

Neo-Shok™

U.S. Patent No. 4879857

Photo captions:

- A.** Quick response contact point
- B.** Unmatched resilient load performance
- C.** Two layers of 15/32" APA rated plywood subfloor
- D.** Two-stage Neo-Shock Pad
- E.** First stage responsive to light loads
- F.** Second stage responsive to aggressive loads

Leading the Industry in Shock Absorption

This economical floating sports floor system provides high resiliency, uniformity, energy return and versatility. By offering three durometer choices, the Neo-Shok system can be customized to meet the performance specifications in multi-use installations. Its adaptability assures each separate area of the floor performs to the standards set for each use. The top-scoring resilient load performance of Neo-Shok is ideal for weighty bleachers.

Featuring the original bio-mechanical pad, the Neo-Shok system feels comfortable to the athlete playing on this proven, high performance floor.

Neo-Shok • Installations

Carnegie Mellon University, Pittsburgh, PA • Central High School, Evansville, IN • Champions Athletic Club, Broken Arrow, OK • Detroit Pistons Training Facility, Detroit, MI • Letourneau University, Longview, TX • Miami Heat Training Facility, Miami, FL • NEC Electronics, Roseville, CA • Northern Michigan University, Marquette, MI • North Providence High School, North Providence, RI • Ramsey Student Center, University of Georgia, Athens, GA • Wake Forest University, Winston Salem, NC • Western Michigan University, Kalamazoo, MI • Wichita East YMCA, Wichita, KS

PART 1 - GENERAL SPECIFICATIONS

General Specifications

These specifications relate to general areas for the flooring systems which must be completed for proper installation of the materials furnished by Connor•AGA. Connor•AGA does not undertake to do or supervise the work necessary under "General Specifications."

The furnishing of material, complete installation of the flooring systems described herein, including surface vapor proofing of the concrete slab, as well as laying, sanding and finishing, including application of game lines with respect to the wood floor, and installation of perimeter molding and base, is included in the wood flooring branch of work.

1.1 DESCRIPTION

A. Related work specified under other sections.

1. CONCRETE SUBFLOORS - SECTION 03300

- a. The general contractor shall furnish and install the concrete subfloors depressing the slab sufficiently to accommodate the floor system. The slab shall be steel troweled and finished smooth to a tolerance of 1/8" in any 10' radius by the general contractor. High

spots shall be ground level, and low spots filled in with approved leveling compound by the general contractor to the full approval of the installer (Flooring Contractor).

- b. NOTE: For Rezill Channel, Anchor-Flex, Permalock, Grip-Tite and Anchored Rezill Sleeper systems, the concrete slab aggregate shall be 3/4" screen crushed limestone or similar type materials (no river gravel or pea gravel), free of curing agents. Concrete shall develop an average of 3,500 PSI compression after 28 days.

2. MEMBRANE WATERPROOFING - SECTION 07100

- a. Concrete subfloors on or below grade shall be adequately waterproofed beneath the slab and at the perimeter walls and on earth side of below grade walls by the general contractor using suitable type membrane. Below grade slabs or in areas with a hydrostatic head shall be adequately waterproofed beneath the slab on earth side of walls using 1/8" pre-molded membrane equal to W.R. Meadows, Inc., Elgin, Illinois.

3. THRESHOLDS - SECTION 08700

4. GAME STANDARD INSERTS - SECTION 11500

1.2 REFERENCES

- A. MFMA - Maple Flooring Manufacturers Association
- B. DIN Standards 18021, Part 2

1.3 QUALITY ASSURANCE

- A. MANUFACTURER: Manufacturer of resilient flooring shall be a firm specializing in manufacturing products specified in this section.
- B. INSTALLER (FLOORING CONTRACTOR): The complete installation of the flooring systems, as described in the scope of these specifications and herein, shall be carried out by an experienced installer (Flooring Contractor), and the work shall be performed in accordance with the most recent installation instructions of the manufacturer.

Installer (Flooring Contractor) shall be liable for all matters related to installation for a period of one year after the floor has been substantially installed and completed.

C. PERFORMANCE TESTING

- 1. Flooring system shall have been independently tested and evaluated for athletic performance according to the international standard DIN 18032, Part 2.
- 2. Flooring system shall have been independently tested and evaluated for engineering performance according to the Structural Testing and Engineering Measures (STEM).

1.4 SUBMITTALS

- A. Submit Connor•AGA specification sheets.
- B. Sample - Submit one sample of specified system, if requested by architect.
- C. Maintenance Literature - Upon completion of floor installation, send to owner, attendants or individuals in charge and responsible for the upkeep of the building a CARE CARD. This card spells out care and maintenance instructions including temperature and humidity ranges for

areas where flooring is installed.

- D. Limitation of Connor•AGA Representation and Warranty - The furnishing of the “specification sheets,” sample of the “specified system,” or “CARE CARD” does not constitute a representation or warranty of any nature, type or description by Connor•AGA. Connor•AGA’s warranty is limited to that described at the end of this document under separate heading “Connor•AGA Representation.”

