



Correctional Service
Canada

Service Correctionnel
Canada

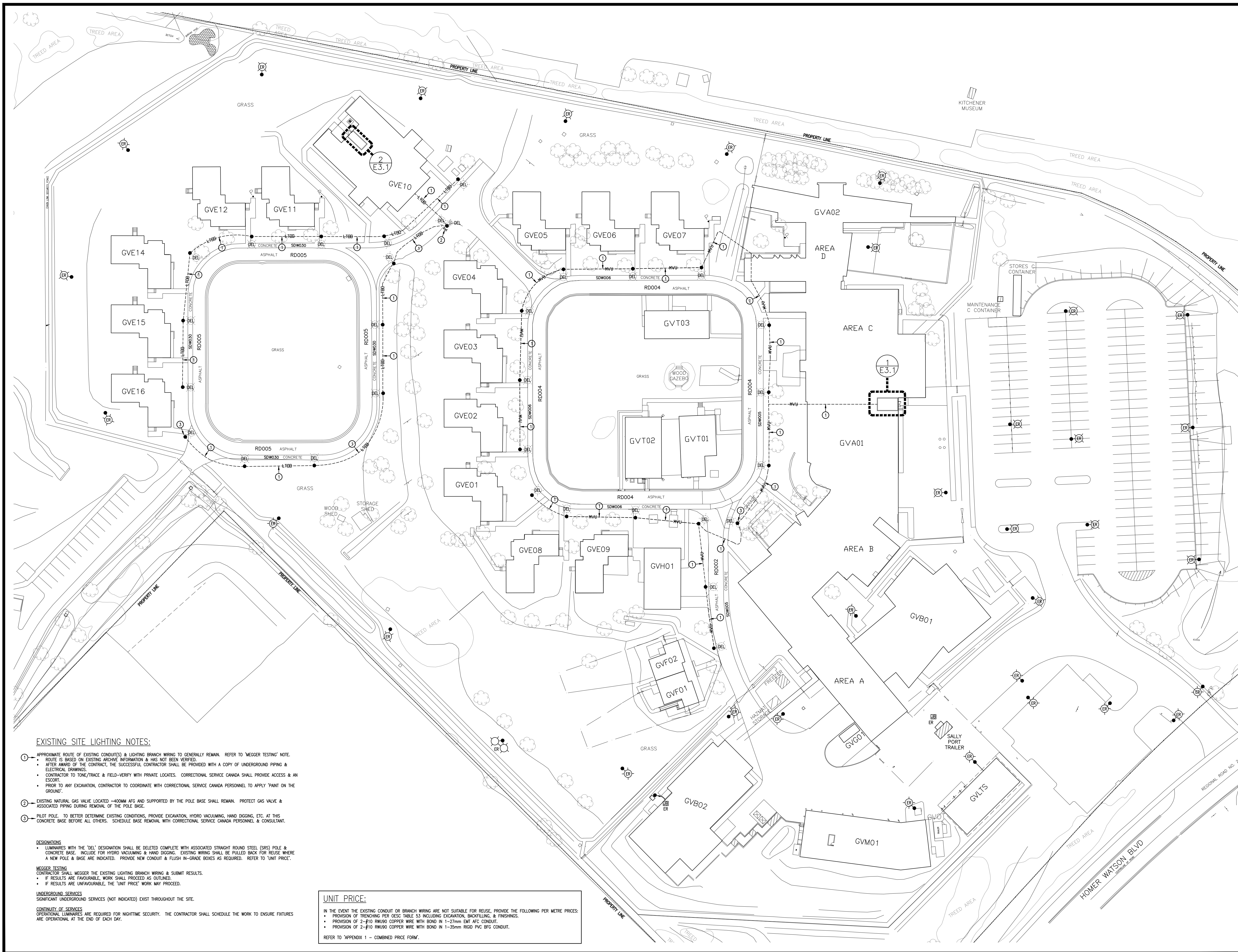
GRAND VALLEY INSTITUTION FOR WOMEN YARD LIGHTING

MECHANICAL/ELECTRICAL
ENGINEERS

MNE

ENGINEERING

ELECTRICAL DRAWING LIST:
E1.1 EXISTING SITE LIGHTING PLAN
E2.1 REVISED SITE LIGHTING PLAN
E3.1 PARTIAL BUILDING PLANS, SCHEDULE & LEGEND



EXISTING SITE LIGHTING NOTES:

