

Addendum No. 02

TO: PLANS AND SPECIFICATIONS FOR STATE OF MISSOURI

Construct Six New Cabins
Echo Bluff State Park
Eminence, MO
Project No: X2208-01

Bid Opening Date: 1:30 PM, Thursday, May 18, 2023 (Changed in Addendum 01)

Bidders are hereby informed that the construction Plans and/or Specifications are modified as follows:

SPECIFICATION CHANGES:

1. Section 07 2119 – Foamed-in-place Insulation
 - a. ADD 2.1.A.9.d as follows:
 - d. Holcim (Gaco) www.holcimbe.com/en
2. Section 07 2500 – Weather Barriers
 - a. ADD 2.2.A.12.b.5 as follows:
 - 5) W.R. Meadows, Air-Shield LMP www.wrmeadows.com/
3. Section 07 4646 – Fiber-Cement Siding
 - a. ADD 2.1.C.4 as follows:
 4. LP Building Solutions www.lpbuildingsolutions.com
4. Section 32 9300 – Plant Materials and Accessories
 - b. REMOVE this section in entirety from the bid set. Owner to provide all planting installation. All aggregate mulch material, edging materials and filler fabric shall be furnished and installed per plans/details.
4. Section 32 9200 – Turf and Grasses:
 - a. ADD paragraph 1.1.A.2 as follows:

Turfgrass Sodding
 - b. ADD paragraph 2.2.A as follows:

Tall Fescue Blend: Grown within 200 miles of the project site. Submit complete grower information including location, seed harvest information, and seed mixture breakdown.
 - c. ADD paragraph 3.3.A-M as follows:

- A. Install sod within 24 hours from time of harvesting
- B. Do not lay sod on frozen or uneven ground.
- C. Lightly moisten topsoil immediately prior to laying sod.
- D. Lay first roll in straight line with subsequent rows parallel and tight with no open joints visible.
- E. Lay sod smooth and do not stretch or overlap.
- F. Stagger lateral joints 12 inches minimum.
- G. Align with adjoining turf areas.
- H. When new sod is placed adjacent to existing sod, cut common edge of existing sod vertically with a sod cutter.
- I. Do not rip or tear sod.
- J. On slopes, begin sod at bottom and progress upwards, laying rows perpendicular to the flow of water.
- K. Stake sod placed on slopes greater than 3:1. Drive stakes at an angle against flow of runoff to ½ inch above sod, and not more than 30 inches apart.
- L. Water sod immediately after laying; as sections are completed, roll entire area.
- M. Thoroughly water to depth sufficient that underside of new sod pad and soil immediately below are thoroughly moist.

5. Section 33 3616 – Septic Tank Effluent Pumping

- a. REMOVE and REPLACE Paragraph 2.2.F. as follows:

F. High-Head Effluent Pumps:

Pump shall be as indicated on the table on Sheet C-503. Pump shall be rated for 13.19 gpm at 96.1 ft of TDH. They should include a 20 foot long extra heavy duty (SO) electrical cord with ground. Pump shall be UL and CSA listed as an effluent pump. Pump shall be provided with a non-prorated five-year warranty.

DRAWING CHANGES:

1. Sheet E-103 – See Attached revised sheet E-103

- a. REVISE keynote 10 and associated equipment location as follows:

PROVIDE A TELEPHONE/DATA 8 PORT PATCH PANEL AND TELEPHONE FIBER DEMARC.

2. Sheet E-104 – See Attached revised sheet E-104

- a. REVISE keynote 9 and associated equipment location as follows:

PROVIDE A TELEPHONE/DATA 8 PORT PATCH PANEL AND TELEPHONE FIBER DEMARC.

3. Sheet E-401 – See Attached revised sheet E-401

- a. REVISE general note A as follows:

UTILITY COMPANY: HOWELL OREGON COOPERATIVE 417-256-2131

TELEPHONE COMPANY: CENTURYLINK 417-255-8221

b. ADD general note B as follows:

B. PROVIDE PULL BOXES FLUSH WITH EVERY 300' ALONG TELEPHONE FIBER CONDUIT. PROVIDE A PEDESTAL EVERY 900' ALONG TELEPHONE FIBER. THE PEDESTAL SHALL AS A PULL BOX. PROVIDE ADDITIONAL PEDESTALS AS NECESSARY TO ACCOMMODATE CABLE LENGTHS. SPLICING OF FIBER OPTIC CABLES WILL NOT BE ACCEPTABLE.

c. ADD general note C as follows:

C. ALL PEDESTAL & DEMARCATION LOCATIONS MUST ACCOMODATE FIBER TERMINATIONS TO BE MOUNTED. LOCKED AND MAINTAINED BY STATE OF MISSOURI (SOM) STAFF.

d. REVISE keynote 3 as follows:

PROVIDE (6) 2-STRAND MULTI-MODE FIBER OPTIC CABLES, RATED FOR OUTDOOR WET LOCATIONS IN 4" C FROM EXISTING MAIN FIBER CONNECTION IN LODGE. FIBER OPTIC CABLE TO TERMINATE ON FIBER DEMARC IN MECHANICAL ROOM FOR EACH CABIN.

e. REVISE Electrical Site Plan to add handhole sizes.

4. Sheet E-402 – See Attached revised sheet E-402

a. ADD general note A as follows:

A. PROVIDE PULL BOXES FLUSH WITH EVERY 300' ALONG TELEPHONE FIBER CONDUIT. PROVIDE A PEDESTAL EVERY 900' ALONG TELEPHONE FIBER. THE PEDESTAL SHALL AS A PULL BOX. PROVIDE ADDITIONAL PEDESTALS AS NECESSARY TO ACCOMMODATE CABLE LENGTHS. SPLICING OF FIBER OPTIC CABLES WILL NOT BE ACCEPTABLE.

b. ADD general note B as follows:

B. ALL PEDESTAL & DEMARCATION LOCATIONS MUST ACCOMODATE FIBER TERMINATIONS TO BE MOUNTED. LOCKED AND MAINTAINED BY STATE OF MISSOURI (SOM) STAFF.

5. Sheet E-603 – See Attached revised sheet E-603

a. REVISE panelboard DPB.

