



ADDENDUM TO THE CONTRACT

for the

JUNEAU INTERNATIONAL AIRPORT TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION & TAXIWAY E REALIGNMENT

Contract No. BE19-218

ADDENDUM NO.: TWO

CURRENT DEADLINE FOR BIDS:

August 22, 2019

PREVIOUS ADDENDA: ONE

ISSUED BY: City and Borough of Juneau
ENGINEERING DEPARTMENT
155 South Seward Street
Juneau, Alaska 99801

DATE ADDENDUM ISSUED:

August 16, 2019

The following items of the contract are modified as herein indicated. All other items remain the same. This addendum has been issued and is posted online. Please refer to the CBJ Engineering Contracts Division webpage at: http://www.juneau.org/engineering_ftp/contracts/Contracts.php

QUESTIONS AND CLARIFICATIONS:

Question 1. *"Please provide a basis of estimate or estimated quantities for the square footage of painting in Item P-620.020.0000 and square footage of hydroblasting in Item P-620.070.000. They were not included in the quantities notebook."*

Response: P620 basis of estimate calculations provided with Addendum #2.

Question 2. *"The point of my original question on the 58-28 oil was misinterpreted. The 58-28 oil is the correct oil used in this region and the item description was correct both in the bid schedule and in the spec but the 'item numbers' did not match. So instead of fixing the item numbers to match, the oil got changed. The last project this oil was spec'd I had US Oil call me and ask why we were using that because it is not what should be used. Please change the oil back to 58-28."*

Response: See Addendum #2

Question 3. *"Spec 26 36 00 item 1.5.A.1.d and 2.2.G.2.b - Is ATS2 to be "bypass isolation" type? Was existing ATS1 also a "bypass isolation" type? Is this necessary?"*

Response: See Addendum #2

Question 4. *"Spec 26 36 00 Item 2.1.J - Was ATS1 provided with ATS remote annunciator? Does ATS2 require a separate ATS remote annunciator?"*

Response: See Addendum #2

Question 5. *"Spec 26 36 00 Item 2.2 - It calls for Contactor type ATS; however dwg E552 keynotes #6 seems to indicate a preference for ATS2 to match the existing ATS1 being a breaker type. Existing ATS1 has a molded case switches with short circuit protection not overcurrent. Will overcurrent upgrades need to be incorporated into ATS1 as well as new ATS2?"*

Response: See Addendum #2

Question 6. *"Spec 26 36 00 item 2.2F.3.f - Was ATS1 provided with ATS remote annunciator? Does ATS2 require a separate ATS remote annunciator as well? What is the purpose of the ATS Modbus RTU or Ethernet TCP/IP communication?"*

Response: See Addendum #2

Question 7. *"Spec 26 36 00 item 3.4.B - Will the training and testing of ground-fault protective devices be performed by electrical contractor."*

Response: See Addendum #2

Question 8. *"Spec 26 32 13 item 2.09.A.1.a and 2.09.C - What is the expected / required communication interface between GCSC the Load Bank Controller as listed in? Can a proposed sequence of operations be provided for our review? It seems that the Load Bank Controller would be installed in the same room as the GCSC (as depicted on dwg E542)."*

Response: Intent is discrete digit I/O; meaning the GSCC simply signals the Load Bank to operate automatically, and depending on the Load Bank interface may also have to signal operational status of each generator.

Drawing E543 is intended to show expected Generator System Signaling Pathways; not sequence of operation. Sheet Note 2 indicates this sheet helps with coordinating all the E54x sheets, and Load bank Sequence of Operation is described on sheet E545 (in concert with Load Bank discussion on sheet E544).

Yes, the Load Bank Controller would be installed in the same room as the GCSC (as depicted on dwg E542).

Question 9. *"Spec 26 32 13 item 2.3.M - Please confirm that protective relays features are built-in as part of the gen EMCP4.X control panel; and that no additional protective relays would be provided with the GCSC system. Paralleling suppressors to protect excitation systems are built-in as part of the gen EMCP4.X control panel."*

Response: It is intended that the generator sets include integrated overload and other protective features/functions deemed appropriate for the application. The GSCC is not intended to provide these functions.

Question 10. *"Spec 26 23 13.11 Gen System Control item 1.2.A.5 - Who is going to modify the existing Gen Swbd?"*

Response: To be determined by the Contractor. Design intent is to not do anything that fundamentally alters the switchboard structure or other major components that voids the

listing.

Question 11. *"Spec 26 23 13.11 Gen System Control item 2.4.G.1 – Power Quality Meter description for each transfer switch" conflicts with CTs design on dwg E544 & dwg E554."*

Response: The existing Generator System design and connected loads are effectively 3-wire, so the CT's design drawings govern. The specification defines a versatile meter that is adaptable to the arrangements described, including the arrangement that exists.

Question 12. *"Dwg E544 - GCSC to interface with DDC I/O for HVAC operation in Gen Run Mode. More detailed clarification is needed for such interface?"*

Response: From GSCC perspective what is required is a dry contact that signals DDC that the respective engine is running (the existing SREB DDC and Mechanical system revision work is defined under Mechanical).

Question 13. *"Dwg E544 - FYI, both Gens to be controlled by GCSC which has a Gen Load Sense / Demand feature. It is recommended that Load Bank operation be utilized when only during 1 gen operation. Additional clarification is required for Gens & Load Bank integrated intended theory of operation."*

Response: Load Bank is required to be utilized with either or both generators operating.

Load Bank is utilized with either or both generators (see also item Drawing E543 Markup); also if the generator provided under this project is fully compatible with the existing generator (meaning they are both Caterpillar units that can be directly networked for load sense/demand functionality), the GSCC is not required to provide those elements (but the network cable must pass through the GSCC).

If the generator provided under this project is fully compatible with the existing generator (for example both generators are Caterpillar units that can be directly networked for indicated functionality), the GSCC is not required to include separate controlling elements (but the network cable between the generators must pass through the GSCC).

Drawing E543 is intended to show expected Generator System Signaling Pathways; not sequence of operation. Sheet Note 2 indicates this sheet helps with coordinating all the E54x sheets. For example, the Load bank Sequence of Operation is described on sheet E545 (in concert with Load Bank discussion on sheet E544).

Question 14. *"Dwg E544 - Based on the CTs circuits shown on this page, it seems that MM1 power quality meter is for metering both G1 & G2; and that MM2 power quality meter is for metering both ATS1&2 loads. Please confirm if all of these additional expensive meters are indeed required."*

Response: The CT windows enclose phase conductors of multiple feeders as indicated. The arrangement is centric to ATS2 being a "Molded Case Switch" type.
See Addendum #2.

Question 15. *"Dwg E554 - Who is responsible to provide these additional CTs into the existing Gen Swbd?"*

Response: Provision of the current transformers (CT's) is to be coordinated by the Contractor and presumably the GSCC builder/integrator (subcontractor to generator supplier?). The CT's to be provided are first defined through interpretation of the Schedule Notes in concert with the type of ATS2 selected (so for Molded Case Switch Type ATS2 the Schedule Note 3 tells what CT's apply). CT accuracy requirements are to be coordinated with the Load Bank and GSCC metering; design intent is the more stringent requirement applies to all CT's; otherwise, the usual non-revenue operational metering (based on ANSI Type switchboard meters) for generator paralleling switchboard application applies.