- ① APPROXIMATE ROUTE OF EXISTING CONDUIT(S) & LIGHTING BRANCH WIRING TO GENERALLY REMAIN. REFER TO 'MEGGER TESTING' NOTE.
- ROUTE IS BASED ON EXISTING ARCHIVE INFORMATION & HAS NOT BEEN VERIFIED.
- AFTER AWARD OF THE CONTRACT, THE SUCCESSFUL CONTRACTOR SHALL BE PROVIDED WITH A COPY OF UNDERGROUND PIPING & ELECTRICAL DRAWINGS.
- CONTRACTOR TO TONE/TRACE & FIELD-VERIFY WITH PRIVATE LOCATES. CORRECTIONAL SERVICE CANADA SHALL PROVIDE ACCESS & AN ESCORT.
- PRIOR TO ANY EXCAVATION, CONTRACTOR TO COORDINATE WITH CORRECTIONAL SERVICE CANADA PERSONNEL TO APPLY 'PAINT ON THE GROUND'.
- ② EXISTING NATURAL GAS VALVE LOCATED ~400MM AFG AND SUPPORTED BY THE POLE BASE SHALL REMAIN. PROTECT GAS VALVE & ASSOCIATED PIPING DURING REMOVAL OF THE POLE BASE.
- ③ PILOT POLE: TO BETTER DETERMINE EXISTING CONDITIONS, PROVIDE EXCAVATION, HYDRO VACUUMING, HAND DIGGING, ETC. AT THIS CONCRETE BASE BEFORE ALL OTHERS. SCHEDULE BASE REMOVAL WITH CORRECTIONAL SERVICE CANADA PERSONNEL & CONSULTANT.

DESIGNATIONS

- LUMINAIRES WITH THE 'DEL' DESIGNATION SHALL BE DELETED COMPLETE WITH ASSOCIATED STRAIGHT ROUND STEEL (SRS) POLE & CONCRETE BASE. INCLUDE FOR HYDRO VACUUMING & HAND DIGGING. EXISTING WIRING SHALL BE PULLED BACK FOR REUSE WHERE A NEW POLE & BASE ARE INDICATED. PROVIDE NEW CONDUIT & FLUSH IN-GRADE BOXES AS REQUIRED. REFER TO 'UNIT PRICE'.
- MEGGER TESTING**
- CONTRACTOR SHALL MEGGER THE EXISTING LIGHTING BRANCH WIRING & SUBMIT RESULTS.
- IF RESULTS ARE FAVOURABLE, WORK SHALL PROCEED AS OUTLINED.
- IF RESULTS ARE UNFAVOURABLE, THE 'UNIT PRICE' WORK MAY PROCEED.

UNDERGROUND SERVICES

SIGNIFICANT UNDERGROUND SERVICES (NOT INDICATED) EXIST THROUGHOUT THE SITE.

CONTINUITY OF SERVICES

OPERATIONAL LUMINAIRES ARE REQUIRED FOR NIGHTTIME SECURITY. THE CONTRACTOR SHALL SCHEDULE THE WORK TO ENSURE FIXTURES ARE OPERATIONAL AT THE END OF EACH DAY.

UNIT PRICE:

IN THE EVENT THE EXISTING CONDUIT OR BRANCH WIRING ARE NOT SUITABLE FOR REUSE, PROVIDE THE FOLLOWING PER METRE PRICES:

- PROVISION OF TRENCHING PER OESC TABLE 53 INCLUDING EXCAVATION, BACKFILLING, & FINISHINGS.
- PROVISION OF 2-#10 RW90 COPPER WIRE WITH BOND IN 1-27mm EMT AFC CONDUIT.
- PROVISION OF 2-#10 RW90 COPPER WIRE WITH BOND IN 1-35mm RIGID PVC BFG CONDUIT.

REFER TO 'APPENDIX 1 - COMBINED PRICE FORM'.

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1	02.26.19	ISSUE FOR 90% REVIEW	A.W.G.

NO.	DATE	REVISION	BY
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ORIENTATION PROJECT NORTH

JOB NO: 465-1803-0

Correctional Service Canada
Service Correctionnel Canada

MNE ENGINEERING

MNE Engineering Inc.
22 Kewco Place - Box A
Kitchener, Ontario N2C 2G5
(519) 894-9408
www.mneengineering.co

