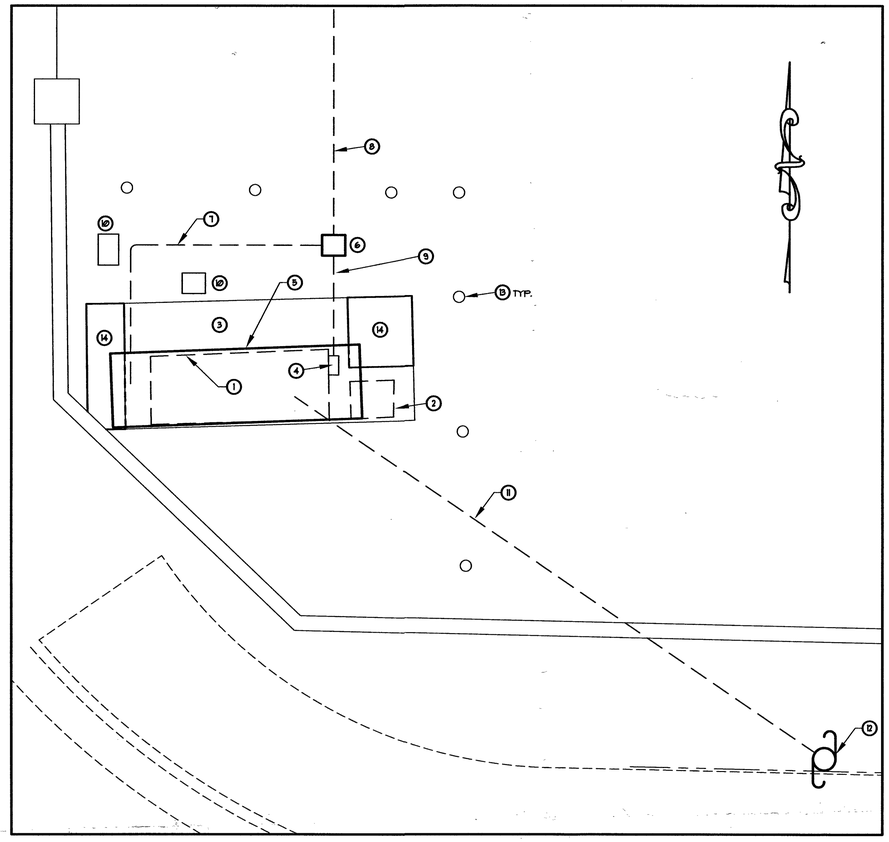
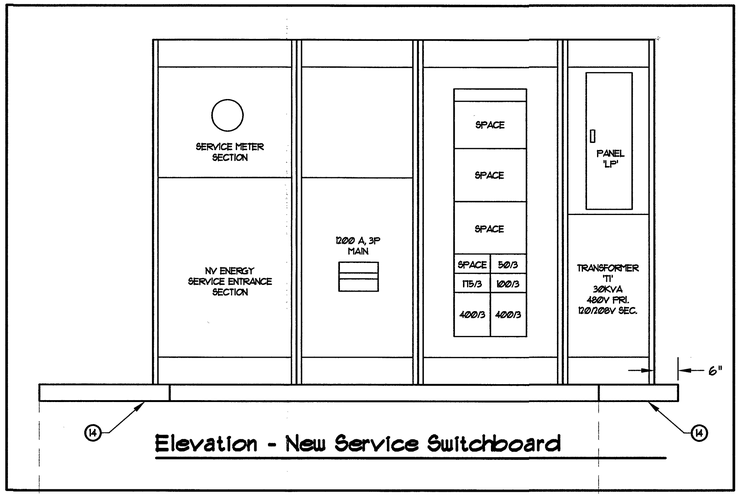
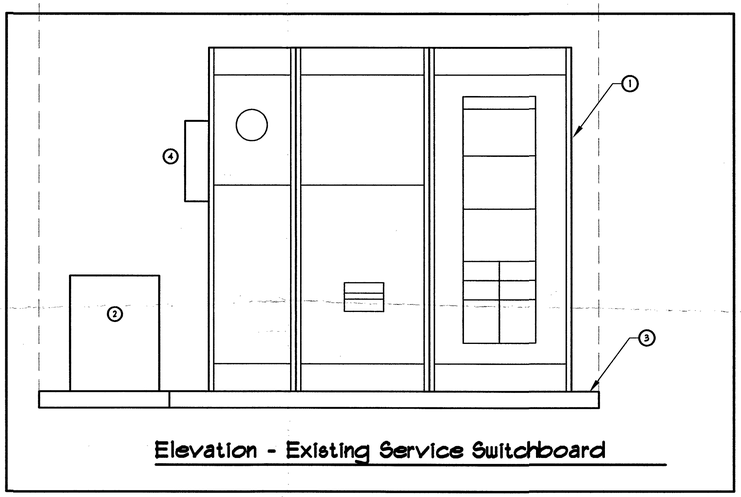


