

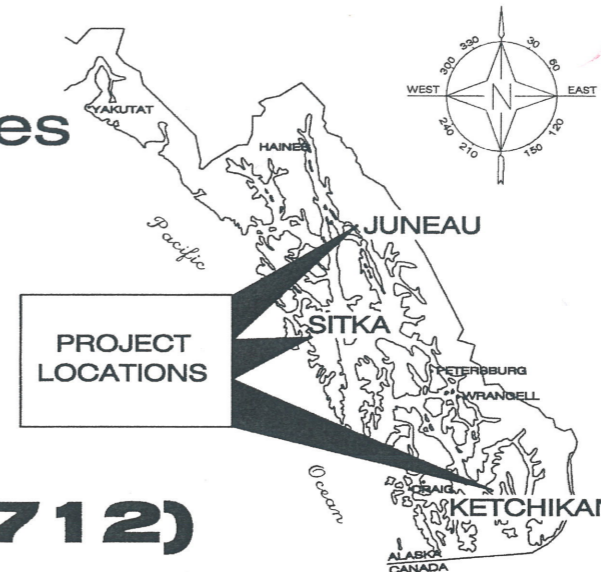
State of Alaska

Department of Transportation and Public Facilities
Southeast Region

SEA AREAWIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

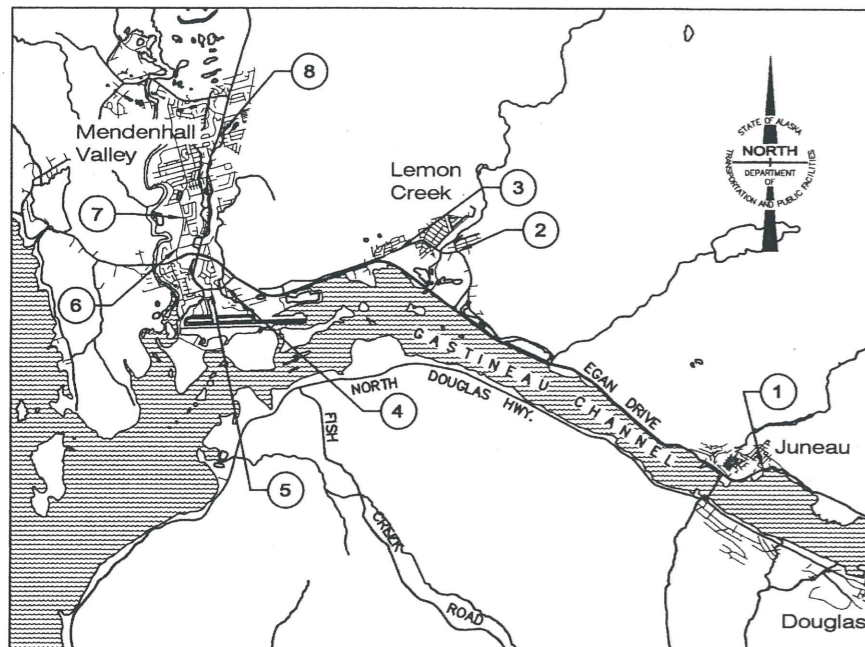
PROJECT NO. 69192

FEDERAL PROJECT NO. HHE-000S (712)

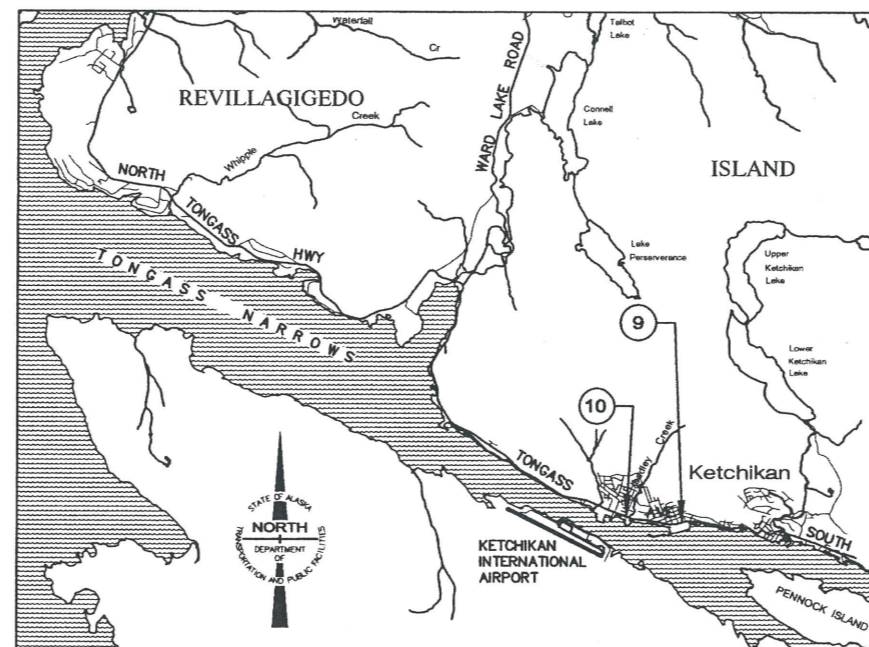


INDEX	
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
C1	ESTIMATE OF QUANTITIES
D1	ELECTRICAL SUMMARIES
Q1-Q2	MAIN AND EGAN
Q3-Q4	GLACIER AND ANKA
Q5-Q7	GLACIER AND SUNNY POINT
Q8-Q9	GLACIER AND JORDAN
Q10-Q11	GLACIER AND SHELL SIMMONS
Q12-Q14	RIVERSIDE AND VINTAGE
Q15	RIVERSIDE AND RIVERWOOD
Q16-Q17	MENDENHALL LOOP AND VALLEY BLVD
Q18-Q19	S TONGASS AND WASHINGTON
Q20-Q22	S TONGASS AND CARLANNA LAKE RD
Q23-Q25	HALIBUT POINT RD AND KATLIAN
S1-S2	TRAFFIC CONTROL PLANS
T1	ESCP DETAILS

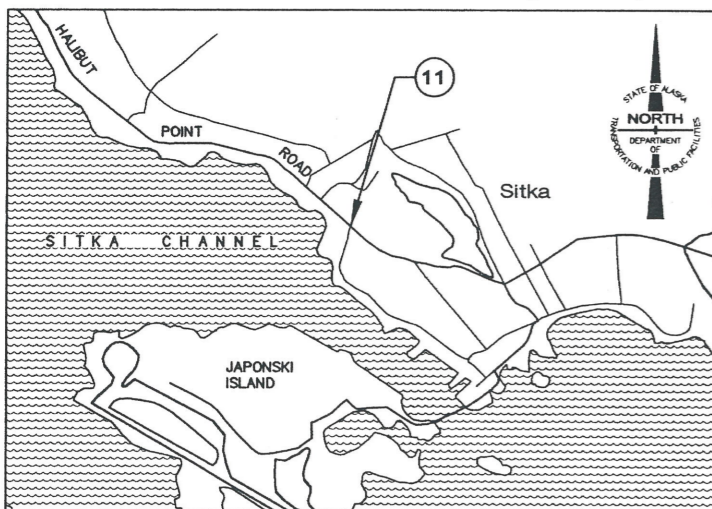
NOTE: As-built sheets D-1 to T1 by Contractor per Section 660



Juneau Vicinity Map



Ketchikan Vicinity Map



Sitka Vicinity Map

TRAFFIC SIGNAL LOCATIONS	
SIGNAL NO.	LOCATION
JUNEAU	
1	MAIN AND EGAN
2	GLACIER HWY AND ANKA
3	GLACIER HWY AND SUNNY POINT
4	GLACIER HWY AND JORDAN
5	GLACIER HWY AND SHELL SIMMONS
6	RIVERSIDE AND VINTAGE
7	RIVERSIDE AND RIVERWOOD
8	MENDENHALL LOOP AND VALLEY BLVD
KETCHIKAN	
9	S. TONGASS AND WASHINGTON
10	S. TONGASS AND CARLANNA LAKE RD
SITKA	
11	HALIBUT POINT RD AND KATLIAN

As-Built Plans *John D. Kajdan 2/19/15*
Contractor: Ever Electric Inc. dba Island Electric
Start: 8/8/2012 End: 12/11/2013
Project Engineers: Don Newell - Sitka, Mandi Bolshakoff - Ketchikan, John Kajdan - Juneau

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:
 C-03.10 T-30.10
 L-24.00 T-35.00

PATH: Q:\SEA\69192\Planset\A1_Tsht.dwg
Tue, 09/Aug/11 09:13AM

PLOT:

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

APPROVED: *Chuck Cordea* 9/23/11
REGIONAL PRE-CONSTRUCTION ENGINEER
CHUCK CORDEA, P.E. DATE

APPROVED: *Albert H. Clough* 9-23-2011
DIRECTOR, SOUTHEAST REGION
ALBERT H. CLOUGH, CPG DATE

CERTIFIED TRUE & CORRECT AS-BUILT OF ACTUAL FIELD CONDITION:
John D. Kajdan 2/27/15
CONSTRUCTION PROJECT MANAGER DATE

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	HHE-000S (712) ~ 69192	2011	A-1	31

No.	DATE	DESCRIPTION
1	10/31/11	ITEM 661(1) ADDED

SEA AREAWIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

ESTIMATE OF QUANTITIES

ESTIMATE OF QUANTITIES			
ITEM NO.	PAY ITEM	PAY UNIT	QUANTITY
640 (1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED
640 (5)	WORKER MEALS AND LODGING, OR PER DIEM IN KETCHIKAN	LUMP SUM	ALL REQUIRED
640 (6)	WORKER MEALS AND LODGING, OR PER DIEM IN SITKA	LUMP SUM	ALL REQUIRED
641 (1)	EROSION AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQUIRED
641 (3)	TEMPORARY EROSION AND POLLUTION CONTROL	LUMP SUM	ALL REQUIRED
641 (4)	TEMPORARY EROSION AND POLLUTION CONTROL AMENDMENTS	CONTINGENT SUM	ALL REQUIRED
641 (5)	EROSION, SEDIMENT AND POLLUTION CONTROL ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED
643 (2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQUIRED
643 (15)	FLAGGING	CONTINGENT SUM	ALL REQUIRED
643 (23)	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED
643 (25)	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQUIRED
660 (7)	TEMPORARY SIGNAL SYSTEM COMPLETE	LUMP SUM	ALL REQUIRED
660 (16)	SIGNAL CABINETS SHOP TESTING	CONTINGENT SUM	ALL REQUIRED
660 (17)	JUNEAU TRAFFIC SIGNALS FYA MODIFICATION COMPLETE	LUMP SUM	ALL REQUIRED
660 (18)	KETCHIKAN TRAFFIC SIGNAL FYA MODIFICATION COMPLETE	LUMP SUM	ALL REQUIRED
660 (19)	SITKA TRAFFIC SIGNALS FYA MODIFICATION COMPLETE	LUMP SUM	ALL REQUIRED
661 (1)	LOAD CENTER, TYPE 1	EACH	2
<i>Extra Work Items</i>			
<i>660(20)</i>	<i>New Cable at Riverside and Vintage</i>	<i>Lump Sum</i>	<i>All Required</i>
<i>660(21)</i>	<i>Uninterruptable Power Supply</i>	<i>Lump Sum</i>	<i>All Required</i>
<i>660(22)</i>	<i>Sitka Extra Work</i>	<i>Lump Sum</i>	<i>All Required</i>
<i>660(23)</i>	<i>Traffic Control for Ketchikan UPS</i>	<i>Lump Sum</i>	<i>All Required</i>
<i>660(24)</i>	<i>Provide Signal Testing Facility</i>	<i>Lump Sum</i>	<i>All Required</i>
<i>660(25)</i>	<i>Ketchikan FYA UPS Heater Receptical</i>	<i>Lump Sum</i>	<i>All Required</i>

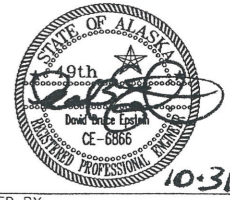
* * * * *

* Items not used.

As-Built Drawing

JSK 2/19/15
Project Engineer Date

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE

DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION
SEA AREAWIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

ESTIMATE OF QUANTITIES

PROJECT DESIGNATION NUMBER

HHE-000S (712)

STATE	YEAR
ALASKA	2011

SHEET NUMBER	TOTAL SHEETS
C1	31

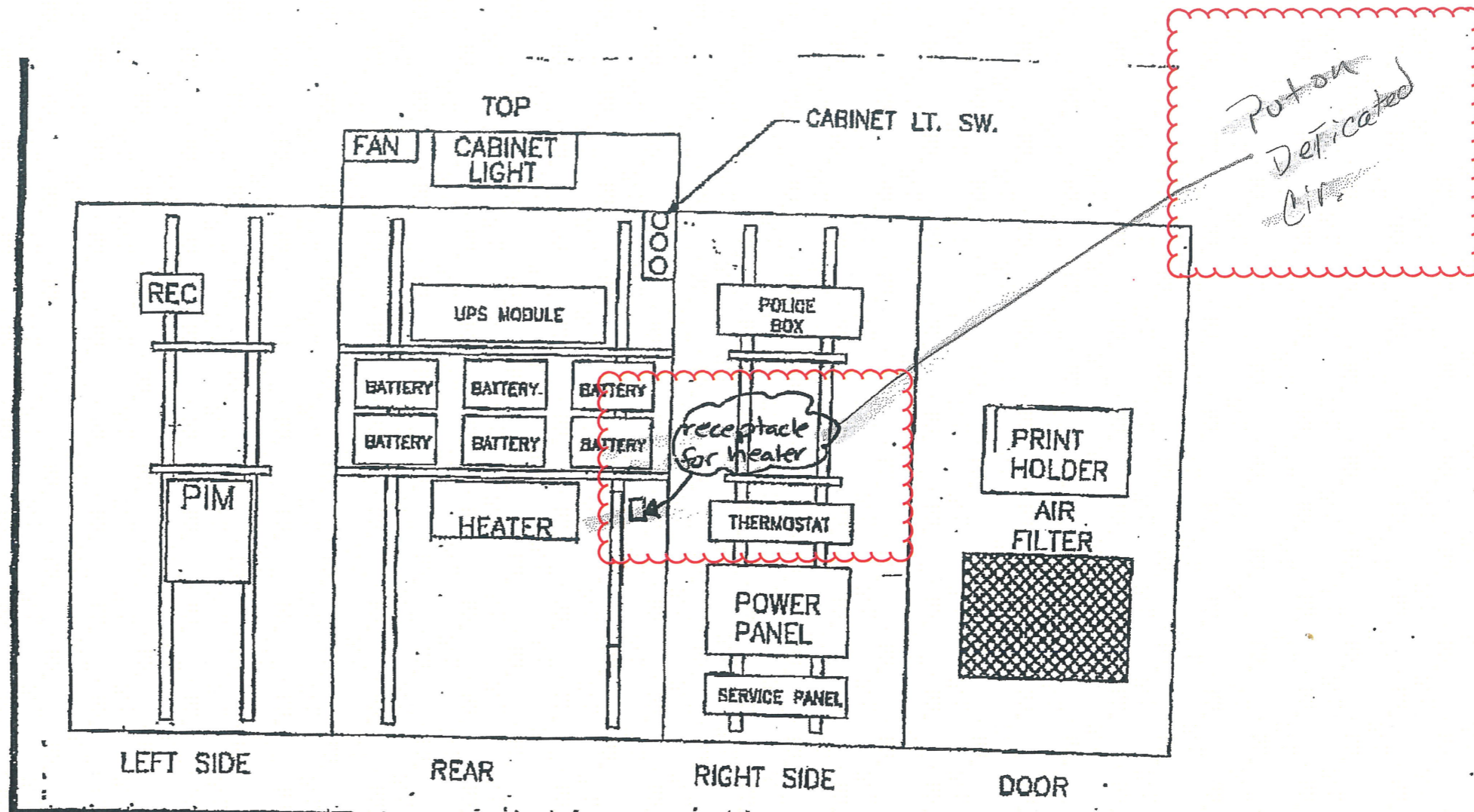
Project 69192 Southeast Areawide Flashing Yellow Arrow (FYA) Signal Upgrades
 Change Order No. 2
 Attachment #01

P-1

4252519734

US Traffic NW

Jun 21 02 02:02P



Jun 24 02 05:05P RTSS

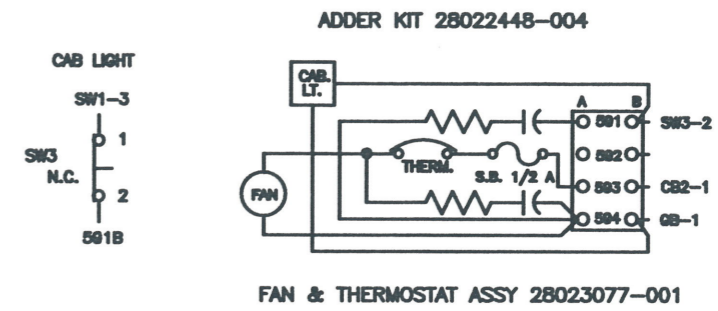
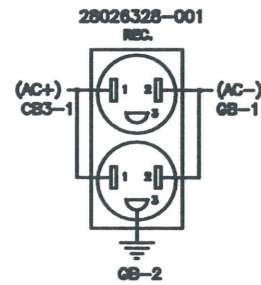
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P-2

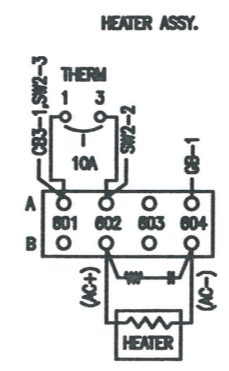
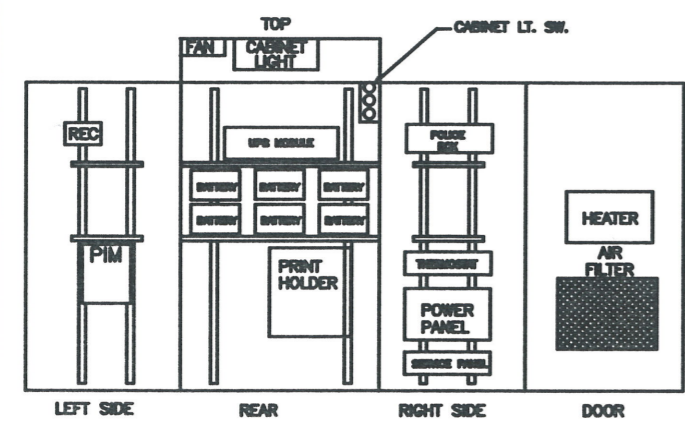
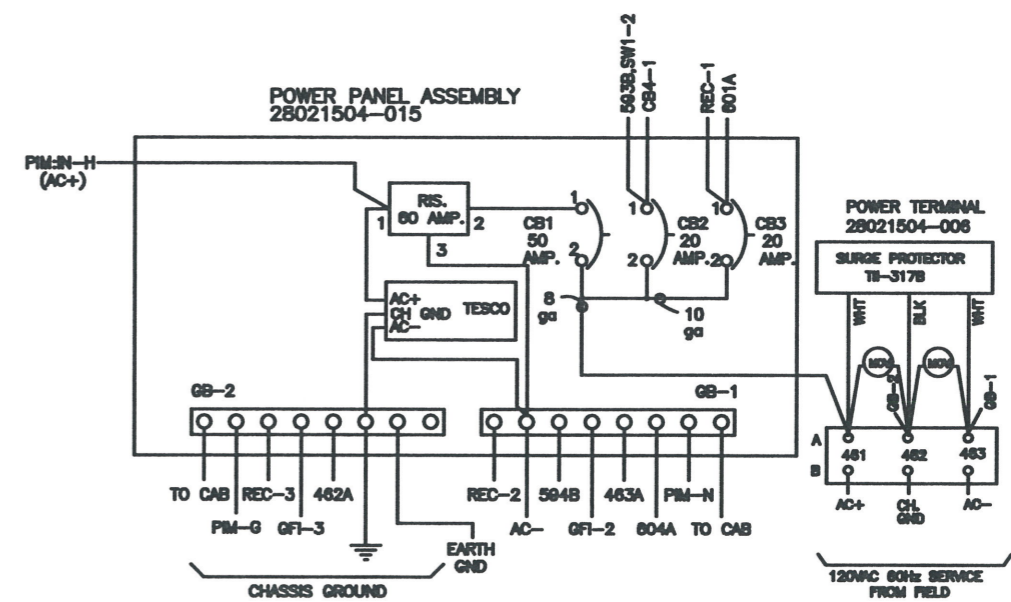
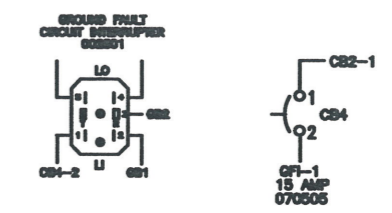
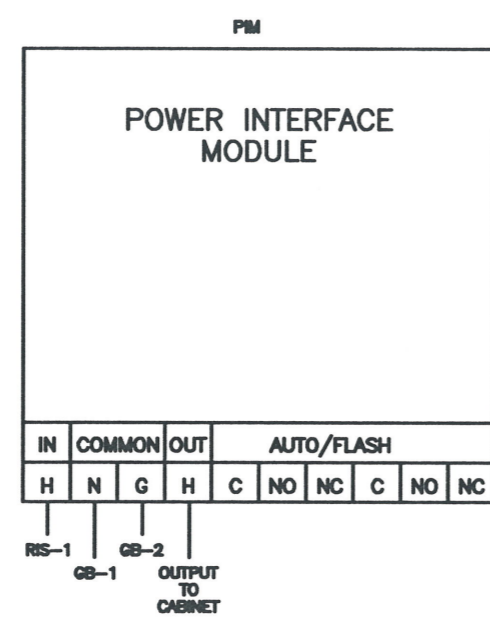
US Traffic Corp.
 Type "M" Cabinet Assembly
 Uninterruptable Power Supply
 Submitted for Project:
 Alaska DOT Uninterrupted Power Supply Upgrades
 Dated 10/20/02 ~~Ray Henry Schmitt~~

As-Built Drawing

JSK 2/19/15
 Project Engineer Date



Details used for Ketchikan
UPS added by Change Order 1



As-Built Drawing

JSK
Project Engineer
2/19/15
Date

AUTO CAD & PRINT UPDATE / RJ		12-18-01	
PRODUCTION REL.		8/17/01	
REV.	DESCRIPTIONS	DATE	APPROVED
	NAME	DATE	
DRAWN	TROND	8/17/01	
CHECK			
ENGINEER	J.WISCO	8/17/01	
APPROV			
QTY REQD	NEED ASSEMBLY		
DWG. # 99-335-02		SD. # S053300	

U.S. TRAFFIC CORPORATION
Manufacturers & Systems Engineers
9805 JOHN STREET, SANTA FE SPRINGS, CA 90670

ALASKA DOT - JUNEAU
NORTH TONGAS HWY & WALMART

AS-BUILTS

SIGNAL HEAD SUMMARY TABLE

SIGNAL NO.	EXISTING SIGNAL HEAD NO.	NEW SIGNAL HEAD NO.	POLE NO.	PHASE	MOUNTING TYPE
1	6	6, 16	3	1 AND 6	SEE NOTES 3 AND 4
1	11	11	4	1	POST MOUNT T-1
2	9	9, 19	2	1 AND 6	SEE NOTES 3 AND 4
2	6, 7	6, 7	2	1, 2	SIDE MOUNT S-2
2	1	1, 21	1	2 AND 5	SEE NOTES 3 AND 4
2	X, 13	X, 13	4	5, 6	SIDE MOUNT S-2
3	52	52	4	5	POST MOUNT T-1
3	51	51, 22	1	2 AND 5	SEE NOTES 3 AND 4
4	2	2, 22	1	4, 5	POST MOUNT T-2
4	6	5, 6	2	2 AND 5	SEE NOTES 3 AND 4
4	N/A	21	4	1	POST MOUNT T-1
4	15	14, 15	3	1 AND 6	SEE NOTES 3 AND 4
5	2	2, 22	1	5, 8	SIDE MOUNT S-2
5	6	5, 6	3	2 AND 5	SEE NOTES 3 AND 4
5	11	11, 21	4	1, 4	SIDE MOUNT S-2
5	15	14, 15	5	1 AND 6	SEE NOTES 3 AND 4
6	2, 3	2, 3	1	6, 7	SIDE MOUNT S-2
6	6, 7	6, 7	3	4 AND 7	SEE NOTES 3 AND 4
6	10, 11	10, 11	3	5, 4	SIDE MOUNT S-2
6	12, 24	12, 24	4	2 AND 5	SEE NOTES 3 AND 4
6	13, 14	13, 14	4	2 AND 3	SIDE MOUNT S-2
6	1, 23	1, 23	1	1 AND 6	SEE NOTES 3 AND 4
6	18	17, 18	6	3 AND 8	SEE NOTES 3 AND 4
6	22	22	6	1	SIDE MOUNT S-1
7	1	1, 21	1	2 AND 5	SEE NOTES 3 AND 4
7	15	15	5	5	SIDE MOUNT S-2
7	10	10, 20	4	1 AND 6	SEE NOTES 3 AND 4
7	6	6	3	1	SIDE MOUNT S-2
8	10, 11	10, 11	4	5 AND 8	SIDE MOUNT S-2
8	1	1, 21	1	2 AND 5	SEE NOTES 3 AND 4
8	4, 5	4, 5	2	1 AND 4	SIDE MOUNT S-2
8	6	6, 26	3	1 AND 6	SEE NOTES 3 AND 4
9	5, 6	5, 6	2	2 AND 5	SEE NOTES 3 AND 4
9	2, 3	2, 3	1	4 AND 5	SIDE MOUNT S-2
9	13	13, 23	5	1 AND 6	SEE NOTES 3 AND 4
9	12	12	4	1	SIDE MOUNT S-1
10	51	51, 22	3	2 AND 5	SEE NOTES 3 AND 4
10	52	52	5	5	SIDE MOUNT S-1
11	4	4, 14	1	2 AND 5	SEE NOTES 3 AND 4
11	9	9, 13	2	1 AND 6	SEE NOTES 3 AND 4
11	10, 15	10, 15	5	4, 5	SIDE MOUNT S-2
11	6, 16	6, 16	4	1, 6	SIDE MOUNT S-2

- NOTES:
 1. SIGNAL NUMBER CORRESPONDS WITH SHEET A1.
 2. SEE STANDARD DRAWING T-30.10 FOR MOUNTING TYPE.
 3. ASTROBRAC STELLAR STAINLESS 3 SECTION 96" CABLE MOUNT AS-Ø125-3-96 FOR 3 SECTION HEAD.
 4. ASTROBRAC STELLAR STAINLESS 4 SECTION 96" CABLE MOUNT AS-Ø125-4-96 FOR 4 SECTION HEAD.

SUMMARY OF LOAD CENTER: 1

LOAD CENTER TYPE 1

LOCATION DATA: JNU-VINTAGE AND RIVERSIDE SIT-KATLIAN AND HALIBUT PT. RD.

