239.11		717.33	250.00	3	750.00	293.00	3	880.00				2,347.33	3,988.6
Personnel 9: Accounts	160.00 m	onth	24	3,840.00	160.00	3	480.00	200.00	3	600.00	200.00	3	600.00				1,680.00	2,160.0
Total Personnel	3,004.00			72,096.00	2,654.22	3	7,962.66	2,880.00		8,640.00	2,909.67		8,730.00				25,332.66	46,763.3
RINGE BENEFITS																		
Fringe Benefit 1				0.00			0.00			0.00			0.00				0.00	0.0
Fringe Benefit 2				0.00			0.00			0.00			0.00				0.00	0.0
Fringe Benefit 3				0.00			0.00			0.00			0.00				0.00	0.0
Total Fringe Benefits				0.00			0.00			0.00			0.00				0.00	0.0
ravel																		
Travel 1: Documentation Centre	120.00 ea	ch	18	2,160.00	120.00	8	960.00	120.00	6	720.00	180.00	2	360.00				2,040.00	120.0
Travel 2: Hon Project Director	120.00 ea		21	2,520.00	120.00	4	480.00	120.00	5	600.00	160.00	3	480.00				1,560.00	960.0
Travel 3: Project Coordinator	170.00 ea		40	6,800.00	120.00	7	840.00	170.00	4	680.00	340.00	3	1,020.00				2,540.00	4,260.0
Travel 4: Monitoring	170.00 ea		24	4,080.00	170.00	3	510.00	170.00	3	510.00	170.00	2	340.00				1,360.00	2,720.0
Travel 5: Conservation Civil Engr.	450.00 ea		4	1,800.00	519.25	1	519.25	120.00	1	120.00	445.00	1	445.00				1,084.25	715.75
Travel 6: Evalluation Committee	450.00 ea	ich	6	2,700.00	330.00	1	330.00	407.80	2	815.60	70.00	1	70.00				1,215.60	1,484.40
Total Travel				20,060.00			3,639.25			3,445.60	1,365.00		2,715.00				9,799.85	10,260.15
Equipment																		
Equipment 1				0.00			0.00			0.00			0.00				0.00	0.00
Equipment 2				0.00			0.00			0.00			0.00				0.00	0.00
Equipment 3				0.00			0.00			0.00			0.00				0.00	0.00
Total Equipment				0.00			0.00			0.00			0.00				0.00	0.00
Supplies																		
Supply 1: Technical	Lot	Lot	1	6,500.00	224.48	1	224.48	386.10	1	386.10	160.00	1	160.00				770.58	5,729.42
Supply 2: Furniture	Lot	Lot	1	5,200.00	0.00		0.00	396.00	1	396.00	300.00	1	300.00				696.00	4,504.00
Supply 3: Site Teams	Lot	Lot	1	10,000.00	623.00	1	623.00	421.45	1	421.45	417.55	2	835.10				1,879.55	8,120.45
Supply 4: Workshop	Lot	Lot	1	8,000.00	664.00		664.00	106.15	_		280.00	1	280.00				1,050.15	6,949.85
									1	106.15								
Supply 5: General Office	300.00	month	24	7,200.00	188.87	3	566.61	307.66	3	922.98	268.66	3	805.99				2,295.58	4,904.42
Supply 6: Site supply bamboo etc	Lot	Lot	1	14,000.00	1,321.00	1	1,321.00	447.00	1	447.00	269.33	3	808.00				2,576.00	11,424.00
Supply 7: Site supply lime/grvel etc.	Lot	Lot	1	27,000.00	1,345.00	1	1,345.00	2,182.70	1	2,182.70	879.64	3	2,638.92				6,166.62	20,833.38
Supply 8: Sundry materials	Lot	Lot	1	31,500.00	3,546.61	1	3,546.61	2,497.80	1	2,497.80	880.94	3	2,642.82				8,687.23	22,812.77
Total Supplies				109,400.00			8,290.70			7,360.18	3,456.12		8,470.83				24,121.71	85,278.29
