18th Quarterly Progress Report to the
FEDERAL HIGHWAY ADMINISTRATION
(FHWA)

On the Project
THE IMPACT OF WIDE-BASE TIRES ON PAVEMENT DAMAGE
DTFH61-11-C-00025

For the Period
July 1st to September 30th, 2015

Submitted by
Illinois Center for Transportation
University of Illinois at Urbana-Champaign

FEDERAL HIGHWAY ADMINISTRATION

QUARTERLY PROGRESS REPORT

FHWA Project: DTFH61-11-C-00025 FY: 2015 Quarter: 18 July-September

Research Agent: Illinois Center for Transportation

Principal Investigator: Imad L. Al-Qadi

PHASE	RESEARCH TASK	2011									2012												2013												2014												2015										ESTIMATED % COMPLETION
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	
1	1.1. Comprehensive literature review and synthesis on past and current research	20	60	90	100																																																				100
	1.2. Experimental plan and modeling framework			50	60	80	100																																																		100
	1.3. Implementation and marketing plan		10	50	70	80	100																																																		100
	1.4. Phase I report			60	70	80	100																																																		100
	1.5. Conference call with panel	0	50			100																																																			100
	1.6. Presentations to relevant conferences and symposiums																																																								100
2	2.1. Prepare experimental equipment, test structures, and instrumentation					0	0	0	0	0	10	30	40	45	50	60	70	85	90	95	100																																				100
	2.2. Conduct experiments, including material characterization and accelerated loading						0	0	0	0	5	10	20	25	30	40	50	60	70	40	40	40	45	50	55	55	57	60	62	65	68	70	72	73	75	77	80	82	84	85	87	88	90	92	95	95	97	98	100								100
	2.3. Conduct modeling					0	0	0	0	0	1	2	5	6	8	10	20	25	30	30	35	35	40	45	50	50	53	55	56	57	59	60	61	62	65	68	70	85	90	95	96	97	97	97	97	97	98	99	100								100
	2.4. Development of analysis tool													0	0	0	0	5	5	10	15	15	20	25	35	40	42	45	46	48	49	51	52	52	55	58	60	62	65	70	75	77	80	85	90	90	92	93	95	97	98	100					100
	2.5. Delivery of draft Phase II report and analysis tool																												0	0	0	0	0	0	0	0	0	0	0	0	10	20	30	40	50	50	60	70	85	87	90	95	95	95	95		95
	2.6. Present to relevant conferences and symposiums																																																								95
	2.7. Prepare article, technical papers, user manuals, training, TAC meeting, and TRB webminar																																																								0
	Estimated Progress (%)	1	3	7	8	10	11	11	11	11	13	16	20	21	23	27	33	39	43	41	40	38	42	45	49	50	52	54	54	56	57	58	59	60	62	64	65	71	73	76	79	81	83	86	88	88	91	93	96	97	98	99	99	99	99		99
	Planned Progress (%)	1	3	7	10	13	17	21	25	29	33	36	40	44	47	51	55	59	61	63	64	66	68	70	71	73	75	77	81	85	89	93	97	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		100

QUARTERLY PROGRESS REPORT

QUARTER 18

The Impact of Wide-Base Tires on Pavement Damage – A National Study

1. Work Performed

The following tasks were accomplished during this quarter:

- The final report is being edited according to the requirements of Section 508
- The final meeting with the TAC was scheduled, and travel arrangements are being made
- Journal publications where submitted:
    - Effect of wide-base tires on nationwide flexible pavement systems–numerical modeling (accepted with revision TRB)
    - Quantitative assessment of the effect of wide-base tires on pavement response using finite element analysis (accepted by TRB)
    - Environmental and economic impact of using new-generation wide-base tires (under review by TRB)

2. Work to Be Accomplished in the Next Quarter

- The final report will be finalized per the requirements of Section 508
- Preparation for the TAC meeting will be made
- Workshops will be offered on wide-base tires
- Panel comments will be addressed
- Numerical model verification will be continued

3. Problems Encountered

- Lack of clarity regarding the requirements of Section 508 has made the process of finalizing the final report more time-consuming than expected

