2/5/2016

CC8 NDT Test Plan (FAA Review) – Phase I*

*separate NDT plan(s) will be prepared for additional phase(s)

Pre-Traffic Testing [2/4/2016 - 2/21/2016]:

Prior to the start of traffic testing on February 22, the CSRA NDT team will perform the following tasks:

1. **2D/3D Imaging (Feb. 4-5):** With the use of the NDT Van, collect 2D/3D image data across the entirety of the CC8 test sections from West to East.
2. **Mobile Profiler / SurPro (Feb. 4-5):** Take longitudinal profiles using the NDT van mobile profiler and take transverse profiles using SurPro . All profiles will be taken at the same time as 2D/3D imaging. Locations of longitudinal and transverse profiles are shown in Figure 2.
3. **Joint Groove Profiler (Feb. 4-5):** Take baseline profiles at slab N3 and N4. Profiles also will be taken prior at the end of trafficking and will be used to detect slab curling across the transverse joint. The locations are depicted in the following Figure 2.
4. **GPR (Feb. 4-5):** Use the 900MHz GPR antenna (cart type). Take baseline GPR (east to west) on all CC8 test sections in conjunction with the Imaging and Mobile Profiler.
5. **PSPA (Feb. 19):** PSPA testing will be conducted at the center of all the 20 slabs. The locations are shown in the following Figure 1.
6. **HWD (Feb. 19):** After seating loads with the NAPTV (planned for Feb. 11), HWD testing will be conducted at slab corners including POT locations and slab centers as shown in the following Figure 1. The target loading sequence will be: 4,000 lbs, 8,000 lbs, and 12,000 lbs with an approximate 12,000-lb seating load. The maximum deflection would be limited to 20 mils with 12,000 lbs. As with the PSPA, baseline HWD readings will be taken before trafficking. The deflection data will be used for monitoring modulus changes using BAKFAA, slab curling and the changing support conditions with increasing pass numbers.

Other NDT activities that may be performed prior to traffic if time permits are as follows:

1. **ELATextur:** ELATextur readings will be taken to monitor abrasion on concrete surface at both trafficked and nontrafficked areas as shown in the following Figure 2. Texture readings will be taken prior to trafficking and end of the trafficking.
2. **MIT Scan:** The MIT Scan will be used to verify the dowel bar placement at all of the joints in the CC8 test section.

Prior to the start of traffic, CSRA will conduct a baseline visual condition survey on the concrete slab surface. The collected inspection data will be uploaded in PAVEAIR database. Prior to the survey, CSRA will establish a suitable database in PAVEAIR in which visual condition data will be entered.

All the collected data will be stored in the G: drive located in the NAPTF. Data files will be accessible on the G: drive within a week of the measurements.

Testing During Traffic [2/22/2016 - TBD]:

It is anticipated that each day's traffic will consist of 5 wanders, following the CC8 test plan. At the end of each day's trafficking, CSRA will perform a visual survey for crack recording in accordance with ASTM D5340. SCI calculation will consider the following distresses in accordance with AC 150/5320-6E: longitudinal, transverse, and diagonal cracking; corner breaks; intersecting cracks and shattered slabs; and shrinkage cracking. The collected data and calculated SCI will be updated daily in the PAVEAIR database by end of the day. The updated SCI will be reported to the FAA as well by end of the day to facilitate go/no go decisions on traffic.

Traffic on Phase I of CC8 is anticipated to stop temporarily on the afternoon of March 3 to allow resumption of traffic testing on CC7. The timing of resumed testing on Phase I of CC8 will be determined by the FAA. After March 3, this plan will be revisited to determine whether changes or additional tests are warranted.

Post-Traffic Testing [TBD]:

CSRA NDT team will conduct visual condition survey on concrete slab surface. The collected inspection data and final SCI will be uploaded in PAVEAIR database.

The NDT Team will take readings using the PSPA, HWD, Waylink Imaging System, Mobile Profiler, SurPro, Joint Groove Profiler, ELATextur, and GPR. All the collected data will be stored in G drive located in the NAPTF within a week from the measurements.

