

# Roof Inspection Report

Prepared for:

Mr. Greg Boettger  
Bellevue Schools  
&  
Mr. Ralph Gladbach  
GP Architecture, LLC.

Prepared by:

Roofing Solutions, Inc.  
6728 W. 153<sup>rd</sup> Street  
Overland Park, KS 66223



## Project Location

Bellevue School Transport  
2824 Arboretum Drive  
Bellevue, NE 68005

**Facility:** Bellevue School Transport  
2824 Arboretum Drive  
Bellevue  
Nebraska  
68005  
U.S.A.



**Contact Name:** Greg Boettger

**Contact Telephone:** (402) 293-5066 Ext:



**Contact Fax:** ( ) -

**Date of Last Inspection:** Apr 05, 2017

**Type of building:** Office

**Type of Neighborhood:** Residential

## Roof Section List

Photo	Section / Name / Year Installed	Size / Height	Roof Type	Condition Index / *RCI / ASLR(Yrs)	Estimated Replacement Value
	Roof A A 2005	20,045 sq. ft. 24 ft.	Standing Seam Sheet Metal Roofing	Good 71 8(Yrs)	\$160,360.00
	Roof B B 2005	3,460 sq. ft. 16 ft.	Asphalt Shingles	Good 66 6(Yrs)	\$20,760.00
<b>23,505</b>					<b>\$181,120.00</b>
*RCI Rating 0 -100 where 100 is excellent					

## Recommendation Summary

Section ID	Budget Year	Activity Type	Action Item ?	Allocation	Urgency	Budget Amount
Roof A	2017	Repair	Yes	Expense	High	\$500
Roof B	2017	Repair	Yes	Expense	High	\$300
						<b>\$800</b>

**Expense Budgets - 5 Years**

<b>Section ID</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Roof A	\$500	\$0	\$0	\$0	\$0
Roof B	\$300	\$0	\$0	\$0	\$0
	<b>\$800</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**Total Budgets - 5 Years**

<b>Section ID</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Roof A	\$500	\$0	\$0	\$0	\$0
Roof B	\$300	\$0	\$0	\$0	\$0
	<b>\$800</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**Roof Name:** A**Roof Size:** 20,045 sq. ft.**Est. replacement Cost:** \$ 160,360.00**Existing System Type:** Standing Seam Sheet Metal Roofing**Year Installed:** 2005**Assessed Service Life Remaining (Years) :** 8**Height:** 24 Ft.**Slope:** 02:12**Interior Sensitivity:** Normal**Drainage:** Adequate**Currently Leaking?** No**History of Leaking?** Yes**Drainage and Leak Details:** The A roof areas slope to the north and drain to an external guttering.

Facility personnel reported past leak issues around the small raised roof area.





## Existing Roof System Construction

Layer Type	Description	Method Of Attachment
Insulation	Fiberglass	Laid - In -Place
Membrane	Metal	Mechanically Fastened

## Overall Core Condition

An under view of the structure revealed a layer of insulation on the underside of the roof system. The membrane is a metal roof panel with a mechanically crimped, standing seam.

## Core Photos

Photos	Date	Description
	Apr 05, 2017	Deck Underside
	Apr 05, 2017	Membrane

## Overall Roof Inspection Assessments

Date	Inspection Type	Inspecting Company	Inspector
Apr 05, 2017	Phase 1 Roof Inspection	Roofing Solutions, Inc.	Garry Hendrickson

Roof Section A refers to the metal roof system over the main building at the Bellevue School Transport facility. The roof is an approximately twelve (12) year old, metal roof panel with a mechanically crimped standing seam. The roof section includes the main roof area and two (2) lower roof areas. The roofs are single slope designs with closures used at the head wall and eave edges. The metal roof panels do not extend past the eave edges very far at various locations which could result in future leak issues.

Defects and conditions found during the inspection include the following:

- Coating repair attempts observed to metal flashing laps around the raised roof area & on cricket seams
- Missing metal edging flashings and closures on the raised roof area edges
- Improper pipe penetration flashings observed
- Loose attachment anchors in the rake edge and head wall flashings

Overall, the roof system is in good working condition. With the aforementioned defects addressed, in addition to routine maintenance and regular inspection, the roof system should remain effective for the duration of its assessed service life. There was no warranty information available for this roof section at the time of inspection.

