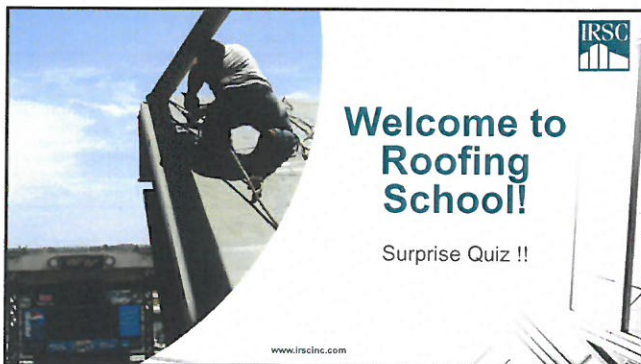




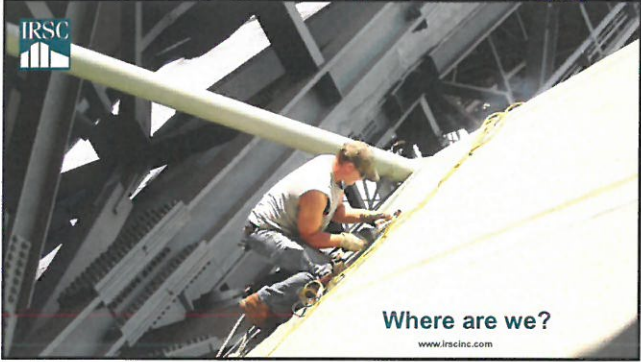
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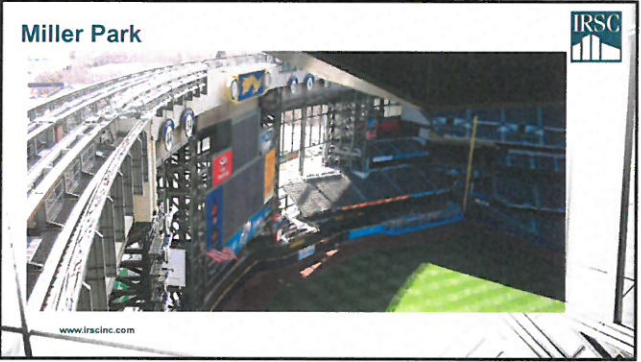
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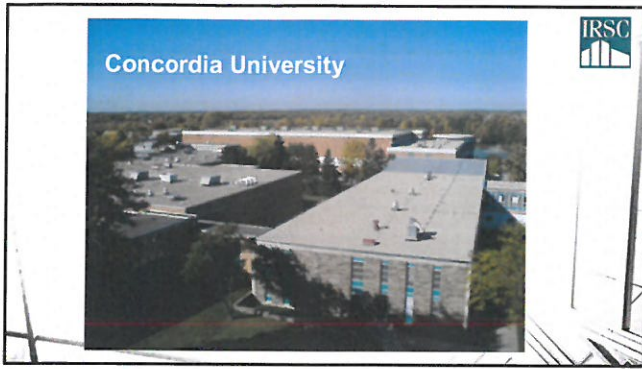
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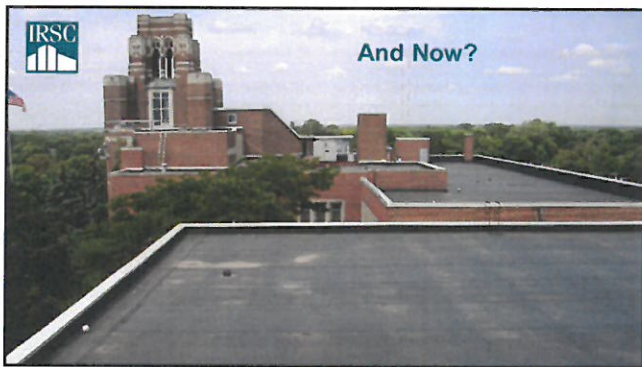
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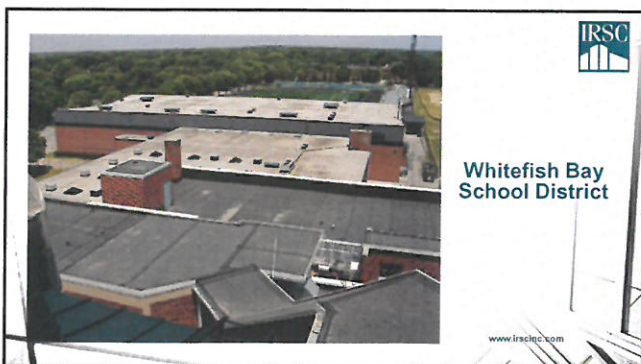
