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CALCULATED LOAD ANALYSIS - SINGLE-FAMILY DWELLING BLDG J-A, K-A, AND L-A 1 BR FLAT
PER NEC 2017 220.82(B) AND (C) SOUTH CITY CNI PHASE 3

1. LIGHTING LOADS
GENERAL LIGHTING & GENERAL RECEPTACLE LOADS
PER NEC 2017 ARTICLE 220.82(B)
705 SF x 3 VA/SF x 100% = 2,115 VA

2. SMALL APPLIANCE BRANCH AND LAUNDRY CIRCUITS
SMALL APPLIANCE BRANCH CIRCUIT AND LAUNDRY CIRCUIT
CIRCUITS PER NEC Article 210.11(C)(1)&(2)
2 x 1,500 VA x 100% = 4,500 VA

3. NAMEPLATE LOADS

APPLIANCE	1,500 VA	x	100%	=	1,500
RANGE	6,500 VA	x	100%	=	6,500
DRYER	5,000 VA	x	100%	=	5,000
WATER HEATER	4,500 VA	x	100%	=	4,500
TOTAL					17,500 VA

4. OTHER PERMANENTLY CONNECTED MOTORS

MOTOR	150 VA	x	100%	=	150
TOTAL CONNECTED LOAD					17,650
FIRST 10 KW AT 100%					10,000
REMAINDER AT 40%					3,060
CALCULATED GENERAL LOAD PER NEC 2017 220.82(B)					13,060 VA

5. AIR CONDITIONER OR SPACE HEATING LOAD (LARGER OF THE TWO)
HEAT PUMP NAMEPLATE PLUS INDOOR FAN MOTOR = 3,727 x 100% = 3,727
SUPPLEMENTAL ELECTRIC HEATING = 8,000 x 65% = 5,200
CALCULATED HVAC LOAD PER NEC 2017 220.82(C) = 8,927

TOTAL = 19,017 VA
240V SINGLE PHASE SERVICE LOAD = 79 A

CALCULATED LOAD ANALYSIS - SINGLE-FAMILY DWELLING BLDG I-A, J-A AND K-A 2 BR FLAT
PER NEC 2017 220.82(B) AND (C) SOUTH CITY CNI PHASE 3

1. LIGHTING LOADS
GENERAL LIGHTING & GENERAL RECEPTACLE LOADS
PER NEC 2017 ARTICLE 220.82(B)
898 SF x 3 VA/SF x 100% = 2,694 VA

2. SMALL APPLIANCE BRANCH AND LAUNDRY CIRCUITS
SMALL APPLIANCE BRANCH CIRCUIT AND LAUNDRY CIRCUIT
CIRCUITS PER NEC Article 210.11(C)(1)&(2)
3 x 1,500 VA x 100% = 4,500 VA

3. NAMEPLATE LOADS

APPLIANCE	1,500 VA	x	100%	=	1,500
RANGE	6,500 VA	x	100%	=	6,500
DRYER	5,000 VA	x	100%	=	5,000
WATER HEATER	4,500 VA	x	100%	=	4,500
TOTAL					17,500 VA

4. OTHER PERMANENTLY CONNECTED MOTORS

MOTOR	150 VA	x	100%	=	150
TOTAL CONNECTED LOAD					17,650
FIRST 10 KW AT 100%					10,000
REMAINDER AT 40%					3,060
CALCULATED GENERAL LOAD PER NEC 2017 220.82(B)					13,060 VA

5. AIR CONDITIONER OR SPACE HEATING LOAD (LARGER OF THE TWO)
HEAT PUMP NAMEPLATE PLUS INDOOR FAN MOTOR = 3,227 x 100% = 3,227
SUPPLEMENTAL ELECTRIC HEATING = 8,000 x 65% = 5,200
CALCULATED HVAC LOAD PER NEC 2017 220.82(C) = 8,427

TOTAL = 21,487 VA
240V SINGLE PHASE SERVICE LOAD = 90 A

CALCULATED LOAD ANALYSIS - SINGLE-FAMILY DWELLING BLDG H-A, I-B AND L-A 2 BR FLAT
PER NEC 2017 220.82(B) AND (C) SOUTH CITY CNI PHASE 3

1. LIGHTING LOADS
GENERAL LIGHTING & GENERAL RECEPTACLE LOADS
PER NEC 2017 ARTICLE 220.82(B)
917 SF x 3 VA/SF x 100% = 2,751 VA

