



# INSPECTION RECEIPT

## Atlantic Independent Inspections LLC

Fort Lauderdale, FL 33324  
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**Max Cohen**

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To: [REDACTED]  
Address: [REDACTED]  
City: Brooklyn State: NY Zip: 11234  
Email: [REDACTED]  
PhoneNumber: [REDACTED]

Inspection Location

[REDACTED]

Inspection Date: 12/26/2023

Time: 01:00 PM

Invoice Date: 01/14/2024

Invoice #:

QTY	DESCRIPTION	UNIT PRICE	LINE TOTAL
1	Forensic ROOF® Inspection	[REDACTED]	[REDACTED]
		subtotal	[REDACTED]
		TOTAL	[REDACTED]

### Inspection Contacts

Type: Home Owner  
Name: [REDACTED] on  
Address: [REDACTED]  
City: Brooklyn State: NY Zipcode: 11234  
Tel: [REDACTED]  
Email: [REDACTED]



<https://inspectionplus.net/InspectionReports/InvoicePayOnline?SEI=225852623>

*Thank you for your business*

# Forensic ROOF® Inspection

**Report No :**  
129263

**Prepared Exclusively for :**  
██████████

**Published On :**  
01/14/2024



**Inspection Date :**  
12/26/2023

**Property Inspected :**  
██████████  
██████████

**Inspection Time :**  
01:00 PM  
**Inspection Fee :**  
██████████

**Invoice No :**  
000018

**Inspected By :**  
**Max Cohen**

516-262-2117

Maxc@atlanticindependentinspectionsllc.com



Atlantic Independent Inspections LLC

Fort Lauderdale, FL 33324

NRCIA-CP-7297

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**Report Published Date**  
01/14/2024



NRCIA License: NRCIA-CP-7297

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This Inspection Report is not a certification.

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# Scope of Inspection

This Forensic Roof® Inspection Report is a result of performing an inspection at the property address stated herein. The sole and expressed purpose and scope of the inspection were limited to comprehensively evaluating a select attribute of the roofing system, at the customer's option, that may have included, but was not limited to, the following: building code compliance, manufacturer's installation specification compliance, workmanship evaluation, third-party damage responsibility evaluation, or referral to a specialist.

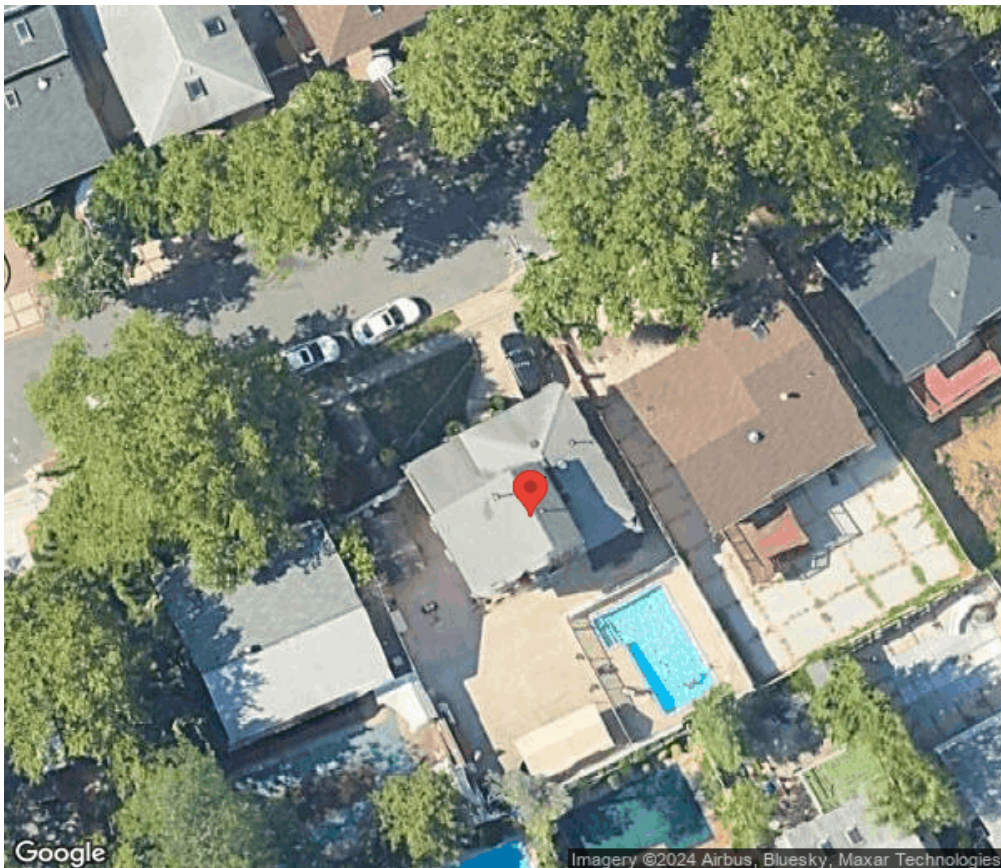
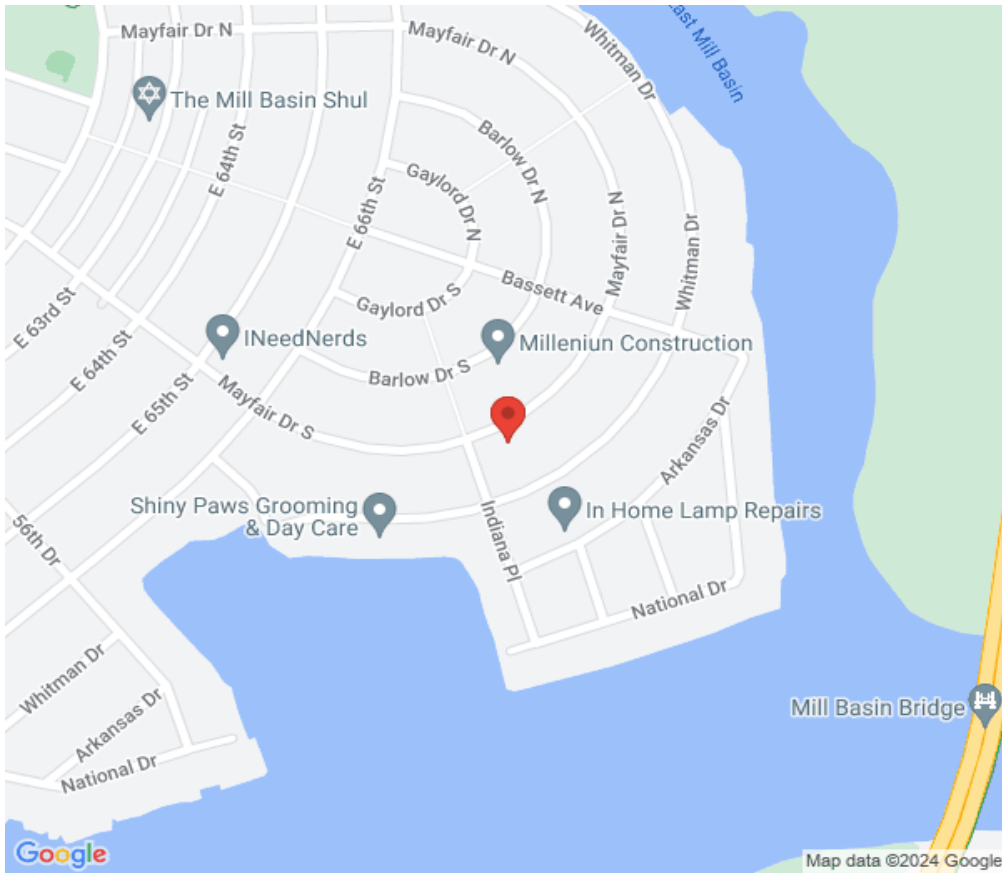
The Forensic Roof Inspection performed for the customer was a non-invasive visual examination of the interior of the building, the attic (when accessible), the building's exterior perimeter, the building's attached garage, and the building's rooftop. The NRCIA inspector performed this inspection following the standards of practice and inspection protocols of the National Roof Certification and Inspection Association. The NRCIA inspector provides the customer with this standardized Forensic Roof Inspection Report, giving technical analysis that facilitates the customer in evaluating the select attribute of the roofing system adequately. If any new information becomes available, the NRCIA inspector reserves the right to modify this report.

The Forensic Roof Inspection did not evaluate if the roof, in its current condition, has the likelihood of leaking, nor did it determine if the roof meets the LeakFREE® Roof Certification criteria. If the Forensic Roof Inspection did not satisfy the customer's inspection requirements, then a purchase of a further LeakFREE Inspection is recommended.

Payment is payable immediately upon the completion of the inspection. The client is responsible for any costs and expenses incurred to recover delinquent debts (including, but not limited to, reasonable attorney fees and interest at the highest rate allowed by law) and shall be payable on demand. VisualROOF, LeakFREE, Forensic Roof, Today's Inspection...Tomorrow's Protection, Certified Roof, Certification PLUS, are trademarks of or licensed to the National Roof Certification and Inspection Association.

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## Location of Property



## Inspection Contacts

**Name:** [REDACTED]  
**Caller Type:** Home Owner  
**Email:** [REDACTED]  
**Address:** [REDACTED]  
**Tel:** [REDACTED]

**Contractor Name:** Atlantic Independent Inspections LLC  
**City:** Fort Lauderdale **State:** FL **Zip:** 33324  
**Tel:** 954-866-2352  
**Website:** atlanticindependentinspectionsllc.com  
**NRCIA License:** NRCIA-CP-7297

**Inspector Name:** Max Cohen  
**Tel:** 516-262-2117  
**Email:** Maxc@atlanticindependentinspectionsllc.com  
**NRCIA License:** NRCIA-MB-10377

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## Roof

### Damaged Roofing Material



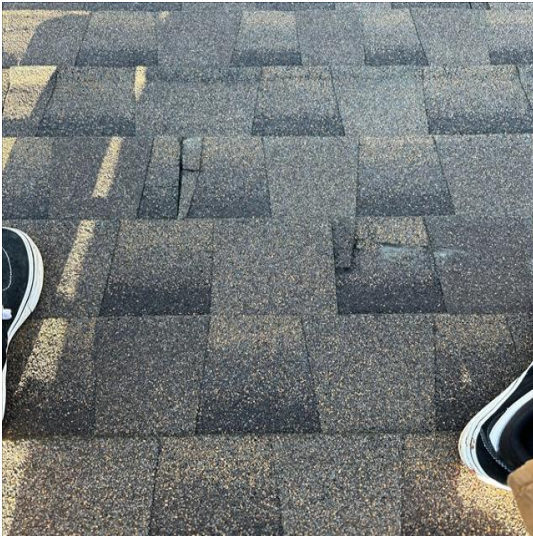
**Image Number: 1**

**Observation:** Damaged shingles were observed at time of inspection. These damaged shingles will deteriorate faster than the others and may present the chance of moisture intrusion at some point.

**Cause:** Improper installation. There were no indications that this damage was caused by a third party at time of inspection.

**Remedy:** Replace shingles that are damaged.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number: 2**

**Observation:** Damaged shingles were observed at time of inspection. These damaged shingles will deteriorate faster than the others and may present the chance of moisture intrusion at some point.

**Cause:** Improper installation. There were no indications that this damage was caused by a third party at time of inspection.

**Remedy:** Replace shingles that are damaged.

**Determination:** Roof Repair required for LeakFREE Roof Certification

### Debris



**Image Number: 3**

**Observation:** Nails, staples and debris was observed on roof and around property at time of inspection. It should be noted that the shingle on the ground in one of the photos is most likely a shingle missing from a hip cap that is mentioned elsewhere in this report. Leaving these items on the roof can cause damage to the roof if stepped on and should have been removed after roof replacement.

**Cause:** Poor workmanship.

**Remedy:** Clean roof, gutters and property of any debris after roof construction.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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**Image Number: 4**

**Observation:** Nails, staples and debris was observed on roof and around property at time of inspection. It should be noted that the shingle on the ground in one of the photos is most likely a shingle missing from a hip cap that is mentioned elsewhere in this report. Leaving these items on the roof can cause damage to the roof if stepped on and should have been removed after roof replacement.

**Cause:** Poor workmanship.

**Remedy:** Clean roof, gutters and property of any debris after roof construction.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number: 5**

**Observation:** Nails, staples and debris was observed on roof and around property at time of inspection. It should be noted that the shingle on the ground in one of the photos is most likely a shingle missing from a hip cap that is mentioned elsewhere in this report. Leaving these items on the roof can cause damage to the roof if stepped on and should have been removed after roof replacement.

**Cause:** Poor workmanship.

**Remedy:** Clean roof, gutters and property of any debris after roof construction.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number: 6**

**Observation:** Nails, staples and debris was observed on roof and around property at time of inspection. It should be noted that the shingle on the ground in one of the photos is most likely a shingle missing from a hip cap that is mentioned elsewhere in this report. Leaving these items on the roof can cause damage to the roof if stepped on and should have been removed after roof replacement.

**Cause:** Poor workmanship.

**Remedy:** Clean roof, gutters and property of any debris after roof construction.

**Determination:** Roof Repair required for LeakFREE Roof Certification



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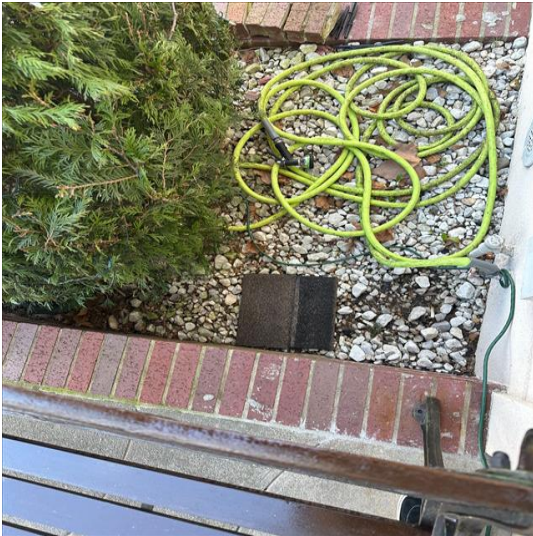


**Image Number:** 7

**Observation:** Debris was observed to be accumulated in multiple areas of the property.

**Cause:** Poor workmanship.

**Remedy:** Clean area of any debris or left over material.



**Image Number:** 8

**Observation:** Nails, staples and debris was observed on roof and around property at time of inspection. It should be noted that the shingle on the ground in one of the photos is most likely a shingle missing from a hip cap that is mentioned elsewhere in this report. Leaving these items on the roof can cause damage to the roof if stepped on and should have been removed after roof replacement.

