

Dr. Toufic H. and Mildred Kalil House



Preservation of a Frank Lloyd Wright Usonian Automatic

WJE

Tara Ikenouye, AIA, CPHC
Senior Associate



Christopher J. Dabek
Vice President

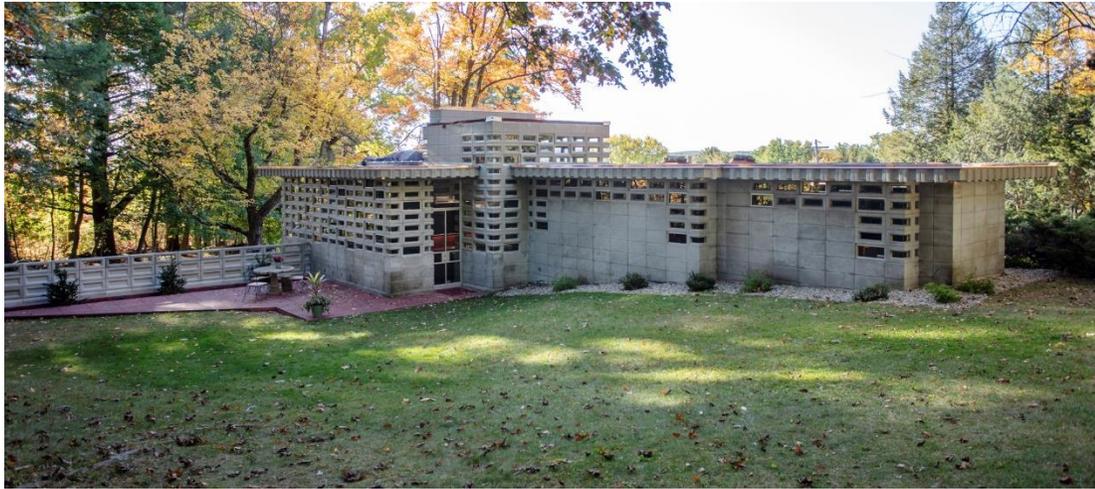
October 31, 2023



THE WORLD'S GATHERING PLACE FOR ADVANCING CONCRETE

aci CONCRETE
CONVENTION

Dr. Toufic H. and Mildred Kalil House



Images source: Leslie Schwartz Photography

Dr. Toufic H. and Mildred Kalil House



Images source: Leslie Schwartz Photography

Kalil House

Usonian Automatic Design and Construction

Forensic Investigation

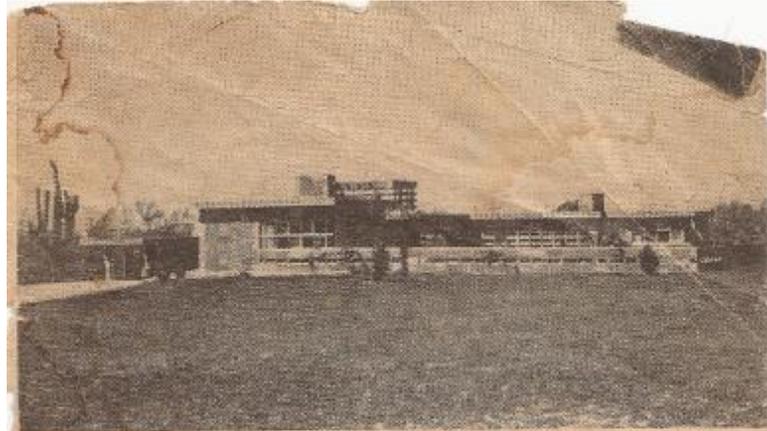
Site Wall Reconstruction



Frank Lloyd Wright Design

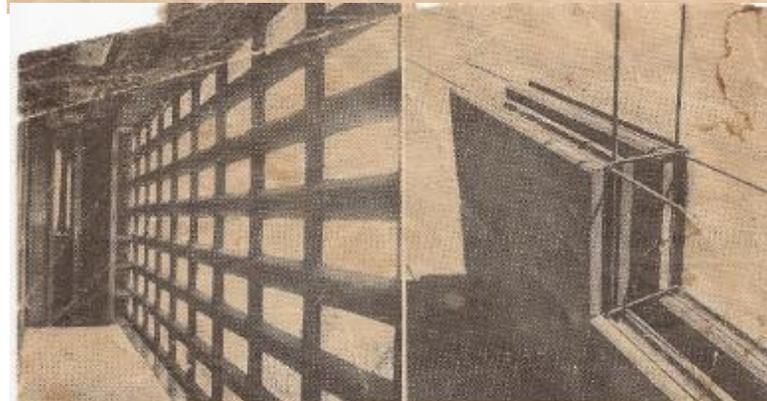
"Organic design of natural growth, based on necessary function"

