

KPOSTCOMPANY

2015 ROOF INSPECTION REPORT

Prepared for: Michael Conley
Fair Park and Community Services
3809 Grand
Dallas, TX 75210

Project Name: State Fair of Texas
Automobile Building
Dallas, TX 75210



Prepared By: Douglas D. Swisher **Email: doug.swisher@kpostcompany.com**

K POST Company: Emergency Pager: 1-888-250-7585 Cell: 214-893-8570 Office 972-910-8777 Fax: 972-910-8773

July 11, 2015

Dear Mr. Conley,

Thank you for giving KPost Company the opportunity to perform the 2015 Roof Inspection on this building. Our goal is to provide you and the State Fair of Texas with the best services in the roofing industry. Please do not hesitate to contact me on my direct office number 214-466-1203, on my cell phone at 214-893-8570 or by E-mail at doug.swisher@kpostcompany.com with any questions or concerns that you may have in reference to this report or about our company.

GENERAL OBSERVATIONS

The main roof section of this building is covered with a gravel surfaced felt and asphalt built up roof system that was installed over insulation on wood and metal roof decks. The tower roof sections of the building are covered with modified bitumen roof systems that were installed over insulation on wood and metal roof decks. Core samples were **NOT** taken during this inspection. The exact type and thickness of the roof insulation is unknown at this time. **We were not informed of any manufacturer's warranty coverage in effect on these roof systems.**

I was informed of and shown water leak areas at four (4) locations along the north perimeter of the main roof section of the building. Due to the fact that this roof is covered with gravel surfacing, only obvious deficiencies could be identified during this visual inspection. I was not able to identify any obvious deficiencies to be in need of repair at these leak areas. These leak areas will be addressed on a Time and Material basis.

We did observe several condition deficiencies within the existing roof system that are in need of repair and they are listed below.

The gravel surfaced felt and asphalt built up roof on the main roof section of this building is in overall poor condition and it appears to be approximately twenty (20) years old. With the completion of repairs to the observed deficiencies along with future periodic roof inspections and preventative maintenance repairs, this roof should continue to perform as designed for another two (2) to three (3) years excluding any damages from abuse or severe weather condition.

The modified bitumen roof on the tower roof sections of the building are in overall fair condition and they appear to be approximately twelve (12) years old. In order to have the roof systems continue to perform as designed, **care needs to be taken when personnel are on the roof to prevent damage to the roof membrane and flashings.** With the completion of repairs to the observed deficiencies along with future periodic roof inspections and preventative maintenance repairs, this roof should continue to perform as designed for another five (5) to seven (7) years excluding any damages from abuse or severe weather condition.

ROOF MAKE-UP SUMMARY

On July 10, 2015, a visual inspection of the roof systems on this building was performed.

Roof Area:	BUR-92,700 square feet (approximate). Modified bitumen-14,275 square feet (approximate).
Roof System Manufacturer:	Unknown
Age of Roof System:	BUR-Roof appears to be approximately twenty (20) years old (estimated 1995). Modified Bitumen-Roof appears to be approximately twelve (12) years old (estimated 2003).
Existing Roof Assembly:	Roof systems over insulation on wood and metal roof decks.
Existing Base Flashings:	Existing perimeter base flashings are a modified bitumen membrane that extends up the perimeter walls. There is a stone coping cap and or metal coping cap on top of the walls. Curbs are flashed with a modified bitumen membrane.
Method of Attachment:	Adhered.
Drainage:	Primary drainage is at roof drains and/or overflow drains or through wall scuppers along the roof perimeters.
Roof Condition/Estimated Life Expectancy:	Needs new roof: 0 years Poor: 0-2 years Fair: 2-5 years Good: 5-10 years Excellent: 10+ years

CONDITION DEFICIENCIES

OBSERVATIONS:

Immediate repairs

- Blisters in the roof membrane.
- Blistered base flashing membrane.
- Delaminated scupper flashing membrane.
- Delaminated lap in the base flashing membrane.
- Deteriorated and open flashing on stack penetrations.
- Delaminated and open stripping ply membrane on the expansion joint.
- Deteriorated and open sealant on support rain collars.
- Settled and separated fill material in pitch pocket.
- Deteriorated and open sealant on wall louvers.
- Loose/unattached cap on stack penetration.
- Debris left lying on the roof surface.

