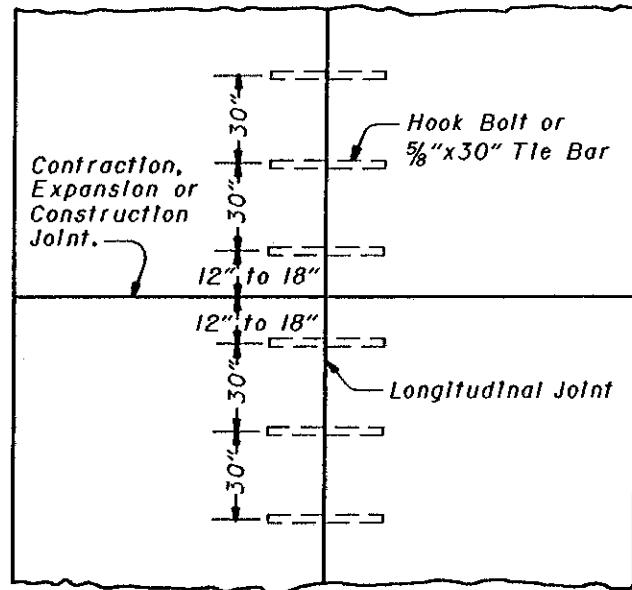
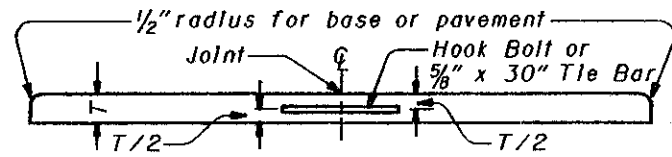