GENERAL:

1. The following questions were received:

- a. "I notice that in detail 5 on page L-501 it calls for Alabama Sunset Decorative Gravel to a depth of 3" but in the specifications on page 32 9300-0 it calls for cobble landscape mulch that has a size range of 30% 12-18", 50% 6-10", 20% 3-4". Can you confirm that this is the correct size and type of material for the rock mulch areas around each cabin?"
 - i. Spec section 32 9300 removed from bid set. All aggregate mulch materials, edging materials and filter fabric shall be furnished and installed per plans/details.
- b. "Is there a spot on the property that we could dump clean fill? Also is there a spot that we can store the onsite topsoil for reuse?"
 - i. Yes, there is a location on site to locate clean fill, however, it will need to be piled/mounded up. Yes, there is a location onsite to store topsoil for reuse. To be identified at the pre-construction meeting.
- c. "Do we need to rock the existing bioswale? I see that there is bioswale rock in the specifications, but it is not called out in the plans."
 - i. Rock is only to be provided where called out on the plans. See C104.
- d. "In the plans the only stormwater drainage pipe I see is the 18" pipe on note 11 page C-103. Is that the only stormwater utility we need to install? It looks like there is already pipe installed for the two walkways on the west side of the site in the existing bioswale. The specifications give details about manholes, catch basins and stormwater inlets in section 334100 but the only manholes I see called out in the plans in the sanitary sewer."
 - i. Yes, the only proposed pipe on the plans to be installed for storm sewer.
- e. "Is the water main hooked to the city of Eminence local water system?"
 - i. No, Echo Bluff State Park is fed by a series of wells on-site.
- f. "Would steel jacketed or another type of MC cable be considered for concealed branch circuits due to these structures being wood framed for a more efficient installation vs the specified 3/4" minimum conduit?"
 - i. No, MC cable does not ensure future modifications are able to be made to the facility.
- g. "Would fire alarm MC cable be acceptable for the fire alarm circuits vs the specified 3/4" minimum conduit?"
 - i. No, MC cable does not ensure future modifications are able to be made to the facility.
- h. "Please provide specifications and responsibility matrix for the communication, fiber and telephone (Div 27) equipment, WAP and horizontal wiring?"
 - i. Communication equipment/devices are shown for infrastructure only, as noted on symbols sheet. Fiber/telephone is to be coordinated with CenturyLink, per addendum.
- i. "MDP schedule calls for a Nema 1 enclosure rating. Should this be revised to Nema 3R for outdoor use?"

- i. Per specification section 262416 – PANELBOARDS, section 2.2.1.1:
The outdoor panelboards, including DPB (the MDP on this project)
should have a NEMA 250 Type 3R enclosure.

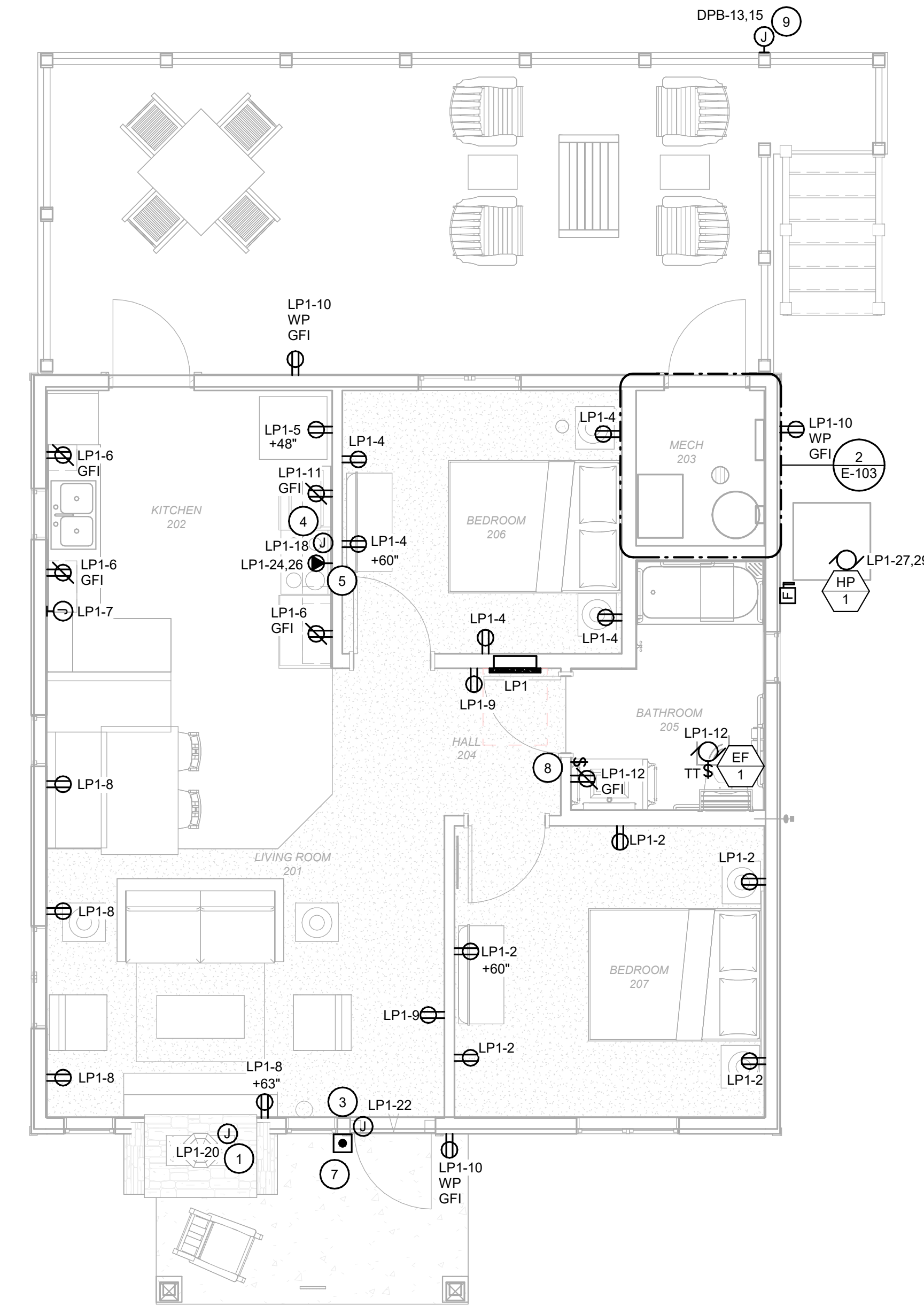
ATTACHMENTS:

1. E-103 Addendum 02 Revision (1 Page)
2. E-104 Addendum 02 Revision (1 Page)
3. E-401 Addendum 02 Revision (1 Page)
4. E-402 Addendum 02 Revision (1 Page)
5. E-603 Addendum 02 Revision (1 Page)