**Cause:** Poor workmanship.

**Remedy:** Clean roof, gutters and property of any debris after roof construction.

**Determination:** Roof Repair required for LeakFREE Roof Certification

## Flashing



**Image Number:** 9

**Observation:** Kick-out flashing was observed to be missing at time of inspection. Water has the possibility of making direct contact with home which may eventually cause moisture intrusion, especially since this home has a EIFS system.

**Cause:** Improper installation.

**Remedy:** Install kick-out flashing to divert water away from home.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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**Image Number:** 10

**Observation:** Sidewall flashing was observed to be installed properly unless otherwise mentioned in this report. Sealant was observed to be used along this flashing. Step flashing could be verified in all but one section of a sidewall and roof intersection.



**Image Number:** 11

**Observation:** Sidewall flashing was observed to be installed properly unless otherwise mentioned in this report. Sealant was observed to be used along this flashing. Step flashing could be verified in all but one section of a sidewall and roof intersection.



**Image Number:** 12

**Observation:** Step flashing could not be verified at lower front roof where the sidewall meets the roof. This is necessary to prevent any moisture intrusion, especially on a pitched roof at a vertical penetration or wall. Counter flashing was observed but is not sufficient in itself.

**Cause:** Improper installation.

**Remedy:** Install step flashing.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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## Gutter



**Image Number: 13**

**Observation:** Gutters were observed to be in good condition with no 3rd party damage at time of inspection. However, downspouts need to be installed at gutter terminations on the roof surface to prevent excessive moisture exposure and potential moisture intrusion. One area of the roof had a gutter with no end cap, which can create moisture intrusion at the sidewall.

**Cause:** N/A

**Remedy:** Install downspouts at gutter terminations.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number: 14**

**Observation:** Gutters were observed to be in good condition with no 3rd party damage at time of inspection. However, downspouts need to be installed at gutter terminations on the roof surface to prevent excessive moisture exposure and potential moisture intrusion. One area of the roof had a gutter with no end cap, which can create moisture intrusion at the sidewall.

**Cause:** N/A

**Remedy:** Install downspouts at gutter terminations.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number: 15**

**Observation:** Gutters were observed to be in good condition with no 3rd party damage at time of inspection. However, downspouts need to be installed at gutter terminations on the roof surface to prevent excessive moisture exposure and potential moisture intrusion. One area of the roof had a gutter with no end cap, which can create moisture intrusion at the sidewall.

**Cause:** N/A

**Remedy:** Install downspouts at gutter terminations.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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**Image Number: 16**

**Observation:** Gutters were observed to be in good condition with no 3rd party damage at time of inspection. However, downspouts need to be installed at gutter terminations on the roof surface to prevent excessive moisture exposure and potential moisture intrusion. One area of the roof had a gutter with no end cap, which can create moisture intrusion at the sidewall.

**Cause:** N/A

**Remedy:** Install downspouts at gutter terminations.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number: 17**

**Observation:** Gutters were observed to be in good condition with no 3rd party damage at time of inspection. However, downspouts need to be installed at gutter terminations on the roof surface to prevent excessive moisture exposure and potential moisture intrusion. One area of the roof had a gutter with no end cap, which can create moisture intrusion at the sidewall.

**Cause:** N/A

**Remedy:** Install downspouts at gutter terminations.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number: 18**

**Observation:** Gutters were observed to be in good condition with no 3rd party damage at time of inspection. However, downspouts need to be installed at gutter terminations on the roof surface to prevent excessive moisture exposure and potential moisture intrusion. One area of the roof had a gutter with no end cap, which can create moisture intrusion at the sidewall. Gutters also need to be cleaned. There was excessive granule build up in some of the gutters from the roof rip off and install.

**Cause:** Roof installation. Debris should always be cleaned up after roof repairs and installation.

**Remedy:** Install downspouts at gutter terminations and clean gutters.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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## Headwalls



**Image Number:** 19

**Observation:** Headwall at rear of home was observed to have exposed fasteners and overexposure of flashing material, at time of inspection. Homeowner states this is an area that has or had leaking. Sealant was observed to be used over exposed fasteners. An interior analysis of the area in question could not be performed at time of inspection due to lack of access. Further analysis is required for this area.

**Cause:** Improper installation.

**Remedy:** Install proper counter flashing to prevent exposure of fasteners. Sealant can not be used in place of flashing.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 20

**Observation:** Headwall at rear of home was observed to have exposed fasteners and overexposure of flashing material, at time of inspection. Homeowner states this is an area that has or had leaking. Sealant was observed to be used over exposed fasteners. An interior analysis of the area in question could not be performed at time of inspection due to lack of access. Further analysis is required for this area.

**Cause:** Improper installation.

**Remedy:** Install proper counter flashing to prevent exposure of fasteners. Sealant can not be used in place of flashing.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 21

**Observation:** Headwall at rear of home was observed to have exposed fasteners and overexposure of flashing material, at time of inspection. Homeowner states this is an area that has or had leaking. Sealant was observed to be used over exposed fasteners. An interior analysis of the area in question could not be performed at time of inspection due to lack of access. Further analysis is required for this area.

**Cause:** Improper installation.

**Remedy:** Install proper counter flashing to prevent exposure of fasteners. Sealant can not be used in place of flashing.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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**Image Number: 22**

**Observation:** Headwall at rear of home was observed to have exposed fasteners and overexposure of flashing material, at time of inspection. Homeowner states this is an area that has or had leaking. Sealant was observed to be used over exposed fasteners. An interior analysis of the area in question could not be performed at time of inspection due to lack of access. Further analysis is required for this area.

**Cause:** Improper installation.

**Remedy:** Install proper counter flashing to prevent exposure of fasteners. Sealant can not be used in place of flashing.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number: 23**

**Observation:** Headwall at rear of home was observed to have exposed fasteners and overexposure of flashing material, at time of inspection. Homeowner states this is an area that has or had leaking. Sealant was observed to be used over exposed fasteners. An interior analysis of the area in question could not be performed at time of inspection due to lack of access. Further analysis is required for this area.

**Cause:** Improper installation.

**Remedy:** Install proper counter flashing to prevent exposure of fasteners. Sealant can not be used in place of flashing.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number: 24**

**Observation:** Headwall at rear of home was observed to have exposed fasteners and overexposure of flashing material, at time of inspection. Homeowner states this is an area that has or had leaking. Sealant was observed to be used over exposed fasteners. An interior analysis of the area in question could not be performed at time of inspection due to lack of access. Further analysis is required for this area.

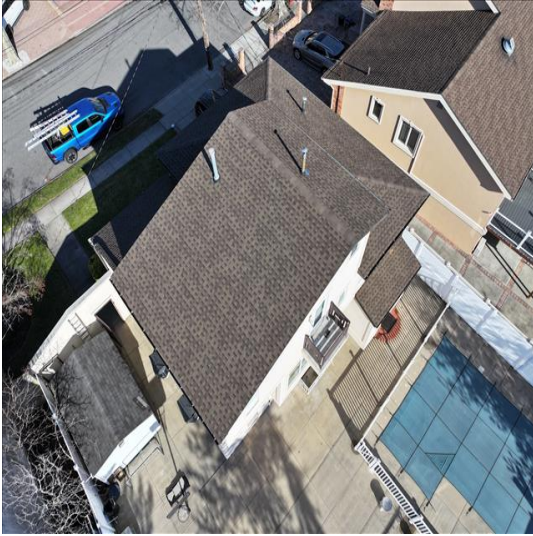
**Cause:** Improper installation.

**Remedy:** Install proper counter flashing to prevent exposure of fasteners. Sealant can not be used in place of flashing.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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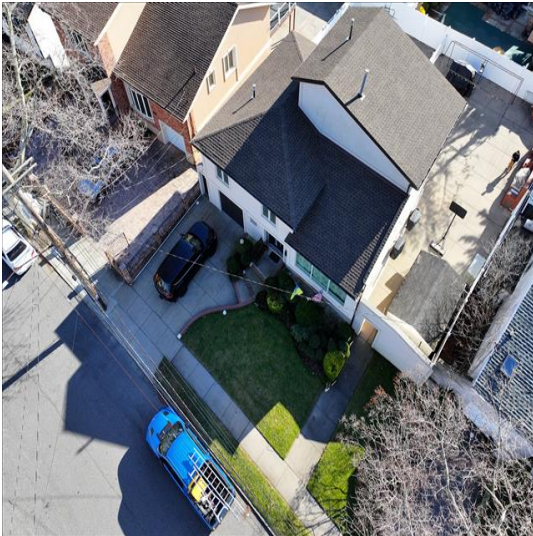
## Overview



**Image Number:** 25

**Observation:** Overview photos of roof. Aerial image with red arrows indicates areas of concern and should be corrected.

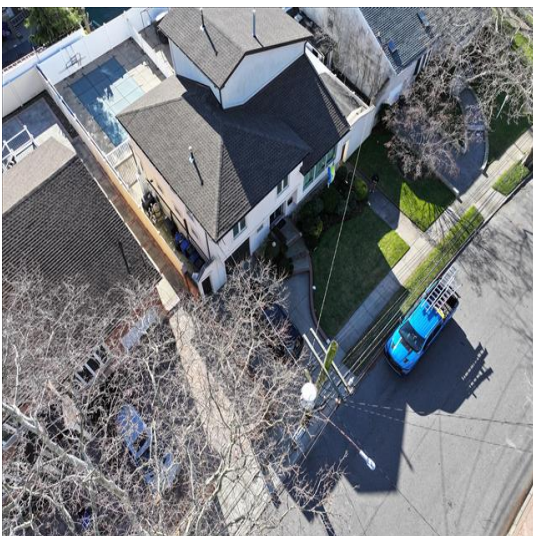
**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 26

**Observation:** Overview photos of roof. Aerial image with red arrows indicates areas of concern and should be corrected.

**Determination:** Roof Repair required for LeakFREE Roof Certification

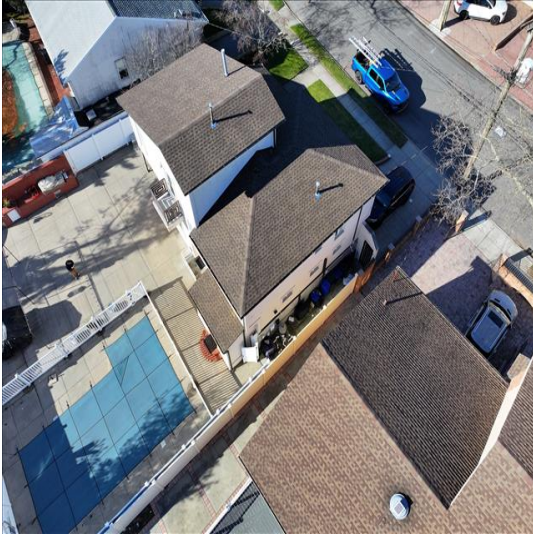


**Image Number:** 27

**Observation:** Overview photos of roof. Aerial image with red arrows indicates areas of concern and should be corrected.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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**Image Number:** 28

**Observation:** Overview photos of roof. Aerial image with red arrows indicates areas of concern and should be corrected.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 29

**Observation:** Overview photos of roof. Aerial image with red arrows indicates areas of concern and should be corrected.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 30

**Observation:** Starter course, storm shield, drip edge and gutters were observed to be properly installed and maintained, unless otherwise mentioned in this report, at time of inspection.

**Determination:** Roof Repair required for LeakFREE Roof Certification



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**Image Number:** 31

**Observation:** Starter course, storm shield, drip edge and gutters were observed to be properly installed and maintained, unless otherwise mentioned in this report, at time of inspection.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 32

**Observation:** Starter course, storm shield, drip edge and gutters were observed to be properly installed and maintained, unless otherwise mentioned in this report, at time of inspection.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 33

**Observation:** Starter course, storm shield, drip edge and gutters were observed to be properly installed and maintained, unless otherwise mentioned in this report, at time of inspection.

**Determination:** Roof Repair required for LeakFREE Roof Certification

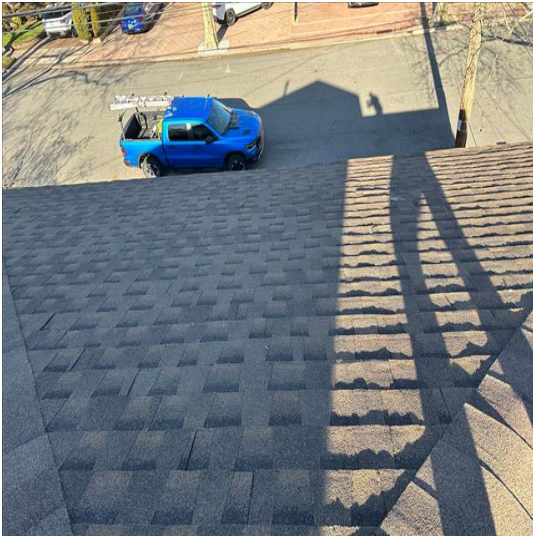
129263



**Image Number:** 34

**Observation:** Overview photos of roof. Aerial image with red arrows indicates areas of concern and should be corrected.