Question 16. *"Dwg E542 - Must be capable of receiving remote EPO shutdown signal (keynotes #4)"*

Response: Yes, defined further on sheets E543 - E546 and E552. See Addendum #2

Question 17. *"Dwg E544 - GCSC to be provided with independent control 24VDC battery (keynotes #4)"*

Response: Battery GSBAT and related charger GSCPS represent a separate 24VDC power source in addition to the generator engine 24VDC supplies.

Question 18. *"Dwg E544 - GCSC to be provided with various interface with Load Bank Controller & to monitor both ATS1&2 status. GCSC must be capable to provide a Load Dump signal to Load Bank Controller but keep the Load Bank circuit breaker normally closed."*

Response: Yes, defined further on sheets E543 - E546 and E552.

Question 19. *"Spec 26 23 13.11 Gen System Control item 1.2.A & 1.4.B.9 & 1.4.C - GCSC to interface with various external systems (Airport Lighting Control & Monitoring System; existing Fire Alarm system; HVAC & DDC system, etc. Custom sequence of operations for such interface with the external systems would be required. On-site testing of GCSC with those systems would be required."*

Response: Agree. Interface function to external system is defined largely on sheets E543 - E546. We expect that the generator/GSCC supplier will find the interfaces to be discrete digital in nature and rather straight forward to test. Providers of the external systems must process the signals from the Generator System; the Load Bank likely is the most complex from the Generator System perspective.

PROJECT MANUAL:

Item No. 1 NOTICE INVITING BID – 00 0300, **add** the following after Deadline for Bids paragraph: "DEADLINE FOR BIDDER QUESTIONS: 2:00 p.m. on August 20th, 2019."

Item No. 2 PART I GENERAL CONTRACT PROVISIONS, SECTION 00 4114 - BID SCHEDULE. **Delete** in its entirety and **replace** with the attached SECTION 00 4114 - BID SCHEDULE, labeled Addendum No. 2.

Item No. 3 PART I GENERAL CONTRACT PROVISIONS, SECTION 00 4115 - BID MODIFICATION. **Delete** in its entirety and **replace** with the attached SECTION 00 4115 - BID MODIFICATION, labeled Addendum No. 2.

- Item No. 4 PART II TECHNICAL SPECIFICATIONS, ITEM P-620 RUNWAY AND TAXIWAY PAINTING, METHOD OF MEASUREMENT, Subsection 620.4.4. **Delete** first sentence and **replace with** "Painted marking removal will not be measured for payment."
- Item No. 5 PART VII: APPENDIX E – SREB AND ALRV TECHNICAL SPECIFICATIONS, DIVISION 26 – ELECTRICAL, SECTION 26 3600 TRANSFER SWITCHES, PART 1 – GENERAL, Paragraph 1.5 A. 1. d. In the first sentence, after the word "operation" **insert** "(applies to Contactor Type transfer switch only)". The bypass/isolation requirement will apply only to a Contactor Type ATS2.
- Item No. 6 PART VII: APPENDIX E – SREB AND ALRV TECHNICAL SPECIFICATIONS, DIVISION 26 – ELECTRICAL, SECTION 26 3600 TRANSFER SWITCHES, PART 2 – PRODUCTS, Paragraph 2.2. **Add** "MOLDED CASE SWITCH-TYPE OR" before the word "CONTACTOR".
- Item No. 7 PART VII: APPENDIX E – SREB AND ALRV TECHNICAL SPECIFICATIONS, DIVISION 26 – ELECTRICAL, SECTION 26 3600 TRANSFER SWITCHES, PART 2 – PRODUCTS, Paragraph 2.2 F. 3. f. 3). After "TCP/IP" **add** "(preferred option)".
- Item No. 8 PART VII: APPENDIX E – SREB AND ALRV TECHNICAL SPECIFICATIONS, DIVISION 26 – ELECTRICAL, SECTION 26 3600 TRANSFER SWITCHES, PART 2 – PRODUCTS, Paragraph 2.2 F. 4. g. 1). **Replace** the words "See functional description under Control Switches and Indicators paragraphs above", with "See functional description under Control Switches and Indicators paragraph 2.2 F. 4. f. 4)."
- Item No. 9 PART VII: APPENDIX E – SREB AND ALRV TECHNICAL SPECIFICATIONS, DIVISION 26 – ELECTRICAL, SECTION 26 3600 TRANSFER SWITCHES, PART 3 – EXECUTION, Paragraph 3.4 B. **Delete** paragraph in its entirety.
- Item No. 10 PART II TECHNICAL SPECIFICATIONS, ITEM P-401 ASPHALT MIX PAVEMENTS. **Delete** pay item "P401.020.5228 Asphalt Binder, PG 52-28" and **replace** with "P401.020.5828 Asphalt Binder, PG 58-28".

DRAWINGS:

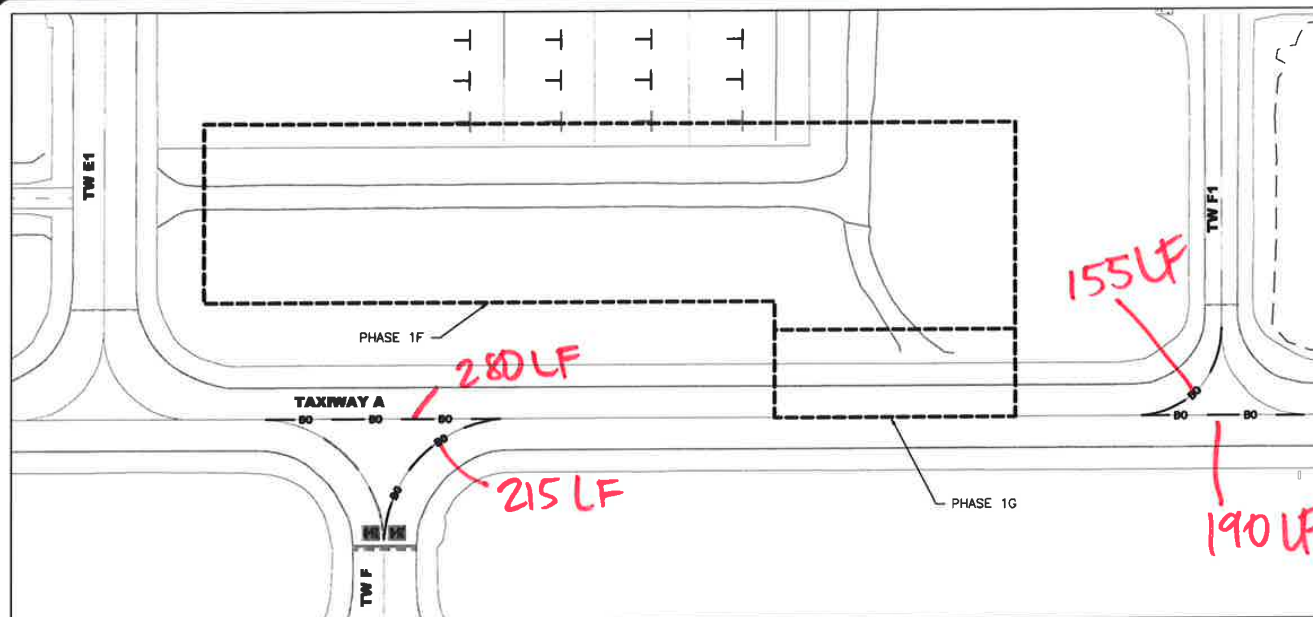
- Item No. 1 SHEET C602 of 233, titled "PAVEMENT MARKING OBLITERATION PLAN (SHEET 2 OF 4)", **replace** sheet with the attached SHEET C602 of 233, titled "PAVEMENT MARKING OBLITERATION PLAN (SHEET 2 OF 4)" labeled Addendum No. 2.
- Item No. 2 SHEET C611 of 233, titled "PAVEMENT MARKING PLAN (SHEET 7 OF 7)", **replace** sheet with the attached SHEET C611 of 233, titled "PAVEMENT MARKING PLAN (SHEET 7 OF 7)" labeled Addendum No. 2.
- Item No. 3 SHEET E541 of 233 titled "SREB ALRV – GENERATOR POWER PLAN", **replace** sheet with the attached SHEET E541 of 233, titled "SREB ALRV – GENERATOR POWER PLAN" labeled Addendum No. 2.
- Item No. 4 SHEET E544 of 233 titled "SREB ALRV – GENERATOR SYSTEM CONTROLS DETAILS", **replace** sheet with the attached SHEET E544 of 233, titled "SREB ALRV – GENERATOR SYSTEM CONTROLS DETAILS" labeled Addendum No. 2.