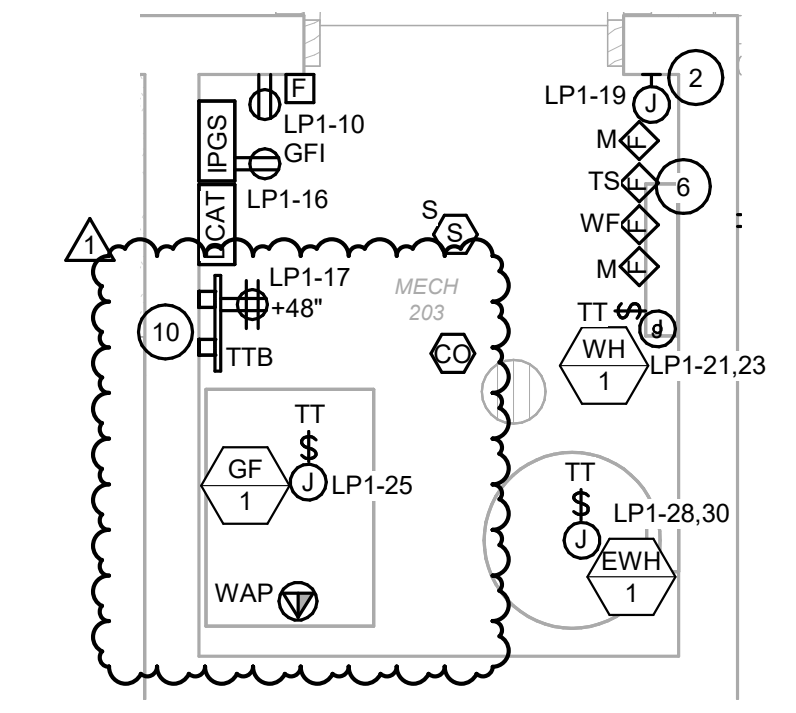
END OF ADDENDUM 02

01/10/2023 11:46:04 AM

1 FLOOR PLAN - POWER - TWO BEDROOM CABIN
SCALE: 1/4" = 1'-0"



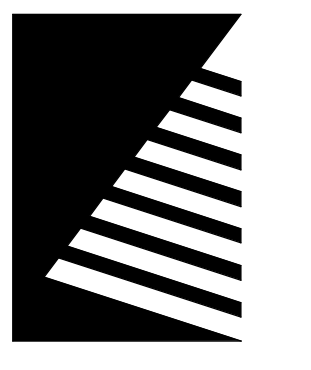
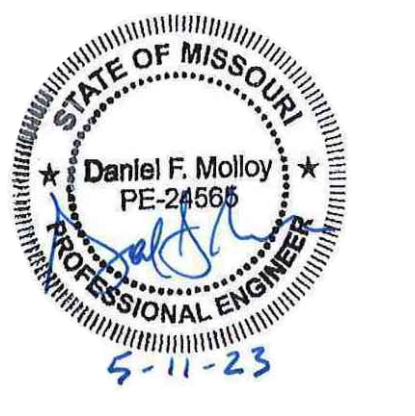
2 ENLARGED PLAN
SCALE: 1/2" = 1'-0"



GENERAL NOTES

- A. NOT USED
- KEYNOTES #**
- 1 PROVIDE CONNECTION TO GAS FIRED FIREPLACE INSERT. COORDINATE EXACT LOCATION AND CONNECTION TYPE WITH ARCHITECTURAL TRADE AND VENDOR.
 - 2 PROVIDE A DEDICATED CIRCUIT FOR WATER SUPPLY HEAT TRACE LOCATED IN CRAWL SPACE. COORDINATE EXACT LOCATION WITH PLUMBING TRADE.
 - 3 PROVIDE CONNECTION TO ACCESS CONTROL SYSTEM CARD READER. COORDINATE EXACT REQUIREMENTS WITH OWNER'S VENDOR.
 - 4 PROVIDE CONNECTION TO OVERHEAD RANGE HOOD. COORDINATE EXACT LOCATION AND CONNECTION TYPE WITH ARCHITECTURAL TRADE AND VENDOR.
 - 5 PROVIDE A NEMA 14-50 RECEPTACLE FOR ELECTRIC RANGE.
 - 6 PROVIDE A MONITOR MODULES FOR SPRINKLER RISER.
 - 7 PROVIDE A WIRELESS DOORBELL NOTIFICATION SYSTEM. CENTRALALERT MODEL CA-360 SHALL BE CONSIDERED AS BASIS OF DESIGN. THE SYSTEM SHALL INCLUDE: 1 ALARM CLOCK MASTER UNITS WITH INTEGRATED FLASHER AND AUDIBLE ALARM. RECHARGABLE BATTERIES FOR ALL MASTER UNITS. 1 WIRELESS DOORBELL, AND 1 BED SHAKER UNIT. PROVIDE CENTRAL ALERT MODEL CA-RX AS SUB-MASTER TO BE PLACED ON LIVING ROOM END TABLE. LOCATE MASTER UNIT ON ACCESSIBLE BEDROOM NIGHT STAND. KROWN KA1000 AND CLARITY AL10 SHALL BE CONSIDERED APPROVED MODELS WHEN PROVIDED WITH PERIPHERAL DEVICES. AS REQUIRED FOR BASIS OF DESIGN. CONTRACTOR SHALL SUBMIT PRODUCT DATA SHEETS.
 - 8 PROVIDE SWITCH FOR EXHAUST FAN CONTROL.
 - 9 PROVIDE CONNECTION TO LIFT STATION CONTROL PANEL, LSCP1. COORDINATE EXACT LOCATION WITH CIVIL TRADE. PROVIDE CONDUIT AND WIRE FROM LIFT STATION CONTROL PANEL TO PUMPS AS REQUIRED BY VENDOR. SEE SHEET ES1.1 FOR MORE INFORMATION.
 - 10 PROVIDE A TELEPHONE/DATA 8 PORT PATCH PANEL AND TELEPHONE FIBER DEMARC.

STATE OF MISSOURI
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AND CONSTRUCTION

DEPARTMENT OF NATURAL
RESOURCES DIVISION OF STATE
PARKS

**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:
1 05/11/2023 ADD 02

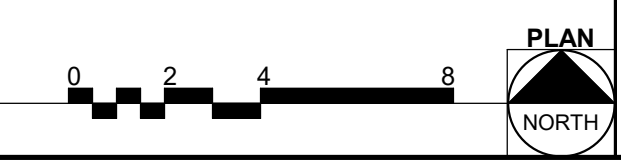
DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

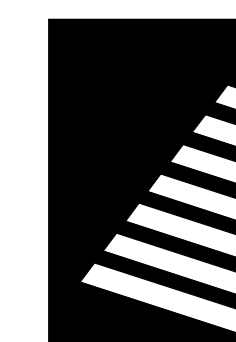
SHEET TITLE:
**FLOOR PLAN -
POWER - TWO
BEDROOM CABIN**

SHEET NUMBER:

E-103

SHEET 66 of 75
ISSUE DATE: 03/02/2023





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ECHO BLUFF STATE PARK CONSTRUCT SIX NEW CABINS

Eminence, Missouri

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

1 05/11/2023 ADD 02

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:

FLOOR PLAN - POWER - FOUR BEDROOM CABIN

SHEET NUMBER:

E-104

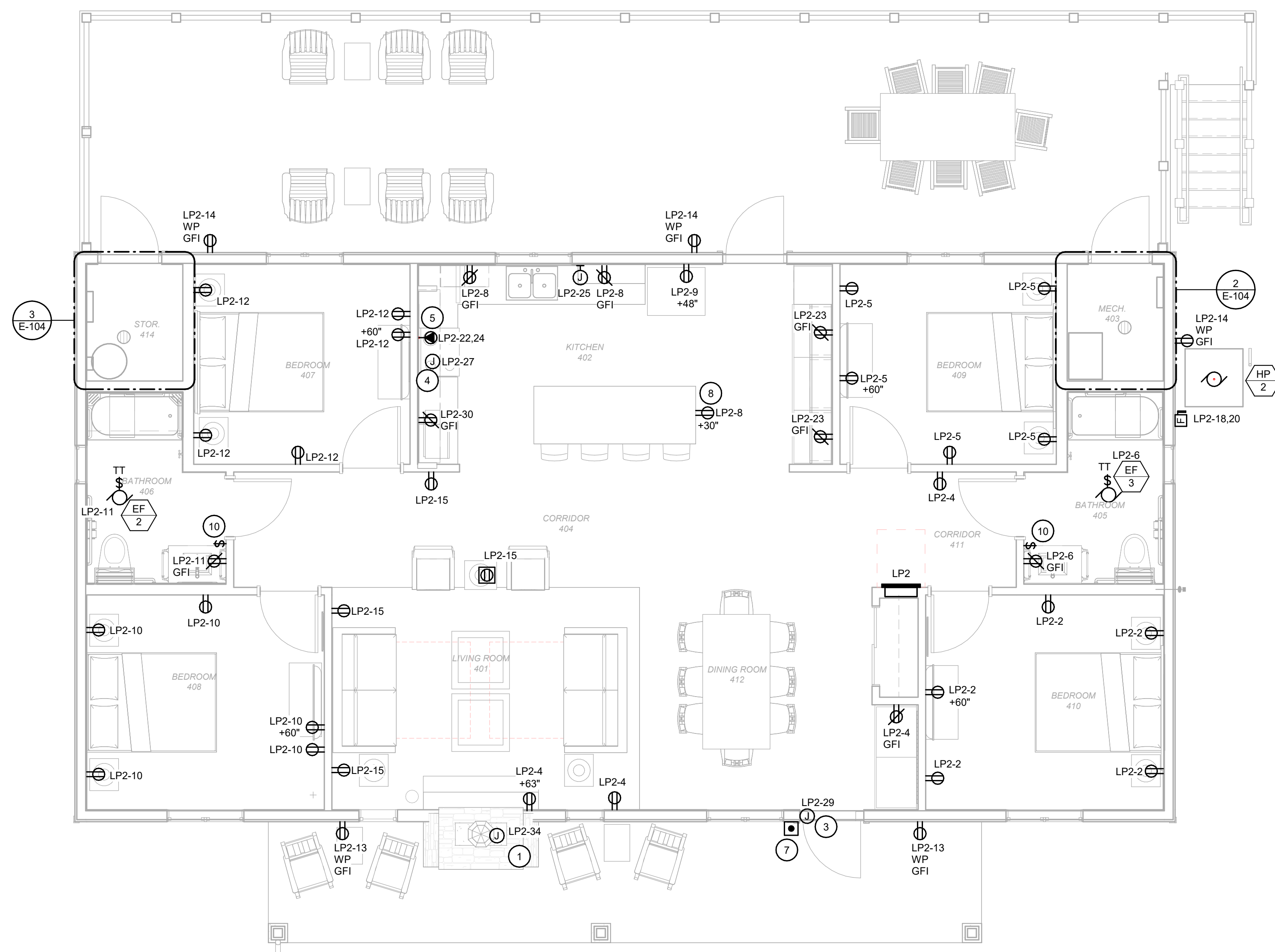
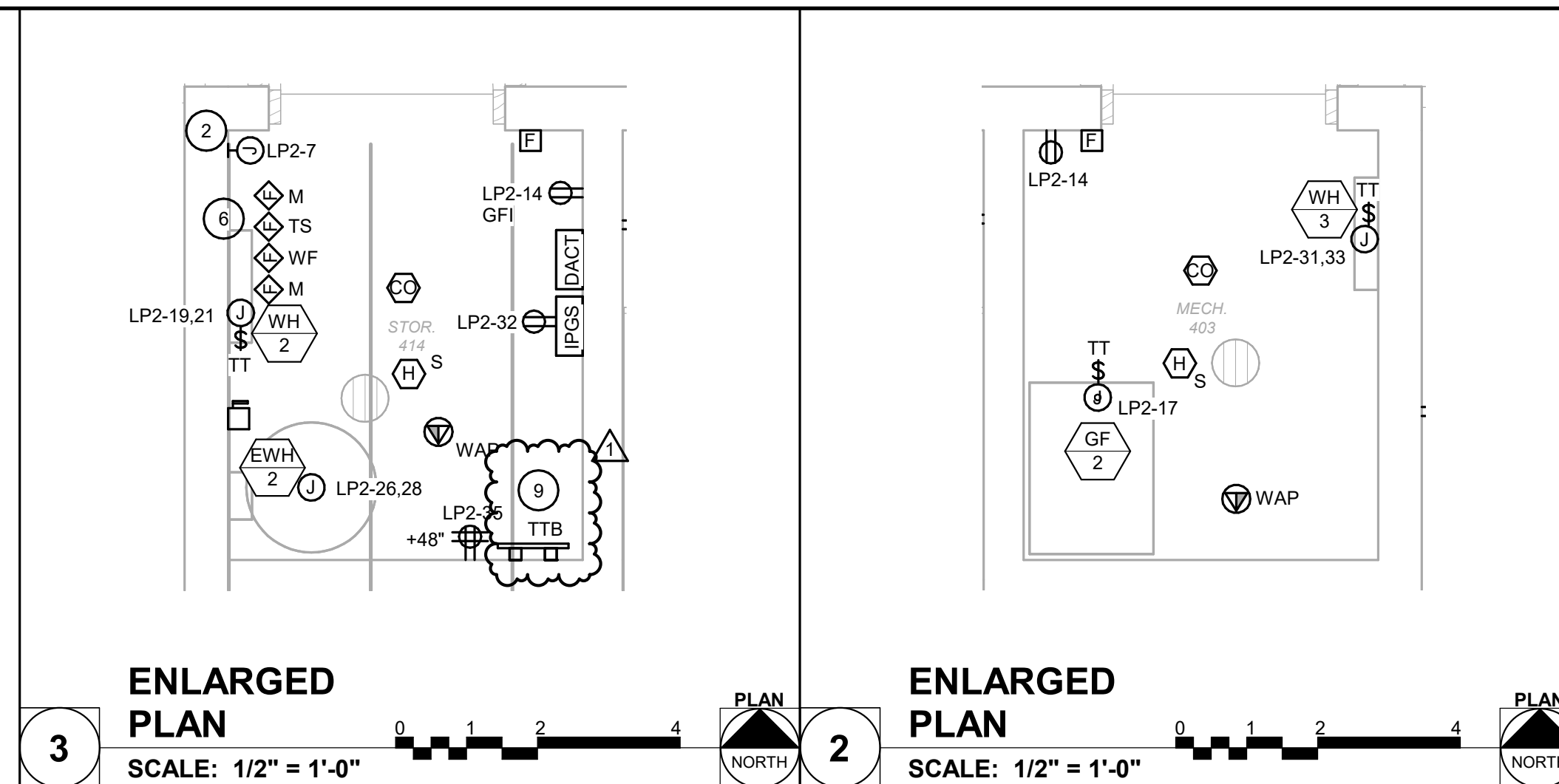
SHEET 67 of 75
ISSUE DATE: 03/02/2023