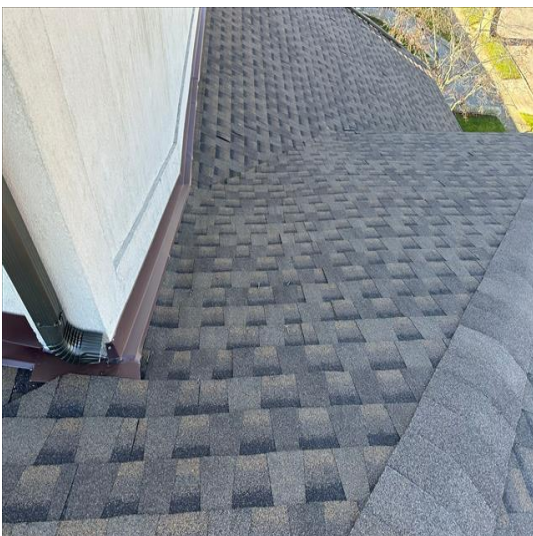
**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 35

**Observation:** Overview photos of roof. Aerial image with red arrows indicates areas of concern and should be corrected.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 36

**Observation:** Overview photos of roof. Aerial image with red arrows indicates areas of concern and should be corrected.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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**Image Number:** 37

**Observation:** Overview photos of roof. Aerial image with red arrows indicates areas of concern and should be corrected.

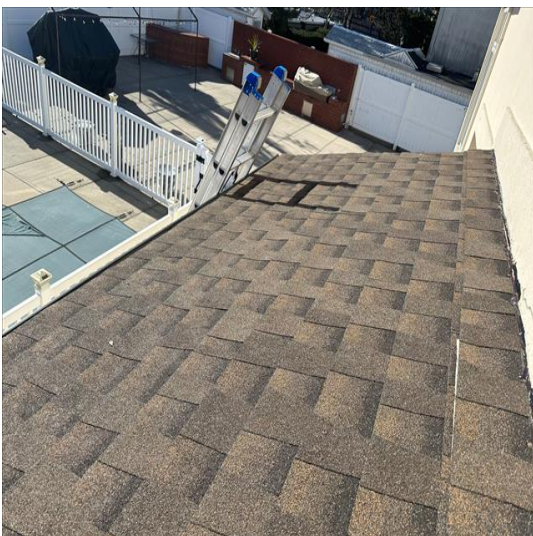
**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 38

**Observation:** Starter course, storm shield, drip edge and gutters were observed to be properly installed and maintained, unless otherwise mentioned in this report, at time of inspection.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 39

**Observation:** Overview photos of roof. Aerial image with red arrows indicates areas of concern and should be corrected.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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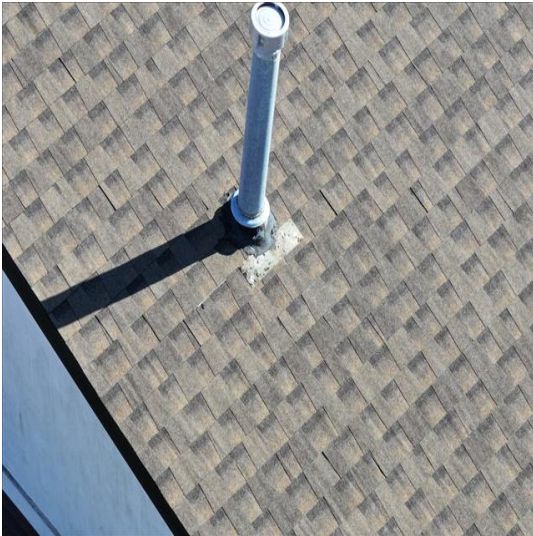
## Penetrations



**Image Number:** 40

**Observation:** Unless otherwise mentioned in this report, roof penetration flashings, boots and sealant were observed to be properly installed and maintained at time of inspection.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 41

**Observation:** Roof penetration on top roof, right penetration has old flashing and should have been replaced with new flashing during roof replacement.

**Cause:** Improper installation.

**Remedy:** Recommend replacing flashing.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 42

**Observation:** Unless otherwise mentioned in this report, roof penetration flashings, boots and sealant were observed to be properly installed and maintained at time of inspection.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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## Shingles



**Image Number:** 43

**Observation:** Multiple exposed fasteners, under driven nails, exposed storm shield and missing hip caps were observed at time of inspection. This area is almost certainly going to leak if not repaired. Under driven nails present the opportunity for remaining shingles to be damaged during high wind episodes, exposed storm shield presents the opportunity for moisture intrusion, exposed fasteners may introduce moisture intrusion.

**Cause:** The most probable cause of this observation was that high winds removed 2 to 3 hip caps due to improper installation. Due to installation during cold months, material transfer to create bonding of shingles has not taken place in addition to improper nail placement. This is a combination of both environmental and workmanship factors.

**Remedy:** Replace hip caps.

**Determination:** Roof Repair required for LeakFREE Roof Certification



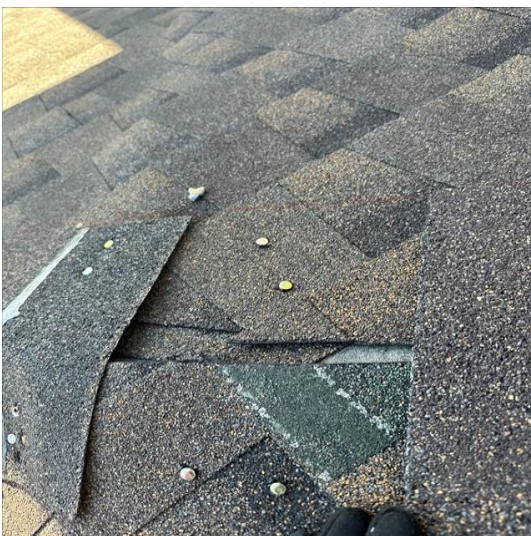
**Image Number:** 44

**Observation:** Inconsistent and/or improper nailing procedure was observed at time of inspection. Page 2 of the manufacturers installation manual indicates that when using 4 nails for installation, nails must be 1/2" from the edge of each shingle. Nails were observed to be missing, over driven and under driven at time of inspection in multiple areas that were readily accessible and possible to inspect without causing damage or invasive testing. It was also observed that nails were installed within the tar strip of some shingles, or multiple nails within a small area which is not within the manufacturers target zone that is indicated in the installation manual. Please note, some photos indicate proper nailing procedure where observed.

**Cause:** Improper installation.

**Remedy:** Shingles should be replaced and properly installed with the correct nailing procedure. These shingles have a higher likelihood of leaking or blowing off in high wind events,

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 45

**Observation:** Multiple exposed fasteners, under driven nails, exposed storm shield and missing hip caps were observed at time of inspection. This area is almost certainly going to leak if not repaired. Under driven nails present the opportunity for remaining shingles to be damaged during high wind episodes, exposed storm shield presents the opportunity for moisture intrusion, exposed fasteners may introduce moisture intrusion.

**Cause:** The most probable cause of this observation was that high winds removed 2 to 3 hip caps due to improper installation. Due to installation during cold months, material transfer to create bonding of shingles has not taken place in addition to improper nail placement. This is a combination of both environmental and workmanship factors.

**Remedy:** Replace hip caps.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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**Image Number:** 46

**Observation:** Multiple exposed fasteners, under driven nails, exposed storm shield and missing hip caps were observed at time of inspection. This area is almost certainly going to leak if not repaired. Under driven nails present the opportunity for remaining shingles to be damaged during high wind episodes, exposed storm shield presents the opportunity for moisture intrusion, exposed fasteners may introduce moisture intrusion.

**Cause:** The most probable cause of this observation was that high winds removed 2 to 3 hip caps due to improper installation. Due to installation during cold months, material transfer to create bonding of shingles has not taken place in addition to improper nail placement. This is a combination of both environmental and workmanship factors.

**Remedy:** Replace hip caps.

**Determination:** Roof Repair required for LeakFREE Roof Certification



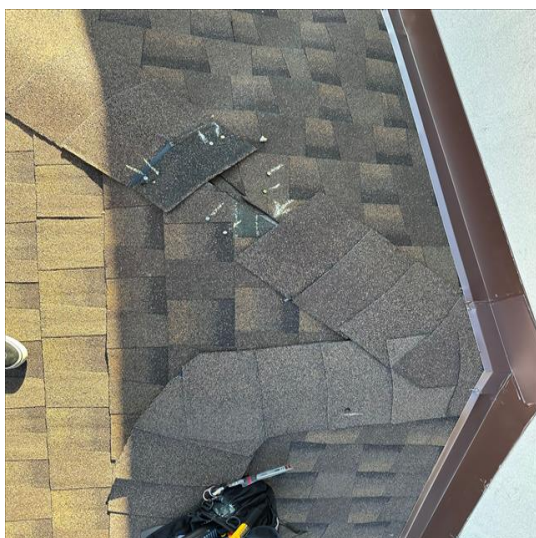
**Image Number:** 47

**Observation:** Multiple exposed fasteners, under driven nails, exposed storm shield and missing hip caps were observed at time of inspection. This area is almost certainly going to leak if not repaired. Under driven nails present the opportunity for remaining shingles to be damaged during high wind episodes, exposed storm shield presents the opportunity for moisture intrusion, exposed fasteners may introduce moisture intrusion.

**Cause:** The most probable cause of this observation was that high winds removed 2 to 3 hip caps due to improper installation. Due to installation during cold months, material transfer to create bonding of shingles has not taken place in addition to improper nail placement. This is a combination of both environmental and workmanship factors.

**Remedy:** Replace hip caps.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 48

**Observation:** Multiple exposed fasteners, under driven nails, exposed storm shield and missing hip caps were observed at time of inspection. This area is almost certainly going to leak if not repaired. Under driven nails present the opportunity for remaining shingles to be damaged during high wind episodes, exposed storm shield presents the opportunity for moisture intrusion, exposed fasteners may introduce moisture intrusion.

**Cause:** The most probable cause of this observation was that high winds removed 2 to 3 hip caps due to improper installation. Due to installation during cold months, material transfer to create bonding of shingles has not taken place in addition to improper nail placement. This is a combination of both environmental and workmanship factors.

**Remedy:** Replace hip caps.

**Determination:** Roof Repair required for LeakFREE Roof Certification

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**Image Number:** 49

**Observation:** One area of the roof was observed to have buckling and lifting of shingles and possibly the sheathing material. A further analysis of this area is needed to determine cause and effect. Interior was not accessible for further inspection.

**Cause:** To be determined.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 50

**Observation:** Inconsistent and/or improper nailing procedure was observed at time of inspection. Page 2 of the manufacturers installation manual indicates that when using 4 nails for installation, nails must be 1/2" from the edge of each shingle. Nails were observed to be missing, over driven and under driven at time of inspection in multiple areas that were readily accessible and possible to inspect without causing damage or invasive testing. It was also observed that nails were installed within the tar strip of some shingles, or multiple nails within a small area which is not within the manufacturers target zone that is indicated in the installation manual. Please note, some photos indicate proper nailing procedure where observed.

**Cause:** Improper installation.

**Remedy:** Shingles should be replaced and properly installed with the correct nailing procedure. These shingles have a higher likelihood of leaking or blowing off in high wind events,

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 51

**Observation:** Inconsistent and/or improper nailing procedure was observed at time of inspection. Page 2 of the manufacturers installation manual indicates that when using 4 nails for installation, nails must be 1/2" from the edge of each shingle. Nails were observed to be missing, over driven and under driven at time of inspection in multiple areas that were readily accessible and possible to inspect without causing damage or invasive testing. It was also observed that nails were installed within the tar strip of some shingles, or multiple nails within a small area which is not within the manufacturers target zone that is indicated in the installation manual. Please note, some photos indicate proper nailing procedure where observed.

**Cause:** Improper installation.

**Remedy:** Shingles should be replaced and properly installed with the correct nailing procedure. These shingles have a higher likelihood of leaking or blowing off in high wind events,

**Determination:** Roof Repair required for LeakFREE Roof Certification

129263



**Image Number: 52**

**Observation:** Inconsistent and/or improper nailing procedure was observed at time of inspection. Page 2 of the manufacturers installation manual indicates that when using 4 nails for installation, nails must be 1/2" from the edge of each shingle. Nails were observed to be missing, over driven and under driven at time of inspection in multiple areas that were readily accessible and possible to inspect without causing damage or invasive testing. It was also observed that nails were installed within the tar strip of some shingles, or multiple nails within a small area which is not within the manufacturers target zone that is indicated in the installation manual. Please note, some photos indicate proper nailing procedure where observed.

**Cause:** Improper installation.

**Remedy:** Shingles should be replaced and properly installed with the correct nailing procedure. These shingles have a higher likelihood of leaking or blowing off in high wind events,

**Determination:** Roof Repair required for LeakFREE Roof Certification



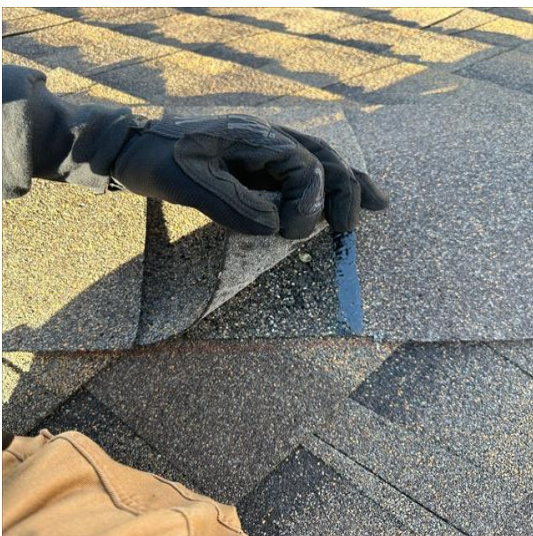
**Image Number: 53**

**Observation:** Inconsistent and/or improper nailing procedure was observed at time of inspection. Page 2 of the manufacturers installation manual indicates that when using 4 nails for installation, nails must be 1/2" from the edge of each shingle. Nails were observed to be missing, over driven and under driven at time of inspection in multiple areas that were readily accessible and possible to inspect without causing damage or invasive testing. It was also observed that nails were installed within the tar strip of some shingles, or multiple nails within a small area which is not within the manufacturers target zone that is indicated in the installation manual. Please note, some photos indicate proper nailing procedure where observed.

