

Roof Inspection Report

Prepared for:

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

Prepared by:

Roofing Solutions, Inc.
6728 W. 153rd Street
Overland Park, KS 66223



Project Location

Bellevue Welcome Center
2600 Arboretum Drive
Bellevue, NE 68005

Facility: Bellevue Welcome Center
2600 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 06, 2017

Type of building: Commercial

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 2002	44,392 sq. ft. 12 ft.	Asphalt Shingles	Fair 55 3(Yrs)	\$266,352.00
44,392					\$266,352.00
*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 A	2020	Replacement	Yes	Capital	Moderate	\$266,352
						\$266,852

Capital Budgets - 5 Years

Section ID	2017	2018	2019	2020	2021
Roof A	\$0	\$0	\$0	\$266,352	\$0
	\$0	\$0	\$0	\$266,352	\$0

Expense Budgets - 5 Years

Section ID	2017	2018	2019	2020	2021
Roof A	\$500	\$0	\$0	\$0	\$0
	\$500	\$0	\$0	\$0	\$0

Total Budgets - 5 Years

Section ID	2017	2018	2019	2020	2021
Roof A	\$500	\$0	\$0	\$266,352	\$0
	\$500	\$0	\$0	\$266,352	\$0

Roof Name: A**Roof Size:** 44,392 sq. ft.**Est. replacement Cost:** \$ 266,352.00**Existing System Type:** Asphalt Shingles**Year Installed:** 2002**Assessed Service Life Remaining (Years) :** 3**Height:** 12 Ft.**Slope:** 06:12**Interior Sensitivity:** Normal**Drainage:** Adequate**Currently Leaking?** No**History of Leaking?** No**Drainage and Leak Details:** Roof Section A 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	OSB Board	Nailed
Underlayment	Ice & water shield	Nailed
Membrane	Shingles	Nailed

Overall Core Condition

No core cut was performed. An under view of the structure revealed wood trusses with an OSB plywood decking and roofing layers were determined at an eave edge. There is one (1) layer of ice & water shield and the membrane is a laminated, asphalt shingle.

Core Photos

Photos	Date	Description
	Apr 06, 2017	Deck Underside
	Apr 06, 2017	Membrane

Overall Roof Inspection Assessments

Date	Inspection Type	Inspecting Company	Inspector
Apr 06, 2017	Phase 1 Roof Inspection	Roofing Solutions, Inc.	Garry Hendrickson

Roof Section A refers to the steep sloped roof system covering the Bellevue Welcome Center building. The roof is an approximately fifteen (15) year old, laminated, asphalt shingle. The roof is a hip design with valleys at the offset in the building and the valleys are flashed with a "W" style metal flashing. The roof has a vented ridge detail with wall vents on the ends of the dormer roofs and a narrow soffit vent. The building has a large skylight roof area at the center of the building, which is surrounded with the same type of laminated shingles as elsewhere.

Defects and conditions found during the inspection include the following:

- There is a ridged area in the roof system
- There are random split shingles
- Areas with surface loss of the granulated roof surfacing observed
- There are deteriorated spots on the shingles
- Numerous areas with exposed nail heads
- There are areas with damaged shingles
- One (1) lead pipe flashing is open on the top
- Missing tin shingle flashings observed at the rake edges of the raised areas
- One (1) loose gutter strap observed
- Tree limbs are extending onto an eave edge, need to be trimmed back
- Random areas with algae growth observed on the EIFS wall coverings
- Small cracks observed in the EIFS wall covering between the windows

Overall, the roof system is in fair working condition due to its age and the above referenced defects. 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, approximately three (3) years. 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	\$500

RSI recommends repairs be completed in accordance with the attached deficiency list.

2020	Replacement	Yes	Capital	Moderate	\$266,352
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RSI recommends a complete tear-off of existing roof system and the installation of a new twenty (20) year design life roof system. We further recommend the replacement of all perimeter coping cap and projection details per SMACNA Architectural Sheet Metal Manual.

\$266,852

Photos and Deficiencies



Defect Code:	5	Quantity:	40 LF	Priority:	Monitor
Description: Buckling or ridging of membrane.					
Repair: Cut out deteriorated buckles and ridges and repair membrane with similar membrane material. Extend repair material a minimum of 6" in all directions past repair areas.					



Defect Code:	6	Quantity:	Random	Priority:	Monitor
Description: Split in membrane.					
Repair: Cut out splits and repair membrane with similar membrane material. Extend repair material a minimum of 6" in all directions past repair areas.					