Contractual														110				
Contractual 1: Physical Survey	Lot	Lot	1	5,000.00	855.00	1	855.00	0.00	1	0.00			0.00				855.00	4,145.00
Contractual 2: Conservation Engr.	Lot	Lot	1	4,000.00	2,000.00	1	2,000.00	2,000.00	1	2,000.00			0.00				4,000.00	0.00
Contractual 3: Geotechnical study	Lot	Lot	1	3,000.00	1,750.00	1	1,750.00	1,800.00	1	1,800.00	0.00	1	0.00				3,550.00	-550.00
Contractual 4: Condition Survey	Lot	Lot	1	4,000.00	0.00	1	0.00	740.00	1	740.00							740.00	3,260.00
Contractural 5: Evaluaton	Lot	Lot	1	3,000.00	328.00	1	328.00	500.00	1	500.00	250.00	1	250.00				1,078.00	1,922.00
Contractual 6: Master Artisans	900.00	month		18,900.00	619.00	3	1,857.00	839.83	3	2,519.49	672.22	3	2,016.66				6,393.15	12,506.85
Total Contractual	500.00	month		37,900.00	015.00		6,790.00	033.03		7,559.49	922.22		2,266.66				16,616.15	21,283.85
Construction				37,300.00			0,750.00			1,555.45	322.22	Access to the	2,200.00				10,010.13	21,203.0.
	0.00			0.00			0.00			0.00			0.00				0.00	0.00
Construction 1 Construction 2	0.00			0.00			0.00			0.00			0.00				0.00	
	0.00			0.00			0.00			0.00			0.00				0.00	0.0
Construction 3	0.00			0.00			0.00			0.00			0.00				0.00	0.0
Total Construction				0.00			0.00			0.00			0.00				0.00	0.0
Other Direct Costs											100							
Other Direct Cost 1:Telephone etc.	120.00 m		24	2,880.00	224.00		672.00	154.96	3	464.88	122.77		368.30				1,505.18	1,374.8
Other Direct Cost 2:Utilities	300.00 m		24	7,200.00	285.00	3	855.00	120.50	3	361.50	387.17	3	1,161.50				2,378.00	4,822.0
Other Direct Cost 3:Site Laboiur	500.00 m	nonth	21	10,500.00	512.00	3	1,536.00	506.50	3	1,519.50	481.33	3	1,443.99				4,499.49	6,000.5
Total Other Direct Costs				20,580.00			3,063.00			2,345.88	991.27		2,973.79				8,382.67	12,197.3
Indirect Costs																		
X%	0.00			0.00			0.00			0.00			0.00				0.00	0.0
Total Indirect Costs				0.00			0.00			0.00			0.00				0.00	0.0
USG Total				260,036.00			29,745.61			29,351.15			25,156.28				84,253.04	175,782.9
Cost Share																		
Cost Share 1: Personnel	287.50 m	onth	24	6,900.00	287.50	3	862.50	300.00	3	900.00	300.00	3	900.00				2,662.50	4,237.
Cost Share 2: Travel	120.00 m		24	2,880.00	120.00		360.00	120.00	3	360.00	120.00	3	360.00				1,080.00	1,800.0
Cost Share 3: Computer etc	2,300.00 ld		1	2,300.00	2,300.00		2,300.00	0.00	1	0.00	0.00	1	0.00				2,300.00	0.0
Cost Share 4: Courier/Photocopy	3,600.00 ld		1	3,600.00	276.00		276.00	150.00	3	450.00	129.13	3	387.40				1,113.40	2,486.6
Cost Share 5: Rent & Security	500.00 m	nonth	24	12,000.00	500.00	3	1,500.00	540.00	3	1,620.00	541.30	3	1,623.90				4,743.90	7,256.1
<b>Total Grantee Cost Share Costs</b>				27,680.00			5,298.50			3,330.00	1,090.43		3,271.30				11,899.80	15,780.2