**Recommendations Details**

<b>Budget Year</b>	<b>Activity Type</b>	<b>Action Item ?</b>	<b>Allocation</b>	<b>Urgency</b>	<b>Quotation \$</b>
2017	Repair	Yes	Expense	High	\$500
RSI recommends repairs be completed in accordance with the attached deficiency list.					
					<b>\$500</b>

**Roof Name:** B**Roof Size:** 3,460 sq. ft.**Est. replacement Cost:** \$ 20,760.00**Existing System Type:** Asphalt Shingles**Year Installed:** 2005**Assessed Service Life Remaining (Years) :** 6**Height:** 16 Ft.**Slope:** 06:12**Interior Sensitivity:** Normal**Drainage:** Adequate**Currently Leaking?** No**History of Leaking?** No**Drainage and Leak Details:** Roof Section B slopes to the eave edges and drains to an external guttering.

No recent leaks were reported on this roof section at the time of inspection.



## Existing Roof System Construction

Layer Type	Description	Method Of Attachment
Deck	Plywood	Nailed
Underlayment	Ice & water shield	Nailed
Membrane	Shingles	Nailed

## Overall Core Condition

No core cut was performed, roofing layers were determined at an eave edge view. There is a layer of ice & water shield and the membrane is a laminated, asphalt shingle.



## Core Photos

Photos	Date	Description
	Mar 22, 2017	Membrane

## Overall Roof Inspection Assessments

Date	Inspection Type	Inspecting Company	Inspector
Apr 05, 2017	Phase 1 Roof Inspection	Roofing Solutions, Inc.	Garry Hendrickson

Roof Section B refers to the steep sloped roof system over the wash building and the front canopy at the Bellevue School Transport facility. The roof is an approximately twelve (12) year old, laminated shingle. The roof is a gable design with a vented ridge detail.

Defects and conditions found during the inspection include the following:

- Accumulation of debris observed in the rear guttering
- The first row of shingles appears to be missing on the canopy roof area at the front of the main building
- The fan curbs have narrow metal flanges with no additional metal flashings present
- Missing starter rows of shingles on the wash building eave edges

Overall, the roof system is in good working condition. With the aforementioned defects addressed, in addition to routine maintenance and regular inspection, the roof system should remain effective for the duration of its assessed service life. There was no warranty information available for this roof section at the time of inspection.

## Recommendations Details

Budget Year	Activity Type	Action Item ?	Allocation	Urgency	Quotation \$
2017	Repair	Yes	Expense	High	\$300
RSI recommends repairs be completed in accordance with the attached deficiency list.					<b>\$300</b>

Photos and Deficiencies



<b>Defect Code:</b>	<b>24</b>	<b>Quantity:</b>	<b>Widespread</b>	<b>Priority:</b>	<b>Monitor</b>
Description: Evidence of past problem and previous repair.					
Repair: Investigate for chronic leak problems and repair any areas that are suspect.					



<b>Defect Code:</b>	<b>58</b>	<b>Quantity:</b>	<b>20 LF</b>	<b>Priority:</b>	<b>Monitor</b>
Description: Inadequate, incomplete, nonconforming membrane flashings or flashing details.					
Repair: Complete membrane flashing repairs in accordance with NRCA recommendations and good roofing practices. Follow manufacturer requirements on warranted systems.					



<b>Defect Code:</b>	<b>58</b>	<b>Quantity:</b>	<b>7</b>	<b>Priority:</b>	<b>Monitor</b>
Description: Inadequate, incomplete, nonconforming membrane flashings or flashing details.					
Repair: Complete membrane flashing repairs in accordance with NRCA recommendations and good roofing practices. Follow manufacturer requirements on warranted systems.					



<b>Defect Code:</b>	<b>75</b>	<b>Quantity:</b>	<b>Random</b>	<b>Priority:</b>	<b>First Year</b>
Description: Inadequate attachment of metal flashings.					
Repair: Reattach metal flashings a maximum of two EPDM washered fasteners per side of curb or attach a maximum of 12" O.C for flashings more than 24 " in length.					

Photos and Deficiencies



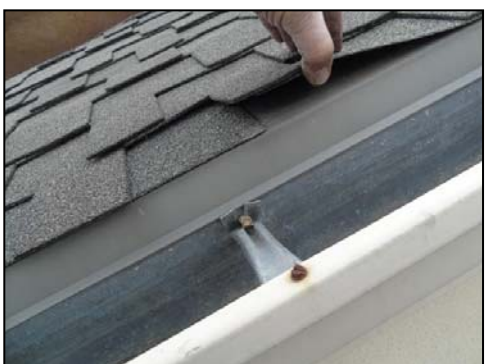
<b>Defect Code:</b>	<b>22</b>	<b>Quantity:</b>	<b>Widespread</b>	<b>Priority:</b>	<b>First Year</b>
Description: Debris, trash, construction materials, HVAC equipment, filters, motors, etc. on roof surface.					
Repair: Remove all trash and debris from roof. Clean and inspect surfaces and repair any damages to the membrane or flashings.					



