ELECTRICAL PANEL SCHEDULES

CKT. #	DESCRIPTION	NOTE	BREAKER POLE	BREAKER AMP.	LOAD (KVA)	A	B	C	LOAD (KVA)	BREAKER AMP.	BREAKER POLE	NOTE	DESCRIPTION	CKT. #
1	RTU-2 FLA: 82.0 MCA: 83.0	4	3	90	9.84	10.7			0.89	20	1	1	FRONT STORE LIGHTS	2
3	3#2, #8 G. in (1) 1-1/4" C. EA				9.84		10.4		0.52	20	1	1	BACK STORE LIGHTS	4
5					9.84			10.5	0.63	20	1	1	STORE LIGHTS	6
7	PREP RM RECEPT.	1	1	20		0.0				20	1	1	STORE LIGHTS	8
9	COMPUTER RECEPT.	1	1	20			0.0			20	1	1	PADDLE FANS	10
11	DEVICE RECEPT.	1	1	20				0.0		20	1	1	STORE LIGHTS	12
13	HAND DRYER	1.5	1	20	1.50	9.5			8.00	90	3	3,5	WATER HEATER	14
15	HAND DRYER	1.5	1	20	1.50		9.5		8.00				3#2, #8 G. in (1) 1-1/4" C. EA	16
17	BATHROOM RECEPT.	1	1	20				8.0	8.00					18
19	STORE LIGHTS	2	1	20		1.2			1.20	20	1	1,6	BUILDING SIGN	20
21	WALL PACKS	1	1	20			0.0			20	1	1	ATM	22
23	BUILDING SIGNS	1,6	1	20	1.20			1.2		20	1	1	ROOF TOP RECEPT.	24
25	CHECKOUT RECEPT.	1	1	20		0.0				20	1	1	3-DOOR FREEZER	26
27	CHECKOUT RECEPT.	1	1	20			0.0			20	1	1	CHECKOUT LIGHTS	28
29	LOTTERY	1	1	20				0.0		20	1	1	SOFFIT RECEPT.	30
31	UNKNOWN	1	1	20		0.0				20	2	1	SLUSHY MACHINE	32
33	SOFFIT RECEPT.	1	1	20			0.0						EXISTING TO REMAIN	34
35	SOFFIT RECEPT.	1	1	20				0.0		20	1	1	UNKNOWN	36
37	CHUCKLES	1	1	20		0.5			0.53	20	1	1	RESTROOM/OFFICE LIGHTS/RR FF	38
39	UNKNOWN	1	1	20			0.0			20	1	1	RECEPT.	40
41	UNKNOWN	1	1	20				0.0		20	1	1	RECEPT.	42
						22.0	19.9	19.7	TOTAL KVA PER PHASE					
						61	55	55	AMPS PER PHASE					

VOLTAGE 208Y/120V
PHASE 3
WIRE 4
MAINS 200 MCB
RATING 200 (AMPS)
WITH I.G. BAR NO

LOCATION SEE PLAN
MOUNTING SEE RISER
FEEDER SEE "MDP"
MIN AIC 22k

PANEL "A"

ITEMS	CON.	%	DEM.
RECEPTACLES	0.0	code	0.0
KITCHEN	0.0	65%	0.0
HVAC	29.5	100%	29.5
LIGHTS (INT.	2.6	125%	3.2
LIGHTS (EXT.	2.4	125%	3.0
MISC.	27.0	100%	27.0
TOTAL KVA	61.5		62.7
TOTAL AMPS	171		174

NOTES:
1) EXISTING TO REMAIN
2) E.C. SHALL RELOCATE BREAKER AND CIRCUIT TO ALLOW SPACE FOR NEW WATER HEATER BREAKER INSTALLATION.
3) E.C. SHALL VERIFY EXISTING PANEL LOAD AND VERIFY THAT THE NEW WATER HEATER LOAD DOES NOT OVERLOAD THE EXISTING PANEL.
4) PROVIDE HACR TYPE BREAKER.
5) PROVIDE LOCKABLE MEANS PER NEC 422.31
6) PROVIDE LOCKABLE MEANS PER NEC 600.6