# US Ambassador's Fund for Cultural Preservation Tombs of Sultan Ibrahim & AmirSultan Muhammad at WHS Makli, Thatta

Progress Report No - 2015/004-1







### **April**, 2015

The month of April was dedicated for conservation of external masonry work of the tomb of Sultan Ibrahim. The teams working on masonry are well trained and are working under master artisans who have considerable experience in working on monuments in Makli.

The Field Teams have been provided clear instructions regarding the sequence of work and regarding the procedures to be followed in order to attain results of acceptable standard. The work that is carried out is also recorded every day in order to maintain details accounts of the work that is executed.

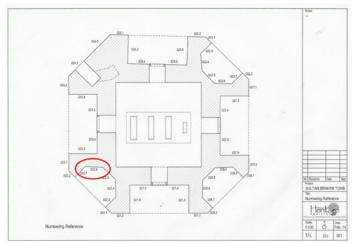
- As per the schedule of the pointing of historic bricks was completed on the external faces and alcoves of the Tomb of Sultan Ibrahim.
- The pointing for the stone platform was followed according to the schedule and completed from the South side of the platform, the work is in progress.
- Efforts have been made to produce quality of bricks of acceptable standards for use in the work of underpinning. Great care has been taken by making the bricks in batches that are fired in the local kiln that has been made functional. Only those bricks that are found to be of the required colour and texture are used in the work



During the underpinning process



After the completion of underpinning



Drawing marking the Underpinning of faces 22.6 & 22.7

Area before underpinning treatment



Underpinning of faces 22.6 & 22.7

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of underpinning. The work, although being carried out very carefully and therefore slowly is following the schedule that has been provided.

Thus the following milestones have been achieved:

- Up to middle of April, pointing of South and South-West external faces was completed, while the underpinning of the Southern and South-West Alcoves was also carried out.
- During the third week of April pointing of West and North-West faces was completed, at the same time underpinning of Southern and South-Western faces was also completed. Once the bricks had become available and the work of pointing was progressing well, it was decided to complete each wall including underpinning as much as possible.



Progress of pointing

• In the last week of April pointing of North and North-East faces was competed while underpinning of West, North-West, North and North-East faces was also completed.

It should be noted that as per the decision of the Consultative Committee, the work on glazed tiles is still not been touched. All possible care is being taken that the loose glazed tiles are provided protection and are not damaged in any way.

Due to the exposed condition of the monument and rising heat intensity, all possible care is being taken to ensure that curing of pointing as well as underpinning is carried out regularly. Gunny bags have been hung on areas where pointing is done and a person is dedicated to continue sprinkling water to keep the gunny bags damp and consequently dampness in lime pointing is maintained for seven days.

Work on stone flooring has also been undertaken and is progressing well. However, on examination it was found that the mortar has slight difference in colour. This matter is being reviewed to see what action should be taken.

The work of underpinning is being delineated by marking the extents of new work with coloured tapes. This is being done in order that visitors could identify the new work.



Pointing of historic bricks



Preparing the daily mix for pointing



Curing of mortar joints



Areas treated by underpinning

At the same time, marking on drawings of underpinning work is also being carried out. This is to maintain careful records of the work for any future assessment or review.

The interior of the tomb is not accessible to the general public in order to protect the interior elements from being damaged. All care is being taken to keep visitors away from scaffoldings etc. while the door to the roof is kept firmly locked in order to avoid any accidents.

After carrying out a study for carrying out the work on the dome and at roof level, a cable is being fixed in order to tie the harness to it to forestall any accidents. Further details have been worked out for the work on the dome. Due to high winds, the work at the roof level needs to be taken up very carefully.

It has been decided to undertake the challenging work on the dome after the completion of pointing and underpinning of exterior walls which are expected to be completed in the third week of May. This would allow experienced master artisans to undertake the work of underpinning and pointing on the dome.

Regular visits are being made by HF Karachi personnel for guiding and monitoring to ensure work according to laid down guidelines.

It is noted that since information about the monument has been placed in specially constructed signage pillars, many people are visiting and get their photographs taken alongside the information and signage pillars.



Pointing of historic bricks



Artisans treating the mortar joints by pointing

3 AFCP - Makli

### US Ambassador's Fund for Cultural Preservation Tombs of Sultan Ibrahim & AmirSultan Muhammad at WHS Makli, Thatta

Progress Report No - 2015/005-1







#### May, 2015

The focus on the external conservation works of the tomb of Sultan Ibrahim was continued through the month of May.

The field teams are well informed with instructions & sequence of tasks. The daily log of activities is kept by the Site Architect and Field-in-Charge, in the form of reports and pictures.

The following milestones have been achieved during the month of May.

- The pointing of historic bricks was completed in the previous month, however the decision was taken to complete the pointing of British era bricks also, and was completed in the month of May.
- Along with the pointing, underpinning of bricks was also started to fill the voids or overhangs of missing bricks. The sequence of work was started from the South Alcove, going around in a counter clockwise manner, with South-West, West, and North being completed in May. However, the bricks along the periphery of the Kashi tiles, were left for now, to be done carefully, under senior personnel supervision.
- During the third week of May, the Rain drains along the external facade of the Tomb were re-plastered. Along with the securing of Kashi Tiles with mud plaster. The open joints of Kashi tiles were protected with



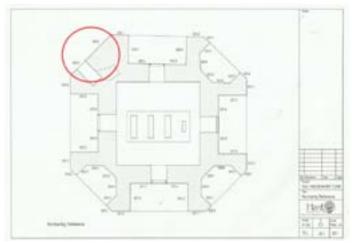
Area before underpinning treatment.