PROJECT: **GRAND VALLEY INSTITUTION FOR WOMEN YARD LIGHTING**

1575 HOMER WATSON BLVD. KITCHENER, ON

CLIENT: **CORRECTIONAL SERVICE OF CANADA**

EXISTING SITE LIGHTING PLAN

SCALE: 1:500

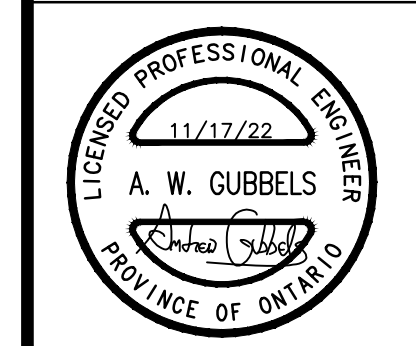
DATE: OCTOBER 2022

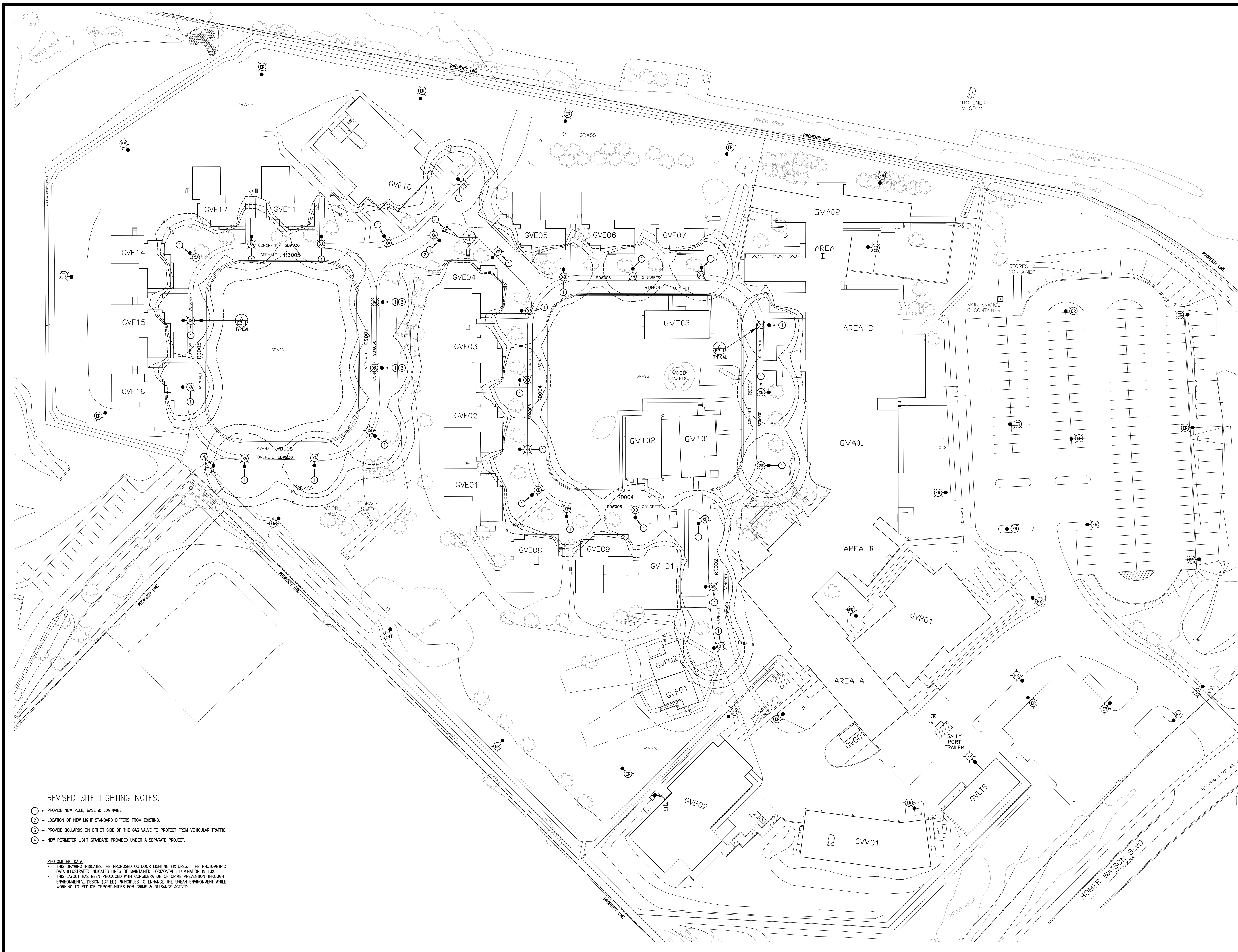
DRAWN: C.C.W.

CHECKED: A.W.G.

DWG NO.: E1.1

SHEET NO.: 1 OF 3





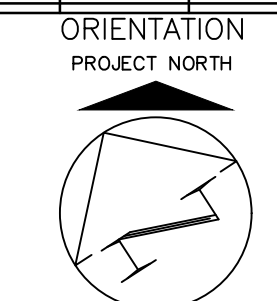
REVISED SITE LIGHTING NOTES:

- ① — PROVIDE NEW POLE, BASE & LUMINAIRE.
- ② — LOCATION OF NEW LIGHT STANDARD DIFFERS FROM EXISTING.
- ③ — PROVIDE BOLLARDS ON EITHER SIDE OF THE GAS VALVE TO PROTECT FROM VEHICULAR TRAFFIC.
- ④ — NEW PERIMETER LIGHT STANDARD PROVIDED UNDER A SEPARATE PROJECT.

PHOTOMETRIC DATA:
 * THIS DRAWING INDICATES THE PROPOSED OUTDOOR LIGHTING FIXTURES. THE PHOTOMETRIC DATA ILLUSTRATED INDICATES LINES OF MAINTAINED HORIZONTAL ILLUMINATION IN LUX.
 * THIS LAYOUT HAS BEEN PRODUCED WITH CONSIDERATION OF CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED) PRINCIPLES TO ENHANCE THE URBAN ENVIRONMENT WHILE WORKING TO REDUCE OPPORTUNITIES FOR CRIME & NUISANCE ACTIVITY.

