


TO SUPERSEDED BY EB 01-010 EFFECTIVE 2/6/01	<div style="text-align: right;">159</div> <h2 style="text-align: center;">ENGINEERING INSTRUCTION</h2> <p style="text-align: center;">NEW YORK STATE DEPARTMENT OF TRANSPORTATION</p> <hr/> <p style="text-align: center;">SUBJECT CONCRETE MIX DESIGN PROGRAM 15 00011</p> <p style="text-align: center;">Subject Code: 7.42-501</p>
Distribution <input type="checkbox"/> Main Office <input type="checkbox"/> Regions <input checked="" type="checkbox"/> Special	Code: 85-24 Date: 5/1/85
APPROVED  JAMES J. MURPHY, DIRECTOR, Materials Bureau	Supersedes:

I. Purpose

The Concrete Mix Design Program Form EDP-239a shall be completed when requesting the calculation of concrete mix designs. The computer calculates mix properties and material quantities using the method described in Materials Method 9.0. For the present, only the Basic Mix Design is available. Any adjusted mix designs will be computed by the Materials Bureau.

II. Preparation

The originator of the Concrete Mix Design Form-239a prepares a single form inserting the following information in the spaces provided. Each form allows as many as 15 different mix designs (one per line). Form EDP 239a is organized as follows:

A. General Description

1. **Accounting Code:** The 26-digit code including organization code, P.I.N., function code, current billing code (see Accounting Manual 4.5-1), and work order number (six character identifier assigned by the user).
2. **Region Number:** The number of the Region or MO for Main Office.
3. **Submitted By:** Please print the name of the originator on the form.
4. **Date:** The month, day and year on which the FORM is prepared.

Note: Since items 2, 3 and 4 are for the reference of the telecom operator and user, they shall not be entered into the computer.

- B. Input Data Description - one line of data should be input for each concrete mix design desired.

Module	Engineering Instruction	Code	1-42	Date	5/1/85	Page	
Subject	Concrete Mix Design Program 1530011						

<u>Columns</u>	<u>Field Title</u>	<u>Acceptable Entries</u>
1	--blank--	Leave blank, intended for future use.
2-16	Contract Number* or Plant Name	Up to 15 alpha-numeric characters.
17	Mix Class	A,C,D,E,F,G,H,I or J
18-21	Specific Gravity of Portland Cement*	3.10-3.20
22-25	Sand Fineness Modulus	2.30-3.30 (for mix class A-G, I or J) 2.40-3.30 (for mix class H)
26-29	Specific Gravity of Sand	2.50-3.10
30-33	Specific Gravity of Coarse Aggregate	2.00-3.20

(If the specific gravity of coarse aggregate is between 2.00 and 2.49 inclusive, this message will be printed: "Computations based on specific gravity of slag aggregate.")

34-36	Percentage of No. 1 Stone in Coarse Aggregate**	0-100
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(For mix classes D and J, this must equal 100.)

37-38	Percentage of No. 2 Stone in Coarse Aggregate**	0-99
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39-40	Percentage of No. 3 Stone in Coarse Aggregate**	0-99
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41-43	--blank--	Leave blank, intended for future use.
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* 1. Alpha-numeric fields should be left-justified and numeric fields right-justified utilizing the decimal points on the form.

**2. For mix classes A,C,E,F,G,H, or I the percentages of No. 1 and No. 2 stone must total exactly 100 and neither can equal zero.

(Note: If the above statements and acceptable entries are not met, computations will not be performed.)

Subject: Concrete Mix Design Program L530011

III. Disposition

A. Originator:

Forwards completed FORM EDP-239a to Regional E.D.P. Liaison Agent.

B. Regional E.D.P. Liaison Agent:

Reviews completed FORM EDP-239a for errors or omissions. Provides for processing of the information contained on EDP-239a via telecom. Returns EDP-239a and the report containing design properties to the Originating Engineer.

IV. Directive Reference

Manual Reference

Concrete Mix Design Program L530011

876-2-3.53001.1

Subject: Concrete Mix Design Program L530011

CLASS PLANT/LOCATION SGPC FM SGFA SGCA PC1 PC2 PC3
 A 095970 TR BRONX 3.15 2.75 2.63 2.85 50 50 0

BATCH QUANTITIES
 (CUBIC YARD)

CEMENT (LBS)	606
WATER (LBS)	279
SAND (LBS)	1029
#1 CA (LBS)	1004
#2 CA (LBS)	1004
#3 CA (LBS)	0
W/C RATIO	0.46
AIR CONTENT (%)	7.0
SLUMP (INS)	2.5-3.5
UNIT WEIGHT (PCF)	145.23

NOTES

- 1) ALL AGGREGATE IS ASSUMED TO BE IN SSD CONDITION. ADJUST BATCHING WEIGHTS TO MAINTAIN CORRECT PROPORTIONS AS FREE MOISTURE VARIES. (USE TABLE BELOW FOR SAND AND COARSE AGGREGATES. ADDED WATER SHOULD BE ADJUSTED TO COMPENSATE FOR FREE MOISTURE.)
- 2) ROUND SCALE WEIGHTS AS REQUIRED BY BATCHING EQUIPMENT.

CUBIC YARD SCALE WEIGHTS
 SAND AND COARSE AGG.

% MOISTRE	SAND SCALE WGT (LBS)	#1 CA SCALE WGT (LBS)	#2 CA SCALE WGT (LBS)	#3 CA SCALE WGT (LBS)
0.0	1029	1004	1004	0
0.5	1034	1014	1009	0
1.0	1039	1014	1014	0
1.5	1044	1019	1019	0
2.0	1049	1024	1024	0
2.5	1054	1029		
3.0	1059	1034		
3.5	1065			
4.0	1070			
4.5	1075			
5.0	1080			
5.5	1085			
6.0	1090			
6.5	1095			
7.0	1101			
7.5	1106			
8.0	1111			

Subject: Concrete Mix Design Program L530011

Sample work flow deck.

```
100 BEGIN JOB YOURNAME; Z X/ALL/MATLS/L530011
200 RUN (COTO)C/MATLS/L530011;
300 Z INSERT THE FOLLOWING IF PRINTER OUTPUT IS DESIRED,
400 Z OTHERWISE THE OUTPUT WILL GO TO DISK.
500 Z FILE FILE6(KIND=PRINTER);
600 DATA
700 Z...INSERT DATA HERE - SAMPLE DATA FOLLOWS....
800 D95970 TR BRONXA3.152.752.632.850505000
900 D95970 TR BRONXC3.152.752.632.850505000
1000 D95970 TR BRONXF3.152.752.632.850505000
1100 ?END JOB
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This program may be run in an interactive mode over the following CMT terminals:

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TD830
MT983
ET1100
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For interactive operation, use a work flow deck similar to the following example.

```
100 BEGIN JOB YOURNAME; Z X/ALL/MATLS/L530011/DRIVE
200 Z *****
300 Z THE PROGRAM C/MATLS/L530011/DRIVE CAN ONLY BE RUN ON BURROUGHS
400 Z OR BURROUGHS LOOK ALIKE SMART TERMINALS
500 Z *****
600 MYJOB(STATION=MYJOB(SOURCESTATION));
700 RUN (COTO)C/MATLS/L530011/DRIVE;
800 ?END JOB
```