GENERAL NOTES

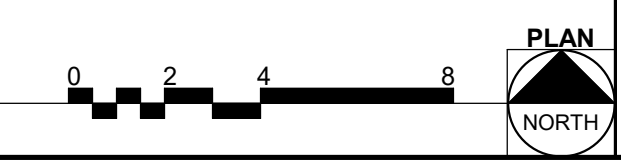
A. NOT USED

KEYNOTES

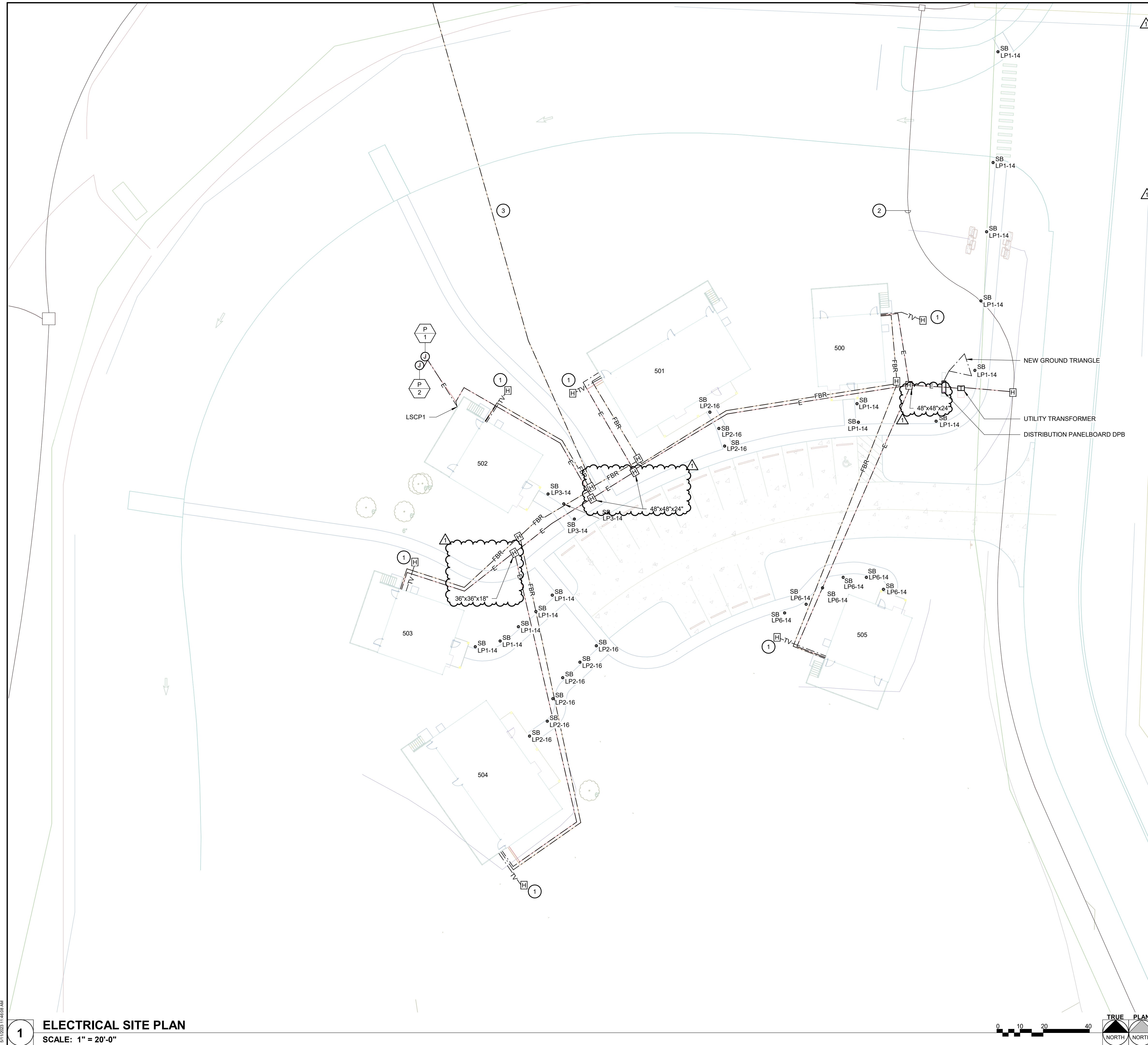
- 1 PROVIDE CONNECTION TO GAS FIRED FIREPLACE INSERT. COORDINATE EXACT LOCATION AND CONNECTION TYPE WITH ARCHITECTURAL TRADE AND VENDOR.
- 2 PROVIDE A DEDICATED CIRCUIT FOR WATER SUPPLY HEAT TRACE LOCATED IN CRAWL SPACE. COORDINATE EXACT LOCATION WITH PLUMBING TRADE.
- 3 PROVIDE CONNECTION TO ACCESS CONTROL SYSTEM CARD READER. COORDINATE EXACT REQUIREMENTS WITH OWNER'S VENDOR.
- 4 PROVIDE A JUNCTION BOX FOR OVERHEAD RANGE HOOD.
- 5 PROVIDE A NEMA 14-50 RECEPTACLE FOR ELECTRICAL RANGE.
- 6 PROVIDE MONITOR MODULES FOR SPRINKLER RISER.
- 7 PROVIDE A WIRELESS DOORBELL NOTIFICATION SYSTEM. CENTRALALERT MODEL CA-360 SHALL BE CONSIDERED AS BASIS OF DESIGN. THE SYSTEM SHALL INCLUDE: 1 ALARM CLOCK MASTER UNITS WITH INTEGRATED FLASHER AND AUDIBLE ALARM, RECHARGABLE BATTERIES FOR ALL MASTER UNITS, 1 WIRELESS DOORBELL, AND 1 BED SHAKER UNIT. PROVIDE CENTRAL ALERT MODEL CA-RX AS SUB-MASTER TO BE PLACED ON LIVING ROOM END TABLE. LOCATE MASTER UNIT ON ACCESSIBLE BEDROOM NIGHT STAND. KROWN KA1000 AND CLARITY AL10 SHALL BE CONSIDERED APPROVED MODELS WHEN PROVIDED WITH PERIPHERAL DEVICES AS REQUIRED FOR BASIS OF DESIGN. CONTRACTOR SHALL SUBMIT PRODUCT DATA SHEETS.
- 8 PROVIDE DUPLEX RECEPTACLE MOUNTED HORIZONTALLY.
- 9 PROVIDE A TELEPHONE/DATA 8 PORT PATCH PANEL AND TELEPHONE FIBER DEMARC.
- 10 PROVIDE SWITCH FOR EXHAUST FAN CONTROL.



