



CONTROLLED RESPONSE AND PERFORMANCE (CRP) SYSTEM

The CRP system offers the sports flooring industry the most advanced resilient system available today. Since the wood is a renewable resource, and the Eco pad made of recycled rubber, this system is also environmentally friendly. In fact, this “green” aspect can be advanced even further by specifying Oriented Strand Board (OSB) and Horner Smartwood™ Maple – a product truly designed to conserve our natural resources yet still provide the industry with the highest level of safety and performance; as is exemplified by the fact that the system passes the stringent shock absorption and ball rebound requirements of DIN 18032, Part II.

PART 1-GENERAL

1.1 DESCRIPTION

- A. This document specifies a wood strip aerobic and gymnasium floor system consisting, in general, of wood subflooring, maple flooring, vapor retarder, restraint, sanding, sealers, finishes, game lines, and wall base.
- B. The general contractor shall provide a concrete slab, smooth troweled and level to a tolerance of 1/8" (3mm) in a 10'0" (3m) radius, subject to the approval of the wood flooring contractor. LABOR AND MATERIALS NECESSARY TO PUT THE CONCRETE SLAB IN ACCEPTABLE CONDITION (HIGH AREAS GROUND DOWN AND LOW AREAS FILLED WITH APPROVED LEVELING COMPOUNDS) SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
 1. Concrete slab depression to use for 7/16" (11mm) padding shall be:
 - a. 2 1/8" (55mm) for 25/32" (20mm) thick flooring
 - b. 2 3/8" (60mm) for 33/32" (26mm) thick flooring
 2. Concrete subfloors shall have an adequate vapor retarder beneath and at the perimeter of the slab.

1.2 QUALITY ASSURANCE

- A. Supplier Qualifications
 1. Supplier of wood flooring shall be Horner Flooring Company.
- B. Installer Qualifications
 1. Flooring contractor shall be a firm experienced in maple flooring systems.
- C. Flooring shall be stored on the premises a minimum of seven (7) days before installation commences, or as required for acclimation. Final determination as to acclimation will be made by the flooring contractor.
- D. All flooring bundles or cartons should be broken and loosely piled to acclimate the flooring to moisture conditions in the building.

1.3 WORKING CONDITIONS

- A. The floor system shall not be delivered or installed until all masonry, plastering, tile work and overhead mechanical trades are completed and building is enclosed and weathertight.
- B. Permanent heat, light and ventilation shall be installed and operative during and after installation, maintaining a temperature range of 55° F (13° C) to 75° F (24° C) and a relative humidity range of 35% to 50%.

1.4 WARRANTY

- A. Horner Flooring Company hereby warrants the CRP SYSTEM flooring materials to be free from manufacturing defects for a period of one year from the date of substantial completion.

PART 2-PRODUCTS

2.1 MATERIAL

- A. Flooring shall be Horner 25/32" (20mm) or 33/32" (26mm) thick x 2 1/4" (57mm) or 1 1/2" (38mm) wide First, Second and Better, Third and Better or Third Grade, continuous tongue and groove and end-matched MFMA Northern Hard Maple, grade marked and stamped as manufactured by Horner Flooring Company.
OPTION: Horner Long Life™ flooring if so specified.
- B. Vapor retarder shall be 6 mil polyethylene.
- C. Pads shall be 7/16" (11mm) or 3/4" (19mm) pads provided by the Horner Flooring Company.
- D. Subfloor shall be 15/32" x 2' x 8' (12mm x 610mm x 244cm) rated sheathing, exposure 1, plywood.
- E. Fasteners
 1. Flooring fasteners shall be 2" (51mm) barbed cleat or 15 gauge (1.8mm) coated staples.
OPTION: If Horner Long Life™ is specified, use 2" (51mm) 15 gauge (1.8mm) staples only.
 2. Subflooring fasteners shall be 1" (25mm) cleats or staples.
- F. CRP Restraints shall be 16 gauge (1.6mm) galvanized steel.
- G. Wall base shall be 3" x 4" (76mm x 102mm) Vent Cove heavy duty molded, vented base with premolded outside corners as supplied by Horner Flooring Company. Specify color: black or brown.

- H. Finish material shall be as specified by architect selected from the latest listing provided by the MFMA, and shall be applied according to manufacturer's instructions.

PART 3-EXECUTION

3.1 INSPECTION

- A. Inspect concrete slab for proper tolerance and dryness and report any discrepancies to the general contractor for correction.
- B. The concrete slab shall be cleaned of all debris so flooring contractor will have adequate access to work surface.
- C. All work required to put the concrete slab in an acceptable condition shall be the responsibility of the general contractor.