Electrical Site Plan

Scale: NOT TO SCALE



Elevation - New Service Switchboard



Elevation - Existing Service Switchboard

General Notes

1. NEW SWITCHBOARD SHALL HAS A FOOTING SUITBAL FOR AVAILABLE SPACE AS SHOWN IN THE SITE PLAN AND IN LINE WITH THE EXISTING UNDERGROUND FEEDERS.
2. FINAL CONNECTIONS TO EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
3. WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE OF NEVADA AND NATIONAL CODES AND ORDINANCES.
4. PROVIDE PERMITS AND INSPECTIONS AS REQUIRED.
5. WIRE SHALL BE COPPER, TYPE THW- MINIMUM 75°C RATED.
6. VERIFY EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, PIPING AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACK FILL, EXCAVATION, SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULL BOXES, SAW CUTTING AND PATCHING, CONCRETE/PAVING, ETC. AS REQUIRED. BACK FILL TRENCHES TO 90%. COMPACTING AND PATCH TO MATCH EXISTING. ALL UNDERGROUND INSTALLATION SHALL MEET NEC 300.5 REQUIREMENTS.
7. EXTERIOR CONDUIT EXPOSED TO DAMAGE SHALL BE TYPE RGS. EXTERIOR BURIED CONDUIT SHALL BE SCHEDULE 40 PVC WITH PVC COATED RGS BENDS WHEN PENETRATING THROUGH SLABS. CONDUIT FITTINGS SHALL BE STEEL OR MALLEABLE IRON TYPE.
8. ALL ELECTRICAL SYSTEMS AND COMPONENTS SHALL BE LISTED OR LABELED BY UL OR OTHER RECOGNIZED TESTING INSTITUTE.
9. COORDINATE WITH NV ENERGY FOR SERVICE DISCONNECT/RECONNECT AND METER REMOVAL/INSTALLATION. COORDINATE WITH OWNER FOR TEMPERARY POWER OUTAGE.