CKT. #	DESCRIPTION	NOTE	BREAKER POLE	BREAKER AMP.	LOAD (KVA)	A	B	C	LOAD (KVA)	BREAKER AMP.	BREAKER POLE	NOTE	DESCRIPTION	CKT. #
1	SPARE		1	20		0.0				20	1	1	COOLER FANS	2
3	SPARE		1	20			0.0			20	1	1	COOLER LIGHTS	4
5	SPARE		1	20				0.0		20	1	1	HEATER	6
7	RTU-1 FLA: 94.0 MCA: 95.0	2	3	100	11.28	11.3				20	3	1	COOLER COMP.	8
9	3#1, #8 G. in (1) 1-1/2" C. EA				11.28		11.3							10
11					11.28			11.3						12
13	DINING RECEPTACLES	1	1	20	0.90	0.9				20	1	1	BEVERAGE COUNTER	14
15	HAND DRYER	1.3	1	20	1.50		1.5			20	1	1	BEVERAGE COUNTER	16
17	HAND DRYER	1.3	1	20	1.50			1.5		20	1	1	BEVERAGE COUNTER	18
19	SPARE	1	1	20		0.0				20	1	1	BEVERAGE COUNTER	20
21	SPARE	1	2	20			0.0			20	1	1	BEVERAGE COUNTER	22
23								0.0		20	1	1	BEVERAGE COUNTER	24
25	SPARE	1	1	20		0.0				20	1	1	BUILDING SIGNS	26
27	D/T MENU BOARD	1	1	20	1.20		1.2			20	1	1	ICE MERCHANDISER	28
29	D/T PREVIEW BOARD	1	1	20	1.20			1.2		20	1	1	GTE BOOTH	30
31	D/T MENU CANOPY	1	1	20	1.20	1.2				20	2	1	SPARE	32
33	AIR-VAC	1	1	20		0.0								34
35	NEW COUNTER	1	1	20			0.0			20	1	1	GENERATOR HEATER	36
37	NEW COUNTER	1	1	20		0.0				20	1	1	UNKNOWN	38
39	NEW COUNTER	1	1	20			0.0				1	1	SPACE	40
41	NEW COUNTER	1	1	20				0.0			1	1	SPACE	42
						13.4	14.0	14.0	TOTAL KVA PER PHASE					
						37	39	39	AMPS PER PHASE					

VOLTAGE 208Y/120V
PHASE 3
WIRE 4
MAINS 200 MCB
RATING 200 (AMPS)
WITH I.G. BAR NO

LOCATION SEE PLAN
MOUNTING SEE RISER
FEEDER SEE "MDP"
MIN AIC 22k

PANEL "B"

ITEMS	CON.	%	DEM.
RECEPTACLES	0.0	code	0.0
KITCHEN	0.0	65%	0.0
HVAC	33.8	100%	33.8
LIGHTS (INT.	0.0	125%	0.0
LIGHTS (EXT.	0.0	125%	0.0
MISC.	7.5	100%	7.5
TOTAL KVA	41.3		41.3
TOTAL AMPS	115		115

NOTES:
1) EXISTING TO REMAIN
2) PROVIDE HACR TYPE BREAKER.
3) PROVIDE LOCKABLE MEANS PER NEC 422.31

CKT. #	DESCRIPTION	NOTE	BREAKER POLE	BREAKER AMP.	LOAD (KVA)	A	B	C	LOAD (KVA)	BREAKER AMP.	BREAKER POLE	NOTE	DESCRIPTION	CKT. #
1	NO LEAD STP	1	2	20		0.0				15	1	1	EML	2
3							0.0			20	2	1	CANOPY	4
5	SUPER STP	1	2	20				0.0						6
7						0.0				15	1	1	DISP. 1 & 2	8
9	CANOPY	1	2	20			0.0			20	2	1	CANOPY	10
11								0.0						12
13	DISP. 3 & 4	1	1	15		0.0				15	1	1	DISP. 5 & 6	14
15	CANOPY	1	2	20			0.0			20	2	1	CANOPY	16
17								0.0						18
19	DISP. 7 & 8	1	1	15		0.0				15	1	1	DATA DIST.	20
21	SPACE	1	1				0.0			25	1	1	AIR STAND	22
23	CANOPY FASCIA	1	1	20				0.0		20	1	1	ENTRY/EXIT	24
25	CANOPY LOGO	1	1	20		0.0				20	1	1	CODE POLE	26
27	CANOPY FASCIA	1	1	20			0.0				1	1	SPACE	28
29	CANOPY FASCIA	1	1	20				0.0			1	1	SPACE	30
31	SPACE	1	1			0.0				20	2	1	PERIMETER LIG	32
33	PERIMETER LIGHTS	1	1	15			0.0							34
35	PERIMETER LIGHTS	1	2	20				0.0				1	RELAY SWITC	36
37						0.0				15		1	SITE/CONSOLE	38
39	PERIMETER LIGHTS	1	2	30			0.0				1	1	SPACE	40
41								0.0			1	1	SPACE	42
						0.0	0.0	0.0	TOTAL KVA PER PHASE					
						0	0	0	AMPS PER PHASE					