Frank Lloyd Wright

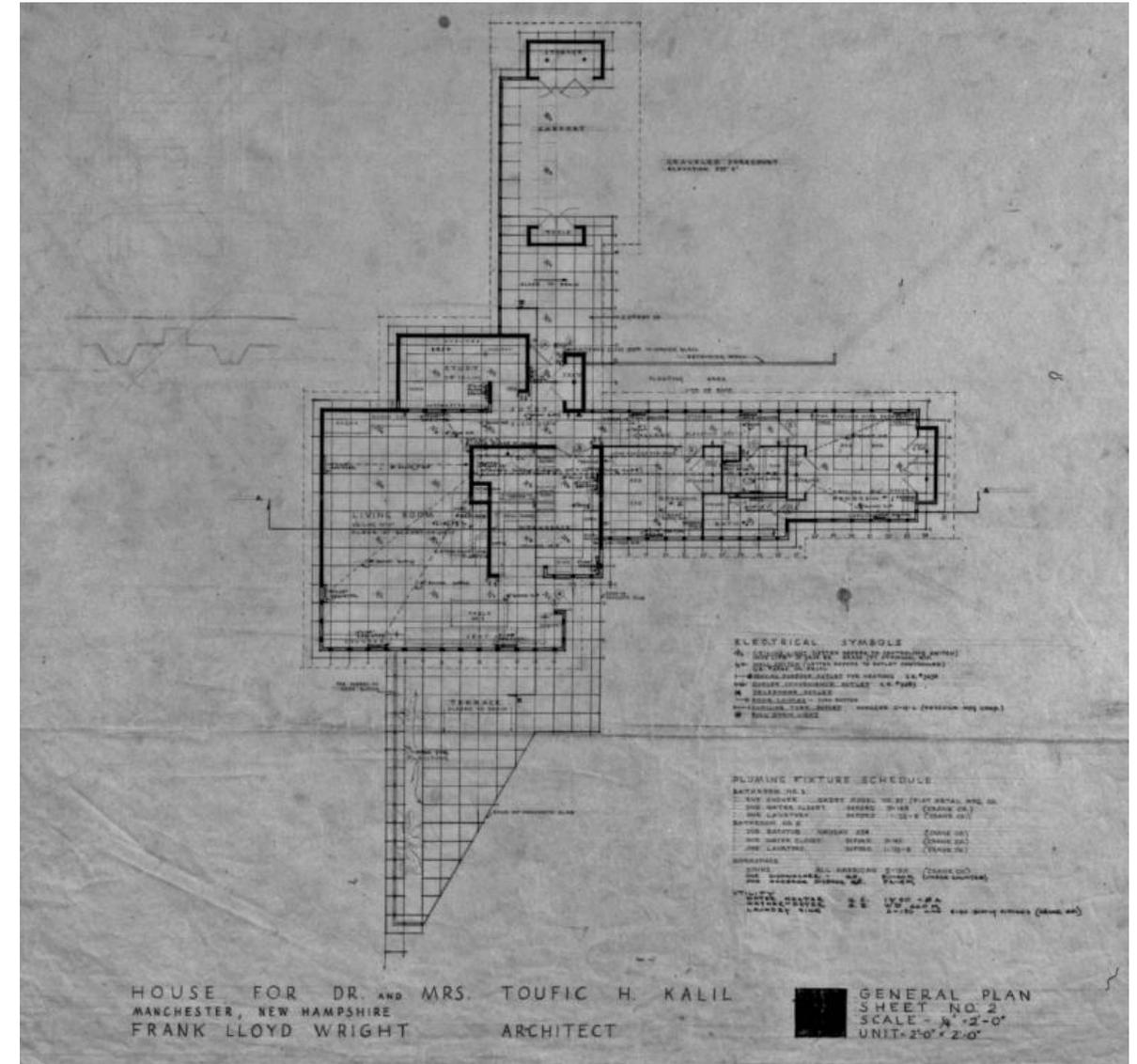


USONIAN AUTOMATIC ADELMAN HOUSE, PHOENIX, COST \$25,000

PEOPLE IN HOMES MOLD IT YOURSELF



Gallery next to outer wall is lighted by glass-paned variation of blocks used throughout (note hall ceiling). Concrete shell blocks are cast on building site in wrap-around forms, then laid in single or double courses (r.) with reinforcing rebs. Nine types of blocks can be cast from the identical mold.



Images source: Columbia University Libraries

Usonian Automatic Construction



Image source: Kalil Family

- Coffered concrete blocks
- Steel forms, cast on-site, dry tamped
- 12 x 24 x 3-1/2 in. module
- 2-in diameter perimeter channel
- No allowance of construction tolerance