2. SMALL APPLIANCE BRANCH AND LAUNDRY CIRCUITS
SMALL APPLIANCE BRANCH CIRCUIT AND LAUNDRY CIRCUIT
CIRCUITS PER NEC Article 210.11(C)(1)&(2)
3 x 1,500 VA x 100% = 4,500 VA

3. NAMEPLATE LOADS

APPLIANCE	1,500 VA	x	100%	=	1,500
RANGE	6,500 VA	x	100%	=	6,500
DRYER	5,000 VA	x	100%	=	5,000
WATER HEATER	4,500 VA	x	100%	=	4,500
TOTAL					17,500 VA

4. OTHER PERMANENTLY CONNECTED MOTORS

MOTOR	150 VA	x	100%	=	150
TOTAL CONNECTED LOAD					17,650
FIRST 10 KW AT 100%					10,000
REMAINDER AT 40%					3,060
CALCULATED GENERAL LOAD PER NEC 2017 220.82(B)					13,060 VA

5. AIR CONDITIONER OR SPACE HEATING LOAD (LARGER OF THE TWO)
HEAT PUMP NAMEPLATE PLUS INDOOR FAN MOTOR = 3,227 x 100% = 3,227
SUPPLEMENTAL ELECTRIC HEATING = 8,000 x 65% = 5,200
CALCULATED HVAC LOAD PER NEC 2017 220.82(C) = 8,427

TOTAL = 21,487 VA
240V SINGLE PHASE SERVICE LOAD = 90 A

CALCULATED LOAD ANALYSIS - SINGLE-FAMILY DWELLING BLDG G-B AND G-C 3 BR TOWNHOUSE
PER NEC 2017 220.82(B) AND (C) SOUTH CITY CNI PHASE 3

1. LIGHTING LOADS
GENERAL LIGHTING & GENERAL RECEPTACLE LOADS
PER NEC 2017 ARTICLE 220.82(B)
1,258 SF x 3 VA/SF x 100% = 3,774 VA

2. SMALL APPLIANCE BRANCH AND LAUNDRY CIRCUITS
SMALL APPLIANCE BRANCH CIRCUIT AND LAUNDRY CIRCUIT
CIRCUITS PER NEC Article 210.11(C)(1)&(2)
3 x 1,500 VA x 100% = 4,500 VA

3. NAMEPLATE LOADS

APPLIANCE	1,500 VA	x	100%	=	1,500
RANGE	6,500 VA	x	100%	=	6,500
DRYER	5,000 VA	x	100%	=	5,000
WATER HEATER	4,500 VA	x	100%	=	4,500
TOTAL					17,500 VA

4. OTHER PERMANENTLY CONNECTED MOTORS

MOTOR	150 VA	x	100%	=	150
TOTAL CONNECTED LOAD					17,650
FIRST 10 KW AT 100%					10,000
REMAINDER AT 40%					3,060
CALCULATED GENERAL LOAD PER NEC 2017 220.82(B)					13,060 VA

5. AIR CONDITIONER OR SPACE HEATING LOAD (LARGER OF THE TWO)
HEAT PUMP NAMEPLATE PLUS INDOOR FAN MOTOR = 3,727 x 100% = 3,727
SUPPLEMENTAL ELECTRIC HEATING = 8,000 x 65% = 5,200
CALCULATED HVAC LOAD PER NEC 2017 220.82(C) = 8,927

TOTAL = 21,987 VA
240V SINGLE PHASE SERVICE LOAD = 92 A

CALCULATED LOAD ANALYSIS - SINGLE-FAMILY DWELLING BLDG I-A 3 BR FLAT
PER NEC 2017 220.82(B) AND (C) SOUTH CITY CNI PHASE 3

1. LIGHTING LOADS
GENERAL LIGHTING & GENERAL RECEPTACLE LOADS
PER NEC 2017 ARTICLE 220.82(B)
1,294 SF x 3 VA/SF x 100% = 3,882 VA

2. SMALL APPLIANCE BRANCH AND LAUNDRY CIRCUITS
SMALL APPLIANCE BRANCH CIRCUIT AND LAUNDRY CIRCUIT
CIRCUITS PER NEC Article 210.11(C)(1)&(2)
3 x 1,500 VA x 100% = 4,500 VA

3. NAMEPLATE LOADS

APPLIANCE	1,500 VA	x	100%	=	1,500
RANGE	6,500 VA	x	100%	=	6,500
DRYER	5,000 VA	x	100%	=	5,000
WATER HEATER	4,500 VA	x	100%	=	4,500
TOTAL					17,500 VA

