GENERAL NOTES

1. THESE GENERAL NOTES ARE INTENDED TO ASSIST THE CONTRACTOR DURING EXECUTION OF THE WORK. HOWEVER, THEY DO NOT COVER ALL OF THE SPECIFICATION REQUIREMENTS.
2. INSTALL ALL EQUIPMENT, CONDUITS, OUTLETS, AND FIXTURES IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES.(NEC).
3. DO NOT SCALE ELECTRICAL PLANS FOR FIXTURES, DEVICE, OR APPLIANCE LOCATIONS. USE FIGURED DIMENSIONS IF GIVEN OR CHECK ARCHITECTURAL PLANS.
4. ALL MATERIAL AND EQUIPMENT IS TO BE LISTED AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND NEC 110–3.
5. MOUNT ALL RECEPTACLES OUTLETS AT +15" MIN. UNLESS OTHERWISE INDICATED. COORDINATE WITH ARCHITECTURAL DRAWINGS.
6. MOUNT ALL TOGGLE SWITCHES AT +48" UNLESS OTHERWISE INDICATED. COORDINATE WITH ARCHITECTURAL DRAWINGS.
7. TOTAL IMPEDANCE, CIRCUIT BREAKERS, PANELS, CONDUCTORS, AND ALL OTHER CIRCUIT COMPONENTS AND SHORT CIRCUIT CURRANT RATINGS SHALL BE COORDINATED SO THAT FAULTS CAN BE CLEARED WITHOUT EXTENSIVE DAMAGE TO CIRCUIT COMPONENTS PER CEC 110.10.
8. ALL ELECTRICAL PANEL BOARDS SWITCHBOARDS, INDUSTRIAL CONTROL PANELS AND MOTOR CONTROLS CENTERS REQUIRING EXAMINATION OR SERVICING WHILE ENERGIZED SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING OR MAINTENANCE PER CEC 110.16.
9. PER 2007 CEC 404.8 ALL SPECIFIED SWITCHES, CONTROLS, THERMOSTATS ETC., SHALL BE INSTALLED AT A MAXIMUM HEIGHT OF 48 INCHES ABOVE THE FLOOR.

LOAD CALCULATION

Iceland Skating Rink

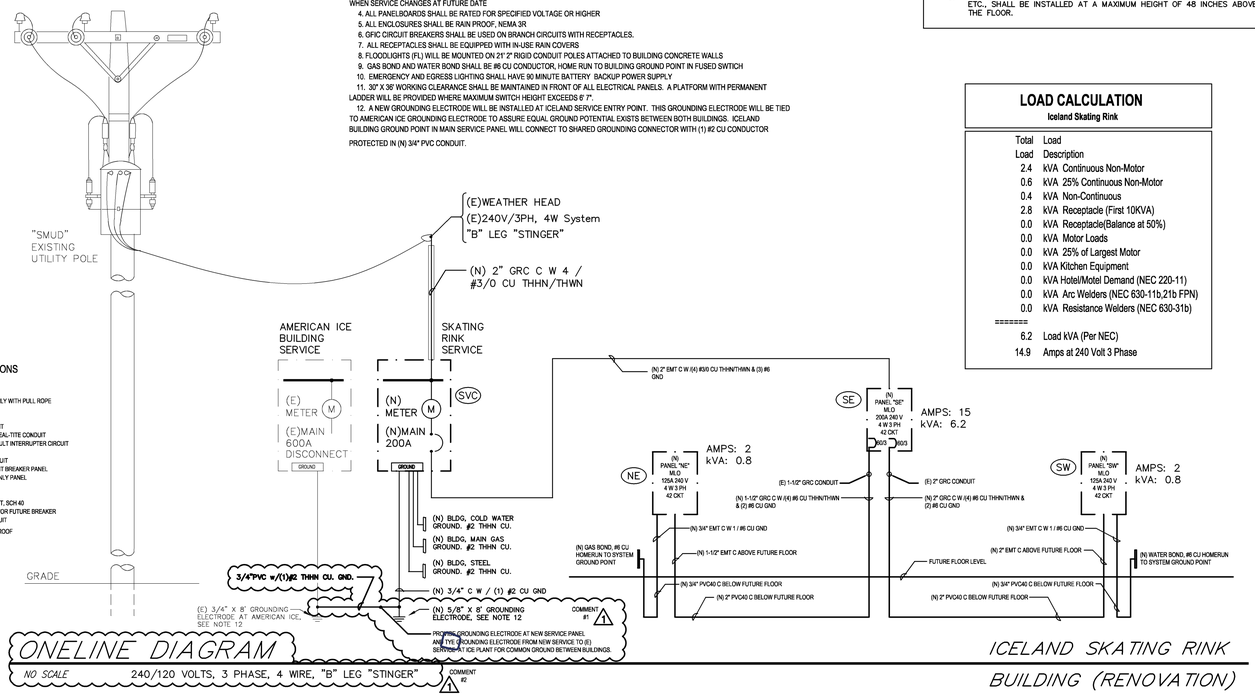
Total Load	
Load	Description
2.4	kVA Continuous Non-Motor
0.6	kVA 25% Continuous Non-Motor
0.4	kVA Non-Continuous
2.8	kVA Receptacle (First 10KVA)
0.0	kVA Receptacle(Balance at 50%)
0.0	kVA Motor Loads
0.0	kVA 25% of Largest Motor
0.0	kVA Kitchen Equipment
0.0	kVA Hotel/Motel Demand (NEC 220-11)
0.0	kVA Arc Welders (NEC 630-11b,21b FPN)
0.0	kVA Resistance Welders (NEC 630-31b)
6.2	Load kVA (Per NEC)
14.9	Amps at 240 Volt 3 Phase