3.2 INSTALLATION

- A. Cover concrete with 6 mil polyethylene, sealing and lapping joints a minimum of 4" (102mm).
- B. Locate the center of the area and begin installing the 15/32" x 2' x 8' (12mm x 610mm x 244cm) pre-padded rated sheathing, exposure 1, plywood so that its center falls directly over the center of the floor area and the long (8' (244cm)) side is perpendicular to the direction of the finished flooring. Install in a brick pattern, (Running Bond) providing a 3/4" (83mm) space around each sheet.
- C. Locate the center of the area and install the top layer (not padded) on a 45° angle to the bottom layer and finished floor direction. Begin by placing the first top sheet so that its center falls directly over the center of a bottom sheet and continue by installing in a brick pattern providing a 3/4" (83mm) space around each sheet. When the CRP Restraint is specified be certain that the 45° angle is such that the CRP restraint will fit into the space created when the top sheet space is coincident with the bottom sheet space. At least two (2) CRP Restraints should be utilized to grasp opposing 8' (244cm) long sides of each bottom sheet. Try to get one on each 1/2 of the sheet where possible. Fasten top and bottom sheets together with 1" (25mm) staples approximately 10-12 (254mm-305mm) inches on center.
- D. Fasten restraints to concrete with aid of 1/4" x 1" (6mm x 25mm) steel drive pins (2 per restraint) or equivalent fastener that will provide a minimum withdrawal strength of 450 lbs. (205kg).
- E. If the specification calls for the restrained version, it need only be restrained in the main playing area, with the standard panel system continuing throughout adjacent areas. The panel system will utilize the same pads 12" (305mm) o.c. or as otherwise specified.

3.3 FLOOR SANDING

- A. Machine sand with coarse, medium and fine paper to a smooth, even and uniform surface.
- B. Remove sanding dust from entire surface by tack of vacuum.
- C. Refer to MFMA sanding and finishing guide for procedures.

3.4 FINISHING

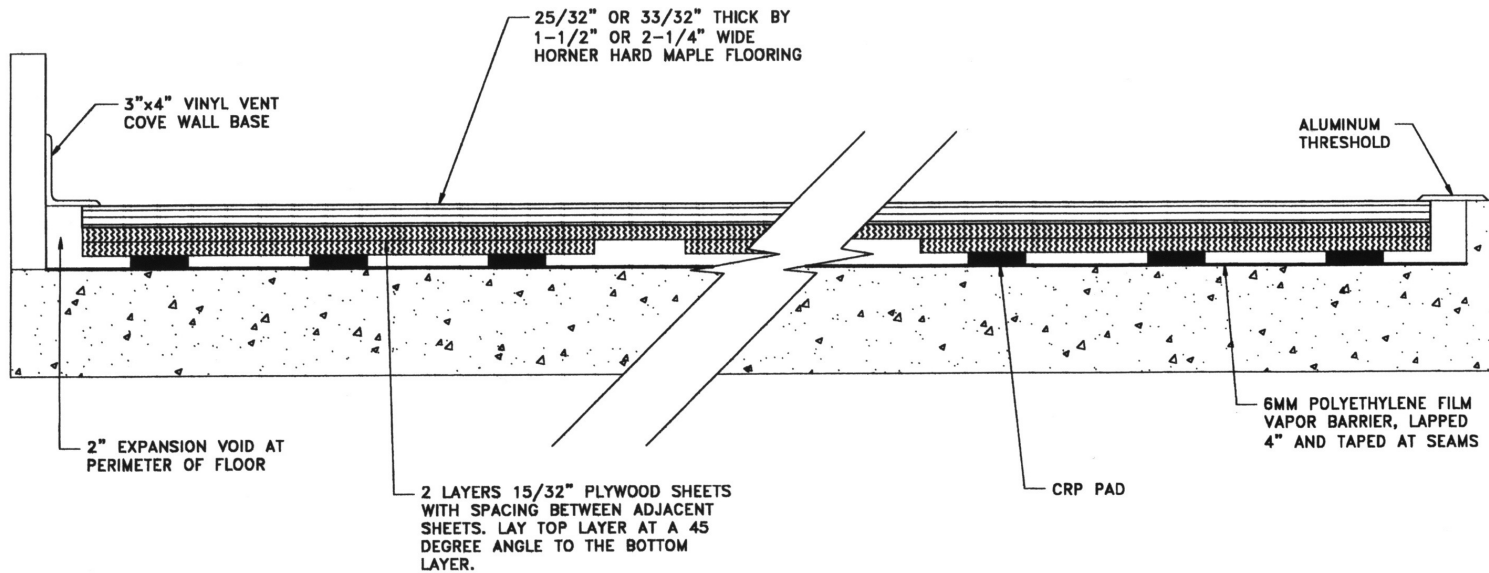
- A. Inspect entire area of floor to insure that surface is acceptable for finishing, completely free from sanding dust and perfectly clean.
- B. Apply seal and finish per manufacturer's instructions.
- C. Buff and clean floor between each coat.
- D. Paint game lines as shown on drawings, between second and first coat of finish.
- E. Game line paint shall be compatible with finish.