Preventative maintenance repairs

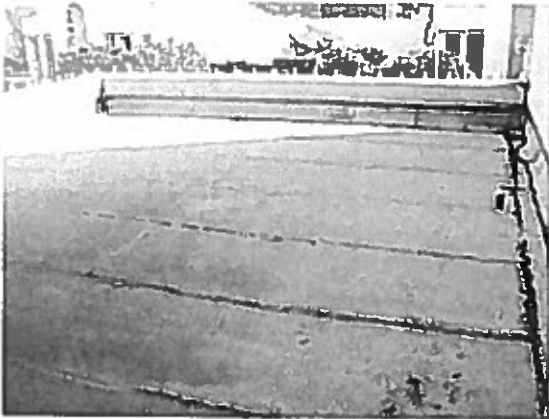
- Displaced gravel roof surfacing.
- Racked and wrinkled base flashing membrane.
- Cracked/open stucco wall covering.
- Loose/unattached access panels on the roof top equipment.
- Improper supports and protection pads under roof top units.
- Tree overhanging the roof.

CONDITION DEFICIENCY PHOTOS



OVERVIEW OF THE ROOF

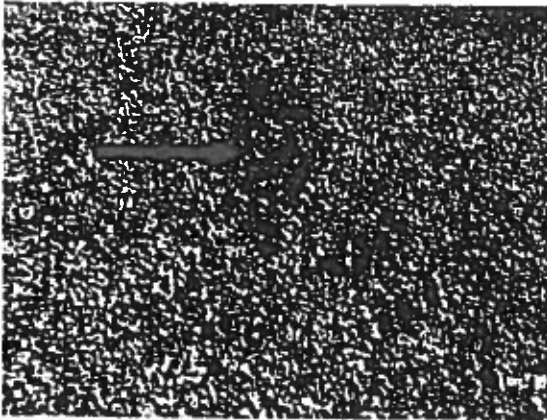
- Overview of the roof on this building.



OVERVIEW OF THE ROOF

- Overview of the roof on this building.

IMMEDIATE REPAIRS



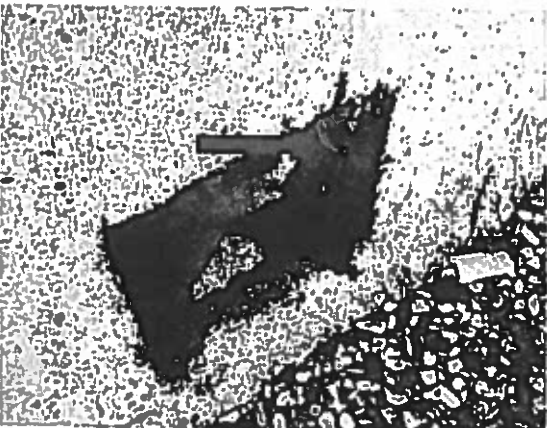
BLISTERS IN THE ROOF MEMBRANE

- Typical view of a blister at a seam in the roof membrane. This condition exists at four (4) locations on the roofs of this building.



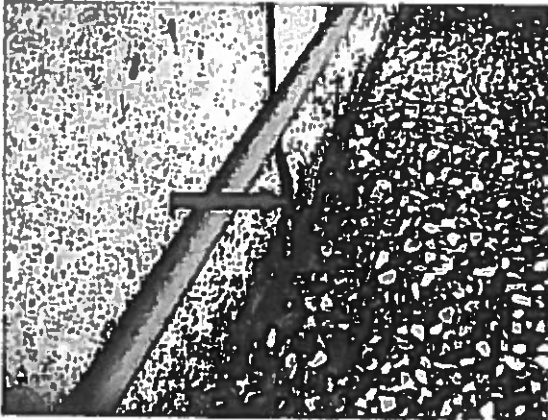
BLISTERED BASE FLASHING MEMBRANE

- Typical view of blistered base flashing membrane. This condition exists at four (4) locations on the roofs of this building.