LOAD CENTER:
 POWER SOURCE: EXISTING TRANSFORMER
 PHOTOELECTRIC CONTROL: YES

SERVICE VOLTAGE 1 PHASE, 3-WIRE, 120/240 VOLTS, 60 Hz.
 SUPPLIED BY AEL&P OR CBS ELECTRIC DEPARTMENT
 INTERRUPTING CAPACITY OF CIRCUIT BREAKERS-SERIES RATED 10,000 AIC
 PROVIDE METER SOCKET? YES SERVICE AMPS 125A

MAIN BREAKER A: 120/240 VOLT, 2 POLE, 100 AMPERES

LOAD PANEL A SUMMARY

CIRCUIT NUMBER	DESCRIPTION	KVA LOAD	BREAKER	
			AMPS	POLES
A1	TRAFFIC SIGNAL SYSTEM	5.54	60A	1
A2	FAN, LIGHT AND HEATER	1.44	20A	1
A3	SPARE	-	20A	1
A4	SPARE	-	20A	1
A5	SPARE	-	30A	1
TOTAL DEMAND LOAD:		6.98		

MAIN BREAKER B: 120/240 VOLT, 2 POLE, 100 AMPERES

LOAD PANEL B SUMMARY

CIRCUIT NUMBER	DESCRIPTION	KVA LOAD	BREAKER	
			AMPS	POLES
B1	LIGHTING CIRCUIT	1.2	20A	2
B2	SPARE	-	20A	2
B3	SPARE	-	20A	2
B4	SPARE	-	20A	2
TOTAL DEMAND LOAD:		1.2		

ELECTRICAL MATERIAL SUMMARY

LOCATION	SIGNAL NO.	MMU	CONTROLLER	CABINET	CABINET FOUNDATION	LOAD CENTER AND FOUNDATION	NEW CONDUCTOR AND ESTIMATE OF QUANTITY	3-SEC	FYA 4-SEC
JUNEAU	1	1	1	1	0	0	1-7C#14 (300')	1	2
JUNEAU	2	1	1	1	0	0	1-7C#14 (300'), 1-5C#14 (500')	4	4
JUNEAU	3	0	0	0	0	0	0	1	2
JUNEAU	4	1	1	1	0	0	2-5C#14 (700'), 2-7C#14 (600')	3	4
JUNEAU	5	1	1	1	0	0	2-7C#14 (600'), 2-5C#14 (800')	4	4
JUNEAU	6	1	1	1	0	1	0	7	8
JUNEAU	7	0	0	0	0	0	2-7C#14 (600')	2	4
JUNEAU	8	1	1	1	0	0	2-7C#14 (600')	4	4
KETCHIKAN	9	2	2	1	0	0	2-7C#14 (2,500')	3	4
KETCHIKAN	10	1	1	1	1	0	1-7C#14 (600')	1	2
SITKA	11	1	1	1	1	1	2-5C#14 (600')	4	4

As-Built Drawing

JSK 2/19/15
 Project Engineer Date

ADDENDUM NUMBER 2

ATTACHMENT NUMBER 4

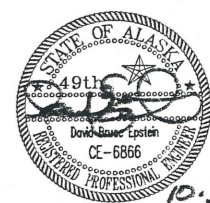
RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	10/31/11	ADD CONDUIT FOR Q15 TO ELEC. SUMM.

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

ELECTRICAL SUMMARIES

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE
 DRAWN/REVISED BY: D. STEVENS

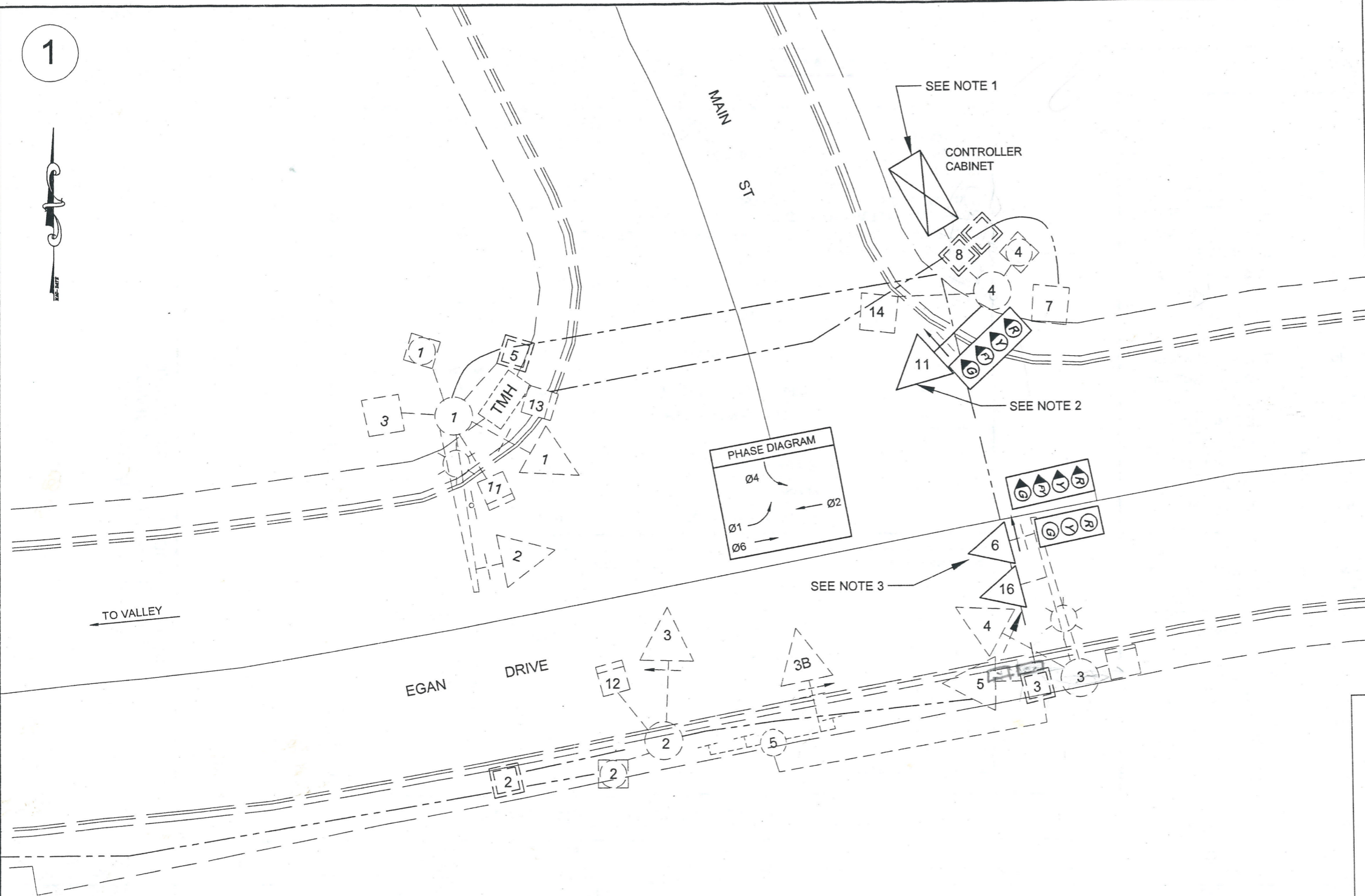
STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION
 SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

ELECTRICAL SUMMARIES

PROJECT DESIGNATION NUMBER HHE-000S (712)

STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
D1	31

1



SUMMARY OF WORK

1. INSTALL NEW EAGLE EPAC M52 TRAFFIC SIGNAL CONTROLLER AND MALFUNCTION MONITORING UNIT (MMU). REPLACE TRAFFIC SIGNAL CONTROLLER CABINET ON EXISTING FOUNDATION. REUSE CONDUIT TO RECONNECT TO LOAD CENTER. LOAD CENTER MUST BE BRACED WHILE CABINET IS REMOVED AND REPLACED.
2. REPLACE EXISTING 5 SECTION POST MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 4 SECTION POST MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW. REUSE #7 CONDUCTOR.
3. REPLACE EXISTING 5 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 4 SECTION TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW AND NEW 3 SECTION TRAFFIC SIGNAL INDICATION. REMOVE "YIELD ON GREEN" SIGN. INSTALL ONE NEW #7 CONDUCTOR. REUSE ONE #5 CONDUCTOR.
4. DISPOSE OF ALL REMOVED TRAFFIC SIGNAL INDICATIONS, BACKPLATES, SIGNAL HOUSING AND MOUNTING HARDWARE, AND/OR ELECTRICAL EQUIPMENT THAT IS NOT TO BE RETAINED, PER DIRECTION OF THE ENGINEER OR DESIGNATED REPRESENTATIVE

As-Built Drawing

JSK 2/19/15
 Project Engineer Date

MAIN AND EGAN

LEGEND

- [R][Y][G] = POST MOUNT SIGNAL HEAD CONFIGURATION
- [R][Y][G] [R][Y][G] = SIDEMOUNT AND MASTARM SIGNAL HEAD CONFIGURATION
- [X] = SIGNAL CABINET
- (X) = SOLID BALL SIGNAL MODULE (X=COLOR)
- (X) = TURN ARROW SIGNAL MODULE (X=COLOR)

WHERE:
 R= RED Y= YELLOW G = GREEN
 FY= FLASHING YELLOW

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	10/11/11	LABEL AN. DIAGRAM. CORR. NOTES 2, 3

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE
 PROJECT NO. HHE-000S-712

DESIGNED BY: D. EPSTEIN

CHECKED BY: C. MOREHOUSE
 DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

MAIN AND EGAN

PROJECT DESIGNATION NUMBER
 HHE-000S (712)

STATE	YEAR
ALASKA	2011

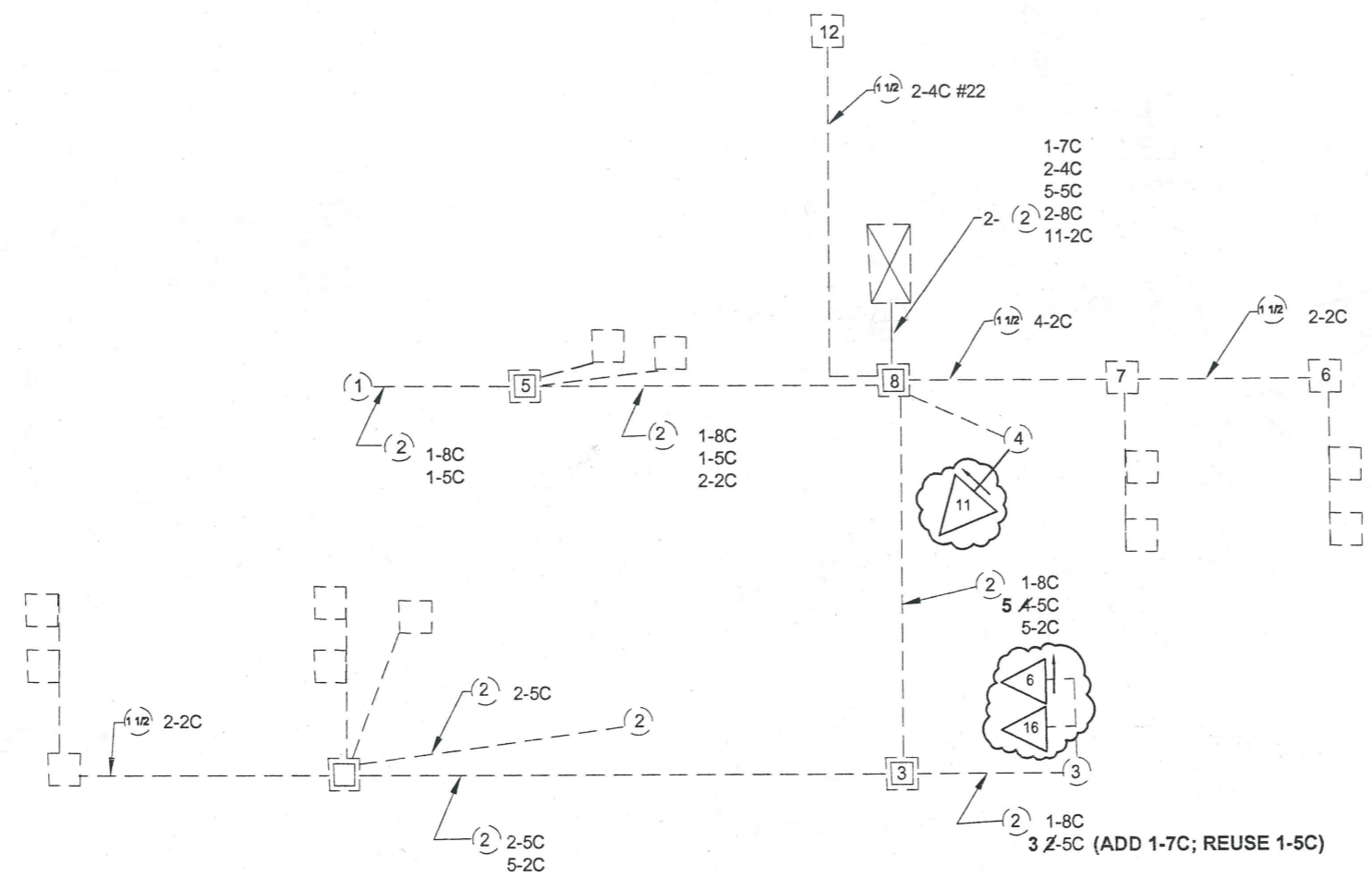
SHEET NUMBER	TOTAL SHEETS
Q1	31

6

1

BUCKET TRN 30

RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
1	10/31/11	CLARIFY USE OF CONDUCTORS



CONDUCTOR LEGEND

2-XX = QUANTITY OF CABLES OF INDICATED TYP

-2C = #13 LOOP DETECTOR LEAD-IN OR #14 PED CALL CABLE

-5C OR 7C = #14 SIGNAL HEAD CABLE

-3C* = 3M PROPRIETARY OPTICOM CABLE

-6PR = MULTI-PAIR LOOP DETECTOR LEAD-IN CABLE OR COMMUNICATION CABLE

NOTE: CONDUCTORS WITHOUT "REMOVE OR INSTALL" PREFIX REMAIN IN PLACE.

LEGEND

□ = TYPE I J-BOX

▣ = TYPE II J-BOX

▤ = TYPE III J-BOX

⊗ = RIGID METAL CONDUIT "X"=DIAMETER IN INCHES

⊙ = MAGNETOMETER DETECTOR

⊠ = LOOP DETECTOR

⊚ = BICYCLE LOOP DETECTOR

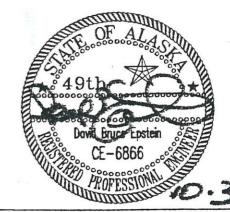
(#) = OLD LOOP NUMBER

EXISTING IS SHOWN WITH DASHED LINES

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE
PROJECT NO. HHE-000S-712

MAIN AND EGAN WIRING SCHEMATIC

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE
DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION
SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

MAIN AND EGAN WIRING SCHEMATIC	
PROJECT DESIGNATION NUMBER HHE-000S (712)	
STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q2	31

As-Built Drawing

JSK 2/19/15
Project Engineer Date

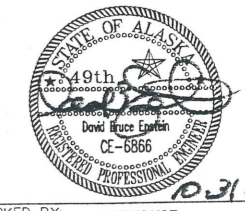
7

ADDENDUM NUMBER		
2		
ATTACHMENT NUMBER		
7		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
1	10/31/11	Label Ph. Diag. correct notes

SEA AREAWIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

GLACIER AND ANKA

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE
DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION
SEA AREAWIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

GLACIER AND ANKA	
PROJECT DESIGNATION NUMBER	
HHE-000S (712)	
STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q3	31

LEGEND

--- PROPERTY LINES
 --- TEMPORARY CONSTRUCTION PERMIT BOUNDARY
 --- EASEMENT BOUNDARY
 --- RIGHT-OF-WAY BOUNDARY

2 TYPE IA J-BOX (50mm) RIGID METAL CONDUIT = DIAMETER IN mm
 2 TYPE II J-BOX (575) OPTICOM DETECTOR
 2 TYPE III J-BOX (514) LOOP DETECTOR
 514 BICYCLE LOOP DETECTOR

⊠ = SIGNAL CABINET
 ⊗ (X) = SOLID BALL SIGNAL MODULE (X=COLOR)
 ⊗ (X) = TURN ARROW SIGNAL MODULE (X=COLOR)

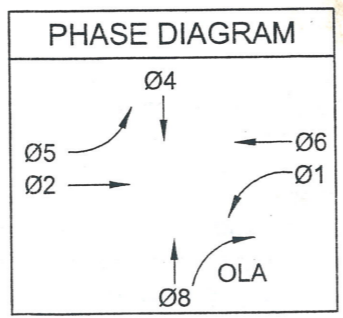
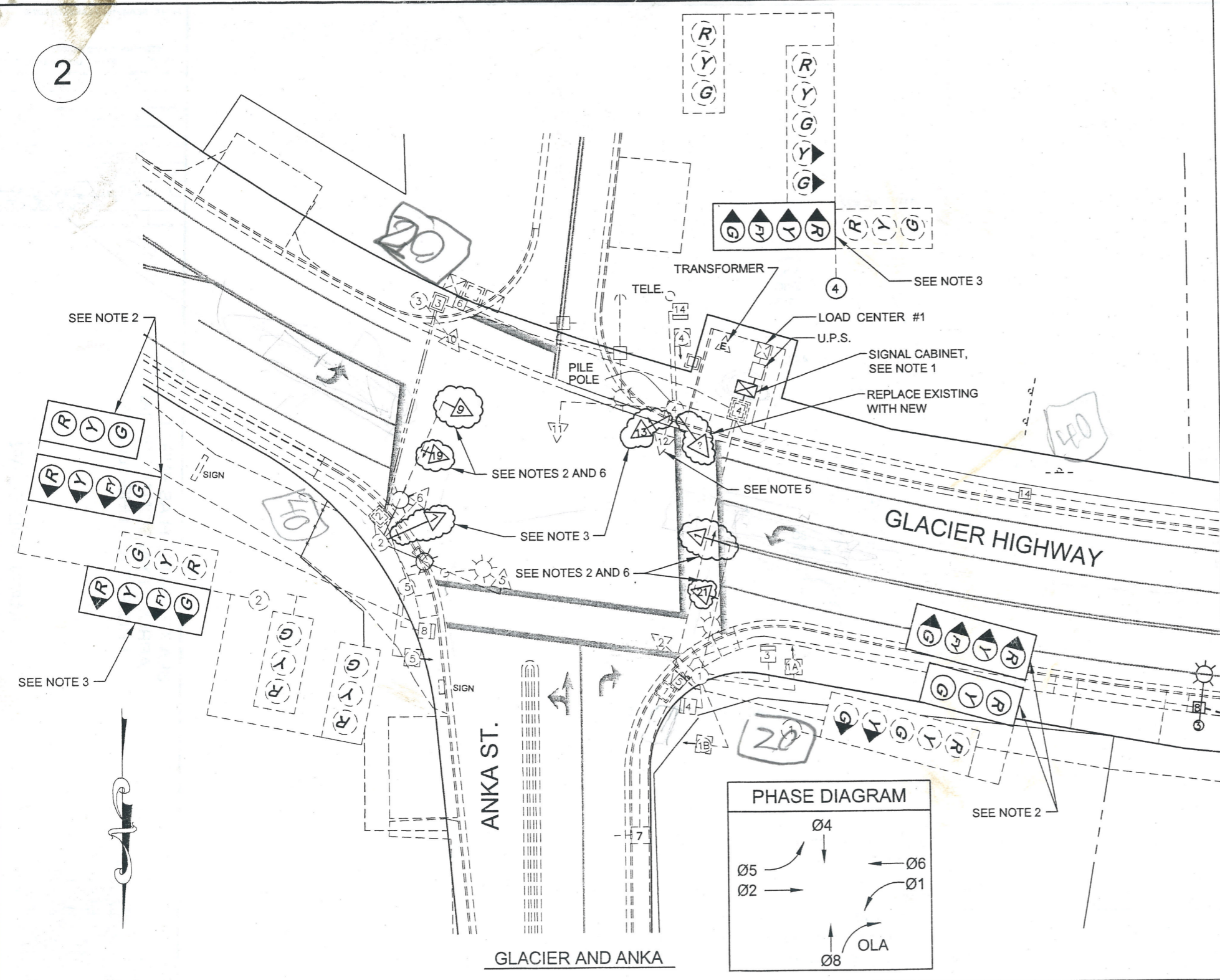
⊠ (R, Y, G) = POST MOUNT SIGNAL HEAD CONFIGURATION
 ⊠ (R, Y, G) = SIDEMOUNT AND MASTARM SIGNAL HEAD CONFIGURATION

WHERE:
 R= RED Y= YELLOW G= GREEN
 FY= FLASHING YELLOW

SUMMARY OF WORK

- INSTALL NEW CABINET ON EXISTING FOUNDATION WITH A EAGLE EPAC M52 TRAFFIC SIGNAL CONTROLLER AND MALFUNCTION MONITORING UNIT (MMU).
- REPLACE EXISTING 5 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 4 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW AND NEW 3 SECTION MAST ARM MOUNT TRAFFIC SIGNAL INDICATION.
- REPLACE EXISTING 5 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 4 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW. REUSE #7 CONDUCTOR. REPLACE ATTACHED 3 SECTION SIGNAL HEADS AND REUSE CONDUCTORS.
- DISPOSE OF ALL REMOVED TRAFFIC SIGNAL INDICATIONS, BACKPLATES, SIGNAL HOUSING AND MOUNTING HARDWARE, AND/OR ELECTRICAL EQUIPMENT THAT IS NOT TO BE RETAINED, PER DIRECTION OF THE ENGINEER OR DESIGNATED REPRESENTATIVE.
- 5 SECTION TRAFFIC SIGNAL INDICATIONS WITH RIGHT TURN ARROWS TO REMAIN AS EXISTING.
- TWO NEW SIGNAL HEADS ON EACH MAST ARMS 1 AND 2. CENTER EACH HEAD ON THE APPROACH LANE. SEE SPECIFICATIONS FOR DETAIL ON CONNECTING NEW SIGNAL HEADS.

2



As-Built Drawing

JSK 2/19/15
Project Engineer Date

8

2

LEGEND

- 2 TYPE IA J-BOX
- 2 TYPE II J-BOX
- 2 TYPE III J-BOX
- 2" RIGID METAL CONDUIT
X"=DIAMETER IN INCHES
- OPTICOM DETECTOR
- 515 LOOP DETECTOR
- 514 BICYCLE LOOP DETECTOR
- (5) NUMBERS IN PARENTHESIS REFER TO THE NUMBER OF CONDUITS AND CABLES OF THAT SIZE

LOW VOLTAGE SIGNAL CONDUCTOR

1C #14: LOOP WIRES
 2C #14: LOOP LEAD-IN
 2C: PEDESTRIAN PUSH BUTTON
 6PR: MULTI-LOOP LEAD-IN
 3C #20: PROPRIETARY OPTICOM CABLE

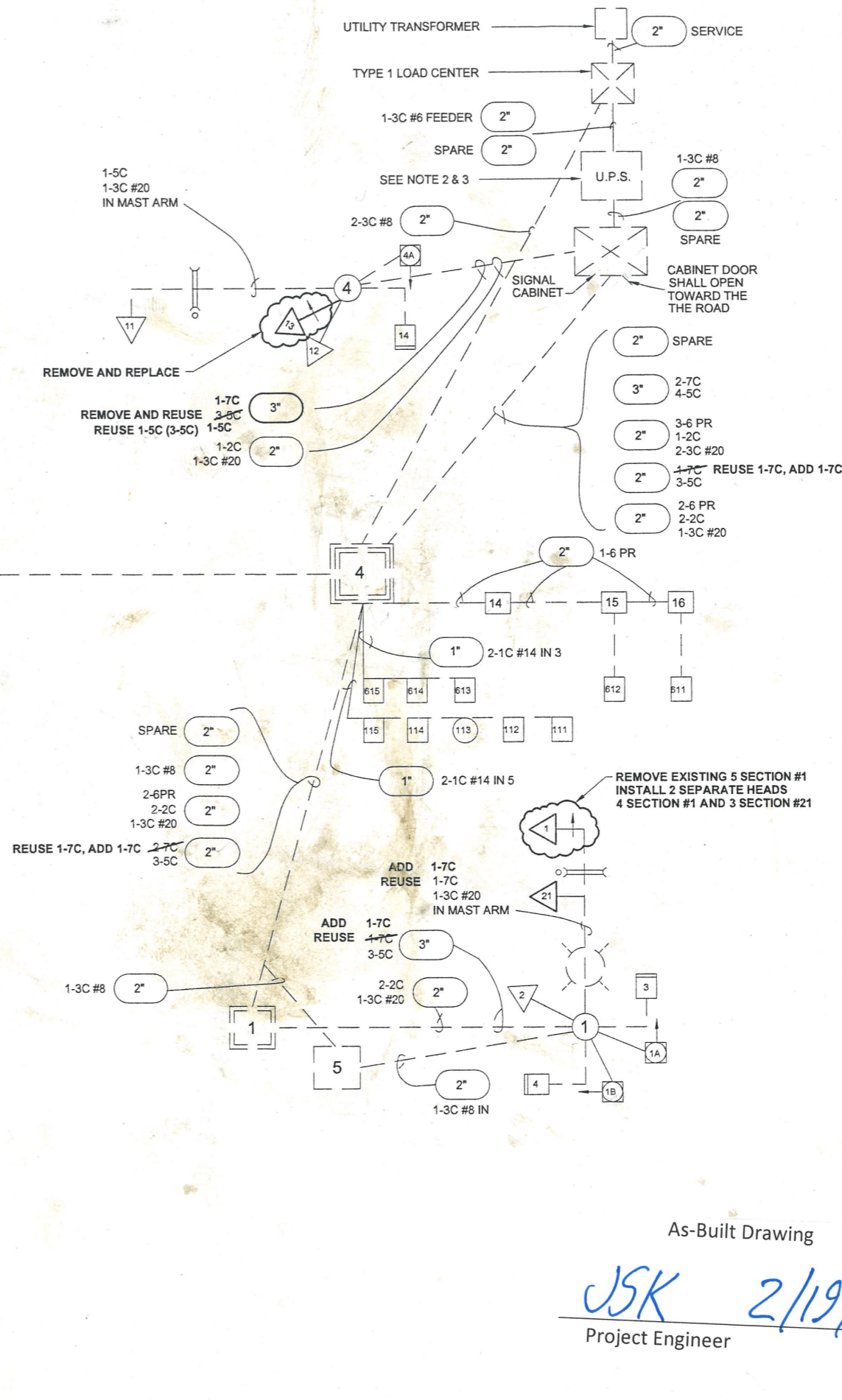
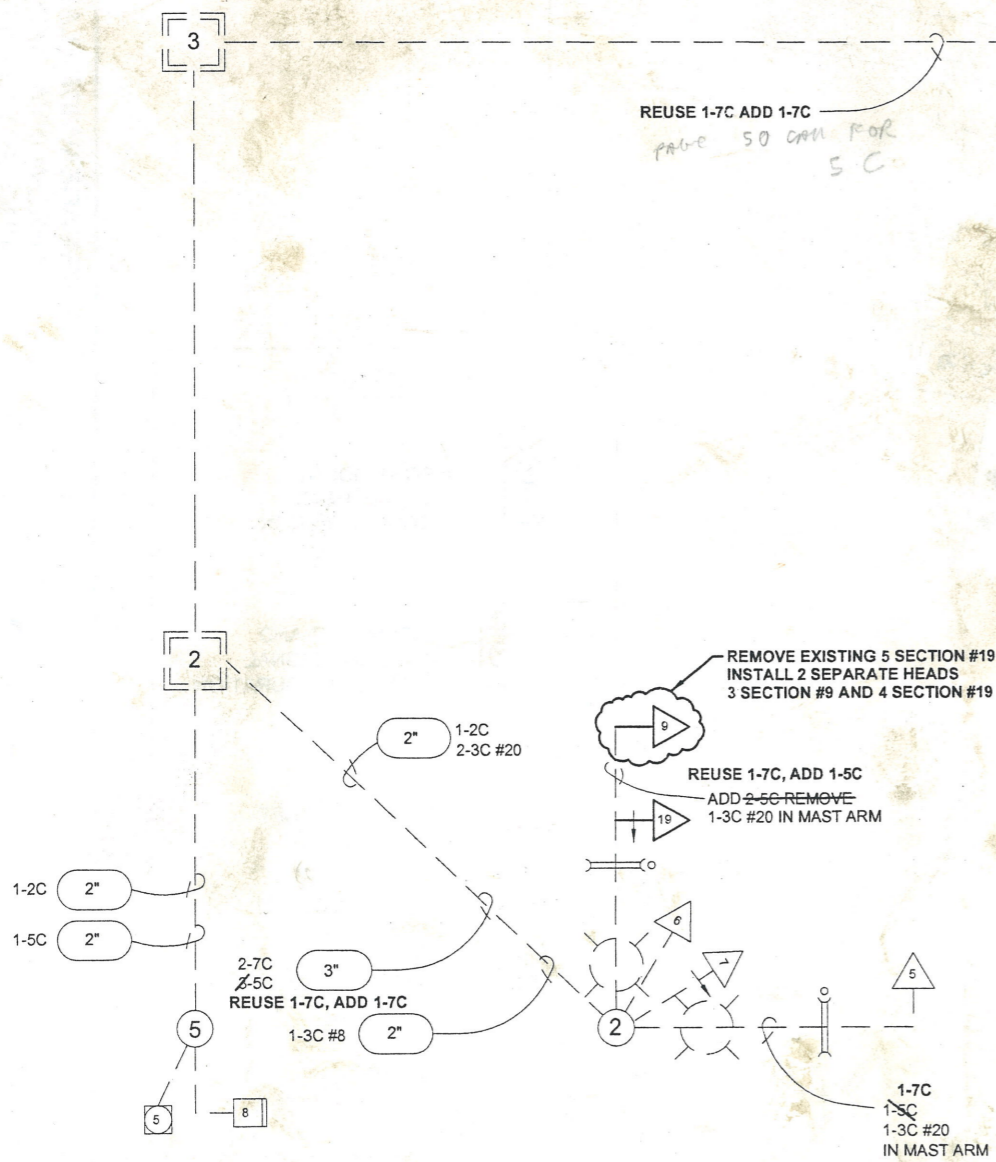
120 VOLT SIGNAL CONDUCTOR

5C: PEDESTRIAN AND STANDARD SIGNAL HEADS
 7C: 5 SECTION SIGNAL HEADS

LIGHTING AND POWER CONDUCTOR

3C#X: LIGHTING OR SIGNAL POWER

THE NUMBER PRECEEDING THE CABLE DESIGNATION INDICATES THE NUMBER OF CABLES TO BE INSTALLED.