1.5 WORKING CONDITIONS

- A. The wood flooring specified herein shall not be installed until all masonry, painting, plaster, tile, marble and terrazzo work is completed, and overhead mechanical trades and painters have finished in the wood floor areas. The building shall be enclosed and weathertight. The building must be reasonably dry, all openings must be closed in, and permanent heating and air conditioning installed and working.
- B. The concrete subfloor shall be determined dry by industry standard testing procedures, free of foreign materials, and turned over to the installer (Flooring Contractor) broom clean. Moderate room temperature of 65° or more shall be maintained a week preceding and throughout the duration of the work. Humidity conditions within the building shall approximate the humidity conditions which will prevail when the building is occupied.
- C. Permanent heat, light and ventilation shall be installed and operating during and after installation, maintaining a temperature range of 55°F to 78°F and a relative humidity range of 35% to 50%. Ideal installation and storage conditions are the same as those which will prevail when building is occupied. Uncontrolled environmental conditions as a result of non-working or non-existing mechanicals may cause excessive flooring shrinkage or expansion.
- D. Flooring must be stored in a dry, well-ventilated area, not in contact with the masonry, to acclimate to building conditions and shall be installed at a moisture content compatible with the normally expected environmental range of temperature and relative humidity achieved while the facility is occupied.
- E. After floors are finished, area shall be locked by general contractor to allow curing time for finish. If after required curing time general contractor or owner requires use of gym, he shall protect the floor by covering with non-marring Kraft paper or red rosin paper with taped joints until acceptance by owner of complete gymnasium floor.
- F. Working conditions as described above shall be followed. Variations and substitutions shall be submitted for approval to the architect who shall advise Connor•AGA of the same.

1.6 TREATING (Optional)

Wood flooring shall be treated with WOODLIFE when specified. WOODLIFE is a clear, penetrating, water repellent wood preservative that protects against mold, mildew, staining and decay fungi, and serves as a deterrent to termites and other insects.

1.7 DRINKING FOUNTAINS

To eliminate floor damage due to water spillage, allow for a concrete “pad” or other non-wood surface to be installed by others in an area approximately 4' x 4' in front of, and to each side of, water fountains.

1.8 HUMIDITY CONTROL

Since all wood flooring will expand and contract as relative humidity varies, it is important to minimize extremes between low and high. If prior experience indicates relative humidity during sustained heating periods will fall below 35%, building engineering shall provide for facilities to introduce moisture into the area when required. Conversely, if relative humidity increases to 50% or higher measures should be taken to dry the building. This may require turning on the heat.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Vapor barrier - 6 mil polyethylene.
- B. Resilient pads - Connor•AGA Neo-Shok pads, 3/4" thick, hemispherical, two stage, polyurethane, Red - 7D durometer.
 - 1. Optional Neo-Shok pads (specify above or delete)
 - a. Connor•AGA Neo-Shok Black - 50D durometer (aerobic or dance floors)
 - b. Connor•AGA Neo-Shok Blue - 60D durometer
- C. Subfloor - 2 layers of 15/32" APA rated plywood sheeting, Exposure 1
- D. Flooring (Connor•AGA Laytite Maple)
 - 1. 25/32" x 2-1/4", Second & Better Grade Northern Hard Maple Flooring, TGEM, MFMA Grade marked and stamped as manufactured by Connor•AGA, Amasa, MI.
 - 2. Options (specify above or delete)
 - a. Sizes - 25/32" x 1-1/2", 33/32" x 1-1/2", 33/32" x 2-1/4"
 - b. Grades: First Grade, Third Grade
 - 3. Treating (specify or delete) - flooring shall be treated with WOODLIFE F preservative.
- E. Fasteners:
 - 1. Flooring fasteners - 2" barbed cleats or coated staples.
 - 2. Subfloor fasteners - 1" staples or equivalent.
- F. Finish materials - Connor•AGA Court-Time oil modified polyurethane seal and finish or equal.
- G. Gameline paint shall be compatible with finish.
- H. Wall Base - 3" x 4", heavy-duty, molded, vented cove base with pre-molded outside corners.

PART 3 - EXECUTION

3.1 INSPECTION by Installer (Flooring Contractor)

- A. Inspect concrete slab for proper tolerance and dryness. Report any discrepancies to general contractor and architect in writing.
- B. Concrete slab shall be broom cleaned by general contractor.
- C. Installer (Flooring Contractor) to approve, in writing, all field conditions provided in these General Specifications prior to commencement of installation.

3.2 INSTALLATION

- A. Subfloor
 - 1. Cover concrete with poly sealing and lapping joints a minimum of 6".
 - 2. Install lower layer of subfloor perpendicular to finish maple flooring spacing all edges 1/4" and breaking joints 4'. Provide 1-1/2" expansion voids at perimeter and at all vertical obstructions. The underside of first layer shall have Neo-Shok pads attached 12" on center (32 per sheet) and 6" from edges on all sides. Install solid blocking at doorways and under bleachers in the stacked position.
 - 3. The second layer of subfloor shall be laid at a 45 degree angle over the first layer, 1/4" spacing at all edges and breaking joints 4'. Attach second layer of subfloor with fasteners 12" on center.
- B. Maple flooring
 - 1. Install maple flooring by power nailing or stapling 10"-12" on center with end joints properly driven up.
 - 2. Size joints between flooring strips to allow for intermediate expansion, in accordance with local humidity conditions.
 - 3. Provide 1-1/2" expansion voids at perimeter and at all vertical obstructions.

3.3 FINISHING

A. Maple Flooring

1. Machine sand with course, medium, and fine paper to a smooth, even and uniform surface.
2. Remove sanding dust from entire surface by tack or vacuum.
3. Inspect entire area of floor to insure that surface is acceptable for finishing, completely free from sanding dust, perfectly clean.
4. Apply two coats of approved seal and two coats of approved finish per manufacturer's instructions.
5. Buff and clean floor between coats.
6. Game Lines: Apply game lines as indicated on drawings, between seal and first coat of finish.
7. Game line point shall be compatible with finish.

3.4 BASE INSTALLATION

- #### **A. Install vent cove base to walls with base cement or screws. Use pre-molded outside corners and mitered inside corners.**

3.5 CLEANING

- #### **A. Remove excess and waste materials from the area of work.**

Connor•AGA

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