

PORTLAND CEMENT CONCRETE MIX DESIGN
DOTD Form 03-22-0735

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Metric/English
Rev. 7/98

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
PORTLAND CEMENT CONCRETE MIX DESIGN

MATT MENU SELECTION - 30

Metric / English (M / E) Located on MATT Menu

Project No. 713-59-0104 Plant Name Barry Concrete #1 Plant Code 10303 Material Code 592

Type / Class A 1=Truck Mixer, 2=Central Mixer, 3=Site Mixer Parish Acadia Mix Design No. 1003 Slip Form Paving Y = Yes N = No

Mixing Method Proj. Name Parish Rd. #25 F.A.P. BRD-0015 (929)

	Source Code	Company Name	Materials		Mat. Code	Alk. React. Y = Yes N = No	Spec. Grav.	Absorp. Factor	Product Name
			Location	Normal Set <input type="checkbox"/> Y = Yes N = No					
Cement	<u>0710</u>	<u>Lone Star Ind.</u>	<u>Leeds, AL</u>		<u>1102</u>		<u>3.115</u>		
Fly Ash									
Slag									
Fine Aggregate	<u>A1134</u>	<u>TXI</u>	<u>Grangeville, LA</u>		<u>570</u>	<u>W</u>	<u>2.144</u>	<u>10.15</u>	
Coarse Aggr. 1	<u>A1134</u>	<u>TXI</u>	<u>Grangeville, LA</u>		<u>571</u>	<u>W</u>	<u>2.153</u>	<u>12.12</u>	
Coarse Aggr. 2									
Water Reducer									
Air Entrainer									
Set Accelerator									
Superplasticizer									
Special Additive A									
Special Additive B									
Special Additive C									

Mix Proportions For One Cubic Meter (Cubic Yard) of Concrete		Departmental Use	
Cement	<u>334</u> kg (lb)	<u>11.00</u> m ³ (cu ft)	
Fly Ash		<u>334</u> kg/m ³ (bag/cu yd)	
Slag		<input type="checkbox"/> % By Mass (W)	
Fine Aggregate (SSD)	<u>175</u> kg (lb)	<input type="checkbox"/> % By Mass (W)	
Coarse Aggregate 1 (SSD)	<u>1123</u> kg (lb)	<u>1177</u> L/m ³ (gal/bag)	
Coarse Aggregate 2 (SSD)		<u>1513</u> By Mass (W)	
Water	<u>177</u> L (gal)	<input checked="" type="checkbox"/> Cement with 0.6% or less Alkalies required	<input type="checkbox"/> Y = Yes N = No
Water Reducer			
Air Entrainer			
Set Accelerator			
Superplasticizer			
Special Additive A			
Special Additive B			
Special Additive C			
Contractor <u>Cypress Const.</u>			
Certified Concrete Technician <u>Signature</u>	<u>1045</u> Code	Date Received <u>12-12-98</u>	ACCEPTED <input checked="" type="checkbox"/> REJECTED <input type="checkbox"/>
Date Submitted <u>12-12-98</u>		District Laboratory Engineer <u>Signature</u>	Date <u>12-12-98</u>

Acceptance based on mix proposal meeting spec. requirements for yield, cement factor, water-cement ratio, materials sources, cement type, admixture types, special additive, MATT codes & results of trial batches

Remarks

The greater portion of this form is completed by the contractor. Once complete, the proposed mix design is submitted to the Project Engineer, then forwarded to the District Laboratory Engineer for approval.

Mix Designs are required when a plant produces Portland Cement concrete for structures or pavements for a Department project. A mix design is required for each class or type of concrete produced for each project and each plant. If any significant changes are made in the mixture, a new mix design must be submitted. This would include changes in materials, proportions, sources or modifications to equipment which may affect the mixture.

Refer to the Department's latest Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures for more detailed information and policy for PCC Mix Designs.

Metric / English <input checked="" type="checkbox"/> M <i>M = Metric</i> <i>E = English</i>

This entry is located on the MATT Menu and is a required entry. Please note that results must be entered in the proper format based on the reporting unit selected.

PROJECT NO. <u>713-59-0104</u>

Required entry, use leading zeros if necessary.

MATERIAL USE <input checked="" type="checkbox"/> S (<i>P or S</i>)

Required entry, alphabetic. Enter P for Paving Concrete or S for Structural Concrete.

PLANT CODE <u>C303</u>

Required entry, alphanumeric. Must be a valid, certified ready mix plant.

MATERIAL CODE <u>502</u> TYPE/CLASS <u>A</u>
<i>If material is a Paving Concrete, cross out CLASS and write in the pavement type. If the material is a Structural Concrete, cross out TYPE and write in the structural class.</i>

Required entry, numeric. If Material Use is P, material code must be a valid PCC Paving for Surface Tolerance code. If Material Use is S, material code must be a valid Structural Concrete code.

Slip Form Paving <input checked="" type="checkbox"/> N <i>Y = Yes</i> <i>N = No</i>

Must be 'Y' or 'N' (Y= Yes N= No)
Blanks are permitted and leading zeros may be omitted.

Mixing Method 1

1 = Truck Mixer
2 = Central Mixer
3 = Site Mixer

Enter the appropriate mixing method. Must be 1, 2 or 3. Blanks are permitted and leading zeros may be omitted.