PATH: Q:\SEA\169\192\PLANSET\TQ2.DWG

STEVENS, DAVID A (DOT)
 TAB: Q4 Friday, October 28, 2011 11:07:43 /

ADDENDUM NUMBER
2

ATTACHMENT NUMBER
8

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	10/31/11	correct spelling clarify actions for heads 1-7

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

GLACIER AND ANKA WIRING DIAGRAM SCHEMATIC

DESIGNED BY: D. EPSTEIN

CHECKED BY: C. MOREHOUSE
 DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

GLACIER AND ANKA WIRING DIAGRAM SCHEMATIC

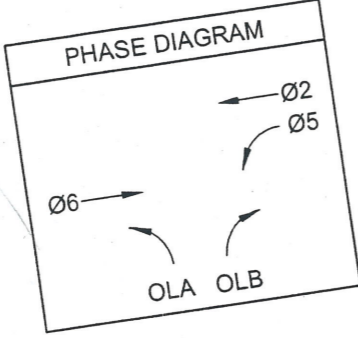
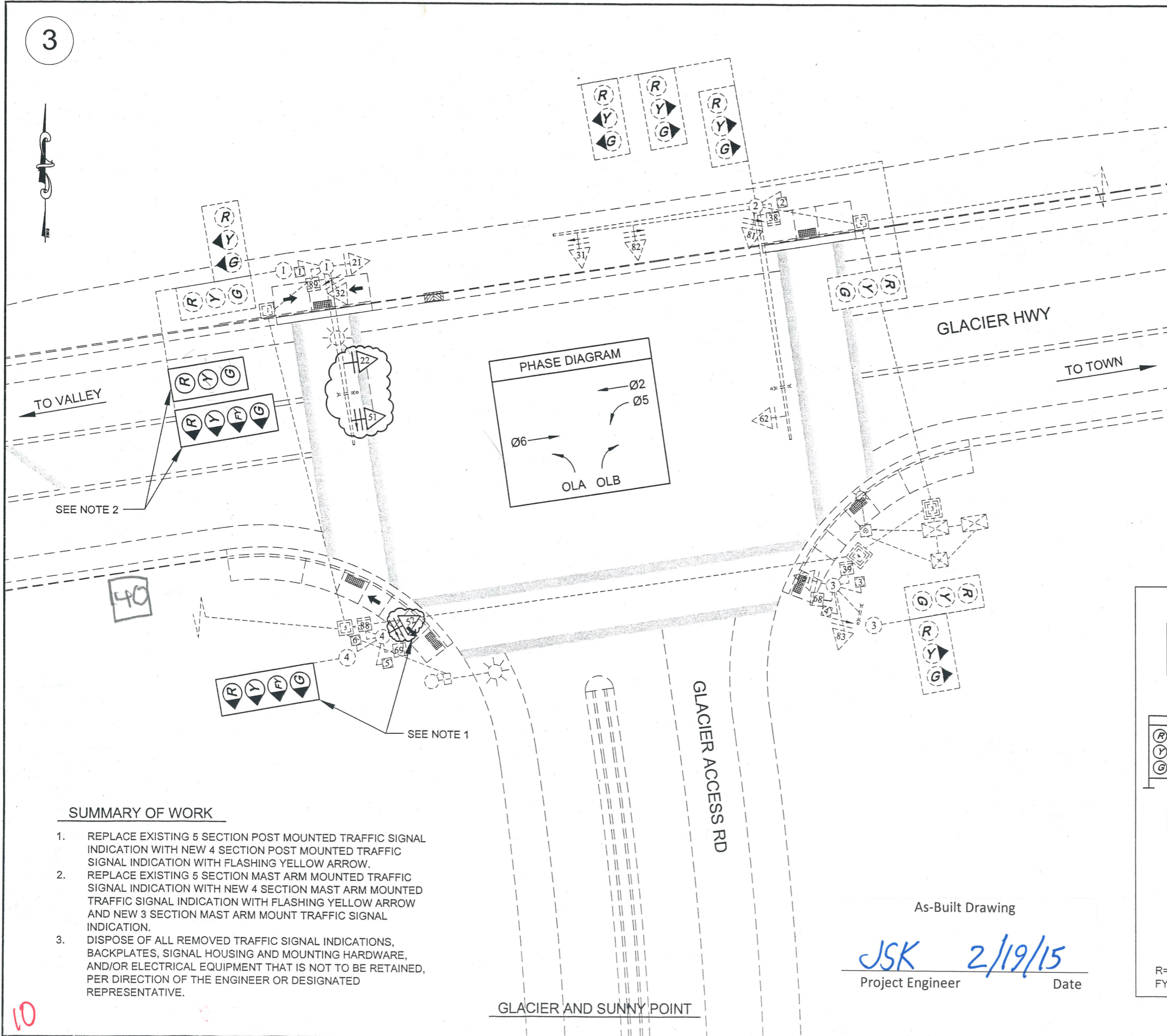
PROJECT DESIGNATION NUMBER
HHE-000S (712)

STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q4	31

As-Built Drawing

JSK 2/19/15
 Project Engineer Date

9



LEGEND

- [Symbol: Post mount signal head] = POST MOUNT SIGNAL HEAD CONFIGURATION
- [Symbol: Sidemount and mastarm signal head] = SIDEMOUNT AND MASTARM SIGNAL HEAD CONFIGURATION
- [Symbol: Signal cabinet] = SIGNAL CABINET
- [Symbol: Solid ball signal module] = SOLID BALL SIGNAL MODULE (X=COLOR)
- [Symbol: Turn arrow signal module] = TURN ARROW SIGNAL MODULE (X=COLOR)

WHERE:
 R= RED Y= YELLOW G = GREEN
 FY= FLASHING YELLOW

SUMMARY OF WORK

1. REPLACE EXISTING 5 SECTION POST MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 4 SECTION POST MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW.
2. REPLACE EXISTING 5 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 4 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW AND NEW 3 SECTION MAST ARM MOUNT TRAFFIC SIGNAL INDICATION.
3. DISPOSE OF ALL REMOVED TRAFFIC SIGNAL INDICATIONS, BACKPLATES, SIGNAL HOUSING AND MOUNTING HARDWARE, AND/OR ELECTRICAL EQUIPMENT THAT IS NOT TO BE RETAINED, PER DIRECTION OF THE ENGINEER OR DESIGNATED REPRESENTATIVE.

As-Built Drawing
JSK 2/19/15
 Project Engineer Date

PATH: Q:\SEA\169192\PLANSET\Q3.DWG

STEVENS, DAVID A (DOT)
 TAB: Q5 Wednesday, October 19, 2011 12:5

ADDENDUM NUMBER
2

ATTACHMENT NUMBER
9

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	10/31/11	label ph. diag. remove note 3 (renumber 4)

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

GLACIER AND SUNNY POINT

DESIGNED BY: D. EPSTEIN

CHECKED BY: C. MOREHOUSE
 DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

GLACIER AND SUNNY POINT

PROJECT DESIGNATION NUMBER
 HHE-000S (712)

STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q5	31

LOW VOLTAGE SIGNAL CONDUCTOR

- 1C #14: LOOP WIRES
- 2C #14: LOOP LEAD-IN
- 2C: PEDESTRIAN PUSH BUTTON
- 0PR: MULTI-LOOP LEAD-IN
- 3C #20: PROPRIETARY OPTICOM CABLE

120 VOLT SIGNAL CONDUCTOR

- 5C: PEDESTRIAN AND STANDARD SIGNAL HEADS
- 7C: 5 SECTION SIGNAL HEADS

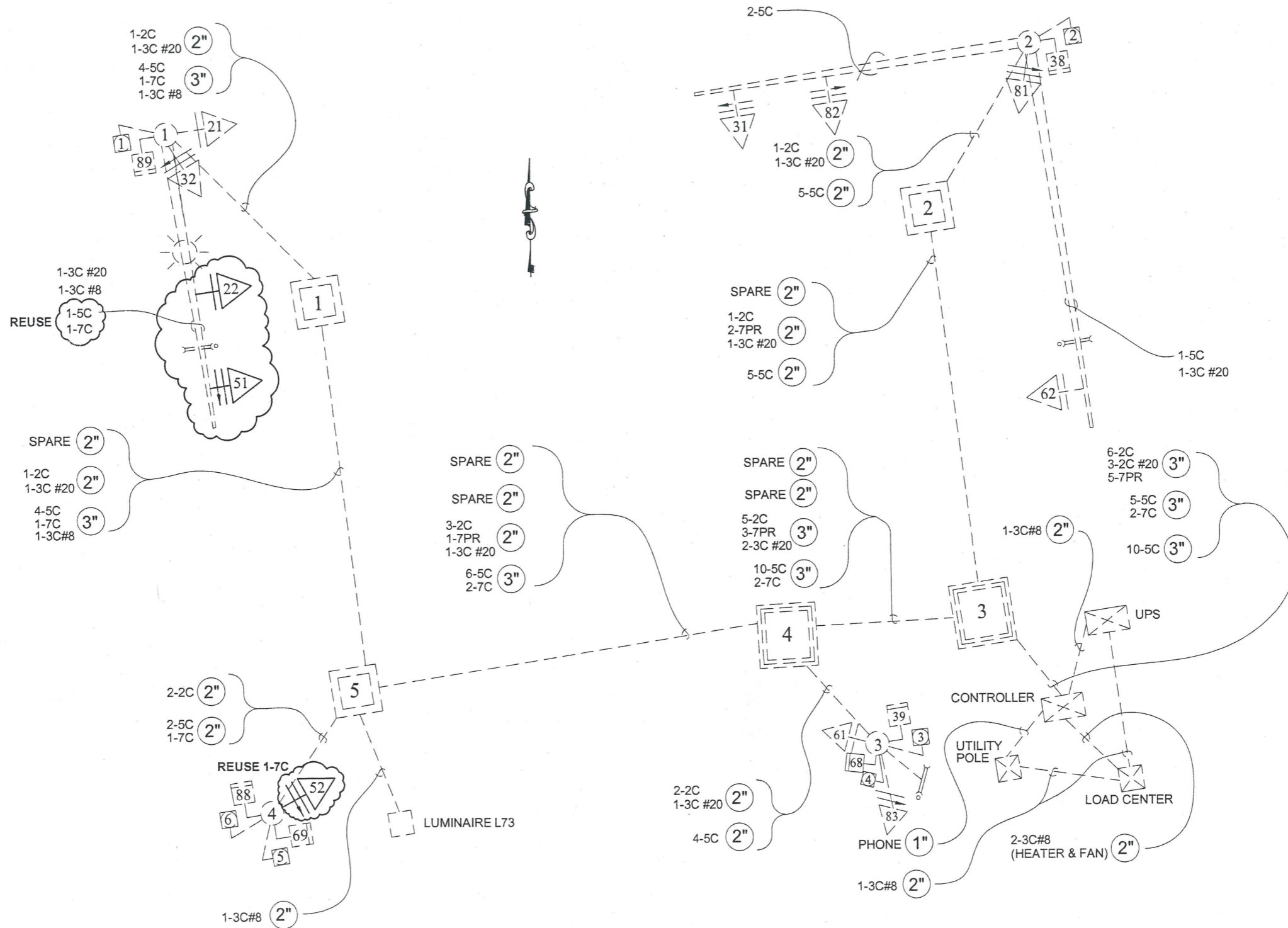
LIGHTING AND POWER CONDUCTOR

- 3C#X: LIGHTING OR SIGNAL POWER

THE NUMBER PRECEDING THE CABLE DESIGNATION INDICATES THE NUMBER OF CABLES TO BE INSTALLED.

LEGEND

- 2 TYPE IA J-BOX
- 2 TYPE II J-BOX
- 2 TYPE III J-BOX
- DETECTOR, PUSH BUTTON DIRECTION
- LOOP DETECTOR
- SIGNAL FACE, PEDESTRIAN
- SIGNAL FACE, VEHICULAR
- RIGID METAL CONDUIT
X"= DIAMETER IN INCHES
- LUMINAIRE
- OPTICOM DETECTOR



As-Built Drawing

JSK *2/19/15*
Project Engineer Date

PATH: Q:\SEA\169192\PLANSET\Q3.DWG

STEVENS, DAVID A (DOT)
TAB: Q6 Wednesday, October 19, 2011 1:01

ADDENDUM NUMBER
2

ATTACHMENT NUMBER
10

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	10/31/11	Remove L73 note

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

GLACIER AND SUNNY POINT WIRING SCHEMATIC

DESIGNED BY: D. EPSTEIN

CHECKED BY: C. MOREHOUSE
DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

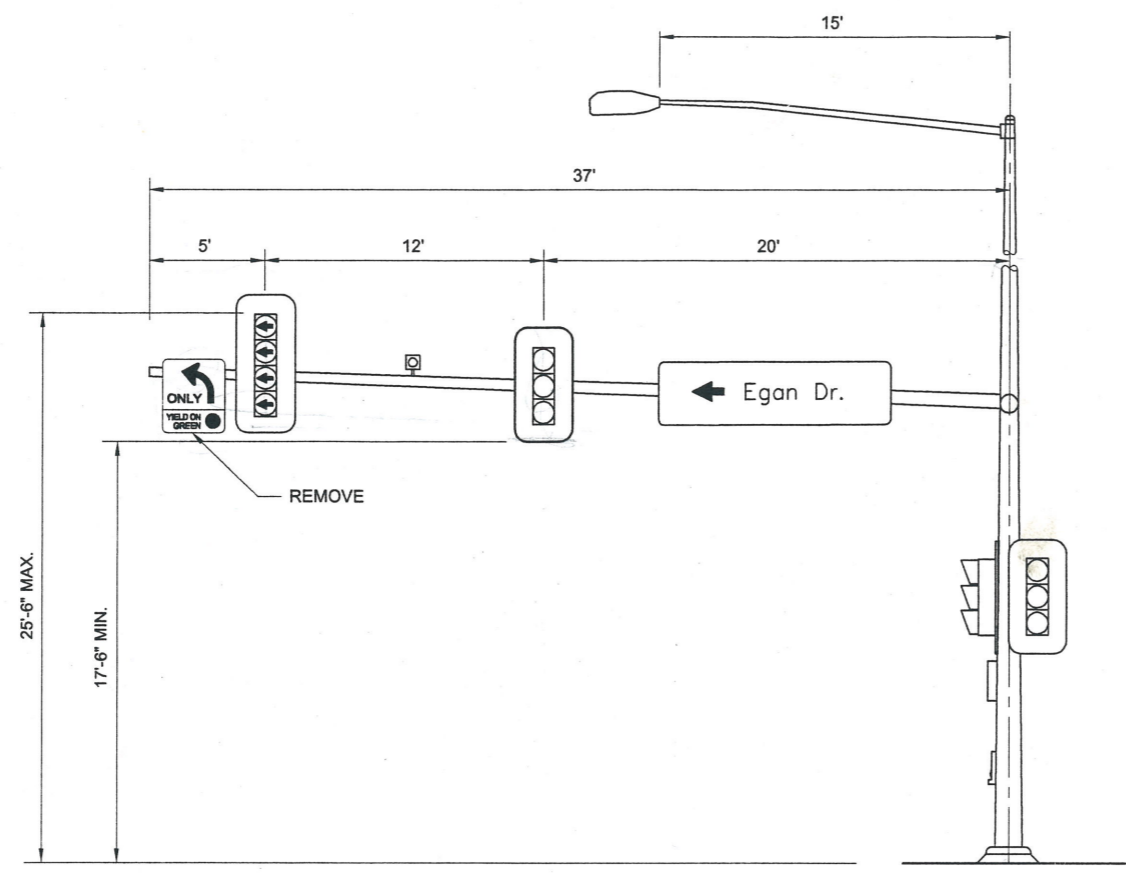
SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

GLACIER AND SUNNY POINT WIRING SCHEMATIC

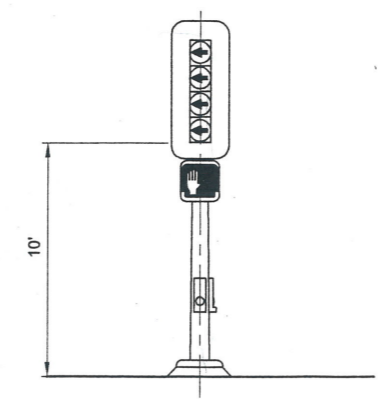
PROJECT DESIGNATION NUMBER
HHE-000S (712)

STATE	YEAR
ALASKA	2011

SHEET NUMBER	TOTAL SHEETS
Q6	31



SIGNAL POLE NO. 1 DETAIL
(WESTBOUND MASTARM)



SIGNAL POLE NO. 4 DETAIL
(WESTBOUND)

PATH: Q:\SEA\69192\PLANSET\Q3.DWG

STEVENS, DAVID A (DOT)
TAB: Q7 Wednesday, August 10, 2011 8:02:

ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION

SEA AREAWIDE FLASHING YELLOW
ARROW (FYA) SIGNAL UPGRADE
PROJECT NO. HHE-000S-712

GLACIER AND SUNNY POINT
POLE DETAILS

DESIGNED BY: D. EPSTEIN

CHECKED BY: C. MOREHOUSE
DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

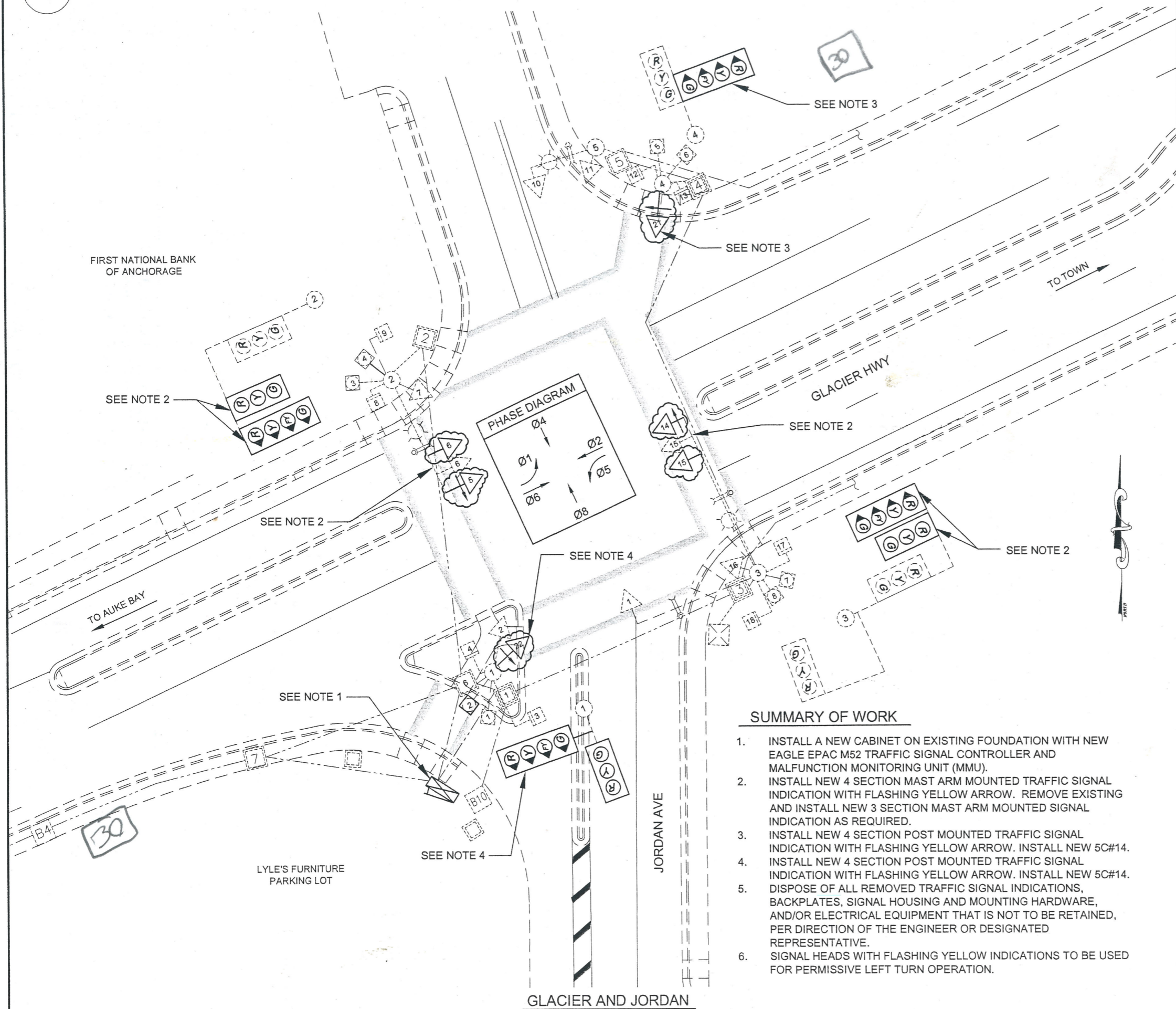
SEA AREAWIDE FLASHING
YELLOW ARROW (FYA)
SIGNAL UPGRADE

GLACIER AND
SUNNY POINT
POLE DETAILS

PROJECT DESIGNATION NUMBER	
HHE-000S (712)	
STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q7	31

As-Built Drawing

JSK 2/19/15
Project Engineer Date



SUMMARY OF WORK

1. INSTALL A NEW CABINET ON EXISTING FOUNDATION WITH NEW EAGLE EPAC M52 TRAFFIC SIGNAL CONTROLLER AND MALFUNCTION MONITORING UNIT (MMU).
2. INSTALL NEW 4 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW. REMOVE EXISTING AND INSTALL NEW 3 SECTION MAST ARM MOUNTED SIGNAL INDICATION AS REQUIRED.
3. INSTALL NEW 4 SECTION POST MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW. INSTALL NEW 5C#14.
4. INSTALL NEW 4 SECTION POST MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW. INSTALL NEW 5C#14.
5. DISPOSE OF ALL REMOVED TRAFFIC SIGNAL INDICATIONS, BACKPLATES, SIGNAL HOUSING AND MOUNTING HARDWARE, AND/OR ELECTRICAL EQUIPMENT THAT IS NOT TO BE RETAINED, PER DIRECTION OF THE ENGINEER OR DESIGNATED REPRESENTATIVE.
6. SIGNAL HEADS WITH FLASHING YELLOW INDICATIONS TO BE USED FOR PERMISSIVE LEFT TURN OPERATION.