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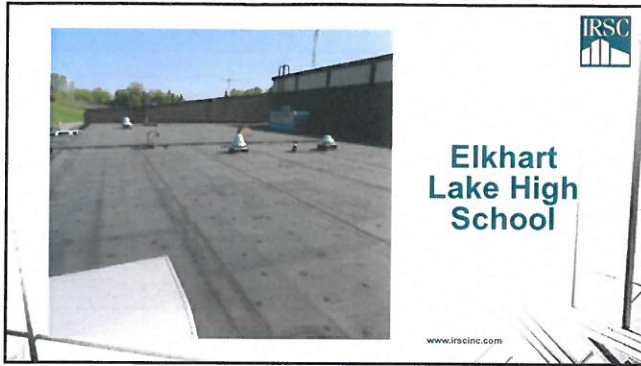
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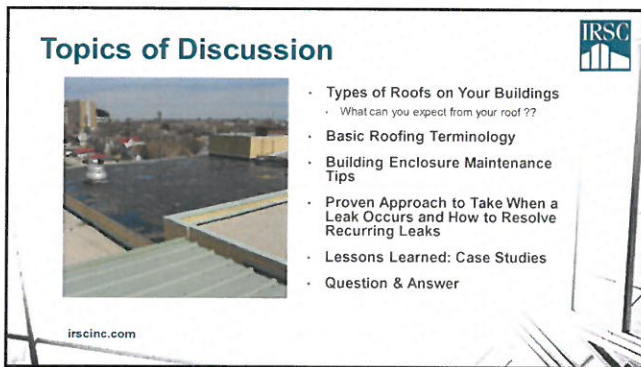
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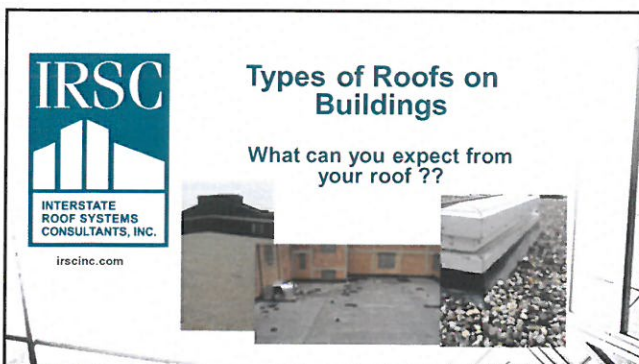
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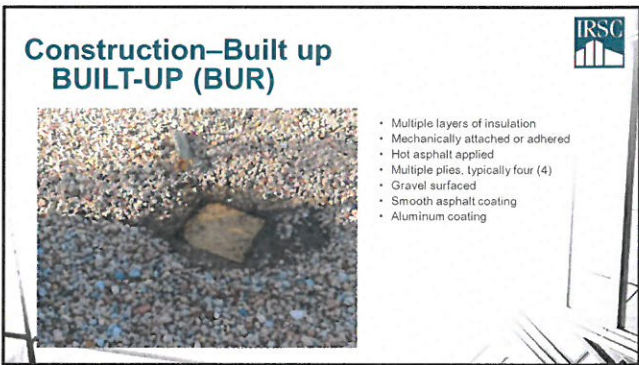
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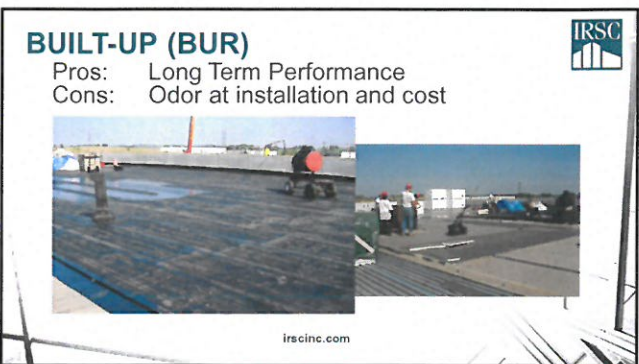
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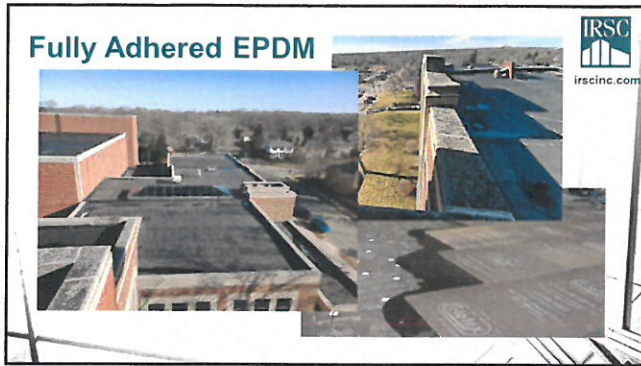
