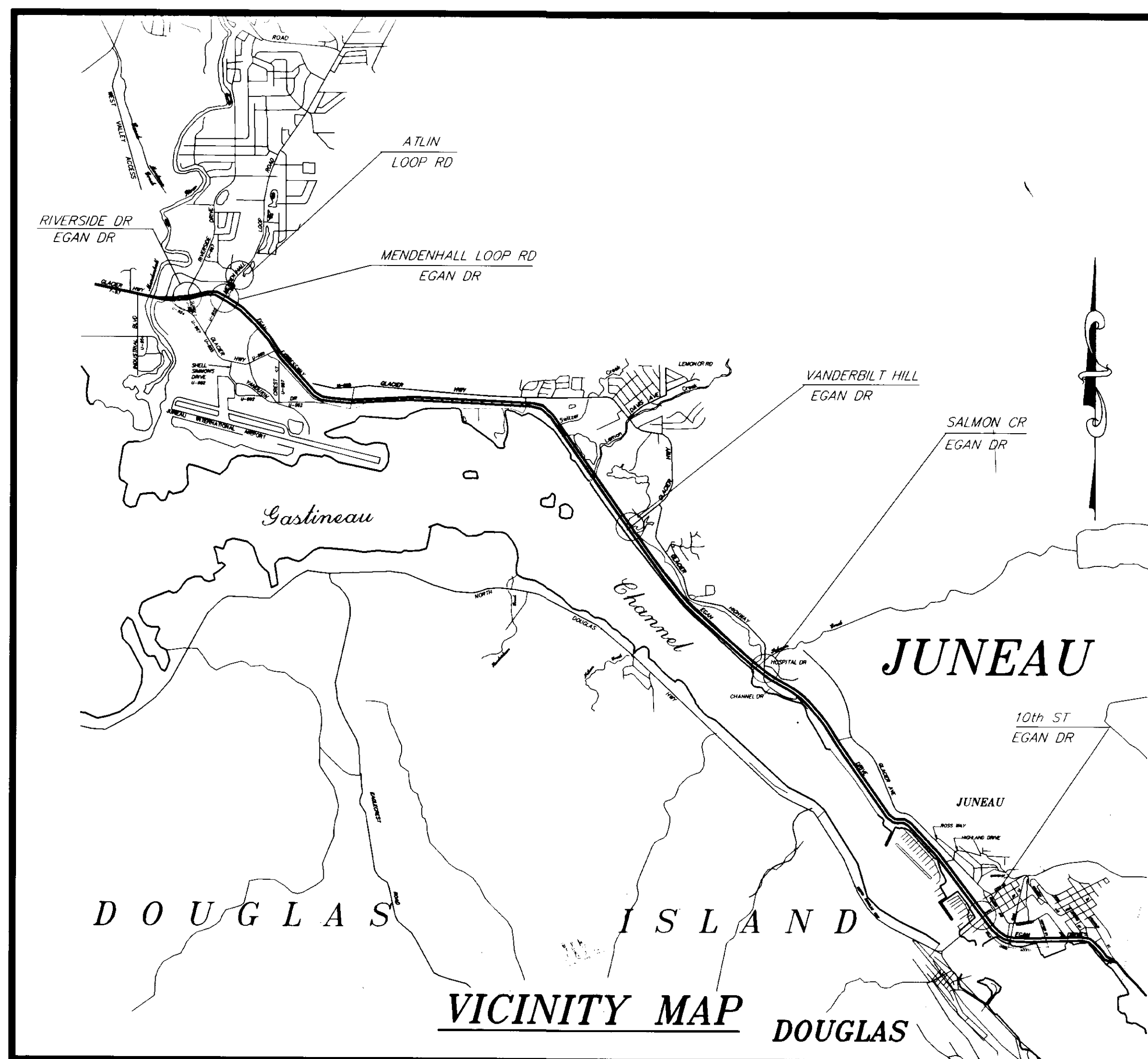


STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND  
 PUBLIC FACILITIES  
 SOUTHEAST REGION  
 DESIGN AND CONSTRUCTION DIVISION

JUNEAU, ALASKA

SOUTHEAST REGION  
**TRAFFIC SIGNAL SYSTEMS  
 EMERGENCY POWER**

FHWA NO. STPG-000S(158)  
 PROJECT NO. 71625



**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	VICINITY MAP
3	ESTIMATE OF QUANTITIES, SUMMARY TABLE AND DETAILS
4	DETAILS
5	PLAN - TENTH ST. AT EGAN DR. PLAN - SALMON CR. AT EGAN DR.
6	PLAN - VANDERBILT HILL RD AT EGAN DR.
7	PLAN - MENDENHALL LOOP RD. AT EGAN DR.
8	PLAN - RIVERSIDE DR. AT EGAN DR.
9	PLAN - MENDENHALL LOOP RD. AT MALL/ATLIN
10	TRAFFIC CONTROL PLAN

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:  
 A-1, C-01.03, C-02.01, C-03.01, C-05.00, T-34.01

"AS - BUILT" PLANS

Contractor : Cave Electric, Inc.

Project Engr. : Soc Kreuzenstein

Begin Const. : September 9, 1995

End Const. : July 1, 1996

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND  
 PUBLIC FACILITIES  
 SOUTHEAST REGION DESIGN SECTION

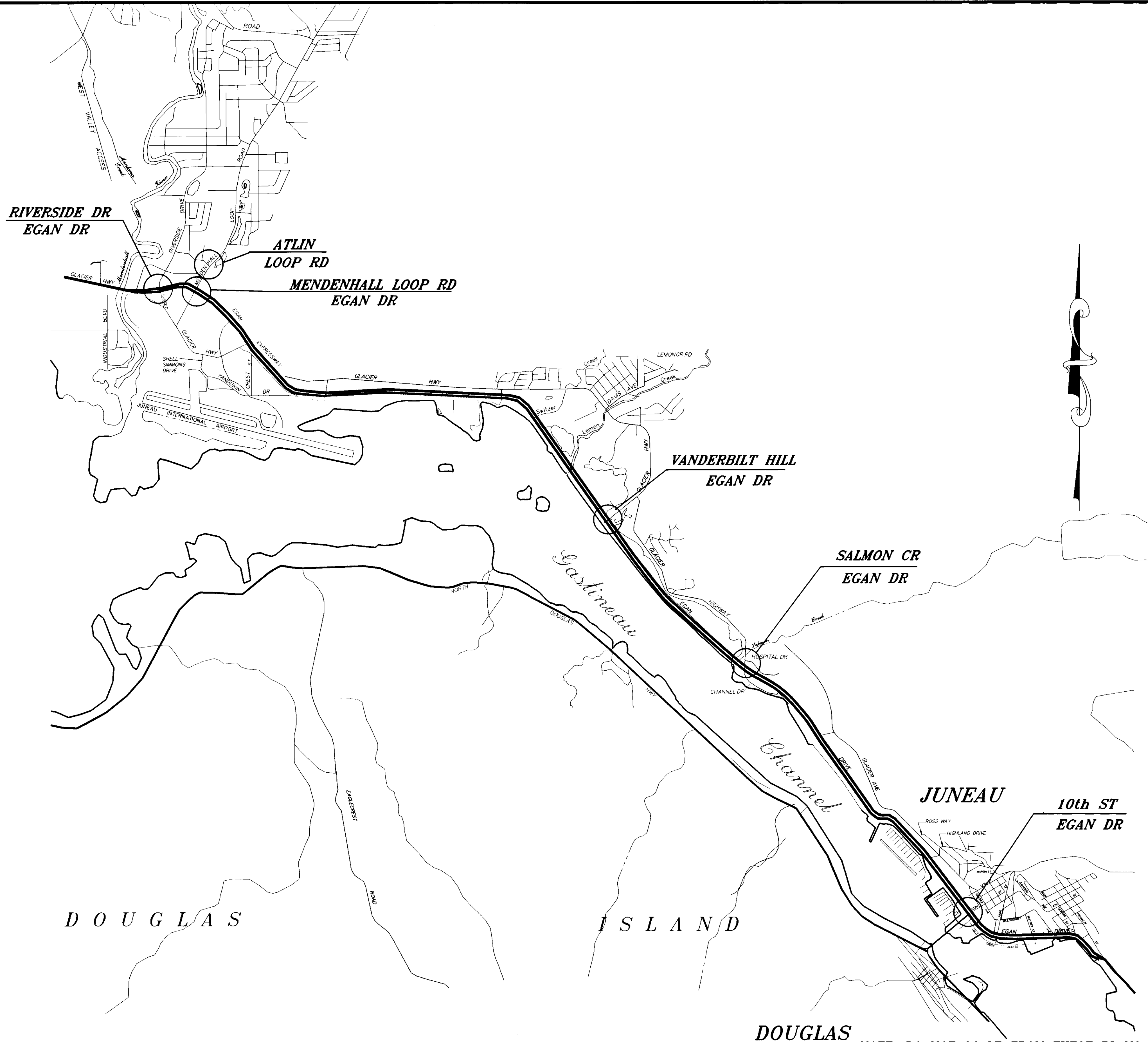
APPROVED \_\_\_\_\_ Date \_\_\_\_\_  
 Regional Preconstruction Engineer

APPROVED \_\_\_\_\_ Date \_\_\_\_\_  
 Director, S.E. Region Design & Construction

PROJECT NUMBER: 71625	ENGINEER'S SEAL
DATE: APRIL, 1995	
SHEET 1 OF 10	

**AS-BUILT**  
 BY: KK DATE: 2/97

P. LUNDA 71625 (DR) - 75 SHEET 1-1



**AS-BUILT**  
 BY: KK DATE: 2/97

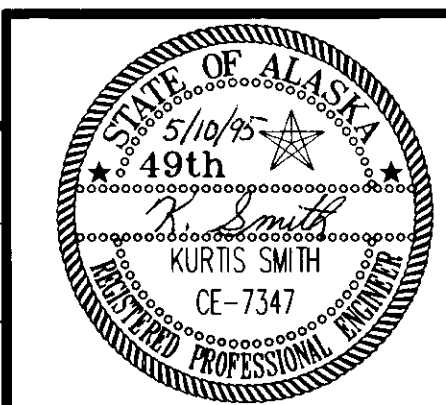
NOTE: DO NOT SCALE FROM THESE PLANS—USE DIMENSIONS

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STATE OF ALASKA  
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 SOUTHEAST REGION DESIGN & CONSTRUCTION

JUNEAU ALASKA  
 TRAFFIC SIGNAL SYSTEMS  
 EMERGENCY POWER  
 FHWA NO. STPG-000S(158)-71625  
**PROJECT LOCATIONS - VICINITY MAP**