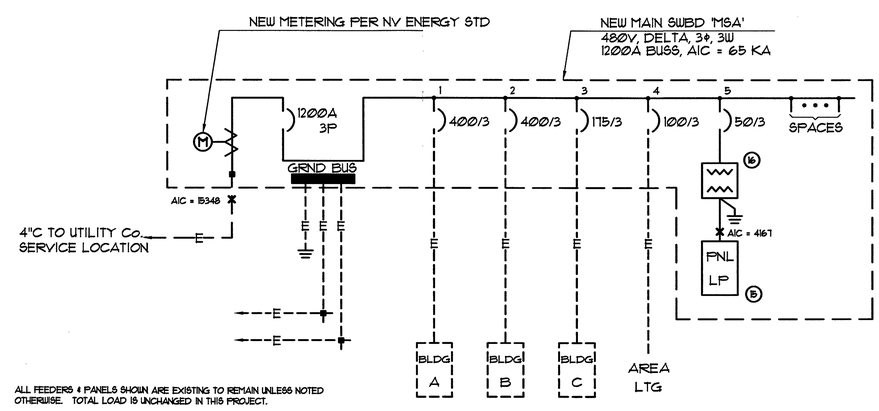
Sheet Notes

1. EXISTING MAIN SERVICE SWITCH BOARD "MSA" TO BE REMOVED AND REPLACED BY NEW SWITCH BOARD. SEE ONE LINE DIAGRAM - NEW THIS SHEET FOR NEW SWITCH BOARD INFO.
2. EXISTING 30 KVA 480/120-208V TRANS FORMER AND ASSOCIATED FEEDERS TO BE REMOVED.
3. EXISTING CONCRETE PAD AND GROUNDING SYSTEM TO REMAIN.
4. EXISTING PANEL "LP" TO BE REMOVED.
5. PROVIDE AND INSTALL NEW MAIN SWITCHBOARD AS SHOWN. EXTEND EXISTING CONCRETE PAD TO ACCOMODATE NEW SECTION FOR RELOCATED TRANSFORMER 'T1' AND PANEL 'LP' AND ENLARGED SERVICE PULL SECTION. CONNECT UTILITY MAIN FEEDER AND FEEDERS TO ALL EXISTING DISTRIBUTION PANELS AS SHOWN IN ONE LINE DIAGRAM. EXAMING THE EXISTING GROUNDING SYSTEM CONDITION AND MAKE CORRECTIONS WHERE NECESSARY AS PER NEC 250.4(A), 250.8, 250.20(B) & (D), AND 250.24(A).
6. PROVIDE AND INSTALL #5 PULL BOX TO INTERCEPT EXISTING FEEDERS TO LOAD SIDE AND REROUGHT FEEDERS FROM PULL BOX TO NEW LOCATION OF PANEL 'LP' AS SHOWN.
7. REROUGHTED FEEDERS TO NEW PANEL'LP' LOCATION. MATCH FEEDER NUMBER AND SIZES TO THE EXISTING.
8. EXISTING FEEDER TO LOAD SIDE TO REMAIN.
9. EXISTING FEEDERS FROM EXISTING PANEL 'LP' TO NEW #5 PULL BOX TO BE REMOVED.
10. EXISTING PULL BOX TO REMAIN.
11. EXISTING NV ENERGY SERVICE FEEDER (60 FEET).
12. EXISTING NV ENERGY SERVICE TRANSFORMER LOCATION.
13. EXISTING BARRIER TO REMAIN.
14. EXTENDED CONCRETE PAD FOR ACCOMODATING ENLARGED SERVICE PULL SECTION AND NEW SECTION FOR PANEL 'LP' AND TRANSFORMER 'T1'.
15. MANUFACTURER PRE-INSTALLED PANEL 'LP' FOR REPLACING EXISTING PANEL.
16. MANUFACTURER PRE-INSTALLED TRANSFORMER 'T1' FOR REPLACING EXISTING TRANSFORMER.

PANEL LP* 3ø , 4 WIRE , 120/208 VOLTS 125A MLO CABINET MOUNTED
MIN INTERRUPTING RATING 10K RMS SYM AMPS LOCATION SEE PLAN NEMA 1

L = LIGHTS, R = RECEPTACLES, M = MECHANICAL EQUIPMENT, SO = SPACE ONLY, SC = SPARE CIRCUIT, E = EXISTING
MLO = MAIN LUGS ONLY, MCB = MAIN CIRCUIT BREAKERS