NOTES

1. NEW SMUD SERVICE WILL INITIALLY BE 240V, 200A, 4 WIRE DELTA CONNECTED. SERVICE WILL CHANGE TO 208V, 200A, 4 WIRE WYE CONNECTION AT FUTURE DATE.
2. PER NOTE 1, "B" PHASE CONDUCTOR, ~200V , SHALL BE MARKED WITH ORANGE TAPE AND SHALL NOT BE USED FOR 120V CIRCUITS.
3. PER NOTE 1, ALL PANELBOARDS SHALL HAVE NAME PLATES NOTING SERVICE TYPE AND VOLTAGE. NAME PLATES SHALL BE UPDATED WHEN SERVICE CHANGES AT FUTURE DATE
4. ALL PANELBOARDS SHALL BE RATED FOR SPECIFIED VOLTAGE OR HIGHER
5. ALL ENCLOSURES SHALL BE RAIN PROOF, NEMA 3R
6. GFIC CIRCUIT BREAKERS SHALL BE USED ON BRANCH CIRCUITS WITH RECEPTACLES.
7. ALL RECEPTACLES SHALL BE EQUIPPED WITH IN-USE RAIN COVERS
8. FLOODLIGHTS (FL) WILL BE MOUNTED ON 21' 2" RIGID CONDUIT POLES ATTACHED TO BUILDING CONCRETE WALLS
9. GAS BOND AND WATER BOND SHALL BE #6 CU CONDUCTOR, HOME RUN TO BUILDING GROUND POINT IN FUSED SWITCH
10. EMERGENCY AND EGRESS LIGHTING SHALL HAVE 90 MINUTE BATTERY BACKUP POWER SUPPLY
11. 30" X 36" WORKING CLEARANCE SHALL BE MAINTAINED IN FRONT OF ALL ELECTRICAL PANELS. A PLATFORM WITH PERMANENT LADDER WILL BE PROVIDED WHERE MAXIMUM SWITCH HEIGHT EXCEEDS 6' 7".
12. A NEW GROUNDING ELECTRODE WILL BE INSTALLED AT ICELAND SERVICE ENTRY POINT. THIS GROUNDING ELECTRODE WILL BE TIED TO AMERICAN ICE GROUNDING ELECTRODE TO ASSURE EQUAL GROUND POTENTIAL EXISTS BETWEEN BOTH BUILDINGS. ICELAND BUILDING GROUND POINT IN MAIN SERVICE PANEL WILL CONNECT TO SHARED GROUNDING CONNECTOR WITH (1) #2 CU CONDUCTOR PROTECTED IN (N) 3/4" PVC CONDUIT.