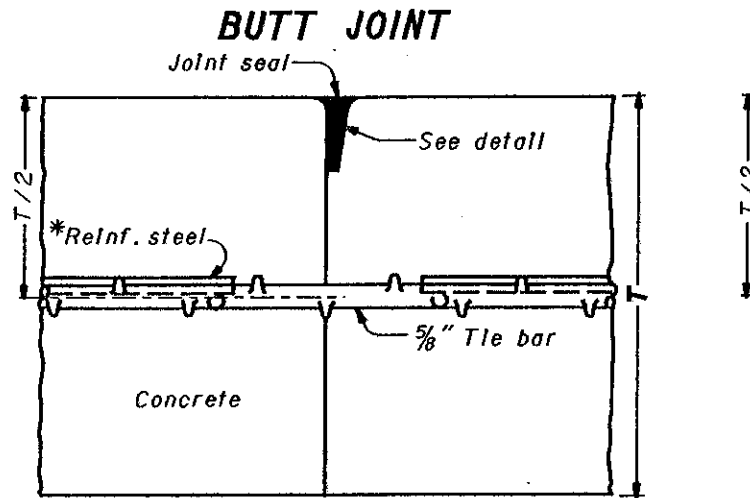
TIE BAR OR HOOK BOLT SPACING



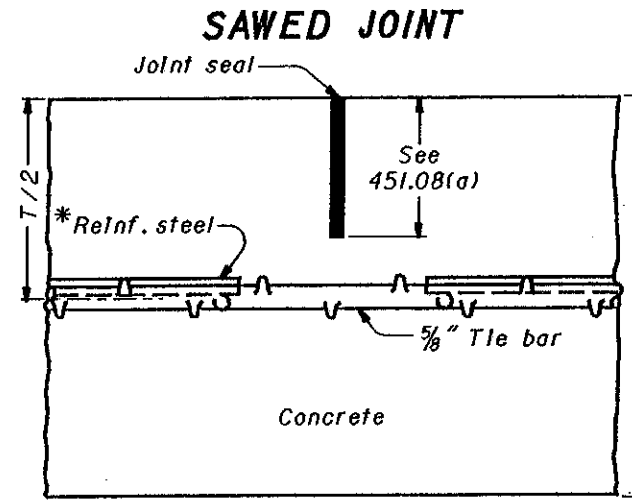
PLAN



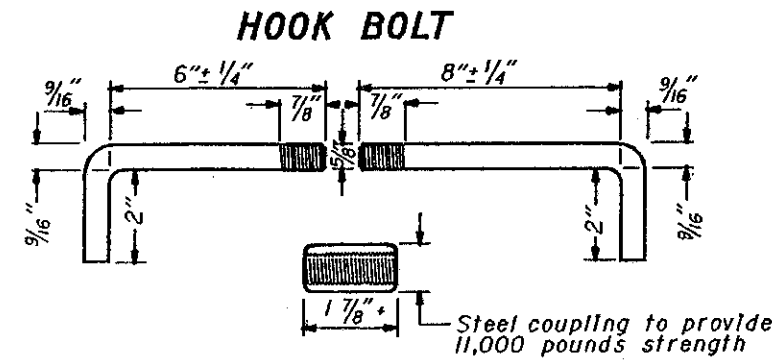
CROSS SECTION



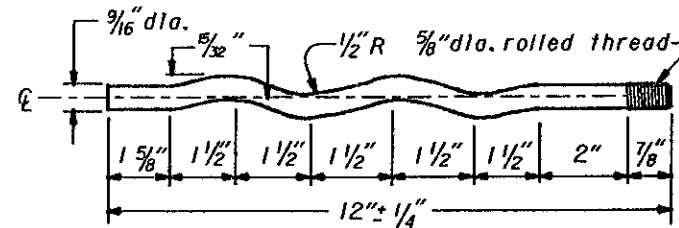
DETAIL OF JOINT *For 451 only



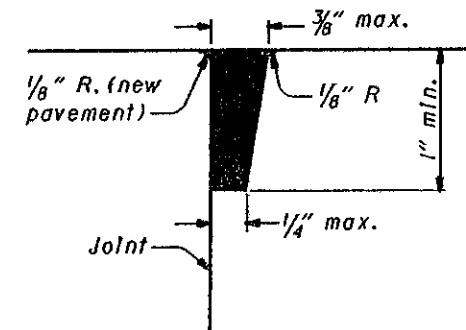
DETAIL OF JOINT



HOOK BOLT ALTERNATE



GROOVE AND SEAL DETAIL



NOTES

GENERAL: Longitudinal joints shall be used when called for on the typical section and shall be constructed as shown on this drawing in 451 and 452 pavement and 305 base. The joint shall be on the centerline of the pavement unless otherwise shown on the plans. Tie bars shall be 5/8 inch round, deformed bars. A satisfactory device shall be used to hold the tie bars in proper position or they may be installed by a mechanical installing device.

BUTT JOINT: The longitudinal joint between adjoining slabs poured in separate operations shall be a butt joint with hook bolts or tie bars, unless otherwise shown on plans. Bent tie bar construction shall not be permitted.

TYPE D (DRILLED TIED LONGITUDINAL) JOINT: Type D joints shall be constructed in accordance with 255.05. Grout shall meet the requirements of 255.02. The use of 3/8 inch expansion anchors, FF-S-325, Group VIII, Type I or Group II, Type 4, Class I may be used in lieu of the *5 x 24" deformed bar and shall be installed according to the manufacturer's recommendations.

The use of self drilling expansion shield anchors, FF-S-325, Group III, Type I(a) and (c) shall not be permitted.

GROOVES: Grooves for sealing expansion bolt or butt joints in 451 or 452 pavements shall be formed by impressing a device or bar into the newly deposited concrete adjacent to the existing or previously poured lane. The device or bar shall be removed as soon as the concrete is in such condition as to preclude distortion of the concrete.

Adjoining slabs adjacent to grooved joints shall be edged with a thin metal edger having a radius of 1/8 inch. Any impression left in the surface of the pavement by the flat part of the edging tool shall be eliminated.

In lieu of the above method the longitudinal joint may be constructed in accordance with 451.08(a).

