



orrelation of Testing Technicians for Core Density
actual calculations of the correlation not be on the exam but you would need we an appreciation to the process. In tion, you would need to be able to wer general questions about the process

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Correlatio	on of Testing Technicians
f	or Core Densities
≻ General	
► Compare	es the hot plant mix pavement
densities	s determined by WYDOT field
laborato	ry and Contractor's laboratory
► I ne paire	ea t-test is used
If differe dispute i	nce is significance, then the resolution procedure will start
	Section

Correlations of Testing Technicians for Core Densities (continued)
≻ Procedure
▶ Obtain 14 cores
◆Cores are collected in pairs
 Pairs are taken within 2 ft of each other
◆Each pair is split up
 7 cores for WYDOT and 7 cores for contractor
▶ Test samples
♦WYDOT MTM 423.0
 Report densities to the nearest 0.1 pcf
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	Procedure (continued)
> Deter	nine densities to the nearest 0.1 pcf
> Perfo	m the paired t-test
≻ Calcu	late the difference between densities
> Deter	nine the S.D. of the differences
≻ Elimir (use c	nate up to one outlier based on 2 S.E alculated S.D.)
≻ S Rai	nge= 0.5 to 2.0 pcf $T = \sqrt{\frac{1}{\sqrt{\frac{S^{-2}}{n}}}}$
≻ If T< 3 n=7	5.707; No significant difference; for
≻ If T> 4	.032; Significant difference
> For n:	=6

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"Directional bias" is considered to exist when all, or all but one of the tests are higher for one laboratory than the other and the average difference exceeds 0.5 lb/ft3	D	irectional Bisa
	"Direction to exist whe the tests a laboratory average d lb/ft3	nal bias" is considered hen all, or all but one of are higher for one y than the other and the ifference exceeds 0.5

Resolving Directional Bias

Perform additional correlation tests if the correlation procedure shows that directional bias is present. Continue performing correlation testing until the directional bias no longer exists in accordance with Subsection 114.3.4, Resolving Field Test Discrepancies. The department's test results will be used for pay factor analysis while correlation testing is being done. Perform new correlation tests if new equipment or personnel (department or contractor) are introduced during testing.

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114.3.4 Resolving Field Testing Discrepancies
 Meet with department personnel and review testing procedures, equipment condition, and equipment calibrations in attempt to solve the problem. When cause of the discrepancy has been identified and corrected, repeat the correlation procedure. If the second correlation determines that the contractor's and department's test results represent different sample populations, conduct referee testing.

Discrepancies
 The Materials Program will conduct the referee tests using the retained referee samples for aggregate gradations and the lepartment's cores for density testing. The Materials Program will make its results available within five working days receiving the samples. If the samples represent a quality acceptance lot, the engineer will use test results correlating with the Materials Program test results for the quality acceptance calculations.













 Homework
Work the following problems tonight:
15-4 Cost Analysis 15-5 Cost Analysis
Change all PCf to S Range 8 to 32 kg/kg/m ³ tric problem
Section 16 - Problems from material covered earlier today including <u>tank problem</u> and 16-5
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