As-Built Drawing

JSK 2/19/15
 Project Engineer Date

LEGEND

- = POST MOUNT SIGNAL HEAD CONFIGURATION
 - = SIDEMOUNT AND MASTARM SIGNAL HEAD CONFIGURATION
 - = SIGNAL FACE VEHICULAR WITH NUMBER (LEFT TURN)
 - = SIGNAL CABINET
 - = SOLID BALL SIGNAL MODULE (X=COLOR)
 - = TURN ARROW SIGNAL MODULE (X=COLOR)
- WHERE:
 R= RED Y= YELLOW G = GREEN
 FY= FLASHING YELLOW

PATH: Q:\SEA\169192\PLANSET\Q4.DWG

STEVENS, DAVID A (DOT)
 TAB: Q8 Wednesday, October 19, 2011 1:20

ADDENDUM NUMBER	2	
ATTACHMENT NUMBER	11	
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
1	10/19/11	Label Ar. Dir. Ar. remove 2 notes correct spelling

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

GLACIER AND JORDAN

DESIGNED BY: D. EPSTEIN

CHECKED BY: C. MOREHOUSE
 DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

GLACIER AND JORDAN

PROJECT DESIGNATION NUMBER
 HHE-000S (712)

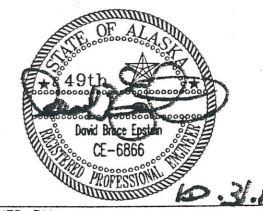
STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q8	?

B

RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
1	10/31/11	Label new conductors

SEA AREAWIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712
 GLACIER AND JORDAN WIRING SCHEMATIC

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE
 DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION
 SEA AREAWIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

GLACIER AND JORDAN WIRING SCHEMATIC
 PROJECT DESIGNATION NUMBER

HHE-000S (712)

STATE	YEAR
ALASKA	2011

SHEET NUMBER	TOTAL SHEETS
Q9	31

LEGEND

- CONTROLLER CABINET (SHOWN DIRECTION OF DOOR SWING)
- LOAD CENTER
- UNINTERRUPTIBLE POWER SUPPLY CABINET
- TYPE IA J-BOX
- TYPE II J-BOX
- TYPE III J-BOX
- RIGID METAL CONDUIT
- OPTICOM DETECTOR
- LOOP DETECTOR
- BICYCLE LOOP DETECTOR

LOW VOLTAGE SIGNAL CONDUCTOR

1C #14: LOOP WIRES
 2C #14: LOOP LEAD-IN
 2C: PEDESTRIAN PUSH BUTTON
 6PR: MULTI-LOOP LEAD-IN
 3C #20: PROPRIETARY OPTICOM CABLE

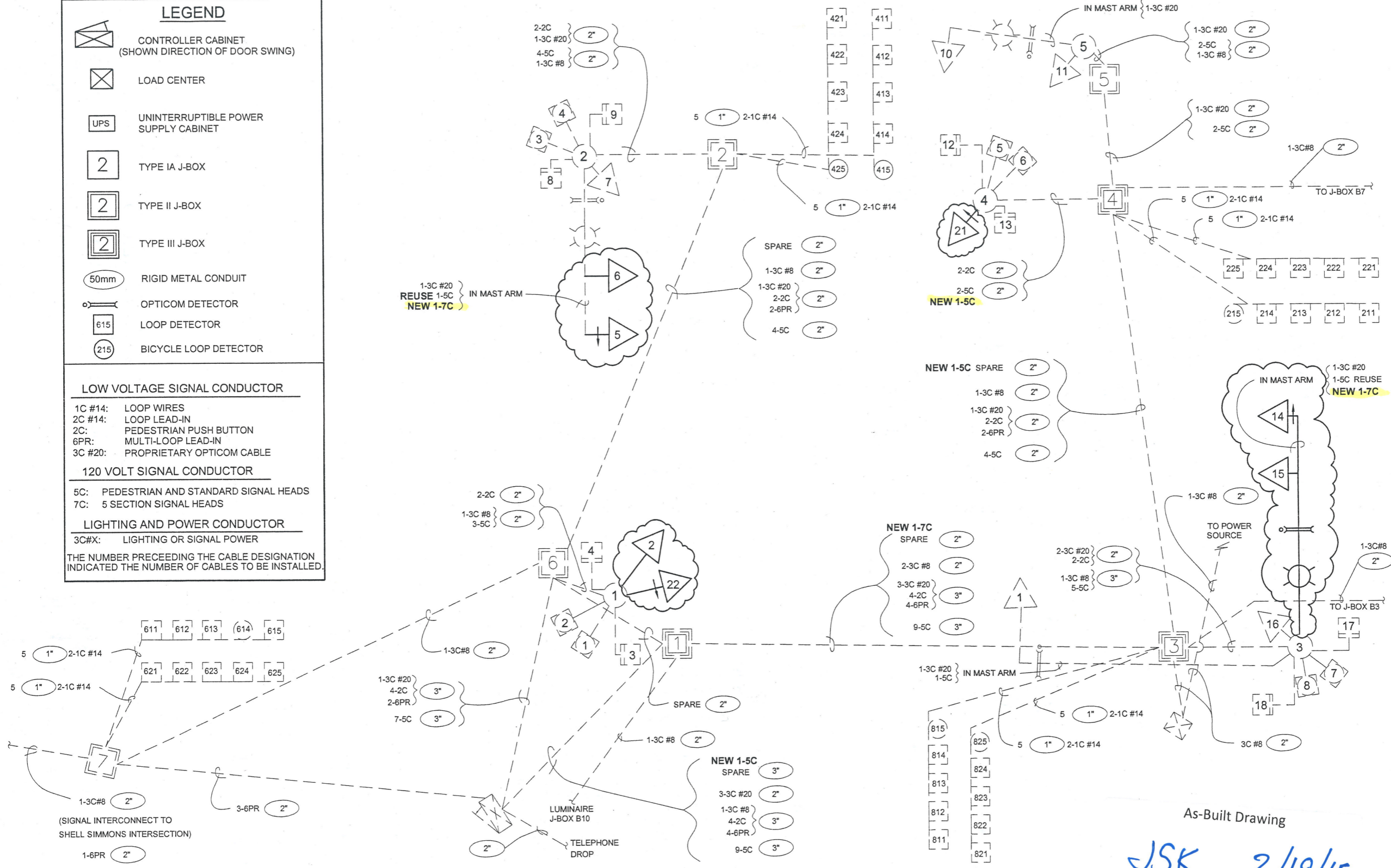
120 VOLT SIGNAL CONDUCTOR

5C: PEDESTRIAN AND STANDARD SIGNAL HEADS
 7C: 5 SECTION SIGNAL HEADS

LIGHTING AND POWER CONDUCTOR

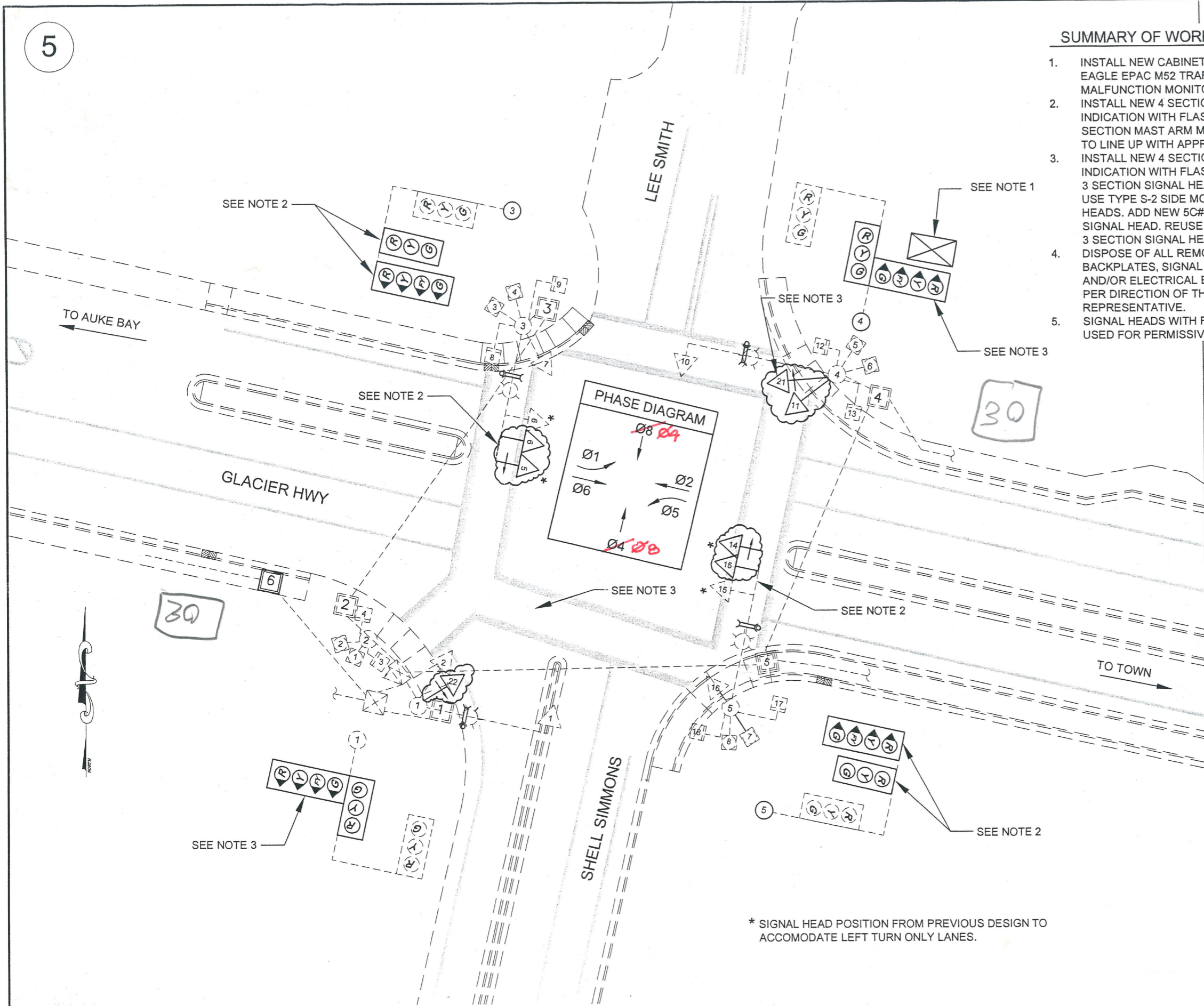
3C#X: LIGHTING OR SIGNAL POWER

THE NUMBER PRECEEDING THE CABLE DESIGNATION INDICATED THE NUMBER OF CABLES TO BE INSTALLED.



As-Built Drawing
 JSK 2/19/15
 Project Engineer Date

14



SUMMARY OF WORK

1. INSTALL NEW CABINET ON EXISTING FOUNDATION WITH NEW EAGLE EPAC M52 TRAFFIC SIGNAL CONTROLLER AND MALFUNCTION MONITORING UNIT (MMU).
2. INSTALL NEW 4 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW. INSTALL NEW 3 SECTION MAST ARM MOUNTED SIGNAL INDICATION AS REQUIRED TO LINE UP WITH APPROACH LANE.
3. INSTALL NEW 4 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW. REPLACE EXISTING 3 SECTION SIGNAL HEAD WITH NEW 3 SECTION SIGNAL HEAD. USE TYPE S-2 SIDE MOUNTING ASSEMBLY TO MOUNT SIGNAL HEADS. ADD NEW 5C#14 CONDUCTOR TO CONNECT NEW FYA SIGNAL HEAD. REUSE EXISTING CONDUCTOR TO CONNECT NEW 3 SECTION SIGNAL HEAD.
4. DISPOSE OF ALL REMOVED TRAFFIC SIGNAL INDICATIONS, BACKPLATES, SIGNAL HOUSING AND MOUNTING HARDWARE, AND/OR ELECTRICAL EQUIPMENT THAT IS NOT TO BE RETAINED, PER DIRECTION OF THE ENGINEER OR DESIGNATED REPRESENTATIVE.
5. SIGNAL HEADS WITH FLASHING YELLOW INDICATIONS TO BE USED FOR PERMISSIVE LEFT TURN OPERATION.

LEGEND

- = POST MOUNT SIGNAL HEAD CONFIGURATION
 - = SIDEMOUNT AND MASTARM SIGNAL HEAD CONFIGURATION
 - = SIGNAL FACE VEHICULAR WITH NUMBER (LEFT TURN)
 - = SIGNAL CABINET
 - = SOLID BALL SIGNAL MODULE (X=COLOR)
 - = TURN ARROW SIGNAL MODULE (X=COLOR)
- WHERE:
 R= RED Y= YELLOW G = GREEN
 FY= FLASHING YELLOW

* SIGNAL HEAD POSITION FROM PREVIOUS DESIGN TO ACCOMODATE LEFT TURN ONLY LANES.

As-Built Drawing

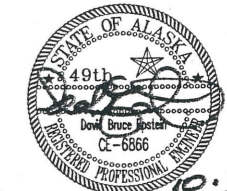
JSK 2/19/15
Project Engineer Date

ADDENDUM NUMBER		
2		
ATTACHMENT NUMBER		
13		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
1	10/31/11	Label Ph. Diag. remove 2 notes

SEA AREAWIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

GLACIER AND SHELL SIMMONS

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE
DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION
 SEA AREAWIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

GLACIER AND SHELL SIMMONS

PROJECT DESIGNATION NUMBER
HHE-000S (712)

STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q10	31

ADDENDUM NUMBER		
2		
ATTACHMENT NUMBER		
19		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
1	10/31/11	Label new conductors

LEGEND

- CONTROLLER CABINET (SHOWN DIRECTION OF DOOR SWING)
- LOAD CENTER
- UNINTERRUPTIBLE POWER SUPPLY CABINET
- TYPE IA J-BOX
- TYPE II J-BOX
- TYPE III J-BOX
- RIGID METAL CONDUIT
- OPTICOM DETECTOR
- LOOP DETECTOR
- BICYCLE LOOP DETECTOR

LOW VOLTAGE SIGNAL CONDUCTOR

1C #14: LOOP WIRES
2C #14: LOOP LEAD-IN
2C: PEDESTRIAN PUSH BUTTON
6PR: MULTI-LOOP LEAD-IN
3C #20: PROPRIETARY OPTICOM CABLE

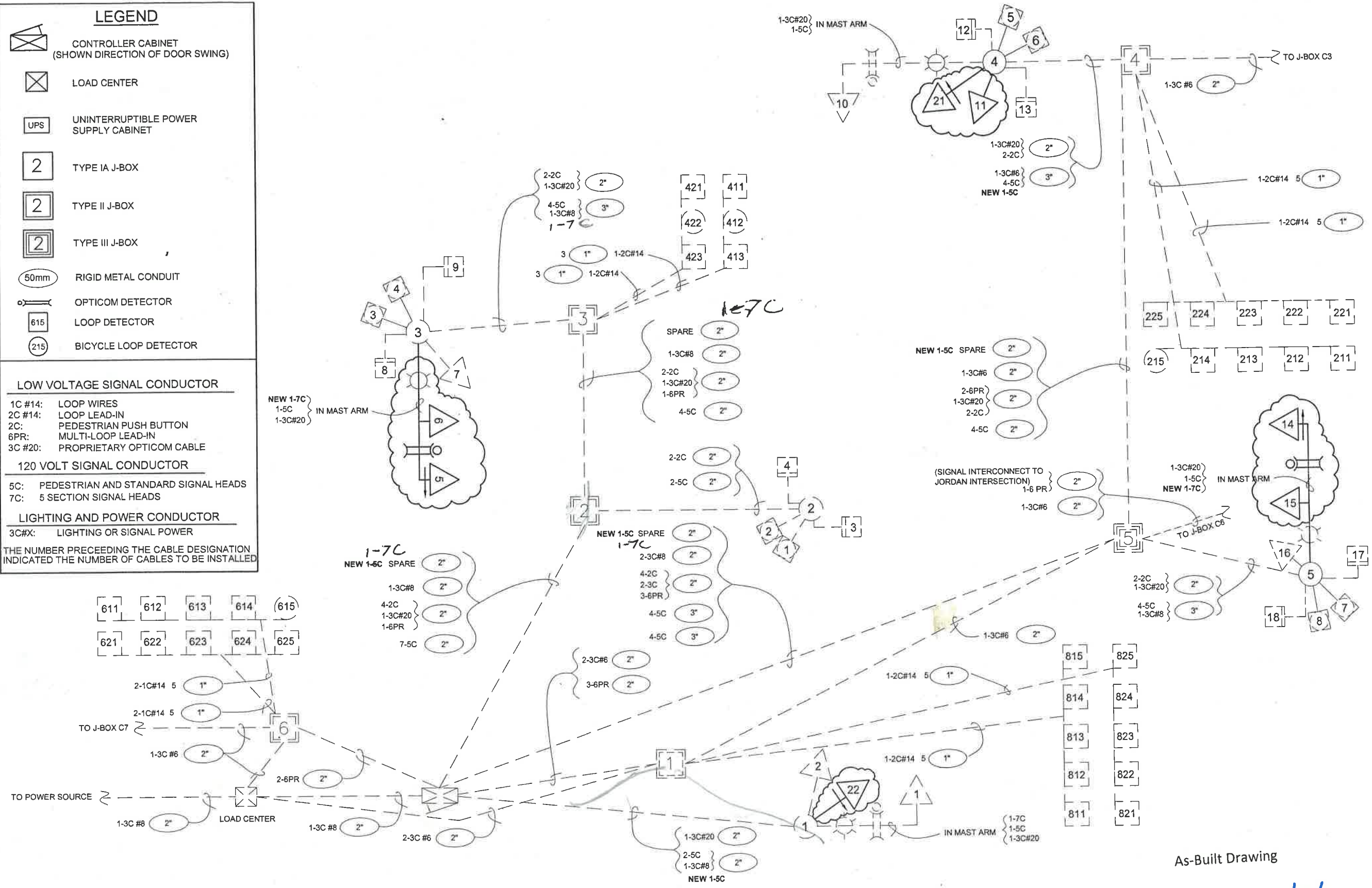
120 VOLT SIGNAL CONDUCTOR

5C: PEDESTRIAN AND STANDARD SIGNAL HEADS
7C: 5 SECTION SIGNAL HEADS

LIGHTING AND POWER CONDUCTOR

3C#X: LIGHTING OR SIGNAL POWER

THE NUMBER PRECEDING THE CABLE DESIGNATION INDICATED THE NUMBER OF CABLES TO BE INSTALLED



SEA AREA WIDE FLASHING YELLOW
 ARROW (FYA) SIGNAL UPGRADE
 PROJECT NO. HHE-000S-712
 GLACIER AND SHELL SIMMONS
 WIRING SCHEMATIC

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE
DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION
SEA AREA WIDE FLASHING
YELLOW ARROW (FYA)
SIGNAL UPGRADE

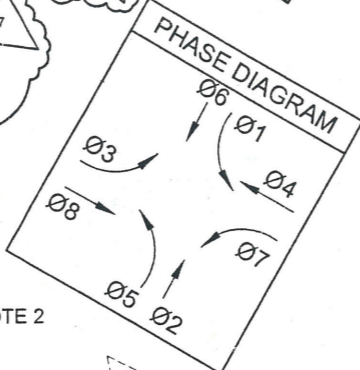
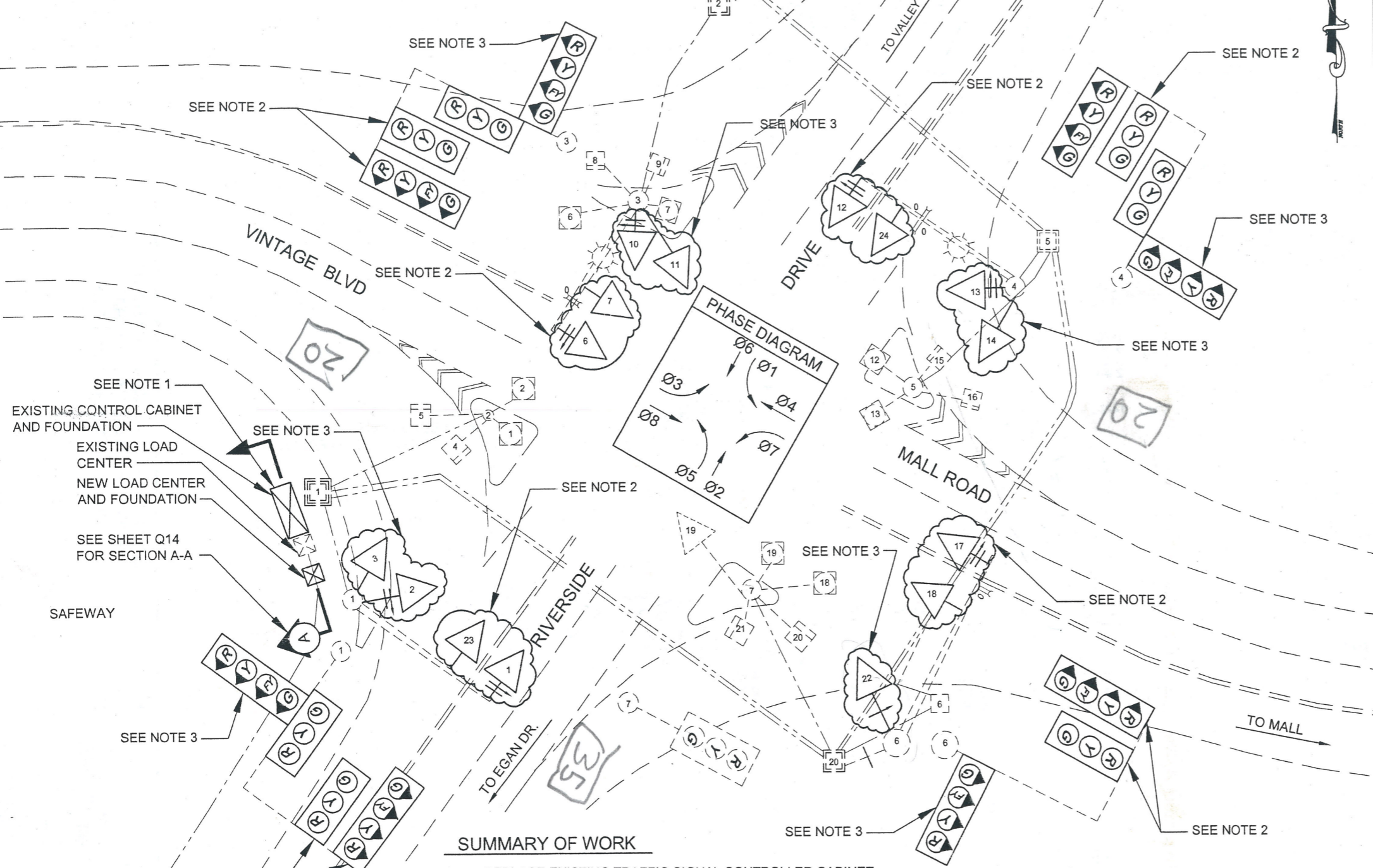
GLACIER AND SHELL SIMMONS WIRING SCHEMATIC

PROJECT DESIGNATION NUMBER
HHE-000S (712)

STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q11	31

As-Built Drawing

JSK *2/19/15*
Project Engineer Date



SEE NOTE 1
 EXISTING CONTROL CABINET AND FOUNDATION
 EXISTING LOAD CENTER
 NEW LOAD CENTER AND FOUNDATION
 SEE SHEET Q14 FOR SECTION A-A

SUMMARY OF WORK

1. REPLACE EXISTING TRAFFIC SIGNAL CONTROLLER CABINET WITH NEW MALFUNCTIONING MONITORING UNIT (MMU) AND CONTROLLER.
2. REPLACE EXISTING 5 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 3 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION AND NEW 4 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION FLASHING YELLOW ARROW. ALSO REPLACE EXISTING 3 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 3 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION NUMBERS 3, 10 AND 14.
3. REPLACE EXISTING 5 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 4 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW.
4. DISPOSE OF ALL OLD TRAFFIC SIGNAL INDICATIONS, BACKPLATES, SIGNAL HOUSING AND MOUNTING HARDWARE, AND/OR ELECTRICAL EQUIPMENT THAT IS NOT TO BE RETAINED, PER DIRECTION OF THE ENGINEER OR DESIGNATED REPRESENTATIVE.
5. ~~NO NEW CONDUCTORS ARE NEEDED SINCE THE SIGNAL WAS ORIGINALLY SET UP TO ADD A SECOND SIGNAL HEAD TO EACH MAST ARM.~~

New Tc installed. existing spares remain.

As-Built Drawing

JSK *2/19/15*
 Project Engineer Date

LEGEND

- [Signal Head Icon] = POST MOUNT SIGNAL HEAD CONFIGURATION
- [Signal Head Icon] = SIDEMOUNT AND MASTARM SIGNAL HEAD CONFIGURATION
- [Signal Cabinet Icon] = SIGNAL CABINET
- [Signal Module Icon] = SOLID BALL SIGNAL MODULE (X=COLOR)
- [Signal Module Icon] = TURN ARROW SIGNAL MODULE (X=COLOR)

WHERE:
 R= RED Y= YELLOW G= GREEN
 FY= FLASHING YELLOW

PATH: Q:\SEA\169192\PLANSET\Q6.DWG

STEVENS, DAVID A (DOT)
 TAB: Q12 Wednesday, October 19, 2011 2:46

ADDENDUM NUMBER
 2

ATTACHMENT NUMBER
 15

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	10/31/11	Labeling, P115, "add fourth" working added

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE
 PROJECT NO. HHE-000S-712

RIVERSIDE AND VINTAGE

DESIGNED BY: D. EPSTEIN

CHECKED BY: C. MOREHOUSE
 DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

RIVERSIDE AND VINTAGE

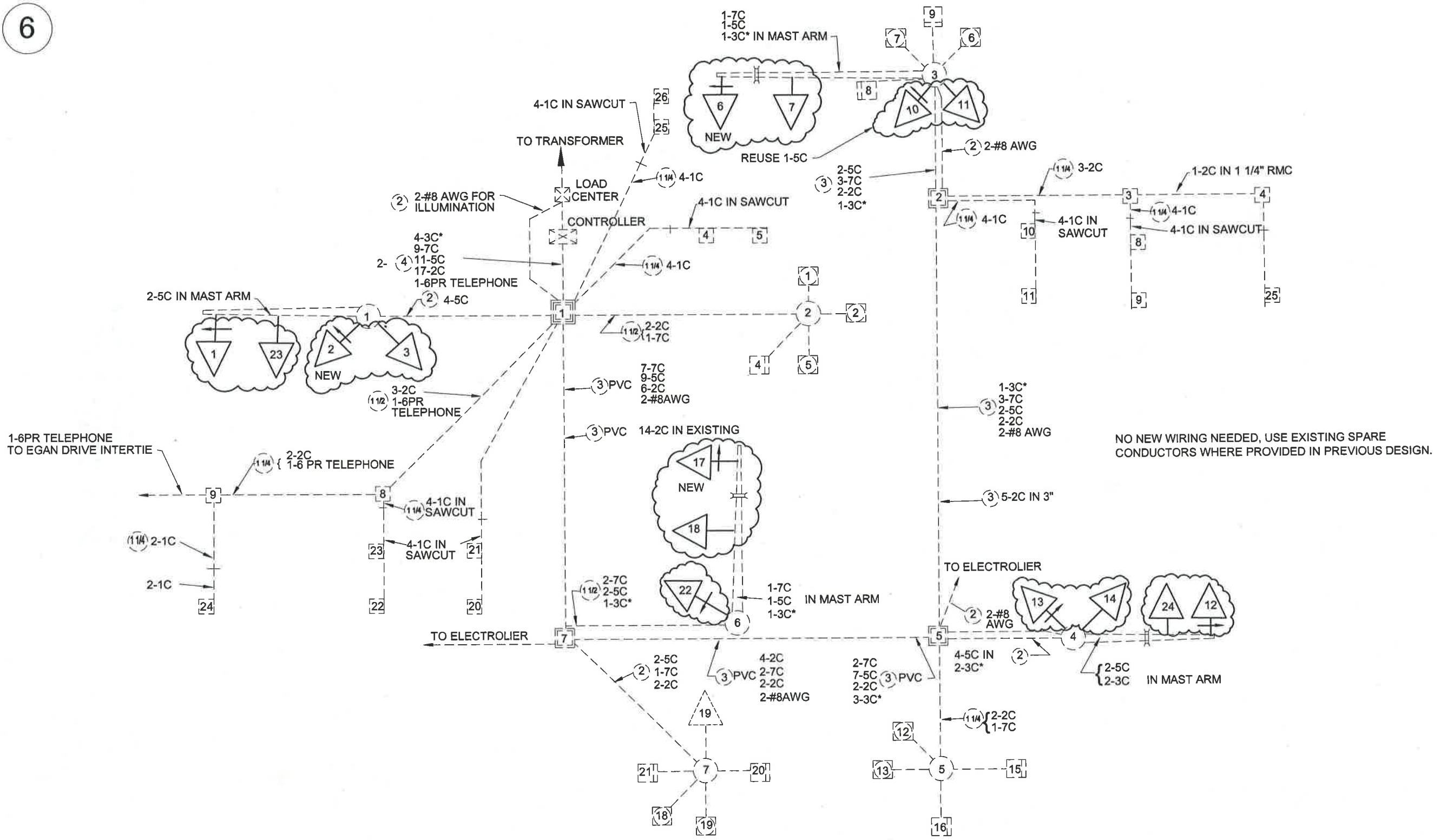
PROJECT DESIGNATION NUMBER
 HHE-000S (712)

STATE	YEAR
ALASKA	2011

SHEET NUMBER	TOTAL SHEETS
Q12	31

ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE
 PROJECT NO. HHE-000S-712
 RIVERSIDE AND VINTAGE WIRING SCHEMATIC



NO NEW WIRING NEEDED, USE EXISTING SPARE CONDUCTORS WHERE PROVIDED IN PREVIOUS DESIGN.

