

1 SIGNAL PLAN - FIRST FLOOR
1/4" = 1'-0"

GENERAL NOTES:

- A. PROVIDE CABLE AND TELEPHONE SERVICE FOR EACH UNIT.
- B. COORDINATE WITH OTHER DISCIPLINES PRIOR TO ROUGH-IN TO AVOID CONFLICT.
- C. PROVIDE DEDICATED NEUTRAL FOR EACH CIRCUIT THAT REQUIRES A NEUTRAL CONDUCTOR.
- D. COORDINATE WITH ALASKA POWER AND TELEPHONE TO PROVIDE TELECOM UTILITIES FOR BUILDING.

SHEET NOTES:

1. PROVIDE STAND-ALONE 120V PHOTOELECTRIC SMOKE ALARM WITH AUDIBLE AND VISUAL ALARM AND BATTERY BACK-UP IN BEDROOMS. CONNECT IN TANDEM FOR ACTIVATION UPON ALARM WITH OTHER ALARMS IN UNIT.
2. PROVIDE STAND-ALONE 120V PHOTOELECTRIC COMBINATION SMOKE/CARBON DIOXIDE ALARM WITH AUDIBLE AND VISUAL ALARM AND BATTERY BACK-UP OUTSIDE OF SLEEPING AREAS. CONNECT IN TANDEM FOR ACTIVATION UPON ALARM WITH OTHER ALARMS IN UNIT.

STAMP:
REVISIONS:
RSA
Mechanical and Electrical Consulting Engineers
670 West Firwood Lane, Suite 200
Anchorage, AK 99503
(907) 276-0521
191 Swanson Avenue
Wasilla, Alaska 99654
(907) 357-1521 (Corporate No.: AECC54)

TRAHO
ARCHITECTS P.S.
1400 N. 10th AVENUE, SUITE A - ANCHORAGE, ALASKA 99502
P: (907) 452-0969 F: (907) 452-0578 WWW.TRAHO.COM

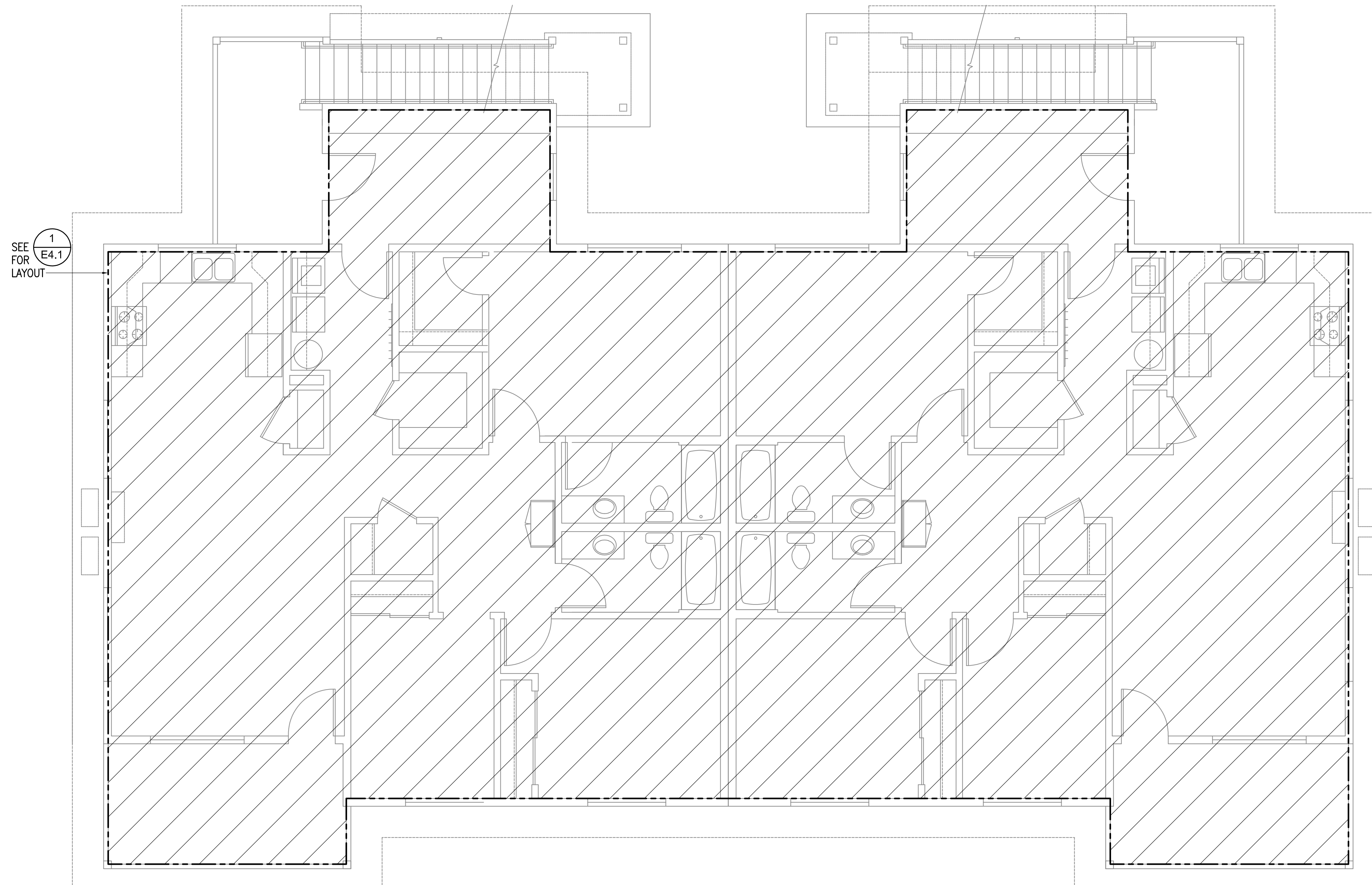
Craig Tract 18 4-plex
TLINGIT-HAIDA REGIONAL HOUSING AUTHORITY
CRAIG, ALASKA

