GENERAL ELECTRICAL NOTES

A. THE GENERAL NOTES AS DESCRIBED HEREIN, APPLY TO ALL DRAWINGS IN THIS PACKAGE WHERE APPLICABLE.

B. PENETRATIONS IN WALLS OR SEPARATIONS, REQUIRING PROTECTED OPENINGS SHALL BE FIRESTOPPED WITH AN APPROVED MATERIAL. REFER TO ARCHITECTURAL SPECIFICATIONS FOR PRODUCT REQUIREMENTS.

C. EXPOSED WIRING SHALL NOT BE PERMITTED. WIRING SHALL BE RECESSED IN WALL, OR WHERE WALLS ARE NOT ACCESSIBLE DUE TO WALL CONSTRUCTION (CONCRETE BLOCK, CONCRETE, BRICK, ETC), PROVIDE CONDUIT AS REQUIRED TO CONCEAL SAME.

D. REFER TO ARCHITECTURAL FLOOR PLANS, ELEVATIONS AND DETAILS, INCLUDING SHOP DRAWINGS FOR COORDINATION OF ELECTRICAL DEVICE LOCATIONS, METHOD OF INSTALLATION & MOUNTING HEIGHTS. ARCHITECTURAL FLOOR PLANS, ELEVATIONS AND DETAILS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON ELECTRICAL DRAWINGS.

E. EQUIPMENT SHUTDOWN AND THE INTERRUPTION OF ANY SERVICES SHALL BE COORDINATED IN ADVANCE WITH THE BUILDING END USER AND SHALL BE KEPT TO A MINIMUM.

F. UNLESS NOTED OTHERWISE, THE CIRCUITING INDICATED ON THE DRAWINGS IS REPRESENTATIONAL ONLY. CONFIRM CIRCUITING REQUIREMENTS ON SITE.

G. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS (SEE PANELBOARD SCHEDULE). BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING AND VOLTAGE DROP REQUIREMENTS, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.

H. MINIMUM CONDUIT SIZE SHALL BE 21mm (3/4") UNLESS NOTED OTHERWISE.

I. EMPTY CONDUIT SHALL BE C/W PULL WIRE AND PLASTIC BUSHINGS.

J. WHERE CONNECTED TO A 20A. BRANCH CIRCUIT SUPPLYING AN INDIVIDUAL RECEPTACLE (SIMPLEX OR DUPLEX), THE RECEPTACLE SHALL BE RATED AT 20A.

K. CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THE DRAWINGS, UNLESS NOTED OTHERWISE.

L. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASES OF DEMOLITION AND CONSTRUCTION. COORDINATE WITH GENERAL CONTRACTOR.

M. ALL LIFE-SAFETY SYSTEMS SHALL BE MAINTAINED AND OPERABLE AT ALL TIMES DURING CONSTRUCTION.

N. AS INDICATED IN THE GENERAL NOTES, DEMOLITION NOTES, AND KEYNOTES IN THIS DRAWING PACKAGE, UNLESS NOTED OTHERWISE, THE TERM "DEMOLISH" SHALL INCLUDE THE COMPLETE REMOVAL OF THE EXISTING ITEM IDENTIFIED, C/W ASSOCIATED WIRING, CONDUIT AND JUNCTION BOXES BACK TO LAST REMAINING DEVICE OR SOURCE. CIRCUITS FREED UP FROM DEMOLISHED ELECTRICAL, SHALL BECOME SPARE. REFER TO THE RENOVATION DRAWING KEY NOTES FOR FURTHER REQUIREMENTS.

O. AS INDICATED IN THE GENERAL NOTES, DEMOLITION NOTES, AND KEYNOTES IN THIS DRAWING PACKAGE, UNLESS NOTED OTHERWISE, THE TERM "REMOVE & REPLACE" SHALL INCLUDE THE COMPLETE REMOVAL & REPLACEMENT OF THE EXISTING ITEM IDENTIFIED IN ITS CURRENT LOCATION, WITH A NEW ITEM, UTILIZING THE EXISTING OUTLET BOX AND WIRING. REFER TO THE RENOVATION DRAWING KEY NOTES FOR FURTHER REQUIREMENTS.

P. AS INDICATED IN THE GENERAL NOTES, DEMOLITION NOTES, AND KEY NOTES, UNLESS NOTED OTHERWISE, THE TERM "RELOCATE" SHALL INCLUDE THE COMPLETE RELOCATION OF THE EXISTING ITEM IDENTIFIED IN ITS CURRENT LOCATION ON THE DEMOLITION DRAWINGS, TO THE NEW LOCATION AS INDICATED ON THE RENOVATION DRAWINGS. INCLUDE ALL LABOUR AND MATERIALS TO REROUTE/EXTEND/REFEED THE EXISTING CIRCUITRY AS REQUIRED TO ACCOMMODATE THE RELOCATION. REFER TO THE RENOVATION DRAWING KEY NOTES FOR FURTHER REQUIREMENTS.

