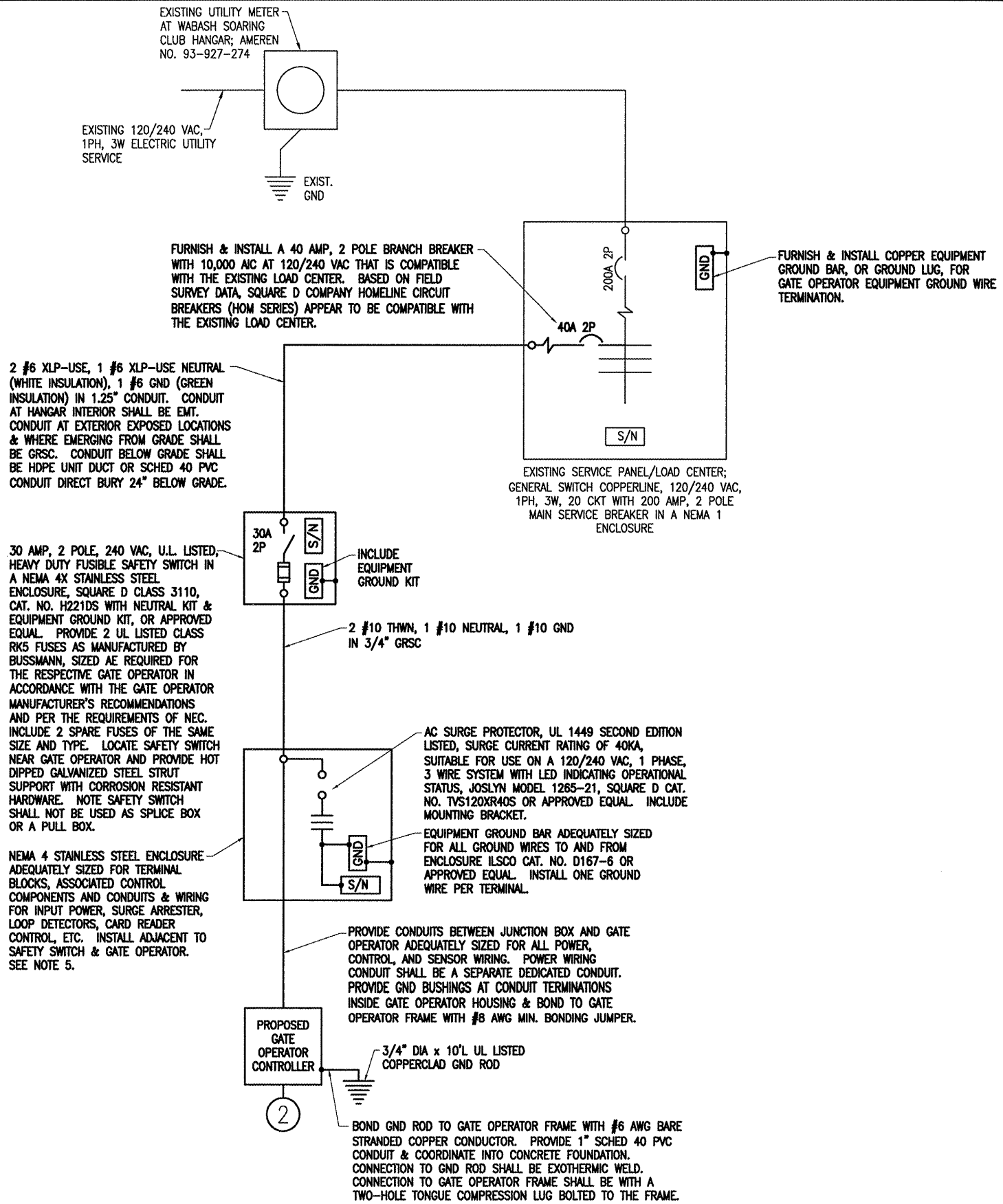


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LW023



EXISTING UTILITY METER
 AT WABASH SOARING
 CLUB HANGAR; AMEREN
 NO. 93-927-274

EXISTING 120/240 VAC,
 1PH, 3W ELECTRIC UTILITY
 SERVICE

EXIST.
 GND

FURNISH & INSTALL A 40 AMP, 2 POLE BRANCH BREAKER
 WITH 10,000 AIC AT 120/240 VAC THAT IS COMPATIBLE
 WITH THE EXISTING LOAD CENTER. BASED ON FIELD
 SURVEY DATA, SQUARE D COMPANY HOMELINE CIRCUIT
 BREAKERS (HOM SERIES) APPEAR TO BE COMPATIBLE WITH
 THE EXISTING LOAD CENTER.

FURNISH & INSTALL COPPER EQUIPMENT
 GROUND BAR, OR GROUND LUG, FOR
 GATE OPERATOR EQUIPMENT GROUND WIRE
 TERMINATION.

2 #6 XLP-USE, 1 #6 XLP-USE NEUTRAL
 (WHITE INSULATION), 1 #6 GND (GREEN
 INSULATION) IN 1.25" CONDUIT. CONDUIT
 AT HANGAR INTERIOR SHALL BE EMT.
 CONDUIT AT EXTERIOR EXPOSED LOCATIONS
 & WHERE EMERGING FROM GRADE SHALL
 BE GRSC. CONDUIT BELOW GRADE SHALL
 BE HDPE UNIT DUCT OR SCHED 40 PVC
 CONDUIT DIRECT BURY 24" BELOW GRADE.