4. Current and Cumulative Expenditures

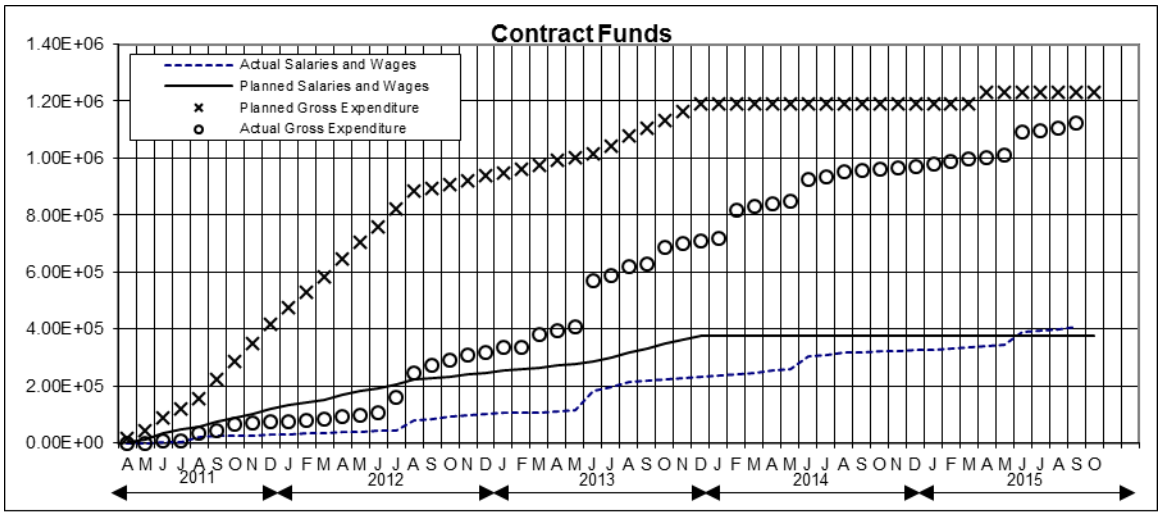

Figure 1. Project's expenditure (based on current plan including amendments).

5. Planned, Actual, and Cumulative Percentage of Effort

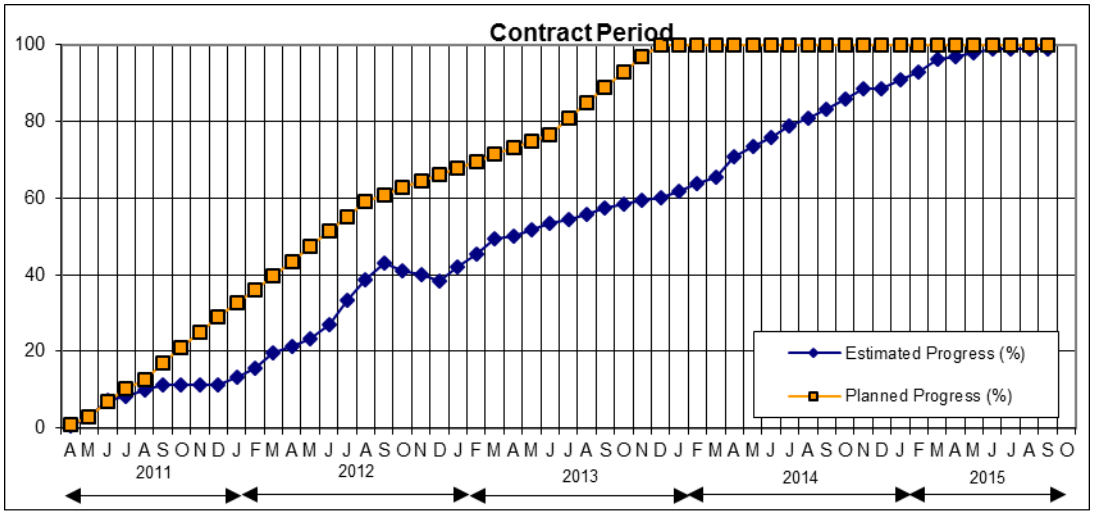

Figure 2. Project's progress (based on current plan including amendments).