Roofs: The Good, The Bad, & The Ugly
BE101
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Course

Information, discussion and updates related to roof warranties, guarantees, management systems to track roof condition, costs of repair and replacement, maintenance and inspection equipment, and long term performance of roofing systems associated with design, construction or maintenance issues.
Learning

At the end of this course, participants will be able to:

• Learning Objective 1: Understand roofing warranties and guarantees, their limitations, and owner responsibilities.

• Learning Objectives 2: Learn the advantages and disadvantages of asset management systems that track roofing assemblies.

• Learning Objectives 3: Understand the methods available to building owners that will assist in improved roofing maintenance.

• Learning Objectives 4: Understand the design, construction and maintenance issues that can affect long-term roof performance.
ROOFS: THE GOOD, THE BAD, & THE UGLY
You are getting that new roof installed
The buildings are operational
You may have even decided to modify the building to improve roof slope
Or just want to give the building a new look
THE JOB IS DONE, BUILDINGS ARE TURNED OVER, AND OWNERS ARE LEAK FREE FOR THE NEXT 20, 30 YEARS. RIGHT?
SINGLE SOURCE I
20-YEAR ROOF SYSTEM WARRANTY

Project Name ___________________________ Panel Profile ___________________________
Project Location (City, State, Zip) ______________ Date of Substantial Completion _______
Amount of Material (square feet) ____________
Building Owner ___________________________ Manufacturer Customer ____________________
Manufacturer Job/Work Order Number(s) _______ Project End Use ________________________

For a period of twenty (20) years from the date of substantial completion, MBCI, a division of NCI Group, Inc. (hereinafter referred to as "Manufacturer") warrants to the Building Owner ("Owner") that the Manufacturer furnished or installed, and has maintained in accordance with the Manufacturer's instructions, the Roof System to be free of all defects in materials and workmanship. The term of the warranty shall commence on the date of substantial completion and shall terminate on the twentieth (20th) anniversary of the date of substantial completion.

MANUFACTURER LIABILITY
The term liability of Manufacturer under this warranty is limited to $7.00 per square foot of roofing material, and Manufacturer shall have the option to cure the liability account all reasonable expenses (including, but not limited to, investigation expenses) incurred in satisfying the requirements of this warranty.

TERMS, CONDITIONS, LIMITATIONS
1. Owner shall provide Manufacturer with written notice within thirty (30) days of the discovery of any defects. Manufacturer shall have the option to cure the liability account all reasonable expenses (including, but not limited to, investigation expenses) incurred in satisfying the requirements of this warranty.
2. Manufacturer shall not have any liability or responsibility if any of the following occur:
   a. Defects caused by misuse (subsequent) or failure to maintain or repair the Roof System.
   b. Defects caused by natural disaster, acts of God, or human intervention.
   c. Defects caused by improper installation, maintenance, or repair of the Roof System.
   d. Defects caused by exposure to chemicals, pollutants, or other substances.
   e. Defects caused by normal wear and tear.
   f. Defects caused by failure to provide adequate maintenance.
   g. Defects caused by failure to use proper installation techniques.
   h. Defects caused by failure to maintain the Roof System.

3. During the term of this Warranty, Manufacturer, its sales representatives and employees shall have free access to the roof during regular business hours.

4. This Warranty is subject to the terms and conditions set forth in the Manufacturer's "Roof Owners' Maintenance Manual," which is provided with the Roof System.

5. This Warranty is non-transferable.

6. This Warranty is void if the Roof System is not properly maintained by the Owner.

7. This Warranty is void if the Roof System is not properly installed by the Manufacturer.

8. This Warranty is void if the Roof System is not properly maintained by the Manufacturer.

9. This Warranty is void if the Roof System is not properly installed by the Manufacturer.

10. This Warranty is void if the Roof System is not properly maintained by the Owner.

11. This Warranty is void if the Roof System is not properly installed by the Manufacturer.

12. This Warranty is void if the Roof System is not properly maintained by the Owner.
What you need to know about these guarantees

First, guarantees limit the manufacturer’s exposure if something goes wrong with the roof.
One paragraph, three sentences, two limitations of liability/responsibility; and it can cost you money.

