



**TR3: Technical Report
Concrete Design Mix**
Must be typewritten.

DEPT BLDGS Job No. 420667068
Scan Code ESHS2726334

TR3 is required prior to permit

1 Location Information <i>Required for all applications.</i>
House No(s) 27-10 Street Name 44 DRIVE
Borough QUEENS Block 81 Lot 5 BIN 4436627 CB No. 402

2 Applicant Information - Licensed Concrete Testing Lab <i>Required for all applications.</i>
Director Last Name BANERJEE Director First Name DEBABRATA Director Middle Initial
Business Name IMPACT CONCRETE & CONTROL INSPECTION INC Business Telephone (718) 939-7774
Business Address 15-46 129TH STREET Business Fax (718) 939-6444
City COLLEGE POIN State NEW YORK Zip 11356 Mobile Telephone (917) 577-7540
E-Mail DBANER@GMAIL.COM
Director's Lic. Number 081431 ☒ P.E. ☐ R.A. Concrete Testing Lab Lic. Number 000064

3 Strength Requirements and Design <i>Required for all applications. Attach Trial Mixture Report and/or Field Experience Results.</i>
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	Mix #1	Mix #2	Mix #3
Method of Determining Proportions (Trial Mixture and/or Field Experience)	☒ Trial Mix ☐ Field Experience	☐ Trial Mix ☐ Field Experience	☐ Trial Mix ☐ Field Experience
Date Trial Mixture Performed	3-3-2020		
Specified Strength (F' c)	6000		
Required Strength (F' cr)	6200		
Specified Test Age (Days)	28		

	Material Type	Material Source	ASTM Standard			
Cementitious #1 (lbs)	Cement	Lehigh I/I	C-150	423 lbs.	lbs.	lbs.
Cementitious #2 (lbs)	Slag	Holcim Lafarge 120	C-989	282 lbs.	lbs.	lbs.
Cementitious #3 (lbs)				lbs.	lbs.	lbs.
Fine Aggregate (lbs)	Sand	L.I Natural	C-33	1400 lbs.	lbs.	lbs.
Coarse Aggregate #1 (lbs)	Stone #67	Tilcon #87	C-33	1725 lbs.	lbs.	lbs.
Coarse Aggregate #2 (lbs)				lbs.	lbs.	lbs.
Coarse Aggregate #3 (lbs)				lbs.	lbs.	lbs.
Amount of Water (gals)	Water	NYC	C-94	32.5 gals.	gals.	gals.
Admixture #1 (oz)	HRWR	Euclid Plastol 5000	C-494	0.0 oz	oz	oz
Admixture #2 (oz)	HRWR	Euclid Plastol 6400	C-494	35.2 oz	oz	oz
Admixture #3 (oz)				oz	oz	oz
Other	SUPPLIER MAY ADJUST	ADMIXTURE AS PER	NYC DOB			
Water-Cement Ratio				0.384		
Slump/Spread (Inches $\pm$ tolerance)				8 $\pm$ 1"	$\pm$	$\pm$
Air Content (% $\pm$ tolerance)				2.0 $\pm$ 1.5	% $\pm$	% $\pm$
Unit Weight (lbs./ft ³)				151.9 lbs./ft ³	lbs./ft ³	lbs./ft ³

4 Concrete Testing Lab Director's Statement and Signature Required for all applications.

I hereby state that the above information is correct and complete to the best of my knowledge and that the above tests were performed in accordance with all Administrative Code Provisions and Departmental Rules, Regulations and Directives.

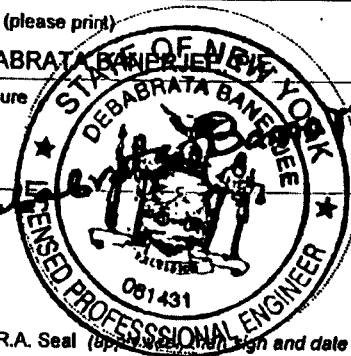
Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both.

It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both.

Name (please print)

DEBABRATA BANERJEE

Signature



Date 08-30-21

P.E. / R.A. Seal (apply seal, then sign and date over seal)

5 Concrete Producer's Statement and Signature Required for all applications. Must be filled out by Owner of Production Facility.

I certify that the material type and source in section 3 above are available at my facility and that I will use such materials to produce the concrete mix(es) specified in section 3. I further certify that I will produce and deliver such mix(es) to the project site in accordance with the applicable code provisions of the NYC construction codes and that such mix(es) are appropriate for the placement conditions for the project identified in section 1 above (BC 1905.8.2).

