THE CITY OF NEW YORK
DEPARTMENT OF BUILDINGS

DEPARTMENTAL MEMORANDUM DATE: June 7, 1982

TO: Borough Superintendents

FROM: Irving E. Minkin, P.E., Deputy Commissioner

SUBJECT: Pneumatically Driven Roof Staples

Table 10-4 of the Building Code specifies a nailing schedule for fastening structural lumber components to each other. Included therein are provisions relating to staples; however, the foregoing did not include specifications for fastening non-structural components of building elements, such as roof shingles or the like.

The enclosed specifications for installation of pneumatically driven roof staples has been reviewed, and found to be acceptable for use in construction in this city, provided that all of the requirements set forth in the enclosures are strictly adhered to.

Irving E. Minkin, P.E.
Deputy Commissioner

IEM:rmr
cc: Commissioner I. Fruchtman, P.E.
Ass't. Commissioner, C.F. DEnnis, P.E.
Professional Societies
B.I.A.C.

1854

BUILDING ELEMENT	NAIL TYPE	NUMBER AND DISTRIBUTION	LEG LENGTH
Asphalt Composition Roof Shingles	16 gauge galvanized staples, 3/4" crown minimum, manufactured from steel wire which is zinc coated by hot-dip galvanized zinc, mechanically deposited zinc or electro-deposited zinc.	A minimum of 4 staples per each 36" section of shingle.	Staple leg length should be long enough to penetrate the opposite side of the sheathing 1/8" or to penetrate the sheathing 3/4".
Asphalt Composition Ridge, Hip, Caps	16 gauge galvanized staples, 3/4" crown minimum, manufactured from steel wire which is zinc coated by hot-dip galvanized zinc, mechanically deposited zinc or electro-deposited zinc.	A minimum of 4 staples per each 36" section of shingle.	Staple leg length should be long enough to penetrate the opposite side of the sheathing 1/8" or to penetrate the sheathing 3/4".

NOTES:
1. Staples should be driven with pneumatic staplers which are specifically designed and manufactured for roofing applications.
2. Staples should be spaced based on the nailing locations as outlined on the roofing manufacturer's packages.

1855

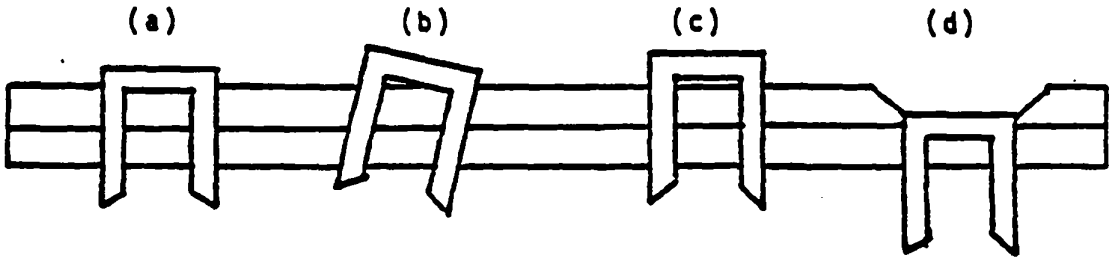
SUMMARY OF PROPER INSTALLATION PRACTICES FOR ROOF STAPLES

1. STAPLE AND STAPLER SELECTION

For new roof construction only, the staples should be zinc coated, 16 gauge, semi-flattened to an eliptical cross section, and long enough to penetrate 3/4" into the wood deck or through it 1/8" if the deck is thinner. The staples should be driven with pneumatic stapler specially designed and manufactured for roofing applications.

2. STAPLE INSTALLATION

To properly secure the shingles and obtain a smooth roof, make sure the tool is always perpendicular to the surface of the shingle. The staple crown must bear tightly against the shingles, but must not cut the shingle surface.



a. Properly Driven
b. Improperly Driven (tool not perpendicular to surface)
c. Under Driven
d. Over Driven

3. ADJUSTING AIR PRESSURE

Start by adjusting the air pressure regulator to show a pressure on the pressure indicator of 90 pounds per square inch (PSI) in the line to the tool (the pneumatic outfit must contain an air pressure indicator/regulator). Using the starter course as a test area, drive staples and adjust the air pressure so the staple crown is driven flush with the shingle surface. Any depressing or tearing of the shingle surface requires reducing the air pressure until the staple is driven flush with the surface. If any light can be seen between the staple and the shingle surface, or your fingernail, or a strip of paper torn from the wrapper can be inserted under a driven staple, the air pressure must be increased until the staple is driven flush with the surface.

1856

Because of the hardness variances in roof decking, periodically check how deep the staples are being driven. Adjust air pressure as required to drive staple flush with shingle surface (as indicated in above).

4. APPLICATION OF SHINGLES

The application instructions printed on the packages of shingles must be followed as they apply to deck preparation, underlayment, shingle layout, valley, flashing and hips or ridges as they are required for new construction. To insure proper securing of each unit of 36" strip-type asphalt shingles a minimum of four (4) staples is required.

An Application Guide to Installing CertainTeed Big Bonus® Shingles with Air-Powered Staplers

New Construction

CertainTeed

1858