3.5 BASE INSTALLATION.

- A. Install Vent Cove base, mitering inside corners and anchoring to walls with base cement or screws and anchors.
- B. Use premolded outside corners and mitered inside corners.

3.6 MAINTENANCE

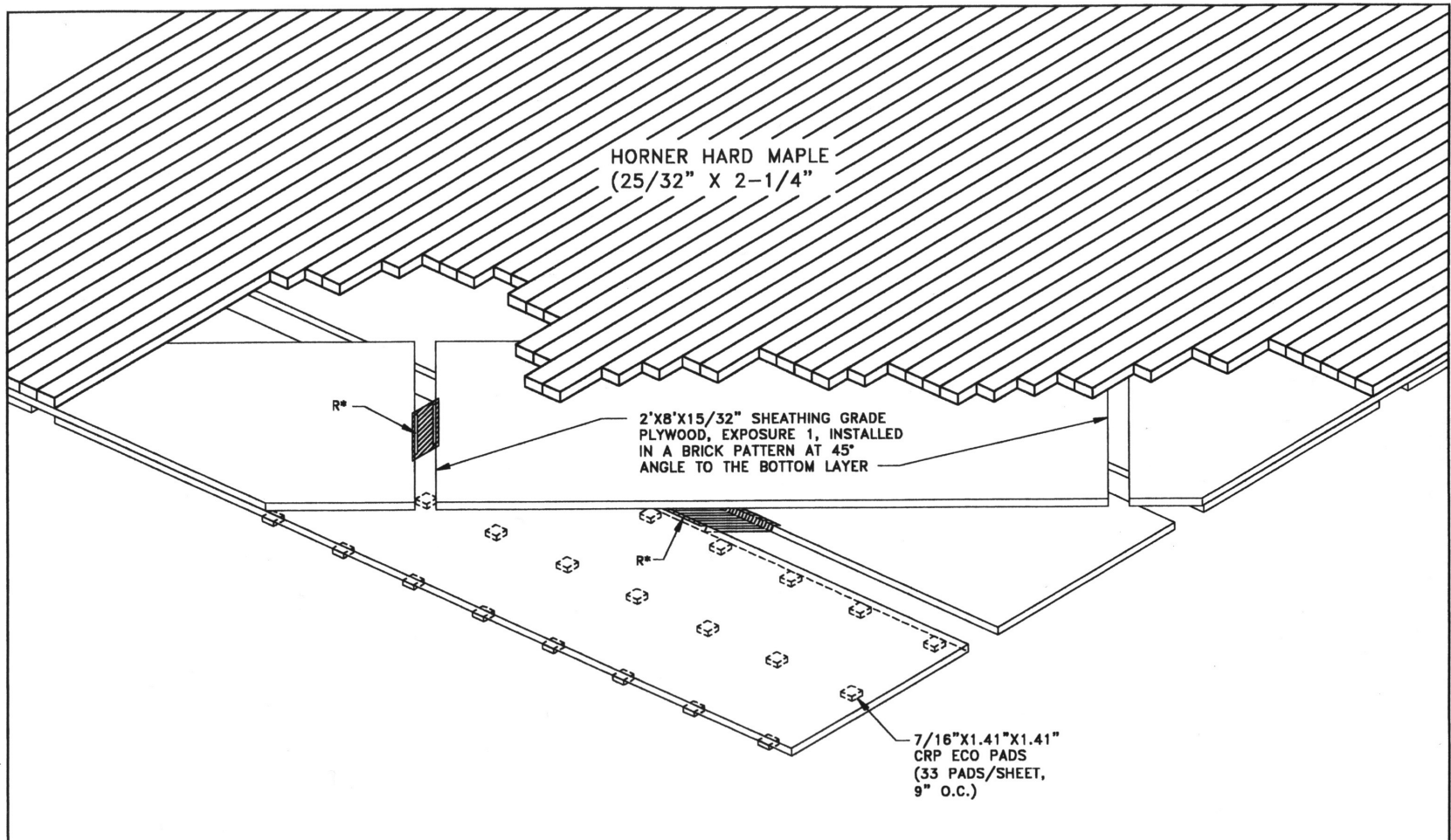
- A. Upon completion of floor installation, the owner, attendants or individuals in charge and responsible for the upkeep of the building are to see that the care and maintenance instructions of the Horner or MFMA Care Card are followed.



HORNER FLOORING COMPANY
 DOLLAR BAY, MICHIGAN
 MARCH 26, 2002

CRP

Slab Depression		
Flooring	25/32" (20mm)	33/32" (26mm)
7/16" pad (11mm)	2-1/8" (54mm)	2-3/8" (60mm)



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OFFENDING COMMAND: begin

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