ABBREVIATIONS

ABBREVIATIONS	
C	CONDUIT
C. O.	CONDUIT ONLY WITH PULL ROPE
CKT	CIRCUITS
(E)	EXISTING
EMT	EMT CONDUIT
FC	FLEXIBLE SEAL-TITE CONDUIT
GFIC	GROUND FAULT INTERRUPTER CIRCUIT
GND	GROUND
GRC	RIGID CONDUIT
MCB	MAIN CIRCUIT BREAKER PANEL
MLO	MAIN LUG ONLY PANEL
(N)	NEW
NEU	NEUTRAL
PVC	PVC CONDUIT, SCH 40
PRB	PROVISION FOR FUTURE BREAKER
RIG	RIGID CONDUIT
WP	WEATHER PROOF



ONELINE DIAGRAM

NO SCALE — 240/120 VOLTS, 3 PHASE, 4 WIRE, "B" LEG "STINGER"

ICELAND SKATING RINK

BUILDING (RENOVATION)

(SW) WARNING Stinger Leg PH B — Allowed Load: 60 amps — Panel loaded at 3% — % Phase Unbalance <30% Loaded

(N)PANEL: "SW" — VOLTAGE: 120/240V 3P, 4W — BUS: 125A — MOUNT: SURFACE
TYPE: PANELBOARD — AIC: SERIES RATED — MAIN: MLO–60A — TYPE: NEMA 3R
NOTES: NEW — Print Date: 11–Feb–11

LOAD	KVA	CB	NO	A	B	C	NO	CB	KVA	LOAD
Space		PFB	1	A			2	20/1	0.4 R	(N)Recept–(GFIC)Quad G–use
Do "Not" Use		–	3		B		4	–		Do "Not" Use
Space		PFB	5			C	6	20/1	0.4 R	(N)Recept–(GFIC)Quad G–use
Space		PFB	7	A			8	PFB		Space
Do "Not" Use		–	9		B		10	–		Do "Not" Use
Space		PFB	11			C	12	PFB		Space
Space		PFB	13	A			14	PFB		Space
Do "Not" Use		–	15		B		16	–		Do "Not" Use
Space		PFB	17			C	18	PFB		Space
Space		PFB	19	A			20	PFB		Space
Do "Not" Use		–	21		B		22	–		Do "Not" Use
Space		PFB	23			C	24	PFB		Space
Space		PFB	25	A			26	PFB		Space
Do "Not" Use		–	27		B		28	–		Do "Not" Use
Space		PFB	29			C	30	PFB		Space
Space		PFB	31	A			32	PFB		Space
Do "Not" Use		–	33		B		34	–		Do "Not" Use
Space		PFB	35			C	36	PFB		Space
Space		PFB	37	A			38	PFB		Space
Do "Not" Use		–	39		B		40	–		Do "Not" Use
Space		PFB	41			C	42	PFB		Space

LOAD CALCULATIONS:
0.0 kVA Continuous Non–Motor
0.0 kVA 25% Continuous Non–Motor
0.0 kVA Non–Continuous
0.8 kVA Receptacle (First 10KVA NEC 220–13)
0.0 kVA Receptacle(Balance at 50%)
0.0 kVA Motor Loads (NEC 430)
0.0 kVA 25% of Largest Motor
0.0 No Kitchen Equip.
0.0 kVA Hotel/Motel Demand (NEC 220–11)
0.0 kVA Arc Welders (NEC 630–11b,21b FPN)
0.0 kVA Resistance Welders (NEC 630–31b)
0.0 kVA Subpanel(s)
0.0 kVA Thru fed Panel(s)
0.8 Total kVA — **2 Amps at VOLTAGE: 120/240V 3P, 4W** — **Iceland Skating Rink**

LEGEND
PFB = Provision for Future Breaker
<E> = Existing Load
<F> = Future Load
C = Continuous Load (>3 hrs per NEC 100)
N = Non–continuous load
R = Receptacle Load (taken at 180 VA only)
M = Motor Load
K= Kitchen Load (NEC 220–20)
H = Hotel/Motel
A= Arc Welders (MG, AC xfmr, DC rectifier)
W= Resistance Welders
P = Sub–Panel

(NE) WARNING Stinger Leg PH B — Allowed Load: 60 amps — Panel loaded at 3% — % Phase Unbalance <30% Loaded

(N)PANEL: "NE" — VOLTAGE: 120/240V 3P, 4W — BUS: 125A — MOUNT: SURFACE
TYPE: PANELBOARD — AIC: SERIES RATED — MAIN: MLO–60A — TYPE: NEMA 3R
NOTES: NEW — Print Date: 11–Feb–11