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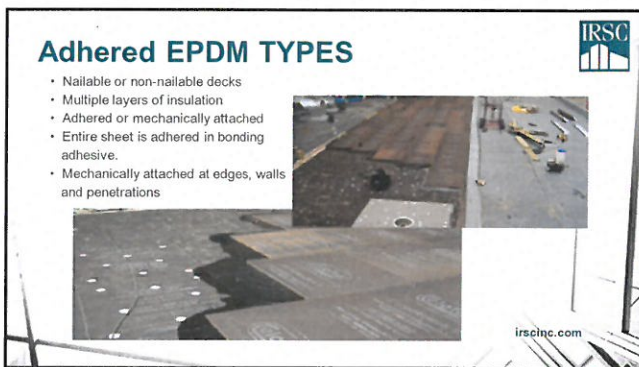
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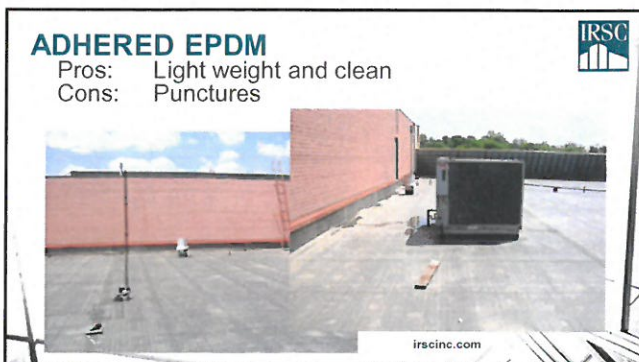
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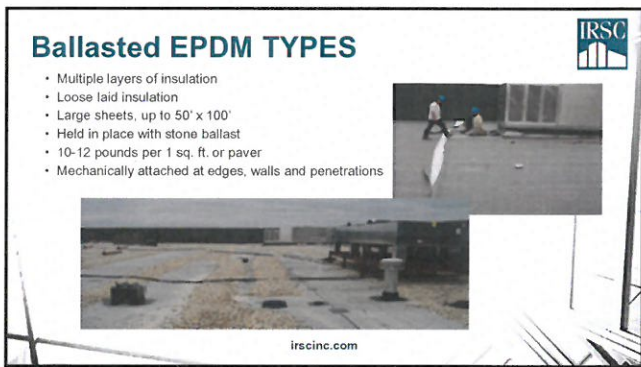
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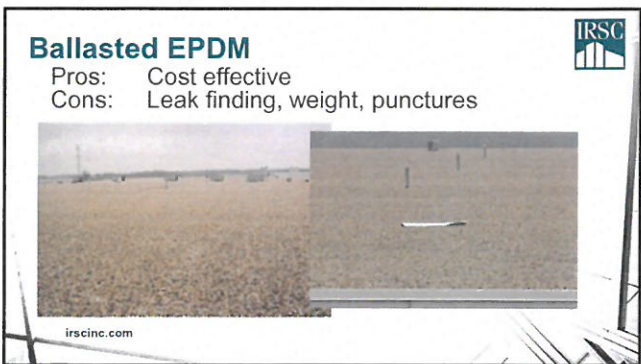
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Thermoplastic (PVC, TPO) System Construction