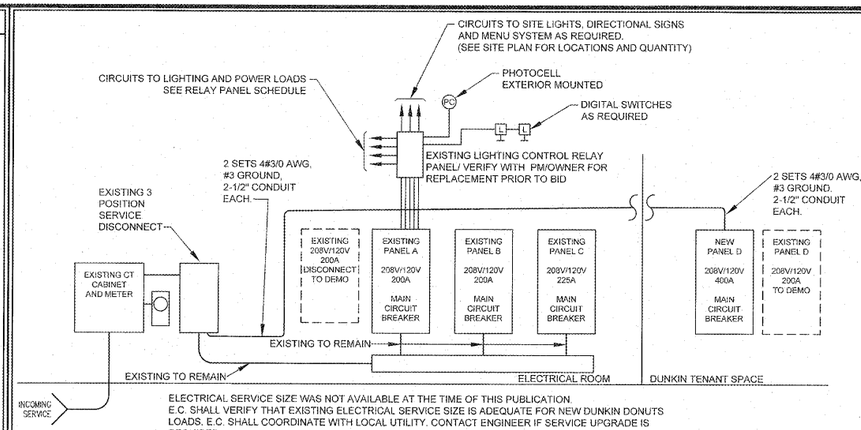
VOLTAGE 208Y/120V
PHASE 3
WIRE 4
MAINS 225 MCB
RATING 225 (AMPS)
WITH I.G. BAR NO

LOCATION SEE PLAN
MOUNTING SEE RISER
FEEDER SEE "MDP"
MIN AIC 22k

PANEL "C"

ITEMS	CON.	%	DEM.
RECEPTACLES	0.0	code	0.0
KITCHEN	0.0	65%	0.0
HVAC	0.0	100%	0.0
LIGHTS (INT.	0.0	125%	0.0
LIGHTS (EXT.	0.0	125%	0.0
MISC.	0.0	100%	0.0
TOTAL KVA			
TOTAL AMPS	0		

NOTES:
1) EXISTING TO REMAIN



ELECTRICAL SERVICE SIZE WAS NOT AVAILABLE AT THE TIME OF THIS PUBLICATION. E.C. SHALL VERIFY THAT EXISTING ELECTRICAL SERVICE SIZE IS ADEQUATE FOR NEW DUNKIN DONUTS LOADS. E.C. SHALL COORDINATE WITH LOCAL UTILITY. CONTACT ENGINEER IF SERVICE UPGRADE IS REQUIRED.

GROUNDING NOTES:

THE E.C. SHALL VERIFY THE FUNCTIONAL ACCURACY OF THE PREDICTED SERVICE DESIGN. THE E.C. SHALL VERIFY THE EXISTING SERVICE GROUNDING/BONDING SYSTEM FULLY COMPLIES WITH NEC ARTICLE 250 AND ALL APPLICABLE LOCAL ORDINANCES.

THE E.C. SHALL IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING, OF ANY REQUIRED CORRECTIVE ACTION.

1 ELECTRICAL RISER DIAGRAM
NONE

ELECTRICAL WIRING METHOD

A. ALL CONDUIT SHALL BE RUN CONCEALED IN SO FAR AS IS PRACTICABLE. CONDUITS SHALL BE EXPOSED ONLY WHERE SO INDICATED ON THE DRAWINGS OR IN UNFINISHED AREAS SUCH AS ELECTRICAL AND BOILER ROOMS.

B. MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS NOTED OTHERWISE ON THE PLANS.

C. RIGID METAL CONDUIT: HOT DIPPED GALVANIZED, MILD STEEL PIPE, ZINC COATED THREADS WITH AN OUTER COATING OF ZINC BICHROMATE, AS MANUFACTURED BY TRIANGLE, REPUBLIC, WHEATLAND OR EQUAL.

D. INTERMEDIATE METAL CONDUIT (IMC): HOT DIPPED GALVANIZED, MILD STEEL PIPE, ZINC COATED THREADS WITH AN OUTER COATING OF ZINC BICHROMATE AS MANUFACTURED BY TRIANGLE, REPUBLIC, WHEATLAND OR EQUAL.

E. FLEXIBLE METAL CONDUIT: GALVANIZED OR ZINC METALIZED STEEL, SINGLE STRIP, INTERLOCKED CONSTRUCTION AS MANUFACTURED BY TRIANGLE, ANACONDA, AMERICAN, FLEXIBLE CONDUIT, ELECTRIC-FLEX OR EQUAL.

F. ELECTRIC METALLIC TUBING (EMT): HOT DIPPED GALVANIZED, MILD STEEL TUBE, ZINC COATED, AS MANUFACTURED BY TRIANGLE, REPUBLIC, WHEATLAND OR EQUAL.

G. RIGID NONMETALLIC CONDUIT. SCHEDULE 40 PVC AS MANUFACTURED BY CARLON OR EQUAL.

H. METAL CLAD CABLE: TYPE MC, COPPER CONDUCTOR, 600 VOLT THERMOPLASTIC INSULATION, 90 DEG. C, INTERLOCKED STEEL ARMOR.

I. ARMORED CABLE: TYPE AC, COPPER CONDUCTOR, 600 VOLT, THERMOPLASTIC INSULATION, 90 DEG. C.

J. ANY EXPOSED RACEWAY SHALL BE RUN TRUE TO PLUMB AND PARALLEL OR PERPENDICULAR TO BUILDING LINES.

K. ALL CONNECTORS SHALL BE COPPER.

L. RACEWAYS SHALL BE SEALED WHEN ENTERING PULL BOXES OR STRUCTURES.

M. SINGLE CONDUCTOR CABLES SHALL BE USED FOR FEEDERS AND BRANCH CIRCUIT WIRING (EXCEPT WHERE MC AND AC CABLE IS USED). MINIMUM SIZE WIRE SHALL BE #12 AWG UNLESS OTHERWISE INDICATED AND SHALL BE SIZED TO CONFORM TO NORMAL NEC VOLTAGE DROPS. WIRE SIZES #10 AWG AND SMALLER SHALL BE SOLID, #8 AWG AND LARGER SHALL BE STRANDED.

FEEDERS AND ALL WIRING IN MOIST OR WET LOCATIONS UNDERGROUND OR UNDER THE SLAB SHALL BE 600 VOLT CODE TYPE THHN-THWN. BRANCH CIRCUIT WIRING IN DRY LOCATIONS, ABOVE GRADE, IN THE INTERIOR OF THE BUILDING SHALL BE 600 VOLT CODE TYPE THHN-THWN OR XHHW.