LEGEND

- = TYPE I J-BOX
- ▣ = TYPE II J-BOX
- ▤ = TYPE III J-BOX
- ⊗ = RIGID METAL CONDUIT X"=DIAMETER IN INCHES
- ⊘ = MAGNETOMETER DETECTOR
- = LOOP DETECTOR
- = BICYCLE LOOP DETECTOR

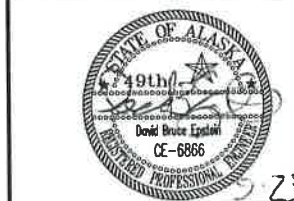
CONDUCTOR LEGEND

- 2-XX = QUANTITY OF CABLES OF INDICATED TYP
- 2C = #12 LOOP DETECTOR LEAD-IN OR #14 PED CALL CABLE
- 5C OR 7C = #14 SIGNAL HEAD CABLE
- 3C* = 3M PROPRIETARY OPTICOM CABLE
- 6PR = MULTI-PAIR LOOP DETECTOR LEAD-IN CABLE OR COMMUNICATION CABLE

As-Built Drawing

JSK 2/19/15
Project Engineer Date

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE

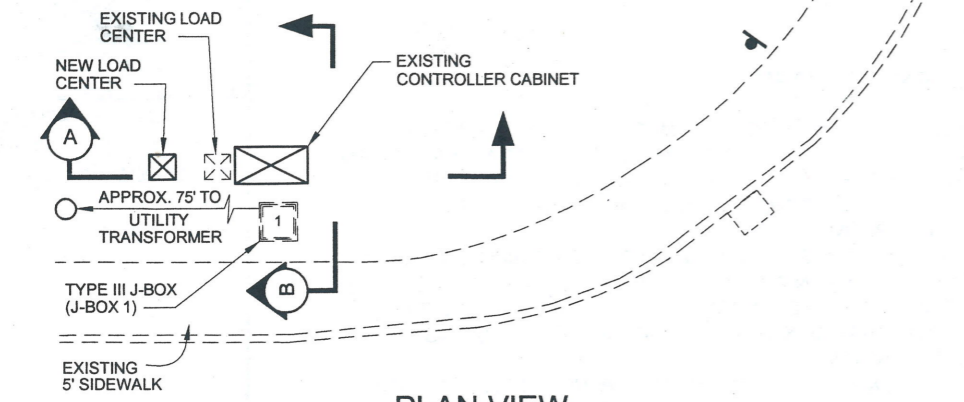
DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION
SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

RIVERSIDE AND VINTAGE WIRING SCHEMATIC

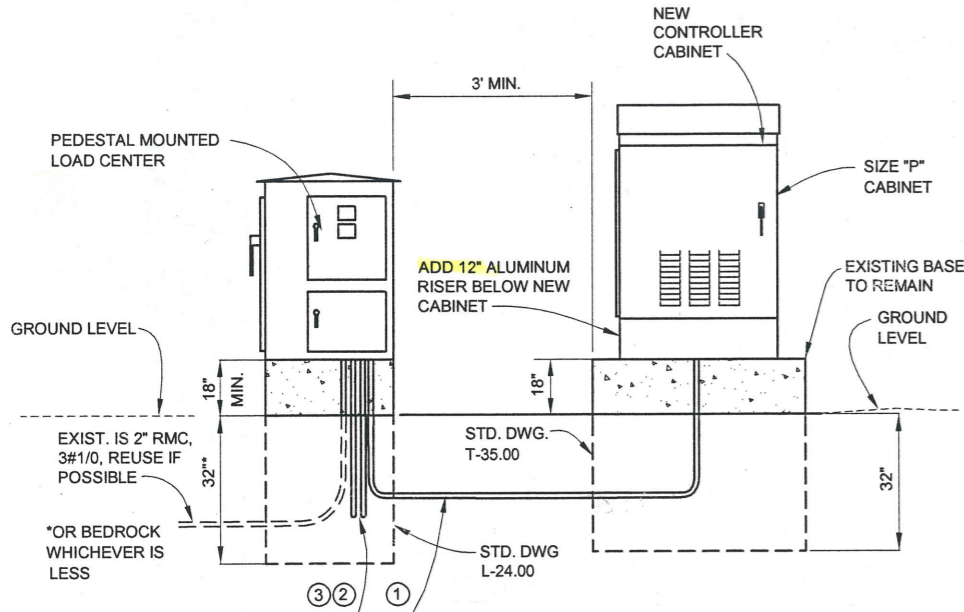
PROJECT DESIGNATION NUMBER	
HHE-000S (712)	
STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q13	31

6



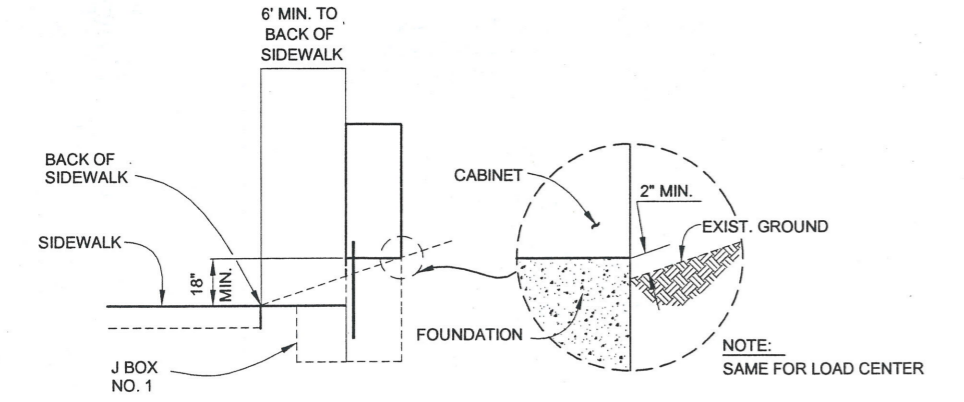
PLAN VIEW

CABINET & LOAD CENTER LOCATION DETAIL

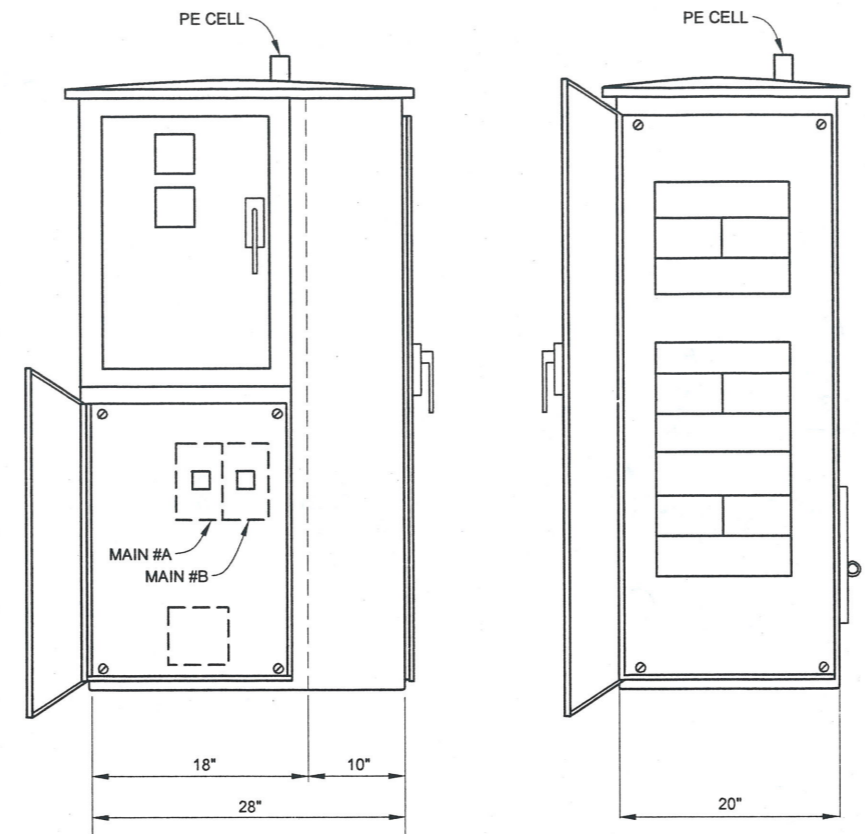


SECTION A-A

- 3 CONDUITS OUT
- ① TO SIGNAL CABINET
 - ② TO J-BOX L1
 - ③ SPARE TO L1

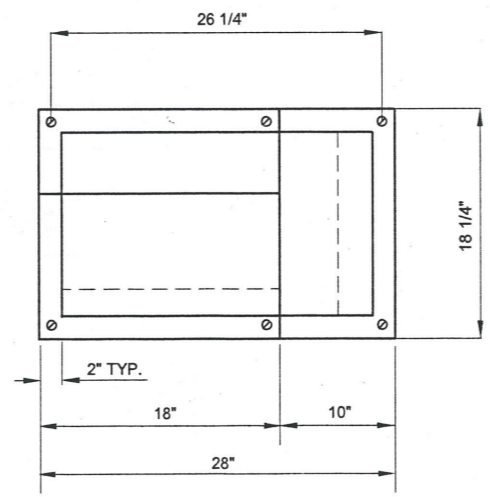


SECTION B-B



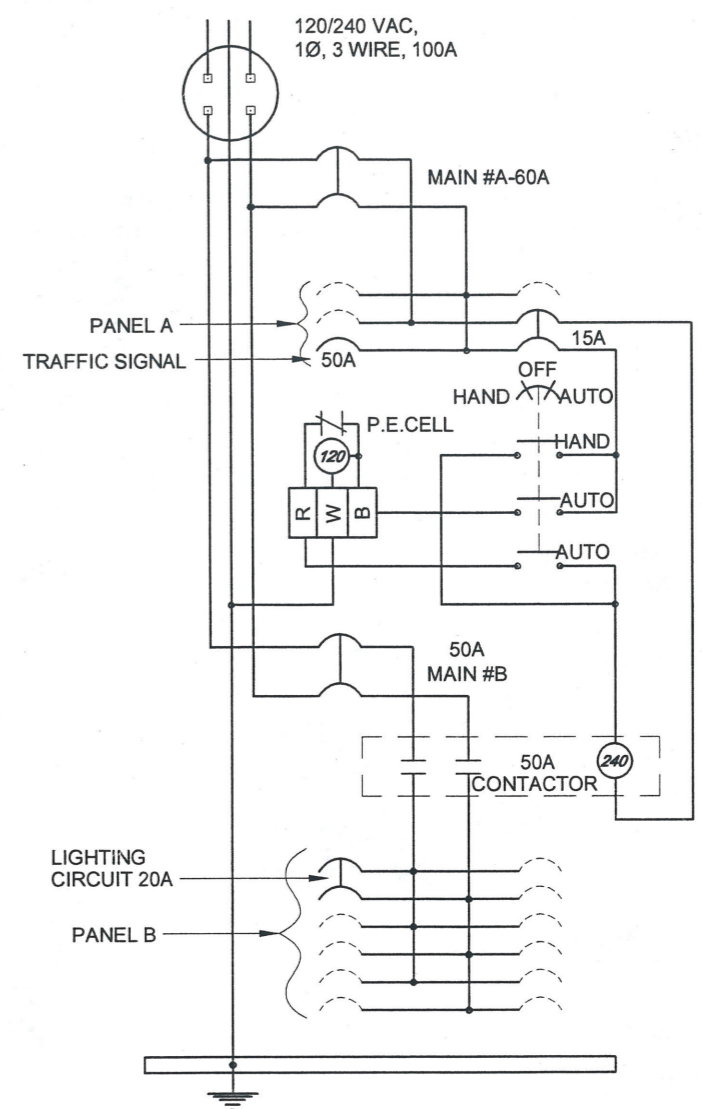
FRONT VIEW

RIGHT SIDE VIEW



PLAN VIEW

LOAD CENTER DETAILS



LOAD CENTER SCHEMATIC

NOTES:

1. DIMENSIONS SHOWN ARE NOMINAL AND MAY VARY BETWEEN MANUFACTURERS.
2. ANCHOR BOLT PATTERN AND FOUNDATION SHALL BE CONSTRUCTED TO MATCH CABINET. FOUNDATION SHALL HAVE #3 REBAR AT 16" VERTICAL AND HORIZONTAL AROUND PERIMETER OF FOUNDATION, 3" CLEAR.

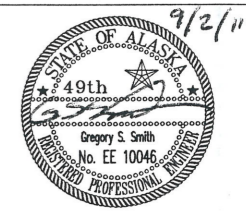
As-Built Drawing

JSK 2/19/15
Project Engineer Date

ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712
RIVERSIDE AND VINTAGE MISCELLANEOUS DETAILS

DESIGNED BY: G. SMITH



CHECKED BY: D. EPSTEIN

DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE RIVERSIDE AND VINTAGE MISCELLANEOUS DETAILS

PROJECT DESIGNATION NUMBER
HHE-000S (712)

STATE	YEAR
ALASKA	2011

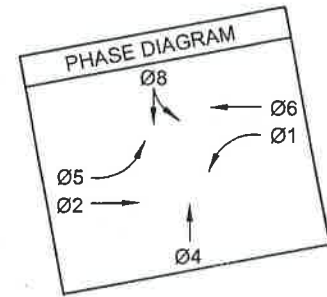
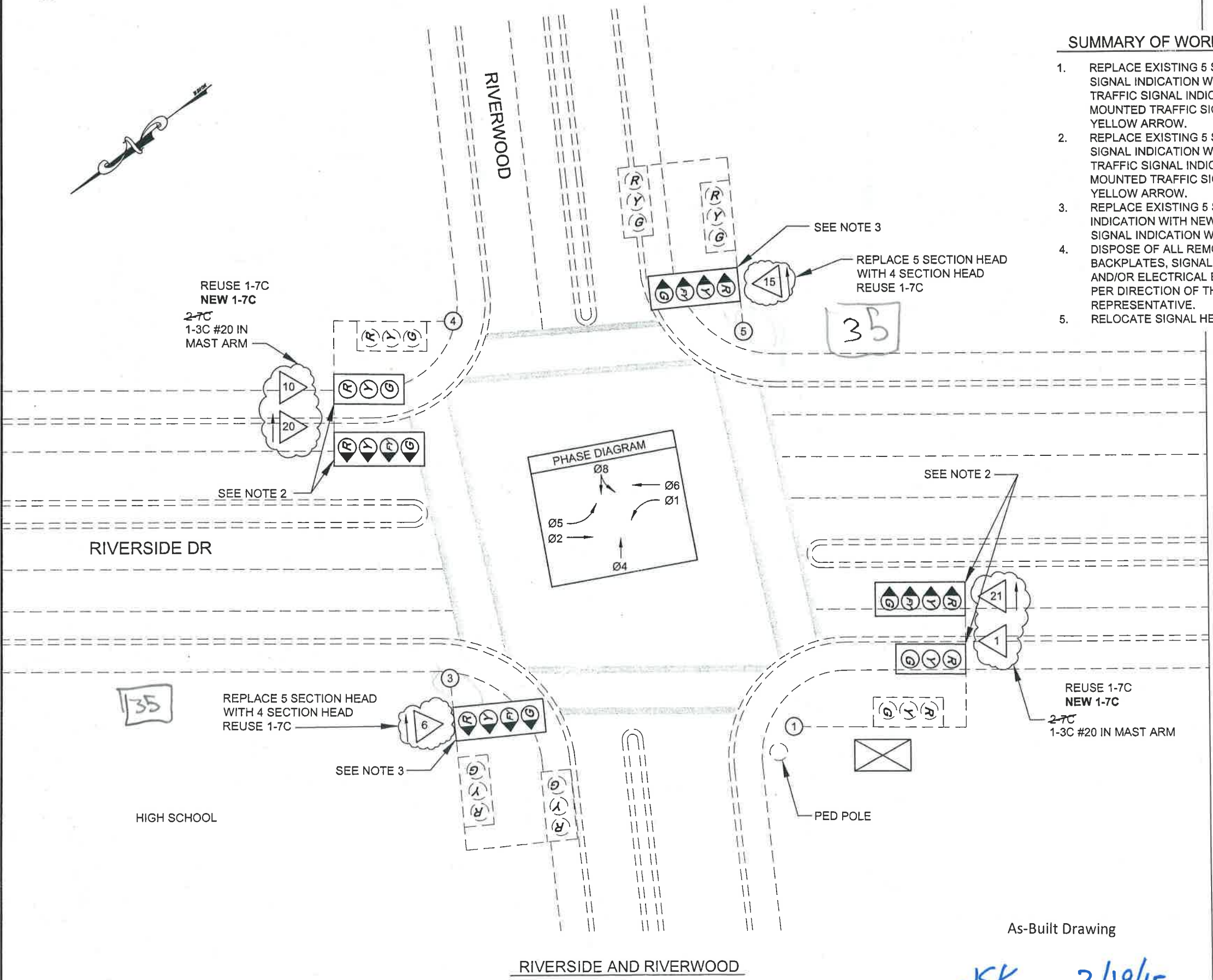
SHEET NUMBER	TOTAL SHEETS
Q14	31

RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
1	10/31/11	CABLE PL. DIAG.

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712
RIVERSIDE AND RIVERWOOD

SUMMARY OF WORK

1. REPLACE EXISTING 5 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 3 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION AND NEW 4 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW.
2. REPLACE EXISTING 5 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 3 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION AND NEW 4 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW.
3. REPLACE EXISTING 5 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 4 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW.
4. DISPOSE OF ALL REMOVED TRAFFIC SIGNAL INDICATIONS, BACKPLATES, SIGNAL HOUSING AND MOUNTING HARDWARE, AND/OR ELECTRICAL EQUIPMENT THAT IS NOT TO BE RETAINED, PER DIRECTION OF THE ENGINEER OR DESIGNATED REPRESENTATIVE.
5. RELOCATE SIGNAL HEADS TO MIDDLE OF APPROACH LANES.



LEGEND

- = POST MOUNT SIGNAL HEAD CONFIGURATION
- = SIDEMOUNT AND MASTARM SIGNAL HEAD CONFIGURATION
- = SIGNAL FACE VEHICULAR WITH NUMBER (LEFT TURN)
- = SIGNAL CABINET
- = SOLID BALL SIGNAL MODULE (X=COLOR)
- = TURN ARROW SIGNAL MODULE (X=COLOR)

WHERE:
R= RED Y= YELLOW G = GREEN
FY= FLASHING YELLOW

As-Built Drawing

JK 2/19/15
Project Engineer Date

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE
DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

RIVERSIDE AND RIVERWOOD

PROJECT DESIGNATION NUMBER
HHE-000S (712)

STATE	YEAR
ALASKA	2011

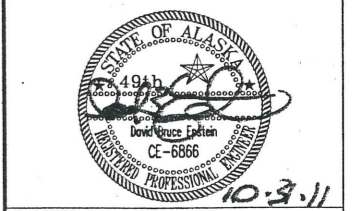
SHEET NUMBER	TOTAL SHEETS
Q15	31

ADDENDUM NUMBER		
2		
ATTACHMENT NUMBER		
17		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
1	10/31/11	Cable Path. Diag.

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

MENDENHALL LOOP AND VALLEY BLVD

DESIGNED BY: D. EPSTEIN



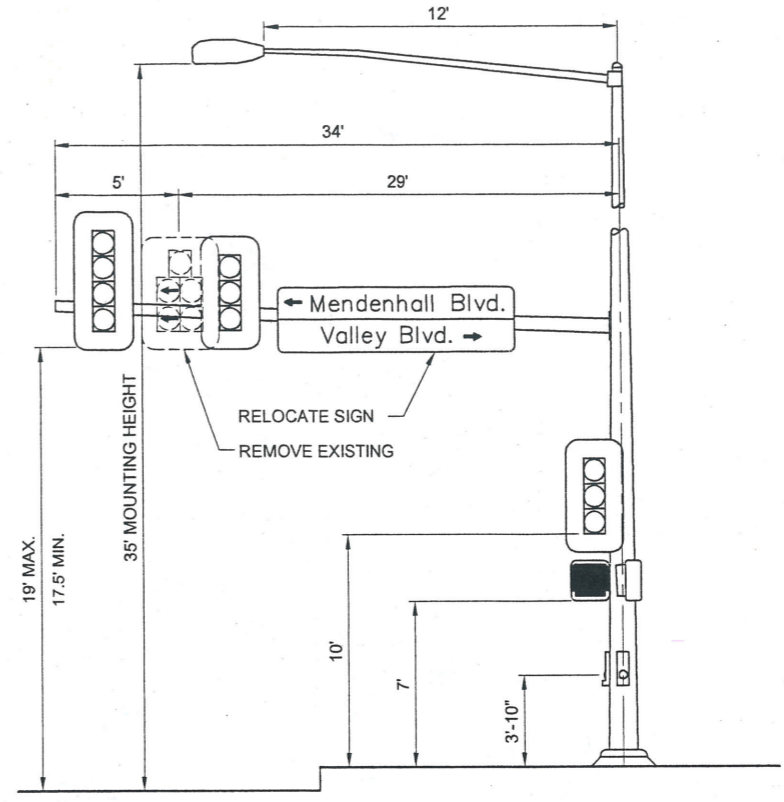
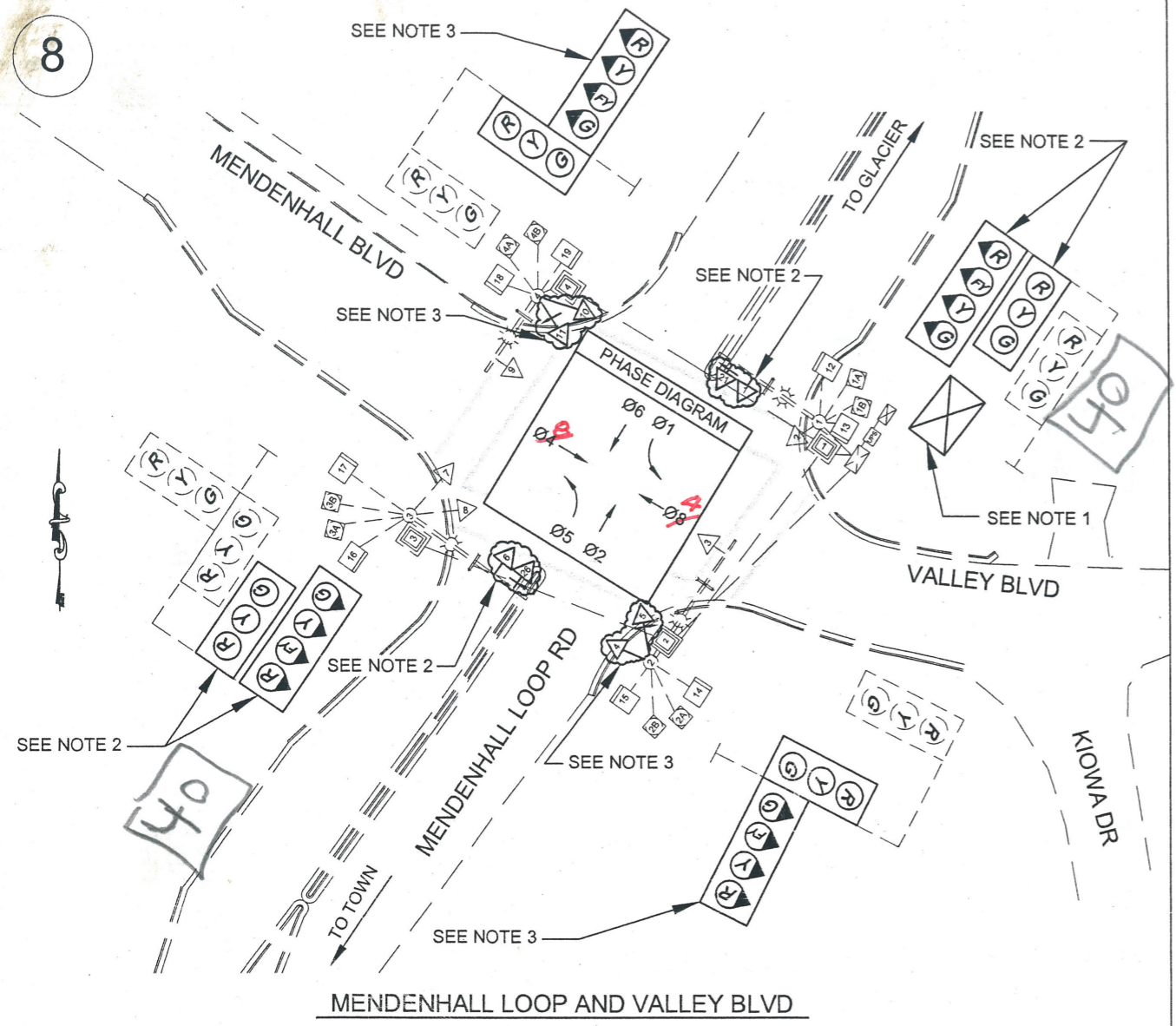
CHECKED BY: C. MOREHOUSE
 DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION
 SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

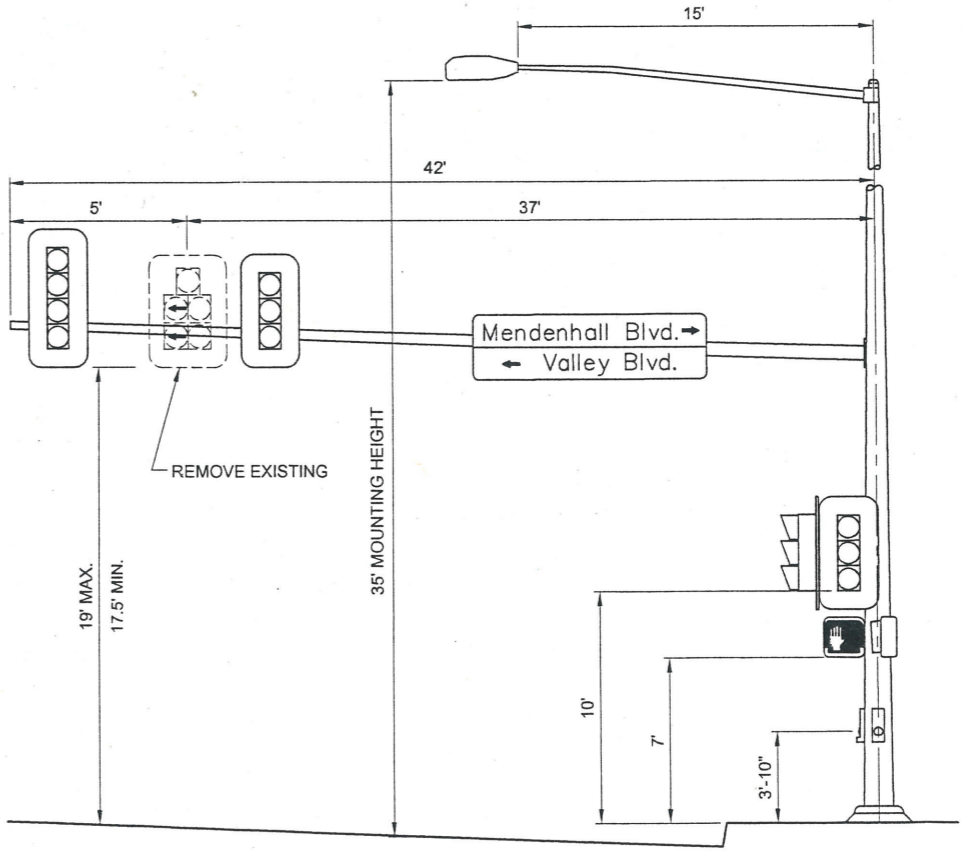
MENDENHALL LOOP AND VALLEY BLVD
 PROJECT DESIGNATION NUMBER
 HHE-000S (712)

STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q16	31

8



SIGNAL POLE NO. 1 DETAIL
 NORTHBOUND



SIGNAL POLE NO. 3 DETAIL
 SOUTHBOUND

SUMMARY OF WORK

- INSTALL A NEW CABINET ON EXISTING FOUNDATION WITH A NEW EAGLE EPAC M52 TRAFFIC SIGNAL CONTROLLER AND MALFUNCTION MONITORING UNIT (MMU).
- REPLACE EXISTING 5 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 3 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION AND NEW 4 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW.
- REPLACE EXISTING 5 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 4 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW.
- DISPOSE OF ALL REMOVED TRAFFIC SIGNAL INDICATIONS, BACKPLATES, SIGNAL HOUSING AND MOUNTING HARDWARE, AND/OR ELECTRICAL EQUIPMENT THAT IS NOT TO BE RETAINED, PER DIRECTION OF THE ENGINEER OR DESIGNATED REPRESENTATIVE.

