

Summary of State Pavement Data Collection Practices - September 2015

Agency	Data Collection	Frequency	Method	Who Collects the Data
1	Pavement Distress: GPS, Surface Type, Cross-slope, Grade, IRI, Cracking, Rutting, Faulting. Pavement Friction	Pavement Distress on NHS- Annually, on Non-NHS- 2 yr. cycle, Pavement Friction on Interstates Annually, on Non-Interstates 2 yr. cycle	Semi -Automated	Pavement Distress data collection is contracted. Pavement Friction data collection is performed in-house.
2	IRI, Rutting, cracking (ft/mi), % cracking	Annually	Automated 100%	Vendor
3	IRI, Rutting, Faulting, Friction, Cracking, Patching, Bleeding	Friction - 2 year cycle; all else Annually	IRI, Rutting, Faulting and Friction Automated. All other factors manually	In-house
4	Roughness (IRI), Rutting, Cracking, Faulting, Friction, Macro-texture and soon FWD	Interstate-Annually. Other- 2 year cycle	Automated	In-house / Fugro-Roadware
5	IRI, Faulting, Rutting, Alligator cracking in asphalt, 3rd Stage Cracking in concrete	Annually	Automated 100%	Vendor
6	IRI, Cracking, Rutting, Faulting and corner breaks	Annually-11000 lane miles	Semi-Automated	Contract
7	IRI, Cracking, Rutting, Geometry and Condition	Annually - 8000 miles CL	Automated- both directions. and Semi-automatic. Looking at 3D	In house
8	Roughness and Distress	Annually	Automatic	Contract
9	Roughness (IRI), Rutting and Cracking	2 yr cycle	Automatic	Contract

10	Roughness (IRI), Rutting, Surface distress – Cracking (Alligator/Trans/Long), Patching, & Potholes	Nationwide program collected on cyclic basis – most roads and miles in network collected every 4 to 5 years.	98% - Initial steps automated, Contractor QC - semi-automated; 2% manual collection	In-house contractors and federal employees
11	Roughness (IRI) and Ride Number (RN), Cracking, Friction, Faulting, Rutting, Pavement markings and signs reflectivity.	All data collected annually except friction that is collected on a 3 yr cycle. Annually - 43000 lane miles.	Automated/ Cracking-manually	In-house. Ride, rutting collected with ICC equipment
12	Distress and Friction. Project level IRI.	Distress-annually. Friction Interstate-2 yr cycle. Others - 5 yr cycle	Distress-manually. Friction collected with ICC equipment	Distress is collected In-house. Ride collected with ICC equipment at project level.
13	IRI, Rutting, cracking and faulting	Every two years	Automated	Vendor
14	IRI, Rutting, Faulting, Cracking, Friction	Annually-IRI, Rutting, Cracking and Faulting; Friction - Annually for Interstate, Biannually for non-interstate.	Automated-100% Manual Cracking but moving to Automated	In-house
15	IRI, Rutting, Cracking, Faulting, Project level FWD and Friction	Annually- Interstate Every two years- NonInterstate (15000 miles/yr)	Semi-automated Manually- Condition rating	Vendor Contracted. Currently Mandli (5 yrs of data collected by Pathways)
16	Roughness (IR), Rutting, FWD, Surface Distresses, Faulting, Spalling, Cracking and Friction	Annually, FWD - (working towards 5 yr. cycle)	Automated	Contracted / Pathways