LOAD	KVA	CB	NO	A	B	C	NO	CB	KVA	LOAD
Space		PFB	1	A			2	20/1	0.4 R	(N)Recept–(GFIC)Quad G–use
Do "Not" Use		–	3		B		4	–		Do "Not" Use
Space		PFB	5			C	6	20/1	0.4 R	(N)Recept–(GFIC)Quad G–use
Space		PFB	7	A			8	PFB		Space
Do "Not" Use		–	9		B		10	–		Do "Not" Use
Space		PFB	11			C	12	PFB		Space
Space		PFB	13	A			14	PFB		Space
Do "Not" Use		–	15		B		16	–		Do "Not" Use
Space		PFB	17			C	18	PFB		Space
Space		PFB	19	A			20	PFB		Space
Do "Not" Use		–	21		B		22	–		Do "Not" Use
Space		PFB	23			C	24	PFB		Space
Space		PFB	25	A			26	PFB		Space
Do "Not" Use		–	27		B		28	–		Do "Not" Use
Space		PFB	29			C	30	PFB		Space
Space		PFB	31	A			32	PFB		Space
Do "Not" Use		–	33		B		34	–		Do "Not" Use
Space		PFB	35			C	36	PFB		Space
Space		PFB	37	A			38	PFB		Space
Do "Not" Use		–	39		B		40	–		Do "Not" Use
Space		PFB	41			C	42	PFB		Space

LOAD CALCULATIONS:
0.0 kVA Continuous Non–Motor
0.0 kVA 25% Continuous Non–Motor
0.0 kVA Non–Continuous
0.8 kVA Receptacle (First 10KVA NEC 220–13)
0.0 kVA Receptacle(Balance at 50%)
0.0 kVA Motor Loads (NEC 430)
0.0 kVA 25% of Largest Motor
0.0 No Kitchen Equip.
0.0 kVA Hotel/Motel Demand (NEC 220–11)
0.0 kVA Arc Welders (NEC 630–11b,21b FPN)
0.0 kVA Resistance Welders (NEC 630–31b)
0.0 kVA Subpanel(s)
0.0 kVA Thru fed Panel(s)
0.8 Total kVA — **2 Amps at VOLTAGE: 120/240V 3P, 4W** — **Iceland Skating Rink**

LEGEND
PFB = Provision for Future Breaker
<E> = Existing Load
<F> = Future Load
C = Continuous Load (>3 hrs per NEC 100)
N = Non–continuous load
R = Receptacle Load (taken at 180 VA only)
M = Motor Load
K= Kitchen Load (NEC 220–20)
H = Hotel/Motel
A= Arc Welders (MG, AC xfmr, DC rectifier)
W= Resistance Welders
P = Sub–Panel

(SE) WARNING Stinger Leg PH B — ALLOWED LOAD: 200 amps — Panel loaded at 7% — % PHASE IMBALANCE <30% Loaded

(NPANEL: "SE" — VOLTAGE: 120/240V 3P, 4W — BUS: 200A — MOUNT: SURFACE
TYPE: PANELBOARD — AIC: SERIES RATED — MAIN: MLO — TYPE: NEMA 3R
NOTES: NEW — Print Date: 11–Feb–11

LOAD		KVA	CB	NO	A	B	C	NO	CB	KVA	LOAD
Space			PFB	1	A			2	20/1	0.4 R	(N)Recept–(GFIC)Quad G–use
Do "Not" Use			–	3		B		4	–		Do "Not" Use
Space			PFB	5			C	6	20/1	0.4 R	(N)Recept–(GFIC)Quad G–use
Space			PFB	7	A			8	20/1	0.4 R	(N)Recept–(GFIC)Quad G–use
Do "Not" Use			–	9		B		10	–		Do "Not" Use
(N)Lighting–LED Controllers	C	0.2	20/1	11			C	12	20/1	0.4 N	(N)Lighting Controller "LCC"
(N)Lighting– Rink Floods	C	0.6	20/1	13	A			14	PFB		Space
Do "Not" Use			–	15		B		16	–		Do "Not" Use
(N)Lighting– Rink Floods	C	0.6	20/1	17			C	18	PFB		Space
(N)Lighting–NL/EM	C	0.2	20/1	19	A			20	PFB		Space
Do "Not" Use			–	21		B		22	–		Do "Not" Use
(N)Lighting–Exterior Wall Packs	C	0.6	20/1	23			C	24	PFB		Space
Space			PFB	25	A			26	PFB		Space
Do "Not" Use			–	27		B		28	–		Do "Not" Use
Space			PFB	29			C	30	PFB		Space
Space			PFB	31	A			32	PFB		Space
Do "Not" Use			–	33		B		34	–		Do "Not" Use
Space			PFB	35			C	36	PFB		Space
To Panel "NE"	P	0.4	60/	37	A			38	60/	0.4 P	To Panel "SW"
----------	P		/–	39		B		40	/–	P	----------
----------	P	0.4	/3	41			C	42	/3	0.4 P	----------