1 FLOOR PLAN - POWER - FOUR BEDROOM CABIN
SCALE: 1/4" = 1'-0"



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GENERAL NOTES

A. UTILITY COMPANY: HOWELL OREGON COOPERATIVE 417-256-2131
TELEPHONE COMPANY: CENTURYLINK 417-255-8221

B. PROVIDE PULL BOXES FLUSH WITH EVERY 300' ALONG TELEPHONE FIBER CONDUIT. PROVIDE A PEDESTAL EVERY 900' ALONG TELEPHONE FIBER. THE PEDESTAL SHALL AS A PULL BOX. PROVIDE ADDITIONAL PEDESTALS AS NECESSARY TO ACCOMMODATE CABLE LENGTHS. SPLICING OF FIBER OPTIC CABLES WILL NOT BE ACCEPTABLE.

C. ALL PEDESTAL & DEMARCATION LOCATIONS MUST ACCOMMODATE FIBER TERMINATIONS TO BE MOUNTED, LOCKED AND MAINTAINED BY STATE OF MISSOURI (SOM) STAFF.

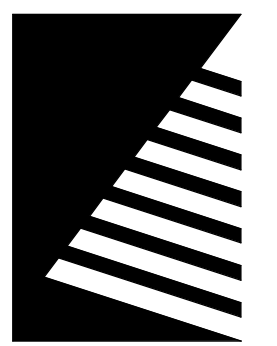
KEYNOTES #

1 APPROXIMATE LOCATION OF SATELLITE DISH. COORDINATE EXACT LOCATION WITH TV SERVICE PROVIDER AND CIVIL. PROVIDE A 2" RGS CONDUIT FROM SATELLITE DISH (MOUNTED ON A POLE) GOING TO EXTERIOR 4"x4" JUNCTION BOX ON CABIN.

2 PRIMARY ELECTRICAL CONDUCTORS AND CONDUIT BY UTILITY. CONNECT TO EXISTING PRIMARY CONDUCTORS IN THIS AREA. COORDINATE EXACT LOCATIONS AND CONNECTIONS WITH UTILITY COMPANY.

3 PROVIDE (6) 2-STRAND MULTI-MODE FIBER OPTIC CABLES, RATED FOR OUTDOOR WET LOCATIONS IN 4" C FROM EXISTING MAIN FIBER CONNECTION IN LODGE. FIBER OPTIC CABLE TO TERMINATE ON FIBER DEMARC IN MECHANICAL ROOM FOR EACH CABIN.

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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #: X2208-01
SITE #: 5235
FACILITY #: 7815230517
DATE: DESCRIPTION:
1 05/11/2023 ADD 02

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:
**ELECTRICAL SITE
PLAN**

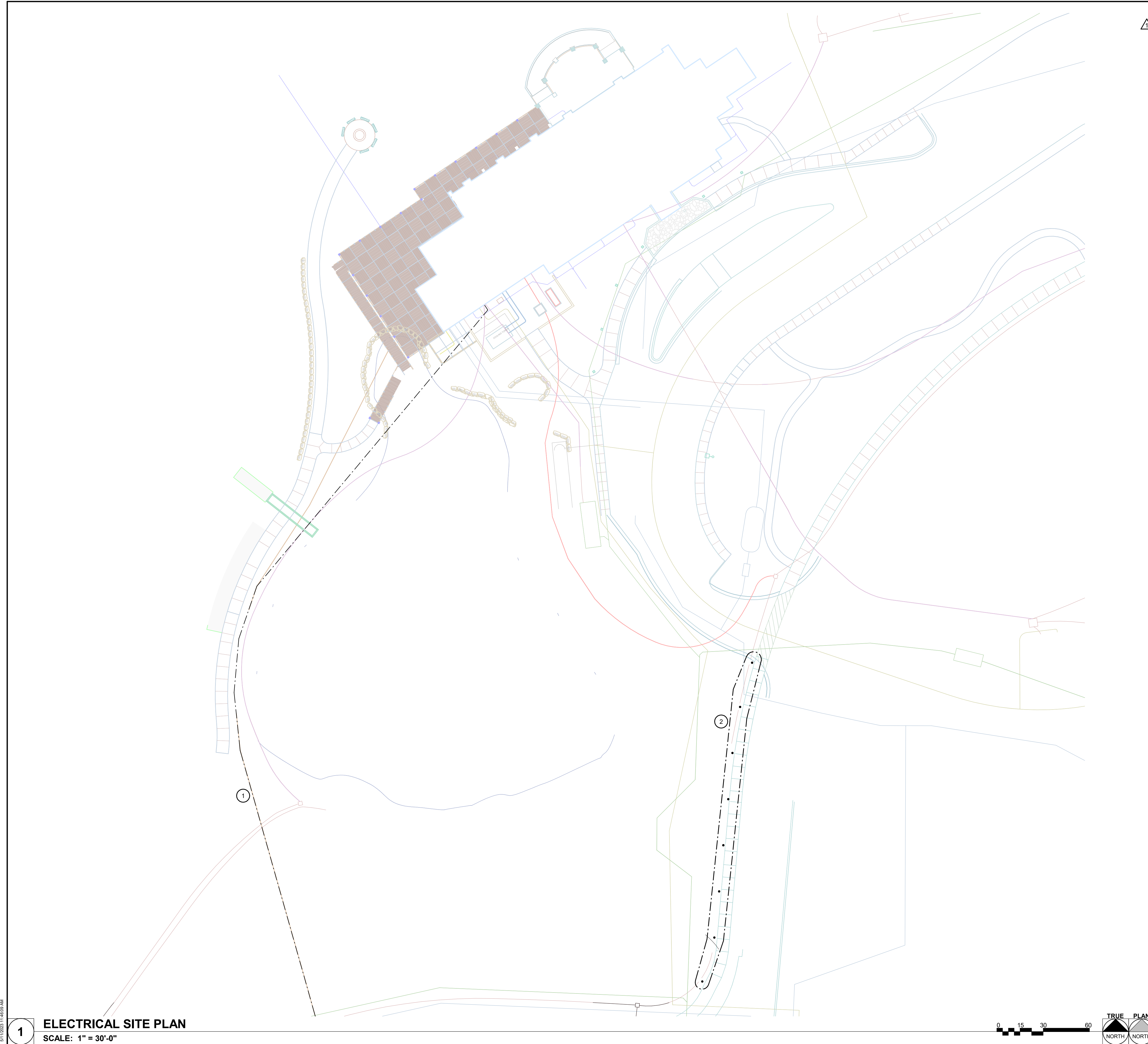
SHEET NUMBER:
E-401

SHEET 70 of 75
ISSUE DATE: 03/02/2023

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1 ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"