- Multiple layers of insulation
- Mechanically attached, fewer fasteners
- Sheets are fastened at the seams, 12" on center or aligned (RhinoBond)
- Fully adhered systems
- Mechanically attached at edge, walls and penetrations
- Heat welded seams




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Thermoplastic (Typ. White)

- Pros: White, Reflectivity, Cost Effective
- Cons: Slippery, Performance Variables, Repairs



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Metal Roof Systems



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Metal Roof Systems

- Standing Seam
- Batten Seam
- Flat Seam
- **The Key:** A waterproofed, solid, substrate

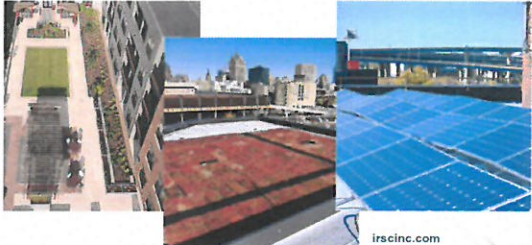


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Green Roof Systems



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Basic Roofing Terminology

- Flashing
- Counter Flashing
- Coping
- Ballast



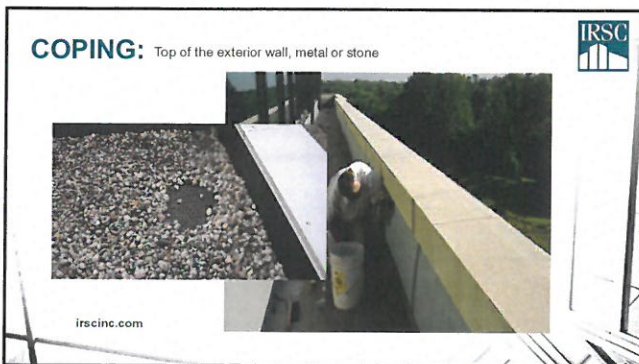