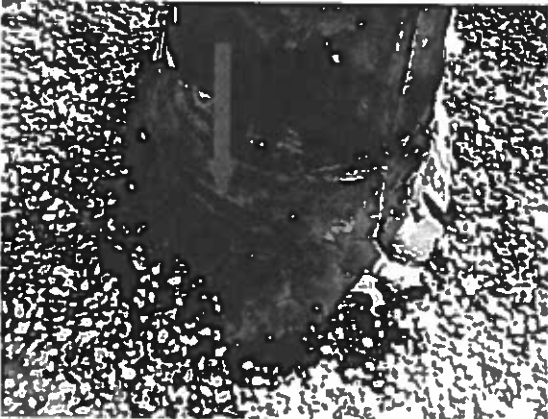
DELAMINATED SCUPPER FLASHING MEMBRANE

- View of delaminated and open flashing at a scupper. This condition exists at one (1) location on the roofs of this building.



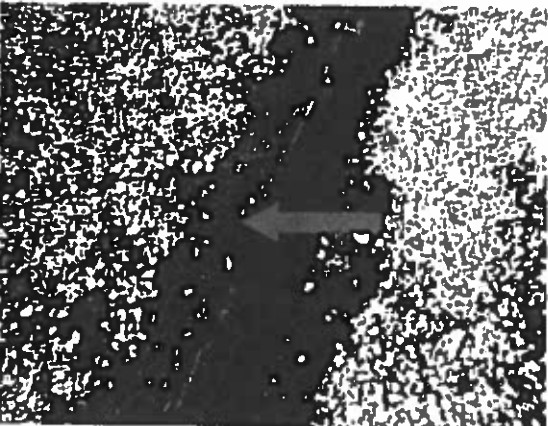
DELAMINATED LAP IN THE BASE FLASHING MEMBRANE

- Typical view of a delaminated and open lap in the base flashings. This condition exists at two (2) locations on the roofs of this building.



DELAMINATED STACK FLASHING

- Typical view of delaminated and open flashing on a stack penetration. This condition exists at three (3) locations on the roofs of this building.



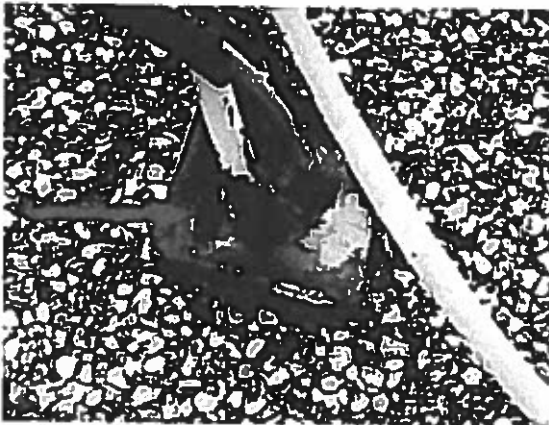
DELAMINATED STRIPPING PLY MEMBRANE

- View of delaminated and open stripping ply membrane on the expansion joint. This condition exists at one (1) location on the roofs of this building.



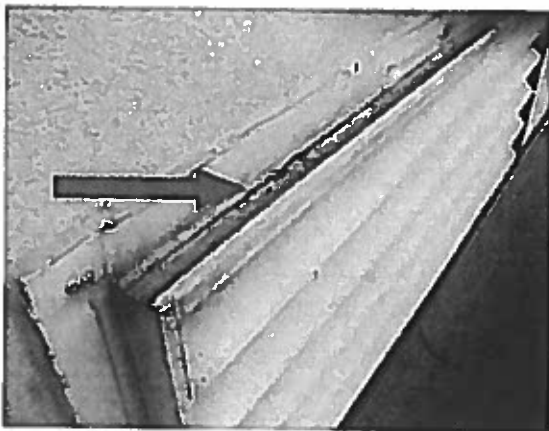
RAIN COLLAR SEALANT

- Typical view of deteriorated and open sealant on a rain collar. This condition exists at fourteen (14) locations on the roofs of this building.