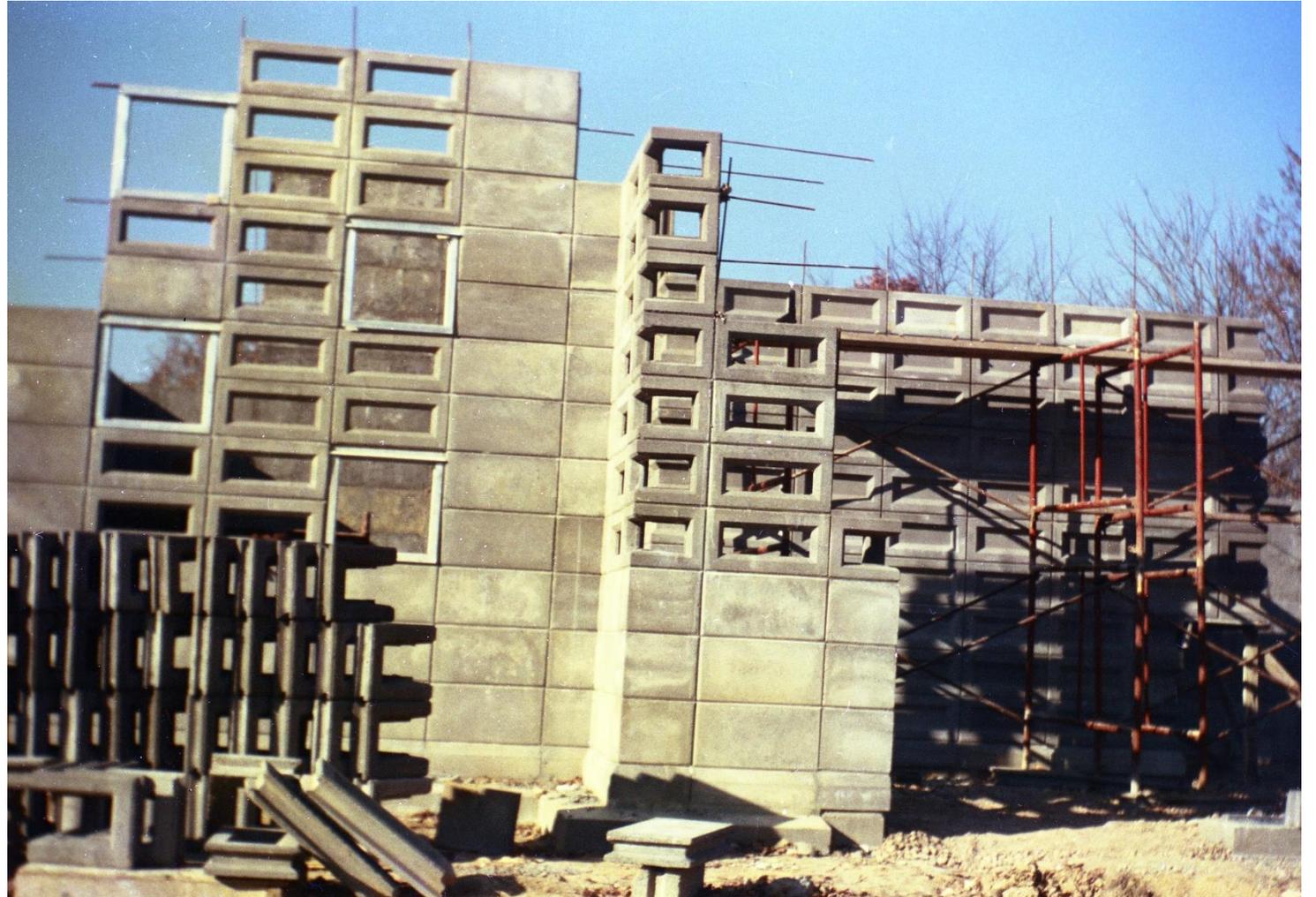


Image source: Kalil Family

Usonian Automatic Construction



Usonian Automatic Construction



Image source: Kalil Family



Image source: Kalil Family

Usonian Automatic Construction