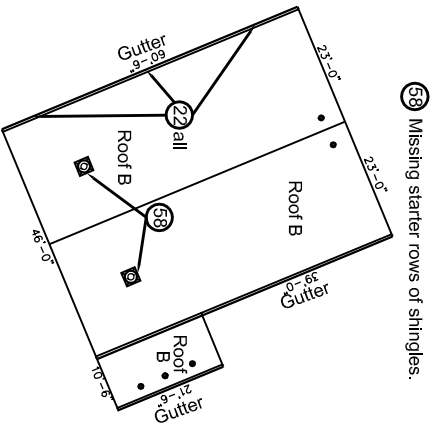
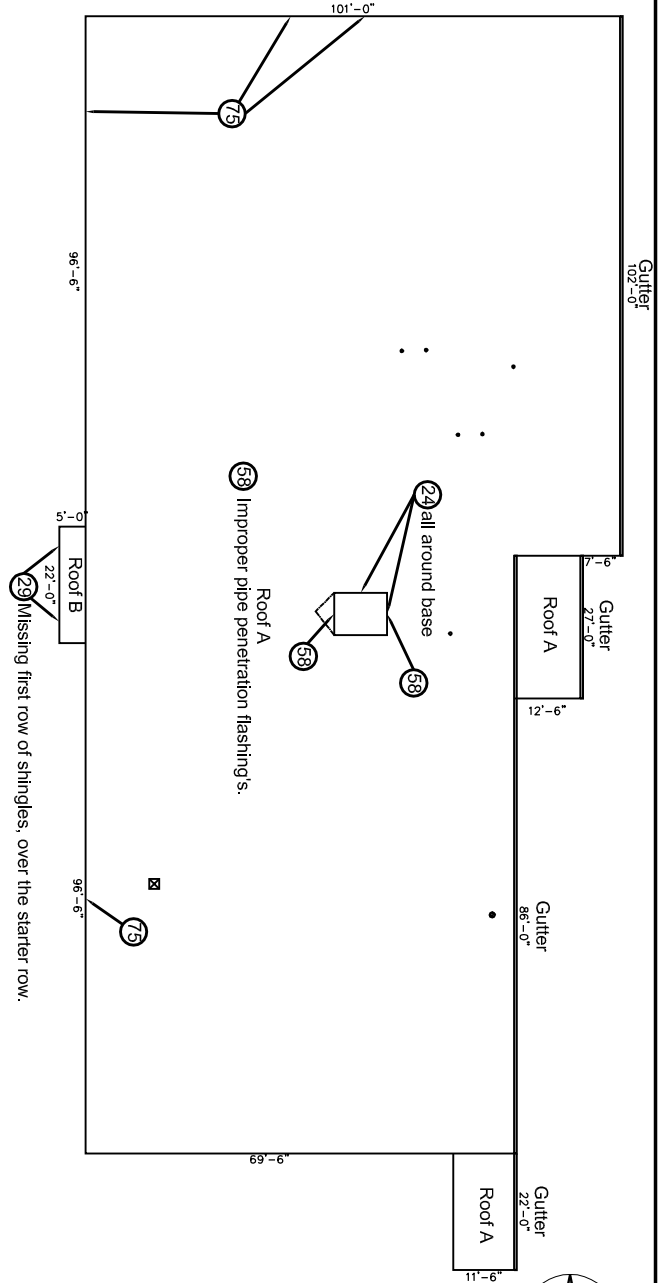
<b>Defect Code:</b>	<b>29</b>	<b>Quantity:</b>	<b>20 LF</b>	<b>Priority:</b>	<b>Monitor</b>
Description: Missing, loose, or broken shingles					
Repair: Remove all damaged shingles and replace all damaged and missing shingles with shingles of like kind and color.					



<b>Defect Code:</b>	<b>58</b>	<b>Quantity:</b>	<b>2</b>	<b>Priority:</b>	<b>Monitor</b>
Description: Inadequate, incomplete, nonconforming membrane flashings or flashing details.					
Repair: Complete membrane flashing repairs in accordance with NRCA recommendations and good roofing practices. Follow manufacturer requirements on warranted systems.					



<b>Defect Code:</b>	<b>58</b>	<b>Quantity:</b>	<b>100 LF</b>	<b>Priority:</b>	<b>Monitor</b>
Description: Inadequate, incomplete, nonconforming membrane flashings or flashing details.					
Repair: Complete membrane flashing repairs in accordance with NRCA recommendations and good roofing practices. Follow manufacturer requirements on warranted systems.					