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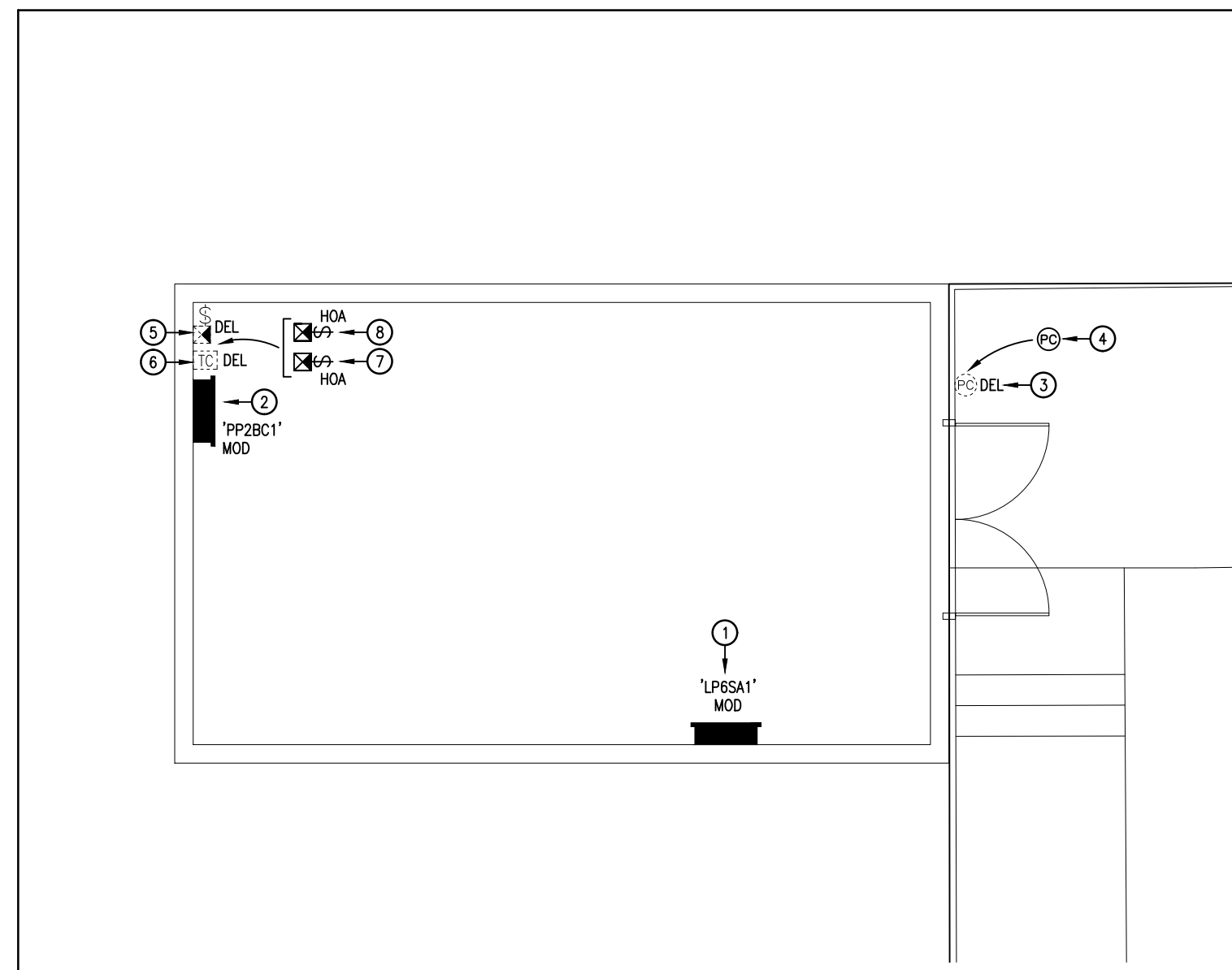
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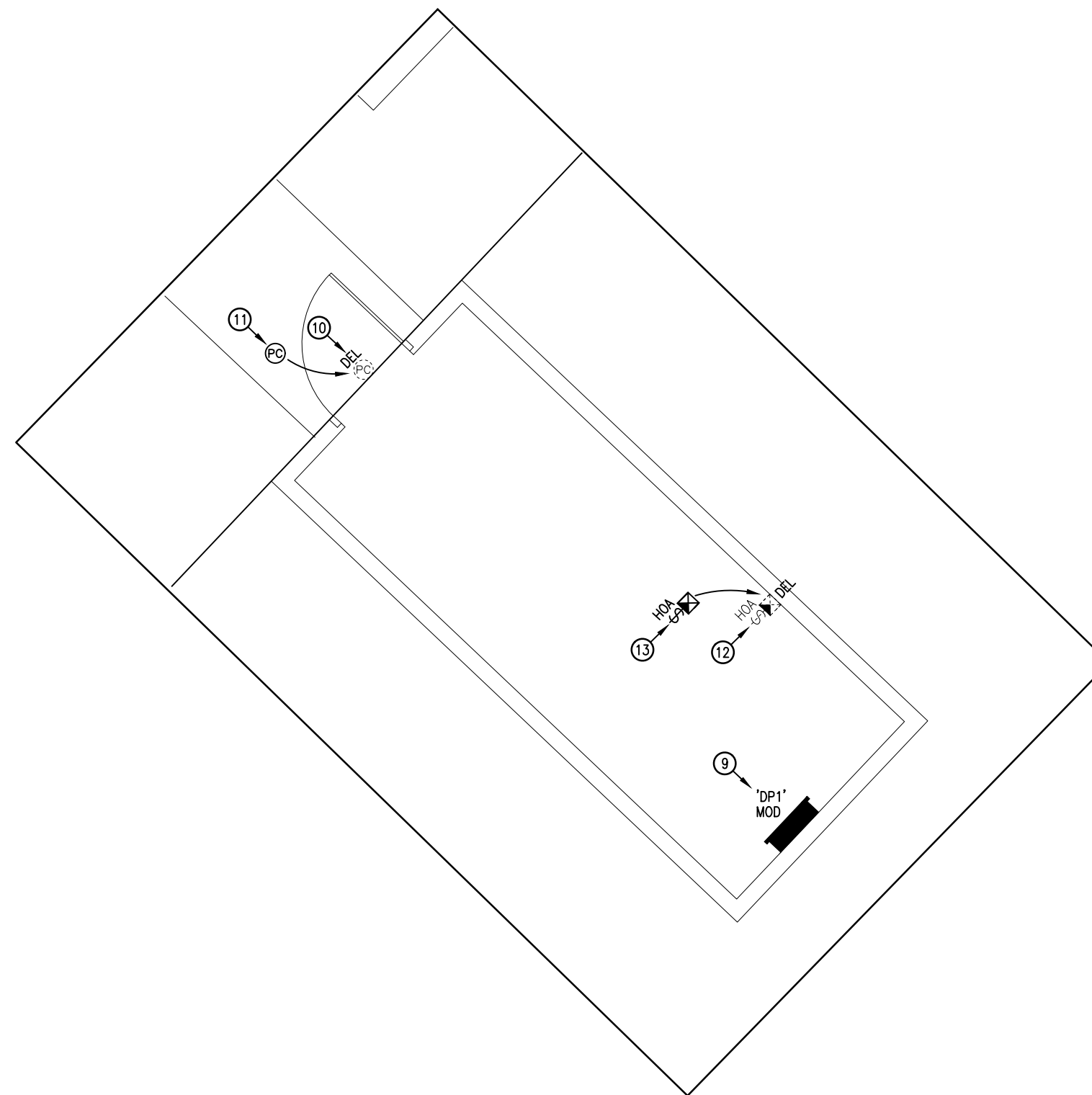
REVISED SITE LIGHTING PLAN