17	IRI, Rutting, cracking, faulting and Falling-weight deflectometer	Annually - Half of system . Annually- Local roads (20000 miles/yr)	Automated 100%	Vendor- IRI, Cracking and Rutting In-house-HPMS ride data
18	AC- IRI, Rutting and Transverse Cracking. PCC- IRI, Joint Distresses, Faulting.	Annually - 11500 miles	Automated 100%	In-house
19	Roadway images @200/mile. Roughness (IRI), Rutting, Cracking, Macro-texture and Road geometry (x-slope and grade).	NHS-Annually. Rest- 2 yr cycle	Currently transitioning from manual to automated	In-house with Mandli equipment.
20	Roughness, Distress, Rutting, Faulting, Edge texture, Friction-as needed, RWD-Research and GPR-One Time	NHS and Interstate-Annually. Others- 2 yr cycle including ramps. Friction - 5 yr cycle or as needed.	Distress- semi-automated. Others- Automated	Contracted / Fugro-Roadware
21	Roughness (IRI) and Rutting Distress	Interstate - Annually. Other- 2 yr cycle	Auto-Roadware Auto-for some roads	In-house
22	Roughness (IRI), Rutting, Cracking and Skid resistance	NHS and State Routes - Annually. Ramps and Short Roads- 3 yr cycle	Automatic or combination of Manual and Automatic	In-house
23	Roughness (IRI) and Rutting Windshield -Distress	NHS 2 year cycle	Auto-Pathways Moving to full automated	In-house
24	IRI, Distress, Rutting, Faulting	Between 9000 and 11000 lane miles on a 2 yr cycle	Automated for IRI, Rutting and Faulting. Semi-automated for distress.	Contract

25	IRI, Rutting, Faulting, Surface Distress, macrotexture, FWD and Skid	Annually (28000 lane miles)	Automated-cracking, rutting and faulting. Semi-automated for surface distresses.	In-house
26	Roughness (MRI), Rutting, Video, Surface Distresses, Faulting, friction, texture	NHS every two years	Automated	Contracted
	Cracking Percent, Curve and Grade, Roughness (MRI)	NHS, samples and some non-NHS every year	Automated	Contracted
	FWD	For design purpose and upon request	The collection is automated. The analysis of the collected data does use software (Elmod), but it requires engineering judgment to know if the inputs are reasonable.	
27	IRI, Rutting, Faulting, Surface Distresses (Cracking)	Annually - 34000 miles/yr	Automated- IRI and Rutting. Semi automated- Surface Distresses. PASER	In-house
28	IRI, Rutting, cracking and faulting	Annually	Automated 100% Analyze 10%	In-house
29	IRI, Rutting, Faulting, Nebraska Distresses Manual	Annually- 10000 CL miles plus parkings, recreational roads and ramps.	Automated-IRI, rutting and cracking. Manual-Visual	In-house
30	IRI, Rutting, Faulting, Cracking- Manually	NHS- Annually, Cracking- Biannually; Non-NHS - Biannually	Automated and Manually	In-house

31	IRI, Cracking, Rutting. Pathways roughness and Rutting Semi-automatic	Interstate and NHS-Annually. Other - 2 yr cycle. Annually - 4600 CL miles	Semi Automatic- Pathways	In-house
32	Roughness (IRI), Distress and Rutting	Annually	Distress- Manual Roughness and Rutting- Automatic	In-house
33	IRI, Rutting, Faulting and Distress (cracking)	NHS- Annually, half of Non NHS - annually	Automated	Vendor
34	Roughness and Rutting	NHS- Annually. Other- 2 to 3 yr cycle	IR and Rutting- Automatic. Distress-Windshield	Metro Areas - Contract Other- In-house
35	IRI, Cracking, Faulting, Rutting	Annually for NCDOT primary system (Interstates, US and NC Routes), approximately 19,000 centerline miles	Automated	Vendor (Pathway Services)
	Cracking	Annually for NCDOT secondary system, approximately 61,000 centerline miles	Manual windshield survey	Vendor (S&ME)
	IRI, Rutting	2 yr cycle for NCDOT rural secondary routes with length >= 2 miles, approximately 36,000 centerline miles	Automated	In-house
	IRI, Rutting, Cracking	2 yr cycle for non-primary system HPMS samples, approximately 970 centerline miles	Automated (IRI and Rutting), Manual (cracking)	In-house