LEGEND

- = POST MOUNT SIGNAL HEAD CONFIGURATION
- = SIDEMOUNT AND MASTARM SIGNAL HEAD CONFIGURATION
- = SIGNAL FACE VEHICULAR WITH NUMBER (LEFT TURN)
- = SIGNAL CABINET
- = SOLID BALL SIGNAL MODULE (X=COLOR)
- = TURN ARROW SIGNAL MODULE (X=COLOR)

WHERE:
 R= RED Y= YELLOW G= GREEN
 FY= FLASHING YELLOW

As-Built Drawing

Project Engineer: JSK
 Date: 2/19/15

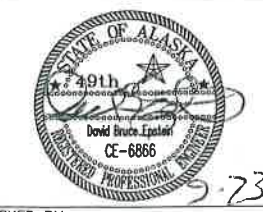
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ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

MENDENHALL LOOP AND VALLEY BLVD WIRING SCHEMATIC

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE
DRAWN/REVISED BY: D. STEVENS

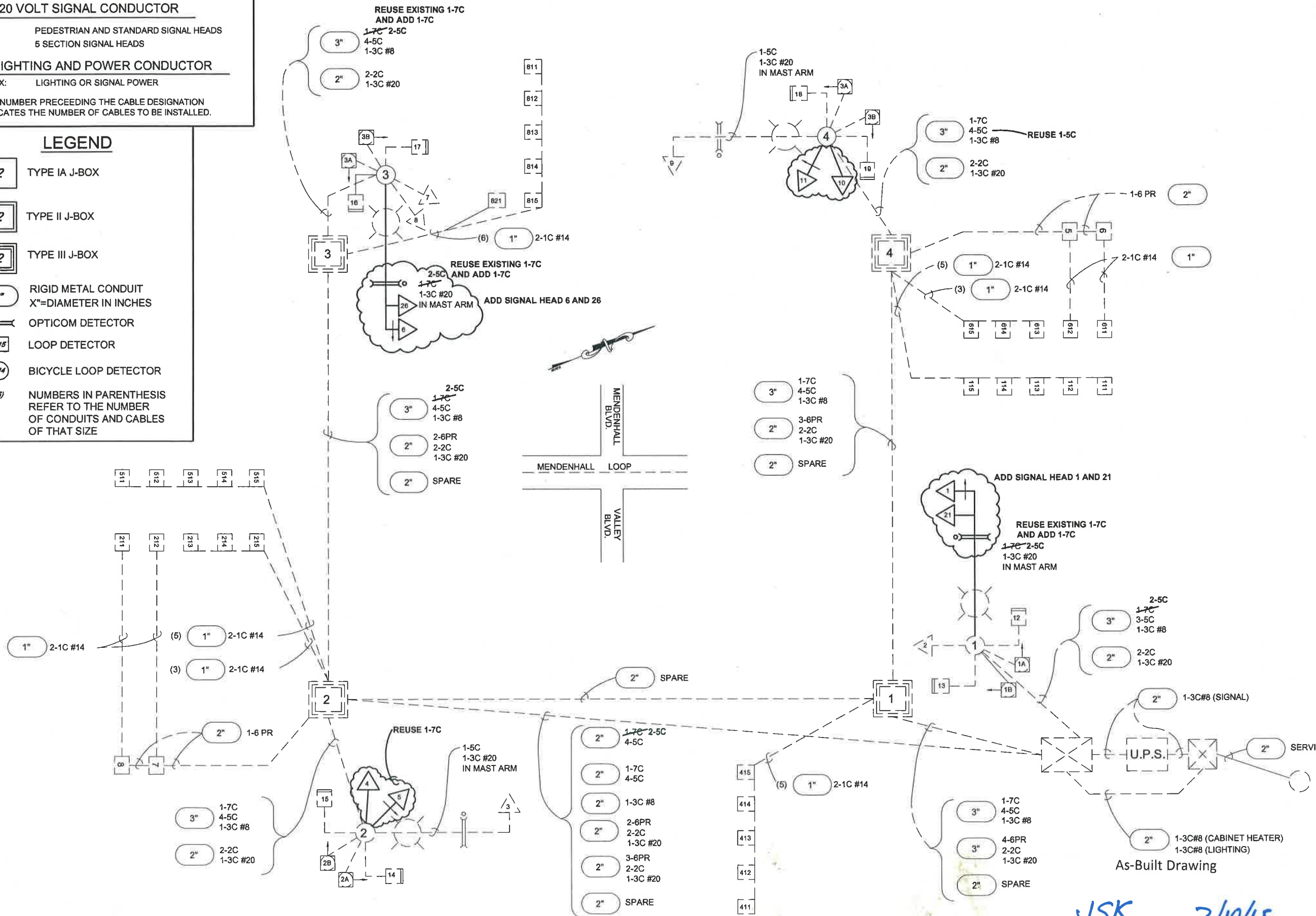
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION
SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

MENDENHALL LOOP AND VALLEY BLVD WIRING SCHEMATIC	
PROJECT DESIGNATION NUMBER	
HHE-000S (712)	
STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q17	31

- LOW VOLTAGE SIGNAL CONDUCTOR**
- 1C #14: LOOP WIRES
 - 2C #14: LOOP LEAD-IN
 - 2C: PEDESTRIAN PUSH BUTTON
 - 6PR: MULTI-LOOP LEAD-IN
 - 3C #20: PROPRIETARY OPTICOM CABLE
- 120 VOLT SIGNAL CONDUCTOR**
- 5C: PEDESTRIAN AND STANDARD SIGNAL HEADS
 - 7C: 5 SECTION SIGNAL HEADS
- LIGHTING AND POWER CONDUCTOR**
- 3C#X: LIGHTING OR SIGNAL POWER
- THE NUMBER PRECEDING THE CABLE DESIGNATION INDICATES THE NUMBER OF CABLES TO BE INSTALLED.

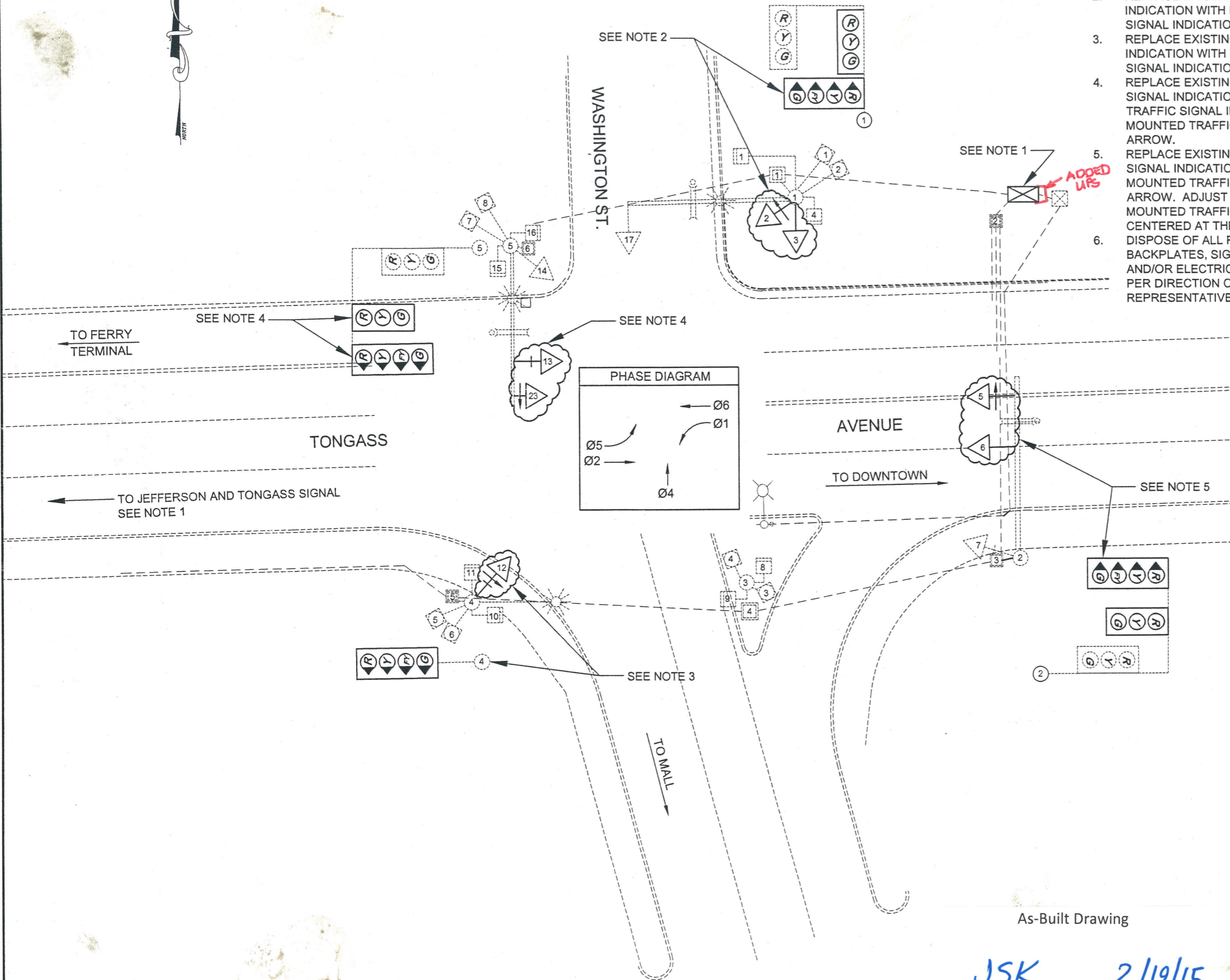
- LEGEND**
- TYPE IA J-BOX
 - TYPE II J-BOX
 - TYPE III J-BOX
 - RIGID METAL CONDUIT X"=DIAMETER IN INCHES
 - OPTICOM DETECTOR
 - LOOP DETECTOR
 - BICYCLE LOOP DETECTOR
 - (5) NUMBERS IN PARENTHESIS REFER TO THE NUMBER OF CONDUITS AND CABLES OF THAT SIZE

8



JSK 2/19/15
Project Engineer Date

22



S. TONGASS AND WASHINGTON

SUMMARY OF WORK

1. INSTALL A NEW CABINET ON EXISTING FOUNDATION WITH ONE CONTROLLER AND ONE NEW MALFUNCTION MONITORING UNIT (MMU) AT THE S. TONGASS AND WASHINGTON TRAFFIC SIGNAL. INSTALL ONE CONTROLLER AND ONE MMU IN THE S. TONGASS AND JEFFERSON TRAFFIC SIGNAL CONTROLLER CABINET.
2. REPLACE EXISTING 5 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 4 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW.
3. REPLACE EXISTING 5 SECTION POST MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 4 SECTION POST MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW.
4. REPLACE EXISTING 5 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 3 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION AND NEW 4 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION FLASHING YELLOW ARROW.
5. REPLACE EXISTING 5 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW NEW 4 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION FLASHING YELLOW ARROW. ADJUST LOCATION OF EXISTING 3 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION SO THAT APPEARS CENTERED AT THE APPROACH LANE.
6. DISPOSE OF ALL REMOVED TRAFFIC SIGNAL INDICATIONS, BACKPLATES, SIGNAL HOUSING AND MOUNTING HARDWARE, AND/OR ELECTRICAL EQUIPMENT THAT IS NOT TO BE RETAINED, PER DIRECTION OF THE ENGINEER OR DESIGNATED REPRESENTATIVE.

LEGEND

- = POST MOUNT SIGNAL HEAD CONFIGURATION
- = SIDEMOUNT AND MASTARM SIGNAL HEAD CONFIGURATION
- = SIGNAL CABINET
- = SOLID BALL SIGNAL MODULE (X=COLOR)
- = TURN ARROW SIGNAL MODULE (X=COLOR)

WHERE:
 R= RED Y= YELLOW G = GREEN
 FY= FLASHING YELLOW

As-Built Drawing

JSK 2/19/15
 Project Engineer Date

STEVENS, DAVID A (DOT)
 TAB: Q18 Thursday, October 20, 2011 7:39:11

ADDENDUM NUMBER	2	
ATTACHMENT NUMBER	18	
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
1	10/21/11	LABOR P.S. 2115

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

S. TONGASS AND WASHINGTON

DESIGNED BY: D. EPSTEIN

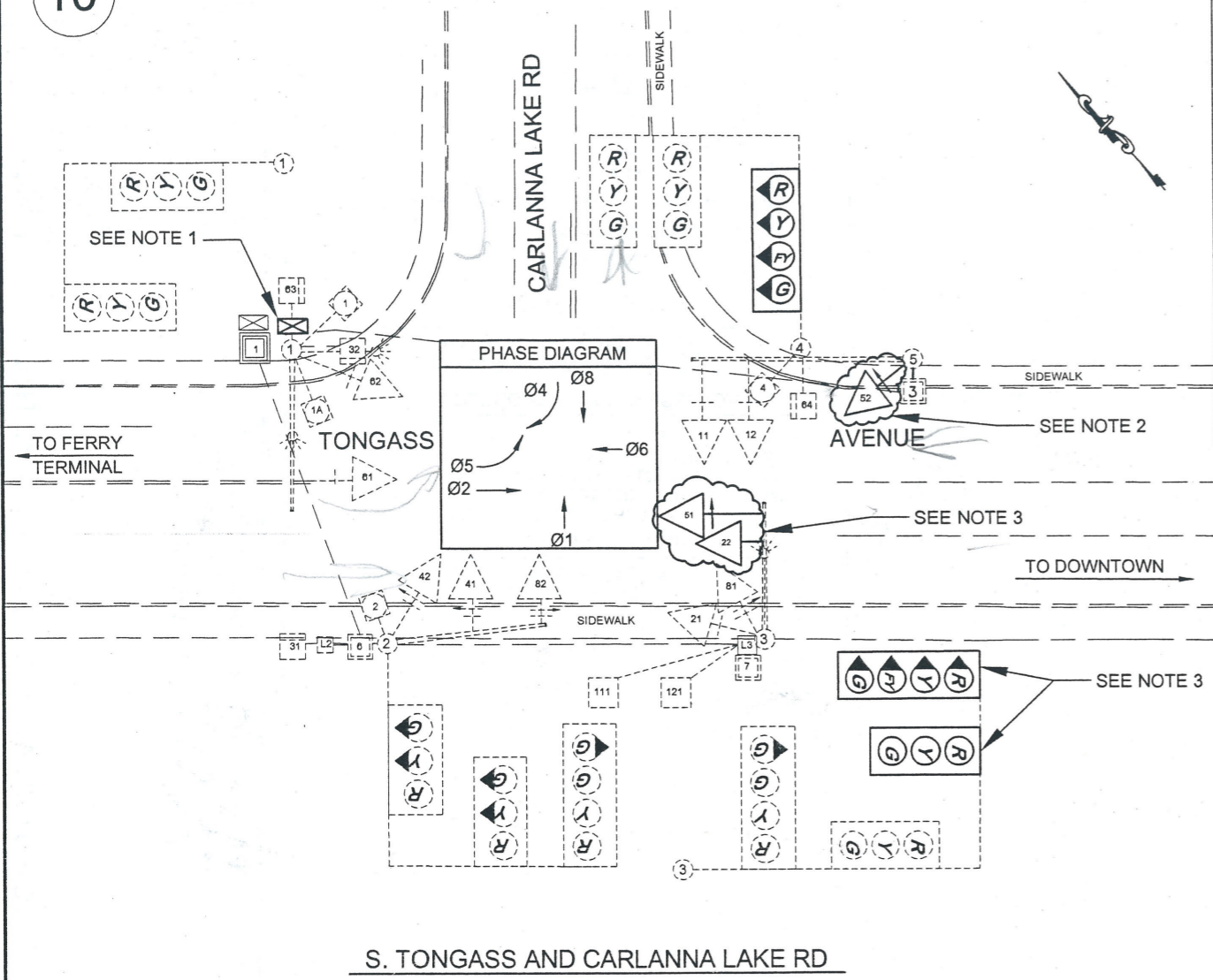
CHECKED BY: C. MOREHOUSE
 DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

S. TONGASS AND WASHINGTON

PROJECT DESIGNATION NUMBER	HHE-000S (712)
STATE	ALASKA
YEAR	2011
SHEET NUMBER	Q18
TOTAL SHEETS	31



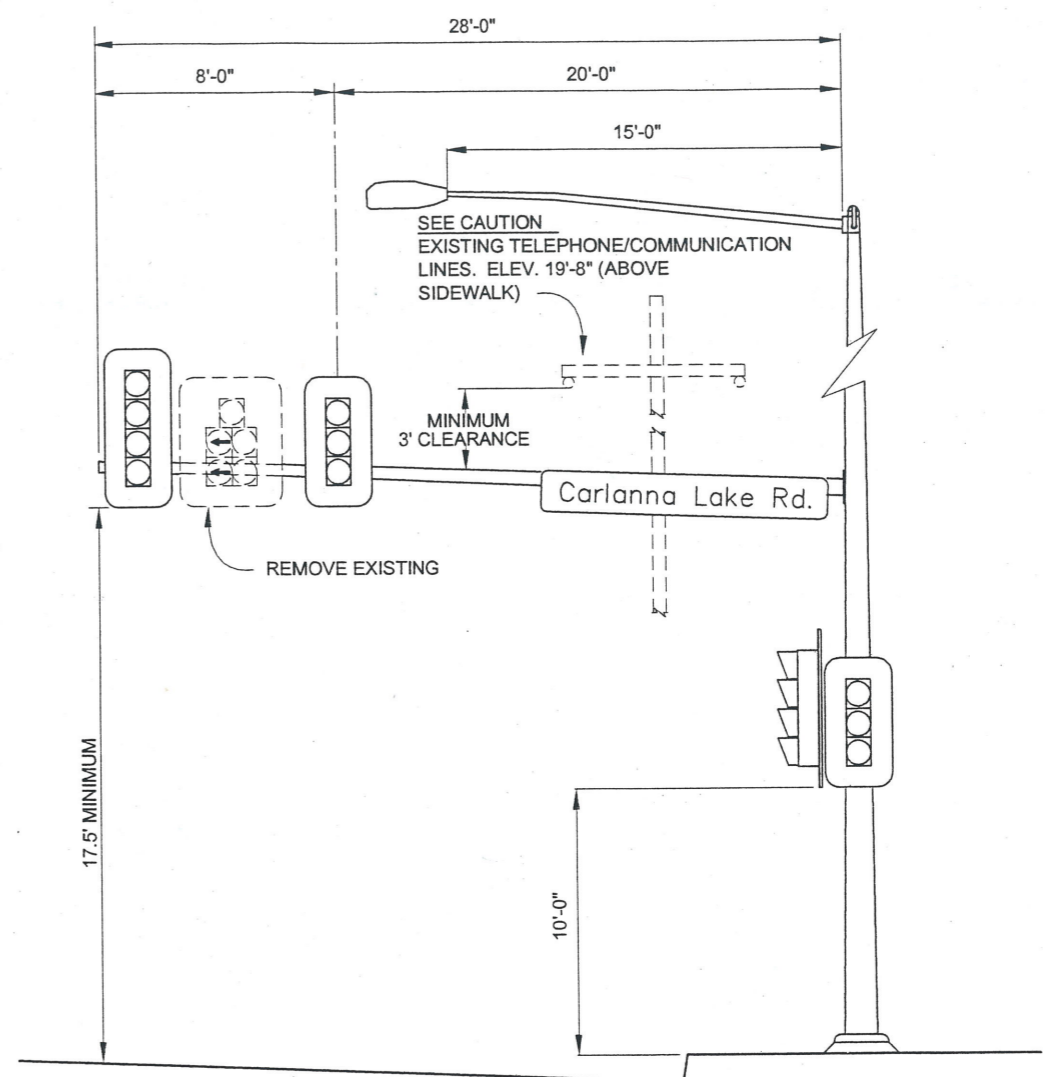
SUMMARY OF WORK

1. INSTALL A NEW CONTROLLER CABINET ON NEW FOUNDATION WITH A NEW EAGLE EPAC M52 TRAFFIC SIGNAL CONTROLLER AND MALFUNCTION MONITORING UNIT (MMU).
2. REPLACE EXISTING 5 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 4 SECTION SIDE MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW.
3. REPLACE EXISTING 5 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH NEW 3 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION AND NEW 4 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION FLASHING YELLOW ARROW.
4. DISPOSE OF ALL REMOVED TRAFFIC SIGNAL INDICATIONS, BACKPLATES, SIGNAL HOUSING AND MOUNTING HARDWARE, AND/OR ELECTRICAL EQUIPMENT THAT IS NOT TO BE RETAINED, PER DIRECTION OF THE ENGINEER OR DESIGNATED REPRESENTATIVE.

LEGEND

- = POST MOUNT SIGNAL HEAD CONFIGURATION
- = SIDEMOUNT AND MASTARM SIGNAL HEAD CONFIGURATION
- = SIGNAL CABINET
- = SOLID BALL SIGNAL MODULE (X=COLOR)
- = TURN ARROW SIGNAL MODULE (X=COLOR)

WHERE:
 R= RED Y= YELLOW G = GREEN
 FY= FLASHING YELLOW



SIGNAL POLE NO. 3 DETAIL

CAUTION:
 EXERCISE EXTREME CARE AROUND TELEPHONE LINES. THESE LINES CARRY THE ENTIRE TELEPHONE SYSTEM NORTH OF CARLANNA LAKE ROAD.

As-Built Drawing

JSK 2/19/15
 Project Engineer Date

ADDENDUM NUMBER		
2		
ATTACHMENT NUMBER		
20		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
1	10/31/11	Label Ph. Diag.