DWG NO.: **E2.1** SHEET NO.: **2 OF 3**

SCALE: 1:500
 DATE: OCTOBER 2022
 DRAWN: C.C.W.
 CHECKED: A.W.G.



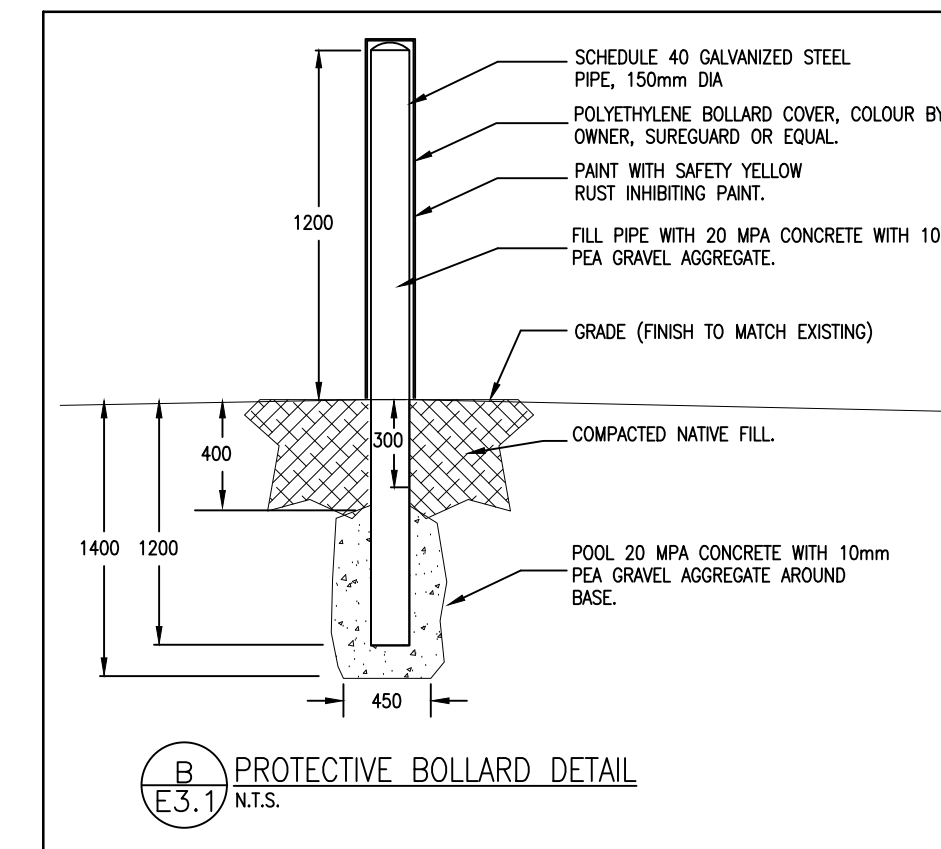