Q. SITE CONFIRM ANY ELECTRICAL WITHIN AREAS OF RENOVATION REQUIRING RELOCATION TO ACCOMMODATE THE RENOVATION.

R. PROVIDE WIRE AND CONDUIT AS REQUIRED FOR CONTINUITY OF ANY FEEDERS OR BRANCH CIRCUITS ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY ELECTRICAL EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.

S. PROVIDE CONDUIT AND/OR COMMUNICATIONS/DATA WIRING AS NECESSARY FOR CONTINUITY OF ANY COMMUNICATIONS/DATA SYSTEMS ORIGINATING OUTSIDE THE DEMOLITION AREA THAT SERVES ANY COMMUNICATIONS/DATA EQUIPMENT OR DEVICES TO REMAIN AFTER DEMOLITION. MODIFY OR REPLACE AS REQUIRED.

T. PROVIDE BLANK COVERPLATES OVER ALL EXISTING UNUSED OPENINGS.

U. DRAWING RECORDS OF THE EXISTING FLOOR PLANS HAVE BEEN COMPILED FROM INFORMATION SUBMITTED BY THE OWNER AND FROM SITE OBSERVATIONS AS NOTED BY THE CONSULTANT. THE ACCURACY OF THESE DRAWING RECORDS IS LIMITED TO THE EXTENT OF KNOWN CONSTRUCTION INFORMATION.

V. DEMOLISH ALL ELECTRICAL DEVICES IN WALLS, FLOORS OR CEILINGS TO BE DEMOLISHED. CONFIRM EXTENT OF DEMOLITION WITH ALL DISCIPLINE DRAWINGS.

W. WHERE EXISTING WALLS TO BE DEMOLISHED HAVE BEEN USED AS A ROUTE TO FEED EXISTING DEVICES NOT INDICATED TO BE DEMOLISHED, REROUTE/EXTEND/RE-FEED EXISTING FEEDS AND CONDUIT AS REQUIRED TO MAINTAIN EXISTING ELECTRICAL SYSTEMS NOT INDICATED TO BE REMOVED.

X. REMOVE ANY UNUSED OR ABANDONED WIRING AND CONDUIT WITHIN RENOVATION AREA, INCLUDING BRANCH CIRCUIT WIRING, VOICE/DATA CABLING AND SYSTEMS CABLING TO SOURCE OF SUPPLY.

Y. WHERE EXISTING WIRING AND CONDUIT ARE RE-USED, VERIFY EXISTING CONDITIONS. MODIFY AND SUPPLEMENT EXISTING FASTENING AND SUPPORT TO MEET CODE REQUIREMENTS.

Z. CONTRACTOR SHALL CONFIRM ALL EXISTING SYSTEMS TO BE IN WORKING CONDITION PRIOR TO CARRYING OUT MODIFICATIONS. WHERE EXISTING SYSTEMS ARE NOT OPERABLE, NOTIFY THE CONSULTANT PRIOR TO CARRYING OUT WORK.

AA. ALL NEW WIRING SHALL BE CONCEALED WHERE POSSIBLE. UTILIZE CRAWLSPACE TO RUN NEW WIRING AS REQUIRED AND FISH INTO WALLS.

BB. WHERE EXISTING WALLS ARE TO BE OPENED FOR INSTALLATION OF NEW WIRING, COORDINATE WITH GENERAL CONTRACTOR ROUTING OF SAME. ARRANGE AND PAY FOR ALL CUTTING/REPAIR/PATCHING AS REQUIRED.

CC. WHERE BRANCH CIRCUIT BREAKERS ARE REMOVED, PROVIDE FILLER PLATES FOR BREAKER SPACES.

DD. UTILIZE SPARE/FREED UP CIRCUITS FROM DEMOLITION AS REQUIRED TO ACCOMMODATE THE ADDITIONAL CIRCUITING REQUIREMENTS IN THE RENOVATION.

EE. PROVIDE NEW TYPEWRITTEN PANEL DIRECTORIES TO ACCOMMODATE UPDATED CIRCUITING. NEW BREAKERS IN DISTRIBUTION PANELS SHALL BE LABELLED USING LAMACOIDS.