Parish Acadia
Proj. Name Parish Rd. #25
FAP No BRD-0015 (929)

Record the FAP No., Project Name, and the Parish in which the project is located in the spaces provided

MATERIALS

	Source Code	Co. Name	Location	Mat. Code	Alk. React.	Spec. Grav.	Absorp. Factor	Product Name
Cement	<u>0710</u>	<u>LoneStar</u>	<u>Leeds, AL</u>	<u>1162</u>	Y = Yes N = No	<u>3.115</u>		
Fly Ash	<u> </u>	<u> </u>	<u> </u>	<u> </u>		<u> </u>		
Slag	<u> </u>	<u> </u>	<u> </u>	<u> </u>		<u> </u>		
Fine Aggregate	<u>A134</u>	<u>TXI</u>	<u>Grangeville</u>	<u>576</u>	<u>N</u>	<u>2.64</u>	<u>0.5</u>	
Coarse Aggr. 1	<u>A134</u>	<u>TXI</u>	<u>Grangeville</u>	<u>571</u>	<u>N</u>	<u>2.53</u>	<u>2.2</u>	
Coarse Aggr. 2	<u> </u>	<u> </u>	<u> </u>	<u> </u>		<u> </u>	<u> </u>	
Water Reducer	<u> </u>	<u> </u>	Normal Set <input type="checkbox"/>	Y = Yes N = No	Set Retarder <input type="checkbox"/>	Y = Yes N = No		
Air Entrainer	<u> </u>	<u> </u>						
Set Accelerator	<u> </u>	<u> </u>	Chloride <input type="checkbox"/>	Y = Yes N = No	Non-Chloride <input type="checkbox"/>	Y = Yes N = No		
Superplasticizer	<u> </u>	<u> </u>						
Special Additive A	<u> </u>	<u> </u>		<u> </u>		<u> </u>		
Special Additive B	<u> </u>	<u> </u>		<u> </u>		<u> </u>		
Special Additive C	<u> </u>	<u> </u>		<u> </u>		<u> </u>		
Mixing Water:	<input type="checkbox"/>	1 = City, 2 = Well, 3 = Other	<u> </u>					

Source Codes: Source Codes for Cement, Fly Ash, Slag, Fine Aggr., Coarse Aggr. 1, Coarse Aggr. 2, Water Reducer, Air Entrainer, Set Accel., and Superplasticizer, must be active product source codes listed in the Qualified Products List Manual. Source Code fields for Special Additives A, B and C are reserved for additives or materials not identified above. Source codes for Special Additives must be a valid Non-QPL Approved Source code. Source Codes for Cement, Fine Aggregate and Coarse Aggregate 1 are required entries.

Company Name & Location: Include the Source Company Name and Location in the spaces provided.

Admixtures: Indicate the form of Admixture: Normal Set, Set Retarder, Chloride, Non-Chloride (Y = Yes, N = No).

Material Codes: Codes for Cement, Fly Ash, Slag, Fine Aggr., Coarse Aggr.1, Coarse Aggr.2, Admixtures and Special Additives A, B and C must all be valid and active material codes in the proper Matt-Id. Material

Material Codes for Cement, Fine Aggregate and Coarse Aggregate 1 are required entries.

Alkali Reactive: Required entries for Fine Aggr & Coarse Aggr1. (Y = Yes, N = No)

Spec. Grav. & Indicate the proper Specific Gravity and Absorption Factor.

Absorpt. Factor Required entries for Cement, Fine Aggregate and Coarse Aggr 1.

Product Names: Product names must be indicated when materials for admixtures or special additives are used.

Mixing Water: Indicate Source of Water Supply: 1 = City
2 = Well
3 = Other
If Other, include source in space provided

Mix Proportions For One Cubic Meter (Cubic Yard) of Concrete			
Cement	334	kg (lb)	
Fly Ash		kg (lb)	
Slag		kg (lb)	
Fine Aggregate (SSD)	715	kg (lb)	
Coarse Aggregate 1 (SSD)	1123	kg (lb)	
Coarse Aggregate 2 (SSD)		kg (lb)	
Water	177	L (gal)	
Water Reducer		mL (oz)	UNIT
Air Entrainer		mL (oz)	kg, L, mL
Set Accelerator		mL (oz)	(lb, gal, oz)
Superplasticizer		mL (oz)	
Special Additive A			
Special Additive B			
Special Additive C			
Contractor <u>Cypress Const.</u>			
Certified Concrete Technician		<u>Signature</u>	10145 Code
Date Submitted <u>112-112-198</u>			

- Mix Proportions:** Indicate the proper proportions for the design. Mix proportions for Cement, Fine Aggregate and Coarse Aggregate 1 are required entries.
- Contractor, Cert. Concrete Tech.:** Include the name of the Contractor and the signature of the Cert. Concrete Technician.
- Contractor Code:** Required numeric entry. Must be a valid Contractor code.
- Date Submitted:** Required entry. Use leading zeros if necessary. (Ex. 08-23-98)

Departmental Use	
Yield	<u>11.010</u> m ³ (cu ft)
Cement Factor	<u>334</u> kg/m ³ (bag/cu yd)
Fly Ash	<input type="checkbox"/> % By Mass (Wt)
Slag	<input type="checkbox"/> % By Mass (Wt)
Water-Cement Ratio	<u>1177</u> L/m ³ (gal/bag)
Water-Cement Ratio	<u>0.53</u> By Mass (Wt)
Cement with 0.6% or less Alkalies required	<input checked="" type="checkbox"/> Y = Yes N = No
Date Received	<u>12-12-98</u> ACCEPTED <input checked="" type="checkbox"/> REJECTED <input type="checkbox"/>
<u>Signature</u> District Laboratory Engineer	<u>0304</u> Code <u>12-12-98</u> Date

The District Laboratory shall complete the Departmental Use portion of this worksheet verifying if the mix complies with specification requirements. Enter Date Received, Accepted or Rejected, Dist Lab Engr Submitter Code and Date of acceptance or rejection. The worksheet must be signed by the District Laboratory Engineer.

Enter any applicable comments pertaining to the mix in the Remarks field. This is a 54 character alphanumeric field.