During the underpinning process.



After the completion of underpinning.



Drawing marking the Underpinning of faces 24.6 & 24.7.



Underpinning of faces 24.6 & 24.7.

mud plaster to avoid the loose tiles from falling off. The ratio of plaster used was 1:1 (Mud, Straw and work completed at the end of May
• In the last week of May, a cable harness was installed on the roof, to allow the artisans to work safely, as work was about to start on the roof and dome. During this last week, the pointing of the drum had begun. By the end of May, the pointing along the South side of the drum had been completed. The ratio used for plaster was 1:2:3 (pottery dust, sand, lime). Along with the pointing of the drum, the

loose bricks along the parapet of the roof were being fixed in place

with lime mortar.

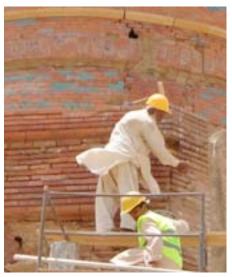
The sudden increase in the intensity of heat, extra care was taken to make sure that all procedures involving application of plasters and mortars are being carefully cured. Upon reviewing the colour difference of the stone flooring pointing, two new samples were applied under careful instructions during his visits by Ar. Ashfaq Ahmed. The decision regarding the suitability of the mortar will be made after the curing process is completed, on next visits by HF's Karachi office.

The progress of work is carefully being recorded, by keeping daily activity logs, along with before during and after pictures of all work. The area under work is carefully marked with coloured tape. Regular visits are being made by HF Karachi personnel for guiding and monitoring to ensure work according to laid down guidelines.

On the 16th of May, a cleaning event of the surrounding area was organized by the US Consulate by arranging to bring about 100 alumni. Children from local community also participated to whom refreshments and caps were handed out by the Consulate.



Pointing of historic bricks around the Kashi.



Pointing of exterior surfaces.



Artisans securing the Kashi tiles with mud mortar.



Plaster of drains.



Children collecting trash at WHS Makli.

## US Ambassador's Fund for Cultural Preservation Tombs of Sultan Ibrahim & AmirSultan Muhammad at WHS Makli, Thatta

Progress Report No - 2015/006-1







#### June, 2015

The month of June was progressive for the conservation as, along with the external masonry work of the tomb of Sultan Ibrahim the interior masonry work had also begun.

The following milestones have been achieved during the month of May.

- The critically sensitive areas requiring underpinning, such as the periphery of Kashi tiles and areas around the window frames were completed. Underpinning of the window frames on the West & North sides was completed in the first week.
- Underpinning of the Drum from West, North and East sides was completed in the second week of June. The ratio used for mortar is 1:2:3 (pottery dust, sand, lime). Also the underpinning of the area near the Kashi tiles was completed in the same week.
- During the third week of June, the bamboo scaffolding for the dome began construction from the North side. The scaffolding will go 16'-0" vertically, and then tapper to protect the top of the dome. The scaffolding is necessary to take every precaution while working on the Dome.
- · The bamboo scaffolding is designed as a cross, to allow for maximum possible access and support dur-



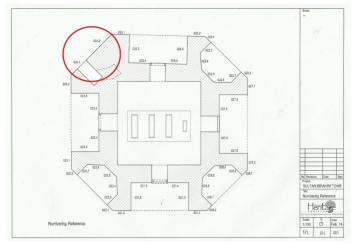
Area before underpinning treatment.



During the underpinning process.



After the completion of underpinning.



Drawing marking the Underpinning of faces in the stairwell.



Underpinning of faces in the stairwell.

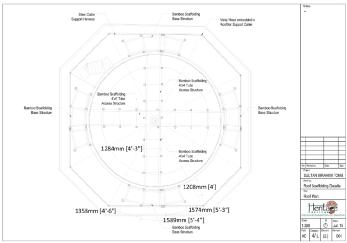
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ing the conservation work of the dome. Hence during the last week of June, the North-South stretch of the scaffolding was completed. The important point to consider is that the scaffolding The work on the interior started from the underpinning and pointing of mortar joints of the staircase area, leading to the roof. This was followed by the pointing of the interior West, North and East alcoves.

HF personnel, makes regular visits to the site, to provide the teams with proper guidelines and ensure work quality through monitoring visits.



Pointing of historic bricks.



Layout Plan for the Bamboo Scaffolding.



Pointing of the interior walls.



North-South Bamboo Scaffolding.



Pointing of mortar joints.



Areas treated by underpinning.