POLE SPACE CKT #	POLE SPACE #	CIRCUIT USE	CKT BKR RATING	CONNECTED LOAD VA A	B	C	CKT BKR RATING	CIRCUIT USE	POLE SPACE #	CKT #
1	1	GATE	30	A	— — —	— — —				
				A	— — —	— — —		SO	2	
3	3	GATE	30	— — —	A	— — —				
				— — —	A	— — —		SO	4	
5	5	R – GATE	20	— — —	— — —	A				
				— — —	— — —	A		SO	6	
7	7	PHOTOCELL	20	A	— — —	— — —				
				A	— — —	— — —		SO	8	
9	9	R –	20	— — —	A	— — —				
				— — —	A	— — —		SO	10	
11	11	L – YARD	50/2	— — —	— — —	A				
				— — —	— — —	A		SO	12	
	13		X	A	— — —	— — —				
				A	— — —	— — —		SO	14	
	15	SO		— — —	A	— — —				
				— — —	A	— — —		SO	16	
	17	SO		— — —	— — —	A				
				— — —	— — —	A		SO	18	
	19	SO		A	— — —	— — —				
				A	— — —	— — —		SO	20	
	21	SO		— — —	A	— — —				
				— — —	A	— — —		SO	22	
	23	SO		— — —	— — —	A				
				— — —	— — —	A		SO	24	
	25	SO		A	— — —	— — —				
				A	— — —	— — —		SO	26	
	27	SO		— — —	A	— — —				
				— — —	A	— — —		SO	28	
	29	SO		— — —	— — —	A				
				— — —	— — —	A		SO	30	
* REPLACEMENT OF EXISTING PANEL. ALL LOADS ARE TRANSFERED LOAD.				A	A	A				
					A					

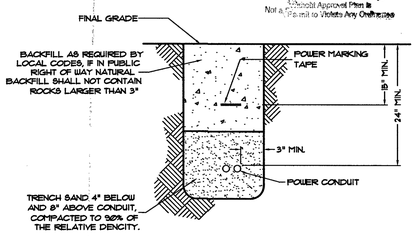


ALL FEEDERS & PANELS SHOWN ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE. TOTAL LOAD IS UNCHANGED IN THIS PROJECT.

One Line Diagram - New

Scale: NOT TO SCALE

PLANS APPROVED ELECTRICAL Building City
EDS SEP 27 2010
Does Not Include Site Work, Landscaping, Plumbing/Mechanical or Off-Site Improvements Nor Shall Its Charge Approval Plan is Not a Permit to Violate Any Ordinance



Trench Details

RECEIVED
SEP 16 2010
CITY OF LAS VEGAS
PERMITS

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811
or
1-800-227-2600
Gas over 2" pressure
or
1-702-455-7544

Avoid cutting underground utility lines. It's costly.
Call before you Overhead
1-702-593-6111
Nevada Power Environment and Safety Services Department