**Cause:** Improper installation.

**Remedy:** Shingles should be replaced and properly installed with the correct nailing procedure. These shingles have a higher likelihood of leaking or blowing off in high wind events,

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number: 54**

**Observation:** Inconsistent and/or improper nailing procedure was observed at time of inspection. Page 2 of the manufacturers installation manual indicates that when using 4 nails for installation, nails must be 1/2" from the edge of each shingle. Nails were observed to be missing, over driven and under driven at time of inspection in multiple areas that were readily accessible and possible to inspect without causing damage or invasive testing. It was also observed that nails were installed within the tar strip of some shingles, or multiple nails within a small area which is not within the manufacturers target zone that is indicated in the installation manual. Please note, some photos indicate proper nailing procedure where observed.

**Cause:** Improper installation.

**Remedy:** Shingles should be replaced and properly installed with the correct nailing procedure. These shingles have a higher likelihood of leaking or blowing off in high wind events,

**Determination:** Roof Repair required for LeakFREE Roof Certification



129263



**Image Number:** 55

**Observation:** Inconsistent and/or improper nailing procedure was observed at time of inspection. Page 2 of the manufacturers installation manual indicates that when using 4 nails for installation, nails must be 1/2" from the edge of each shingle. Nails were observed to be missing, over driven and under driven at time of inspection in multiple areas that were readily accessible and possible to inspect without causing damage or invasive testing. It was also observed that nails were installed within the tar strip of some shingles, or multiple nails within a small area which is not within the manufacturers target zone that is indicated in the installation manual. Please note, some photos indicate proper nailing procedure where observed.

**Cause:** Improper installation.

**Remedy:** Shingles should be replaced and properly installed with the correct nailing procedure. These shingles have a higher likelihood of leaking or blowing off in high wind events,

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 56

**Observation:** Inconsistent and/or improper nailing procedure was observed at time of inspection. Page 2 of the manufacturers installation manual indicates that when using 4 nails for installation, nails must be 1/2" from the edge of each shingle. Nails were observed to be missing, over driven and under driven at time of inspection in multiple areas that were readily accessible and possible to inspect without causing damage or invasive testing. It was also observed that nails were installed within the tar strip of some shingles, or multiple nails within a small area which is not within the manufacturers target zone that is indicated in the installation manual. Please note, some photos indicate proper nailing procedure where observed.

**Cause:** Improper installation.

**Remedy:** Shingles should be replaced and properly installed with the correct nailing procedure. These shingles have a higher likelihood of leaking or blowing off in high wind events,

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 57

**Observation:** Inconsistent and/or improper nailing procedure was observed at time of inspection. Page 2 of the manufacturers installation manual indicates that when using 4 nails for installation, nails must be 1/2" from the edge of each shingle. Nails were observed to be missing, over driven and under driven at time of inspection in multiple areas that were readily accessible and possible to inspect without causing damage or invasive testing. It was also observed that nails were installed within the tar strip of some shingles, or multiple nails within a small area which is not within the manufacturers target zone that is indicated in the installation manual. Please note, some photos indicate proper nailing procedure where observed.

**Cause:** Improper installation.

**Remedy:** Shingles should be replaced and properly installed with the correct nailing procedure. These shingles have a higher likelihood of leaking or blowing off in high wind events,

**Determination:** Roof Repair required for LeakFREE Roof Certification

129263



**Image Number: 58**

**Observation:** Inconsistent and/or improper nailing procedure was observed at time of inspection. Page 2 of the manufacturers installation manual indicates that when using 4 nails for installation, nails must be 1/2" from the edge of each shingle. Nails were observed to be missing, over driven and under driven at time of inspection in multiple areas that were readily accessible and possible to inspect without causing damage or invasive testing. It was also observed that nails were installed within the tar strip of some shingles, or multiple nails within a small area which is not within the manufacturers target zone that is indicated in the installation manual. Please note, some photos indicate proper nailing procedure where observed.

**Cause:** Improper installation.

**Remedy:** Shingles should be replaced and properly installed with the correct nailing procedure. These shingles have a higher likelihood of leaking or blowing off in high wind events,

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number: 59**

**Observation:** Inconsistent and/or improper nailing procedure was observed at time of inspection. Page 2 of the manufacturers installation manual indicates that when using 4 nails for installation, nails must be 1/2" from the edge of each shingle. Nails were observed to be missing, over driven and under driven at time of inspection in multiple areas that were readily accessible and possible to inspect without causing damage or invasive testing. It was also observed that nails were installed within the tar strip of some shingles, or multiple nails within a small area which is not within the manufacturers target zone that is indicated in the installation manual. Please note, some photos indicate proper nailing procedure where observed.

**Cause:** Improper installation.

**Remedy:** Shingles should be replaced and properly installed with the correct nailing procedure. These shingles have a higher likelihood of leaking or blowing off in high wind events,

**Determination:** Roof Repair required for LeakFREE Roof Certification

## Side Walls



**Image Number: 60**

**Observation:** Missing flashing or fascia board cover was observed at time of inspection. Exposed fascia was noted. The location of this deficiency presents an issue for accelerated moisture intrusion at this is at the area of a gutter missing an end cap, and being at the beginning of a pitch. Moisture has the opportunity to make direct contact with this exposure.

**Cause:** Improper installation.

**Remedy:** Recommend installing a fascia board cover or flashing to prevent direct moisture contact and exposure.

**Determination:** Roof Repair required for LeakFREE Roof Certification

129263

## Underlayment



**Image Number:** 61

**Observation:** Small areas of underlayment were exposed at time of inspection. While underlayment could be verified as synthetic, it should not be exposed.

**Cause:** Improper installation.

**Remedy:** Ensure shingles are fully covering any areas of underlayment.

**Determination:** Roof Repair required for LeakFREE Roof Certification

## Valley



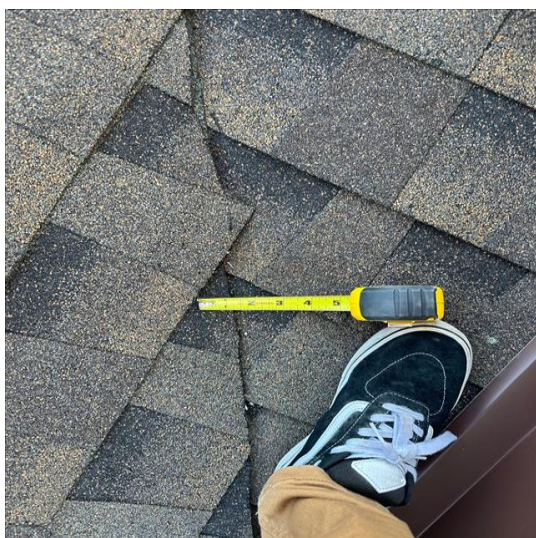
**Image Number:** 62

**Observation:** A valley was observed to be improperly laid out at time of inspection. Moisture can make direct contact with the home during water runoff from rain. There was a gap of about 2 cm that could be seen at the sidewall flashing and termination of the valley. A gutter also directly terminates at this location, which may accelerate moisture intrusion at this wall.

**Cause:** This may be a combination of a workmanship defect and a roof design defect.

**Remedy:** Install a saddle or cricket flashing to divert moisture from this location.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 63

**Observation:** Valley style was a closed cut style and is acceptable to manufacturer specifications. A) Valley flashing was visibly verified at time of inspection B) Valleys were cut according to manufacturer spec in all but one valley, in which the cut was 1/2" off, at 1 1/2" instead of the recommended 2" which can be found in the manufacturer installation manual on page 10. The purpose of the closed cut valley being cut 2" from the center of the valley is to prevent moisture from running under shingles during water run off from rain.

**Cause:** Improper installation for valley cut that is deficient.

**Remedy:** Cut back valley 1/2" to recommended 2" measurement.

**Determination:** Roof Repair required for LeakFREE Roof Certification

129263



**Image Number:** 64

**Observation:** A valley was observed to be improperly laid out at time of inspection. Moisture can make direct contact with the home during water runoff from rain. There was a gap of about 2 cm that could be seen at the sidewall flashing and termination of the valley. A gutter also directly terminates at this location, which may accelerate moisture intrusion at this wall.

**Cause:** This may be a combination of a workmanship defect and a roof design defect.

**Remedy:** Install a saddle or cricket flashing to divert moisture from this location.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 65

**Observation:** Valley style was a closed cut style and is acceptable to manufacturer specifications. A) Valley flashing was visibly verified at time of inspection B) Valleys were cut according to manufacturer spec in all but one valley, in which the cut was 1/2" off, at 1 1/2" instead of the recommended 2" which can be found in the manufacturer installation manual on page 10. The purpose of the closed cut valley being cut 2" from the center of the valley is to prevent moisture from running under shingles during water run off from rain.

**Cause:** Improper installation for valley cut that is deficient.

**Remedy:** Cut back valley 1/2" to recommended 2" measurement.

**Determination:** Roof Repair required for LeakFREE Roof Certification



**Image Number:** 66

**Observation:** Valley style was a closed cut style and is acceptable to manufacturer specifications. A) Valley flashing was visibly verified at time of inspection B) Valleys were cut according to manufacturer spec in all but one valley, in which the cut was 1/2" off, at 1 1/2" instead of the recommended 2" which can be found in the manufacturer installation manual on page 10. The purpose of the closed cut valley being cut 2" from the center of the valley is to prevent moisture from running under shingles during water run off from rain.

**Cause:** Improper installation for valley cut that is deficient.

**Remedy:** Cut back valley 1/2" to recommended 2" measurement.

**Determination:** Roof Repair required for LeakFREE Roof Certification



# Timberline<sup>®</sup> HDZ<sup>™</sup>

## High Definition<sup>®</sup> Lifetime Shingles

### INSTALLATION INSTRUCTIONS

### INSTRUCCIONES DE INSTALACIÓN

#### GENERAL INSTRUCTIONS

**COVERAGE:** 3 bundles (1 bundle of 20 and 2 bundles of 22), when applied according to instructions, will cover 98.4 square feet (9.14 square meters).

**ROOF SLOPE:** GAF shingles must be installed on slopes of 2:12 or greater.

**ROOF DECK:** Use minimum 3/8" (10 mm) plywood or OSB decking as recommended by APA-The Engineered Wood Assn. Wood decks must be well-seasoned and supported, having a maximum 1/8" (3 mm) spacing using a minimum nominal 1" (25 mm) thick lumber and a maximum 6" (152 mm) width, having adequate nail-holding capacity and a smooth surface. Do NOT fasten shingles directly to insulation or insulated deck unless authorized in writing by GAF. Roof decks and existing surfacing material must be dry prior to installation of shingles.

**UNDERLAYMENT:** Underlayment is required by many code bodies and is required to maintain the shingles' UL Class A fire rating. When using FeltBuster<sup>®</sup> High-Traction Synthetic Roofing Felt as underlayment, it MUST be installed over one layer of VersaShield<sup>®</sup> Fire-Resistant Roof Deck Protection in order to maintain a Class A fire rating for GAF asphalt shingles.

**FASTENERS:** Use only zinc-coated steel or aluminum, 10 – 12 gauge, barbed, deformed, or smooth shank roofing nails with heads 3/8" (10 mm) to 7/16" (12 mm) in diameter. Fasteners should be long enough to penetrate at least 3/4" (19 mm) into wood decks or just through the plywood decks. Fasteners must be driven flush with the surface of the shingle. Overdriving will damage the shingle. Raised fasteners will interfere with the sealing of the shingles and can back out.

**RELEASE FILM:** Plastic film strips are present either on the back or face of each shingle. The film strips are to prevent shingles from sticking together while in the bundle. Do not remove the film strip before or during the installation.

**ASPHALT PLASTIC CEMENT:** Use asphalt plastic cement conforming to ASTM D4586 Type I or II.

**WIND RESISTANCE/HAND SEALING:** These shingles have a special thermal sealant that bonds the shingles together after installation when exposed to sun and warm temperatures. If shingles are damaged by winds before sealing or are not exposed to adequate surface temperatures, or if the self-sealant gets dirty, the shingles may never seal. Failure to seal under these circumstances results from the nature of self-sealing shingles, and is not a manufacturing defect. If shingles are to be applied during PROLONGED COLD periods or in areas where airborne dust or sand can be expected before sealing occurs, the shingles MUST be hand sealed. See Nailing Instructions/Hand Sealing.

**VENTILATION:** Proper underdeck ventilation is essential to reduce moisture build up and prevent mold. Ventilation must be designed to meet or exceed current F.H.A., H.U.D., or local code minimum requirements. For more information on ventilation requirements, see [gaf.com](http://gaf.com).

#### INSTRUCCIONES GENERALES

**COBERTURA:** 3 paquetes (1 paquete de 20 y 2 paquetes de 22), cuando se aplica de acuerdo con las instrucciones, cubrirán 98.4 pies cuadrados (9.14 metros cuadrados).

**PENDIENTE DE TECHO:** Las tejas GAF deben instalarse en pendientes de 2:12 o más.

**CUBIERTA DEL TECHO:** Utilice una cubierta mínima de 3/8" (10 mm) de madera contrachapada u OSB como se recomienda en la Asociación norteamericana de madera estructural (APA, The Engineered Wood Association). Las cubiertas de madera deben estar bien estacionadas y sujetas, con un espacio máximo de 1/8" (3 mm) utilizando madera gruesa con un valor nominal mínimo de 1" (25 mm) y un máximo de 6" (152 mm). Las cubiertas deben tener tanto una capacidad adecuada para resistir los clavos como una superficie lisa. NO fije las tejas directamente sobre el aislante ni sobre una cubierta aislada, salvo que GAF lo autorice por escrito. Las cubiertas del techo y el material de revestimiento existente deben estar secos antes de la instalación de las tejas.