DESIGNED BY: <i>JON AHLGREN</i>	PROJECT NO. 71625
DRAWN BY: <i>C. ANDERSON</i>	DATE: APRIL, 1995
CHECKED BY: <i>K. SMITH</i>	SHEET 2 OF 10



**ESTIMATE OF QUANTITIES**

ITEM NO.	ITEM	UNIT	QUANTITY
120(1)	DBE ADJUSTMENT	C.S.	ALL REQUIRED
640(1)	MOBILIZATION AND DEMOBILIZATION	L.S.	ALL REQUIRED
641(1)	TEMPORARY EROSION AND POLLUTION CONTROL	L.S.	ALL REQUIRED
643(1)	TRAFFIC MAINTENANCE	L.S.	ALL REQUIRED
643(4)	CONSTRUCTION SIGN	EACH PER DAY	220
643(7)	TRAFFIC CONE	EACH PER DAY	1000
643(8)	DRUM	EACH PER DAY	150
643(15)	FLAGGING	HOUR	30
660(11)	3 KVA EMERGENCY BACKUP SYSTEM WITH 8 BATTERIES	EACH	2
660(12)	5 KVA EMERGENCY BACKUP SYSTEM WITH 12 BATTERIES	EACH	3
660(13)	5 KVA EMERGENCY BACKUP SYSTEM WITH 24 BATTERIES	EACH	1
660(14)	CONDUIT-MENDENHALL LOOP AND EGAN	L.S.	ALL REQUIRED
660(15)	TRAINING	L.S.	ALL REQUIRED
660(13A)	UPS RISER SECTION	L.S.	ALL REQUIRED

**SIZE RATING SUMMARY**

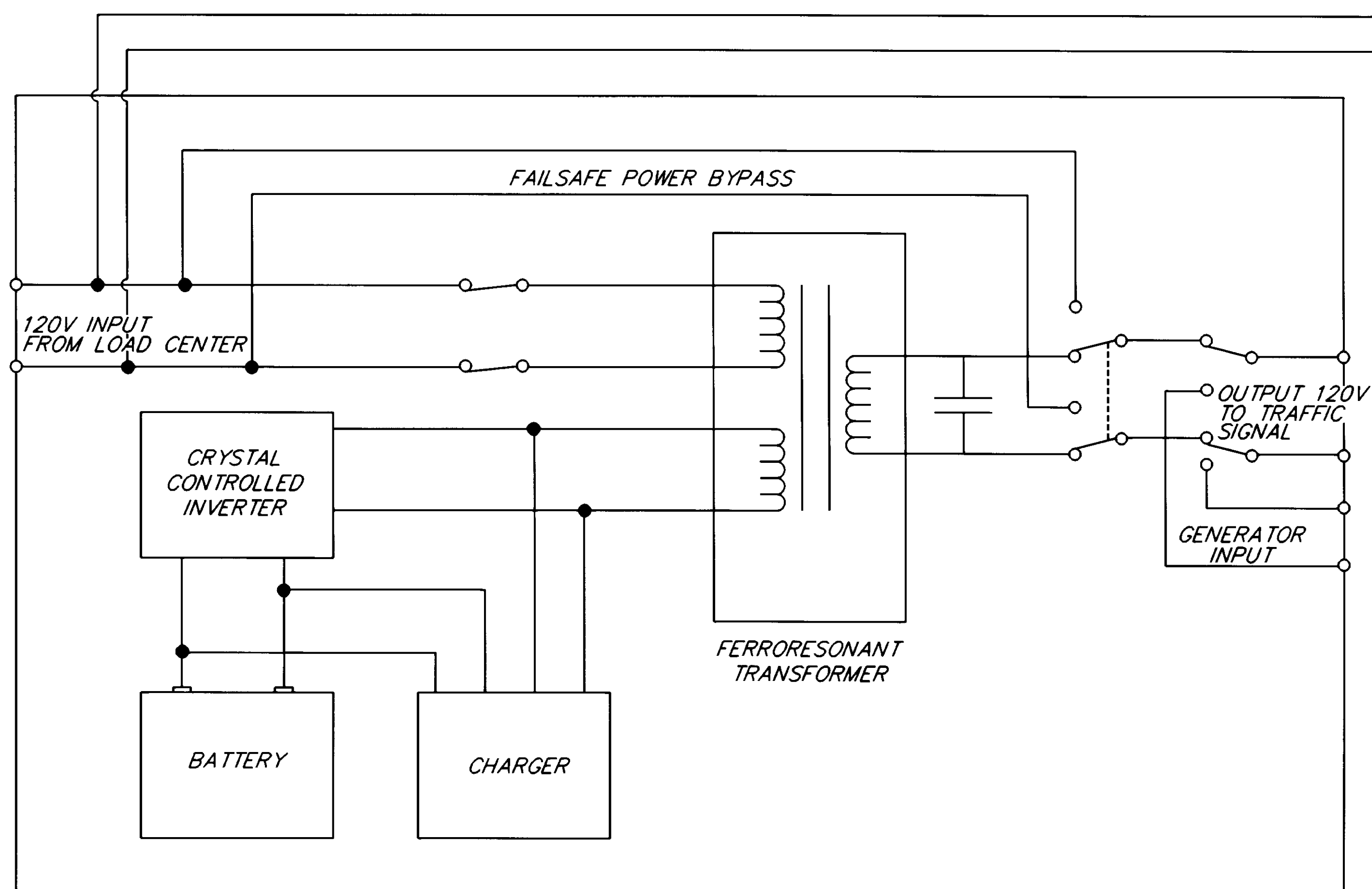
LOCATION	SIGNAL AMPS		WIRE SIZE		POWER SUPPLY RATING	NUMBER OF BATTERIES
	AVERAGE	PEAK	LOAD CENTER TO POWER SUPPLY	POWER SUPPLY TO SIGNAL		
1 TENTH ST. AT EGAN DR.	21.26	27.76	NO. 4 AWG	NO. 4 AWG	5 KVA	12 8
2 SALMON CREEK AT EGAN DR.	17.00	24.96	NO. 4 AWG	NO. 4 AWG	5 KVA	12 8
3 VANERBILT HILL RD. AT EGAN DR.	12.00	24.08	NO. 4 AWG	NO. 4 AWG	3 KVA	8
4 MENDENHALL LOOP RD. AT EGAN DR.	28.13	36.64	NO. 4 AWG	NO. 4 AWG	5 KVA	24 8
5 RIVERSIDE DR. AT EGAN DR.	13.47	19.92	NO. 8 AWG	NO. 8 AWG	3 KVA	8
6 MENDENHALL LOOP RD. AT MALL RD.	19.04	25.36	NO. 8 AWG*	NO. 8 AWG	5 KVA	12 8

\*NOTE: REPLACE EXISTING NO. 10 AWG WITH NEW NO. 8 AWG FROM LOAD CENTER TO POWER SUPPLY. (APPROX. 40FT.)

**NEW CONFLICT MONITOR SUMMARY TABLE**

	LOCATION
1	EGAN DRIVE AT GLACIER HWY/CHANNEL DR (SALMON CK)
2	EGAN DRIVE AT VANDERBILT HILL ROAD
3	EGAN DRIVE AT GLACIER HWY (MCNUGGET)

NOTE: NEW CONFLICT MONITORS SHALL BE GIVEN TO THE ENGINEER FOR INSTALLATION



120V TO TRAFFIC SIGNAL  
CABINET HEATER AND ACCESSORY  
OUTLET RECEPTACLE. REMOVE  
JUMPER WIRE FROM BETWEEN  
THE EXISTING CABINET CIRCUIT  
BREAKERS.

**SIMPLIFIED EMERGENCY BACKUP  
POWER BLOCK DIAGRAM**

**AS-BUILT**  
BY: KK DATE: 2/97

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

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SOUTHEAST REGION DESIGN & CONSTRUCTION

JUNEAU

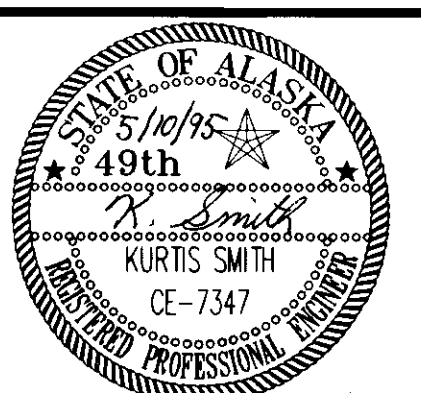
TRAFFIC SIGNAL SYSTEMS  
EMERGENCY POWER  
FHWA NO. STPG-000S(158)-71625