O. WIRING TO RECESSED FIXTURE AND WITHIN FIXTURE RACEWAYS SHALL BE TYPE THHN, #12 AWG MINIMUM.

P. EQUIPMENT GROUND: GREEN CONDUCTOR SHALL BE USED.

CKT. #	DESCRIPTION	NOTE	BREAKER POLE	BREAKER AMP.	LOAD (KVA)	A	B	C	LOAD (KVA)	BREAKER AMP.	BREAKER POLE	NOTE	DESCRIPTION	CKT. #
1	MOBILE DONUT CASE #70.5B (3)	3	1	20	0.07	3.1			3.00	30	2	6	[illegible] OVEN #215	2
3	ESPRESSO MACHINE #96.3		2	30	2.50		3.5		3.00				[illegible] in (1) 3/4" C. EA	4
5	3#10, #10 G. in (1) 3/4" C. EA				2.50			3.5	3.00	30		6	[illegible] #215	6
7	ESPRESSO MACHINE #96.3		2	30	2.50	5.5			3.00				[illegible] in (1) 3/4" C. EA	8
9	3#10, #10 G. in (1) 3/4" C. EA				2.50		3.6		1.[illegible]	20	1		[illegible] COOK STATION #242.2	10
11	DAIRY DISPENSER #101C (2)	3	1	20	0.48			1.0	2.[illegible]	30	2		BAGEL TOASTER #244A	12
13	SUGAR DISPENSER #101D (2)	3	1	20	0.96	3.4			2.4[illegible]				#10 G. in (1) 3/4" C. EA	14
15	COFFEE GRINDER #101G-3	3	1	20	1.37		1.[illegible]		1.86	20	1	3	[illegible] OLD UNIT #246A	16
17	COFFEE GRINDER #101G-3	3	1	20	1.37			1.[illegible]	1.12	20	1	3	ASSEMBLY STATION #247	18
19	TWIN CARAFE BREWER #101P-3		2	50	[illegible]	5.5			[illegible].00	45	2	4,6	ICE MAKER #413	20
21	3#6, #10 G. in (1) 1" C. EA				3.46		4.5						2#12, #12 G. in (1) 3/4" C. EA	22
23	TWIN CARAFE BREWER #101P-3		2		3.46			4.5	1.[illegible]		1	3	3-DOOR REFRIG. #445	24
25	3#6, #10 G. in (1) 1" C. EA				3.46	6.5			4.99		3		HYDROVECTION OVEN #539-B	26
27	SINGLE CARAFE BREWER #101PP-3		2	30	1.73				4.99				3#4, #10 G. in (1) 1-1/4" C. EA	28
29	3#10, #10 G. in (1) 3/4" C. EA				1.73				4.99					30
31	HOT WINTER BEV. MACHINE #108-A1			30	2.26	7.2			4.99	60	3		HYDROVECTION OVEN #539-B	32
33	3#10, #10 G. in (1) 3/4" C. EA				2.26		7.2		4.99				3#4, #10 G. in (1) 1-1/4" C. EA	34
35	BLENDER WITH RINSE #116				0.73			5.7	4.99					36
37	SPARE					1.2			1.20	20	1	1	MOBILE PICK-UP SIGN #855F	38
39	BLENDER WITH RINSE #116				0.73		1.9		1.20	20	1		DIGITAL MENU BOARDS #DMB	40
41	SPARE			20				0.7	0.72	20	1	1	P.O.S.	42
43	UNDERCOUNTER REFRIG. #120F			20	0.60	1.9			1.26	20	1	1	VBU/PRINTER	44
45	UNDERCOUNTER REFRIG. #120F*	3		20	0.60		1.0		0.36	20	1	1	VBU	46
47	UNDERCOUNTER REFRIG. #120F*	3		20	0.60			2.0	1.44	20	1	1	OFFICE IG RECEPTACLES	48
49	TWO COFFEE BREWER #200		2	30	2.03	3.1			1.08	20	1	1	OFFICE IG RECEPTACLES	50
51	3#10, #10 G. in (1) 3/4" C. EA				2.03		2.6		0.54	20	1	1	OFFICE IG RECEPTACLES	52
53	HOT WATER DISP. #102F	3	1	20	1.70			2.9	1.20	20	1	2	AIR CURTAIN	54
55	EF-1		1	15	0.70	2.1			1.44	20	1	2	DRIVE THRU WINDOW	56
57	EF-2		1	15	0.86		2.7		1.80	20	1	2	DRIVE THRU MISC	58
59	ROOF TOP RECEPT.		1	20	0.54			1.1	0.60	20	1		BUG LIGHT	60
61	FOOD CONTROLS/LIGHTS		1	20	1.40	1.4					1		SPACE	62
63	RTU-3 FLA: 97 MCA: 120		3	125	11.64		11.6				1		SPACE	64
65	3#6 G. in (1) 1-1/2" C. EA				11.64			11.6			1		SPACE	66
67					11.64	11.6					1		SPACE	68
69	SPACE		1				0.0				1		SPACE	70
71	SPACE		1					0.0			1		SPACE	72
						53.8	50.5	46.3	TOTAL KVA PER PHASE					
						149	140	129	AMPS PER PHASE					

VOLTAGE 208Y/120V
PHASE 3
WIRE 4
MAINS 400 MCB
RATING 400 (AMPS)
WITH I.G. BAR YES

LOCATION SEE PLAN
MOUNTING SEE RISER
FEEDER SEE "MDP"
MIN AIC 22k

NEW PANEL "D"