**CAPA BASE:** Muchos organismos reguladores exigen una capa base a fin de mantener las tejas con una clasificación contra incendio Clase A, según lo establecido por UL. Cuando se utilice el Filtro sintético de alta tracción para techos FeltBuster<sup>®</sup> como capa base, este DEBE instalarse sobre una capa de Protección para cubierta de techo ignífuga VersaShield<sup>®</sup> para mantener clasificación contra incendio Clase A de las Tejas asfálticas de GAF.

**SUJETADORES:** Utilice solamente clavos de acero recubiertos con zinc o aluminio, calibre 10 y 12, arponados, roscados o de vástago liso con cabezas de 3/8" (10 mm) a 7/16" (12 mm) de diámetro. Los sujetadores deben tener la longitud suficiente para penetrar al menos 3/4" (19 mm) las cubiertas de madera o solo atravesar las cubiertas de madera contrachapada. Los sujetadores deben quedar alineados con la superficie de la teja. La teja se dañará si la traspasa. Los sujetadores que sobresalen interfieren con el sellado de las tejas y pueden aflojarse.

**PELÍCULA DE LIBERACIÓN:** Cada teja tiene franjas de una película plástica en el frente o el reverso. Estas películas evitan que las tejas se peguen entre sí en el paquete. No retire la franja de la película antes ni durante la instalación.

**CEMENTO PLÁSTICO ASFÁLTICO:** Utilice cemento plástico asfáltico conforme a la norma ASTM D4586 para materiales Tipo I o II.

**RESISTENCIA AL VIENTO/SELLADO A MANO:** Estas tejas cuentan con un sellador térmico de especialidad que adhiere las tejas luego de su instalación al entrar en contacto con el sol y las temperaturas cálidas. Si el viento daña las tejas antes de que se sellen, si no están expuestas a temperaturas de superficie adecuadas, o bien si el autosellador se ensucia, es posible que las tejas nunca se adhieran. La falta de sellado bajo estas circunstancias es el resultado de la naturaleza de las tejas autoadhesivas, no se trata de un defecto de fabricación. Si se colocan las tejas durante períodos PROLONGADOS DE FRÍO o en regiones donde se espera que haya polvo o arena transportada por el aire, las tejas DEBEN sellarse de forma manual. Consulte Instrucciones para la colocación de clavos/sellado a mano.

**VENTILACIÓN:** Una ventilación adecuada debajo de la cubierta es fundamental para reducir la acumulación de humedad y prevenir la formación de moho. La ventilación debe diseñarse para cumplir o superar los requisitos mínimos actuales de la Administración Federal de Vivienda (FHA, Federal Housing Administration), del Departamento de Vivienda y Desarrollo Urbano (HUD, Department of Housing and Urban Development), o bien de los códigos locales. Para obtener más información sobre los requisitos de ventilación, visita [es.gaf.com](http://es.gaf.com).

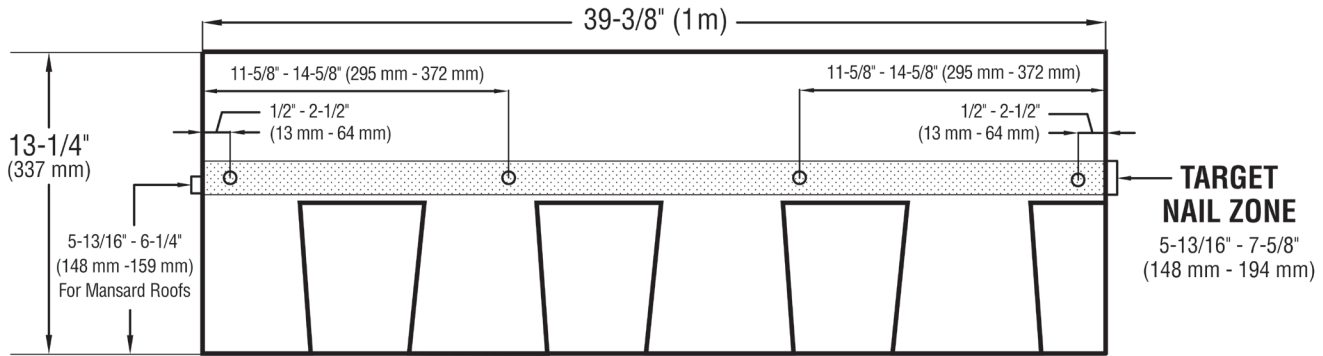
## NAILING INSTRUCTIONS / HAND-SEALING

### INSTRUCCIONES DE CLAVADURA / SELLADO A MANO

To hand-seal shingles and to ensure immediate sealing, apply 4 quarter-sized dabs of shingle tab adhesive on the back of the shingle 1" (25 mm) and 13" (330 mm) in from each side and 1" (25 mm) up from bottom of the shingle. Press shingle firmly into the adhesive. **CAUTION:** Apply ONLY a thin uniform layer of asphalt plastic cement less than 1/8" (3 mm) thick. Excess amounts can cause blistering of the shingles and may soften the asphalt in underlayments and leak barriers, resulting in the asphalt dripping and staining.

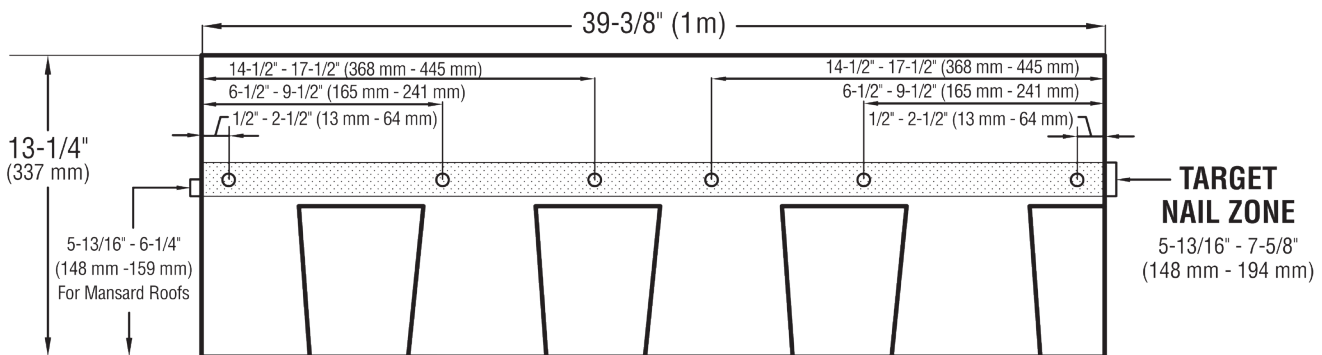
Para sellar las tejas a mano y garantizar una adhesión inmediata, coloque 4 pizcas del tamaño de una moneda de 25 centavos del adhesivo en la parte posterior de la teja a 1" (25 mm) y 13" (330 mm) hacia el interior de cada lado y a 1" (25 mm) hacia arriba desde la parte inferior de la teja. Presione la teja con firmeza contra el adhesivo.

**PRECAUCIÓN:** Aplique ÚNICAMENTE una capa delgada y uniforme del cemento plástico asfáltico con un espesor menor que 1/8" (3 mm). Cantidades excesivas pueden producir ampollamiento en las tejas, además de ablandar el asfalto en las capas base y las barreras contra goteras, lo cual provocará goteo y manchas en el asfalto.



**STANDARD NAILING PATTERN:** Nail shingles with 4 nails approximately 6 7/8" (174 mm) from bottom of shingle, in nailing area, as shown. Nails must not be exposed. For mansard roofs (21:12 and above), nail a nominal 6" (152 mm) from the bottom of the shingle and hand-seal shingles.

**PATRÓN COMÚN PARA LA COLOCACIÓN DE CLAVOS:** Clave las tejas con 4 clavos ubicados, aproximadamente, a 6 7/8" (174 mm) de distancia de la parte inferior de la teja en el área de clavado, tal como se muestra en la imagen. Los clavos no deben quedar expuestos. En el caso de techos de mansarda (con pendientes de 21:12 y superiores), coloque los clavos a una distancia nominal de 6" (152 mm) de la parte inferior de la teja y selle las tejas a mano.



**ENHANCED NAILING PATTERN\*:** Nail shingles with 6 nails approximately 6 7/8" (174 mm) from bottom of shingle, in nailing area, as shown. Nails must not be exposed. For mansard roofs (21:12 and above), nail a nominal 6" (152 mm) from the bottom of the shingle and hand-seal shingles.

\* Required by some local codes and required for enhanced wind coverage on certain products. See limited warranty for details.

**PATRÓN MEJORADO DE COLOCACIÓN DE CLAVOS\*:** Clave las tejas con 6 clavos ubicados, aproximadamente, a 6 7/8" (174 mm) de distancia de la parte inferior de la teja en el área de clavado, tal como se muestra en la imagen. Los clavos no deben quedar expuestos. En el caso de techos de mansarda (con pendientes de 21:12 y superiores), coloque los clavos a una distancia nominal de 6" (152 mm) de la parte inferior de la teja y selle las tejas a mano.

\* Requerido por algunos códigos locales y requerido para una mejor protección contra el viento en algunos productos. Para obtener información detallada, consulte la garantía limitada.

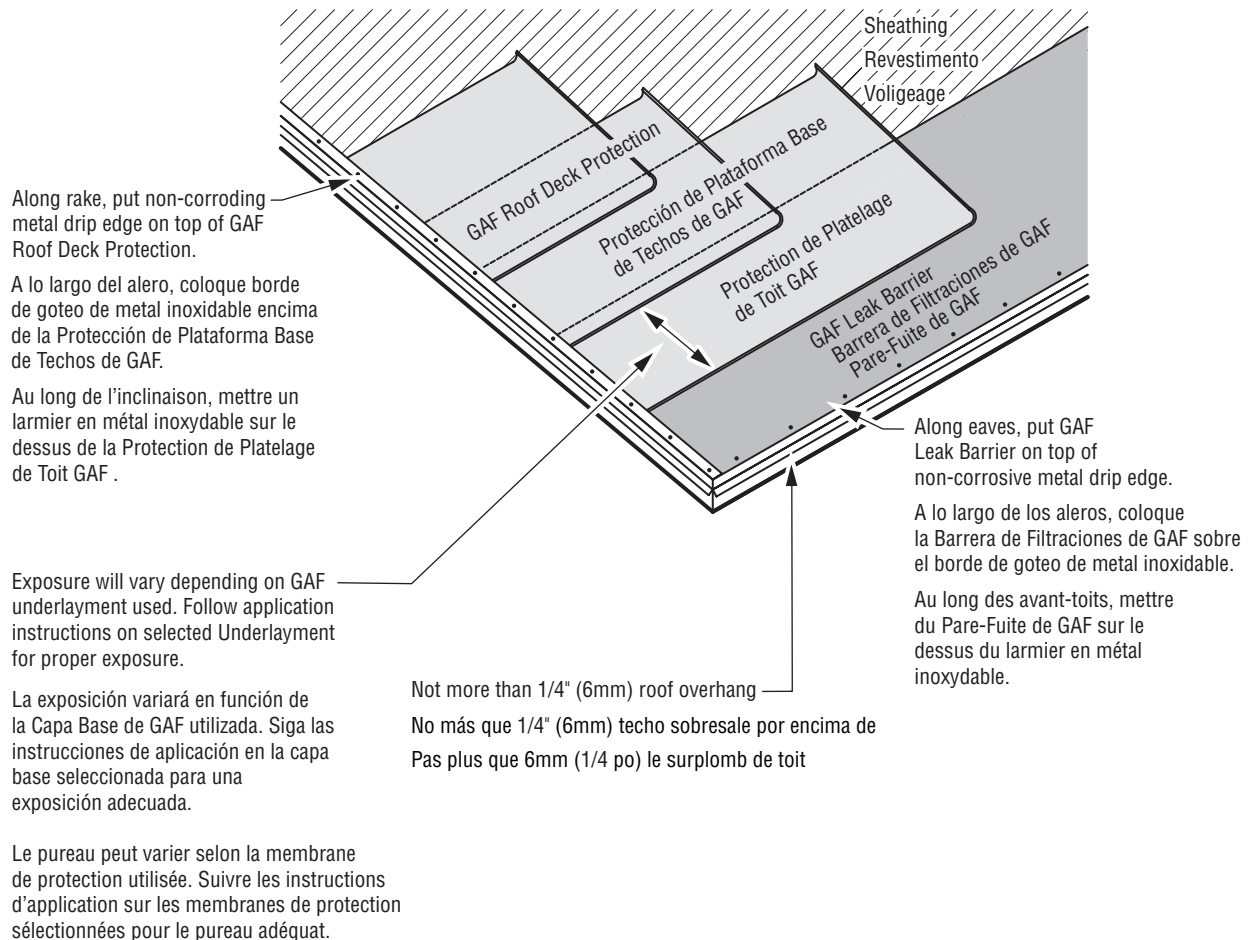
# INSTALLING UNDERLAYMENT INSTALANDO LA CAPA BASE

## UNDERLAYMENT: FOR ROOF SLOPES 2:12 TO LESS THAN 4:12

Application of eave flashing: At eaves and where ice dams can be expected, use one layer of GAF Leak Barrier. Eave flashing must not overhang the eave edge by more than 1/4" (6 mm) and should extend 24" (610 mm) beyond the inside wall line. Where ice dams or debris dams are not expected, install 2 plies of GAF Roof Deck Protection. Application of underlayment: Completely cover the deck with two layers of GAF Roof Deck Protection as shown. Use only enough nails to hold underlayment in place until covered by shingles.