Image source: Kalil Family



Image source: Kalil Family

Low Flashing Heights



Image source: Leslie Schwartz Photography



New Roofing and Flashings



June 2023

Concrete Cleaning



Image source: Kalil Family



June 2019



July 2018



June 2023



June 2023

Kalil House

Usonian Automatic Design and Construction

Forensic Investigation

Site Wall Reconstruction



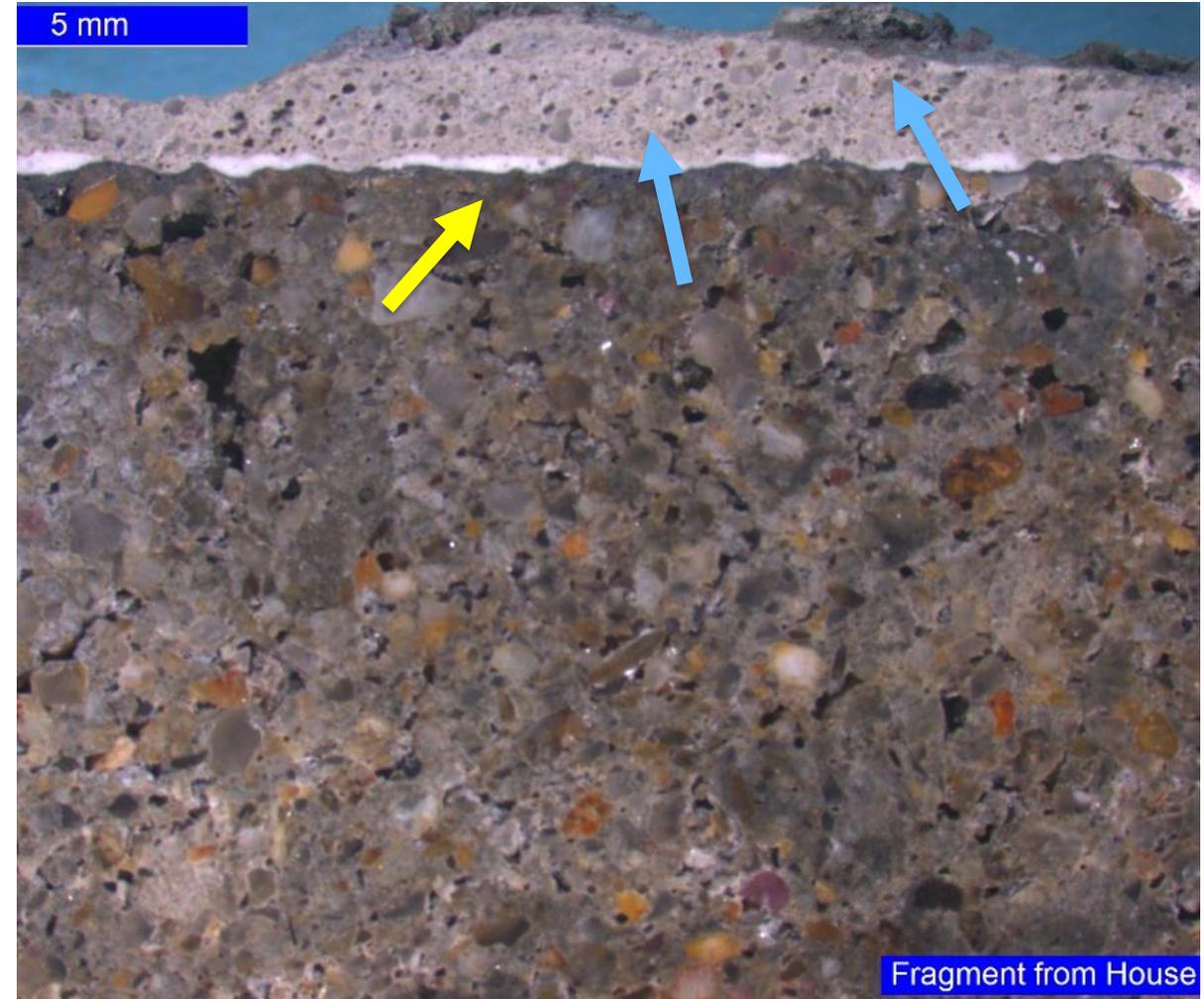
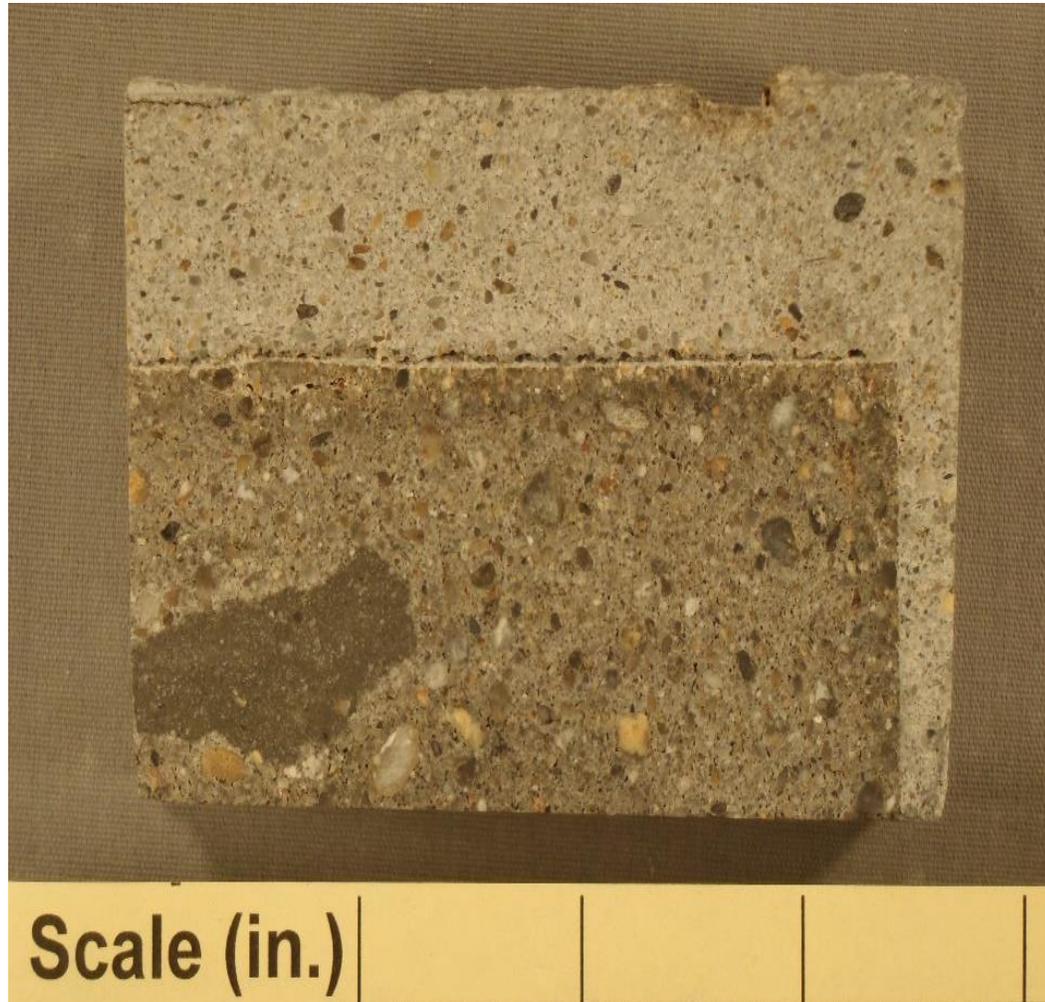
Site Wall Damage