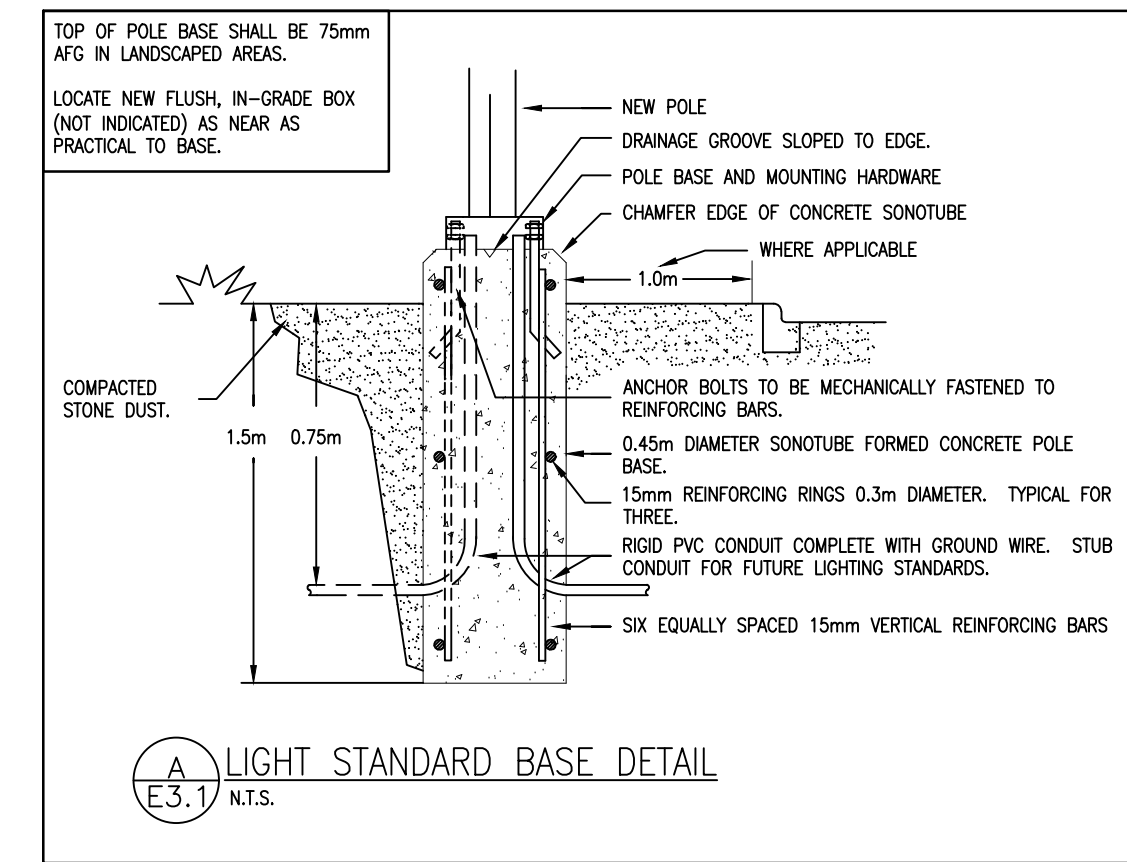
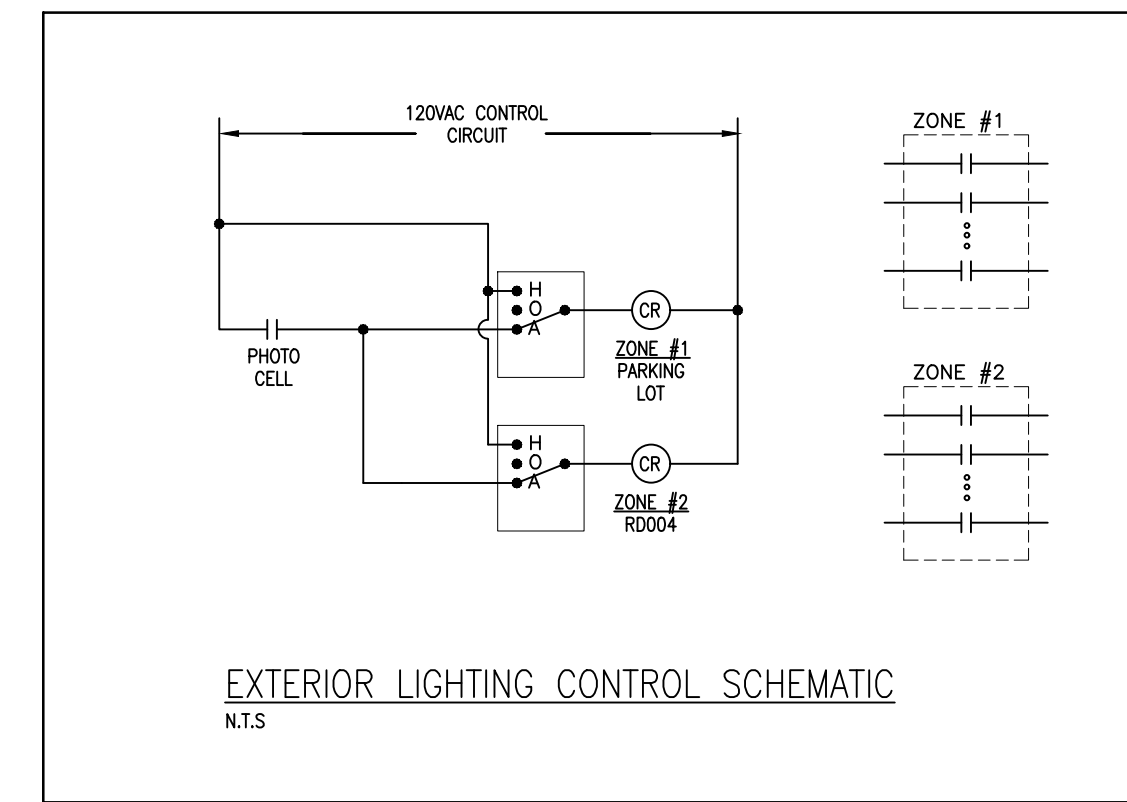
1 PARTIAL GVA01 BUILDING PLAN
SCALE: 1:50