172286-C-10

JOB

CITY OF LAS VEGAS NEVADA

REVISIONS

CONSULTANT

DEPARTMENT OF FIELD OPERATIONS

East Services Center - Main SWBD Replacement
3100 E. Bonanza Rd. 89101

Electrical Site Plan
Electrical One Line Diagram

STAMP

REGISTERED PROFESSIONAL ENGINEER STATE OF NEVADA
JIANZHONG JIANG
Exp. 6-30-11
ELECTRICAL
NO. 13859
9-16-10

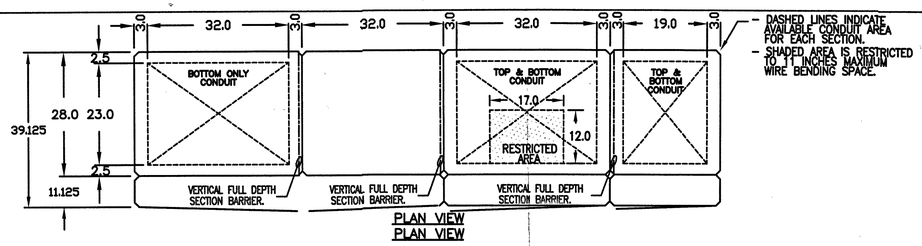
OWNER: CITY OF LAS VEGAS
DEPARTMENT OF FIELD OPERATIONS
FACILITIES MANAGEMENT

3104 EAST BONANZA ROAD
LAS VEGAS, NEVADA 89101
PHONE: (702) 229-6220
FAX: (702) 382-0619
TDD: (702) 386-9108

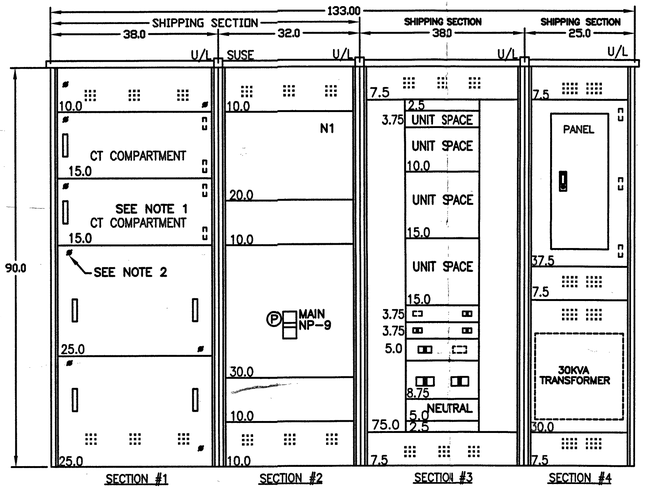
DRAWN	JJ
FILE	Yard/EYmain/EYsite
DATE	9/10/10
SCALE	As Shown
BID NO	N/A
CLV DWG NO	XXX-XXX
HANSEN	
SHT NO	ES

DRAWINGS AS INSTRUMENTS OF SERVICE ARE THE PROPERTY OF THE DESIGN PROFESSIONAL, WHOSE STAMP OF CERTIFICATION APPEARS ON THIS DRAWING AND SPECIFICATIONS ANY USE OR REPRODUCTION IN WHOLE OR IN PART WITHOUT WRITTEN CONSENT IS STRICTLY PROHIBITED COPIES OF THE DRAWINGS AND SPECIFICATIONS RETAINED BY THE CLIENT MAY BE UTILIZED ONLY FOR OCCUPYING THE PROJECT FOR WHICH THEY WERE PREPARED AND NOT FOR THE CONSTRUCTION OF ANY OTHER PROJECT N.A.C. 623.310

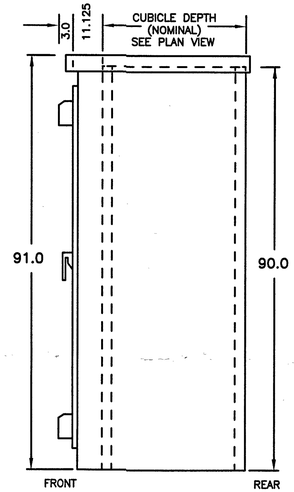
PTD41B-51 X640



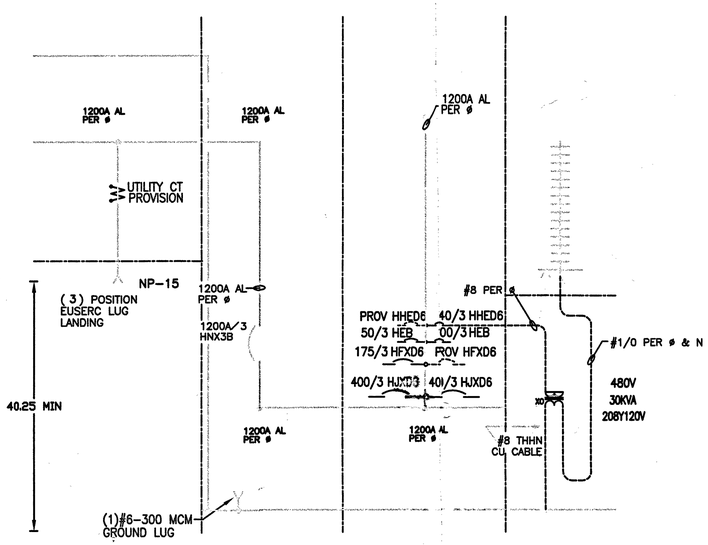
PLAN VIEW
PLAN VIEW



FRONT VIEW
3ø 3W 480 Delta
1200A MAINS
ITEM F10



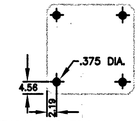
SIDE VIEW



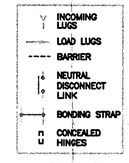
NAMEPLATE SCHEDULE "A"

