KNOPF & ASSOCIATES, INC.

Emailed 11/28/16

ROOFING CONSULTANTS

November 28, 2016

Town of Palm Beach Public Works Mr. Brett Madison 951 Old Okeechobee Road, Suite D West Palm Beach, FL 33401 bmadison@townofpalmbeach.com

Re: 2016 Roof Condition Evaluation Report

Bid #2016-27, Town of Palm Beach item #13

Par 3 Golf Course Maintenance Bldg., 2345 S. Ocean Blvd.

Dear Mr. Madison,

Pursuant to Bid No2016-27 I visited the above site on Wednesday November 22, 2016 to perform a review of the roof specifically and roof areas from the ground. The purpose of this inspection was to evaluate the current condition of the existing roof system, to verify if repairs or replacement is needed.

My inspection was performed in a visual non-destructive manner and my report is supported with captioned photos, site evaluation form and roof plan showing general locations of deficient items found.

My report is as follows:

The building is a long one story structure with moderately sloped wood trusses, plywood decking, a #30/90 organic felt membrane underlayment and a white paint topped, 9" cement shingle tile, "nailed-on". A search of the town permit records, found no record, so the actual age is unknown.

My walk around the building at ground level found the seamless gutter system heavily damaged, at the southeast corner and west end of the north side. Both areas suffer from equipment impact damage.

Access to the roof immediately noted loose and sliding tile on all four of the sloped sides, with the worst areas being the long south side. Closer examination found the tile to be "nailed-on" using what I will guess was an electro-plated pneumatic type gun nail, which is now in various stages of sever rust to total failure.

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Pg ~ 2 ~

Additionally there appears to have been 4-5 areas of various size repairs, to the south and west sides, an indicator of a roof failure in process. Within these repairs I noted fractured membrane, with some minor deck wood decay, along the south side eave, towards the west end (photo 12).

My real concern here is the large quantity of loose tile, which can become airborne missiles in a high wind event, posing a "life safety" risk to persons and property.

Conclusion

Given the present roof condition it is my opinion this roof needs to be replaced as soon as possible.

Recommendations:

- 1) The new tile system should be a #30/SBS Hot Asphalt applied Modified membrane, with the tile set in a large Pad of Polyfoam adhesive, to provide the best wind resistance values available today.
- 2) The new gutters should stop short of the two overhead doors, then be supplemented by installing sloped water diverters over each door, to direct the water to the gutters. This will prevent future impact damage, in the concrete ramp areas.

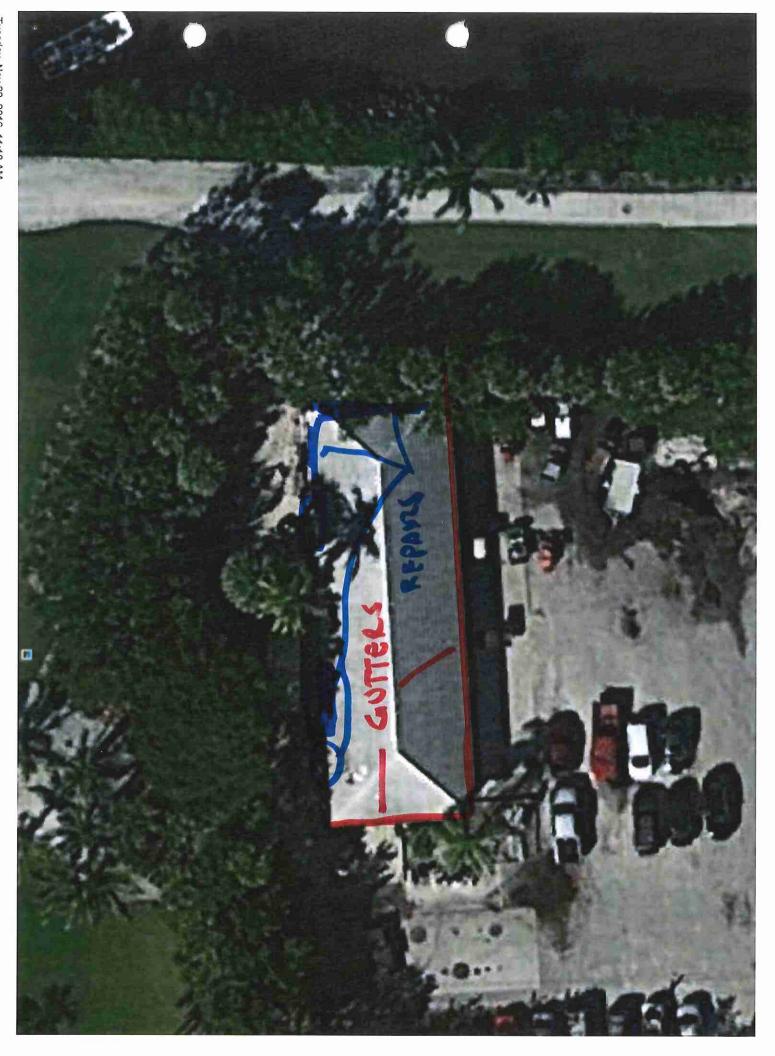
This concludes my report, should you have any questions or concerns, please feel free to contact me.