## CAPA BASE: PARA TECHOS CON PENDIENTES DE 2:12 A MENOS DE 4:12

Aplicación de vierteaguas para aleros: En los aleros y donde se pueda esperar la presencia de estancamientos de hielo, use una capa de barrera contra goteras de GAF. El vierteaguas para aleros no debe sobresalir el borde del techo más de 1/4" (6 mm) y extenderse 24" (610 mm) más allá de la línea interior de la pared. Donde no se esperen estancamientos de hielo o escombros, instale 2 pliegues de protección de la cubierta del techo de GAF. Aplicación de capa base: Cubra completamente la plataforma base con dos capas de protección de la cubierta del techo de GAF como se muestra. Use solamente la cantidad suficiente de clavos como para sostener la capa base en su lugar hasta que la haya cubierto con las tejas.



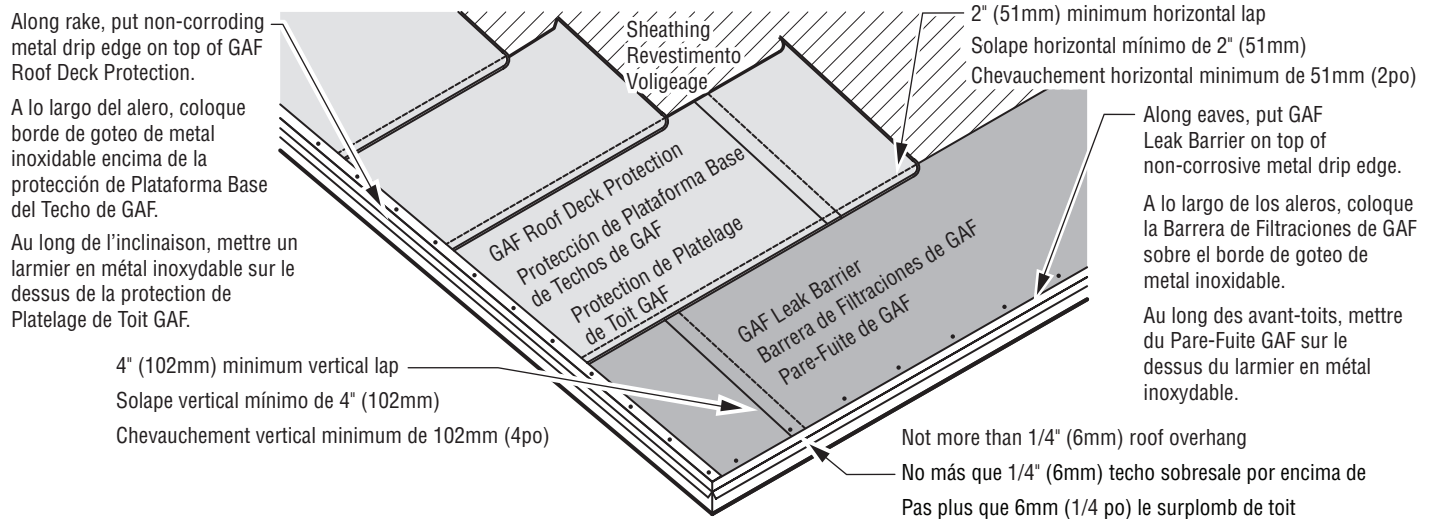
## UNDERLAYMENT: FOR ROOF SLOPES 4:12 OR MORE

**Application of eave flashing:** At eaves and where ice dams can be expected, use one layer of GAF Leak Barrier. Eave flashing must extend 24" (610 mm) beyond the inside wall line. Application of underlayment: Cover deck with one layer of GAF Roof Deck Protection installed without wrinkles. Use only enough nails to hold underlayment in place until covered by shingles.

## CAPA BASE: PARA TECHOS CON PENDIENTES DE 4:12 O MÁS

**Aplicación de vierteaguas para aleros:** En los aleros y donde se pueda esperar la presencia de estancamientos de hielo, use una capa de barrera contra goteras de GAF. El vierteaguas para aleros extenderse 24" (610 mm) más allá de la línea interior de la pared.

**Aplicación de capa base:** Cubra la cubierta con una capa de protección de la cubierta del techo de GAF instalada sin arrugas. Use solamente la cantidad suficiente de clavos como para sostener la capa base en su lugar hasta que la haya cubierto con las tejas.



## INSTALLING STARTER STRIP SHINGLES INSTALACIÓN DE TEJAS DE HILADA INICIAL

### STARTER COURSE

Use GAF starter strip shingles along the eaves and rake. Apply as shown. NOTE: GAF starter strip shingles are recommended at the rakes for best performance and required for enhanced warranty coverage on certain products (see limited warranties for details). Refer to application instructions for the selected starter strip shingles.

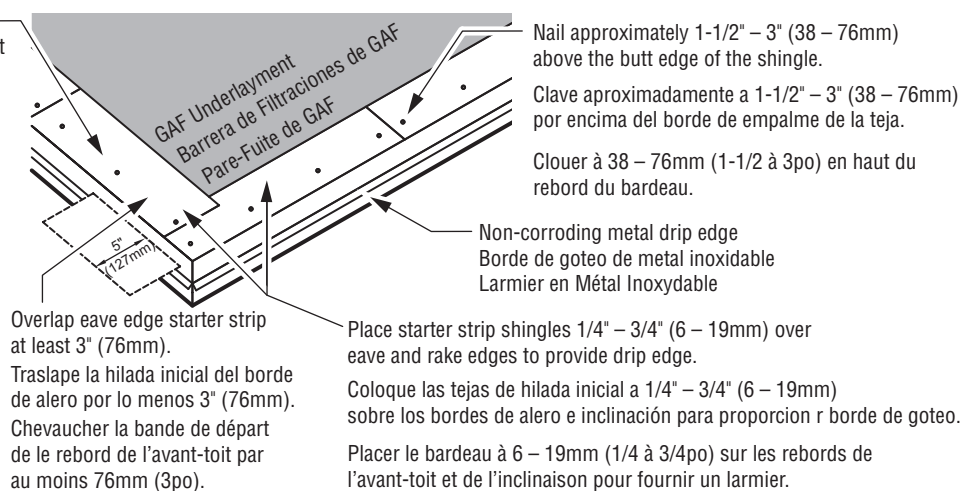
### HILADA INICIAL

Use tejas de hilada inicial de GAF en los aleros. Siga las instrucciones de aplicación de tejas de hilada inicial. NOTA: Se recomienda usar tejas de hilada inicial de GAF en las inclinaciones para mejor rendimiento y se requiere para cobertura de la garantía contra el viento en ciertos productos (consulte la garantía limitada para detalles).

For maximum wind resistance along rakes, install any GAF Starter Strip shingles which contain sealant or cement shingles to underlayment and each other in a 4" (102mm) width of asphalt plastic cement.

Para máxima resistencia al viento a lo largo de las inclinaciones, instale cualquier teja de Hilada Inicial de GAF con conteniendo sellador o cemento las tejas a la capa base y entre sí en un ancho de 4" (102mm) de cemento plástico asfáltico.

Pour une résistance maximale contre les vents le long des inclinaisons, installer des bardeaux de Bande de Départ GAF avec scellant ou coller les bardeaux à la membrane de protection et l'un à l'autre dans une largeur de ciment plastique asphalté de 4po (102mm).





# INSTALLING SHINGLES

## INSTALACIÓN DE TEJAS

### FIRST COURSE

Start with full shingle, which **MUST** be nailed on lower nail zone line. Shingle exposure should be 5-5/8" (143 mm)

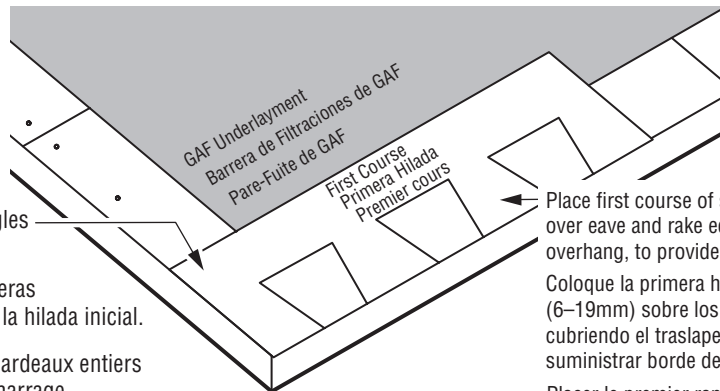
### PRIMERA HILADA

Comience con teja completa. La teja completa **DEBE** ser clavado en la línea inferior de la zona de clavo. La exposición de la teja debe ser 5-5/8" (143 mm)

Start at either rake and lay in either direction.

Comience en cualquier inclinación y coloque en cualquier dirección.

Débuter à l'une ou l'autre des inclinaisons et étendre dans les deux directions.



Start and continue with full shingles laid flush over the starter course.

Empiece y continúe con tejas enteras colocadas en forma nivelada con la hilada inicial.

Démarrer et continuer avec des bardeaux entiers définies flush sur le cours de démarrage.

Place first course of shingles 1/4" – 3/4" (6–19mm) over eave and rake edges, covering starter course overhang, to provide drip edge.

Coloque la primera hilada de tejas a 1/4" – 3/4" (6–19mm) sobre los bordes de alero e inclinación, cubriendo el traslape de la hilada inicial, para suministrar borde de goteo.

Placer le premier rang des bardeaux à 6-19mm (1/4 à 3/4po) sur les rebords de l'avant-toit et de l'inclinaison, en couvrant le surplomb du rang de départ, pour fournir un larmier.

### SECOND COURSE

Position the shingles in the second and subsequent courses flush with the tops of the wide cut-outs. This results in a 5-5/8" (143 mm) exposure.

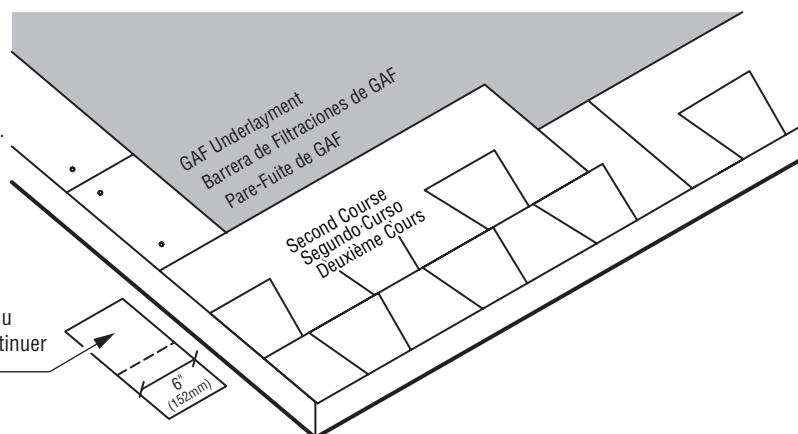
### SEGUNDA HILADA

Coloque las tejas en la segunda hilada y subsiguientes a ras con las partes superiores de los cortes amplios. Esto resulta en una exposición de 5-5/8" (143 mm).

Trim 6" (152mm) from rake edge of first shingle. Continue with whole shingles.

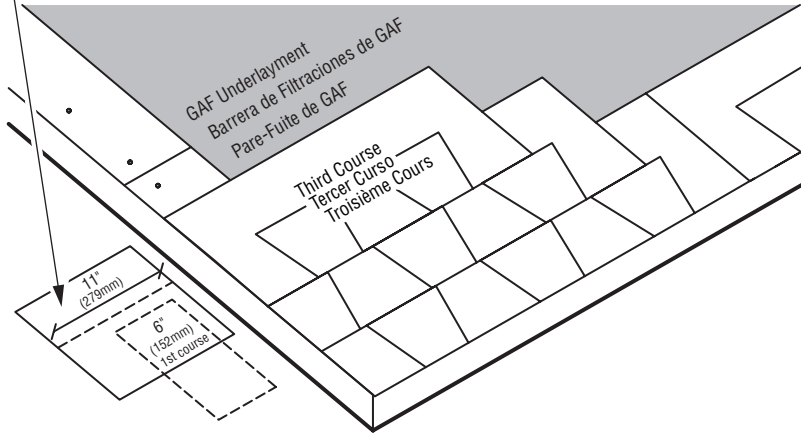
Recorte 6" (152mm) del borde de inclinación de la primera teja. Continúe con tejas completas.

Découper à 110mm (152po) du bout du premier bardeau. Continuer avec des bardeaux entiers.



**THIRD COURSE  
TERCERA HILADA**

Trim 11" (279mm) from rake end of first shingle.  
 Recorte 11" (279mm) del borde de inclinación de la primera teja.  
 Découper à 279mm (11po) du bout du premier bardeau.



**4TH COURSE AND REMAINING**

Strike a chalk line about every 6 courses to check parallel alignment with eaves.

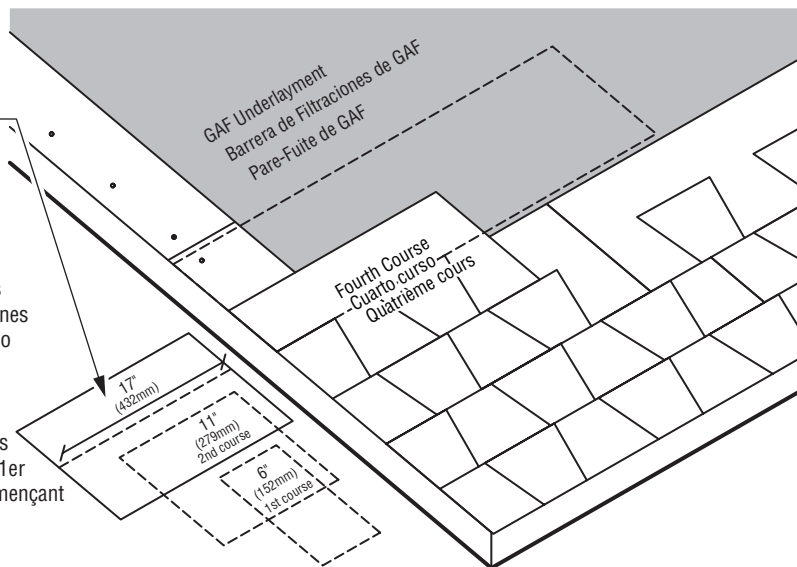
**4TA. HILADA Y RESTANTES**

Trace una línea de tiza aproximadamente cada 6 hiladas para controlar la alineación paralela con los aleros.