SHEET TITLE:
SIGNAL
FIRST FLOOR

COPYRIGHT RESERVED. ALL PARTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF TRAHO ARCHITECTS, P.S. NO PARTS MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT EXPRESS WRITTEN PERMISSION OF TRAHO ARCHITECTS, P.S.
AUTOMATED PLOT DATE:
DRAWING DATE:
May 21, 2018
JOB NO.
L8030
SCALE:
AS SHOWN
SHEET NUMBER

DESIGN DEVELOPMENT - NOT FOR CONSTRUCTION

E4.1



1 SIGNAL PLAN - SECOND FLOOR
1/4" = 1'-0"

GENERAL NOTES:

- A. SEE SHEET E4.1 FOR GENERAL NOTES THAT APPLY TO THIS SHEET.

STAMP:
REVISIONS:
RSA
Mechanical and Electrical Consulting Engineers
670 West Firwood Lane, Suite 200
Anchorage, AK 99503
(907) 278-0521
191 Swanson Avenue
Wasilla, Alaska 99654
(907) 357-1521 (Corporate No.: AECC54)

TRAHO
ARCHITECTS P.S.
1400 N. 16th AVENUE, SUITE A - TAVARIA, WA 98042
P: (360) 452-2069 F: (360) 452-0578 WWW.TRAHO.COM

Craig Tract 18 4-plex
TLINGIT-HAIDA REGIONAL HOUSING AUTHORITY
CRAIG, ALASKA

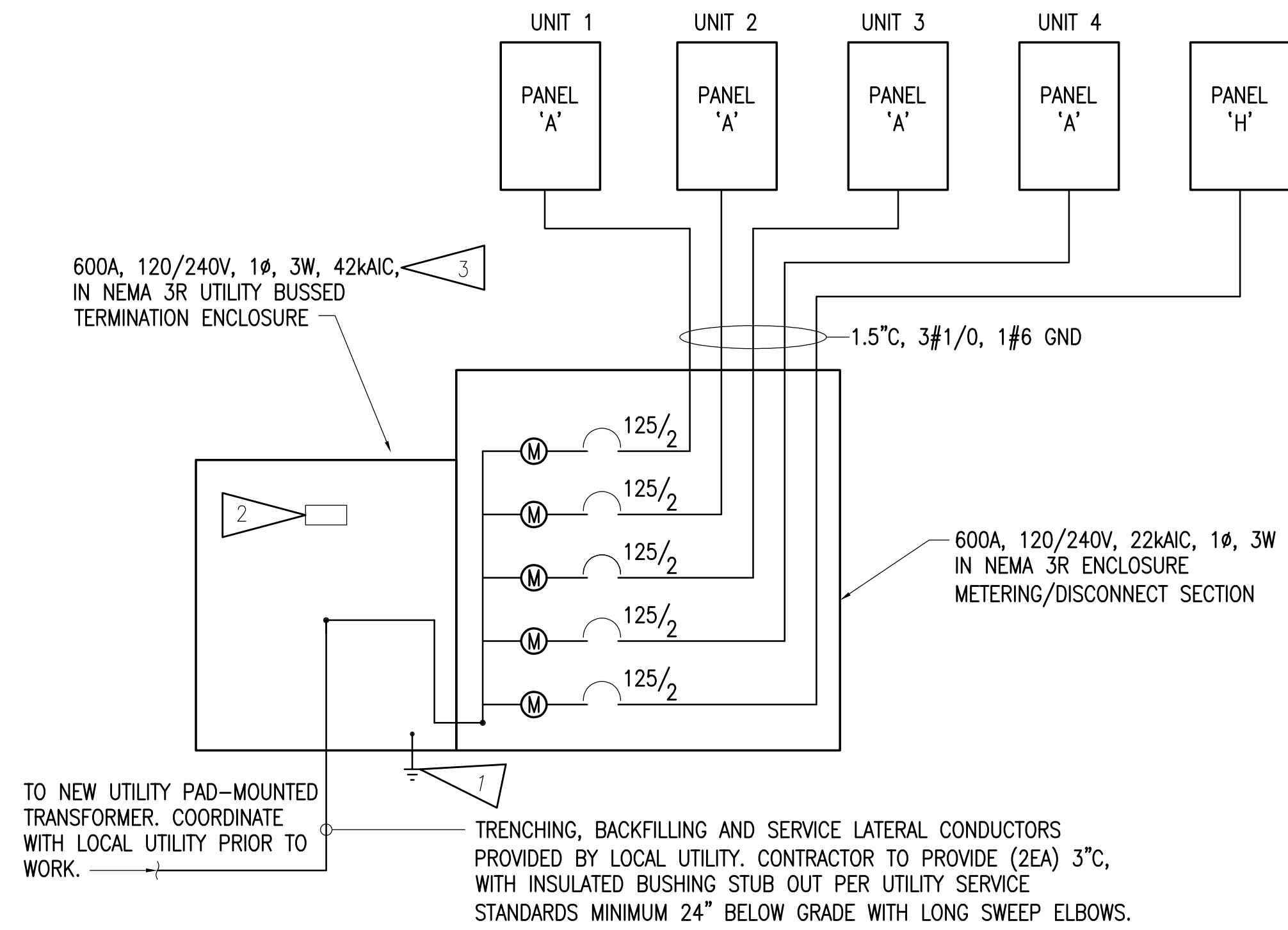
SHEET TITLE:
SIGNAL SECOND FLOOR

COPYRIGHT RESERVED. ALL PARTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF TRAHO ARCHITECTS, P.S. NO PARTS OF THIS DRAWING MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE EXPRESS WRITTEN PERMISSION OF TRAHO ARCHITECTS, P.S.