4. OTHER PERMANENTLY CONNECTED MOTORS

MOTOR	150 VA	x	100%	=	150
TOTAL CONNECTED LOAD					17,650
FIRST 10 KW AT 100%					10,000
REMAINDER AT 40%					3,060
CALCULATED GENERAL LOAD PER NEC 2017 220.82(B)					13,060 VA

5. AIR CONDITIONER OR SPACE HEATING LOAD (LARGER OF THE TWO)
HEAT PUMP NAMEPLATE PLUS INDOOR FAN MOTOR = 4,947 x 100% = 4,947
SUPPLEMENTAL ELECTRIC HEATING = 10,000 x 65% = 6,500
CALCULATED HVAC LOAD PER NEC 2017 220.82(C) = 11,447

TOTAL = 24,507 VA
240V SINGLE PHASE SERVICE LOAD = 102 A

CALCULATED LOAD ANALYSIS - SINGLE-FAMILY DWELLING BLDG I-B 3 BR FLAT
PER NEC 2017 220.82(B) AND (C) SOUTH CITY CNI PHASE 3

1. LIGHTING LOADS
GENERAL LIGHTING & GENERAL RECEPTACLE LOADS
PER NEC 2017 ARTICLE 220.82(B)
1,292 SF x 3 VA/SF x 100% = 3,876 VA

2. SMALL APPLIANCE BRANCH AND LAUNDRY CIRCUITS
SMALL APPLIANCE BRANCH CIRCUIT AND LAUNDRY CIRCUIT
CIRCUITS PER NEC Article 210.11(C)(1)&(2)
3 x 1,500 VA x 100% = 4,500 VA

3. NAMEPLATE LOADS

APPLIANCE	1,500 VA	x	100%	=	1,500
RANGE	6,500 VA	x	100%	=	6,500
DRYER	5,000 VA	x	100%	=	5,000
WATER HEATER	4,500 VA	x	100%	=	4,500
TOTAL					17,500 VA

4. OTHER PERMANENTLY CONNECTED MOTORS

MOTOR	150 VA	x	100%	=	150
TOTAL CONNECTED LOAD					17,650
FIRST 10 KW AT 100%					10,000
REMAINDER AT 40%					3,060
CALCULATED GENERAL LOAD PER NEC 2017 220.82(B)					13,060 VA

5. AIR CONDITIONER OR SPACE HEATING LOAD (LARGER OF THE TWO)
HEAT PUMP NAMEPLATE PLUS INDOOR FAN MOTOR = 4,947 x 100% = 4,947
SUPPLEMENTAL ELECTRIC HEATING = 10,000 x 65% = 6,500
CALCULATED HVAC LOAD PER NEC 2017 220.82(C) = 11,447

TOTAL = 24,507 VA
240V SINGLE PHASE SERVICE LOAD = 102 A

GENERAL NOTE:
THE LOAD CALCULATIONS PRESENTED ON THIS SHEET ARE USED IN THE INDIVIDUAL APARTMENT PANELS, ROOM USES AND MAIN CIRCUIT BREAKERS. THESE CALCULATIONS OVERRIDE THOSE SHOWN IN THE INDIVIDUAL BOARD SCHEDULES THROUGHOUT THE PROJECT.



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Issues and Revisions

Date	Issued / Revised
1 03/16/2020	50% CONSTRUCTION DOCUMENTS
2 05/18/2020	80% CONSTRUCTION DOCUMENTS
3 07/13/2020	PERMIT

BUILDING ADDRESSES

TYPE G-B	442, 444, 446, 448 BATHURST LANE
TYPE H-A	324, 296, 298, 330 ISHMAEL PLACE
TYPE I-A	373, 440 VANCE AVE
TYPE I-B	315, 364 FOOTIE LANE
TYPE I-C	383 S DANNY THOMAS BLVD
TYPE I-D	385, 431 VANCE AVE
TYPE I-E	315 ISHMAEL PLACE
TYPE I-F	327 ISHMAEL PLACE
TYPE I-G	420, 503 FOOTIE LANE
TYPE I-H	345 S DANNY THOMAS BLVD
TYPE I-I	402, 428 FOOTIE LANE

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LRK Project Number: 01.15100.02

Project Name:
South City CNI Phase 4
Memphis TN

Drawing Name:
UNIT PANEL CALCULATIONS

Drawn By: KD
Checked By: DRW

E006