As-Built Condition



Petrographic Analysis



Kalil House

Usonian Automatic Design and Construction

Forensic Investigation

Site Wall Reconstruction



Original Invoices – Molds and Blocks

ESTABLISHED 1893 INCORPORATED 1894

LEIGHTON MACHINE COMPANY
Manufacturers of
CIRCULAR KNITTING MACHINES
TELEPHONE 2-9714 - 3717

No. 5187

Your Order No. _____ Shipped Via _____ MANCHESTER, N. H., October 12 1955

Sold to Duracrete Cement Blocks Co., Terms NET 30 days
Hooksett, N. H. S.M. #870

PRICES SUBJECT TO CHANGE WITHOUT NOTICE. NO DISCOUNT ALLOWED FOR PREPAYMENT OR OTHERWISE UNLESS SPECIFIED.

QUAN.	DESCRIPTION	PRICE	AMOUNT
1	Cement Block Mold Modified - removing 3/64 inches from all four sides - reducing size of final block 3/32 (lt and width) 21-3/4 hrs. Labor @4.00		87.00

*Gave duplicate of above bill to
mort.*

ALL GOODS SHIPPED F. O. B. MANCHESTER, N. H.

OFFICE COPY 1621

DURACRETE BLOCK CO.
STATE DISTRIBUTOR
THOROSEAL WATERPROOFING PRODUCTS
MANCHESTER, N. H.
BOX 217A R.F.D. NO. 1
TELS. 5-6293 - 2-7011

Order No. _____ DATE Jan 23 1956

Sold To Dr. J. H. Kalil

Address 795 Elm St City _____

QUAN.	DESCRIPTION	PRICE	AMOUNT
1905	Sept 28 - Leighton Machine Equip		276.00
	Oct 13 - " " "		87.00
	24 - J. Hodge Co		59.17
	Oct 31 - Repair Iron Works	Supplier	19.50
	Nov 3 - Leighton Machine		64.00
	9 - Brown-Walsh Co		27.50
	549# Steel from sch @ 1.12		65.88
	Labor		
	machinist 9.3 hrs @ 3.60		334.80
	Helper 77.0 @ 2.25		172.25
			1137.10

January 1956
Steel Form Fabrication - \$1,137.10

INVOICE

TELEPHONE MANCHESTER 5-6293 2-7011

DURACRETE

CONCRETE AND CINDER UNITS

DURACRETE BLOCK CO., Inc.
R.F.D. No. 1, Box 217A, Manchester, N. H.

DRIVER self DATE Sept 19 1956

SOLD TO Dr. J. Kalil ORDER NO. _____

ADDRESS _____

TOWN City

DELIVER TO _____

CONCRETE				CINDER			
QUANTITY	SIZE	PER. M	AMOUNT	QUANTITY	SIZE	PER. M	AMOUNT
	2x8x16				Brought Forward		
	4x8x16				4x8x16		
	6x8x16				6x8x16		
	8x8x16				8x8x16		
	8x8x8				8x8x8		
	10x8x16				10x8x16		
	12x8x16				12x8x16		
	12x8x8				12x8x8		
	4x4x16 HH				4x4x16 HH		
	8x4x16 HH				8x4x16 HH		
	Brick				Brick		
	80 Special Blocks				ea 1.00		80.00
	BES-STONE				8x8 Chimney		net
	Barrel				12x8 "		
	#1 Bather						
	#2 Bather						
	#3 Bather						
	#4 Bather						
	Frames						
	Bases						
	Misc.						

No. 44715 THIS IS THE ONLY ITEMIZED BILL YOU WILL RECEIVE KEEP IT TO CHECK YOUR STATEMENT

September 1956
80 Special Blocks - \$1.00 each



Original Sand Pit
Hooksett, New Hampshire

New Cast Concrete Blocks



Finish Trials



Reconstruction



Reconstruction



Reconstruction



September 2019



September 2019

Reconstruction



June 2023



June 2023



Dr. Toufic H. and Mildred Kalil House



WJE Tara Ikenouye, AIA, CPHC
Senior Associate



STONE & LIME
HISTORIC RESTORATION SERVICES

Christopher J. Dabek
Vice President