Trim 17" (432mm) from rake end of first shingle. Continue with whole shingles. Repeat the 1st - 4th course instructions on the remaining courses, starting the fifth course with a full shingle.

Recorte 17" (432mm) del lado que va al borde en la primera teja. Continúe con tejas completas. Repita de la 1ra a la 4ta instrucciones de hilada en las hiladas restantes, comenzando la quinta hilada con una teja completa.

Découper à 432mm (17po) de la fin de râteau de premier bardeau. Continuer avec des bardeaux entiers. Répéter les instructions du 1er au 4ème rang sur les rangs restants, en commençant au cinquième rang avec un bardeau entier.



# INSTALLING ROOF ACCESSORIES AND DETAILS

## INSTALACIÓN DE ACCESORIOS Y DETALLES DE TECHO

### VENTILATION

Install GAF ventilation products for optimal shingle life. See General Instructions and the "Through Ventilation" section. Follow the application instructions for the selected ventilation products.

### VENTILACIÓN

Instale productos de ventilación de GAF para una óptima vida útil de la teja. Consulte las Instrucciones Generales y la sección "A Través de la Ventilación". Siga las instrucciones de aplicación de los productos de ventilación seleccionados.

### RIDGE CAP SHINGLES

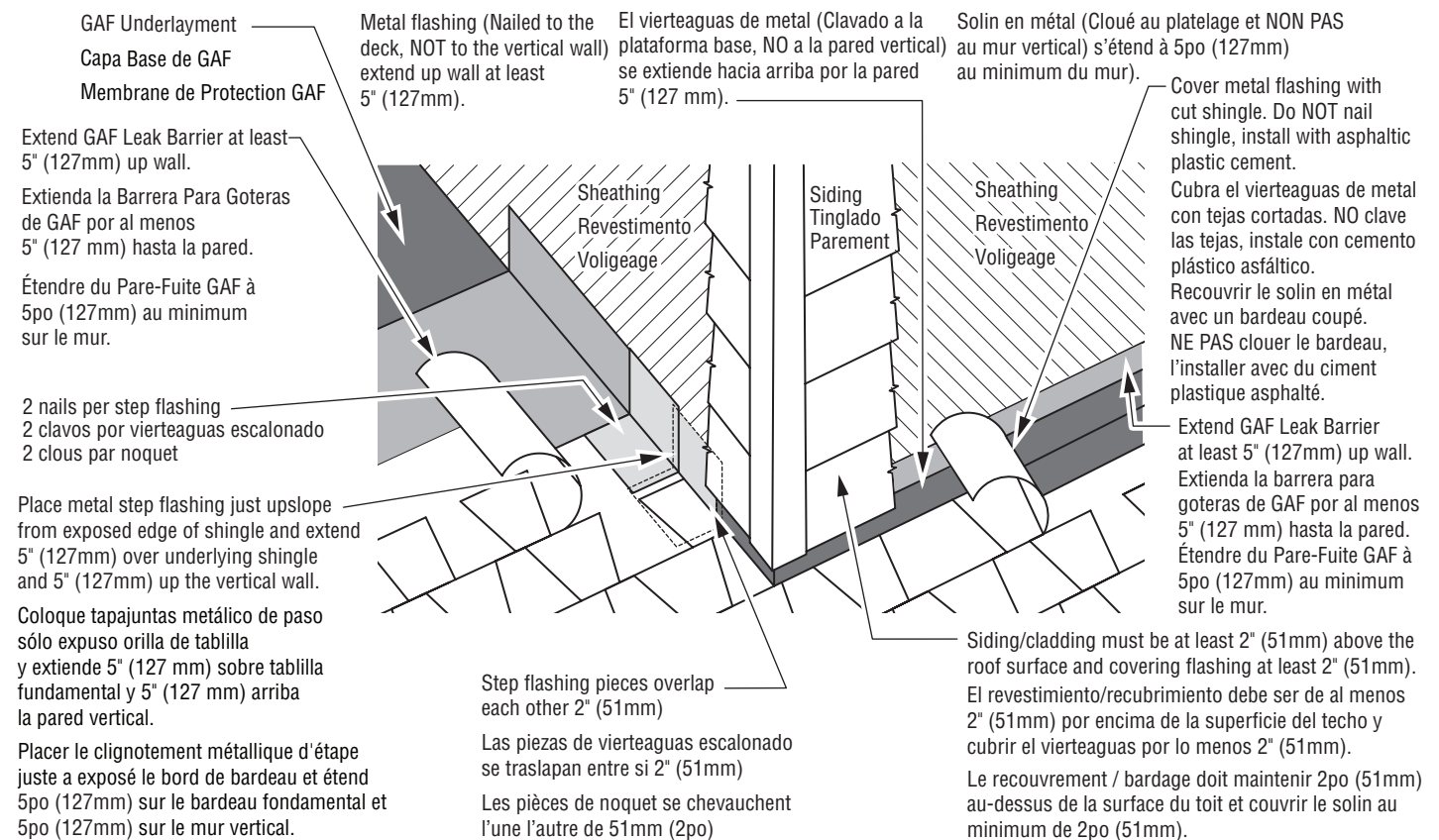
Install GAF Ridge Cap Shingles following the application instructions shown on the GAF Ridge Cap Shingle wrapper. Position laps away from prevailing wind direction.

### TEJAS DE CUMBRERA

Instale las tejas de cumbrera de GAF siguiendo las instrucciones de aplicación que figuran en el envoltorio de las tejas de cumbrera de GAF. Coloque los solapes lejos de la dirección del viento predominante.

### WALL FLASHING (Sloped Roof to Wall)

### VIERTEAGUAS DE PARED (Techo en pendiente hacia la pared)



## CHIMNEY FLASHING AND CRICKETS

Cover deck around chimney and over wood crickets with GAF Roof Deck Protection. DO NOT run GAF Roof Deck Protection up sides of chimney. Install leak barrier over GAF Roof Deck Protection and up sides of chimney at least 5" (127 mm). Install shop fabricated metal cricket flashings (shown) after underlayments are installed. Seal shingles to the metal flanges (see drawing below). Treat large wooden crickets like a separate roof and install valleys, shingles, hip and ridge shingles, and step flashing.

## VIERTAGUAS DE CHIMENEA Y DESVIADOR

Cubra alrededor de la chimenea y sobre los desviadores en pino de madera con protección de la cubierta del techo de GAF. NO coloque protección de la cubierta del techo de GAF por los laterales de la chimenea. Instale la barrera contra goteras sobre la protección de la cubierta del techo de GAF y a los costados de la chimenea a un mínimo de 5" (127 mm). Instale los vierteaguas de los desviadores de metal fabricados (que se muestran) después de instalar las capas base. Selle las tejas a las bridas de metal (ver ilustración debajo). Trate los desviadores grandes de madera como un techo por separado e instale los valles, tejas, tejas de cumbres y bordes y vierteaguas de paso.

Extend non-corroding metal counter flashing over base flashing.

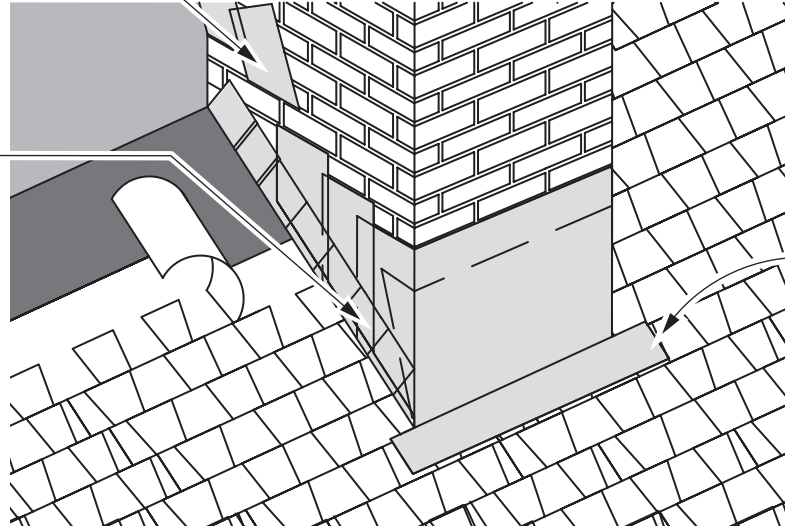
Extienda contravierteaguas de metalinoxidable sobre vierteaguas de base.

Etendre contre solin en metal inoxydable sur le solin de base.

Use one piece metal non-corroding step flashing for each course. Seal overlying shingles to step flashing with asphalt plastic cement.

Utilice un metal de pedazo tapajuntas no-corroendo de paso para cada curso. Selle tablillas que recubre para dar un paso destellar con asfalto cemento plástico.

Utiliser un métal de morceau clignotement d'étape non-corrodant pour chaque cours. Sceller des bardeaux recouvrir pour marcher clignoter avec l'asphalte ciment en plastique.

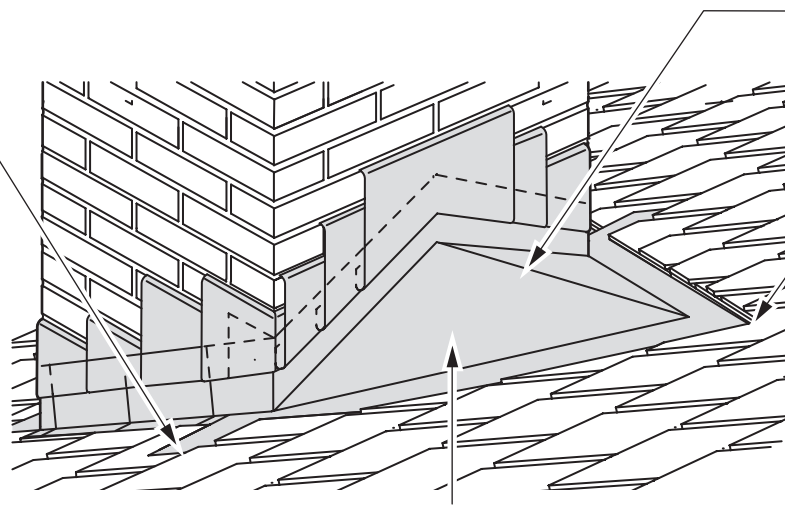


4" (102mm) mín.  
4" (102mm) mín.  
102mm (4po) mín.

Seal shingles to metal flange with asphalt plastic cement.

Selle las tejas a la brida de metal con cemento del plástico del asfalto.

Sceller les bardeaux à la bride de métal avec du ciment de plastique d'asphalte.



Cricket ridge should be at least 12" (305mm).  
El borde de los desviadores debe estar a por lo menos 12" (305 mm).  
Le pli du dos d'âne doit être au minimum de 12po (305mm).  
Cricket flange should be at least 18" (457mm) up roof deck.  
La brida de los desviadores debe estar a por lo menos 18" (457mm) por la cobertura del techo.  
La bride du dos d'âne doit être au minimum à 18po (457mm) sur le platelage de toit.

Crickets should extend at least 6" (152mm) up the back of the chimney and extend at least 12" (305mm) up the roof deck.

Los desviadores deben extenderse a por lo menos 6" (152mm) hasta la parte posterior de la chimenea y extenderse a por lo menos 12" (305mm) hasta la cubierta del techo.