ALASKA

**ESTIMATE OF QUANTITIES/MISC. SUMMARIES**

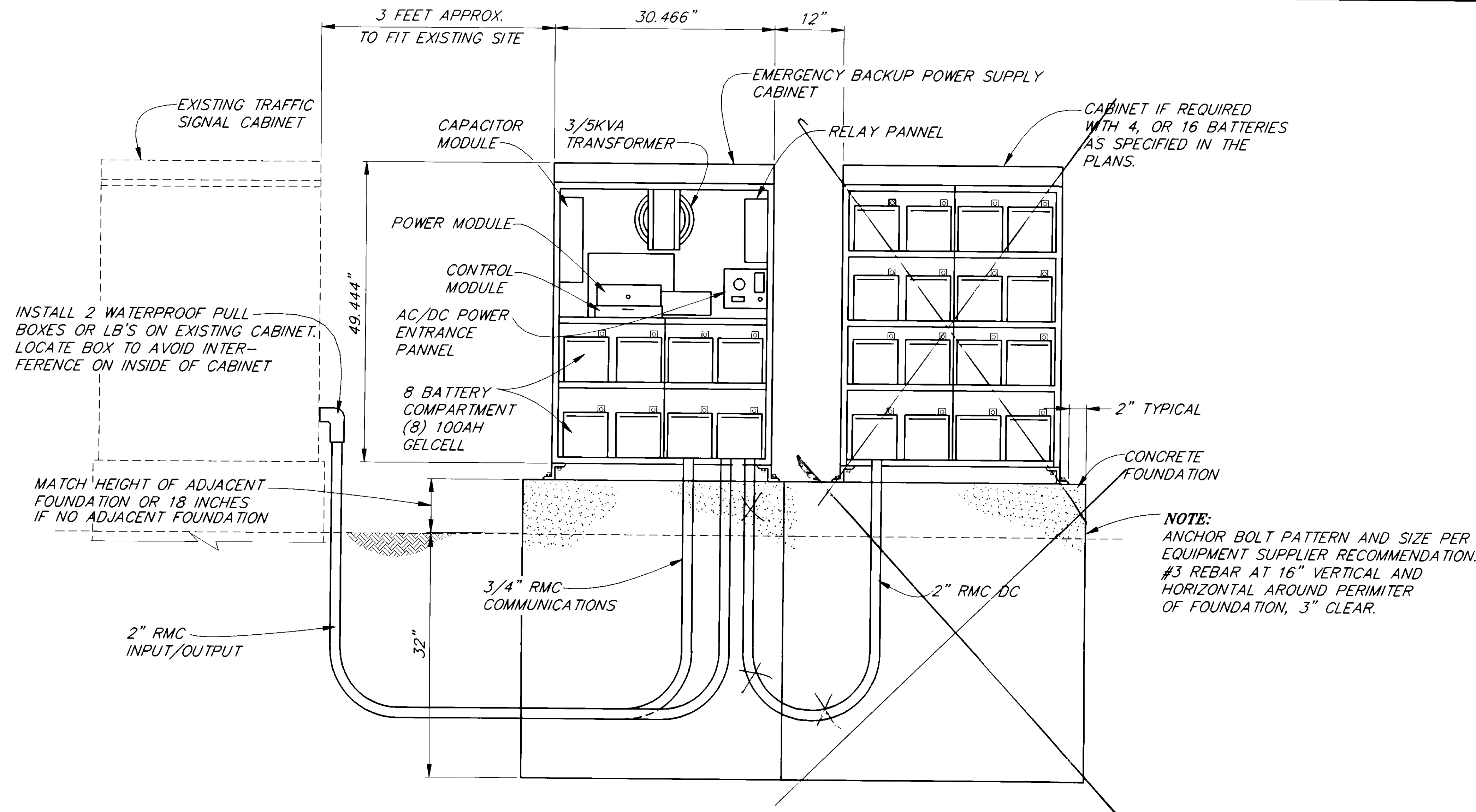
DESIGNED BY: JON AHLGREN  
DRAWN BY: C. ANDERSON  
CHECKED BY: K. SMITH

PROJECT NO. 71625  
DATE: APRIL, 1995  
SHEET 3 OF 10



**GENERAL NOTES**

1. LOCATIONS SHOWN FOR THE EMERGENCY BACKUP POWER SUPPLIES ARE APPROXIMATE AND MAY BE ADJUSTED TO FIT EXISTING SITE CONDITIONS AS APPROVED BY THE ENGINEER.
2. CONDUIT SIZES SHOWN ARE APPROXIMATE AND SHALL BE ADJUSTED IF THEY CONFLICT WITH THE POWER SUPPLY MANUFACTURER'S RECOMMENDATION.
3. NEW J-BOXES SHALL BE CONSTRUCTED OF POLYMER CONCRETE AND REINFORCED WITH A HEAVY-WEAVE FIBERGLASS. COVERS SHALL BE STEEL.
4. ALL EMERGENCY POWER SUPPLIES SHALL BE PROGRAMMED TO OPERATIONAL MODE A (FULL STANDBY).
5. ALL BATTERIES SHALL HAVE CABINET HEATERS.
6. A GROUND WIRE SHALL BE INSTALLED THROUGH ALL CONDUIT BETWEEN THE LOAD CENTER, THE TRAFFIC SIGNAL CABINET, THE EMERGENCY POWER SUPPLY AND THE EXTRA BATTERY CABINET. THE GROUND WIRE SHALL BE CONNECTED TO ALL CONDUIT END BUSHINGS AND TO THE CABINETS.



**DETAIL**  
**TYPICAL EMERGENCY BACKUP POWER SUPPLY**

**AS-BUILT**  
BY: KK DATE: 2/97

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

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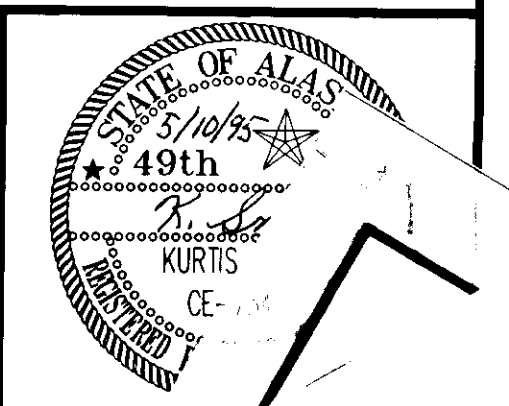
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SOUTHEAST REGION DESIGN & CONSTRUCTION