- Item No. 5 SHEET E552 of 233 titled "SREB ALRV – ELECTRICAL ONE-LINE DIAGRAM", **replace** sheet with the attached SHEET E544 of 233, titled "SREB ALRV – ELECTRICAL ONE-LINE DIAGRAM" labeled Addendum No. 2.
- Item No. 6 SHEET E554 of 233 titled "SREB ALRV – GENERATOR SWITCHBOARD", **replace** sheet with the attached SHEET E544 of 233, titled "SREB ALRV – GENERATOR SWITCHBOARD" labeled Addendum No. 2.

By: 
Greg Smith,
Contract Administrator

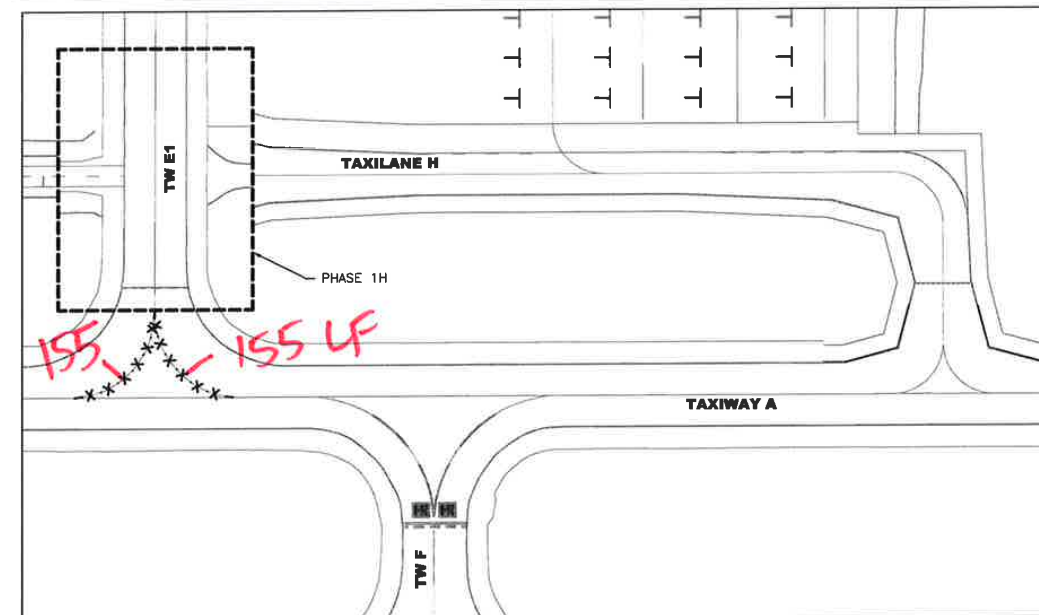
Total number of pages contained within this Addendum: 28

6/25/2019, 7:46 PM
Data Revised: 6/25/2019, 7:46 PM
Project Name: JUNEAU INTERNATIONAL AIRPORT
File Path and Name: P:\2017\17264\p-cb\pav\juney\JUNEAU\A601-C602-C603.dwg
Drawn By: AS/CW/BH
Checked By: UP/RC



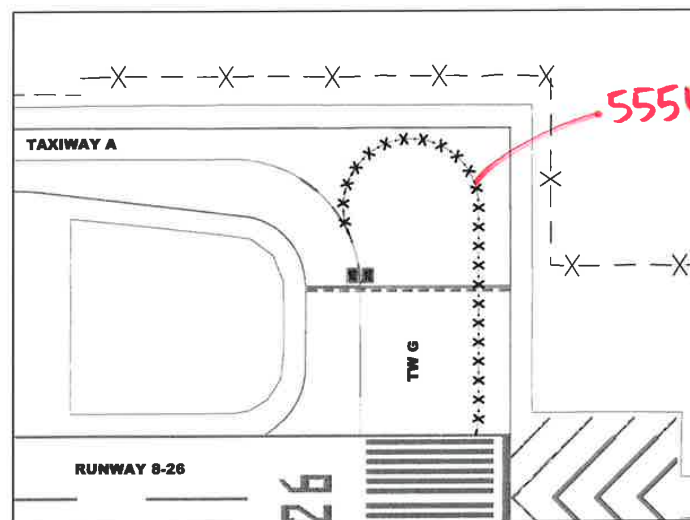
PHASE 1F/1G (DAY 76)

SCALE: 1"=100'



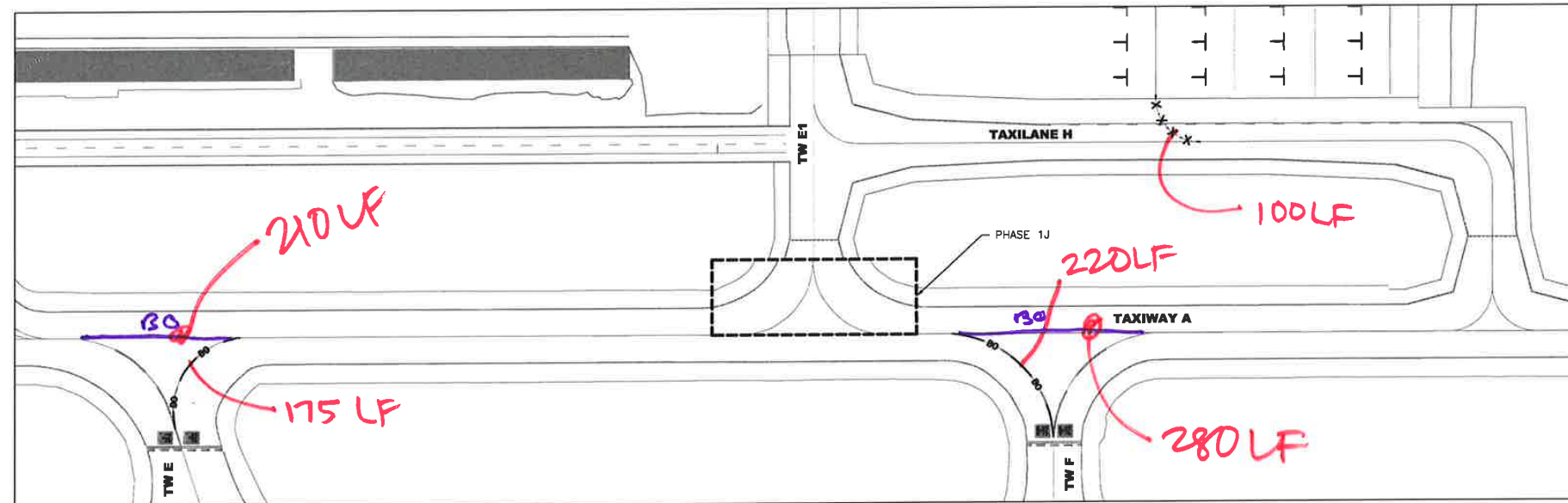
PHASE 1H (DAY 86)