Defect Code:	8	Quantity:	Random	Priority:	Monitor
Description: Surface erosion.					
Repair: Prepare membrane surface by thoroughly cleaning and priming. Apply new surfacing of like materials to eroded areas. On gravel surfaced systems apply gravel in hot asphalt or recommended cold adhesive. Apply granulated fiberglass cap sheet or modified bitumen membrane on like systems. Apply coating system on smooth asphalt surfaces. Transition surfacing to provide for a smooth and neat finished appearance to match the existing surfacing.					



Defect Code:	9	Quantity:	Random	Priority:	Monitor
Description: Membrane deterioration.					
Repair: Replace all deteriorated membrane with new membrane of similar type, gauge, and plies.					

Photos and Deficiencies



Defect Code:	10	Quantity:	Widespread	Priority:	Monitor
Description: Tented membrane at fastener.					
Repair: Remove fasteners that are loose or not flush with the substrate. Remove underlying substrate materials including insulation and coverboard and replace with matching materials of similar thicknesses to provide for a smooth flush surface.. Install new fasteners and plates per manufacturer's recommendations for system type and apply new membrane repair materials of similar type, gauge, and plies as existing roof system.					



Defect Code:	23	Quantity:	Random	Priority:	Monitor
Description: Physical damage to membrane including cuts, holes, tears, scrapes, scuffs, or abrasions.					
Repair: Apply repair membrane over damaged area, extending repair material a minimum 6" past damage.					



Defect Code:	53	Quantity:	1	Priority:	First Year
Description: Open lead flashing.					
Repair: Provide extension lead and turn into pipe. Counterflash top of short lead with extension a minimum of 3".					



Defect Code:	58	Quantity:	Widespread	Priority:	Monitor
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.					

Photos and Deficiencies



Defect Code:	75	Quantity:	1	Priority:	First Year
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.					



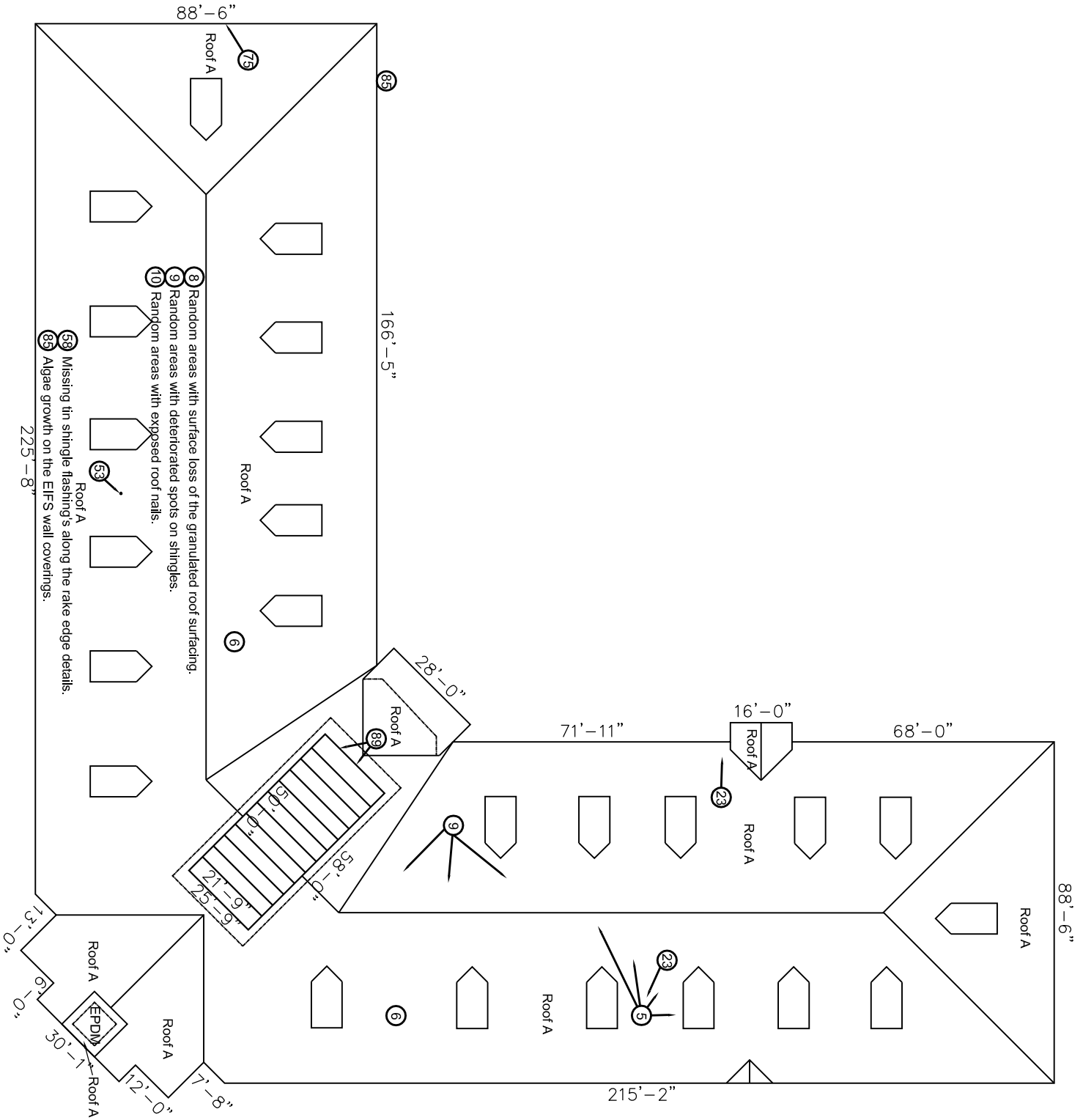
Defect Code:	85	Quantity:	1	Priority:	First Year
Description: Vegetation growth.					
Repair: Remove vegetative growth including all roots and organic matter. Remove all affected roofing and replace with like materials.					