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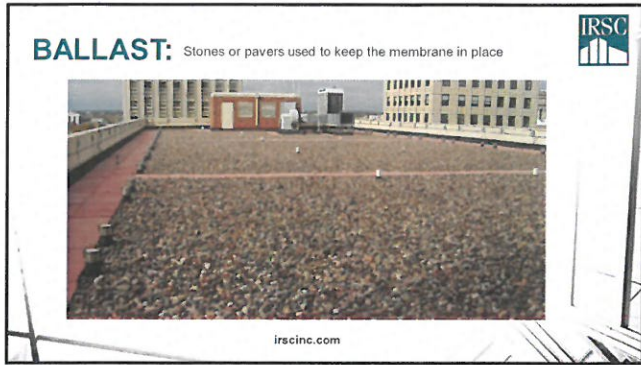
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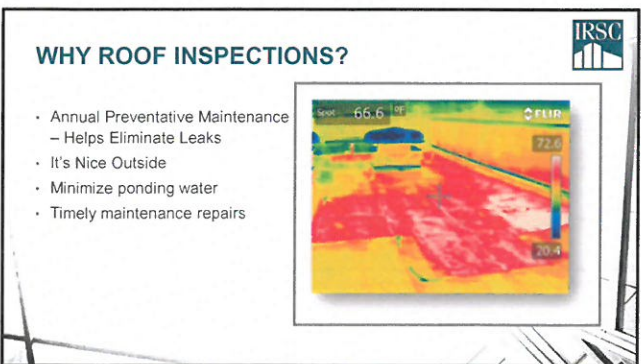
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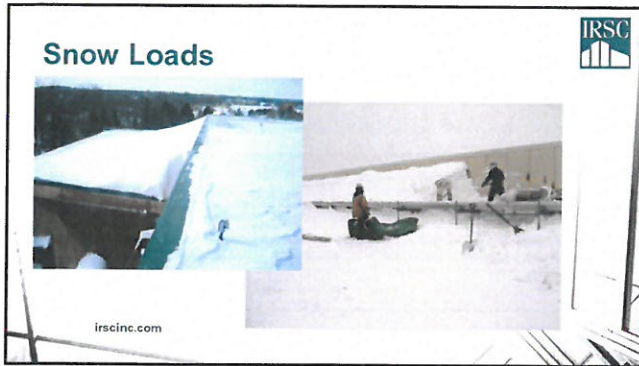
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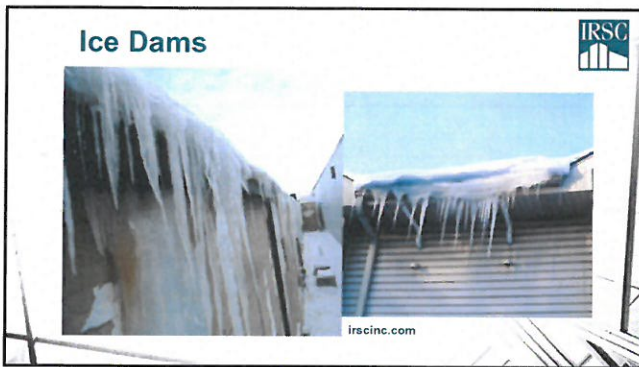
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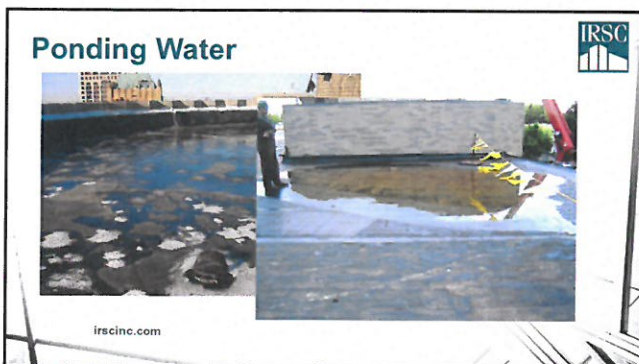
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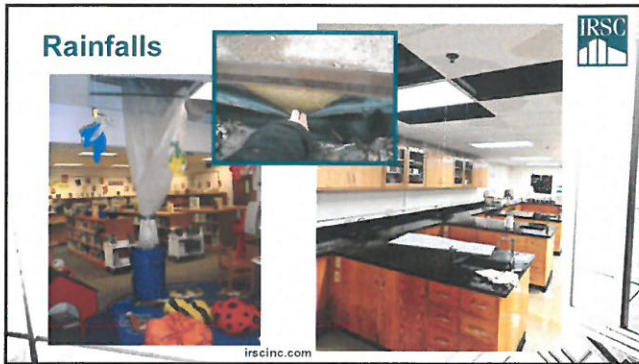
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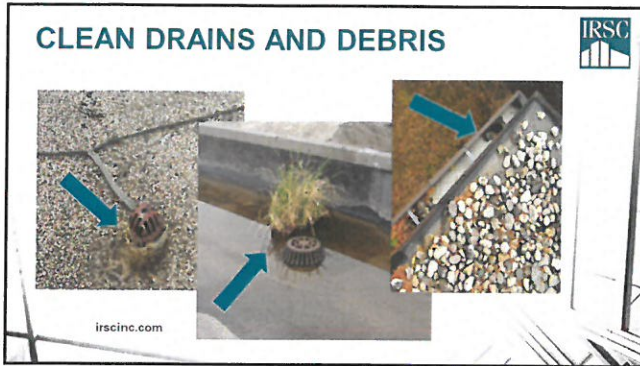
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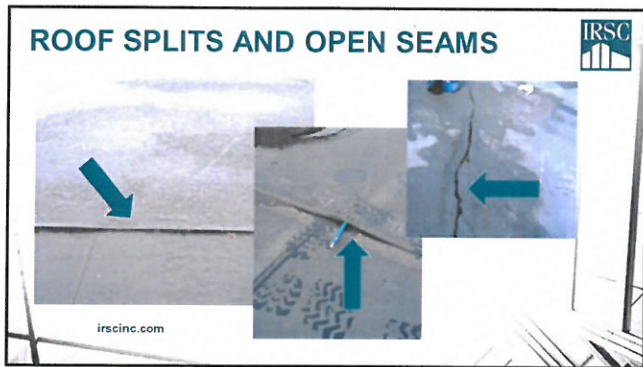
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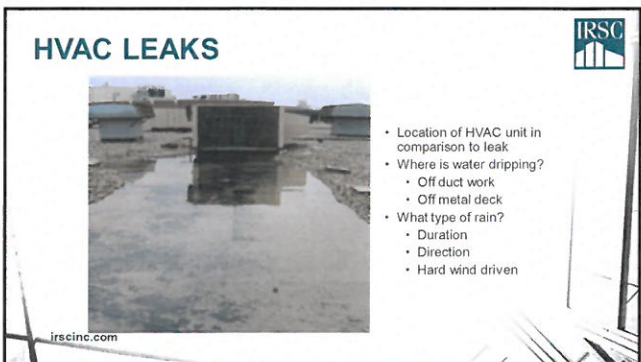
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**Proven Approach
to Take When a
Leak Occurs and
How to Resolve
Recurring Leaks**