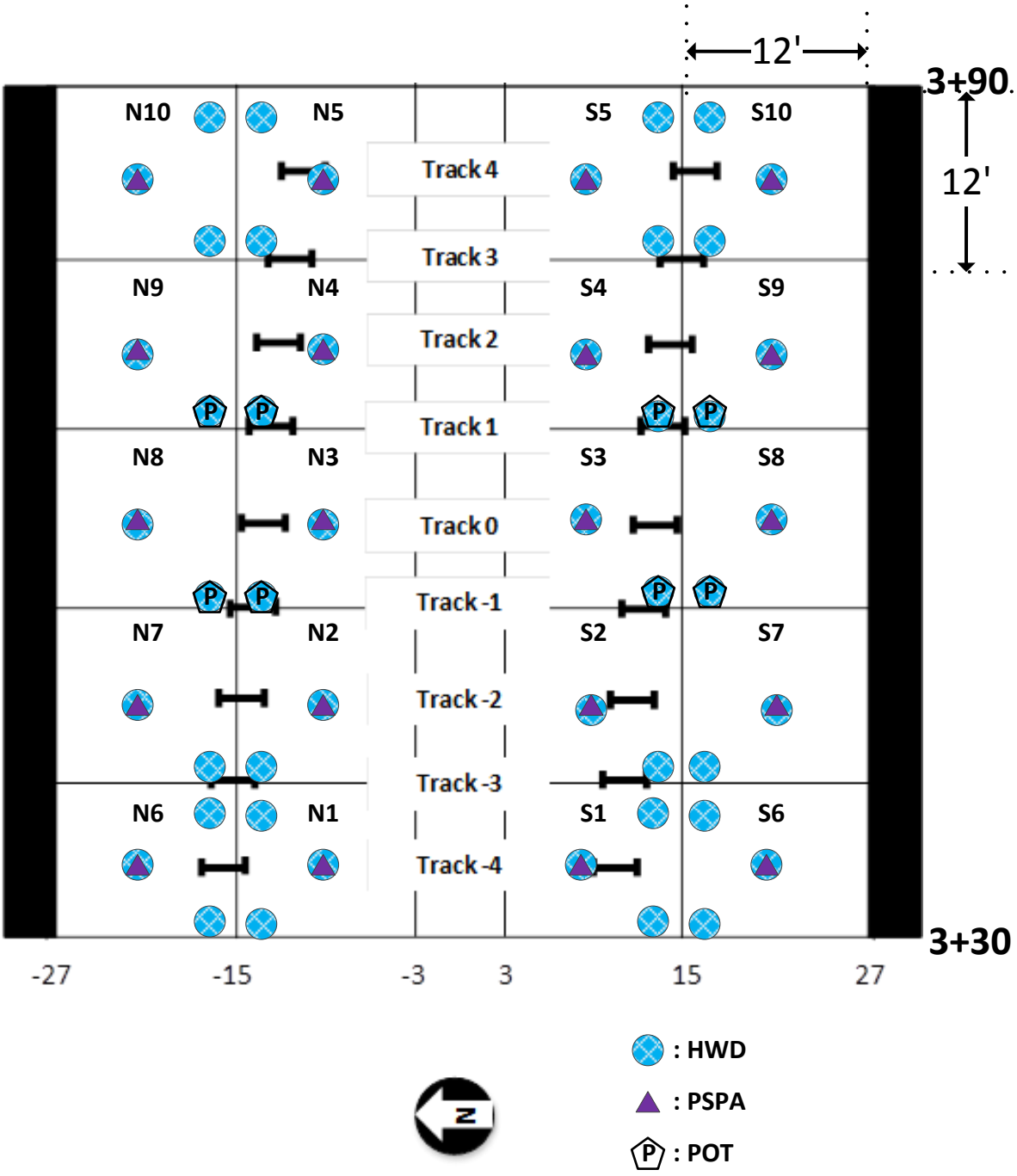

Figure 1. PSPA and HWD Test Locations.