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

S. TONGASS AND CARLANNA LAKE RD.

DESIGNED BY: D. EPSTEIN



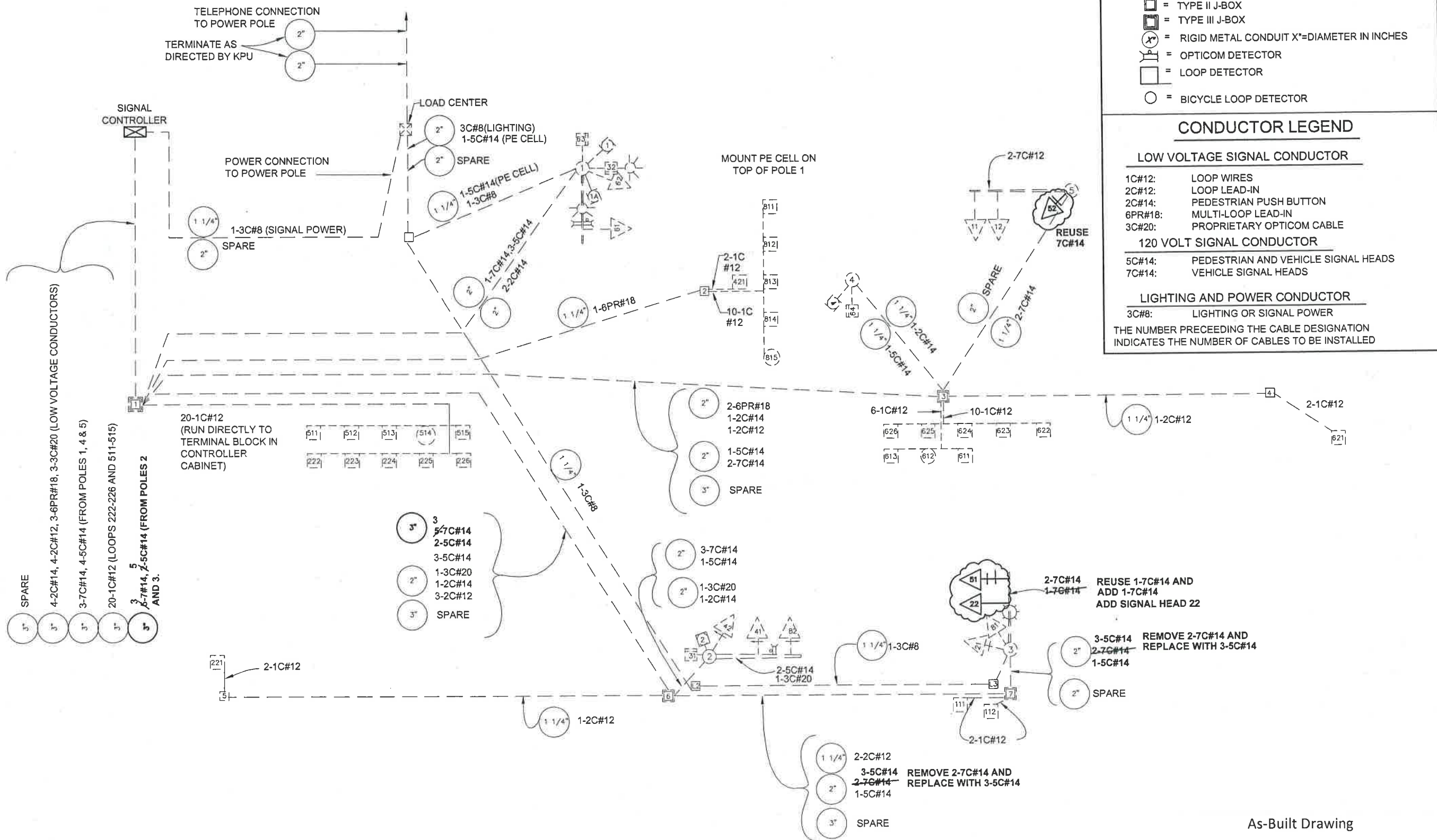
CHECKED BY: C. MOREHOUSE
 DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION
 SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

S. TONGASS AND CARLANNA LAKE RD.
 PROJECT DESIGNATION NUMBER
 HHE-000S (712)

STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q20	31

25



LEGEND

- = TYPE I J-BOX
- ▣ = TYPE II J-BOX
- ▢ = TYPE III J-BOX
- ⊗ = RIGID METAL CONDUIT X"=DIAMETER IN INCHES
- ⊘ = OPTICOM DETECTOR
- ⊞ = LOOP DETECTOR
- = BICYCLE LOOP DETECTOR

CONDUCTOR LEGEND

LOW VOLTAGE SIGNAL CONDUCTOR

- 1C#12: LOOP WIRES
- 2C#12: LOOP LEAD-IN
- 2C#14: PEDESTRIAN PUSH BUTTON
- 6PR#18: MULTI-LOOP LEAD-IN
- 3C#20: PROPRIETARY OPTICOM CABLE

120 VOLT SIGNAL CONDUCTOR

- 5C#14: PEDESTRIAN AND VEHICLE SIGNAL HEADS
- 7C#14: VEHICLE SIGNAL HEADS

LIGHTING AND POWER CONDUCTOR

- 3C#8: LIGHTING OR SIGNAL POWER

THE NUMBER PRECEDING THE CABLE DESIGNATION INDICATES THE NUMBER OF CABLES TO BE INSTALLED

As-Built Drawing

JSK 2/19/15
Project Engineer Date

26

PATH: Q:\SEA\09192\PLANSET\Q10.DWG

STEVENS, DAVID A (DOT)
TAB: Q21 Thursday, October 20, 2011 7:57:1

ADDENDUM NUMBER
2

ATTACHMENT NUMBER
21

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	10/31/11	removed 2 notes show new controller

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

S. TONGASS AND CARLANNA LAKE RD. WIRING SCHEMATIC

DESIGNED BY: D. EPSTEIN

CHECKED BY: C. MOREHOUSE
DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

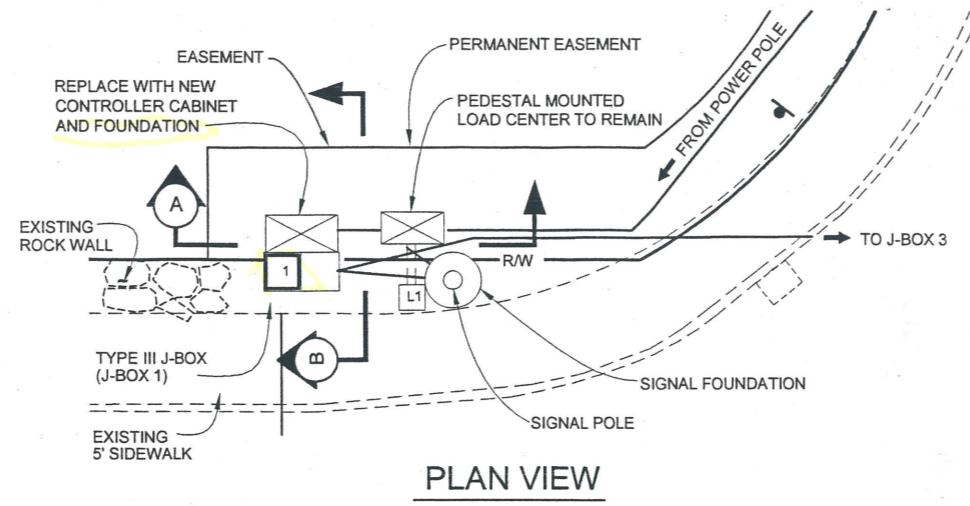
SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

S. TONGASS AND CARLANNA LAKE RD. WIRING SCHEMATIC

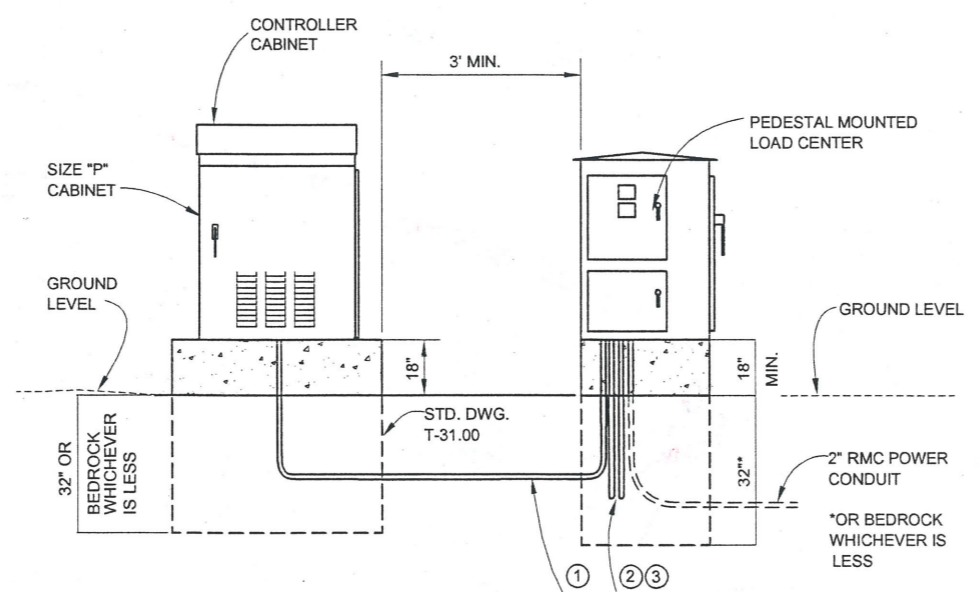
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STATE	YEAR
ALASKA	2011

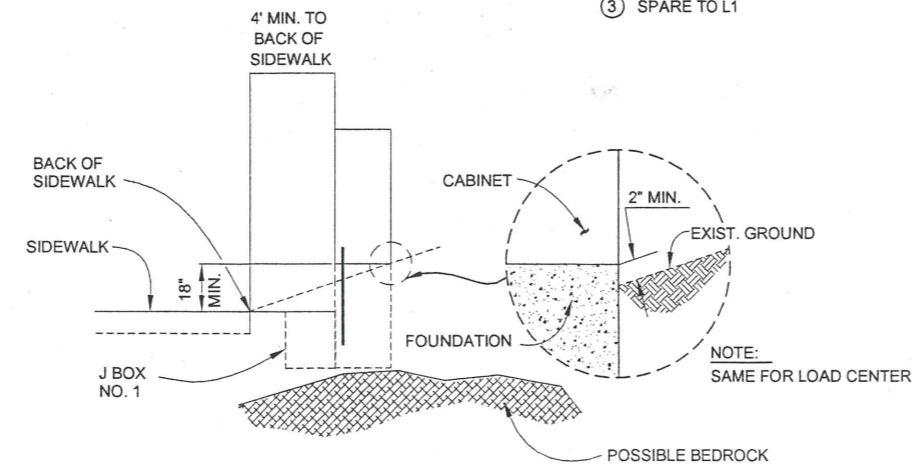
SHEET NUMBER	TOTAL SHEETS
Q21	31



CABINET & LOAD CENTER LOCATION DETAIL



SECTION A-A



SECTION B-B

ADDENDUM NUMBER		
2		
ATTACHMENT NUMBER		
22		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
1	10/31/11	remove load center details + schematic

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712
 S. TONGASS AND CARLANNA LAKE RD. MISCELLANEOUS DETAILS

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE

DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE
S. TONGASS AND CARLANNA LAKE RD. MISCELLANEOUS DETAILS

PROJECT DESIGNATION NUMBER

HHE-000S (712)

STATE	YEAR
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ALASKA	2011
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SHEET NUMBER	TOTAL SHEETS
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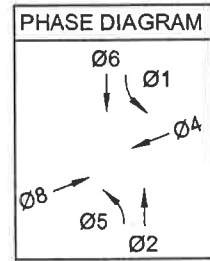
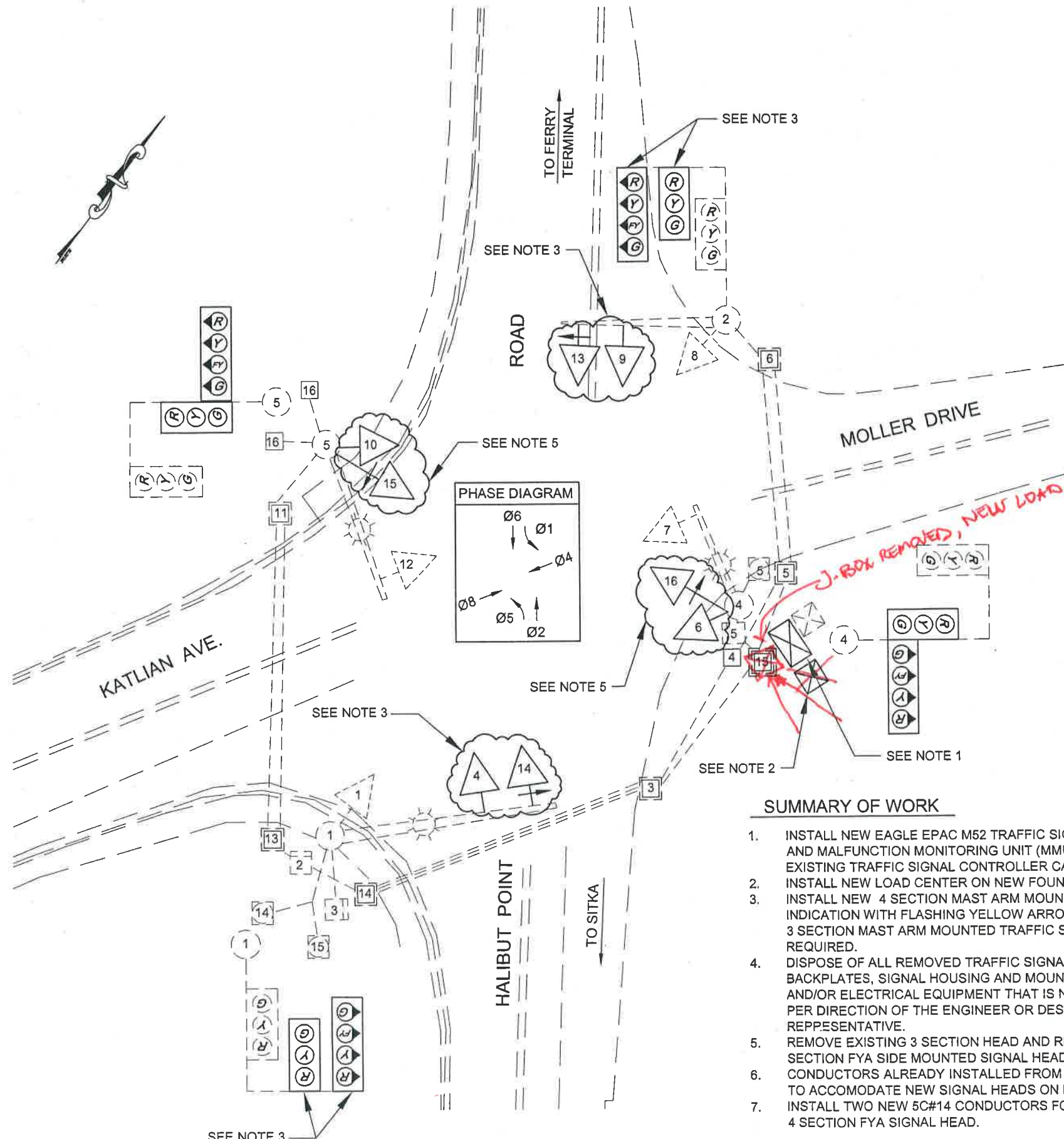
Q22	31
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As-Built Drawing

JSK 2/19/15

Project Engineer Date

27



SUMMARY OF WORK

1. INSTALL NEW EAGLE EPAC M52 TRAFFIC SIGNAL CONTROLLER AND MALFUNCTION MONITORING UNIT (MMU). REPLACE EXISTING TRAFFIC SIGNAL CONTROLLER CABINET.
2. INSTALL NEW LOAD CENTER ON NEW FOUNDATION.
3. INSTALL NEW 4 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION WITH FLASHING YELLOW ARROW. ADJUST EXISTING 3 SECTION MAST ARM MOUNTED TRAFFIC SIGNAL INDICATION AS REQUIRED.
4. DISPOSE OF ALL REMOVED TRAFFIC SIGNAL INDICATIONS, BACKPLATES, SIGNAL HOUSING AND MOUNTING HARDWARE, AND/OR ELECTRICAL EQUIPMENT THAT IS NOT TO BE RETAINED, PER DIRECTION OF THE ENGINEER OR DESIGNATED REPRESENTATIVE.
5. REMOVE EXISTING 3 SECTION HEAD AND REPLACE WITH 4 SECTION FYA SIDE MOUNTED SIGNAL HEAD AND 3 NEW SECTION CONDUCTORS ALREADY INSTALLED FROM PREVIOUS PROJECT TO ACCOMODATE NEW SIGNAL HEADS ON MAST ARM.
6. INSTALL TWO NEW 5C#14 CONDUCTORS FOR THE SIDEMOUNTED 4 SECTION FYA SIGNAL HEAD.

As-Built Drawing

JSK 2/19/15
Project Engineer Date

LEGEND

- = POST MOUNT SIGNAL HEAD CONFIGURATION
- = SIDEMOUNT AND MASTARM SIGNAL HEAD CONFIGURATION
- = SIGNAL CABINET
- = SOLID BALL SIGNAL MODULE (X=COLOR)
- = TURN ARROW SIGNAL MODULE (X=COLOR)

WHERE:
R= RED Y= YELLOW G = GREEN
FY= FLASHING YELLOW

ADDENDUM NUMBER		
2		
ATTACHMENT NUMBER		
23		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
1	10/31/11	add new load center note + remove

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

HALIBUT POINT RD AND KATLIAN

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE
DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

HALIBUT POINT RD AND KATLIAN
PROJECT DESIGNATION NUMBER
HHE-000S (712)

STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
Q23	31

28

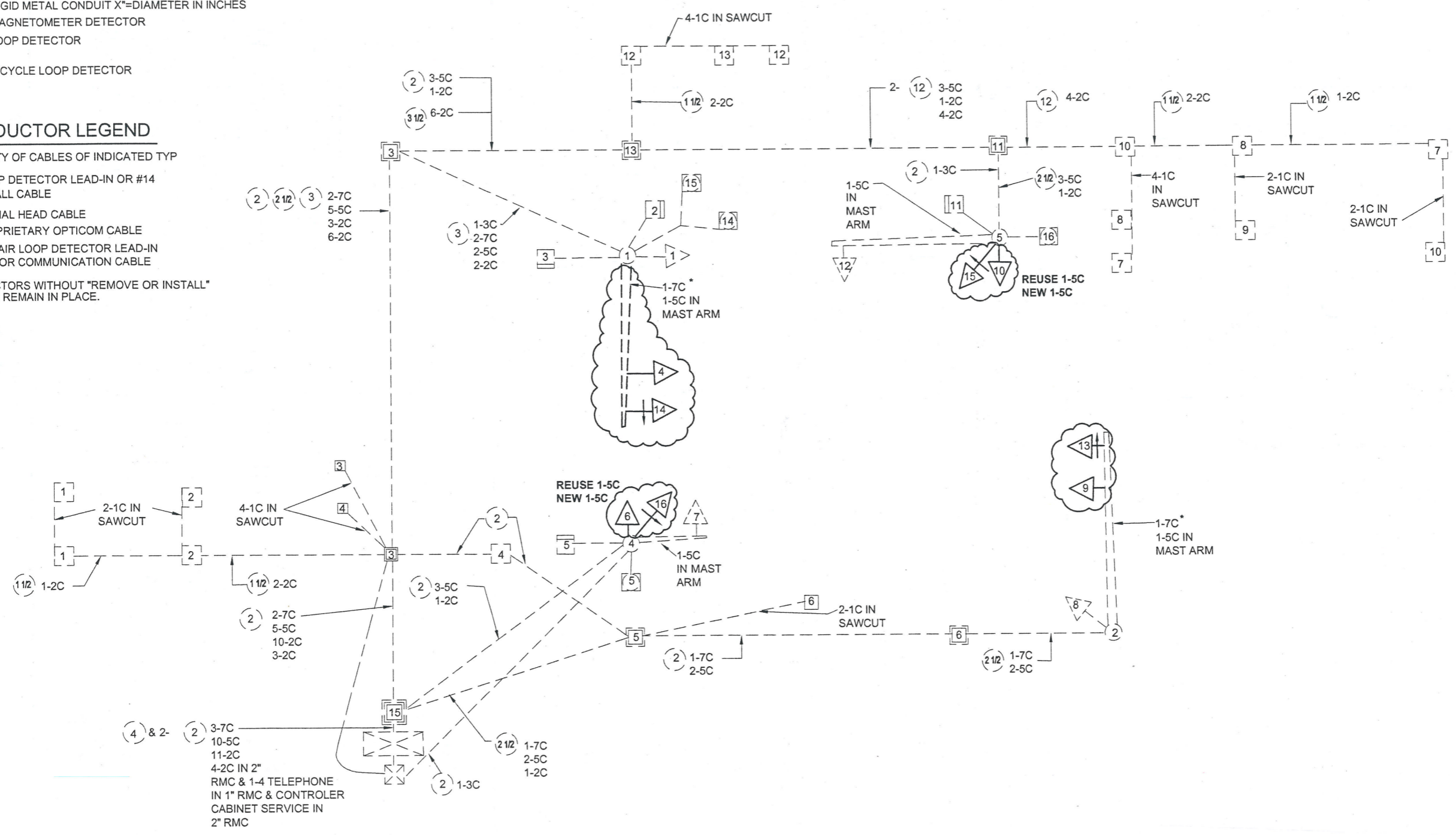
ADDENDUM NUMBER		
2		
ATTACHMENT NUMBER		
24		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION
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LEGEND

- = TYPE I J-BOX
- ▣ = TYPE II J-BOX
- ▤ = TYPE III J-BOX
- ⊗ = RIGID METAL CONDUIT X"=DIAMETER IN INCHES
- ⊖ = MAGNETOMETER DETECTOR
- = LOOP DETECTOR
- = BICYCLE LOOP DETECTOR

CONDUCTOR LEGEND

- 2-XX = QUANTITY OF CABLES OF INDICATED TYP
 - 2C = #13 LOOP DETECTOR LEAD-IN OR #14 PED CALL CABLE
 - 5C OR 7C = #14 SIGNAL HEAD CABLE
 - 3C* = 3M PROPRIETARY OPTICOM CABLE
 - 6PR = MULTI-PAIR LOOP DETECTOR LEAD-IN CABLE OR COMMUNICATION CABLE
- NOTE: CONDUCTORS WITHOUT "REMOVE OR INSTALL" PREFIX REMAIN IN PLACE.



SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE
 PROJECT NO. HHE-0005-712
 HALIBUT POINT RD AND KATLIAN WIRING SCHEMATIC

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE
DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION
SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

HALIBUT POINT RD AND KATLIAN WIRING SCHEMATIC
PROJECT DESIGNATION NUMBER

HHE-0005 (712)