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Leak Check List

1. Check the weather and look above the ceiling tile
2. Is the leak from a pipe or mechanical equipment
3. Control the water and damage to the interior contents
4. Access the roof (if safe) and check to see if there is anything unusual (plugged drain, storm damage, etc)
5. Repair to the best of your ability if you are able to see a defect in the roof (hole, open seam, etc.
6. Contact your District roofing professional

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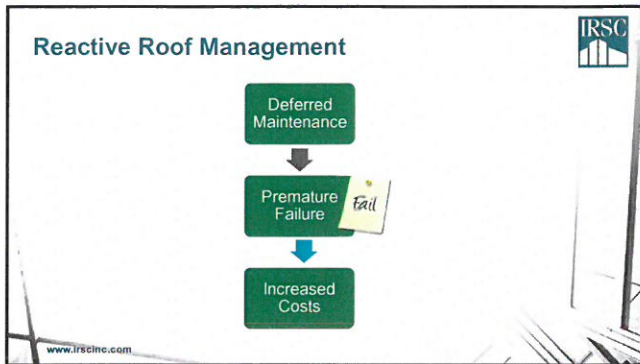
Why Roof Maintenance?



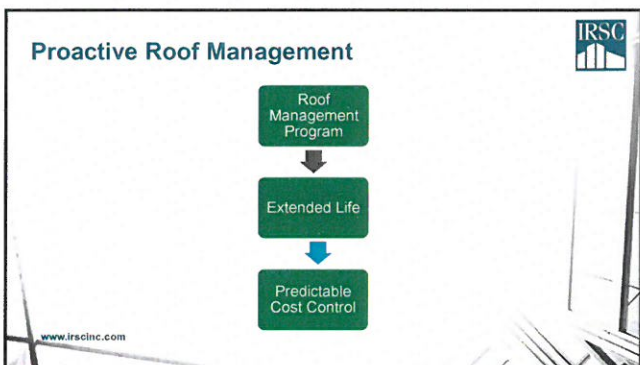
**REACTIVE
VS.
PROACTIVE**

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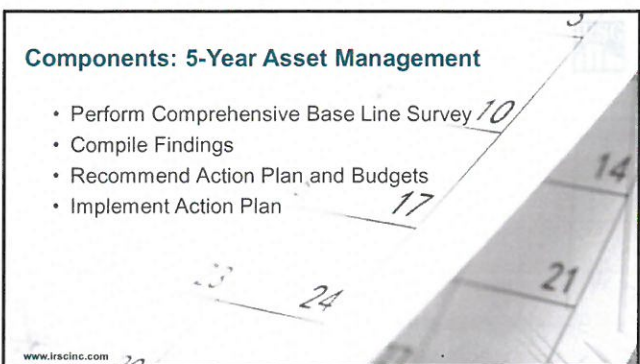
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Comprehensive Base-Line Survey

- Survey Existing Conditions
 - Deck Type, Insulation Type, Composition, etc.
- Perform Necessary Test Cuts
- Create Facility Drawings
- Compile Historical Data
- Document Deficiencies





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Compilation Findings


- Level of Severity
- Types of Problems
- Test Cut Results
- Immediate Maintenance Needs
- Future Maintenance Needs