EXISTING SERVICE PANEL/LOAD CENTER;
 GENERAL SWITCH COPPERLINE, 120/240 VAC,
 1PH, 3W, 20 CKT WITH 200 AMP, 2 POLE
 MAIN SERVICE BREAKER IN A NEMA 1
 ENCLOSURE

30 AMP, 2 POLE, 240 VAC, U.L. LISTED,
 HEAVY DUTY FUSIBLE SAFETY SWITCH IN
 A NEMA 4X STAINLESS STEEL
 ENCLOSURE, SQUARE D CLASS 3110,
 CAT. NO. H221DS WITH NEUTRAL KIT &
 EQUIPMENT GROUND KIT, OR APPROVED
 EQUAL. PROVIDE 2 UL LISTED CLASS
 RK5 FUSES AS MANUFACTURED BY
 BUSSMANN, SIZED AS REQUIRED FOR
 THE RESPECTIVE GATE OPERATOR IN
 ACCORDANCE WITH THE GATE OPERATOR
 MANUFACTURER'S RECOMMENDATIONS
 AND PER THE REQUIREMENTS OF NEC.
 INCLUDE 2 SPARE FUSES OF THE SAME
 SIZE AND TYPE. LOCATE SAFETY SWITCH
 NEAR GATE OPERATOR AND PROVIDE HOT
 DIPPED GALVANIZED STEEL STRUT
 SUPPORT WITH CORROSION RESISTANT
 HARDWARE. NOTE SAFETY SWITCH
 SHALL NOT BE USED AS SPLICE BOX
 OR A PULL BOX.

2 #10 THWN, 1 #10 NEUTRAL, 1 #10 GND
 IN 3/4" GRSC

AC SURGE PROTECTOR, UL 1449 SECOND EDITION
 LISTED, SURGE CURRENT RATING OF 40KA,
 SUITABLE FOR USE ON A 120/240 VAC, 1 PHASE,
 3 WIRE SYSTEM WITH LED INDICATING OPERATIONAL
 STATUS, JOSLYN MODEL 1265-21, SQUARE D CAT.
 NO. TVS120XR40S OR APPROVED EQUAL. INCLUDE
 MOUNTING BRACKET.

EQUIPMENT GROUND BAR ADEQUATELY SIZED
 FOR ALL GROUND WIRES TO AND FROM
 ENCLOSURE ILSCO CAT. NO. D167-6 OR
 APPROVED EQUAL. INSTALL ONE GROUND
 WIRE PER TERMINAL.

NEMA 4 STAINLESS STEEL ENCLOSURE
 ADEQUATELY SIZED FOR TERMINAL
 BLOCKS, ASSOCIATED CONTROL
 COMPONENTS AND CONDUITS & WIRING
 FOR INPUT POWER, SURGE ARRESTER,
 LOOP DETECTORS, CARD READER
 CONTROL, ETC. INSTALL ADJACENT TO
 SAFETY SWITCH & GATE OPERATOR.
 SEE NOTE 5.

PROVIDE CONDUITS BETWEEN JUNCTION BOX AND GATE
 OPERATOR ADEQUATELY SIZED FOR ALL POWER,
 CONTROL, AND SENSOR WIRING. POWER WIRING
 CONDUIT SHALL BE A SEPARATE DEDICATED CONDUIT.
 PROVIDE GND BUSHINGS AT CONDUIT TERMINATIONS
 INSIDE GATE OPERATOR HOUSING & BOND TO GATE
 OPERATOR FRAME WITH #8 AWG MIN. BONDING JUMPER.

3/4" DIA x 10'L UL LISTED
 COPPERCLAD GND ROD

BOND GND ROD TO GATE OPERATOR FRAME WITH #6 AWG BARE
 STRANDED COPPER CONDUCTOR. PROVIDE 1" SCHED 40 PVC
 CONDUIT & COORDINATE INTO CONCRETE FOUNDATION.
 CONNECTION TO GND ROD SHALL BE EXOTHERMIC WELD.
 CONNECTION TO GATE OPERATOR FRAME SHALL BE WITH A
 TWO-HOLE TONGUE COMPRESSION LUG BOLTED TO THE FRAME.

NOTES

- SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.
- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70-NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE SHALL NOT BE PERMITTED.
- ALL EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.
- ALL FIXED WIRING IN THE HANGAR SHALL BE IN METAL RACEWAYS TO COMPLY WITH THE REQUIREMENTS OF NEC 513.7.
- ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.
- ALL WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM AR162724 - ELECTRIC GATE - 24'.

BY	
REVISION	
DATE	

MID-AMERICAN AIR CENTER
 LAWRENCEVILLE-VINCENNES AIRPORT
 LAWRENCEVILLE, ILLINOIS

IL PROJ.: LW-3869 A.I.P. PROJ.: 3-17-0061-815

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DRAWN	MV 01/07/09
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 1525 South Sixth Street
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FRONTAL AREA
 FENCE INSTALLATION
 SOARING CLUB GATE
 ELECTRICAL ONE-LINE
 DIAGRAM

WABASH SOARING CLUB GATE OPERATOR
 ELECTRICAL ONE LINE DIAGRAM