Respectibily,

Leslie G. Knopf, CPRC President 16-071

Enc:

1) Google Earth Roof View	1 pg.
2) Roof Maintenance Inspection Checklist Form	3 pgs.
3) Knopf Photos	5 pgs.



ROOFING CONSULTANTS

Roof Maintenance Inspection Checklist

General Roof Information			
Type of Roof: Flat Sloped	Par 3 Maintenance Bldg.		
Today's Date: 1 22 1 Date In	stalled: Date of Last Maintenance:		
Today's Date III	Stalled Date of Last Maintenance		
Reason for Inspection:			
Name of Inspector/ Maintenance	Personnel: UR ICHOPK		
Roofing Material	Composition		
nesting indexinal	Concrete		
	Engineered		
	Environmentally Friendly		
	Hot Mopped		
	Metal .		
	Slate Tile		
	Wood Shingles/Shakes		
	The second secon		
	Other:		
	·		
Physical, Visible Damage/	WOOD DECAY, LOOSE SCIDING TICE		
Structural Deformation	MULTIPES RESPONSE SCIOINE TICE		
Dirt, Rocks, Branches, Other	111211 00 100 100		
Debris on Roof			
Water Damage, Drainage,	Vec		
Gutter Problems -	234		
Additional Notes/ Roof Damage			
			
For Flat Roofs	Action: Comments/Notes		
能與地區情報及自然的有權利並	Repair/Replace		
Roof Surface:			
Good, Fair, Poor			
Coating: Good, Fair, Poor	- N/A -		
Deformations:			
Holes, Punctures, Cracks, Active			
Leaks, Visible Weathering			
Other Notable Problems			

For Sloped Roofs	Action: Repair/Replace	Comments/Notes
Roof Surface: Good, Fair Poor	REP LD CE	
Asphalt Shingle/Tile/Shake, Slate: Missing/Curled/Bent/Worn/ Cracked		·
Metal Roofs: Bent, Worn, Rusted, Corroded, Missing Panels Fasteners	RUETIES G	
Other Notable Problems		

Exterior Roofing		在上海特別及計算	是对对方的特殊的 医克里勒氏 医克里特氏征 医克里氏征 医克里特氏征 医克里特氏征 医克里特氏征 医克里特氏征 医克里特氏征 医克里特氏征 医克里特氏征 医克里特氏征 医克里特氏征 医克里氏征 医克里特氏征 医克里特氏征 医克里特氏征 医克里特氏征 医克里氏征 医克里特氏征 医克里氏征 医克里特氏征 医克里氏征 医克里氏征 医克里氏征 医克里氏征 医克克氏征 医克里氏征 医克里氏征 医克里氏征 医克里氏征 医克里特氏性原生性 医克里氏征 医克里氏征 医克里氏征 医克里氏征 医克里氏征 医克里氏征 医克里氏征 医克里氏征 医克里氏征 医克里特氏性原生性原生性原生性原生性原生性原生性原生性原生性原生性原生性原生性原生性原生性
Structural Component	Condition: Good, Fair, Poor	Repair/Replace	Comments/Notes
Chimneys			
Decking			Some Decay
Dormers	T.C:		
Drip Edges			DAMBGED, METTHG
Fascia `			OBCOYED
Gutters and Downspouts	#	×	OAM D G & O
Hips			4 11 11 11
Ridges			
Sheathing	, -11-,		
Skylights			

		*		
Soffit	*			
				T
Starter Strips				
Underlayment				* 1
Valleys				*
Vents				
Other Components			3	
Interior Roofing	SOLUTION AND		THE PERSON NAMED IN COLUMN	CALL CALLS A VANCOUR
Structural	Condition:	Repair/Replace	Comments/Notes	
Component	Good, Fair,			
·	Poor			
Ceiling Tiles				
Drywall				
Evidence of				
Leaks/Staining				
Insulation				
Rafters	,			
Roof Trusses				
Additional		<u> </u>		
Notes/Comments		1000		
				*
		t)		

#1 Front view



#2 Damaged gutter at overhead door, east side.



#3 Missing (deteriorated) copper eave drip south side, east end.



#4 Example of numerous areas where eave tile course is damaged and missing.



#5 Damaged gutter and down-spout, north side, west end.



#6 Example of "rusted" failing nails, for tile system.



#7 Tile row, which does not even cover previous tile row, nails.



#8 Example of loose sliding tile, throughout roof.



#9 Overview of similar sliding tile.



#10 Example of recent large repair area, at south side, east end of roof.



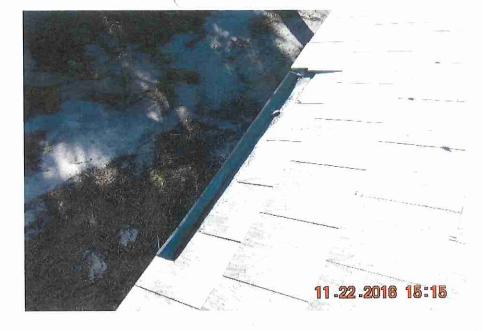
#11 Same caption as photo 10.



#12 Exposed organic membrane split open and wood decay beneath. (red circle)



#13 Water diverter above rear entry door.



#14 Long eave repair at west end.