Defect Code:	85	Quantity:	Random	Priority:	Monitor
Description: Vegetation growth.					
Repair: Remove vegetative growth including all roots and organic matter. Remove all affected roofing and replace with like materials.					



Defect Code:	89	Quantity:	Random	Priority:	First Year
Description: Missing wall covering/cladding.					
Repair: Replace cladding/wall covering with matching materials and methods. Reattach and reseal all joints, seams, laps, etc.					



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Project Name:

Bellevue Welcome Center

Project Address:

2600 Arboretum Drive
Bellevue, NE 68005

Sheet Number:
01 of 01

Date:
04/06/2017

Drawn By:
 GH

Project Number:
17-7652

Sheet Title:
A-Roof Plan

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

Deficiency Legend

Defect #	FIELD MEMBRANE AND ROOF SURFACE
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.
	METALWORK AND MISCELLANEOUS
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.

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Ph 1 Roof Inspection_2017-04-06



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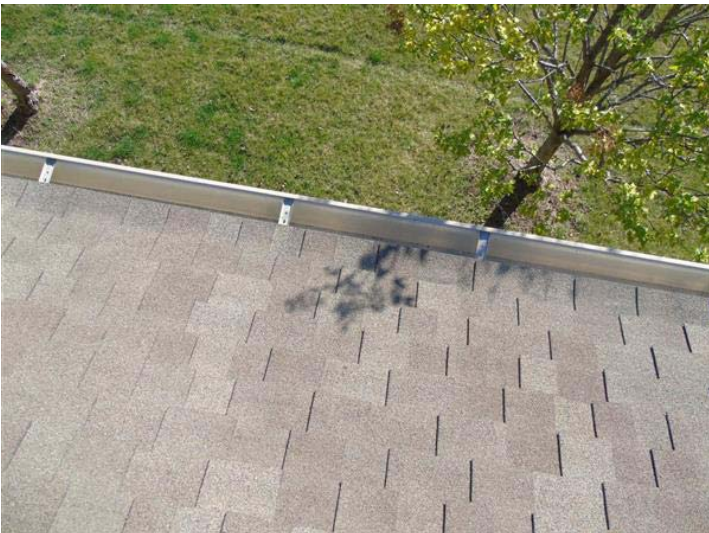
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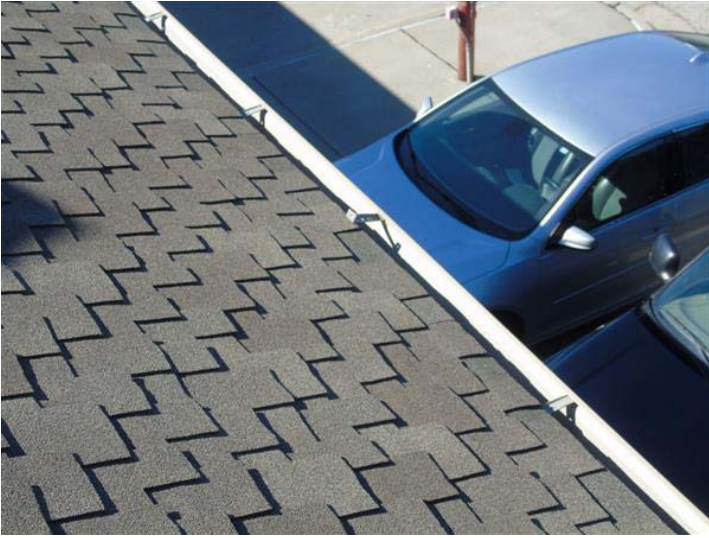
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