GENERAL NOTES

A. PROVIDE PULL BOXES FLUSH WITH EVERY 300' ALONG TELEPHONE FIBER CONDUIT. PROVIDE A PEDESTAL EVERY 900' ALONG TELEPHONE FIBER. THE PEDESTAL SHALL AS A PULL BOX. PROVIDE ADDITIONAL PEDESTALS AS NECESSARY TO ACCOMMODATE CABLE LENGTHS. SPLICING OF FIBER OPTIC CABLES WILL NOT BE ACCEPTABLE.

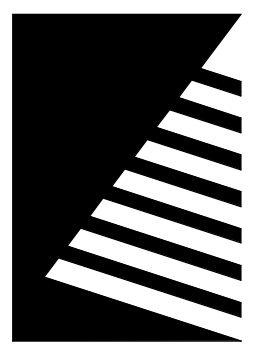
B. ALL PEDESTAL & DEMARCATION LOCATIONS MUST ACCOMMODATE FIBER TERMINATIONS TO BE MOUNTED, LOCKED AND MAINTAINED BY STATE OF MISSOURI (SOM) STAFF.

KEYNOTES #

1 PROVIDE (6) 2-STRAND MULTI-MODE FIBER OPTIC CABLES, RATED FOR OUTDOOR WET LOCATIONS IN 4" FROM EXISTING MAIN FIBER CONNECTION IN LODGE WITH ONE CABLE DEDICATED TO EACH NEW CABIN SITE SHOWN ON SHEET E-401.

2 ALL FIXTURES IN THIS AREA ARE FIXTURE TYPE SB, CIRCUITED TO LP1-14. SPACING FOR THESE FIXTURES IS 30".

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**ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS**

Eminence, Missouri

PROJECT #.:	X2208-01
SITE #.:	5235
FACILITY #.:	7815230517
# DATE:	DESCRIPTION:
1	05/11/2023 ADD 02

DRAWN BY: KES
CHECKED BY: DFM
DESIGNED BY: TLA

SHEET TITLE:
**ELECTRICAL SITE
PLAN**

SHEET NUMBER:
E-402

SHEET 71 of 75
ISSUE DATE: 03/02/2023

05/11/2023 11:46:04 AM

1 ELECTRICAL SITE PLAN
SCALE: 1" = 30'-0"



PANELBOARD DPB													
VOLTAGE:		240/120V		CONNECTED LOAD PER PHASE				ISOLATED GROUND BUS (Y/N):				N	
PHASE/WIRE:		1Ø / 3W		PHASE				BUSSING:				SEE SPEC	
RATED AMPERAGE:		1200 A		MOUNTING:				SURFACE					
MAIN:		1200 A MCB		MCB GROUND FAULT PROTECTION (Y/N):				N					
SCC RATING (SYM):		42,000		MCB SHUNT TRIP (Y/N):				N					
				MCB 100% RATED (Y/N):				N					
CKT	IDENTIFICATION	TYPE (*)	BKR SIZE	POLES	A	B	POLES	BKR SIZE	TYPE (*)	IDENTIFICATION	CKT		
1	PANEL LP1 (2 BR)		225 A	2	18668	28575				PANEL LP2 (4 BR)	2		
3						21820	23885				4		
5	PANEL LP3 (2 BR)		225 A	2	16292	16292				PANEL LP4 (2 BR)	6		
7						19420	19420				8		
9	PANEL LP5 (4 BR)		300 A	2	28575	16292				PANEL LP6 (2 BR)	10		
11						22695	19420				12		
13	PANEL LSCP1		20 A	2	1500						14		
15						1500					16		
17											18		
19											20		
Load Classification		Connected Load		Demand Factor		Demand Load		PANEL TOTALS					
Motor		1560 VA		108.33%		1690 VA		TOTAL CONNECTED LOAD: 254354 VA					
Lighting - Continuous		3478 VA		125.00%		4348 VA		TOTAL DEMAND: 248859 VA					
Receptacle		14580 VA		84.29%		12290 VA		TOTAL CONNECTED CURRENT: 1060 A					
Appliance - Dwelling Unit		29300 VA		75.00%		21975 VA		TOTAL DEMAND CURRENT: 1037 A					
Other Continuous Load		12480 VA		125.00%		15600 VA							
Other Non-Continuous Load		31550 VA		100.00%		31550 VA							

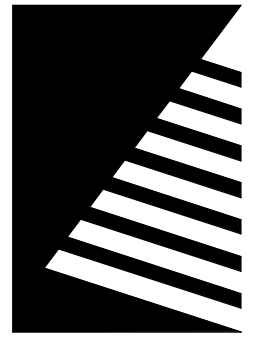
NOTES:
 1. ALL BREAKERS ARE STANDARD UNLESS OTHERWISE NOTED
 2. (*) NUMBER INDICATES BREAKER TYPE: 1 = AFCI, 2 = CLASS A 5mA GFCL, 3 = 30mA GFPE, 4 = SHUNT TRIP ACTIVATED, 5 = PANELBOARD FEEDER SERVING UNIT SHALL BE LOCKABLE USING A PADLOCK, IN ACCORDANCE WITH OSHA LOCK-OUT-TAG RULES, 6 = LSI, 7 = LSIG.