Name (print) Gerard Ferrotti

Title Operation Manager

Signature Gerard Ferrotti

Date 08-31-2021

NRMCA Certification Expiration Date (BC 1095.8.2) 05-08-2023

Business Name Empire Transit Mix

Business Telephone 718-384-3000

Business Address 430 Maspeth Avenue

Business Fax: (718) 384-3113

City Brooklyn

State NY

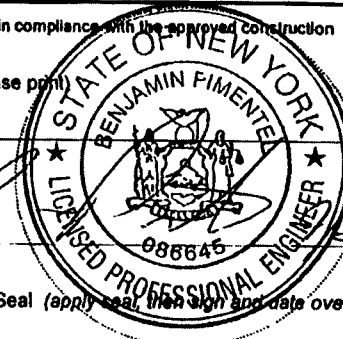
Zip 11211

6 Design Applicant's Statement and Signature Required for all applications. Must be filled out by P.E./R.A. responsible for plans.

I certify I have reviewed the concrete design mix(es) reported by the licensed testing lab and found them to be in compliance with the approved construction documents (BC 1905.6).

Name (please print)

Signature



Date

P.E. / R.A. Seal (apply seal, then sign and date over seal)

7 Building Owner's Statement and Signature Required for all applications.

Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both. It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by a fine or imprisonment, or both. I understand that I am found after hearing to have knowingly or negligently falsified or allowed to be falsified any certificate, form, signed statement, application, report or certification of the correction of violation required under the provisions of this code or of a rule of any agency, I may be barred from filing further applications or documents with the Department.

Name (print)

JAN A. W. WERWAISS

Title

AUTHORIZED SIGNATORY

Signature

J.A.W.

Date

09/21/2021

IMPACT

CONCRETE & CONTROL INSPECTIONS, INC.

18-30 129TH STREET, COLLEGE POINT, NEW YORK 11356
TEL: (718) 939-7774 FAX: (718) 939-6444

CONCRETE MIX DESIGN REPORT

CLIENT: Empire Transit Mix	Mix Type E	Structure Tech NY	DATE: 3/3/20
		8 Court Square	LAB NO.: 2020-3-2-20 P N Air
Project: In House QC mix 2020-2022		Building 1	MIX TYPE: EMPIRE P AIR
Placement: Slab on Grade		27-10 44th Drive	METHOD: Trial
Supplier: Empire Transit Mix		LIC Queens NY	SAMPLED BY: Impact
			Expire on: 3/3/2022

5000 PSI +1200 Psi Normal wt concrete Pump Mix @28 Days

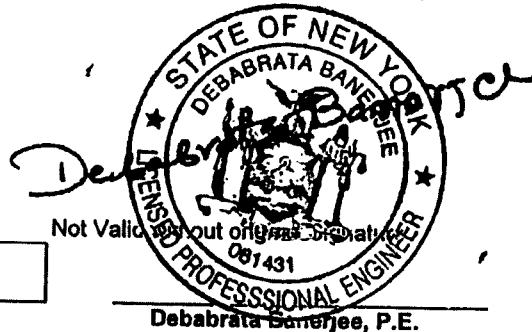
Product	Source & Type	ASTM	S.G.	NYS Source No.
Cement	Lehigh-III	ASTM C150	3.15	69
Slag	Holcim Lafarge 120	ASTM C989	2.94	201
Silica Fume		ASTM C1240	2.20	6010
Fine Agg.	L I Natural/ Coram	ASTM C33	2.62	10-18F
Coarse Agg.	Tilcon (#67)	ASTM C33	2.80	8-9R
Coarse Agg.	Tilcon (#8)	ASTM C33	2.80	8-9R
Water	NYC Potable	ASTM C94	1.00	-
Admixture 1	Euclid- Plastol 5000	ASTM C494	1.20	1035
Admixture 2	Euclid- Plastol 6400	ASTM C494	1.20	4033
Admixture 3				4082

Recommended Mix Design # 4

Cement (lbs.)	423
Slag (lbs.)	282
Microsilica (lbs.)	0
Fine Agg. (lbs.)	1400
Coarse Agg. (lbs.)	1725
Coarse Agg. (lbs.)	0
Water (gals.)	32.5
Admixture 1 (oz.)	0.0
Admixture 2 (oz.)	35.2
Admixture 3 (Gal.)	0.0
Slump (in.)	8"±1"
Air Content (%)	2 % ±1.5%
U. Wt. P.C.F.	151.9
W/C Ratio	0.384