NO	ENGRAVING
N1	M1 INTEGRATED

2.5" x 5.0" ENGRAVED NAMEPLATE
BLACK W/WHITE CORE



TYPICAL BOLTDOWN HOLE PROVISION FOR CUBICLE BOTTOM EACH SECTION.



LEGEND

MOLDED CASE BREAKERS
NUMBER & SIZE LUG PER LEG

FRAME TYPE	AMPS	CONNECTORS
BL, BLH, HBL, BQD	15–20	1–#14–#8 AWG (CU) 1–#12–#8 AWG (AL)
	25–50	1–#8–#6 AWG CU 1–#8–#4 AWG AL
	55–70	1–#6–#4 AWG (CU) 1–#6–#2 AWG (AL)
	80–100	1–#4–#1/0 AWG (CU) 1–#2–#1/0 AWG (AL)
	110–125	1–#2–#1/0 AWG (CU) 1–#1/0–#2/0 AWG (AL)
QJ2, QJH2, QJ2H	60–225	1–#6 AWG–300 MCM (CU) 1–#4 AWG–300 MCM (AL)
ED2, ED4, ED6, ETI, ED6, HED4, HED6, CED6	15–20	1–#14–#10 AWG (CU) 1–#12–#10 AWG (AL)
	25	1–#10 AWG (CU OR AL)
	30–100	1–#10–#1/0 (CU OR AL)
	110–125	1–#3/0–3 (CU) 1–#2/0–1 (AL)
FXD6, FD6, SFD6 HFD6, SHFD6, CFD6, SCFD6	70–250	1–#6 AWG–350 MCM (CU) 1–#4 AWG–350 MCM (AL)
JXD2, JXD6, JD6, SJD6 HJD2, SHJD6, CJD6, SCJD6	200–400	1–(2)–#3/0–500 MCM (CU) 1–(2)–1–#4/0–500 MCM (AL)
LXD6, LD6, SLD6, HLD6 SHLD6, CLD6, SCLD6	250–800	1–(2)–1–#3/0–500 MCM (CU) 1–(2)–#4/0–500 MCM (AL)
LMD6, LMXD6, HLMD6, HLMXD6 MD6, MXD6, SMD6, HMD6, SHMD6, CMD6, SCMD6	400–800	2–#1 AWG–500 MCM (CU OR AL)
ND6, SND6, HND6 SHND6, CND6, SCND6	700–800	3–#1/0–500 MCM (CU OR AL)
	800–1200	4–250–500 MCM (CU OR AL)

NOTES

CONSTRUCTION STANDARD -SWITCHBOARD IS BUILT AND LABELED PER UL 891 IN EFFECT AT TIME OF MANUFACTURE

INCOMING SERVICE -AMPERES: 1200
VOLTS: 480 DELTA
SYSTEM: 3 PHASE, 3 WIRE

INTERRUPTING RATING -THE SHORT CIRCUIT INTERRUPTING CAPABILITY IS 65000 RMS SYMMETRICAL AMPERES AT 480 VOLTS BASED ON THE LOWEST SHORT CIRCUIT CURRENT RATING OF THE INDIVIDUAL OR SERIES RATED COMBINATION DEVICE INSTALLED AT TIME OF MANUFACTURE. THE BUSSING STRUCTURE IS CONSTRUCTED TO WITHSTAND FAULTS OF 65000 RMS SYMMETRICAL AMPERES.