PANELBOARD LP1 (TYPICAL FOR CABINS 1, 3, 4 & 6)													
VOLTAGE:		240/120V		CONNECTED LOAD PER PHASE				ISOLATED GROUND BUS (Y/N):				N	
PHASE/WIRE:		1Ø / 3W		PHASE				BUSSING:				SEE SPEC	
RATED AMPERAGE:		225 A		MOUNTING:				RECESSED					
MAIN:		225 A MCB		MCB GROUND FAULT PROTECTION (Y/N):				N					
SCC RATING (SYM):		22,000		MCB SHUNT TRIP (Y/N):				N					
				MCB 100% RATED (Y/N):				N					
CKT	IDENTIFICATION	TYPE (*)	BKR SIZE	POLES	A	B	POLES	BKR SIZE	TYPE (*)	IDENTIFICATION	CKT		
1	LTG 202,203,205,206,EXTERIOR		20 A	1	551	900				RCPT - RM 207	2		
3	LTG 201,204,207		20 A	1		725	900			RCPT - RM 206	4		
5	REFRIGERATOR		20 A	1	1000	540				RCPT - RM 202	6		
7	DISHWASHER		20 A	1		2200	720			RCPT - RM 201	8		
9	RCPT - RM 201,204 EXHAUST FAN		20 A	1	360	720				RCPT - RM 203, EXTERIOR	10		
11	MICROWAVE		20 A	1		1500	700			RCPT - RM 206, EXHAUST FAN	12		
13	SPARE		20 A	1	0	22				LTG EXTERIOR PATH	14		
15	SPARE		20 A	1		0	1200			FIRE ALARM PANEL	16		
17	PATCH PANEL		20 A	1	500	200				RANGE HOOD	18		
19	HEAT TRACE		30 A	1		500	200			FIREPLACE	20		
21					2400	200				ACCESS CONTROL	22		
23	ELECTRIC WALL HEATER (WH1)		25 A	2		2400	4800				24		
25	GAS FURNACE (GF1)		20 A	1	500	4800				RANGE	26		
27	HEAT PUMP CONDENSING UNIT (HP1)		40 A	2		3335	2640				28		
29			20 A	1	3335	2640				ELECTRIC WATER HEATER (EWH1)	30		
31	SPARE		20 A	1		0	0			SPARE	32		
33	SPARE		20 A	1	0	0				SPARE	34		
35	SPARE		20 A	1	0	0				SPARE	36		
37	SPARE		20 A	1						SPARE	38		
39	SPARE		20 A	1						SPARE	40		
41	SPARE		20 A	1						SPARE	42		
Load Classification		Connected Load		Demand Factor		Demand Load		PANEL TOTALS					
Motor		520 VA		125.00%		650 VA		TOTAL CONNECTED LOAD: 40488 VA					
Lighting - Continuous		1298 VA		125.00%		1623 VA		TOTAL DEMAND: 38938 VA					
Receptacle		4820 VA		100.00%		4820 VA		TOTAL CONNECTED CURRENT: 169 A					
Appliance - Dwelling Unit		14500 VA		75.00%		10875 VA		TOTAL DEMAND CURRENT: 162 A					
Other Continuous Load		6480 VA		125.00%		8100 VA							
Other Non-Continuous Load		12870 VA		100.00%		12870 VA							

NOTES:
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 2. (*) NUMBER INDICATES BREAKER TYPE: 1 = AFCI, 2 = CLASS A 5mA GFCL, 3 = 30mA GFPE, 4 = SHUNT TRIP ACTIVATED, 5 = PANELBOARD FEEDER SERVING UNIT SHALL BE LOCKABLE USING A PADLOCK, IN ACCORDANCE WITH OSHA LOCK-OUT-TAG RULES, 6 = LSI, 7 = LSIG.

PANELBOARD LP2 (TYPICAL FOR CABINS 2 & 5)													
VOLTAGE:		240/120V		CONNECTED LOAD PER PHASE				ISOLATED GROUND BUS (Y/N):				N	
PHASE/WIRE:		1Ø / 3W		PHASE				BUSSING:				SEE SPEC	
RATED AMPERAGE:		400 A		MOUNTING:				RECESSED					
MAIN:		300 A MCB		MCB GROUND FAULT PROTECTION (Y/N):				N					
SCC RATING (SYM):		22,000		MCB SHUNT TRIP (Y/N):				N					
				MCB 100% RATED (Y/N):				N					
CKT	IDENTIFICATION	TYPE (*)	BKR SIZE	POLES	A	B	POLES	BKR SIZE	TYPE (*)	IDENTIFICATION	CKT		
1	LTG-401,403,405,409,410,412,EXT		20 A	1	1375	900				RCPT - RM 410	2		
3	LTG-402,404,406,407,408,411,412		20 A	1		793	720			RCPT - RM 401,411,412	4		
5	RCPT - RM 409		20 A	1	900	700				RCPT - RM 405, EXHAUST FAN	6		
7	HEAT TRACE		30 A	1		500	540			RCPT - RM 402	8		
9	REFRIGERATOR		20 A	1	1000	900				RCPT - RM 408	10		
11	RCPT - RM 406, EXHAUST FAN		20 A	1		700	900			RCPT - RM 407	12		
13	RCPT - EXTERIOR		20 A	1	360	900				RCPT - RM 403, EXTERIOR	14		
15	RCPT - RM 401,404		20 A	1		720	12			LTG EXTERIOR PATH	16		
17	GAS FURNACE (GF1)		20 A	1	1000	3840				HEAT PUMP CONDENSING UNIT (HP2)	18		
19						2400	3840				20		
21	ELECTRIC WALL HEATER (WH2)		25 A	2	2400	4800				RANGE	22		
23	RCPT - RM 402		20 A	1		360	4800				24		
25	DISHWASHER		20 A	1	2200	3000					26		
27	RANGE HOOD		20 A	1		500	3000				28		
29	ACCESS CONTROL		20 A	1	200	1500				MICROWAVE	30		
31	ELECTRIC WALL HEATER (WH3)		25 A	2		2400	1200			FIRE ALARM PANEL	32		
33			20 A	1	2400	200				FIREPLACE	34		
35	PATCH PANEL		20 A	1		500	0			SPARE	36		
37	SPARE		20 A	1	0	0				SPARE	38		
39	SPARE		20 A	1		0	0			SPARE	40		
41	SPARE		20 A	1		0	0			SPARE	42		
Load Classification		Connected Load		Demand Factor		Demand Load		PANEL TOTALS					
Motor		1040 VA		112.50%		1170 VA		TOTAL CONNECTED LOAD: 52460 VA					
Lighting - Continuous		2180 VA		125.00%		2725 VA		TOTAL DEMAND: 50935 VA					
Receptacle		9760 VA		100.00%		9760 VA		TOTAL CONNECTED CURRENT: 219 A					
Appliance - Dwelling Unit		14800 VA		75.00%		11100 VA		TOTAL DEMAND CURRENT: 212 A					
Other Continuous Load		6000 VA		125.00%		7500 VA							
Other Non-Continuous Load		18680 VA		100.00%		18680 VA							

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CONSTRUCTION
DOCUMENTS

OFFICE OF
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 DIVISION OF FACILITIES
 MANAGEMENT, DESIGN
 AND CONSTRUCTION

DEPARTMENT OF NATURAL
 RESOURCES DIVISION OF STATE
 PARKS

ECHO BLUFF STATE
PARK CONSTRUCT
SIX NEW CABINS

Eminence, Missouri

PROJECT #: X2208-01

SITE #: 5235

FACILITY #: 7815230517

DATE: DESCRIPTION:

1 05/11/2023 ADD 02

DRAWN BY: KES
 CHECKED BY: DFM
 DESIGNED BY: TLA

SHEET TITLE:
SCHEDULES

SHEET NUMBER:

E-603