- Location of HVAC Equipment



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Recommended Action Plan & Budget



- Detailed Report of Findings
 - Expected Life of Roof System
 - Recommended Preventative Maintenance
 - 5 Year Budget Costs
 - Outline Annual Maintenance

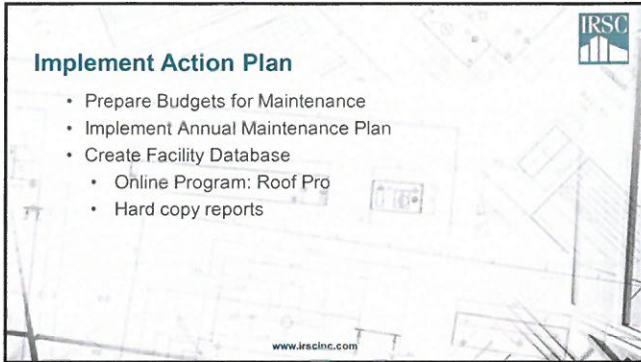



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Implement Action Plan

- Prepare Budgets for Maintenance
- Implement Annual Maintenance Plan
- Create Facility Database
 - Online Program: Roof Pro
 - Hard copy reports

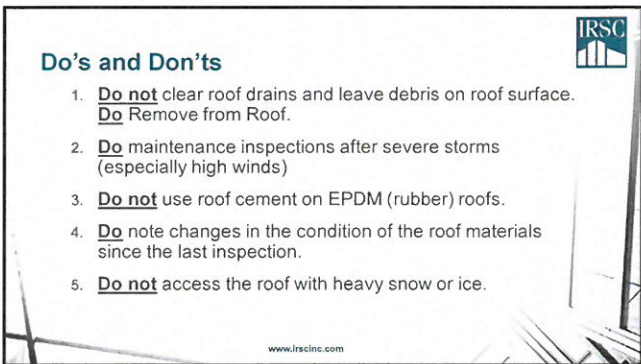



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Do's and Don'ts

1. **Do not** clear roof drains and leave debris on roof surface.
Do Remove from Roof.
2. **Do** maintenance inspections after severe storms (especially high winds)
3. **Do not** use roof cement on EPDM (rubber) roofs.
4. **Do** note changes in the condition of the roof materials since the last inspection.
5. **Do not** access the roof with heavy snow or ice.



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What NOT To Do:



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Thank you for attending!

Questions??

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