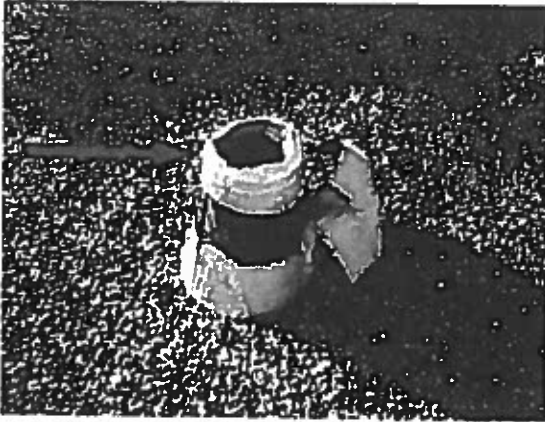
PITCH POCKET FILL

- View of separated and open sealant in a pitch pocket. This condition exists at one (1) location on the roofs of this building.



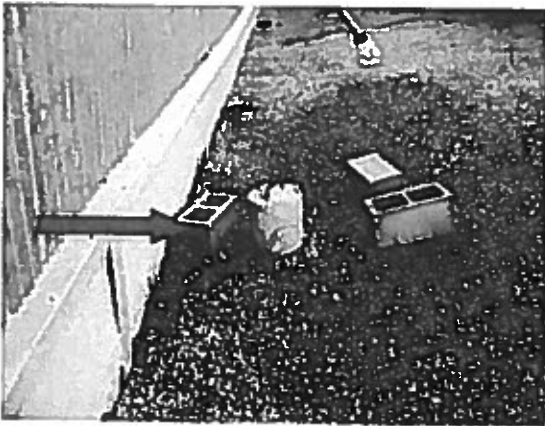
WALL LOUVERS

- Typical view of deteriorated and open sealant on a wall louver. This condition exists at six (6) locations on the roofs of this building.



STACK CAP

- View of a loose/unattached cap on a stack penetration. This condition exists at one (1) location on the roofs of this building.



DEBRIS

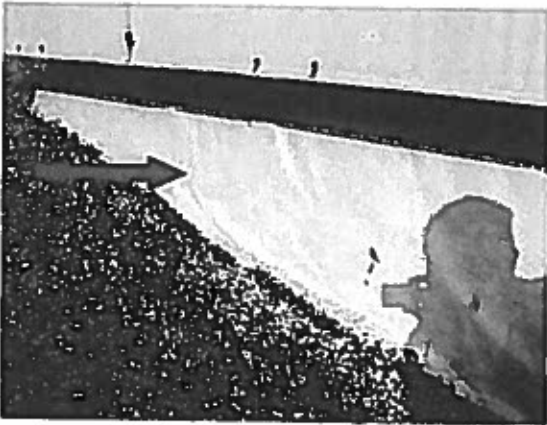
- Typical view of debris left lying on the roof surface. This condition exists at various locations across the roof surface.

PREVENTATIVE MAINTENANCE REPAIRS



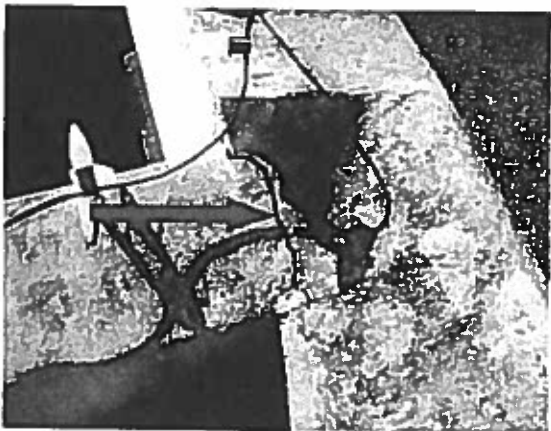
DISPLACED GRAVEL SURFACING

- Typical view of displaced gravel surfacing on the sloped sections of the main roof section. This has resulting in exposed roofing felts that will prematurely deteriorate. This condition exists to some degree across the main roof section of this building. **No repairs needed at this time. Continue to monitor this condition through periodic inspections.**