STATE	YEAR
ALASKA	2011

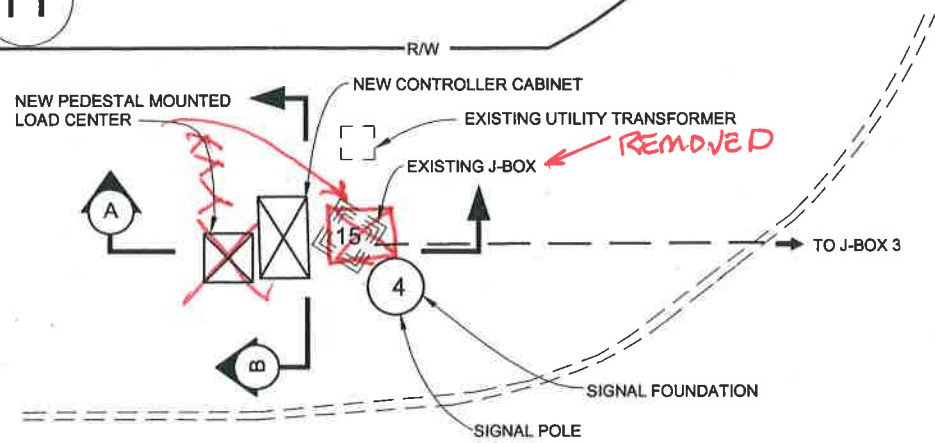
SHEET NUMBER	TOTAL SHEETS
Q24	31

As-Built Drawing

JSK
Project Engineer

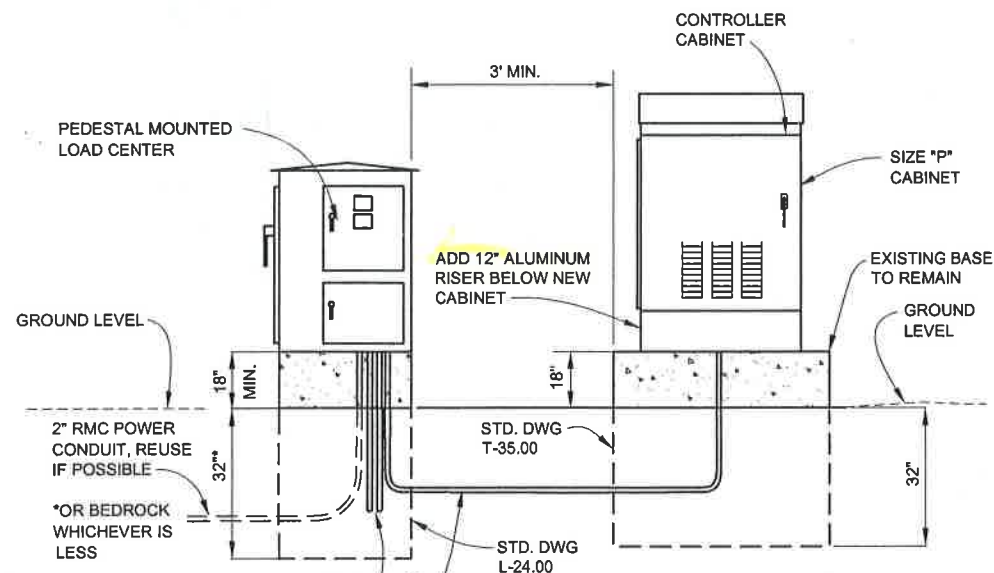
2/19/15
Date

29



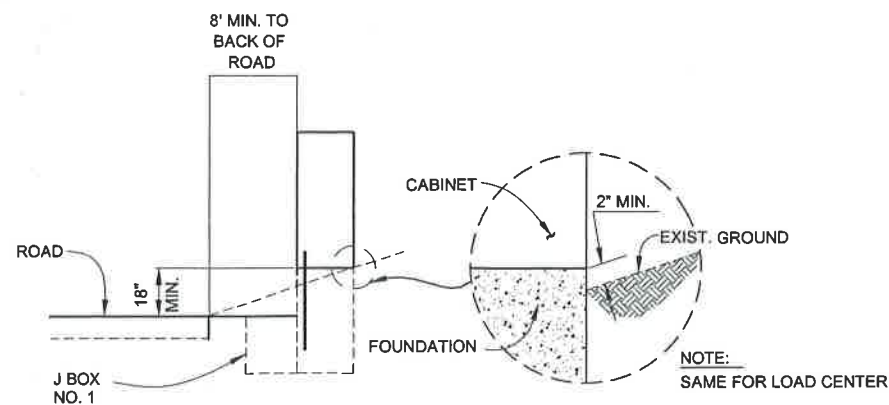
PLAN VIEW

CABINET & LOAD CENTER LOCATION DETAIL

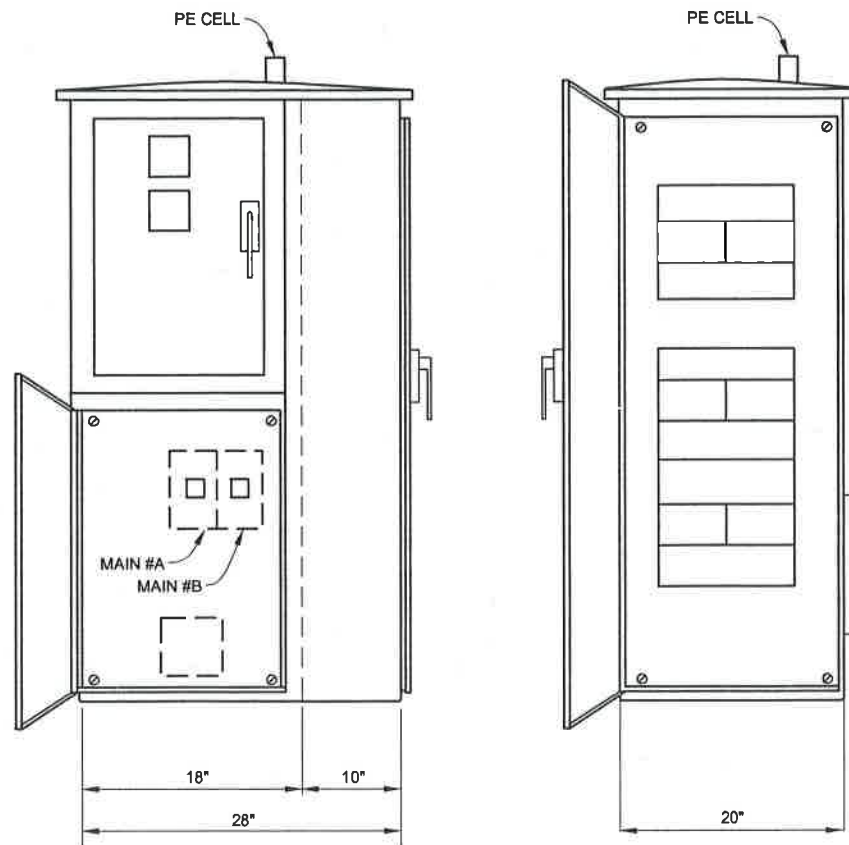


SECTION A-A

- 3 CONDUITS OUT
- ① TO SIGNAL CABINET
- ② TO J-BOX L1
- ③ SPARE TO L1

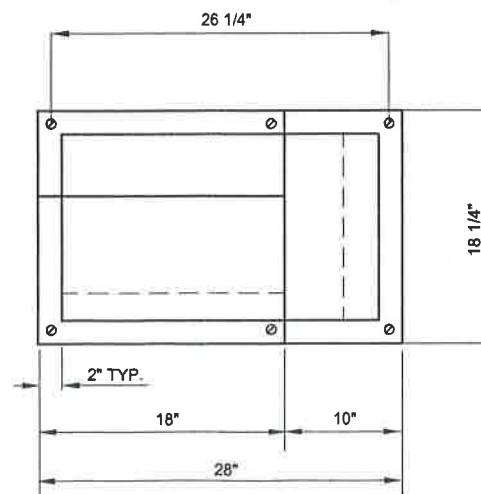


SECTION B-B



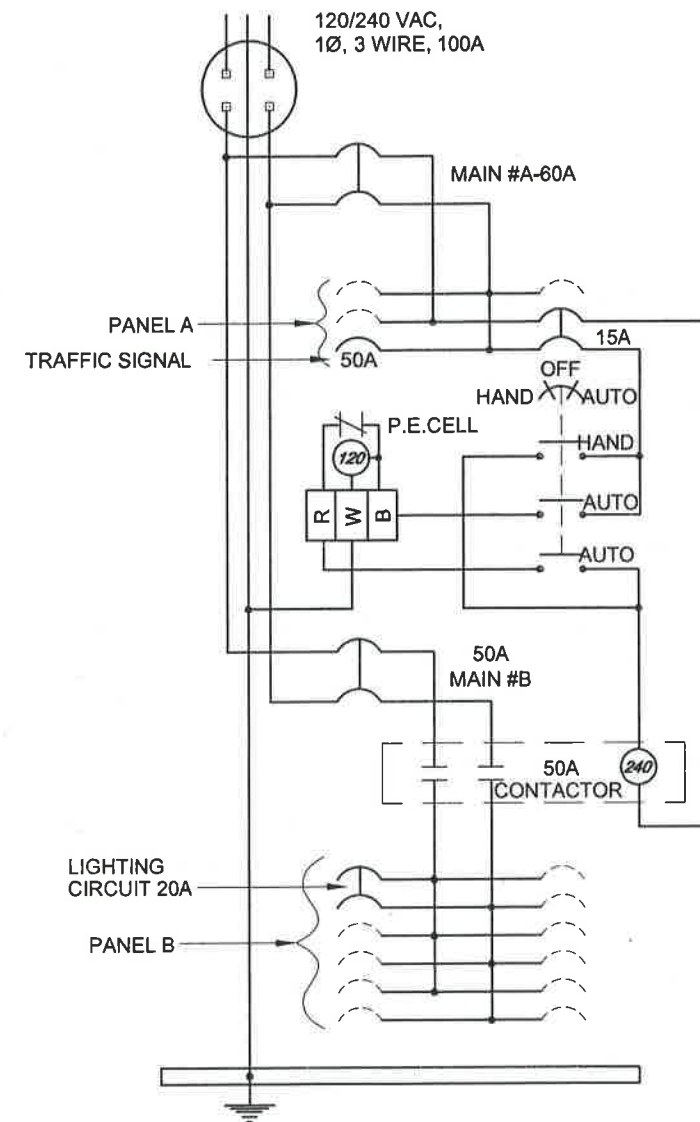
FRONT VIEW

RIGHT SIDE VIEW



PLAN VIEW

LOAD CENTER DETAILS



LOAD CENTER SCHEMATIC

NOTES:

1. DIMENSIONS SHOWN ARE NOMINAL AND MAY VARY BETWEEN MANUFACTURERS.
2. ANCHOR BOLT PATTERN AND FOUNDATION SHALL BE CONSTRUCTED TO MATCH CABINET. FOUNDATION SHALL HAVE #3 REBAR AT 16" VERTICAL AND HORIZONTAL AROUND PERIMETER OF FOUNDATION, 3" CLEAR.

As-Built Drawing

JSK 2/19/15
Project Engineer Date

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

HALIBUT POINT RD AND KATLIAN MISCELLANEOUS DETAILS

DESIGNED BY: G. SMITH



CHECKED BY: D. EPSTEIN

DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE
HALIBUT POINT RD AND KATLIAN MISCELLANEOUS DETAILS

PROJECT DESIGNATION NUMBER

HHE-000S (712)

STATE YEAR

ALASKA 2011

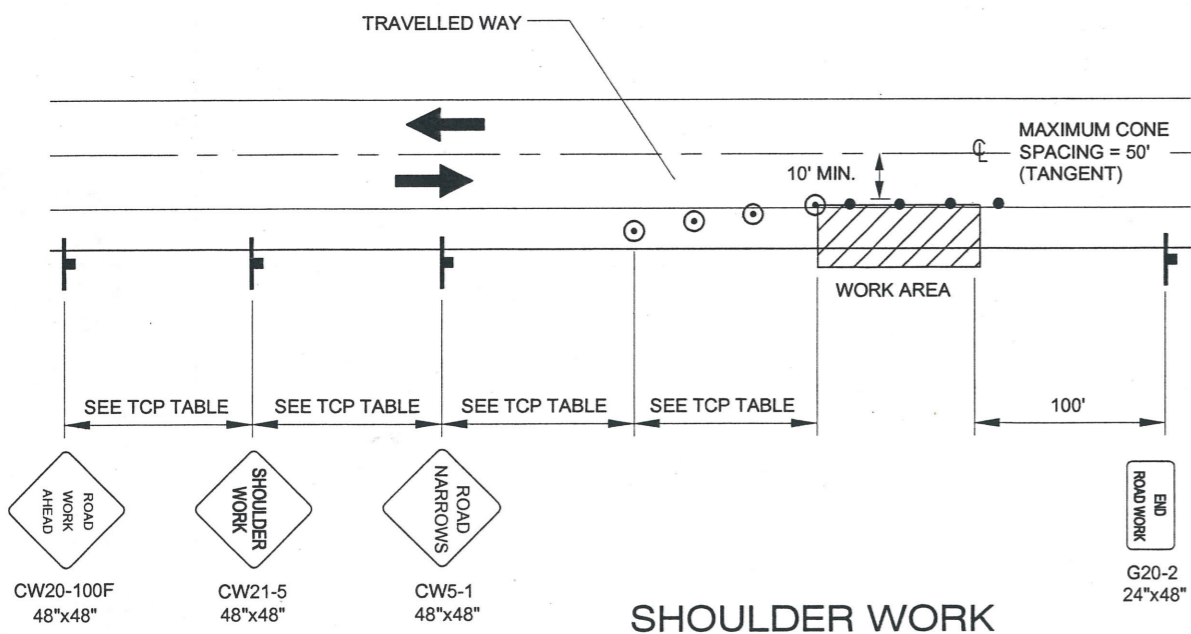
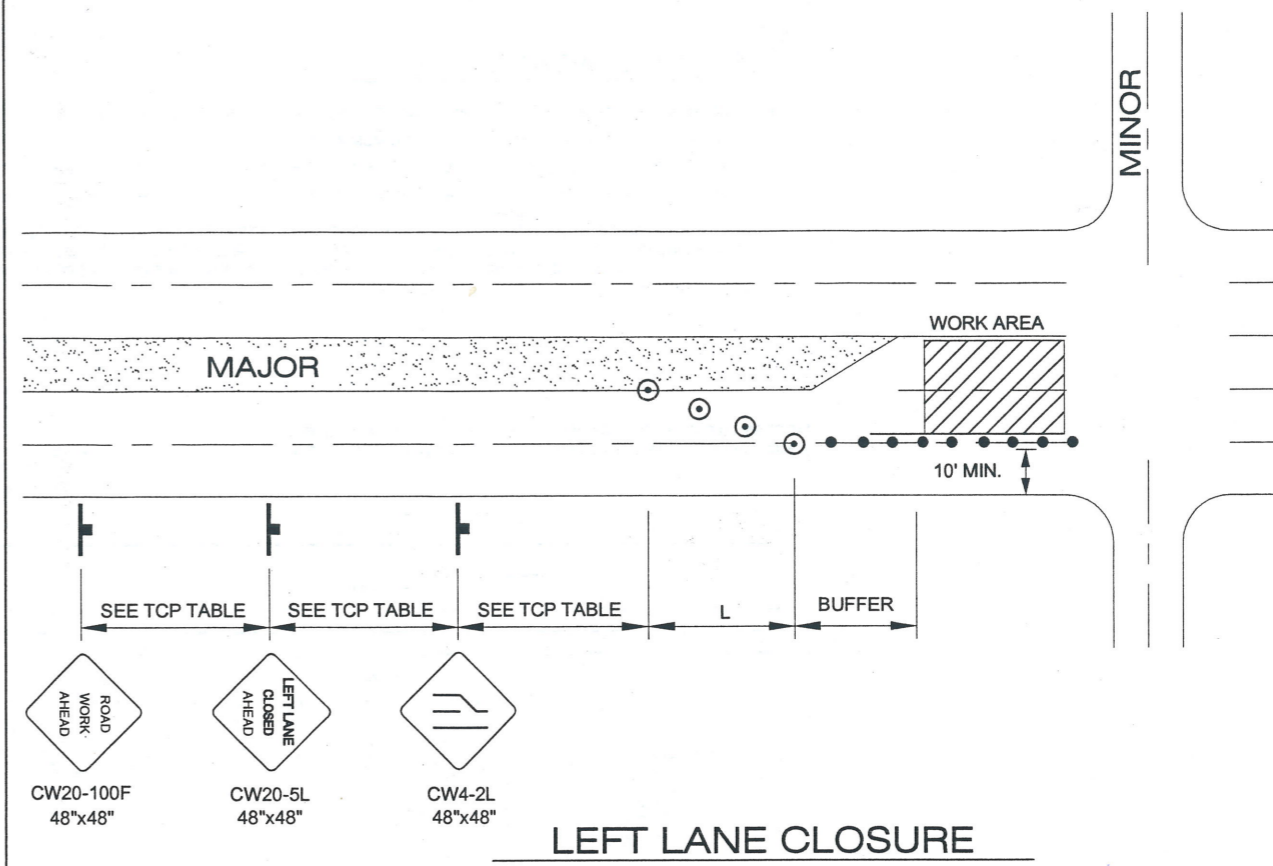
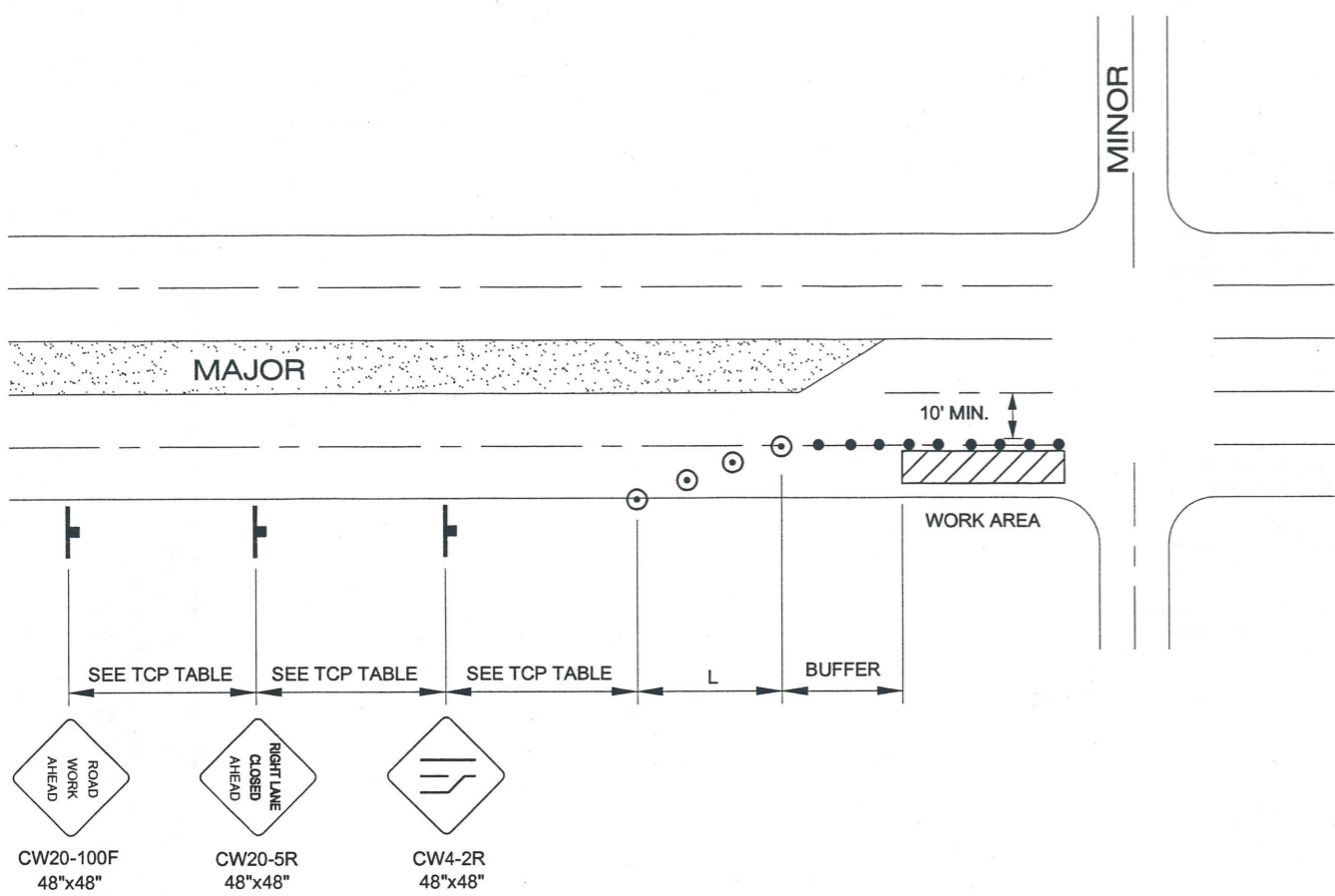
SHEET NUMBER TOTAL SHEETS

Q25 31

30

ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION

SEA AREAWIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE
 PROJECT NO. HHE-000S-712
 TRAFFIC CONTROL PLANS



LEGEND

- ┆ SIGN
- CONE
- ⊙ DRUM
- ⊕ TYPE III BARRICADE

$L = WS (45 \text{ MPH OR } >)$

$L = \frac{WS^2}{60} (40 \text{ MPH OR } <)$

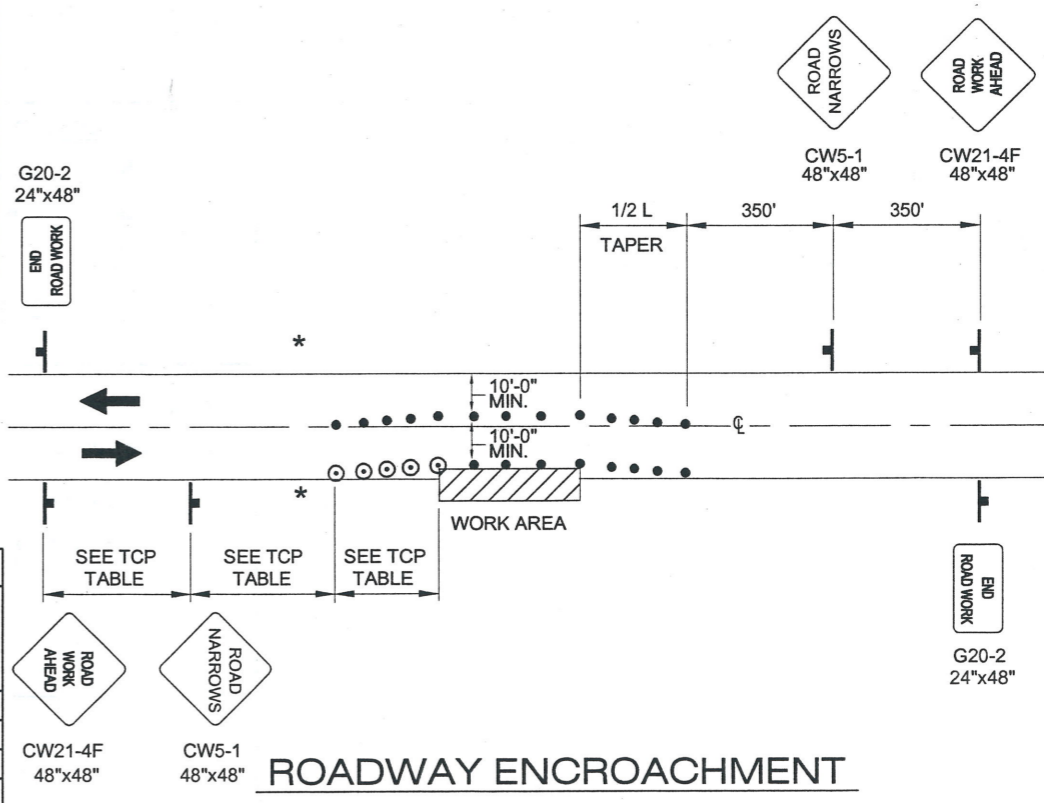
WHERE:

L= LENGTH OF TAPER (FT)

W= WIDTH OF OFFSET (FT)

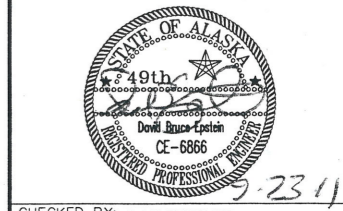
S= SPEED (MPH)

TCP TABLE SETUP			
SPEED (MILES PER HOUR)	BUFFER/LENGTH (ft)	CONE/DRUM SPACING ON TAPER (ft)	ADVANCE WARNING SIGN SPACING (ft)
25	155	25	100
30	200	30	100
35	250	35	350
40	305	40	350
45	360	45	500
50	425	50	500
55	495	55	500
60	570	60	1000



NOTE: IF ONLY ONE LANE IS AFFECTED 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 SHALL BE DELETED.

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE
 DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION
 SEA AREAWIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

TRAFFIC CONTROL PLANS

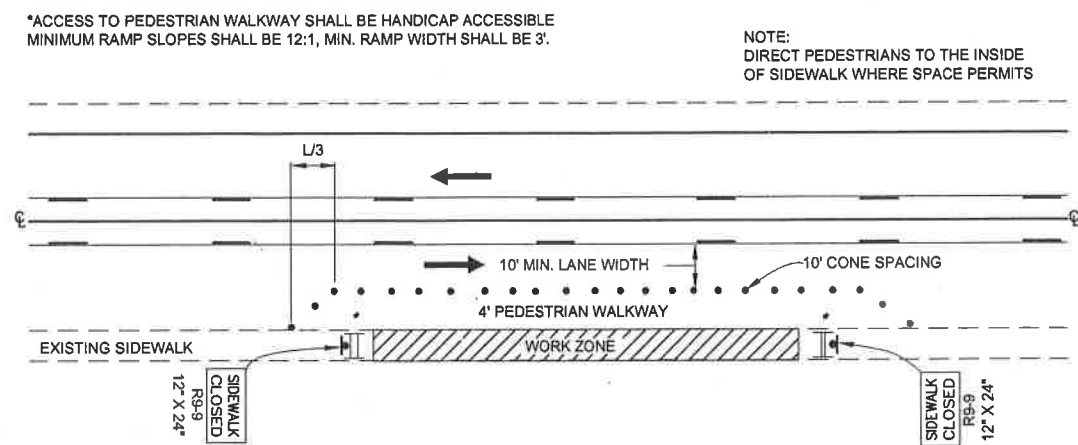
PROJECT DESIGNATION NUMBER
HHE-000S (712)

STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
S1	31

ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION

TRAFFIC CONTROL NOTES:

1. A MINIMUM OF TWO LANES SHALL BE MAINTAINED AT ALL TIMES, THROUGH ALL WORK AREAS.
2. TEMPORARY DRIVING LANES SHALL HAVE A MINIMUM WIDTH OF 10'-0".
3. CONSTRUCTION SIGNING SHALL BE IN PLACE ONLY WHEN THE CONDITIONS EXIST FOR WHICH THE SIGNS ARE INTENDED.
4. CHANNELIZATION DEVICES IF USED AT NIGHT SHALL BE LIT IN ACCORDANCE WITH THE ALASKA TRAFFIC MANUAL.
5. IT IS THE INTENT OF THIS TRAFFIC CONTROL PLAN (TCP) TO ILLUSTRATE SOME, NOT ALL, OF THE TRAFFIC CONTROL SETUPS WHICH WILL BE REQUIRED ON THIS PROJECT. PLANS FOR CONFIGURATIONS NOT COVERED BY THE TCP SHALL BE CREATED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL. WHERE APPROPRIATE, THEY SHALL INCORPORATE APPLICABLE PORTIONS OF DETAILS ON THESE SHEETS.



SIDEWALK CLOSURE

LEGEND

- SIGN
- CONE
- ⊙ DRUM
- || TYPE II BARRICADE

FORMULAS FOR L (TAPER LENGTH)

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

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

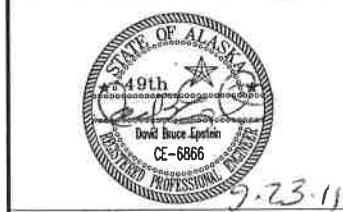
WHERE W = WIDTH OF OFFSET
 S = POSTED SPEED LIMIT

DRUM OR CONE SPACING = S (IN FEET)

MIN. BUFFER	
S	LENGTH
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570

SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712
 TRAFFIC CONTROL PLANS

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE

DRAWN/REVISED BY: D. STEVENS

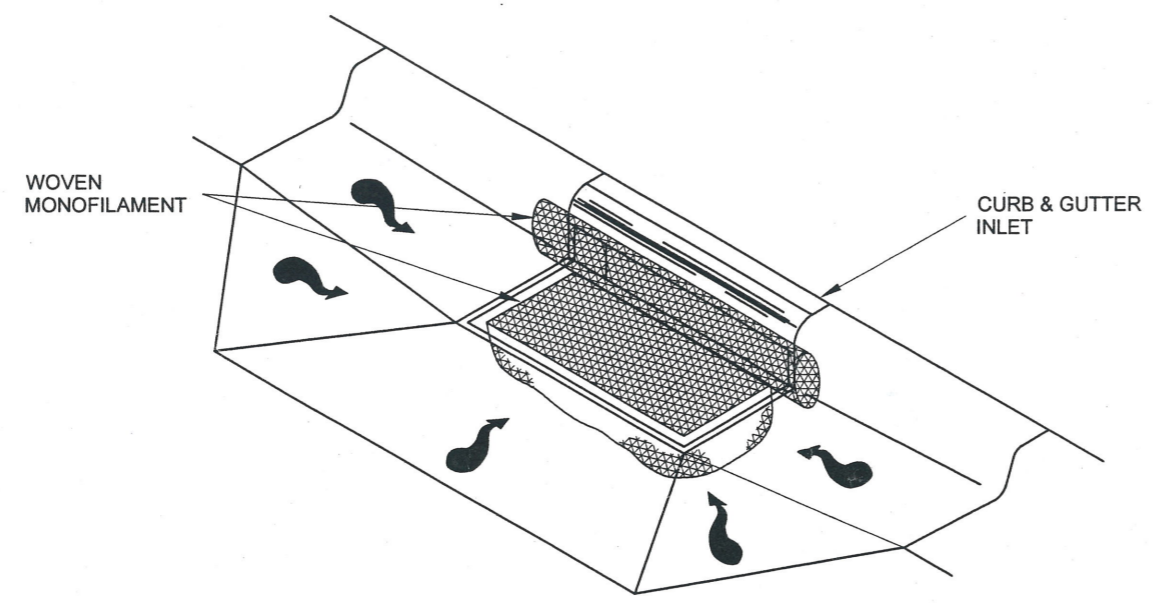
STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
 SOUTHEAST REGION
 SEA AREA WIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE

TRAFFIC CONTROL PLANS

PROJECT DESIGNATION NUMBER
HHE-000S (712)

STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
S2	31

ADDENDUM NUMBER		
ATTACHMENT NUMBER		
RECORD OF REVISIONS		
No.	DATE	DESCRIPTION



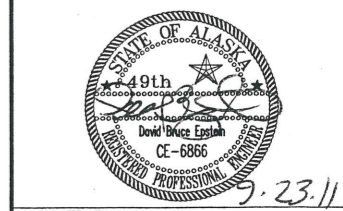
CURB INLET PROTECTION DETAIL

CATCH BASIN FILTERS SHALL BE USED AT ALL SITES WHERE SEDIMENT IS LIKELY TO BE GENERATED DURING CONSTRUCTION AND WHERE THE FILTERS ARE A REASONABLE MEANS OF TRAPPING IT.

SEA AREAWIDE FLASHING YELLOW ARROW (FYA) SIGNAL UPGRADE PROJECT NO. HHE-000S-712

ESCP DETAILS

DESIGNED BY: D. EPSTEIN



CHECKED BY: C. MOREHOUSE
DRAWN/REVISED BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

SEA AREAWIDE FLASHING
YELLOW ARROW (FYA)
SIGNAL UPGRADE

ESCP DETAILS

PROJECT DESIGNATION NUMBER
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STATE	YEAR
ALASKA	2011
SHEET NUMBER	TOTAL SHEETS
T1	31

33