“Owner shall provide Manufacturer with written notice within thirty (30) days of the discovery of any leak(s) in the Roofing System. Failure of the Owner to do so shall automatically relieve Manufacturer of any and all responsibility and/or liability under this Warranty. If upon Manufacturer’s investigation, Manufacturer determines that the leaks in the Roofing System are not covered in this warranty, the party requesting Manufacturer’s investigation shall be liable for all direct investigation expenses incurred by Manufacturer.”
Another Guarantee Example

Under General Provisions:

“The original installation of the roofing membrane must be free of errors, omissions, or poor workmanship by the roofing contractor...”
What you need to know about these guarantees

Second, Owners are part of the guarantee process
You, the owner, can void the guarantee if you fail to do periodic maintenance.

“This guarantee is not a maintenance agreement or an insurance policy. Therefore, routine inspections and maintenance are the Building Owner’s responsibility... Failure to follow the Maintenance Program on the reverse side of this document will void the Guarantee...”
Solutions to protect against “guarantee failures”

1. Periodic maintenance program
2. Know the Guarantee Terms and Conditions
3. System to “protect” rights
4. Develop a Management/Tracking System
   1. Controlled access
   2. Coordination of other trades
   3. Track Guarantee issues/resolutions
Roof database systems

1. Commercial products
   a. Roofer
   b. Roofpro
2. Manufacturer’s propriety program
3. In-house tracking system
Database issues

1. Who is the keeper of the database?
   a. Building Owner?
   b. Contractor?
   c. Engineer/Consultant?

2. How will it be updated?
   a. In-house personnel?
   b. Manufacturer?
   c. Outside consultants?

3. Which database to use?
   a. Will it interface with job order software?
   b. What information do you want to track?

4. Money/dinero/scratch
Why roofs fail prematurely

• Out of sight, out of mind
• Poor installation
• Improper repairs
• Wrong roof for the building
• Poor design
• God
POP QUIZ
“The Enemy”
“The Target”
“Strategic Defense Initiative”
“Defeat”
And then there’s God!!
This is what you get when the client wants bids 24 hours after the blow-off.

<table>
<thead>
<tr>
<th>1. Bids Due CEB 6/24/11; 3:00PM</th>
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<tbody>
<tr>
<td>2. Use DOPS documents—Provided by H. Mitchell</td>
</tr>
<tr>
<td>3. GC/SC Provision 1 Docs from Chapel Hill MS Roof</td>
</tr>
<tr>
<td>4. USE YOUR PROPOSAL FORM</td>
</tr>
<tr>
<td>5. BASE PIP</td>
</tr>
<tr>
<td>a. 2 Blow-off Areas + Elevator Shaft</td>
</tr>
<tr>
<td>b. Do not include removals—BH Roof to accomplish</td>
</tr>
<tr>
<td>c. General conditions for OUR application</td>
</tr>
<tr>
<td>d. 1/2&quot;/ft. tapered system</td>
</tr>
<tr>
<td>e. Track: 2 ply SBS or APP (Top sheet is with granules; Center: one ply granule + one granule)</td>
</tr>
<tr>
<td>f. Lift back route w/ 24&quot;x24&quot; flange cut-in mat</td>
</tr>
<tr>
<td>g. 24 sq. GS w/ solded joint (welded) permanent ready</td>
</tr>
<tr>
<td>h. ELEVATOR</td>
</tr>
<tr>
<td>i. Remove LP system; turn over to County</td>
</tr>
<tr>
<td>j. 2yr Contractor + 20yr NBL manufacturers guarantee for all materials</td>
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</tbody>
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Diagram:
- 03" C.R. 30 mil.
- 12" D.C. 0.45 R-value
- 03" C.R. 30 mil.
- 12" D.C. 0.45 R-value
- 24 sq. GS - 4" Knape/Boyd
- 12" D.C. 0.45 R-value
- New Insulated Metal
- Fan Curb mounted to deck
- 5" finished flashing height
- Watertight back
Completion: N/A
Alt 1: 82 Feet Central" 84
Left wall blank in 1/4 wall

B.B. Type II
1" x 1/2" stem

Downspout: Matchingdrain 80 3/4" G.I. C.G. 40
Batt C.I. C. 40'

New Insulated Metal
Fasten, Finish "on" wall.
Finish flashing height
Waterproof cover

30" C. Stepped
12" O.C. Stepped
20 Mils PK w/ Batt Insul

BB + Alternate
BL Roof 25" to remain

BD C. Elevator
12" I. W. Shackle

Sanitary C. 12" O.C. Standard

Adherenda
4" x 4" bonding 1:41
12" off edges
Edge capped
No yoke > 1/2"
This concludes The American Institute of Architects Continuing Education Systems Course

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