LOAD CALCULATIONS:
2.4 kVA Continuous Non–Motor
0.6 kVA 25% Continuous Non–Motor
0.4 kVA Non–Continuous
1.2 kVA Receptacle (First 10KVA NEC 220–13)
0.0 kVA Receptacle(Balance at 50%)
0.0 kVA Motor Loads (NEC 430)
0.0 kVA 25% of Largest Motor
0.0 No Kitchen Equip.
0.0 kVA Hotel/Motel Demand (NEC 220–11)
0.0 kVA Arc Welders (NEC 630–11b,21b FPN)
0.0 kVA Resistance Welders (NEC 630–31b)
1.8 kVA Subpanel(s)
0.0 kVA Thru fed Panel(s)
6.2 Total kVA — **15 Amps at VOLTAGE: 120/240V 3P, 4W** — **Iceland Skating Rink**

LEGEND
PFB = Provision for Future Breaker
<E> = Existing Load
<F> = Future Load
C = Continuous Load (>3 hrs per NEC 100)
N = Non–continuous load
R = Receptacle Load (taken at 180 VA only)
M = Motor Load
K= Kitchen Load (NEC 220–20)
H = Hotel/Motel
A= Arc Welders (MG, AC xfmr, DC rectifier)
W= Resistance Welders
P = Sub–Panel

ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL ELECTRICAL EQUIPMENT TO THE 2010 CALIFORNIA ELECTRICAL CODE AND THE 2008 CALIFORNIA ENERGY CODE PER TITLE 24 STANDARDS.