ITEMS	CON.	%	DEM.
RECEPTACLES	3.6	code	3.6
KITCHEN	99.1	65%	64.4
HVAC	36.5	100%	36.5
LIGHTS (INT.)	0.0	125%	0.0
LIGHTS (EXT.)	0.0	125%	0.0
MISC.	11.2	100%	11.2
TOTAL KVA	150.3		115.7
TOTAL AMPS	417		321

NOTES:
1) I.G. CIRCUIT - PROVIDE ADDITIONAL INSULATED GROUND WIRE.
2) PROVIDE LOCKABLE BREAKER PER NEC 422.31
3) PROVIDE GFI BREAKER.
4) PROVIDE HACR TYPE BREAKER
5) PROVIDE LOCKABLE BREAKER PER NEC 600.6
6) BREAKER SIZED PER EQUIPMENT CUT SHEET REQUIREMENTS. VERIFY WITH EQUIPMENT NAMEPLATE DATA.

FAULT CURRENT NOTE:

E.C. SHALL CONTACT THE UTILITY TO DETERMINE ACTUAL AVAILABLE SHORT CIRCUIT CURRENT. ALL NEW DISTRIBUTION EQUIPMENT SHALL HAVE ADEQUATE RATING TO WITHSTAND THE ACTUAL AVAILABLE FAULT CURRENT.

E.C. SHALL VERIFY THAT ALL EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT IS RATED TO WITHSTAND THE ACTUAL AVAILABLE FAULT CURRENT.

CONTACT THE ENGINEER IMMEDIATELY WITH ANY PROBLEMS THAT CANNOT BE RESOLVED ONSITE.

ELECTRIC LOAD SUMMARY

EXISTING SERVICE	=	800.00 Amps
EXISTING PEAK DEMAND KVA*	=	57.00 KVA
EXISTING PEAK DEMAND AMP	=	158.33 Amps
EXISTING PEAK AT 125%	=	197.92 Amps
EQUIP LOAD REMOVED	=	8.00 KVA
EQUIP LOAD ADDED	=	155.80 KVA
EQUIPMENT NET LOAD	=	**147.80 KVA**
LIGHTING LOAD REMOVED		
LIGHTS	=	5.09 KVA
LIGHTING LOAD ADDED		
LIGHTS	=	4.90 KVA
LIGHTING NET LOAD	=	**-0.19 KVA**
HVAC LOAD REMOVED		
RTU's	=	40.32 KVA
EXH. FANS/COND	=	0.00 KVA
TOTAL REOMVED	=	40.32 KVA
HVAC LOAD ADDED		
RTU's	=	58.70 KVA
EXH. FANS	=	0.53 KVA
TOTAL ADDED	=	59.23 KVA
HVAC NET LOAD	=	**18.91 KVA**
NEW LOAD KVA	=	166.92 KVA
NEW LOAD AMPERES	=	**462.56 Amps**
EXISTING LOAD	=	197.92 Amps
TOTAL NET LOAD**	=	**660.47 Amps**

* Per Dominion Power - metered 02/2016
** Less than 800A, no change in service required.

THESE PLANS ARE CONFIDENTIAL PROPERTY OF DUNKIN' BRANDS, INC. UNDER RESTRICTED ACCESS

dunkin' brands

PROJECT NO.: 17229

NRD national restaurant designers
ARCHITECTS & ENGINEERS
3005 Carrington Mill Blvd., Morrisville, NC 27560
ph: 919 544 7251 fax: 919 544 9399
A Division of LMHT Associates

SET REVISIONS			
NO	DESCRIPTION	DATE	
1	OWNER COMMENTS RESTROOM CHANGE	5/2/18	

DATE	3-18-18			
SCALE				
DRAWN	CTT			
CKD	DRS			
APPD	DRS			

SHEET REVISIONS

DD FRESH BREW 1.0
908 MARKET DRIVE, EMPORIA, VA

ELECTRICAL SCHEDULES AND DETAILS

PC# 358084

E-4.0

NOTE: DRAWINGS ARE NOT TO SCALE IF SHEET IS PLOTTED ON 11" x 17"

Order Plans @ WWW.LDLine.com