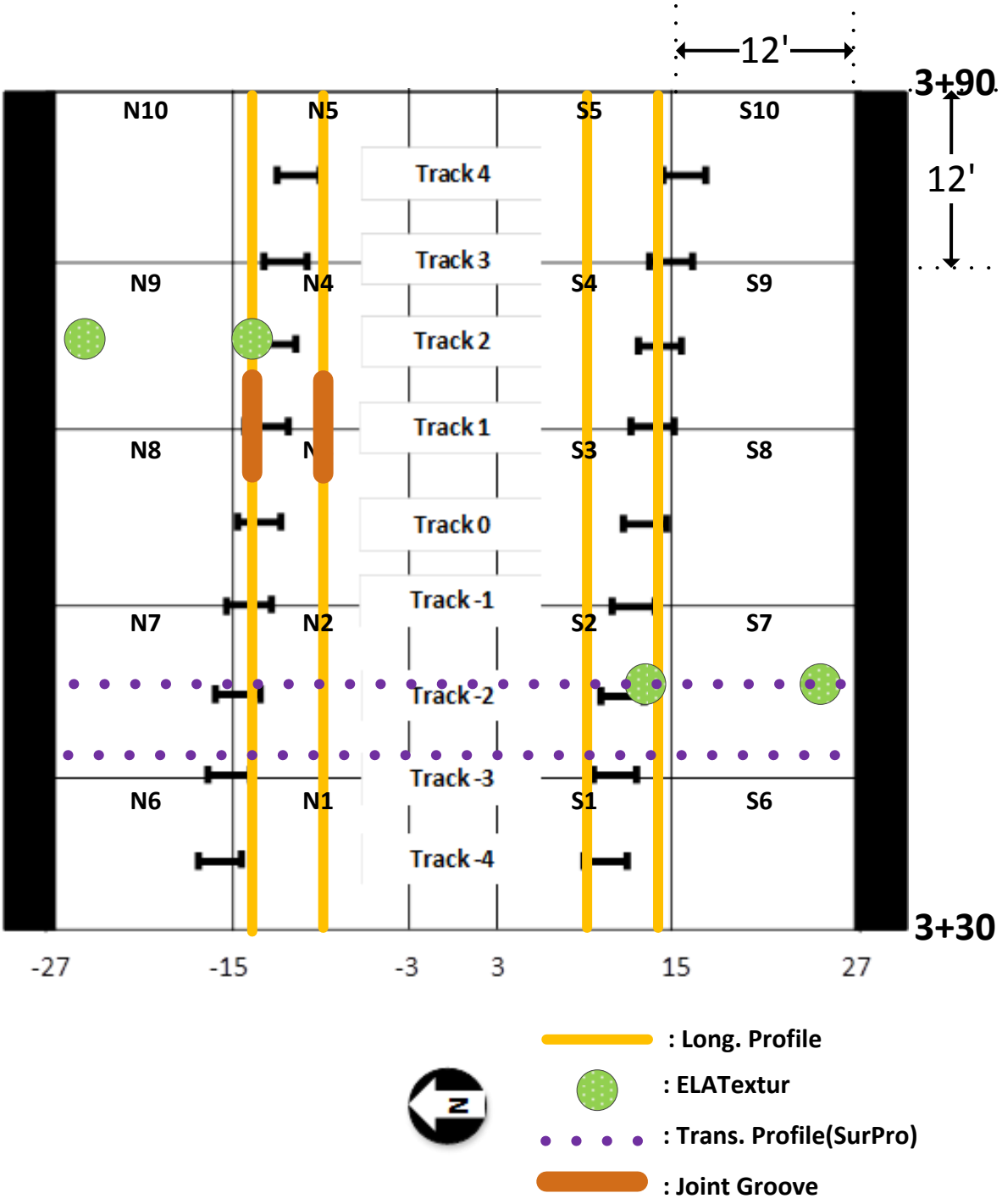

Figure 2. Longitudinal Profile, ELATextur, Transverse Profile, and Joint Groove Profile Test Locations.