2 PARTIAL GVE10 BUILDING PLAN
SCALE: 1:50

DRAWING NOTES:

- 1 - MODIFY EXISTING 225A, 600/347V, 3-PHASE, 4-WIRE EATON PRL2 DISTRIBUTION PANEL AS FOLLOWS:
 - EXISTING 15A-1P BRANCH BREAKERS SERVE THE LIGHT STANDARDS IN THE PARKING LOT AND AROUND R0004.
 - CONFIRM CONNECTED LOADS ON SITE.
 - PROVIDE UPDATED DIRECTORY.
- 2 - MODIFY EXISTING 225A, 208/120V, 3-PHASE, 4-WIRE EATON PRL1 DISTRIBUTION PANEL AS FOLLOWS:
 - REUSE & REWORK EXISTING 120V LIGHTING CONTROL CIRCUIT.
 - PROVIDE UPDATED DIRECTORY.
- 3 - DELETE EXISTING PHOTOCELL. EXISTING CONTROL WIRING MAY BE REUSED.
- 4 - PROVIDE NEW PHOTOCELL. REFER TO THE "EXTERIOR LIGHTING CONTROL SCHEMATIC".
- 5 - DELETE EXISTING LIGHTING CONTACTOR AND ON/OFF TOGGLE SWITCH THAT CONTROLS THE LIGHT STANDARDS IN THE PARKING LOT AND AROUND R0004.
- 6 - DELETE EXISTING REDUNDANT TIMELOCK.
- 7 - PROVIDE NEW 30A LIGHTING CONTACTOR COMPLETE WITH INTEGRAL HAND/OFF/AUTO SWITCH TO CONTROL THE NEW LIGHT STANDARDS AROUND R0004. QUANTITY OF POLES TO SUIT QUANTITY OF EXISTING CIRCUITS. LABEL AS "EAST YARD LIGHTING". REFER TO THE "EXTERIOR LIGHTING LIGHTING CONTROL SCHEMATIC".
- 8 - PROVIDE NEW 30A LIGHTING CONTACTOR COMPLETE WITH INTEGRAL HAND/OFF/AUTO SWITCH TO CONTROL THE EXISTING LIGHT STANDARDS IN THE PARKING LOT. QUANTITY OF POLES TO SUIT QUANTITY OF EXISTING CIRCUITS. LABEL AS "PARKING LOT LIGHTING". REFER TO THE "EXTERIOR LIGHTING LIGHTING CONTROL SCHEMATIC".
- 9 - MODIFY EXISTING 250A, 208/120V, 3-PHASE, 4-WIRE SIEMENS S1 DISTRIBUTION PANEL AS FOLLOWS:
 - DELETE EXISTING 30A-3P BREAKER THAT SERVES THE EXISTING LIGHT STANDARDS AROUND ROODS AND REPLACE WITH A 20A-3P BREAKER.
 - REUSE & REWORK EXISTING 120V LIGHTING CONTROL CIRCUIT.
 - PROVIDE UPDATED DIRECTORY.
- 10 - DELETE EXISTING PHOTOCELL THAT CONTROLS THE LIGHT STANDARDS AROUND ROODS. EXISTING CONTROL WIRING MAY BE REUSED.
- 11 - PROVIDE NEW PHOTOCELL TO CONTROL THE LIGHTS STANDARDS AROUND ROODS.
- 12 - DELETE EXISTING LIGHTING CONTACTOR & HAND/OFF/AUTO SWITCH.
- 13 - PROVIDE A NEW 30A-3P CONTACTOR AND HAND/OFF/AUTO SWITCH TO CONTROL THE LIGHT STANDARDS AROUND ROODS. LABEL AS "WEST YARD LIGHTING". IN "AUTO" MODE, THE LIGHTING SHALL BE CONTROLLED BY THE PHOTOCELL. THE "ON" AND "OFF" MODES SHALL MANUALLY BYPASS THE PHOTOCELL.