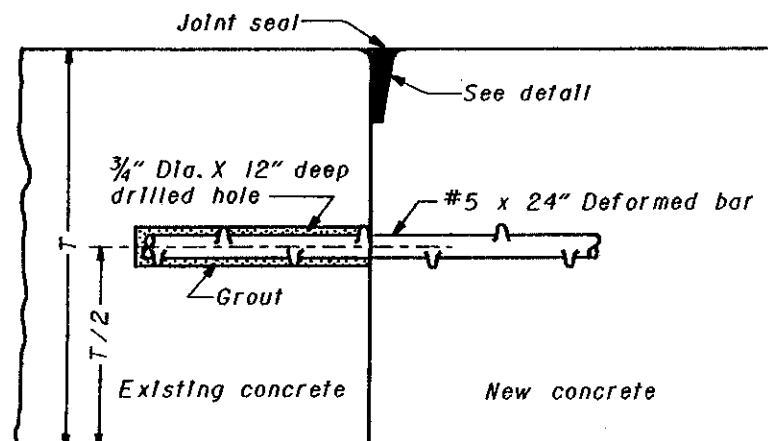
After the joint is formed it shall be protected from dirt and foreign matter until the joint seal is placed.

SEALING JOINTS: Sawed or hand-formed joints may be sealed with 705.04 or 705.11 joint sealer. Sealing of longitudinal joint in Item 305 Base is not required.

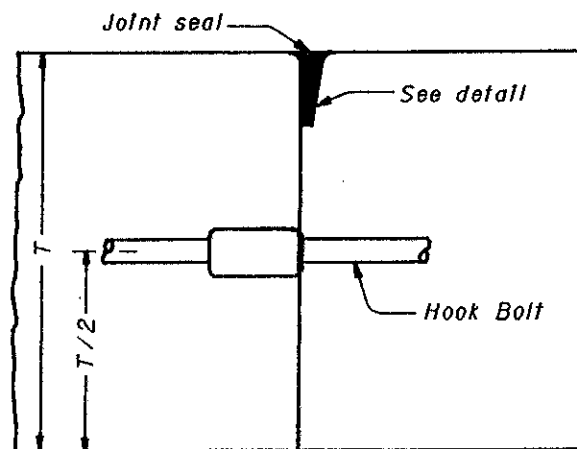
HOOK BOLTS: Hook bolt inserts shall be turned to a tight fit when installed in threaded hook bolts or couplings.

METAL STRENGTH: Tie bars, hook bolt assemblies and hook bolt alternate shall have a minimum strength of 11,000 pounds.

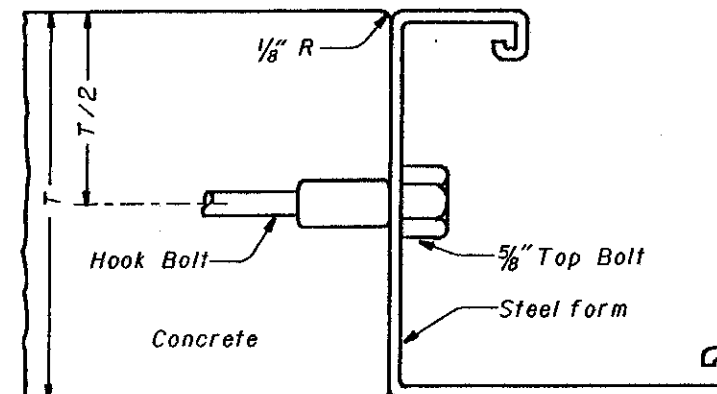
TYPE D (DRILLED TIED LONGITUDINAL) JOINT



BUTT JOINT



ACCEPTABLE METHOD OF FORMING JOINT



BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF TRANSPORTATION

LONGITUDINAL PAVEMENT JOINTS

DATE
2-21-92
10-28-94

STANDARD CONSTRUCTION DRAWING
BP-2.1

APPROVED *D.K. Hillman* ENGR., L & D