Engineering Brief # 8

Date: September 12, 1975

In Reply Refer To: AAS-580

Subject: Engineering Briefs Numbers 6, 7, and 8

From: Acting Chief, Airports Engineering Division, AAS-500
To: All Regions

Attn: Chiefs, Airports Divisions

The subject engineering briefs are enclosed for your information. Engineering Brief No. 6 describes the use of a heater planer to correct pavement unevenness at San Juan International Airport, Puerto Rico. Engineering Brief No. 7 describes the procedures used in the construction of a rubber asphalt friction course at Peterson Field, Colorado Springs, Colorado. Engineering Brief No. 8 reports on the condition of porous friction course runways at Hot Springs, Virginia, and Greensboro, North Carolina.

The purpose of engineering briefs is to keep FAA field offices informed of airport construction methods which are being tried in one or more regions, but which are not necessarily known to other regions or ADO's. The information contained in the briefs is not to be construed as a general approval by Airports Service of the described technique. Instead, it will usually indicate that the technique has been approved by the region on a trial basis after concurrence by Airports Service.

ORIGINAL SIGNED BY:
E. DONALD BAUER

Enclosures
ENGINEERING BRIEF NO. 8

POROUS FRICTION COURSE PAVEMENT AT:
INGALLS FIELD, HOT SPRINGS, VIRGINIA
AND
GREENSBORO - HIGH POINT - WINSTON SALEM
REGIONAL AIRPORT, NORTH CAROLINA

On August 21, I departed National Airport on an FAA aircraft to inspect the porous friction course pavements at the above airports. I was very impressed about how well they are performing to date. The overall condition of the pavement at both fields was excellent. The surface was smooth (not rough) and no visual evidence of any ravelling in the traffic areas was observed. The airport managers at both airports stated that the pavement drained exceptionally well even during the heaviest rainfall.

At the Hot Springs airport, which has only one runway, locked-wheel turns left several gouges in the PFC. A Notam was issued so that pilots would not continue this maneuver in the future. The

lock-wheel turns, although scouring the surface, did not result in any ravelling, as the shoved aggregate retained its bond.

During winter operations, the PFC was observed by airport personnel to be the last pavement to freeze and the last to thaw. The last to freeze feature of the PFC is of course good. However all surfaces that aircraft traverse should be the same. One pilot reported difficulty in aircraft directional control when taxiing from an ice free PFC runway onto a non-PFC taxiway which was icy. The last to thaw feature was a minor problem. Although the top of the PFC thaws as any other pavement surface, the frozen water within the matrix of the PFC takes considerably more time to thaw, thus interfering with the internal drainage feature of the PFC. No ravelling has been observed during freeze thaw cycles thus far. Also snow plows have not caused any deterioration or ravelling of the PFC.

The PFC was constructed on runway 6-24 at Ingalls Field in the fall of 1972. The runway is 5602' in length and lOO' wide. Representative aircraft using the facility are the BAC-111, DC-9, and the B-737. No rutting or other pavement abnormalities were observed. The PFC at Greensboro-High Point-Winston Salem Airport was constructed during the fall of 1974. It contains rubberized asphalt. Runway 14-32 is 6380' long and 150' wide. Typical aircraft using the facility are the DC-9, B-727, and an occasional L-1011. No rutting or other pavement abnormalities were observed. Both proJects were funded under ADAP.

ORIGINAL SIGNED BY:
THOMAS MORROW
AAS-582
August 29, 1975