LIGHTING FIXTURE SCHEDULE (*1)							
TYPE	MANUFACTURER	MODEL	LAMPS QUANTITY-TYPE	MOUNTING P - POLE R - RECESSED S - SURFACE SD - SUSPENDED W - WALL	VOLTAGE	NOTES	ALTERNATE MANUFACTURERS
XA	LITHONIA	RADPT LED P4 40K SYM 120 PT4 SF DNAXD	87W 4000K LED	P 3.65m SRS DNAXD	120	*2	• CREE LIGHTING, HUBBELL OUTDOOR LIGHTING, • SIGNIFY (COOPER/EATON/PHILIPS), • RAB DESIGN
XB	LITHONIA	RADPT LED P4 40K SYM 347 PT4 SF DNAXD	86W 4000K LED	P 3.65m SRS DNAXD	347	*2	

* NOTES:
1. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. REFER TO LIGHT STANDARD BASE DETAIL.

ELECTRICAL LEGEND					
USE	SYMBOL	DESCRIPTION	USE	SYMBOL	DESCRIPTION
LIGHTING			RECEPTACLES		
		LINEAR LIGHT FIXTURE 'X'			DUPLEX RECEPTACLE
		CEILING MOUNTED LIGHT FIXTURE 'X'			RECEPTACLE ABOVE COUNTER
		WALL MOUNTED LIGHT FIXTURE 'X'			RECEPTACLE IN KICK SPACE
		POLE MOUNTED LIGHT FIXTURE 'X'			SPLIT RECEPTACLE
		SPOT OR FLOOD LIGHT FIXTURE 'X'			GFI RECEPTACLE
		PROCESS BEACON LIGHT			UPS-BACKED RECEPTACLE
		NIGHT LIGHT FIXTURE			RECEPTACLE, 20A, T-SLOT
		EMERGENCY LIGHT FIXTURE - WALL			TAMPER RESISTANT RECEPTACLE
		EMERGENCY LIGHT FIXTURE - CEILING			2-POLE OR 3-POLE RECEPTACLE
		EMERGENCY BATTERY PACK 'X'			FLOOR/TABLE MOUNTED OUTLET
		EXIT FIXTURE 'X'			CEILING/DECK MOUNTED OUTLET
					RACEWAY POWER OUTLET
SWITCHING & CONTROLS			EQUIPMENT & DISTRIBUTION		
		SWITCH			MOTOR
		3-WAY SWITCH			NON-FUSED DISCONNECT SWITCH
		4-WAY SWITCH			FUSED DISCONNECT SWITCH
		SWITCH POB			MANUAL STARTER
		KEY CONTROLLED SWITCH			COMBINATION STARTER
		OCCUPANCY SENSOR WALL SWITCH			MAGNETIC STARTER
		HAND-OFF-AUTO SWITCH			RELAY/CONTACTOR
		OCCUPANCY/VACANCY SENSOR 'X'			EQUIPMENT IDENTIFIER
		MULTIPLE GANG SWITCHES			DISTRIBUTION PANEL
		DIMMER SWITCH			ELECTRIC BASEBOARD HEATER
		VARIABLE SPEED CONTROLLER			ELECTRIC FAN FORCED HEATER
		TIME SWITCH / TIME CLOCK			ELECTRIC HEATER IDENTIFIER
		PUSH BUTTON SWITCH			CONDUIT ABOVE GRADE
		PHOTO CELL			120V UNDERGROUND WIRING/CONDUIT
		DAYLIGHT SENSOR			347V UNDERGROUND WIRING/CONDUIT
		THERMOSTAT (RA=REVERSE ACTING)			PROTECTIVE GUARD
		MOTION SENSOR			JUNCTION BOX
		EMERGENCY PUSH BUTTON			SERVICE POLE
		POWER DOOR PUSH BUTTON			DIRECT CONNECTION
		POWER DOOR LOCKING DEVICE			BUS RELAY
		CALL STATION			GAS VALVE
INCIDENTALS					
		EXISTING, TO REMAIN UNCHANGED			ABOVE FINISHED GRADE
		EXISTING, TO BE RELOCATED			ABOVE FINISHED FLOOR
		RELOCATED			ABOVE FINISHED CEILING
		EXISTING, TO BE MODIFIED			BELOW FINISHED GRADE
		EXISTING, TO BE DELETED			BELOW FINISHED FLOOR
		WET LOCATION (*CATEGORY 1)			BELOW FINISHED CEILING
		CORROSIVE LOCATION (*CATEGORY 2)			WEATHER PROOF
					FENCE

* CATEGORY DEFINITIONS ARE AS PER SECTION 22 OF THE ONTARIO ELECTRICAL SAFETY CODE.

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DRAWING: PARTIAL BUILDING PLANS, SCHEDULE & LEGEND			
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DWG NO.: E3.1		SHEET NO.: 3 OF 3	