SCALE: 1"=100'



PHASE 1H (DAY 86)

SCALE: 1"=100'



PHASE 1J (DAY 106)

SCALE: 1"=100'

NOTES:

- ALL CENTERLINE MARKINGS LEADING INTO CLOSED AREAS SHALL BE OBLITERATED OR BLACKED OUT WITH BLACK PAINT AT THE BEGINNING OF EACH PHASE. PAVEMENT MARKINGS SHALL BE REPLACED AT THE END OF EACH PHASE PRIOR TO OPENING, AS SHOWN ON THE PAVEMENT MARKING PLANS.
- CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO PROTECT PAVEMENT SURFACES DURING MARKING OBLITERATION. ANY PAVEMENT SURFACES DAMAGED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- OBLITERATION OF PAINT MARKINGS, AS SHOWN ON THIS SHEET, SHALL BE ACCOMPLISHED WITH A COORDINATED CLOSURE OF THE AREAS INDICATED FOR EACH PHASE. THE CONTRACTOR SHALL COORDINATE WITH THE ASO AND PROJECT ENGINEER FOR A CLOSURE OF THE AREA.
- CONTRACTOR SHALL PROTECT ALL EXISTING RUNWAY CENTERLINE, EDGE, DESIGNATION, THRESHOLD, AND TOUCHDOWN MARKINGS DURING TAXIWAY CENTERLINE OBLITERATION. ANY RUNWAY MARKINGS DAMAGED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- NIGHT CLOSURES ARE REQUIRED FOR REMOVAL OF THE TAXIWAY CENTERLINE MARKINGS THAT ARE WITHIN THE RSA. THESE CLOSURES SHALL BE COORDINATED WITH THE ASO AND PROJECT ENGINEER.
- REMOVAL OF PAVEMENT MARKINGS ON ASPHALT PAVEMENT SHALL INCLUDE THE SEALING OF THE PAVEMENT SCAR WITH GSB-88, AND SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE FOR OBLITERATION. THIS SEALER SHALL BE APPLIED AS SOON AS PRACTICAL AFTER THE MARKINGS HAVE BEEN REMOVED.

LEGEND:

- EXISTING AIRFIELD MARKINGS
- EXISTING AIRFIELD MARKINGS TO BE OBLITERATED
- EXISTING AIRCRAFT MARKINGS TO BE BLACKED OUT
- PHASE LIMITS

AMS 8/15/17



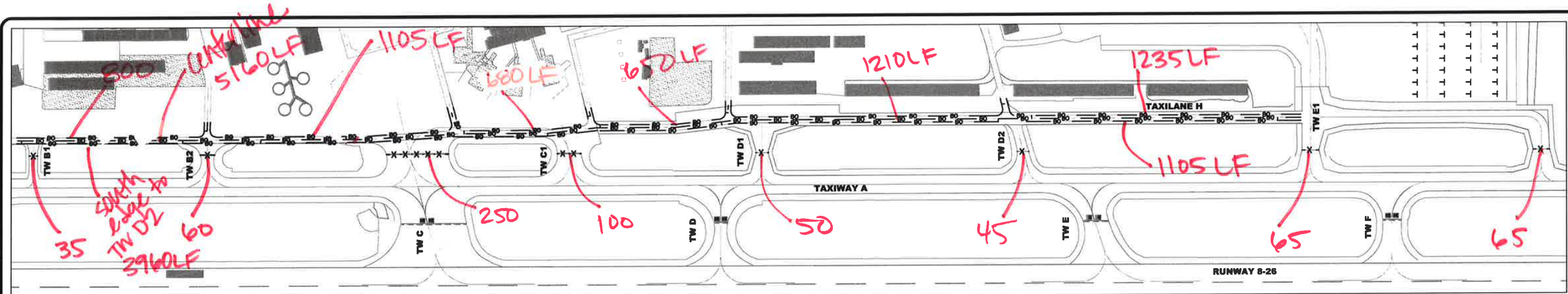
NO.	DATE	REVISION



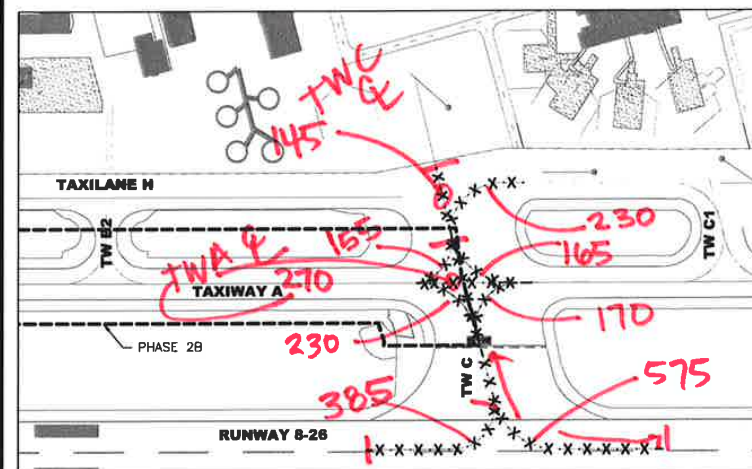
JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION,
AND TAXIWAY E REALIGNMENT
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
PAVEMENT MARKING OBLITERATION PLAN
(SHEET 2 OF 4)

DATE: 06/25/19
SHEET: C602 OF 233
AS-BUILT SHEET:

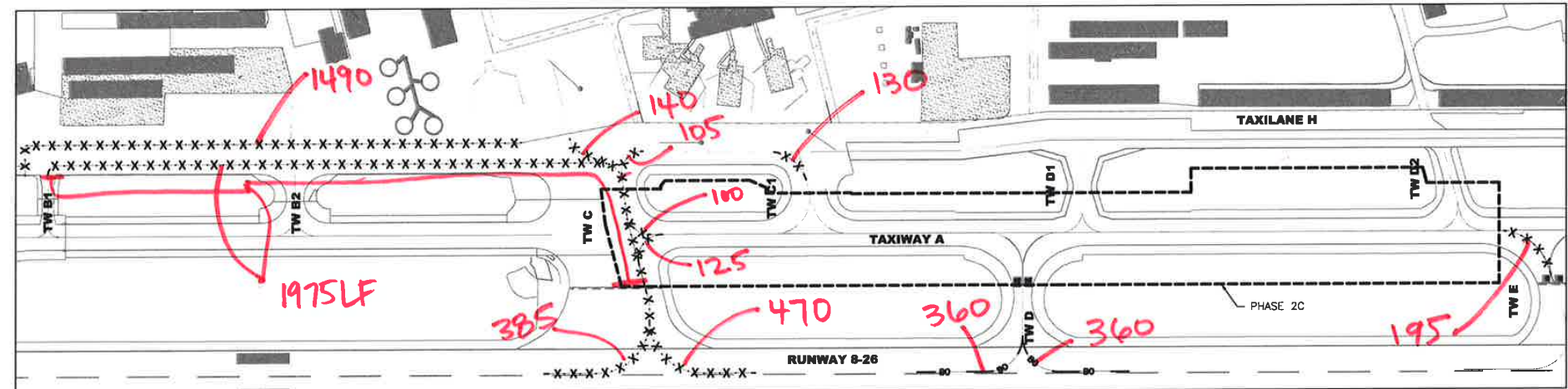
Code: Revised: 6/25/2019, 7:45 PM
Drawn By: AS/CM/BR
Checked By: MB
Title: P620
Project Name: JUNEAU INTERNATIONAL AIRPORT
Project Number: C603
Revision: 1
Revision Description: 1.0
Revision Date: 6/25/2019, 7:45 PM



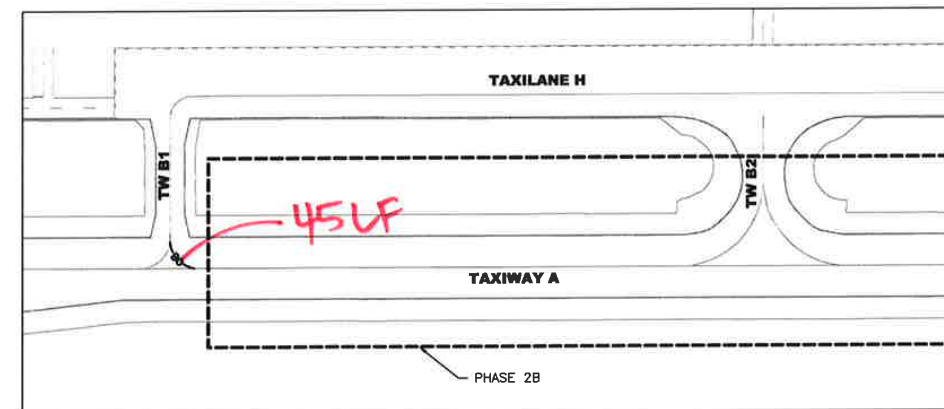
PHASE 2.0 (DAY 1)
SCALE: 1"=200'



PHASE 2A/2B (DAY 3)
SCALE: 1"=200'



PHASE 2B (DAY 44)
SCALE: 1"=200'



PHASE 2B (DAY 10)
SCALE: 1"=100'

NOTES:

- ALL CENTERLINE MARKINGS LEADING INTO CLOSED AREAS SHALL BE OBLITERATED OR BLACKED OUT WITH BLACK PAINT AT THE BEGINNING OF EACH PHASE. PAVEMENT MARKINGS SHALL BE REPLACED AT THE END OF EACH PHASE PRIOR TO OPENING, AS SHOWN ON THE PAVEMENT MARKING PLANS.
- CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO PROTECT PAVEMENT SURFACES DURING MARKING OBLITERATION. ANY PAVEMENT SURFACES DAMAGED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- OBLITERATION OF PAINT MARKINGS, AS SHOWN ON THIS SHEET, SHALL BE ACCOMPLISHED WITH A COORDINATED CLOSURE OF THE AREAS INDICATED FOR EACH PHASE. THE CONTRACTOR SHALL COORDINATE WITH THE ASO AND PROJECT ENGINEER FOR A CLOSURE OF THE AREA.
- CONTRACTOR SHALL PROTECT ALL EXISTING RUNWAY CENTERLINE, EDGE, DESIGNATION, THRESHOLD, AND TOUCHDOWN MARKINGS DURING TAXIWAY CENTERLINE OBLITERATION. ANY RUNWAY MARKINGS DAMAGED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- NIGHT CLOSURES ARE REQUIRED FOR REMOVAL OF THE TAXIWAY CENTERLINE MARKINGS THAT ARE WITHIN THE RSA. THESE CLOSURES SHALL BE COORDINATED WITH THE ASO AND PROJECT ENGINEER.
- REMOVAL OF PAVEMENT MARKINGS ON ASPHALT PAVEMENT SHALL INCLUDE THE SEALING OF THE PAVEMENT SCAR WITH GSB-95, AND SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE FOR OBLITERATION. THIS SEALER SHALL BE APPLIED AS SOON AS PRACTICAL AFTER THE MARKINGS HAVE BEEN REMOVED.

LEGEND:

- EXISTING AIRFIELD MARKINGS
- EXISTING AIRFIELD MARKINGS TO BE OBLITERATED
- EXISTING AIRCRAFT MARKINGS TO BE BLACKED OUT
- PHASE LIMITS