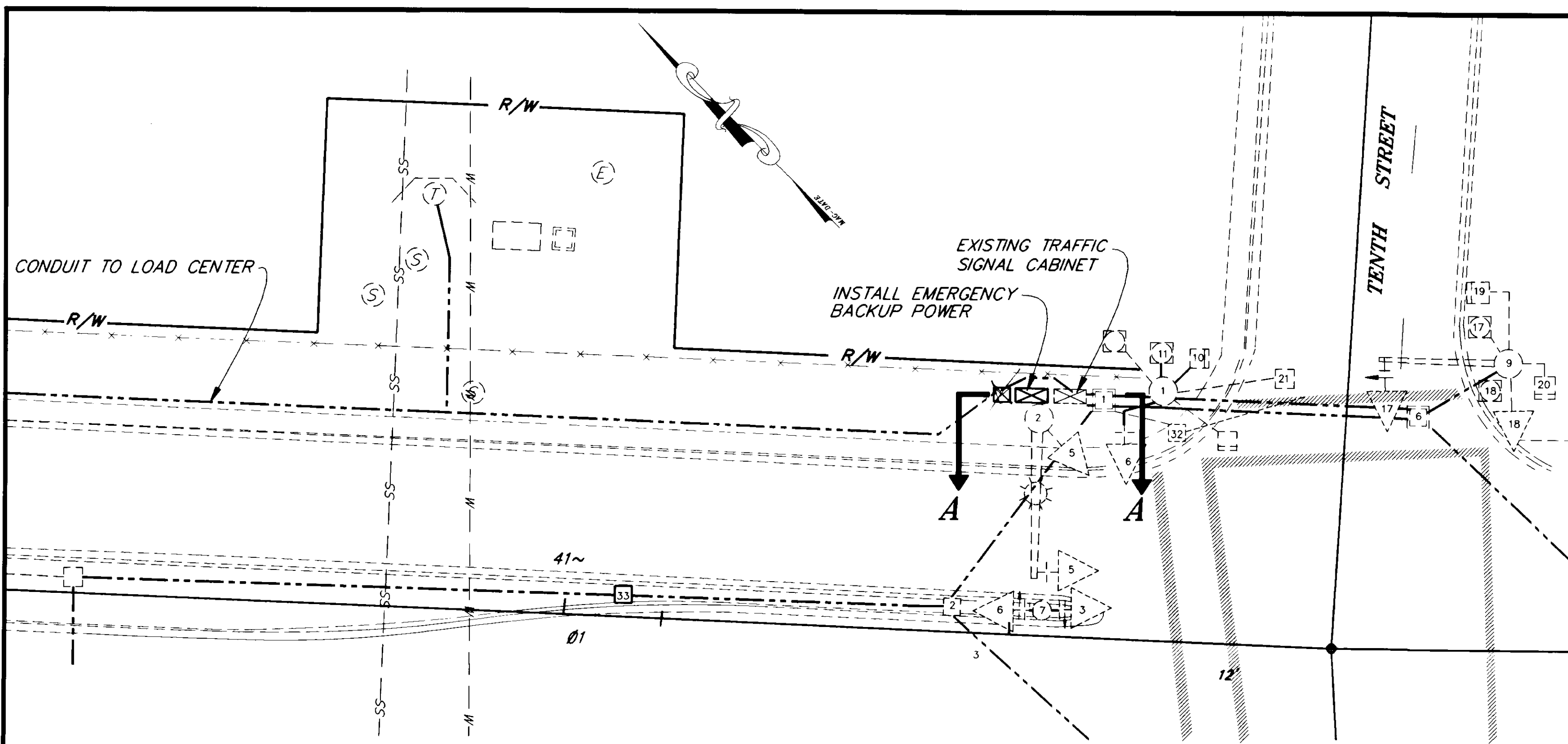
JUNEAU

TRAFFIC SIGNAL SYSTEMS  
EMERGENCY POWER  
FHWA NO. STPG-000S(158)-71625  
**DETAIL**

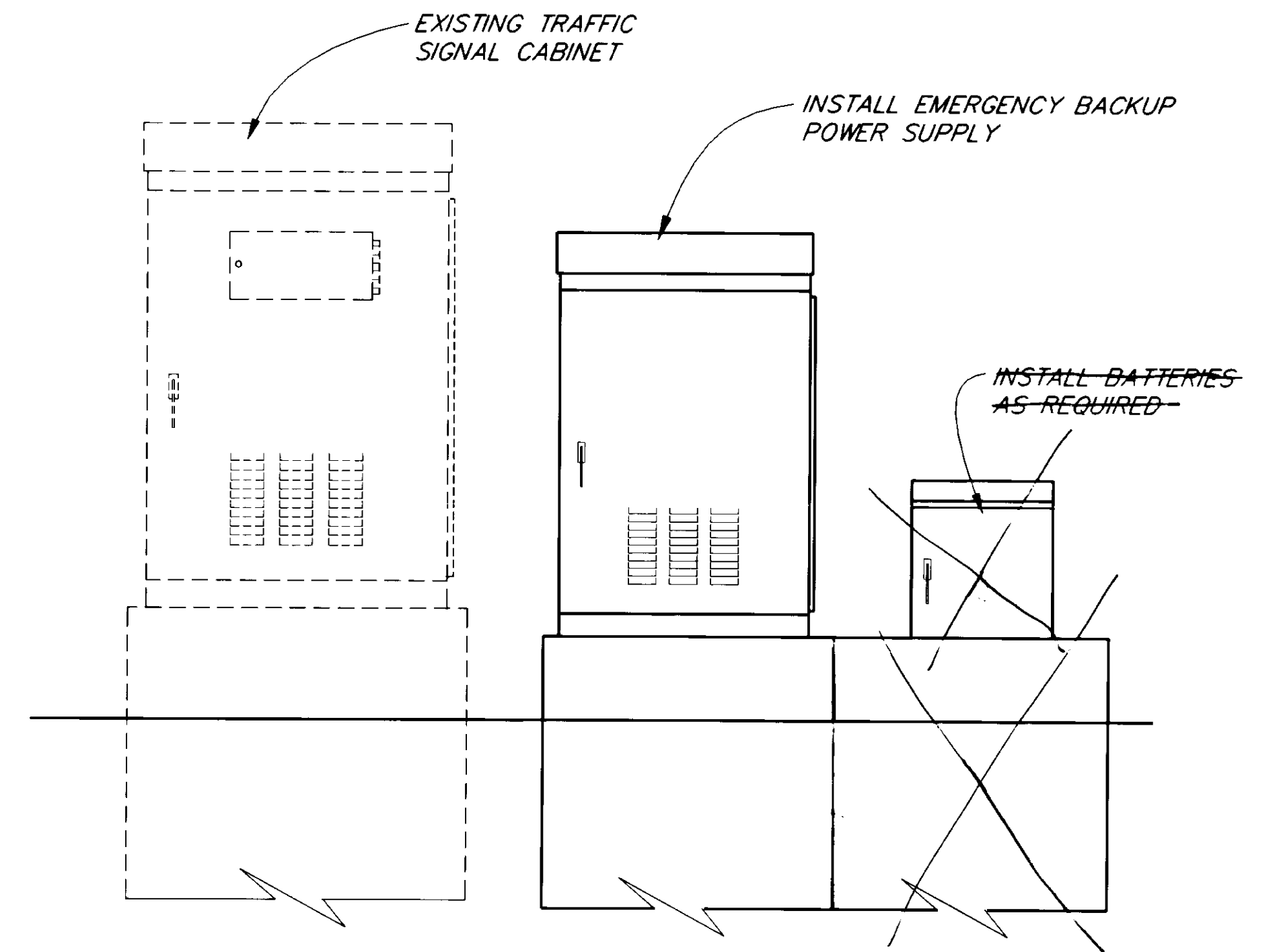
ALASKA

DESIGNED BY: <u>JON AHLGREN</u>	PROJECT NO. <u>71625</u>
DRAWN BY: <u>C. ANDERSON</u>	DATE: <u>APRIL, 1995</u>
CHECKED BY: <u>K. SMITH</u>	SHEET <u>4</u> OF <u>10</u>