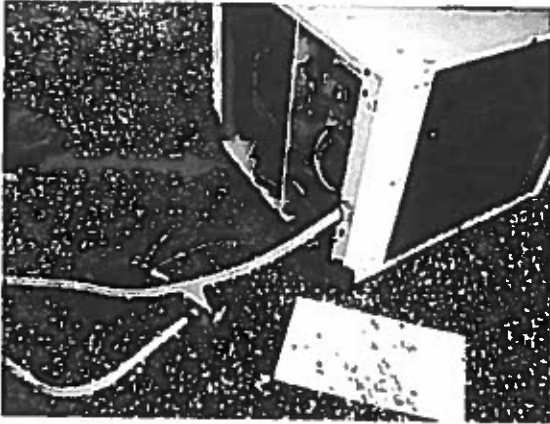
RACKED AND WRINKLED BASE FLASHING

- Typical view of racked and wrinkled base flashing membrane. This condition exists at seven (7) locations on the roofs of this building.



STUCCO WALL COVERING

- View of a crack in the stucco wall covering. This condition exists at one (1) location on the roofs of this building.



ROOF TOP EQUIPMENT PANELS

- Typical view of a loose/unattached access panel on the roof top equipment. This condition exists at one (1) location. We recommend that the appropriate contractor be contacted to address this condition.



IMPROPER EQUIPMENT SUPPORT

- Typical view of improper supports under the roof top equipment. This condition exists at two (2) locations on the roofs of this building. We recommend that the appropriate contractor be contacted to address this condition.



TREE OVERHANG

- View of a tree overhanging the roof surface. This condition exists at one (1) location. We recommend that the appropriate contractor be contacted to address this condition.

RECOMMENDATIONS

We recommend that the condition deficiencies listed and shown above be addressed in an effort to maintain and extend the serviceable life of this existing roof system.

The active water leak locations along the north perimeter of the main roof (BUR roof) will be addressed on a Time and Material basis.

We also recommend that periodic roof inspections be performed to identify any new condition deficiencies that may arise.

With the age and overall poor condition of the existing BUR roof system on the main roof section of this building, we do not feel that it would be in your best interest or cost effective to expend a large amount of capital to make large repairs to this roof. We recommend that budgeting be implemented to replace the roof system.

With the completion of minor roof repairs and through periodic roof inspections, this BUR roof system should continue to perform, as designed, for another two (2) to three (3) years, excluding damages resulting from physical abuse and from severe weather conditions.

Care needs to be taken when personnel are on the roof to prevent damage to the roof membrane and flashings.

REPAIR SCOPE OF WORK

Immediate repairs:

- Spud the gravel roof surfacing at areas where work is to be performed.
- Cut out the blistered roof membrane at one (1) location. Clean, prime and apply new modified bitumen roof membrane over the area. Total of approximately nine (9) square feet.
- Cut out the blistered base flashing membrane at four (4) locations. Clean, prime and apply new modified bitumen flashing membrane over the areas. Total of approximately twenty (20) lineal feet.
- Clean, prime and apply three course flashing materials and aluminum coating over one (1) delaminated and open scupper flashing.
- Clean, prime and apply three course flashing materials and aluminum coating over two (2) delaminated and open laps in the base flashing membrane.
- Remove the deteriorated and flashing from three (3) stack penetrations. Clean, prime and reflash the stack penetrations.
- Remove any loose/delaminated existing stripping ply membrane from the expansion joint. Clean, prime and overlay the expansion joint with new modified bitumen membrane.
- Remove the deteriorated and open sealant from fourteen (14) rain collars. Remove the rain collars from the supports. Clean, prime and apply three course liquid flashing materials to the prepared areas.
- Refill one (1) pitch pocket.
- Remove the deteriorated and open sealant from around six (6) wall louvers. Clean, prime and apply new sealant to the prepared areas.
- Furnish and install one (1) stack cap.
- Remove and dispose of the debris from the roof surface and from the roof drain strainers.