AUTOMATED PLOT DATE:
DRAWING DATE:
May 21, 2018
JOB NO.
L8030
SCALE:
AS SHOWN
SHEET NUMBER

DESIGN DEVELOPMENT - NOT FOR CONSTRUCTION

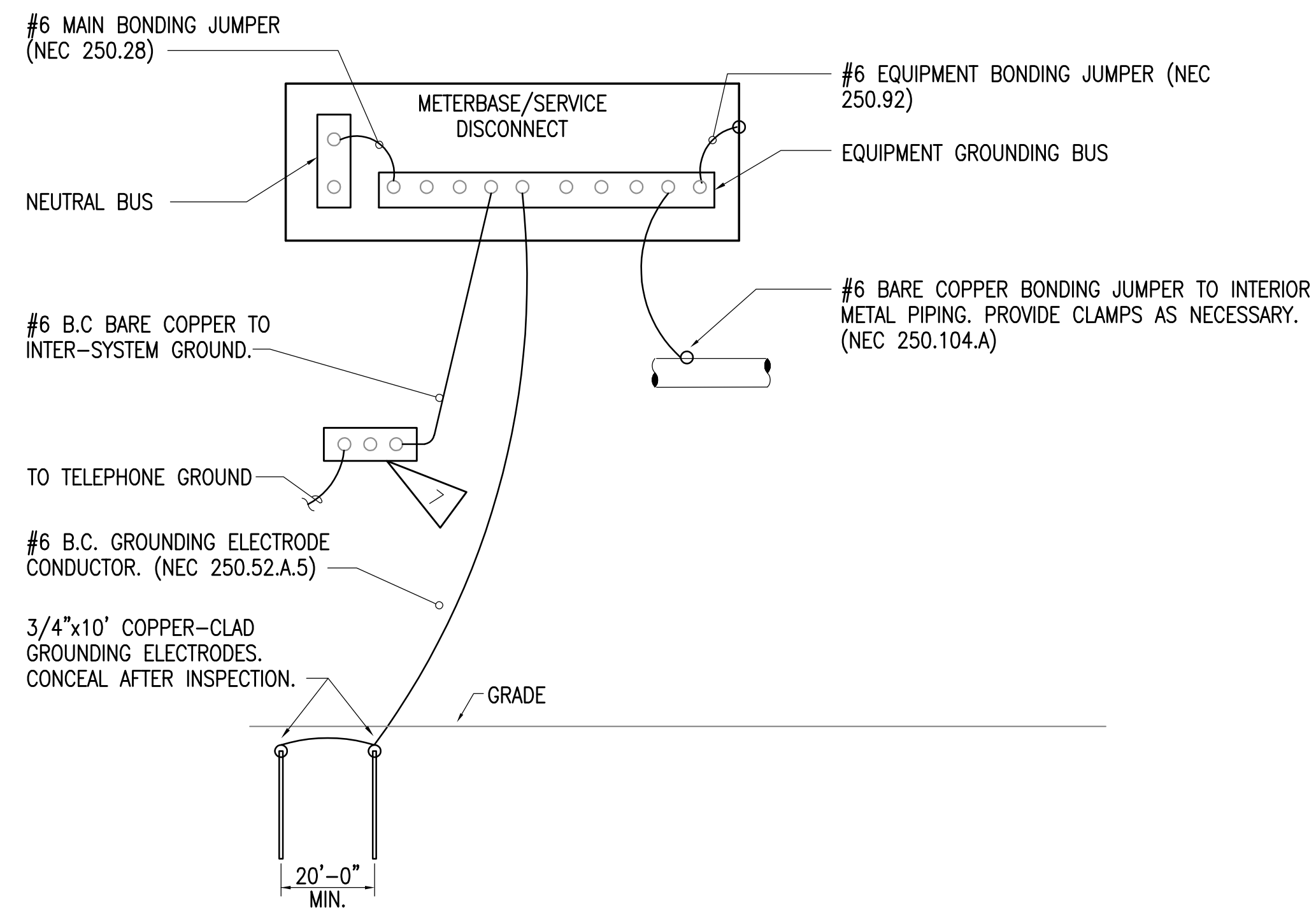
E4.2



1 POWER ONE-LINE DIAGRAM
NO SCALE

SHEET NOTES:

- SEE 2/E5.1 FOR GROUNDING DETAIL.
- PROVIDE SIGNAGE WITH THE AVAILABLE FAULT CURRENT AT THE UTILITY BUSSED ENCLOSURE.
- FOR BUILDING BUSSED ENCLOSURE, PROVIDE WITH 22KAIC RATING.



2 GROUNDING DETAIL
NO SCALE

**CRAIG TRIBAL ASSOCIATION 4-PLEX
FOUR-PLEX BUILDING LOAD ANALYSIS**

PROJECT: CRAIG TRIBAL ASSOCIATION 4-PLEX VOLTAGE: 240 PHASE: 1

4-PLEX FEEDER CALCULATION PER NEC 220 PART III

1. HOUSE LOAD
GENERAL LIGHTING LOAD, NEC TABLE 220.12

CRAWLSPACE	884 VA
EXTERIOR/STAIRS	447 VA
SUBTOTAL	1,331 VA
DEMAND PER NEC 215.2(A)(1): 125% 25% OF CONTINUOUS LOAD	333 VA
NET GENERAL LIGHTING LOAD	1,664 VA