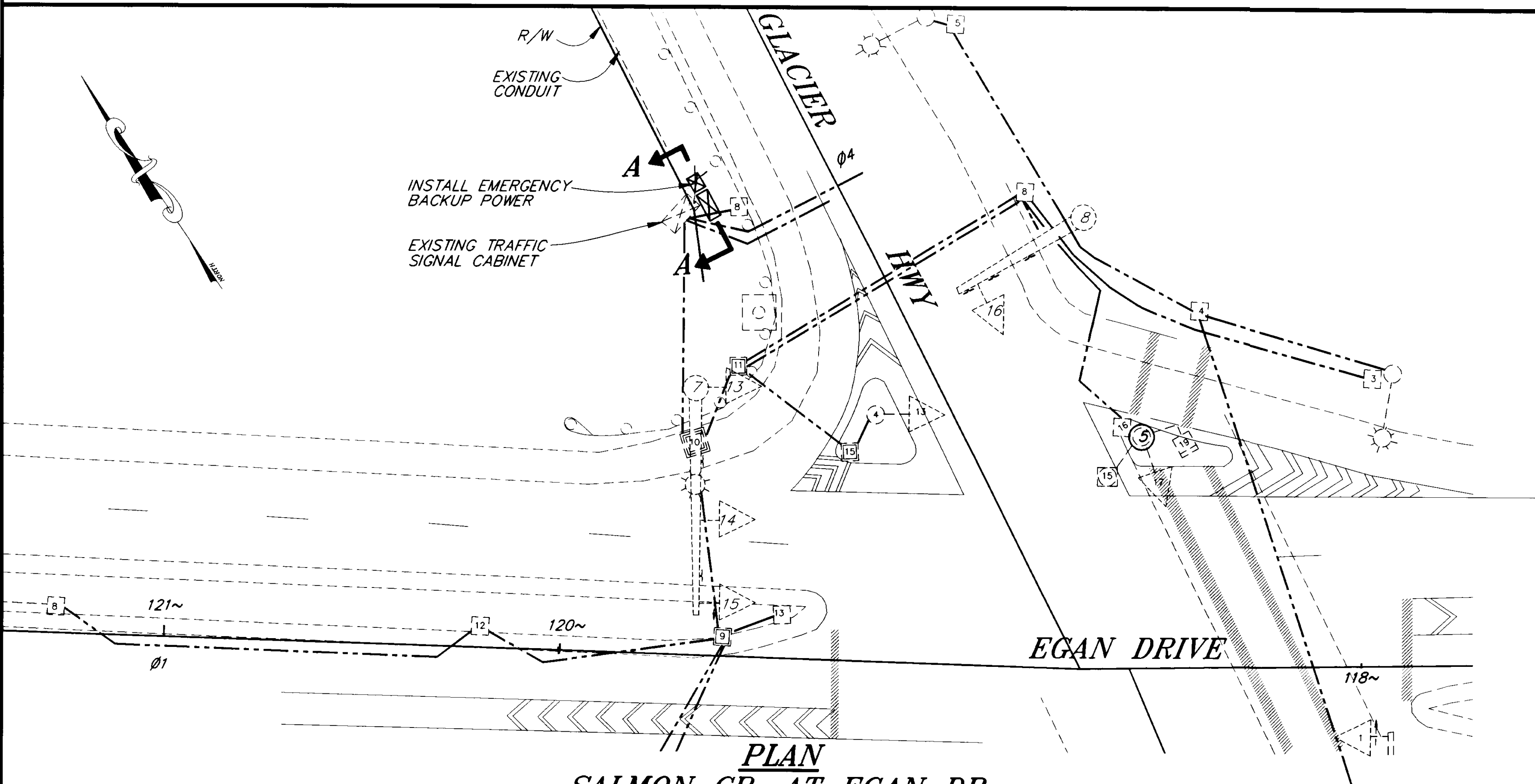




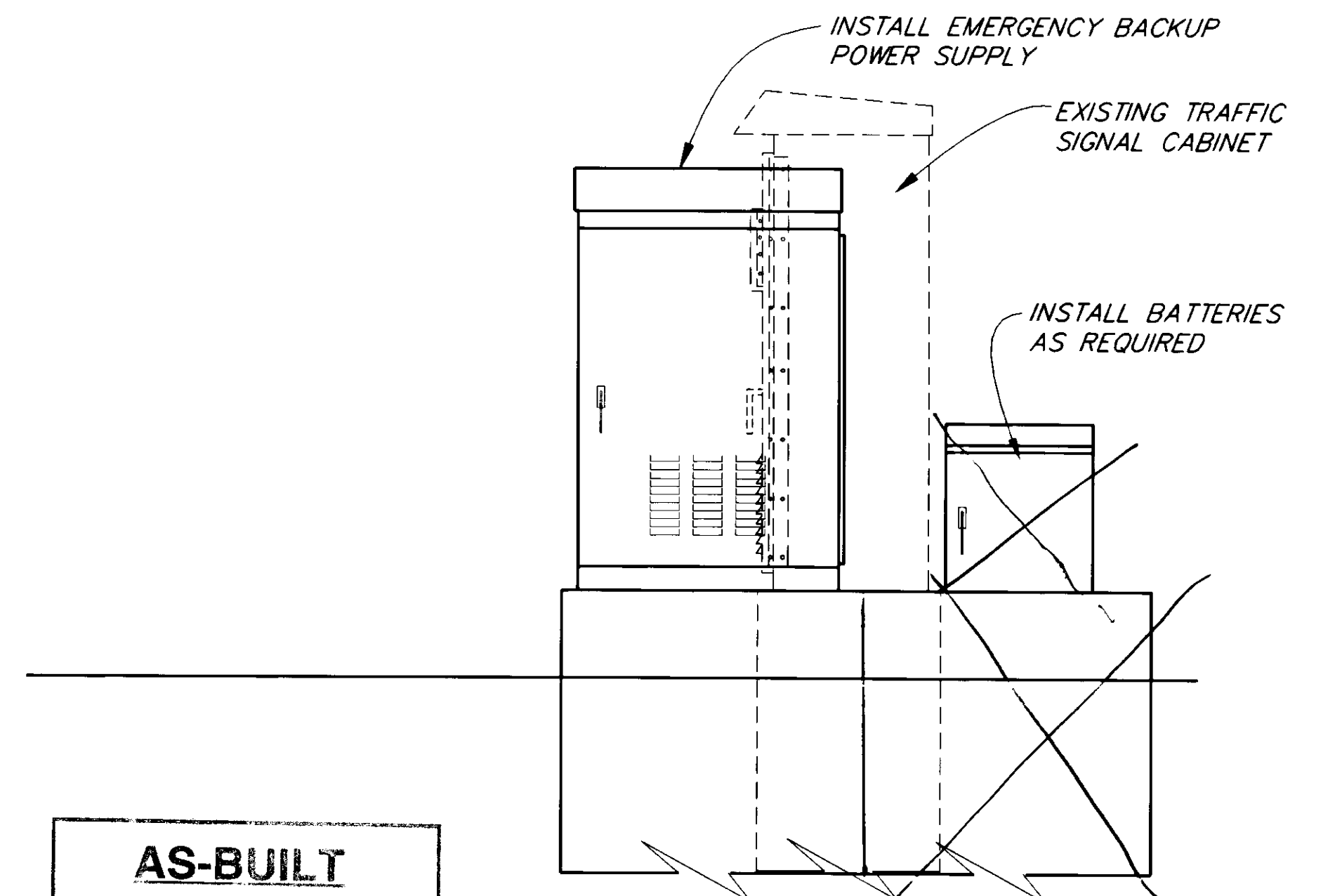
**PLAN**  
**TENTH ST. AT EGAN DR.**



**VIEW A-A**



**PLAN**  
**SALMON CR. AT EGAN DR.**



**VIEW A-A**

**AS-BUILT**  
BY: KK DATE: 2/97

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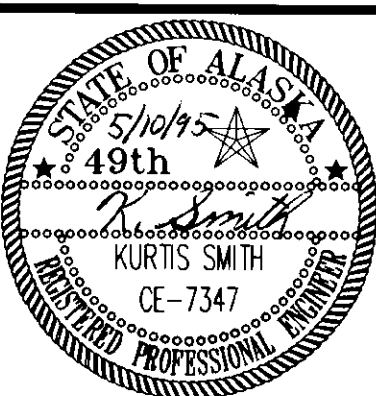
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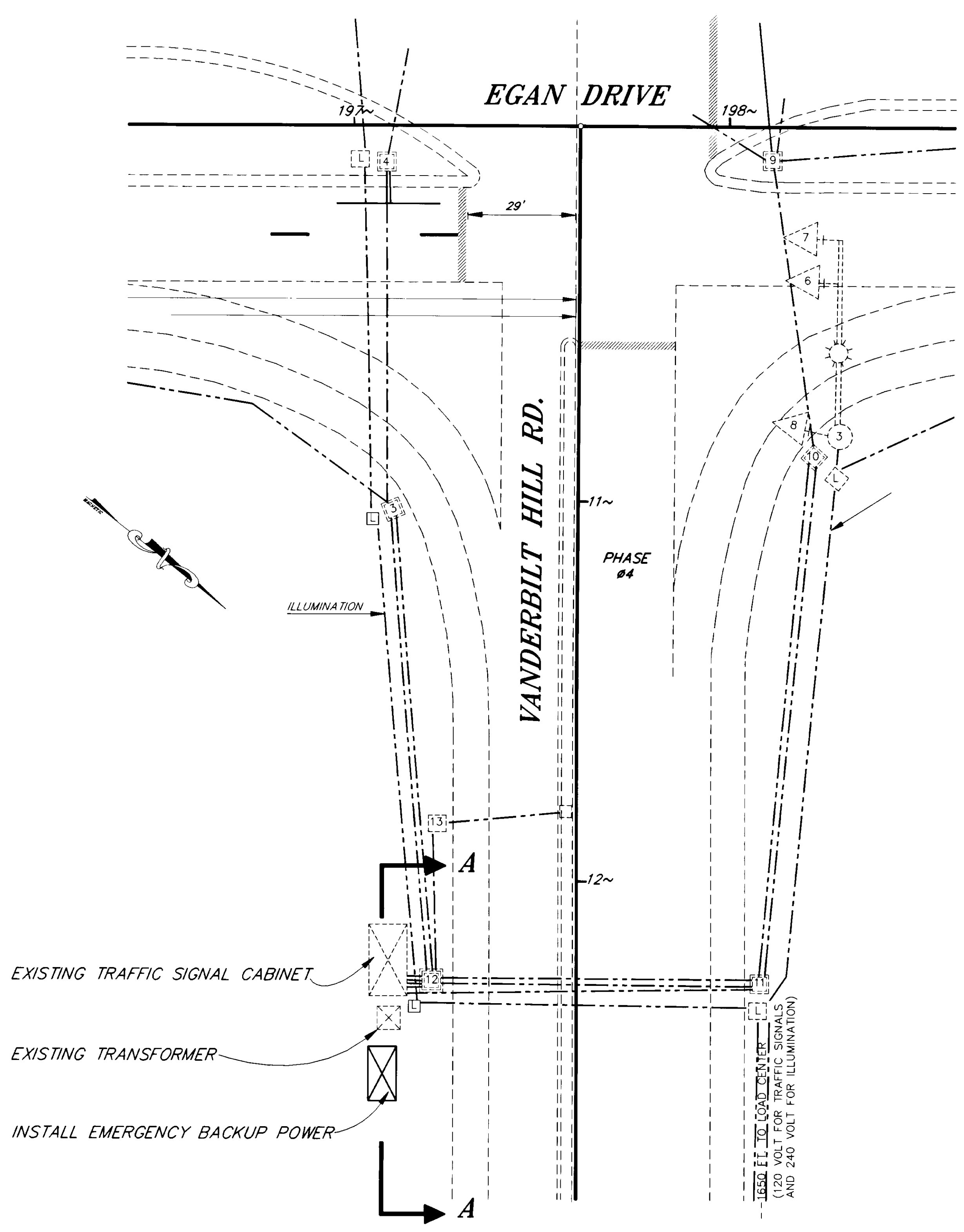
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EMERGENCY POWER  
FHWA NO. STPG-0005(158)-71625  
**TENTH ST. AT EGAN DR.**  
**SALMON CR. AT EGAN DR.**

ALASKA

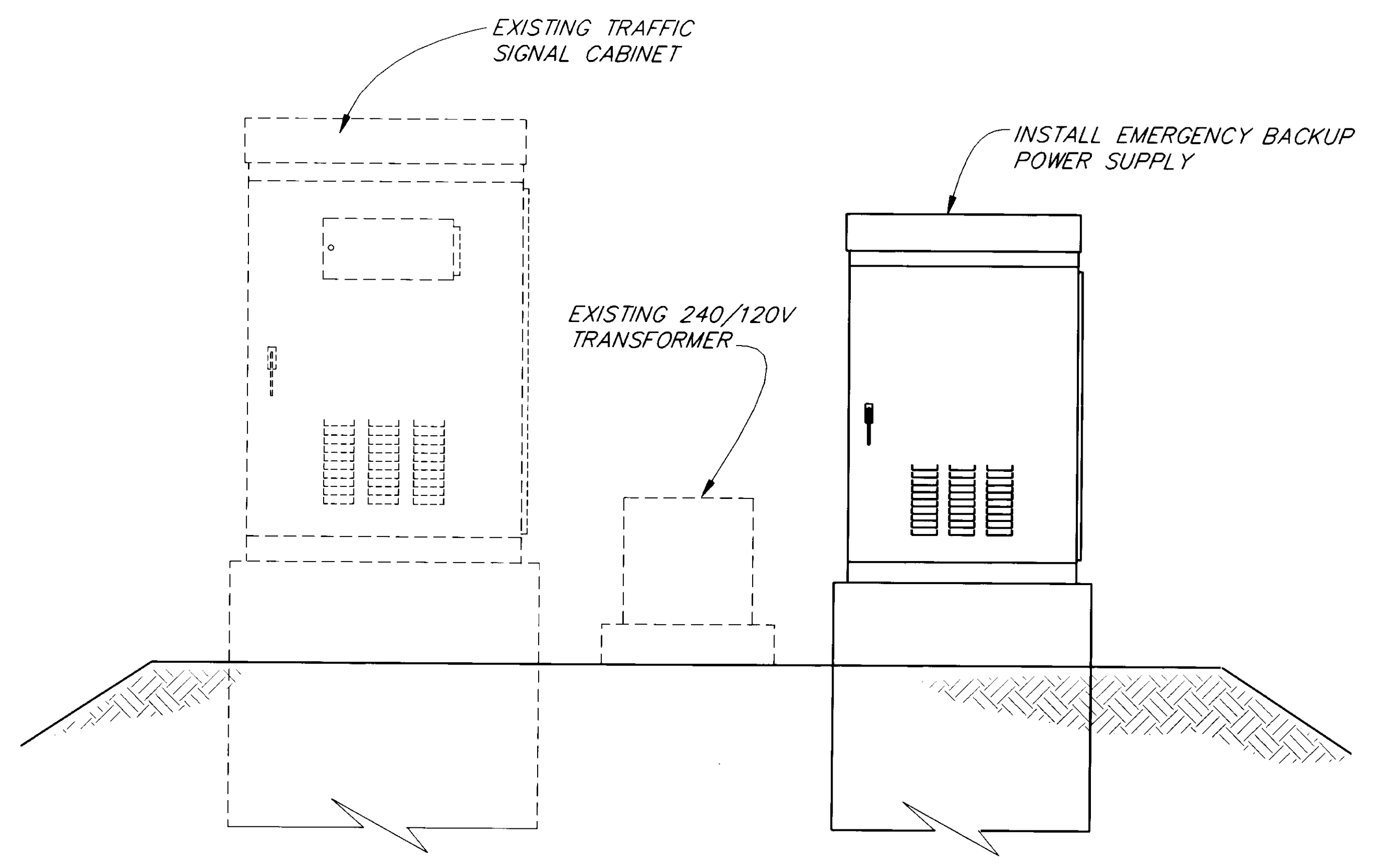
DESIGNED BY:  
JON AHLGREN  
DRAWN BY:  
C. ANDERSON  
CHECKED BY:  
K. SMITH

PROJECT NO.  
71625  
DATE:  
APRIL, 1995  
SHEET 5 OF 10





**PLAN**  
**VANDERBILT HILL RD. AT EGAN DR.**



**SECTION A-A**

AS BUILT  
 BY: KK DATE: 2/97

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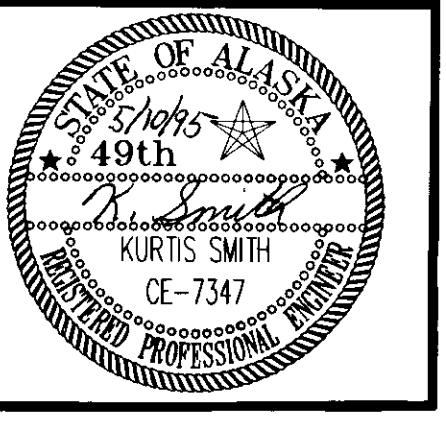
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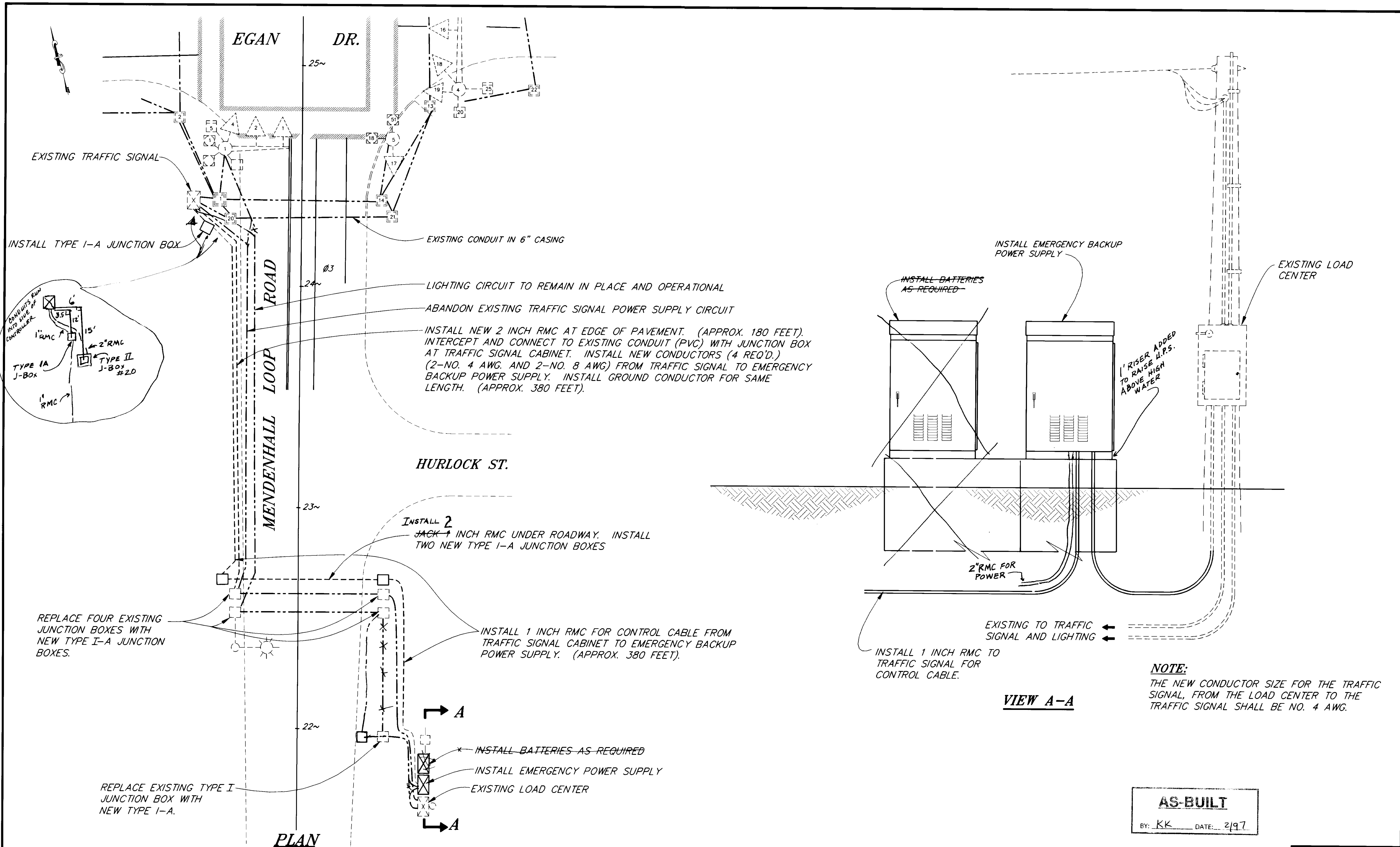
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 EMERGENCY POWER  
 FHWA NO. STPG-000S(158)-71625  
**VANDERBILT HILL AT EGAN DR.**