ENCLOSURE -ENCLOSURE IS TYPE NEMA 3R FOR OUTDOOR APPLICATION. CUBICLE FRAMES AND COVERS ARE CONSTRUCTED FROM CODE GAUGE STEEL.

EXTERIOR FINISH -ASA 61 GREY PAINT

TERMINATIONS-FRONT ACCESS REQUIRED

BUS BARS -ALUMINUM SIZED ON BASIS OF 65 DEG. C MAX. TEMP. RISE.

1) 1200A 'NEVADA POWER' CT COMPARTMENT WITH PROVISIONS ONLY FOR UTILITY CT'S.

2) CAPTIVE SEALING SCREWS WITH WINGNUTS ARE REQUIRED ON FRONT COVERS WHERE SHOWN. ALSO REQUIRED ON SIDE AND REAR COVERS OF SECTION 1.

INTERRUPTING CAPACITY RATING - SYMMETRICAL AMPS BREAKER	120V	240V	480V	600V	LUG#
HFXD6 70-250A	-	100K	65K	25K	TA1FD350A
HJXD6 200-400A	-	100K	65K	35K	TA2J6500
HHED6 15-125A	-	100K	65K	25K	TA1E6125
HNX 800-1200A	-	100K	65K	50K	
HEB 15-100A	-	100K	65K	25K	TA1EG10

ABBREVIATIONS

'SUSE' INDICATES THAT THE MARKED SECTION IS SUITABLE ONLY FOR USE AS SERVICE EQUIPMENT AND IS SO IDENTIFIED.

'UL' INDICATES THAT THE MARKED SECTION COMPLIES WITH ALL APPLICABLE UNDERWRITERS LABORATORIES STANDARDS AND IS IDENTIFIED WITH A UL LABEL.

'PROV' INDICATES PROVISION IS MADE FOR A FUTURE DEVICE. ALL REQUIRED STRAPS ARE INCLUDED.

'UNIT SPACE' INDICATES UNOCCUPIED AREA INTENDED FOR FUTURE USE.

'P' INDICATES PADLOCKING PROVISIONS

AMPACITY RATING

		SUPPLY	SECTION
SECTION #1	MAINS	1200	–
	NEUTRAL	–	–
SECTION #2	MAINS	1200	1200
	NEUTRAL	–	–
SECTION #3	MAINS	1200	1200
	NEUTRAL	–	–
SECTION #4	MAINS	–	–
	NEUTRAL	–	–

FOR PANELBOARD RATINGS SEE INDIVIDUAL PANELBOARD LABELS

UTILITY CO. : NPC	
DESCRIPTION	PG No
CT COMPARTMENT	322
UGPS	345
LINE TERMINATION	347
METER PLATES	--
HIGH REAR ENTRY	--
SMM METERING	--

PLANS APPROVED-ELECTRICAL
ELECTRICAL DEPT.
City of Las Vegas, Nevada
BY: _____ DATE: 12/17/10
Does Not Include Mechanical, Construction, Off-Site Improvements
Make No Change Without Approval
Approval of Plan Is Not a Permit to Violate Any Ordinance

JOB

RECEIVED
DEC 13 2010 - 177843
CITY OF LAS VEGAS

NO.	REVISIONS	BY & DATE	CHD.	APP.

JOB: CLV EAST YARD – REVISED
3104 E. BONANZA RD LAS VEGAS, NV 89101

P.O.: 271579
CUST.: NEDCO SUPPLY
TIE:
S.O.: 17-56945-F10
BY: MJB
ENG. LOC.: 7170
TITLE: SB3 REV.A SWBD M1 INTEGRATED
DATE: 11-16-2010
APP.:
INFO. LOC.: 7170
DWG. NO.: 17-0C-3002998165-100-A
REV.: 0
APP.:
DWG. FILE: 7170
SHEET 1 OF 1

Confidential – property of
Siemens Industry Inc
Building Technologies Division
Norcross, Georgia