	IRI, Rutting	Annual for non-primary system NHS and Functional class < 3, approximately 500 centerline miles	Automated	In-house
	Skid	3 yr cycle for NCDOT primary system; approximately 19,000 centerline miles	Automated	In-house
	FWD	Project level collection as requested	Automated	In-house
36	IRI, Rutting, Faulting, Cracking	Annually - 8500 miles	Automated	In-house
37	IRI	2 yr. cycle except Interstates & NHS (Annual). 13,747 directional miles	Automated	In-house
	Cracking, Faulting, Rutting	Annually on the State System. Every 2 years on the Non-state routes Federal Aid. Cracking and Rutting 29,000 directional miles; Faulting 725 directional miles	Manual	In-house
	FWD, Skid/Friction	Per Request/Project Level. Mileage tested varies	Automated	In-house
38	Distress, Roughness, Road geometry	2 year cycle	Flexible Pav.: Automated Rigid Pav.: Semi-automated	Contracted / Mandli
39	IRI, Rutting, Faulting, Cracking- Manually, Patching and Raveling	NHS- Annually, Cracking- Biannually; Non-NHS - Biannually	Automated- Interstate and NHS, Manually- Non NHS	Vendor; In-house for IRI every two years.

40	Cracking, IRI, Faulting and Rutting. GPR and CRCM in a limmited basis	Annually-NHS - 28000 lane miles. 2 yr cycle the rest of the network.	Semi-automated	Contract
41	IRI, Rutting, Faulting and Cracking	Annually NHS-800 CL miles	Automated	In house
42	IRI, Cracking, Rutting, Patching and Bleeding	Annually-1150 CL miles	Automated	Contract
43	Forward imaging, IRI, Rutting, All Pavements: Transverse Cracking, Longitudinal Cracking Bituminuos Pavements: Fatigue Cracking, Raveling, Rutting, Patch Deterioration. Concrete Pavements: Spalling, Faulting, Patching, Punchouts	Interstate System: IRI, PDI-Annually @1700 lane miles Primary System: NHS routes-IRI-Annually. Remaining Primary routes-IRI, PDI-3 year cycle @3600 centerline miles annually @ 11000 total centerline miles Secondary System: AADT>400 -IRI, PDI-3 year cycle AADT<400 -IRI, PDI-6 year cyce @2500 centerline miles annually@ 31000 total centerline miles	Semi-automated	Primary System- vendor collected (STANTEC) Secondary - In-house
44	AC- Cracking, Patch Deterioration. PCC- Joint Spalling, Joint Sealing, Longitudinal Cracking, Punchouts and Corner Breaks	Annually	Manual- Visual distresses. Automated- IRI, Rutting and Faulting.	In-house

45	Roughness (IRI), Distress and Rutting. Friction-Materials testing	NHS including Interstate:IRI-Annually, Distress-2 yr cycle. Non-NHS and Others- 2 yr cycle.	Automated	Contracted / Mandli. TDOT is in the process of issuing a new RFP.
46	IRI, Rutting, Cracking, Patching, Punchouts, Spalls, Friction, patching failures	Distress 100% annually, Skid 50% Interstate and 25% others-Annually	Distress-Manually, Other - Automated 100%	Distress- Vendor; Rut and Ride- In-house
47	Cracking, IRI, Faulting and Rutting. Geometry and location of other assets.	2 yr cycle - 6000 CL miles	Automated- both directions (asphalt) and Semi-automated for PCCP	Contract
48	Roughness (IRI) and Rutting Cracking	NHS-Annually - 3200 CL miles. Other- 2 year cycle.	Auto and Semi-Automatic	Contract
49	Roughness (IRI), Rutting, Surface Distresses, Faulting, Spalling, Cracking, Shoulder type and width	Interstate-Annually, Primary-Annually, Secondary- 20%-25% per year and completed in 5 year cycle	Semi-Automated	Contracted
50	IRI, Rutting, Faulting, Cracking, Friction, Patching	Annually; Friction - Biannually	Automated, Semi-automated for cracking	In-house
51	IRI, Cracking, Rutting, Geometry and Asset Inventory	Annually-NHS. 2 yr cycle-county information	Automated and Semi-automated	Contract
52	IRI, Rutting, Faulting and PCI	NHS-Annually STN-2 yr cycle (24000 lane miles.)	Automated-IRI and Semi-automated for surface distresses.	In house
53	IRI, Cracking, Faulting, Rutting and Friction.	Annually	Automated- IRI, Faulting, Rutting. Semi-automated for cracking	Vendor- IRI,Cracking and Rutting In-house-Cracking