ALASKA

NOTE: DO NOT SCALE FROM THESE PLANS—USE DIMENSIONS

DESIGNED BY: <b>JON AHLGREN</b>	PROJECT NO. <b>71625</b>
DRAWN BY: <b>C. ANDERSON</b>	DATE: <b>APRIL, 1995</b>
CHECKED BY: <b>K. SMITH</b>	SHEET <b>6</b> OF <b>10</b>





**PLAN  
MENDENHALL LOOP RD. AT EGAN DR.**

**VIEW A-A**

**NOTE:**  
THE NEW CONDUCTOR SIZE FOR THE TRAFFIC SIGNAL, FROM THE LOAD CENTER TO THE TRAFFIC SIGNAL SHALL BE NO. 4 AWG.

**AS-BUILT**  
BY: KK DATE: 2/97

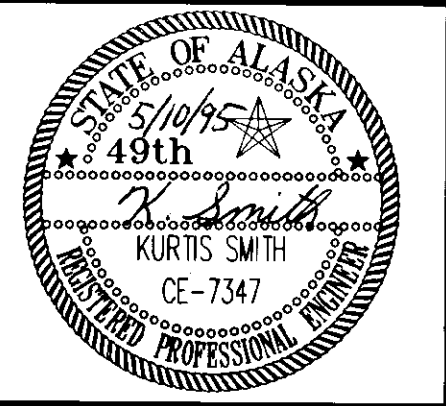
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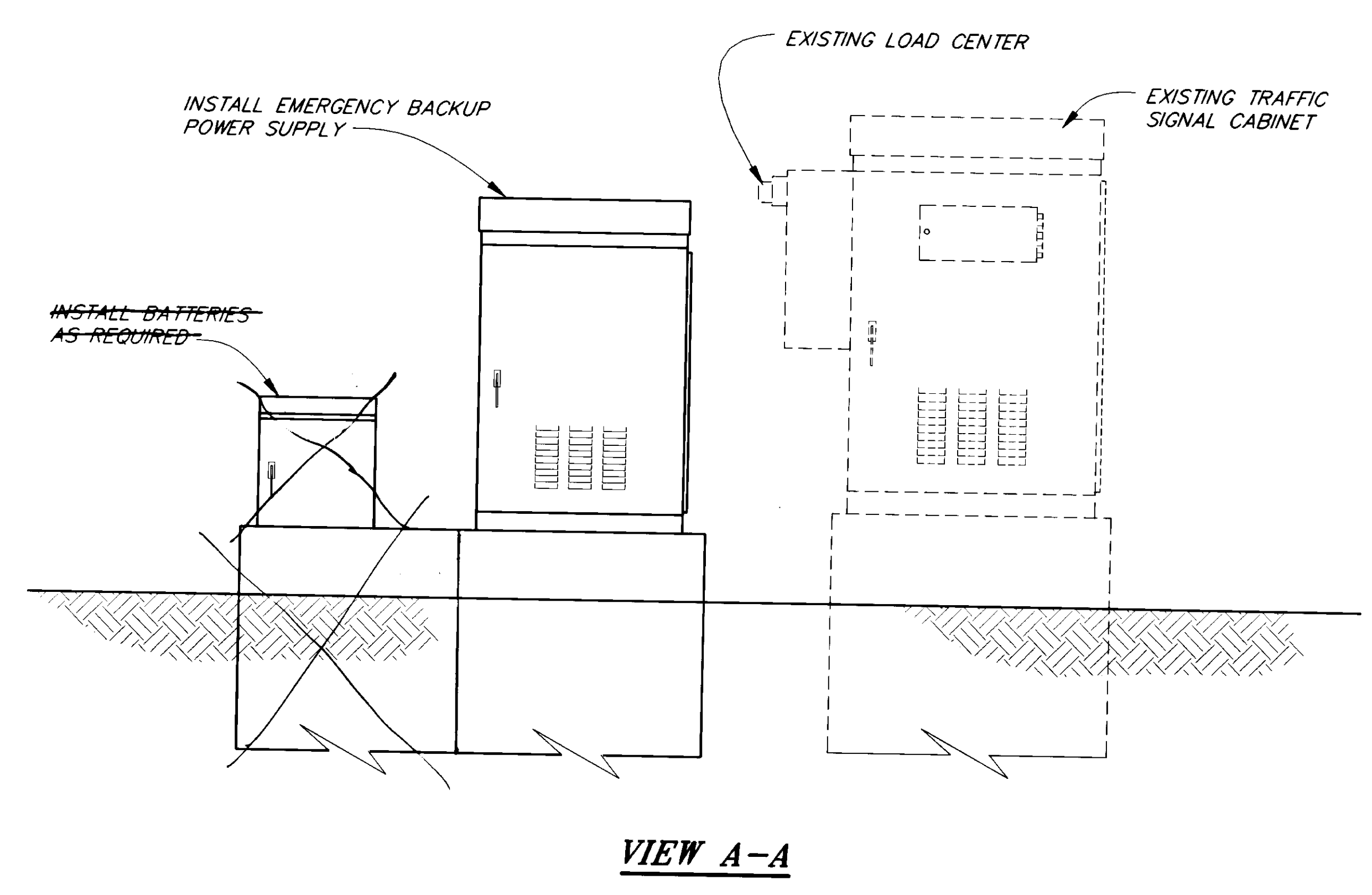
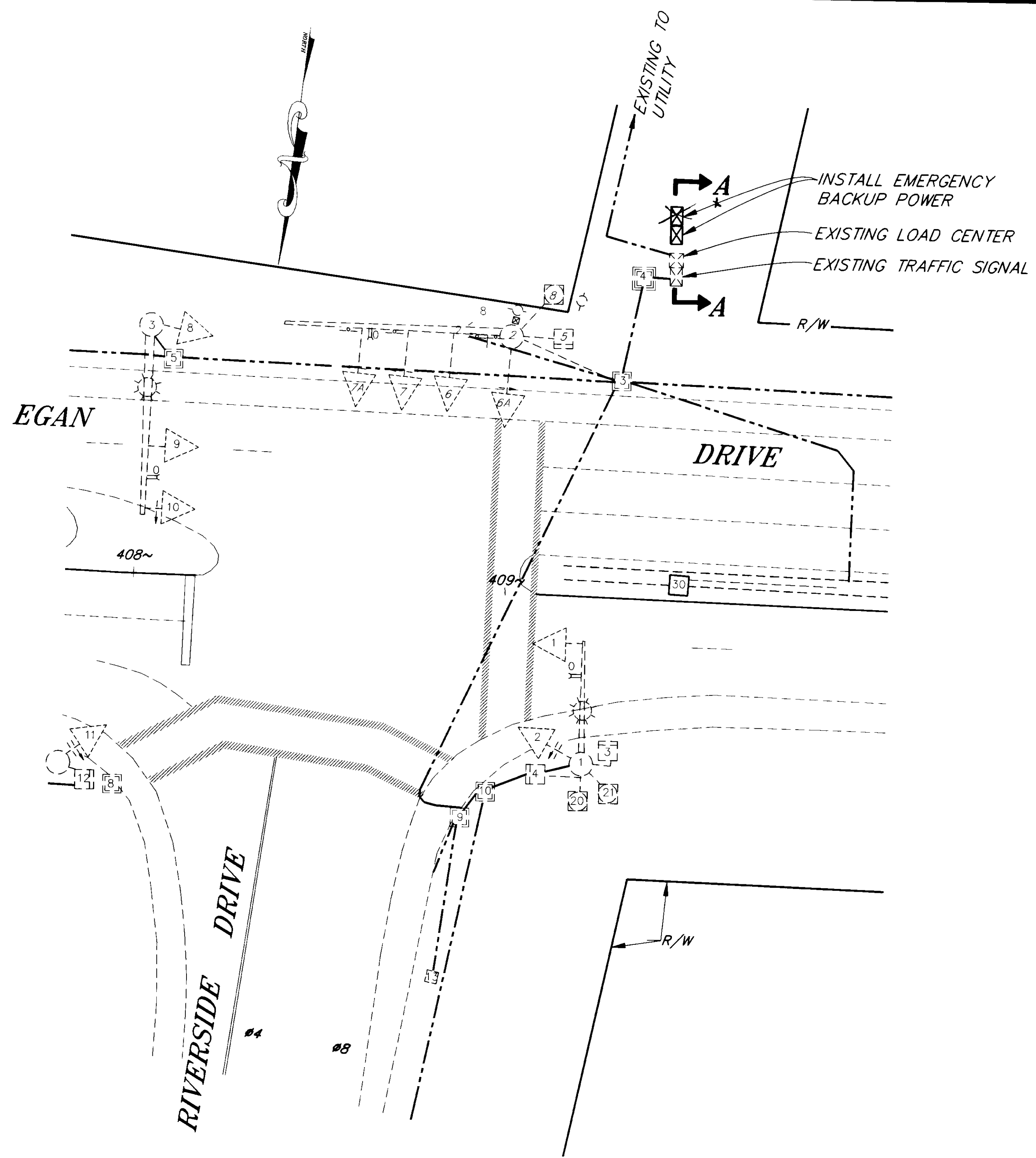
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JUNEAU  
TRAFFIC SIGNAL SYSTEMS  
EMERGENCY POWER  
ALASKA  
FHWA NO. STPG-000S(158)-71625  
**MENDENHALL LOOP RD. AT EGAN DR.**