SYMBOL LIST

LIGHTING	
○	LIGHTING FIXTURE, SURFACE OR PENDANT MOUNTED
●	(NL) LIGHTING FIXTURE, SURFACE OR PENDANT MOUNTED
▭	FLUORESCENT LIGHTING FIXTURE, RECESSED MOUNTED
▭	(NL) FLUORESCENT LIGHTING FIXTURE, RESESSED MOUNTED
⊢○	LIGHTING FIXTURE, WALL MOUNTED
○	FLUORESCENT LIGHTING FIXTURE, SURFACE MOUNTED
◎	LIGHTING FIXTURE, RECESSED MOUNTED
○–○	FLUORESCENT STRIP FIXTURE, SURFACE MOUNTED
⊢⊗	EXIT LIGHT FIXTURE WITH BATTERY BACK–UP, WALL MOUNTED ARROWS SHOWS DIRECTION
⊗	EXIT LIGHT FIXTURE, CEILING MOUNTED
□–	POLE MOUNTED FIXTURE
⊓	EMERGENCY LIGHT WITH BATTERY BACK–UP
$	SINGLE POLE TOGLE SWITCH, 15A 120–277V @ +48" ABOVE FINISHED FLOOR @ CENTER OF DEVICE.
$ 3	THREE WAY TOGGLE SWITCH, 15A 120–277V @ +48" ABOVE FINISHED FLOOR @ CENTER OF DEVICE.
$ a,b,c	SUBSCRIPT DENOTES OUTLET/FIXTURE CONTROLLED @ +48" ABOVE FINISHED FLOOR @ CENTER OF DEVICE.
OUTLETS	
⏚	FOURPLEX RECEPTACLE OUTLET 15A, 125V, +15" MIN. ABOVE FINISHED FLOOR @ BOTTOM OF DEVICE.
⏚	DUPLEX RECEPTACLE OUTLET 15A, 125V, +15" MIN. ABOVE FINISHED FLOOR @ BOTTOM OF DEVICE.
⏚	208V, 3PH, 1PH RECEPTACLE OUTLET SIZE AS NOTED
⏚	DUPLEX RECEPTACLE FLOOR OUTLET 15A, 125V FLUSH IN FINISH FLOOR COLOR AS NOTED.
⏚ IG	DUPLEX RECEPTACLE OUTLET WITH AN ISOLATED GROUND, 15A 125V, +15" ABOVE FINISHED FLOOR @ BOTTOM OF DEVICE.
⏚ IG	FOURPLEX RECEPTACLE OUTLET WITH AN ISOLATED GROUND, 15A 125V, +15" ABOVE FINISHED FLOOR @ BOTTOM OF DEVICE.
▼▼	TELEPHONE OUTLET : FLOOR MOUNTED, 3/4"C. MOUNT TO ABOVE CEILING. WITH PULL ROPE, PROVIDE MUD RING.
▽▽	DATA OUTLET : FLOOR MOUNTED, 3/4"C. MOUNT TO ABOVE CEILING, WITH PULL ROPE, PROVIDE MUD RING.
▼ P	PUBLIC TELEPHONE OUTLET
▼	COMBINATION TELE/DATE OUTLET
J	JUNCTION BOX, SIZE AND TYPE AS INDICATED OR REQUIRED
EQUIPMENT	
▨	MAIN SWITCH BOARD "MSB" SEE ONE LINE DIAGRAM
▬	BRANCH PANEL SURFACE MOUNTED
▬	BRANCH PANEL FLUSH MOUNTED
▭	TERMINAL CABINET
T	DISTRIBUTION TRANSFORMER, SIZE & MOUNTING AS NOTED
⊠	MOTOR STARTER, SEE MP&S CONNECT AS REQUIRED
F	DISCONNECT SWITCH SIZE AND TYPE AS REQUIRED F –> FUSED
M	MOTOR MP&S
M	EXHAUST FAN – MP&S
AC–1	MECHANICAL EQUIPMENT I.D. TAG – MP&S
1	NUMBERED NOTE SHOWN ON SAME SHEET
A / E1/1	DETAIL DESIGNATION, TOP LETTER INDICATES DETAIL, BOTTOM LETTER INDICATES SHEET NUMBER
A1 100W MH 277V	FIXTURE DESIGNATION, DENOTES FIXTURE TYPE
TTB	TELEPHONE TERMINAL BOARD "TTB" 4'X8'x3/4" PLYWOOD BACKBOARD W/ FOURPLEX RECEPTACLE AND (1) #6 GND.
OS DT	WALL MOUNTED SENSOR SWITCH, DUAL TECHNOLOGY
OS U	CEILING MOUNTED SENSOR SWITCH, ULTRASONIC
OS P	WALL MOUNTED SENSOR SWITCH, PASSIVE INFRARED
PP	POWER PACK, 120V
WIRING	
———	CIRCUIT CONCEALED IN CEILING OR WALL
– – – – –	CIRCUIT CONCEALED IN FLOOR OR UNDERGROUND
	TANDEM FIXTURE, MASTER SLAVE MAKE–UP
	HOME RUN TO PANELBOARD OR TERMINAL CABINET
	DENOTES # OF #12 WIRES, NO MARKS = 2 #12, 1/2"C. CURVED HATCH DENOTES IG. OTHERS AS NOTED
	CONDUIT RISER
	CONDUIT RISER DOWN
	STUBBED CONDUIT
	FLEX CONDUIT
ABBREVIATIONS	
C	CONDUIT
C.O.	CONDUIT ONLY WITH PULL ROPE
(E)	EXISTING
EM	EMERGENCY BATTERY PACK
EL	EVENING LIGHT
GFI	GROUND FAULT INTERRUPTER
GFIC	GROUND FAULT CIRCUIT INTERRUPTER
IG	ISOLATED GROUND
MP&S	SEE MECHANICAL PLANS AND SPECIFICATIONS
MT	EMPTY CONDUIT WITH NYLON PULL ROPE
(N)	NEW
NIC	NOT IN CONTRACT
NIES	NOT IN ELECTRICAL SECTION OF THESE PLANS AND SPECIFICATIONS
NL	NIGHT LIGHT
PFB	PROVISION FOR FUTURE BREAKER
PNL	PANELBOARD
(R)	EXISTING TO BE REMOVED OR RELOCATED
RE:	REFERENCE, REFER TO AND COORDINATE WITH
TTB	TELEPHONE TERMINAL BOARD
UON	UNLESS OTHERWISE NOTED
WP	WEATHER PROOF
NOTE	SYMBOLS INDICATES ABOVE MAY NOT NECESSARILY APPEAR AS PART OF THESE DRAWINGS IF NOT REQUIRED

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DESIGN & DRAFTING SERVICES

STAMP

RESTORATION
ICELAND SKATING RINK
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SACRAMENTO, CA 95815

PROJECT NAME/ADDRESS

February 11, 2011
PROJECT DATE

G. COOPER — DRAWN/DESIGNER — CHECKED

PLAN CHECK COMMENTS JANUARY 11, 2011
1
2
3
REVISIONS/DATES

ELECTRICAL ONELINE SYMBOLS, NOTES & SCHEDULES
SHEET TITLE

NEW SHEET
E0.1
1

SHEET 1 OF 5