AMS
8/15/19

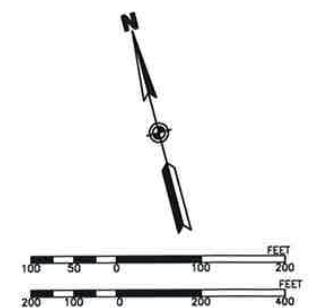


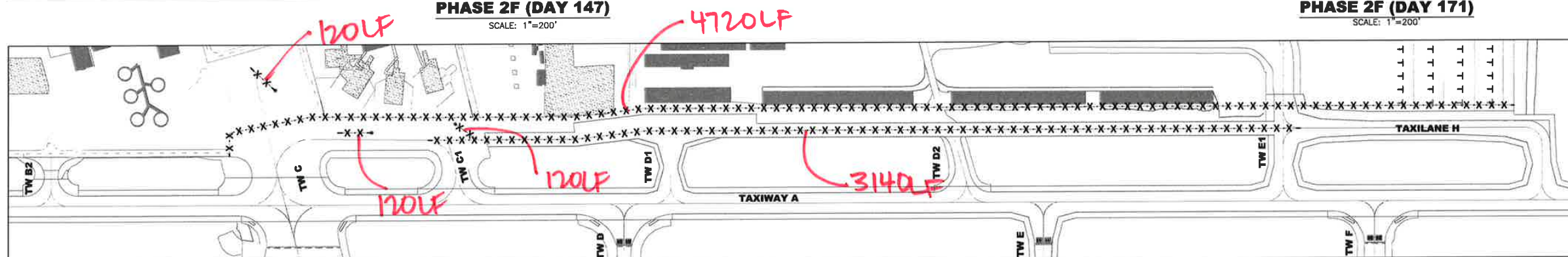
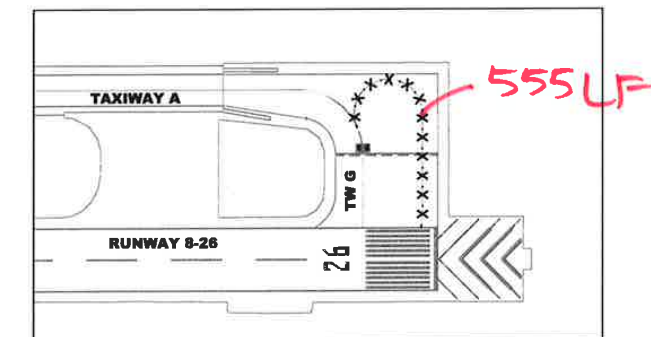
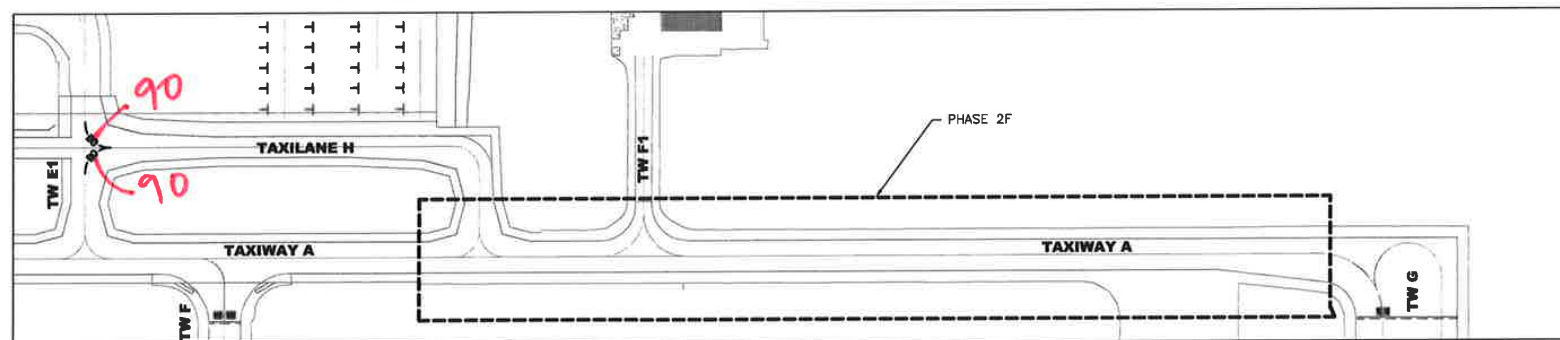
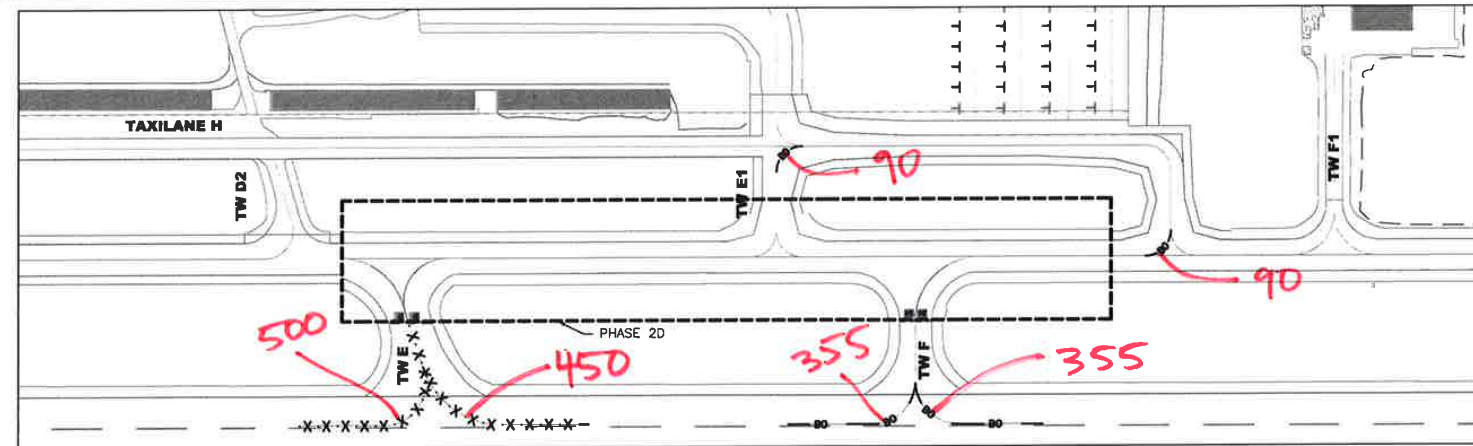
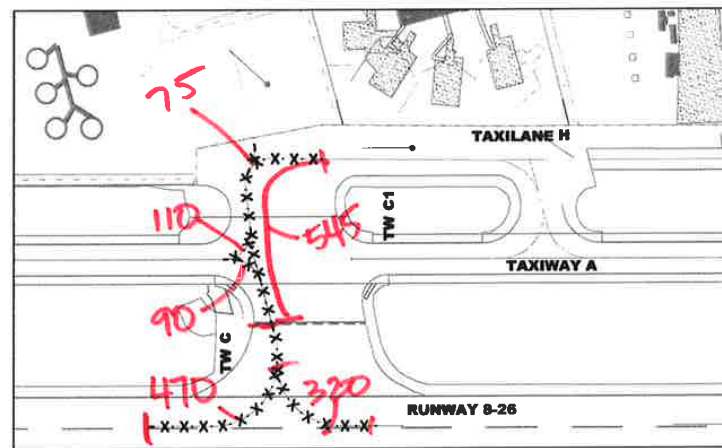
NO.	DATE	REVISION



JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION,
AND TAXIWAY E REALIGNMENT
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
PAVEMENT MARKING OBLITERATION PLAN
(SHEET 3 OF 4)

DATE: 06/25/19
SHEET: C603 OF 233
AS-BUILT SHEET:





NOTES:

1. ALL CENTERLINE MARKINGS LEADING INTO CLOSED AREAS SHALL BE OBLITERATED OR BLACKED OUT WITH BLACK PAINT AT THE BEGINNING OF EACH PHASE. PAVEMENT MARKINGS SHALL BE REPLACED AT THE END OF EACH PHASE PRIOR TO OPENING, AS SHOWN ON THE PAVEMENT MARKING PLANS.
2. CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO PROTECT PAVEMENT SURFACES DURING MARKING OBLITERATION. ANY PAVEMENT SURFACES DAMAGED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
3. OBLITERATION OF PAINT MARKINGS, AS SHOWN ON THIS SHEET, SHALL BE ACCOMPLISHED WITH A COORDINATE CLOSURE OF THE AREAS INDICATED FOR EACH PHASE. THE CONTRACTOR SHALL COORDINATE WITH THE ASO AND PROJECT ENGINEER FOR A CLOSURE OF THE AREA.
4. CONTRACTOR SHALL PROTECT ALL EXISTING RUNWAY CENTERLINE, EDGE, DESIGNLID, THRESHOLD, AND TOUCHDOWN MARKINGS DURING TAXIWAY CENTERLINE OBLITERATION. ANY RUNWAY MARKINGS DAMAGED SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.
5. NIGHT CLOSURES ARE REQUIRED FOR REMOVAL OF THE TAXIWAY CENTERLINE MARKINGS THAT ARE WITHIN THE RSA. THESE CLOSURES SHALL BE COORDINATED WITH THE ASO AND PROJECT ENGINEER.
6. REMOVAL OF PAVEMENT MARKINGS ON ASPHALT PAVEMENT SHALL INCLUDE THE SEALING OF THE PAVEMENT SEAL WITH GSP-40B, AND SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE FOR OBLITERATION. THIS SEALER SHALL BE APPLIED AS SOON AS PRACTICAL AFTER THE MARKINGS HAVE BEEN REMOVED.