NOTE: DO NOT SCALE FROM THESE PLANS-USE DIMENSIONS

DESIGNED BY: <u>JON AHLGREN</u>	PROJECT NO. <u>71625</u>
DRAWN BY: <u>C. ANDERSON</u>	DATE: <u>APRIL, 1995</u>
CHECKED BY: <u>K. SMITH</u>	SHEET <u>7</u> OF <u>10</u>





**PLAN**  
**RIVERSIDE DR. AT EGAN DR.**

**AS-BUILT**  
 BY: *KK* DATE: *2/97*

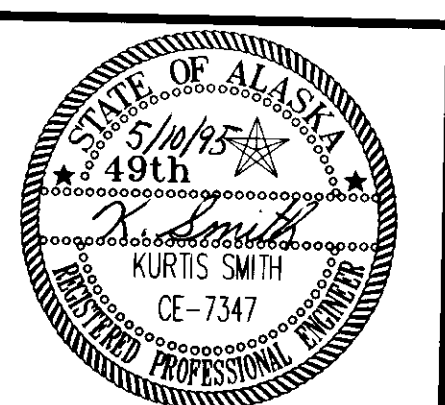
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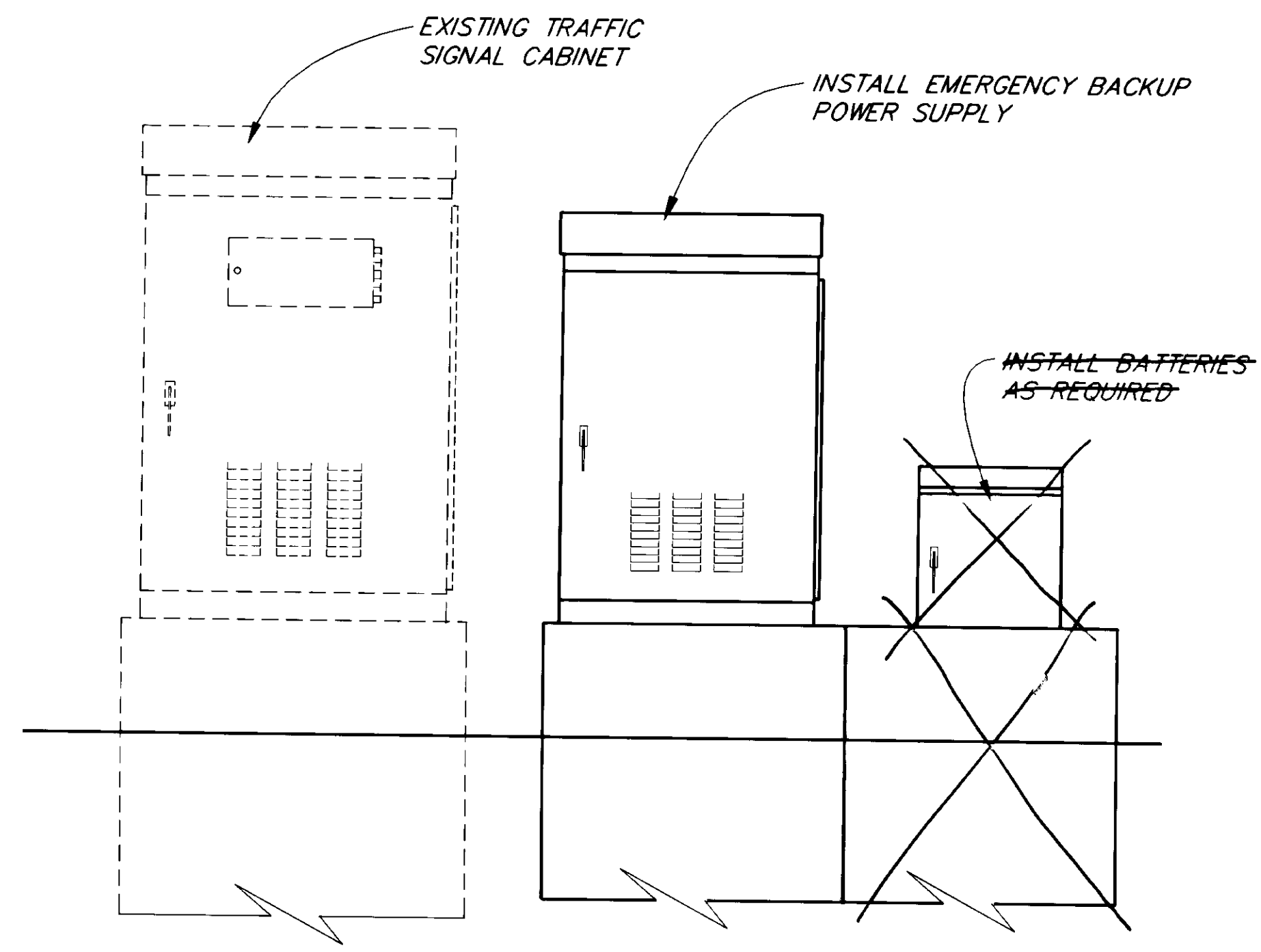
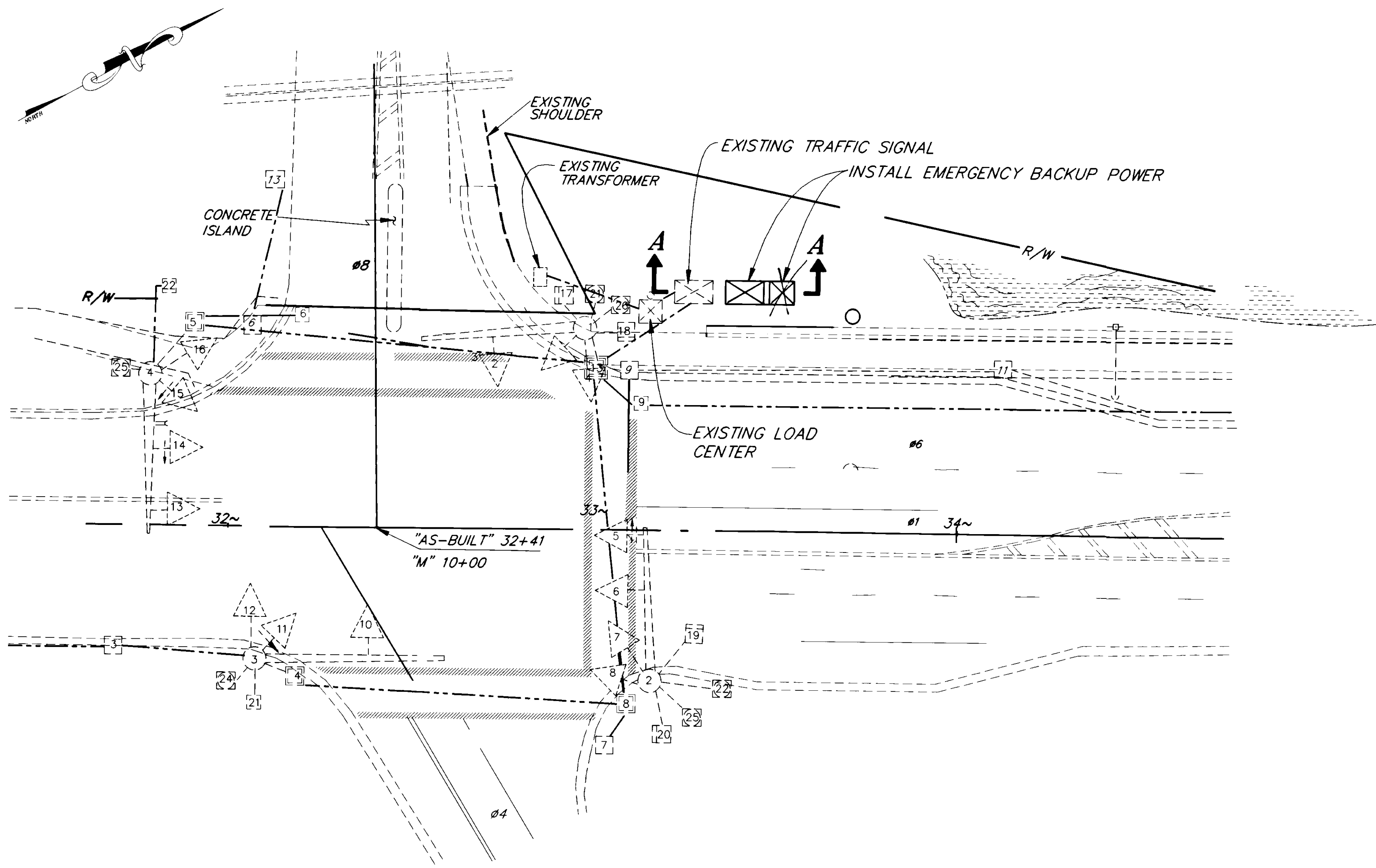
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JUNEAU  
 TRAFFIC SIGNAL SYSTEMS  
 EMERGENCY POWER  
 FHWA NO. STPG-000S(158)-71625  
 ALASKA  
**RIVERSIDE DR. AT EGAN DR.**

DESIGNED BY: <i>JON AHLGREN</i>	PROJECT NO. 71625
DRAWN BY: <i>C. ANDERSON</i>	DATE: APRIL, 1995
CHECKED BY: <i>K. SMITH</i>	SHEET 8 OF 10





**VIEW A-A**

**PLAN**  
**MENDENHALL LOOP RD. AT MALL/ATLIN ST.**

**AS-BUILT**  
 BY: KK DATE: 2/97

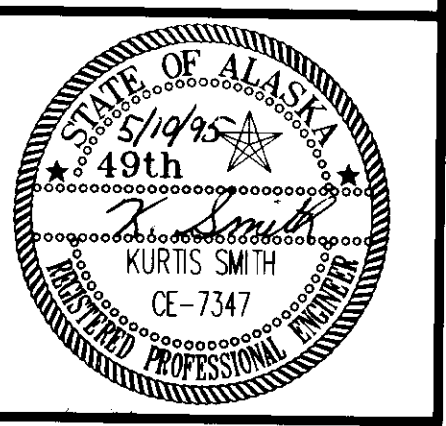
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 EMERGENCY POWER  
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 ALASKA  
**MENDENHALL LOOP RD. AT MALL/ATLIN ST.**