Preventative maintenance repairs:

- Remove the racked and wrinkled base flashing membrane from seven (7) locations. Clean, prime and apply new modified bitumen flashing membrane to the prepared areas. Total of approximately 175 lineal feet.
- Apply urethane sealant over one (1) crack in the stucco wall covering above roof level.
- Reattach one (1) loose access panel on the roof top equipment. We recommend that the appropriate contractor be contacted to address this condition.
- Once the two (2) existing roof top units are raised by others, install proper supports for the units. We recommend that the appropriate contractor be contacted to address this condition.
- Trim back the overhanging tree from the roof surface. We recommend that the appropriate contractor be contacted to address this condition.

It is not cost effective to address the large areas of gravel displacement on the main roof section. This deficiency will be addressed when the existing roof system is replaced.

RECOVER SCOPE OF WORK

The following recover scope of work for the BUR roof section (main) of the building is proposed contingent upon the building structure being sound and capable of supporting the recover roof system. Core samples will need to be taken before any recover activities. This is strictly a budget scope of work and pricing.

- Remove the gravel surfacing from the roof.
- Inspect and prepare existing membrane prior application of insulating concrete.
- Remove and dispose of all debris created during roofing operations.
- Remove the gravel surfacing from the roof.
- Over prepared existing membrane, install slope to drain light weight insulating concrete following thickness and slope design.
- Following adequate cure time for the light weight insulating concrete, (estimated 1-2 days), install fully adhered white Carlisle 45 mil Fleece Back TPO (total 100 mil thickness) using bead applied Carlisle Fast 100 installed in accordance with manufacturer's application recommendations.
- Provide and install new curb and wall flashings.
- Provide and install new penetration flashings.
- All detail work is to be per the manufacturer's printed installation procedures for the desired warranty.
- Furnish and install new prefinished metal coping cap.
- Furnish and install new galvanized metal counterflashings and divider wall caps.
- Manufacturer's fifteen (15) Year NDL (No Dollar Limit) warranty, covering both materials and workmanship.
- KPost two year (2) workmanship warranty

PRICING & SIGNATURE PAGE

Total price for <u>water leak (1) repair T&M not to exceed</u>	\$3,520.00+Tax
Total price for <u>immediate repairs</u>	\$6,050.00+Tax
Total price for <u>preventative maintenance repairs</u>	\$5,400.00+Tax
 Total BUDGET price for <u>recover roof system (Main roof section only)</u>	 \$1,075,000.00+Tax

Activity	2016	2017	2018	2019	2020
Roof repair-Immediate	\$4,500.00	\$4,800.00	\$5,100.00	\$5,400.00	\$5,700.00
Roof repair-PM	\$3,500.00	\$3,800.00	\$4,100.00	\$4,400.00	\$4,700.00
Roof replacement	N/A	N/A	\$1,075,000.00	N/A	N/A

Note: Due to volatile pricing in freight, lumber, steel and all roofing products, pricing on this document is good for 30 days. The expiration date of this proposal is 08/10/15. If approval is given to KPost Company on this pricing after the expiration date, pricing will be adjusted according to market pricing at that time and submitted as a change order to the contract. This pricing change order must be approved in writing before any material will be ordered.

This pricing specifically includes the following:

- Removal and disposal of all roof related debris generated from our work.
- All work to be completed per the manufacturer's specifications.
- One (1) year workmanship warranty on specific work performed.

This pricing specifically excludes the following:

- After-hours or weekends.
- Any mechanical, plumbing or electrical disconnect or reconnect.
- Any work other than items listed above.
- Any permits, bonds or taxes.
- Full roof/waterproofing warranty.

Note: Payment is due in full within thirty (30) days upon completion of work.

We at KPost Company appreciate the opportunity of furnishing this proposal to the City of Dallas. If awarded this contract, we will perform work in an expedient manner, with quality workmanship as our primary objective. Feel free to contact me on my direct office number 214-466-1203, on my cell 214-893-8570 or by E-mail at doug.swisher@kpostcompany.com if you have any questions.

Please indicate below whether this work will be performed under terms of a Sub Contract or on a Purchase Order. After our review and acceptance of this paperwork, the work will be able to commence.

Sincerely,

Douglas D. Swisher

Douglas D. Swisher
Senior Service Estimator
KPost Company

Signature/Accepted

Contract / Purchase Order Number