

Item	RECYCLED CONCRETE AGGREGATE BASE COURSE									
	Louisiana DOTD	FAA								
Agency Specification	Section 301, Class I Base Course Section 302, Class II Base Course	Item P-219, Recycled Concrete Aggregate Base Course								
Description	<p><u>Section 301</u>—This work consists of furnishing and placing Class I roadway and shoulder base courses on a subgrade layer.</p> <p><u>Section 302</u>—This work consists of furnishing and placing Class II roadway and shoulder base course on a prepared surface.</p>	Base course composed of recycled concrete aggregate, crushed to meet a particular gradation.								
Test Methods Referenced	<ul style="list-style-type: none"> • AASHTO T 96 • AASHTO T 104 • DOTD TR 428 	<ul style="list-style-type: none"> • ASTM C131 • ASTM D2419 • ASTM D4318 								
Materials	<ul style="list-style-type: none"> • Recycled portland cement concrete 	<ul style="list-style-type: none"> • Recycled concrete aggregate • Fine aggregate 								
Relevant Material Requirement(s)	<p>Recycled portland cement concrete:</p> <ul style="list-style-type: none"> • Recycled PCC shall be reasonably free of asphaltic concrete overlay material, reinforcing steel, joint material, and other debris, but may contain a minimal amount of other base course materials resulting from normal construction methods. • Quality requirements: <ul style="list-style-type: none"> – Soundness (AASHTO T 104), max loss: 15% – Wear (AASHTO T 96), max loss: 40% – Material passing the #40 shall be non-plastic. 	<p>Recycled concrete aggregate:</p> <ul style="list-style-type: none"> • Recycled concrete aggregate shall consist of $\geq 90\%$ PCC (with virgin aggregate added if necessary), with the following making up the remaining: <table border="1" data-bbox="982 951 1349 1115"> <thead> <tr> <th>Material</th> <th>Max Content</th> </tr> </thead> <tbody> <tr> <td>Wood</td> <td>0.1%</td> </tr> <tr> <td>Brick, mica, schist, or other friable material</td> <td>4%</td> </tr> <tr> <td>Asphalt Concrete</td> <td>10%</td> </tr> </tbody> </table> • Quality requirements: <ul style="list-style-type: none"> – Wear (ASTM C131), max loss: 45% – Material passing the #40: <ul style="list-style-type: none"> o Liquid Limit ≤ 25 o Plasticity Index ≤ 4 <p>Fine aggregate:</p> <ul style="list-style-type: none"> • Fine aggregate shall be fines produced from the crushing operation. • Sand equivalent value ≥ 35 (ASTM D2419) 	Material	Max Content	Wood	0.1%	Brick, mica, schist, or other friable material	4%	Asphalt Concrete	10%
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Important Deviations										
Level of Acceptability for Use	<ul style="list-style-type: none"> • Group 2 – Except for aggregate gradation, the state-specified material meets all FAA material requirements. The state-specified material may be used on airfields supporting aircraft with less than 60,000 lbs maximum takeoff weight. • Group 3 – The state-specified material may be used on FAA facilities if the aggregate gradation requirements are met. 									

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	FAA and Louisiana DOTD Aggregate Gradation Requirements																													
Additional Specifications	Gradation requirements:																													
	Sieve	% Passing																												
		FAA	Louisiana DOTD																											
		Design	Job Compliance	Class I and II Base Courses																										
	2 in.	100	--	--																										
	1-1/2 in.	95 - 100	± 5	100																										
	1 in.	70 - 95	± 8	90 - 100																										
	3/4 in.	55 - 85	± 8	70 - 100																										
	#4	30 - 60	± 8	35 - 65																										
	#30	12 - 30	± 5	--																										
#40	--	--	12 - 32																											
#200	0 - 8	± 3	0 - 8																											
Gradation plots comparing FAA to state agency gradation requirements:																														
<p style="text-align: center;">P-219 Recycled Crushed Aggregate Base Course</p> <table border="1"> <caption>Data points for P-219 and LADOTD Class I and II gradation</caption> <thead> <tr> <th>Sieve Size</th> <th>P-219 (% Passing)</th> <th>LADOTD Class I and II (% Passing)</th> </tr> </thead> <tbody> <tr> <td>#200</td> <td>~8</td> <td>~5</td> </tr> <tr> <td>#40</td> <td>~12</td> <td>~10</td> </tr> <tr> <td>#30</td> <td>~15</td> <td>~12</td> </tr> <tr> <td>#4</td> <td>~30</td> <td>~35</td> </tr> <tr> <td>0.75</td> <td>~55</td> <td>~70</td> </tr> <tr> <td>1.0</td> <td>~70</td> <td>~85</td> </tr> <tr> <td>1.5</td> <td>~95</td> <td>~95</td> </tr> <tr> <td>2.0</td> <td>100</td> <td>100</td> </tr> </tbody> </table>				Sieve Size	P-219 (% Passing)	LADOTD Class I and II (% Passing)	#200	~8	~5	#40	~12	~10	#30	~15	~12	#4	~30	~35	0.75	~55	~70	1.0	~70	~85	1.5	~95	~95	2.0	100	100
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