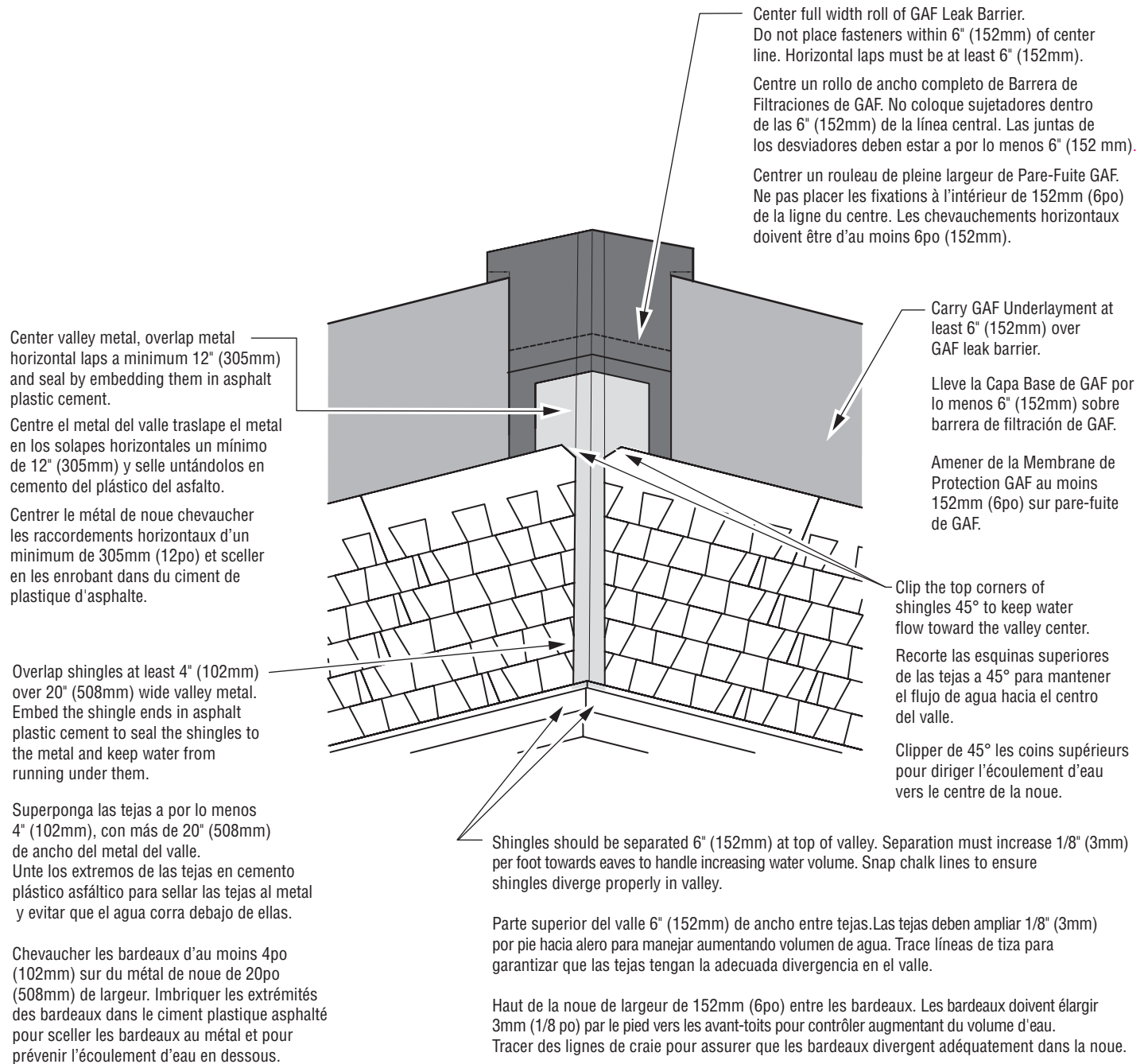
Les dos d'âne doivent s'étendre au minimum de 6po (152mm) vers l'arrière de la cheminée et s'étendre au minimum de 12po (305mm) vers le plan du toit.

## VALLEY CONSTRUCTION – OPEN

Use minimum 20" (508 mm) wide aluminum, galvanized steel, copper, or other non-corroding, non-staining metals (24 gauge minimum). Long valleys or local building codes may require wider metal. Nail the metal on the edges so the nail heads hold it in place. Do not puncture the metal. Nailing through the metal may cause leaking and buckling due to movement.

## CONSTRUCCIÓN DEL VALLE – DE CORTE ABIERTO

Use un ancho mínimo de 20" (508 mm) de aluminio, acero galvanizado, cobre y otro metal inoxidable que no manche (calibre 24 como mínimo). Los valles largos o los códigos locales de construcción pueden requerir un metal más ancho. Clave el metal en los bordes de modo tal que las cabezas de los clavos sostengan el metal en su lugar. No perforo el metal. Clavar a través del metal puede causar filtraciones y ampollamiento debidos al movimiento.



## VALLEY CONSTRUCTION – CLOSED CUT

### CONSTRUCCIÓN DEL VALLE – CORTE CERRADO

Extend end of shingle at least 12" (305mm) beyond valley center line. Before nailing, firmly press shingles down at valley center to conform to valley shape. Nail, putting extra fastener in top corner of shingle. Due to the extreme water volume in valleys, nails near the center can leak.

Extienda la teja del extremo por los menos 12" (305mm) más allá de la línea del centro del valle. Antes de clavar, presione firmemente las tejas sobre el centro del valle para ajustarse a la forma del valle. Clavo, poniendo un sujetador adicional en la esquina superior de la teja. Debido al volumen extremo de agua en los valles, los clavos cercanos al centro pueden tener filtraciones.

Étendre le bout du bardeau d'au moins 305mm (12po) dépassé la ligne centrale de la noue. Avant de clouer, appuyer fermement sur le bardeau au centre de la noue pour apparier la forme de la noue. Clouer, en plaçant une fixation additionnelle sur le coin supérieur du bardeau. En raison du volume important d'eau dans les noues, les clous près du centre peuvent causer une fuite.

Carry GAF Underlayment at least 6" (152mm) over GAF Leak Barrier.

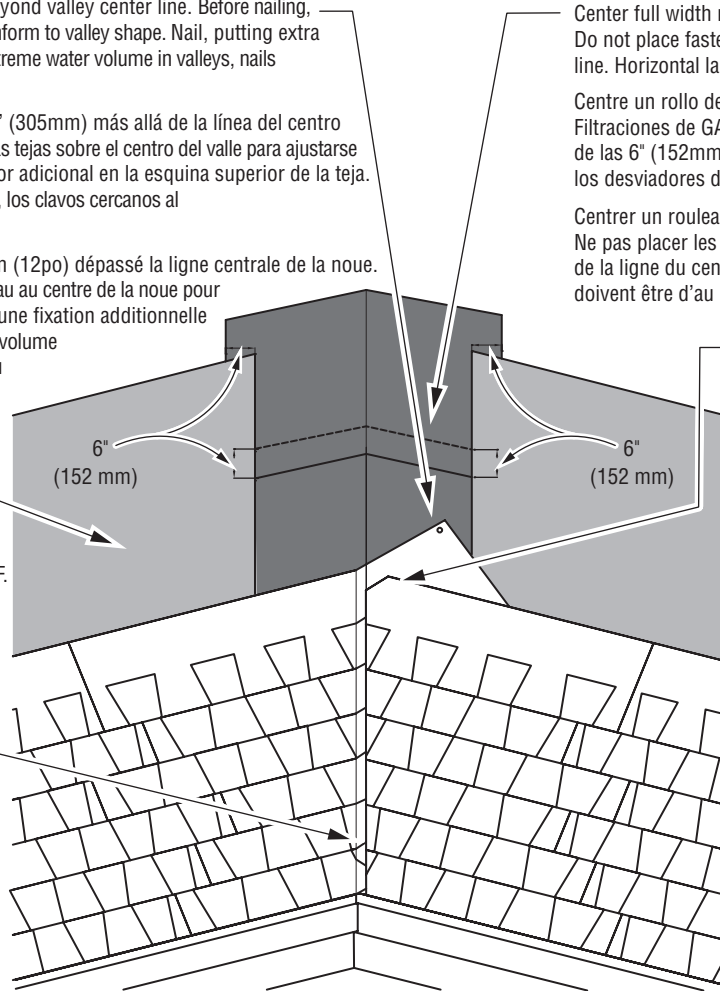
Lleve la Capa Base de GAF por lo menos 6" (152mm) sobre barrera de filtración de GAF.

Amener de la Membrane de Protection GAF au moins 152mm (6po) sur Pare-Fuite de GAF.

Run starter strip across valley at least 12" (305mm) and weave with opposite side starter strip and shingle.

Haga correr la hilada inicial por todo el valle 12" (305mm) como mínimo y entrelace con la hilada inicial y teja de hilada inicial del lado opuesto.

Courir une bande de départ au travers de la noue d'un minimum de 12po (305mm) et joindre avec la bande de départ et le bardeau du côté opposé.



Center full width roll of GAF Leak Barrier. Do not place fasteners within 6" (152mm) of center line. Horizontal laps must be at least 6" (152mm).

Centre un rouleau de ancho completo de Barrera de Filtraciones de GAF. No coloque sujetadores dentro de las 6" (152mm) de la línea central. Las juntas de los desviadores deben estar a por lo menos 6" (152mm).

Centrer un rouleau de pleine largeur de Pare-Fuite GAF. Ne pas placer les fixations à l'intérieur de 152mm (6po) de la ligne du centre. Les chevauchements horizontaux doivent être d'au moins 6po (152mm).

Overlying shingles must be cut so they are 2" (52mm) away from valley center line. Clip shingle corners 45° to keep water flow in the valley center. Seal the valley shingles to each other using plastic roof cement.

Las tejas superpuestas deben ser cortadas para tener 2" (52mm) de distancia de la línea central del valle. Recorte las esquinas de las tejas a 45° para mantener el flujo de agua en el centro del valle. Selle las tejas de valle entre sí utilizando cemento plástico para techo.

Les bardeaux qui chevauchent doivent être coupés de sorte qu'ils sont éloignés de 2po (52mm) de la ligne du centre de noue. Clipper les coins de bardeau à 45° pour garder l'écoulement d'eau dans le centre de la noue. Sceller les bardeaux de noue l'un à l'autre avec du ciment plastique asphalté.

CAUTION: Do NOT place nails closer than 6" (152 mm) to the valley center line.

El CUIDADO: NO coloque clavos más cerca que 6" (152mm) al valle la línea central.

PRUDENCE : NE pas placer des clous plus près que 152mm (6po) à la ligne de centre de vallée.

## PRECAUTIONARY NOTES

1. Do NOT use on vertical side walls.
2. These shingles are particularly tough and may require additional effort to trim to fit on the roof. Curved blade utility knives are more effective than straight blade utility knives in cutting these shingles. Using a circular saw equipped with carbide-tipped blades is also effective.
3. Asphalt shingles will be stiff in cold weather and flexible in hot weather. Handle carefully. Shingles can easily be broken in cold weather or their edges damaged in hot weather. Do not drop bundles on edges or on other bundles to separate shingles. Do not load bundles across a hip or ridge. Do not bend bundles over shoulder for carrying. Premium shingles with heavier weight may cause cracks at sharp bend points.
4. Store on flat surface in a covered, ventilated area with a maximum temperature of 110°F (43°C). Do not store near steam pipes, radiators, etc., or in sunlight. Do not store double-stacked pallets on a long-term basis. If double stacking is required for short periods, use slip sheets of 1/2" (13 mm) plywood cut to the pallet size to minimize damage. Long-term double-stacked storage, especially in hot weather, can result in possible sticking, staining, and distortion of the shingles.

**RE-ROOFING:** If old asphalt shingles are to remain in place, nail down or cut away all loose, curled, or lifted shingles and replace with new, and just before installing the new roofing, sweep the surface clean of all loose debris. Since any irregularities may show through the new shingles, be sure the underlying shingles provide a smooth surface. Fasteners must be long enough to penetrate the wood deck at least 3/4" (19 mm) or just through plywood. Follow shingle installation instructions for installation.

**NOTE:** Shingles can be applied over wood shingles if the surface can be made smooth enough. This may include cutting back old shingles at eaves and rakes, installing new wood edging strips as needed, and the use of beveled wood strips. Install Type 30 underlayment to maintain a ANSI/UL 790 Class A roofing fire rating.

**IMPORTANT:** Repair leaks promptly to avoid adverse effects, including mold growth.

For general technical support, visit our website at [gaf.com](http://gaf.com) or call 1-800-766-3411.

## NOTAS DE PRECAUCIÓN

1. NO utilice este producto en paredes laterales verticales.
2. Los cuchillos de utilería con filo curvo son más efectivos que los de filo recto para cortar estas tejas. Utilizar una cierra circular con cuchillas de puntas de carburo es también muy efectivo. Independientemente de la herramienta que se utilice, use siempre un equipo de protección apropiado, como guantes, protección ocular, etc. En caso de que se genere polvo o se eliminen gases, le recomendamos usar una protección respiratoria adecuada. Consulte la Hoja de datos de seguridad (Safety Data Sheet, SDS) para mayor información y siga todos los procedimientos de seguridad indicados.
3. Debido a la naturaleza de las tejas asfálticas, estas son rígidas en climas fríos y flexibles en climas cálidos. Manipule este producto con precaución. Las tejas pueden romperse con facilidad en climas fríos, o bien sus bordes pueden dañarse en climas cálidos. No deje caer los paquetes sobre los bordes ni sobre otros paquetes para separar las tejas. No cargue paquetes sobre techos a cuatro aguas ni sobre las cumbres. No se incline para cargar y transportar los paquetes en el hombro. Las tejas de calidad superior con mayor peso pueden agrietarse en curvas pronunciadas.
4. Almacene este producto sobre una superficie plana en un área cubierta y ventilada con una temperatura máxima de 110°F (43°C). No almacene cerca de tuberías de vapor, radiadores, etc., ni bajo la luz solar directa. No almacene el producto apilado en palés durante un período prolongado. Si es necesario almacenar el producto apilado en palés durante períodos cortos, utilice láminas deslizantes de madera contrachapada de 1/2" (13 mm) entre medio de los palés para reducir los daños. El almacenamiento del producto apilado en palés durante largos períodos, especialmente en climas calurosos, puede causar posibles adherencias, manchas y deformación de las tejas.

**RETECHADO:** Si las tejas asfálticas antiguas deben permanecer en su lugar, desclave o corte todas las tejas flojas, onduladas o levantadas y reemplácelas por tejas nuevas. Justo antes de instalar el techo nuevo, limpie la superficie hasta que no haya partículas sueltas. Dado que cualquier irregularidad puede ser visible a través de las tejas nuevas, asegúrese de que las tejas de la base brinden una superficie plana. Los sujetadores deben tener la longitud suficiente para penetrar al menos 3/4" (19 mm) la cubierta de madera o solo a través de la cubierta de madera contrachapada. Siga las instrucciones de instalación de tejas para una correcta instalación.

**NOTA:** Las tejas pueden aplicarse sobre tejas de madera siempre que la superficie esté lo suficientemente lisa. Esto puede implicar cortar tejas viejas en aleros y desniveles, instalar ribetes de borde de madera nuevos según sea necesario y colocar listones de madera biselados. Instale una capa base Tipo 30 para mantener una calificación contra incendios en techos Clase A, según lo establecido por la norma ANSI/UL 790.

**IMPORTANTE:** Repare las goteras rápidamente para evitar efectos adversos como el crecimiento de moho.

Para obtener soporte técnico general, visite nuestro sitio web [es.gaf.com](http://es.gaf.com), o bien llame al 1-800-766-3411.