FF. OUTLETS OR EQUIPMENT SHALL BE MOVED TO ANY POINT WITHIN A 10' RADIUS WHEN THE CONSULTANT REQUESTS RELOCATION BEFORE THE WORK HAS BEEN SUBSTANTIALLY COMPLETED, WITHOUT ADDITIONAL COST.

GG. FINAL CONNECTION TO ALL MECHANICAL EQUIPMENT SHALL BE FLEXIBLE. CONFIRM FINAL CIRCUIT BREAKER AND WIRE SIZE WITH MECHANICAL EQUIPMENT SHOP DRAWINGS. ADJUST CIRCUIT BREAKER AND WIRE SIZE AS REQUIRED WITHOUT ADDITIONAL COST TO OWNER.

HH. ELECTRICAL CONTRACTOR SHALL COORDINATE QUANTITIES AND LOCATIONS OF ALL SWITCHES AND VALVES REQUIRING WIRING WITH SPRINKLER CONTRACTOR.

II. PROVIDE RE-VERIFICATION OF FIRE ALARM SYSTEM FOR ALL NEW AND MODIFIED DEVICES.

ELECTRICAL SYMBOL LEGEND

HT AFF	SYMBOL	DESCRIPTION
		LIGHTING
		STRIP LIGHT(TYPE DENOTED)
		LIGHTING CONTROL
1200mm		SINGLE POLE SW
		EQUIPMENT
		DIRECT POWER CONNECTION
		GENERAL ELECTRIC
		LIGHT SYMBOL INDICATES EXISTING

HT AFF	SYMBOL	DESCRIPTION
		DASHED SYMBOL INDICATES REMOVED
		KEYED NOTE(SEE SCHEDULE)
		DEMOLITION NOTE(SEE SCHEDULE)
	##	REVISION TAG
		WIRING
		CONDUIT EXPOSED
		FIRE ALARM
		HEAT DETECTOR(TYPE & TEMP DENOTED)

ELECTRICAL SYMBOL NOTES

FL01 A-12b — THE LIGHTING FIXTURE TYPE IS INDICATED BY UPPER CASE LETTERS AND NUMBERS. THE CIRCUIT DESIGNATION IS INDICATED BY LETTERS AND NUMBERS SEPARATED BY DASH. THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER.

EXAMPLE 1: LIGHTING FIXTURE TYPE "FL01" IS CONNECTED TO PANEL A, CIRCUIT 12 AND CONTROLLED BY SWITCH "b".

S_d — THE CONTROL DEVICE DESIGNATION IS INDICATED BY A LOWER CASE LETTER. EXAMPLE: SINGLE POLE SWITCH "d" TO CONTROL LIGHTING FIXTURES INDICATED BY "d".

EQ-1 A-1,3,5 — SPECIAL CONNECTIONS. THE EQUIPMENT IS INDICATED BY THE TAG. SEE THE MOTOR AND EQUIPMENT SCHEDULE FOR THE LOAD DESCRIPTION AND TYPE OF CONNECTION. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER(S) ADJACENT TO THE SYMBOL. EXAMPLE: EQUIPMENT NO. 1; 3 PHASE CONNECTION TO PANEL A, CIRCUITS 1, 3, 5.

LPN-102 — PANELBOARDS. PANELBOARD DOORS MAY BE SHOWN TO INDICATE OPENING SIDE OF RECESSED PANELBOARDS. SEE PANELBOARD IDENTIFICATION FOR DESIGNATION CODES.

1 (TYP) — KEYNOTE. SEE THE KEYED NOTES ON THAT SHEET FOR THE NOTE NUMBER INDICATED. (TYP) INDICATES THAT THE NOTE IS TYPICAL OF THE APPLICATION.

SPECIFIC CODE NOTES

FIRE PROTECTION REQUIREMENTS

A. PENETRATIONS IN WALLS REQUIRING PROTECTED OPENINGS MUST BE FIRESTOPPED WITH AN APPROVED MATERIAL.
   1. CONDUITS MAY PENETRATE WALLS OR PARTITIONS, PROVIDED THEY ARE FIRE-STOPPED.
   2. OPENINGS FOR STEEL ELECTRICAL BOXES NOT EXCEEDING 16 SQUARE INCHES ARE PERMITTED PROVIDED OPENINGS DO NOT AGGREGATE MORE THAN 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL OR PARTITION.
   3. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS MUST BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES.