LEGEND:

DISCUSSION

-X.X.X-

— 80 —

EXISTING AIRFIELD MARKINGS

EXISTING AIRFIELD MARKINGS TO BE
OBLITERATED

EXISTING AIRCRAFT MARKINGS TO BE
BLACKED OUT

PHASE LIMITS



NO.	DATE	REVISION

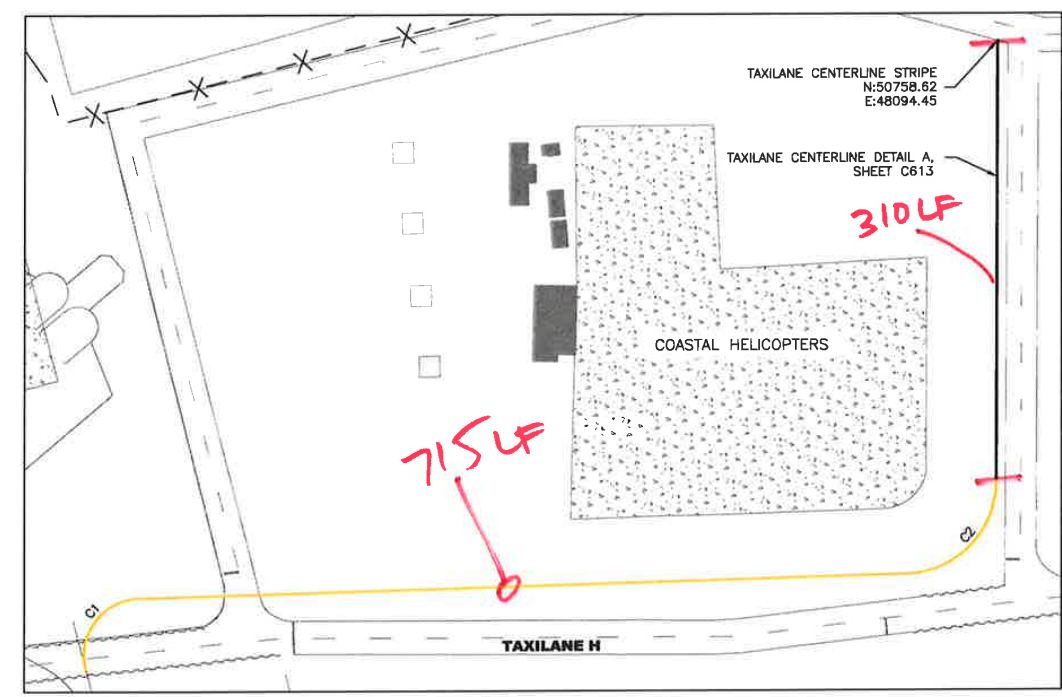


JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
**TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION,
AND TAXIWAY E REALIGNMENT**
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
PAVEMENT MARKING OBLITERATION PLAN
(SHEET 4 OF 4)

DATE:	06/25/19
SHEET:	C604 OF 233
AS-BUILT SHEET:	

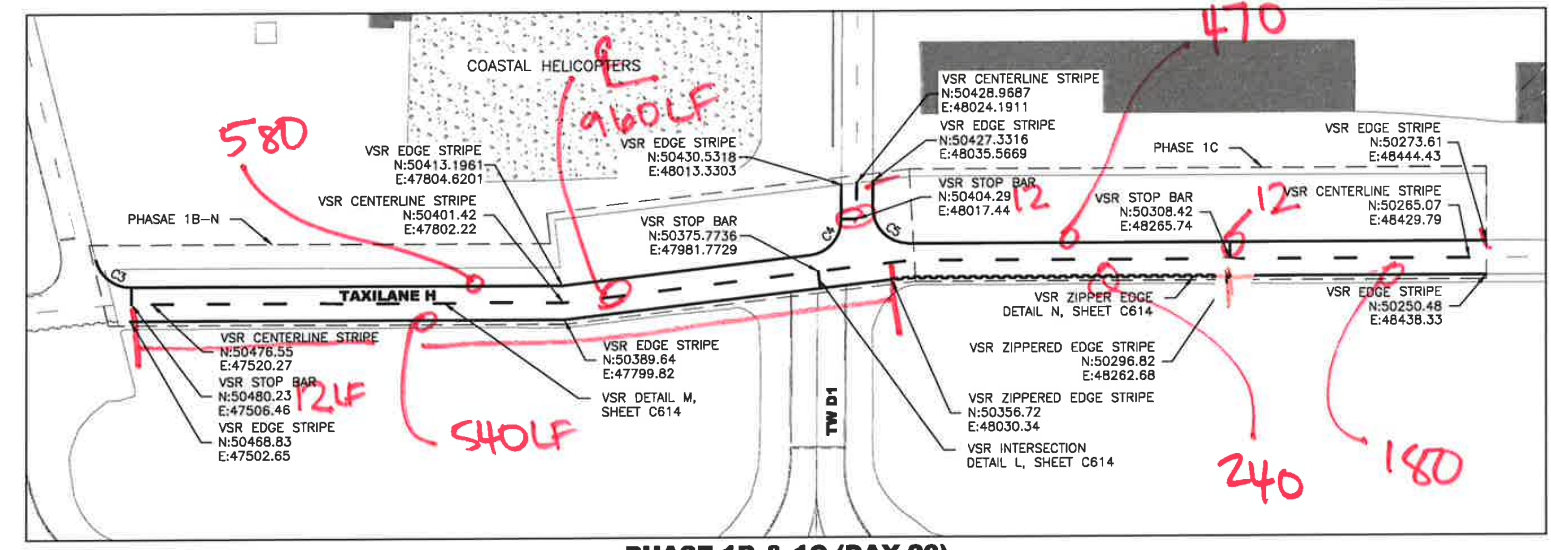


6/25/2019 7:44 PM
Designed By: JG/CM/BS
Checked By: MP/RC
File Path and Name: P:\2017\17264-jr-cb\jru_torrey\A\NS&M\C605-C613\C605-C613.dwg
Data Revised: 6/25/2019 7:44 PM
Layout Name: C605
File Path and Name: P:\2017\17264-jr-cb\jru_torrey\A\NS&M\C605-C613\C605-C613.dwg