RECEPTACLE LOAD: 11 RECEPTACLES EACH @ 180VA
DEMAND PER NEC TABLE 220.44
FIRST 10,000VA OR LESS @ 100% = 1,980 VA

2. 4-PLEX UNIT LOAD (SEE 4-PLEX LOAD ANALYSIS)

NET COMPUTED 4-PLEX LOAD: **63,285 VA**

MINIMUM FEEDER/SERVICE SIZE 120/240V, 1-PHASE, 3-WIRE IS: **66,928 VA / 240V = 279 AMPS**

BASED ON THE ABOVE CALCULATION, 600A, 120/240V, 1-PHASE, 3-WIRE SERVICE IS REQUIRED FOR BUILDING.

**CRAIG TRIBAL ASSOCIATION 4-PLEX
TYPICAL UNIT LOAD ANALYSIS**

PROJECT: CRAIG TRIBAL ASSOCIATION 4-PLEX VOLTAGE: 240 PHASE: 1

2-BR UNIT FEEDER CALCULATION PER NEC 220.82 FOR DWELLING UNITS

TYPICAL UNIT - TOTAL AREA: 1558 SF

1. GENERAL LIGHTING AND RECEPTACLE LOADS LOAD AT 3 VA/SF	4,674 VA
2. SMALL APPLIANCES AND LAUNDRY BRANCH CIRCUITS 2 SMALL APPLIANCES EACH AT 1,500 VA, 120V, EA	3,000 VA
3. APPLIANCE LOADS MICROWAVE REFRIGERATOR ELECTRIC CLOTHES DRYER	1,500 VA 1,200 VA 5,000 VA
4. MECHANICAL CONTINUOUS LOADS VF-1, 52W, 120V DEMAND FACTOR PER NEC 210.20(A) 25% OF CONTINUOUS LOAD NET MECHANICAL CONTINUOUS LOAD	52 VA 13 VA 65 VA
5. HVAC LOADS CU-1, HP-1, 9.5MCA, 240V, 1-PHASE GH-1, 117W, 120V RH-1 FAN/LIGHT, 0.65A, 120V VF-1, 52W, 120V EF-1, 16WA, 120V, 2EA	2,280 VA 117 VA 78 VA 52 VA 32 VA 2,559 VA
SUBTOTAL GENERAL CONNECTED LOAD APPLY DEMAND FACTOR PER NEC 220.82(B) FIRST 10,000 VA AT 100% REMAINDER AT 40%	18,063 VA 10,000 VA 3,225 VA 13,225 VA
NET GENERAL LOAD	13,225 VA

MINIMUM FEEDER/SERVICE SIZE FOR 120/208 V, SINGLE-PHASE, THREE-WIRE
13,225 VA / 240V = 55 AMPS

BASED ON THE ABOVE CALCULATION, 125A 120/240V SINGLE-PHASE, THREE-WIRE SERVICE IS REQUIRED FOR EACH UNIT.

STAMP:

REVISIONS:

RSA
Mechanical and Electrical Consulting Engineers
670 West Firwood Lane, Suite 200 Anchorage, AK 99503 (907) 276-0521
191 Swanson Avenue Wasilla, Alaska 99654 (907) 357-1521 (Corporate No.: AECC547)

TRAHO ARCHITECTS P.S.
1400 N. 10th Avenue, Suite A - Anchorage, Alaska 99502
P: (907) 452-0060 F: (907) 452-0578 WWW.TRAHO.COM

**Craig Tract 18 4-plex
TLINGIT-HAIDA REGIONAL HOUSING AUTHORITY
CRAIG, ALASKA**

SHEET TITLE:
POWER ONE-LINE DIAGRAM AND LOAD CALCULATION

COPYRIGHT RESERVED. ALL PARTS OF THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF TRAHO ARCHITECTS, P.S. AND SHALL BE USED OR REPRODUCED IN ANY MANNER WITHOUT THE EXPRESSED WRITTEN PERMISSION OF TRAHO ARCHITECTS, P.S.

AUTOMATED PLOT DATE:

DRAWING DATE:
May 21, 2018

JOB NO.
L8030

SCALE:
AS SHOWN

SHEET NUMBER
E5.1