B. LIGHT FIXTURES AND OTHER APPARATUS INSTALLED IN AN ACOUSTICAL CEILING GRID SHALL BE INDEPENDENTLY SUPPORTED.

C. RECESSED LIGHTING FIXTURES INSTALLED IN FIRE RATED CEILING ASSEMBLIES SHALL BE FIRE RATED FIXTURES BEARING THE ULC FIRE RATED LABEL. FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE ULC FIRE RESISTANCE DIRECTORY, AND SHALL INCLUDE A FIRE RATED ENCLOSURE INSTALLED OVER THE FIXTURE THAT MEETS THE REQUIREMENTS OF THE ULC FIRE RESISTANCE DIRECTORY.

ELECTRICAL DRAWINGS

SYMBOLS & ABBREVIATIONS
E0.1 ELECTRICAL SYMBOLS AND ABBREVIATIONS

DEMOLITION PLANS
ED2.1 ARENA CRAWLSPACE - DEMOLITION PLAN

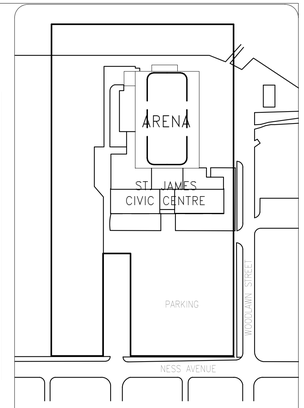
LIGHTING PLANS
EL2.1 ARENA CRAWLSPACE - LIGHTING PLAN

POWER PLANS
EP2.1 ARENA CRAWLSPACE - POWER & SYSTEMS PLAN

SCHEDULES
E6.1 ELECTRICAL SCHEDULES

ELECTRICAL ABBREVIATIONS LIST

1P	1 POLE (2P, 3P, 4P, ETC.)
A	AMPERE
AC	AIR CONDITIONER
ACLG	ABOVE CEILING
ADO	AUTOMATIC DOOR OPENER
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFI	ARC FAULT CIRCUIT INTERRUPTER
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
AMP	AMPERE
APPROX	APPROXIMATELY
ARCH	ARCHITECT, ARCHITECTURAL
AS	AMP SWITCH
AT	AMP TRIP
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BD	BOARD
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CONTR	CONTRACTOR
CU	COPPER
C/W	COMPLETE WITH
DEPT	DEPARTMENT
DET	DETAIL
DISC	DISCONNECT
DIST	DISTRIBUTION
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRIC, ELECTRICAL
ELEV	ELEVATOR
EMT	ELECTRICAL METALLIC TUBING
EP	ELECTRIC PNEUMATIC
EXIST	EXISTING
FA	FIRE ALARM
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL (CONDUIT)
GYP BD	GYPSUM BOARD
HP	HORSEPOWER
HT	HEIGHT
HRV	HEAT RECOVERY VENTILATION
HTG	HEATING
HTR	HEATER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
IC	INTERRUPTING CAPACITY
J-BOX	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KVAR	KILOVOLT-AMPERE REACTIVE
KW	KILOWATT
LOC	LOCATE OR LOCATION
LT	LIGHT
LTG	LIGHTING
LTNG	LIGHTNING
LV	LOW VOLTAGE
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MDC	MAIN DISTRIBUTION CENTER
MDP	MAIN DISTRIBUTION PANEL
MEC	MECHANICAL CONTRACTOR
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PB	PULL BOX OR PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE (CONDUIT)
PWR	POWER
QP	QUADPLEX RECEPTACLE
QUAN	QUANTITY
R	RELOCATED
RM	ROOM
SC	SURFACE CONDUIT
SEC	SECONDARY
SER	SERVICE ENTRANCE RATED
SHT	SHEET
S/N	SOLID NEUTRAL
SPEC	SPECIFICATION
SPKR	SPEAKER
STD	STANDARD
SU	SUMP PUMP
SURF	SURFACE MOUNTED
SW	SWITCH
TL	TWIST LOCK
TR	TAMPER RESISTANT
T-STAT	THERMOSTAT
TYP	TYPICAL
UE	UNDERGROUND ELECTRICAL
UG	UNDERGROUND
UH	UNIT HEATER
V	VOLT
VSR	VOLTAGE SENSING RELAY
VA	VOLT-AMPERES
'	FEET
"	INCHES
#	NUMBER
Ø	PHASE



KEY PLAN
NTS

The General Contractor shall check & verify all dimensions andreport any errors or omissions to the designers.

0	2020-10-30	ISSUED FOR CONSTRUCTION	

APEGM
Certificate of Authorization
Epp Siepman Engineering Inc.
No. 4035

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ARENA CRAWLSPACE RESTORATION
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WINNIPEG, MANITOBA

Sheet Title
ELECTRICAL SYMBOLS AND ABBREVIATIONS

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