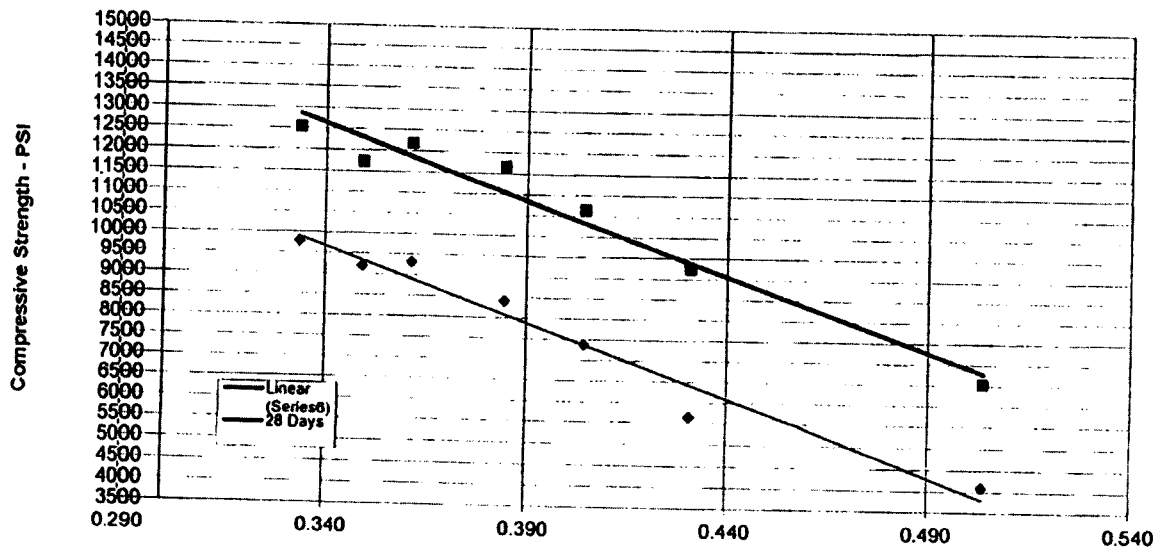
(Theoretical Unit wt)

Euclid-Micro Fiber 150
Dosage Rate 1.0 lb. per yard



Debabrata Banerjee, P.E.

Compressive Strength vs. Water Cement Ratio



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CONCRETE MIX DESIGN REPORT

CLIENT: Empire Transit Mix 0 0	DATE: 3/3/20
PROJECT: In House QC mix 2020-2022 0	LAB NO.: 2020-3-2-20 P N Air
SUPPLIER: Empire Transit Mix	MIX TYPE: EMPIRE P AIR
	METHOD: Trial
	SAMPLED BY: Impact
	DELIVERED BY: 3/3/2022

5000 PSI +1200 Psi Normal wt concrete Pump Mix @28 Days

Aggregate Gradation Passing Percent Finer

Sieve Size	F.A.	C.A. #87	CA #8	FA C-33	CA #67	CA #8
2"					C-33	C-33
1 1/2"		100				
1"		100			100	
3/4"		94.2			90-100	
1/2"		40.5				
3/8"	100.0	20.3			20-55	
# 4	97.5	3.8			0-10	
# 8	94.2	1.1				
# 16	80.7					
# 30	47.8					
# 50	14.2					
# 100	2.3					
FM	2.63					
Unit Weight Dry Rodded						
Specific Gravity	2.62					
Colometric Test						

Plate # 1

TRIAL MIXES - DRY BATCH WEIGHTS (lbs./Cubic Yards)

Point	Yield	Cement	Slag	Silica	F.A.	C.A.-1	C.A.-2	Water	Adx 1	Adx 2	Adx 3	Unit Wt.	Slump(in)	W/C	Air
1	26.8	320	200	0	1535	1750	0	31.4	31.2	0.0	0.0	150.8	8.25	0.504	3.5
2	26.9	360	240	0	1520	1725	0	31.0	38.2	0.0	0.0	151.2	8.00	0.431	3.2
3	27.0	396	264	0	1450	1725	0	32.0	39.8	0.0	0.0	152.0	9.00	0.404	3.0
4	27.0	423	282	0	1400	1725	0	32.5	0.0	35.2	0.0	152.4	8.50	0.384	2.7
5	26.9	450	300	0	1340	1725	0	32.5	0.0	41.3	0.0	152.6	9.00	0.361	2.2
6	27.0	480	320	0	1300	1725	0	33.5	0.0	44.5	0.0	152.9	8.75	0.349	2.1
7	27.0	495	355	0	1240	1725	0	34.0	0.0	51.0	0.0	153.2	8.00	0.334	2.0

COMPRESSIVE STRENGTH RESULTS (ASTM C39) - P.S.I. (4" x8" Cylinders)---

	Point	w/c ratio	7 Days Results		Average	28 Days Results				Average
	1	0.504	4214	3981	4098	6768	6620	6211	8533	
	2	0.431	5806	5684	5645	9502	9209	9027	9246	
	3	0.404	7084	7658	7371	10848	10486	10645	10660	
	4	0.384	8388	8431	8410	11812	12074	11118	11668	
	5	0.361	9435	9184	9310	12260	12221	12064	12182	
	6	0.349	9007	9389	9198	12024	11550	11639	11738	
	7	0.334	9713	9844	9779	12417	12146	13063	12542	
									Shrinkage %	
	Point	w/c ratio	3 Days Results		Average	56 Days Results		Average	7 day	28 day
	1	0.504	3168	2978	3073	7816	8041	7829	0.006	0.014
	2	0.431	4553	4196	4375	10096	10471	10284	0.004	0.016
	3	0.404	5598	5594	5596	11692	11754	11723	0.008	0.020
	4	0.384	6413	7027	6720	12212	13111	12682	0.014	0.028
	5	0.361	7127	7290	7209	13102	12904	13003	0.007	0.028
	6	0.349	6887	6970	6929	12569	12884	12727	0.007	0.030