DESIGNED BY: JON AHLGREN	PROJECT NO. 71625
DRAWN BY: C. ANDERSON	DATE: APRIL, 1995
CHECKED BY: K. SMITH	SHEET 9 OF 10



**LEGEND**

- ..... SIGN
- ..... CONE
- ..... DRUM
- ..... TYPE III BARRICADE
- ..... FLAGGING STATION

**FORMULAS FOR L (TAPER LENGTH)**

40 MPH OR LESS  $L = \frac{W \times S^2}{60}$

45 MPH OR GREATER  $L = W \times S$

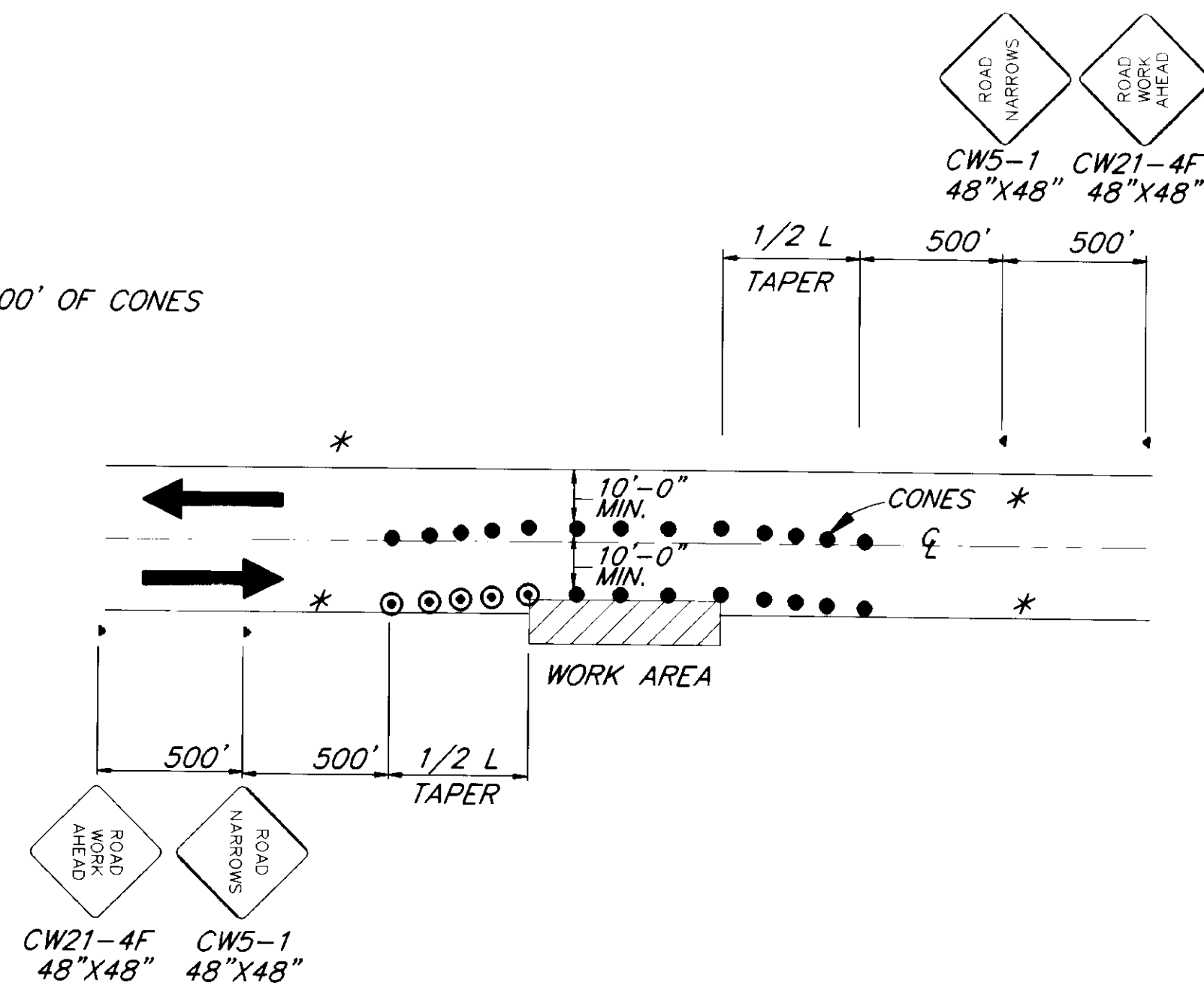
WHERE W= WIDTH OF OFFSET  
S= POSTED SPEED LIMIT  
OR ANTICIPATED  
OPERATING SPEED

DRUM OR CONE SPACING = S ( IN FEET)

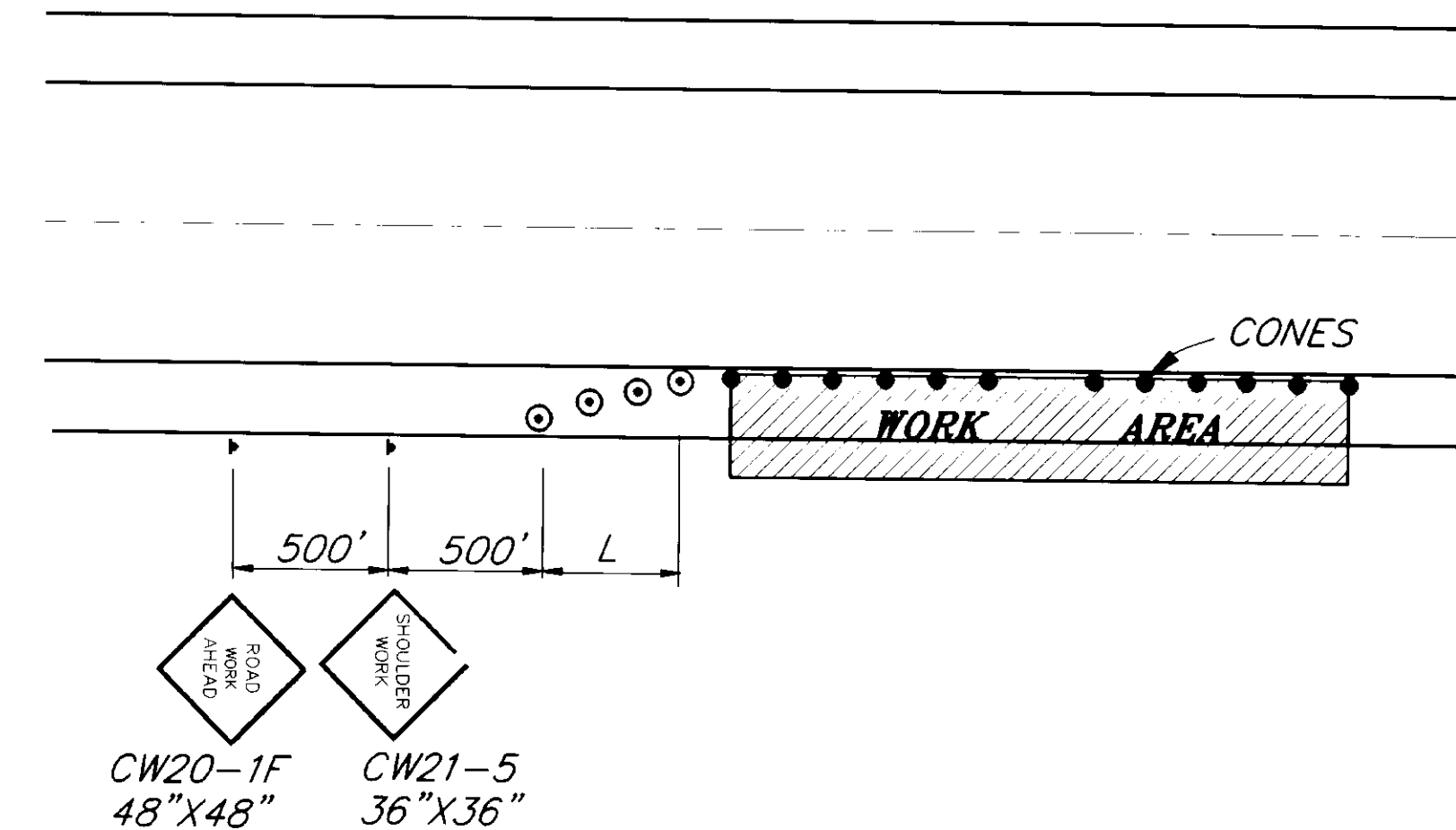
**TRAFFIC CONTROL NOTES**

1. TRAFFIC SIGNAL SHUTDOWNS ARE NOT ALLOWED EXCEPT FOR MOMENTARILY (LESS THAN ONE MINUTE) CONNECTING AND DISCONNECTING A GENERATOR OR THE NEW EMERGENCY POWER SUPPLY. MOMENTARY SHUTDOWNS ARE NOT ALLOWED FROM 6:30 AM TO 8:30 AM AND FROM 11:00 AM TO 7:00 PM.
2. NO LANE CLOSURES ON EGAN DRIVE ARE ALLOWED INBOUND FROM 7:00 AM TO 9:00 AM AND OUTBOUND FROM 3:00 PM TO 6:00 PM. NO LANE CLOSURES ON OTHER STREETS ARE ALLOWED DURING THE ABOVE TIMES.

\* NO PARKING WITHIN 200' OF CONES



NOTE: IF ONLY ONE LANE IS EFFECTED BY ROAD WORK (THAT IS, THE CONES ALONG THE WORK AREA ARE NO CLOSER THAN 10' TO CENTERLINE) THE CENTERLINE CONES FOR THE OPPOSING LANE MAY BE DELETED.



**AS-BUILT**  
BY: KK DATE: 2/97

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**DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES**  
SOUTHEAST REGION DESIGN & CONSTRUCTION

JUNEAU

TRAFFIC SIGNAL SYSTEMS  
EMERGENCY POWER  
ALASKA  
FHWA NO. STPG-000S(158)-71625  
**TRAFFIC CONTROL PLAN**

DESIGNED BY: <u>JON AHLGREN</u>	PROJECT NO. <u>71625</u>
DRAWN BY: <u>C. ANDERSON</u>	DATE: <u>APRIL, 1994</u>
CHECKED BY: <u>K. SMITH</u>	SHEET <u>10</u> OF <u>10</u>