**DRAWING LEGEND**

- DRAIN
  - OVERFLOW
  - SCUPPER
  - HVAC UNIT
  - CURB
  - SATELLITE
  - PITCH PAN
  - PIPE
  - FLUE
  - SLEEPER
  - SKYLIGHT
  - EXHAUST FAN
  - CONDENSER ON SLEEPERS
  - DEFECT NOTE
  - CONSTRUCTION NOTE
- N.L.C. NOT IN CONTRACT  
U.N.O. UNLESS NOTED OTHERWISE



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**Project Name:**

**Bellevue School Transport**

**Project Address:**

**2824 Arboretum Drive  
 Bellevue, NE 68005**

**Sheet Number:**  
**01 of 01**

**Date:**  
**04/05/2017**

**Drawn By:**  
 GH

**Project Number:**  
**17-7648**

**Sheet Title:**  
**A&B-Roof Plan**

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## Deficiency Legend

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Defect #	<b>FIELD MEMBRANE AND ROOF SURFACE</b>
1	Description: Deteriorated or missing sealant at counterflashing, termination bar, sealant lip, metal flashing, expansion joint, etc.
2	Description: Fishmouth in field or flashing seam.
3	Description: Open lap in field membrane.
4	Description: Dry lap edge.
5	Description: Buckling or ridging of membrane.
6	Description: Split in membrane.
7	Description: Wrinkle in membrane.
8	Description: Surface erosion.
9	Description: Membrane deterioration.
10	Description: Tented membrane at fastener.
11	Description: Blister in field membrane or flashing.
12	Description: Alligatoring of asphalt surfacing.
13	Description: Tar boils/blueberries.
14	Description: Displaced ballast.
15	Description: Ponding of water.
16	Description: Blocked drain, scupper, or downspout.
17	Description: Missing or damaged drain/scupper strainer
18	Description: Unadhered membrane or inadequate membrane attachment.
19	Description: Unadhered insulation or inadequate insulation attachment.
20	Description: Displaced insulation
21	Description: Loose walkway pad or deteriorated paver.
22	Description: Debris, trash, construction materials, HVAC equipment, filters, motors, etc. on roof surface.
23	Description: Physical damage to membrane including cuts, holes, tears, scrapes, scuffs, or abrasions.
24	Description: Evidence of past problem and previous repair.
25	Description: Membrane slippage
26	Description: Membrane shrinkage
27	Description: Missing or damaged membrane protection layer at sleeper, antenna, satellite sled, blocking, pipe stand, paver, etc.
28	Description: Reported leak location
29	Description: Missing, loose, or broken shingles
30	Description: Open or missing tile eave stop.
31	Description: Missing or open mortar joints at the ridge or hip.
32	Description: Broken or missing tile.
33	Description: Loose, displace, or unsecured tiles.

## Deficiency Legend

Defect #	FLASHINGS AND PENETRATIONS
40	Description: Low flashing height.
41	Description: Missing or inadequate flashing attachment.
42	Description: Loose or unadhered flashings.
43	Description: Weathered and deteriorated flashing
44	Description: Bridged flashing
45	Description: Open flashing lap
46	Description: Split in flashing
47	Description: Racked flashings
48	Description: Missing termination
49	Description: Missing counterflashing
50	Description: Missing pipe flashing.
51	Description: Leaking or damaged gutters/downspouts.
52	Description: Missing rain cap, rain collar, or hood.
53	Description: Open lead flashing.
54	Description: Fallen or loose backer rod.
55	Description: Deteriorated or shrunken pitch pan filler.
56	Description: Abandoned and obsolete equipment.
57	Description: Expansion joint deficiencies.
58	Description: Inadequate or nonconforming membrane flashing detail.
	<b>METALWORK AND MISCELLANEOUS</b>
70	Description: Open joint in metal flashing.
71	Description: Open or missing joint cover.
72	Description: Signage penetration not sealed properly.
73	Description: Improper sheet metal detail.
74	Description: Inadequate coverage of metal flange.
75	Description: Inadequate attachment of metal flashings.
76	Description: Inadequate transition flashings.
77	Description: Grease or other contaminants exhausted or vented onto roof surface.
78	Description: Leaking or damaged gutters/downspouts.
79	Description: Cracks in walls.
80	Description: Broken, plugged, or disconnected condensate line.
81	Description: Displaced antenna, sign, bracing, support, strap, etc.
82	Description: Open or deteriorated wall joint.
83	Description: Efflorescence.
84	Description: Deck deflection
85	Description: Vegetation growth.
86	Description: Corrosion or rust
87	Description: Mechanical defect
88	Description: Skylight defect/cracked/deteriorated
89	Description: Missing wall covering or cladding materials.

Bellevue School Transport\_Bellevue, NE  
Ph 1 Roof Inspection\_Roof A\_2017-04-05



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