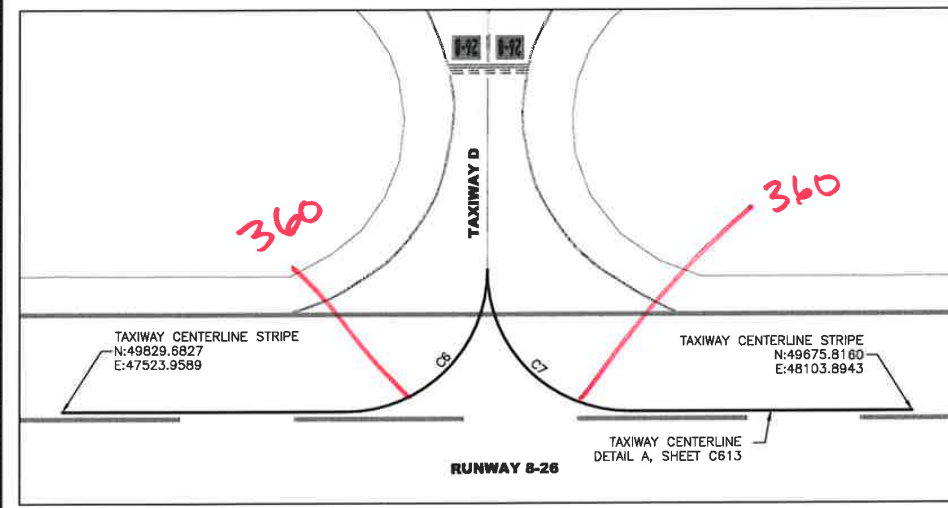


**PHASE 1A (DAY 1)
PERMANENT & TEMPORARY MARKINGS**
SCALE: 1"=60'

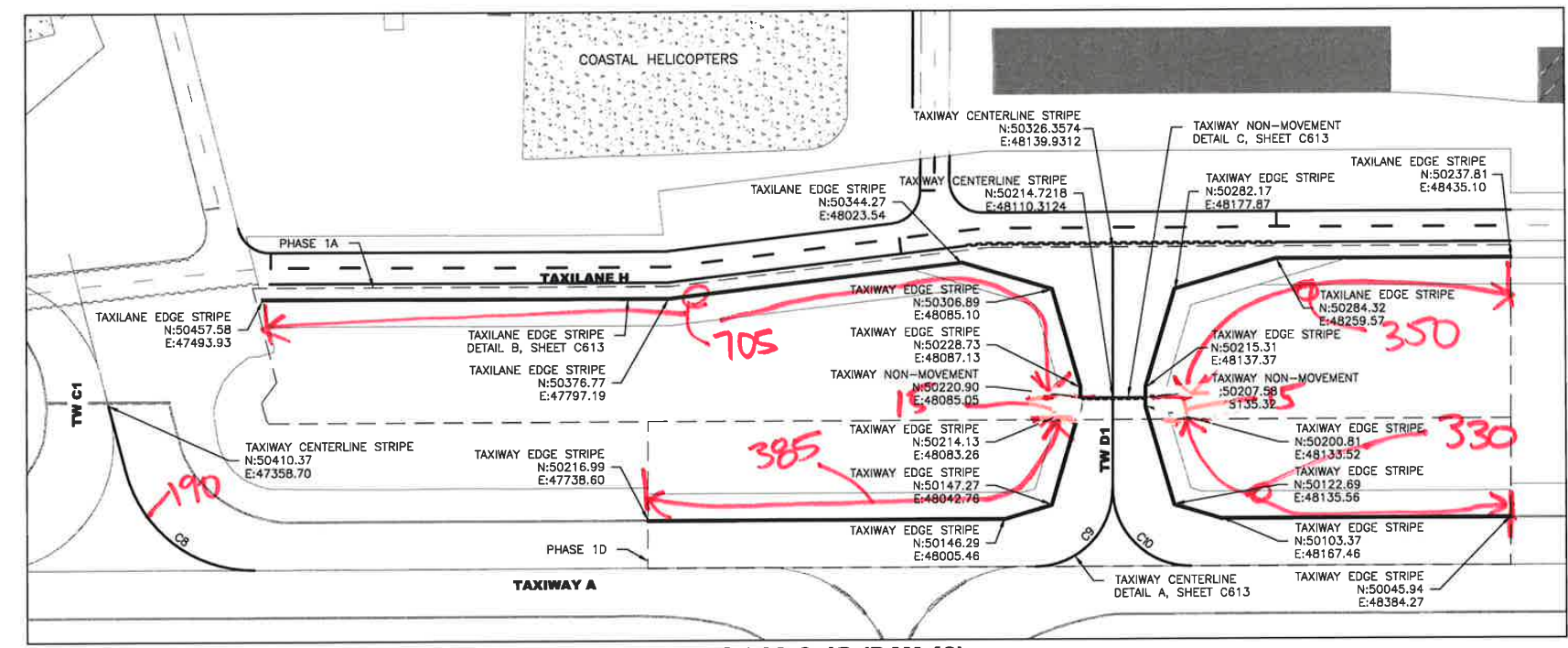
NOTE:
CONTRACTOR TO MAINTAIN TEMPORARY CENTERLINE UNTIL PHASE 1C IS COMPLETE.



**PHASE 1B & 1C (DAY 20)
PERMANENT MARKINGS**
SCALE: 1"=60'



**PHASE 1A & 1D (DAY 40)
PERMANENT MARKINGS**
SCALE: 1"=60'



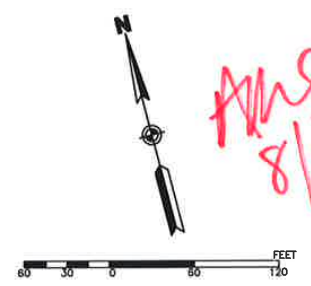
**PHASE 1A & 1D (DAY 40)
PERMANENT MARKINGS**
SCALE: 1"=60'

LEGEND:

- TEMPORARY AIRFIELD MARKINGS
- EXISTING AIRFIELD MARKINGS
- NEW AIRFIELD MARKINGS
- AIRFIELD MARKING CURVE ID (SEE CURVE TABLE)

NOTES:

- SEE CURVE TABLES ON SHEET C612.
- SEE PAVEMENT MARKING DETAIL SHEETS C613 - C614.



Aug
8/15/19



NO.	DATE	REVISION



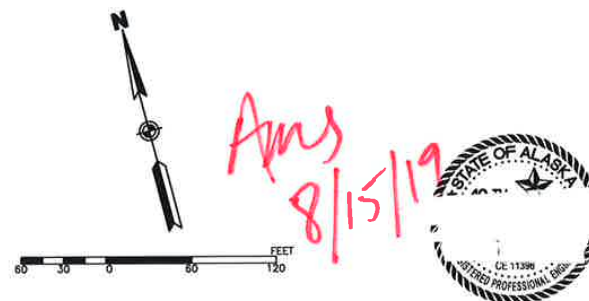
JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
**TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION,
AND TAXIWAY E REALIGNMENT**
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
PAVEMENT MARKING PLAN
(SHEET 1 OF 7)

DATE:	06/25/19
SHEET:	C605 OF 233
AS-BUILT SHEET:	



	TEMPORARY AIRFIELD MARKINGS
	EXISTING AIRFIELD MARKINGS
	NEW AIRFIELD MARKINGS
C1	AIRFIELD MARKING CURVE ID (SEE CURVE TABLE)

1. SEE CURVE TABLES ON SHEET C612.
2. SEE PAVEMENT MARKING DETAIL SHEETS C613 - C614.

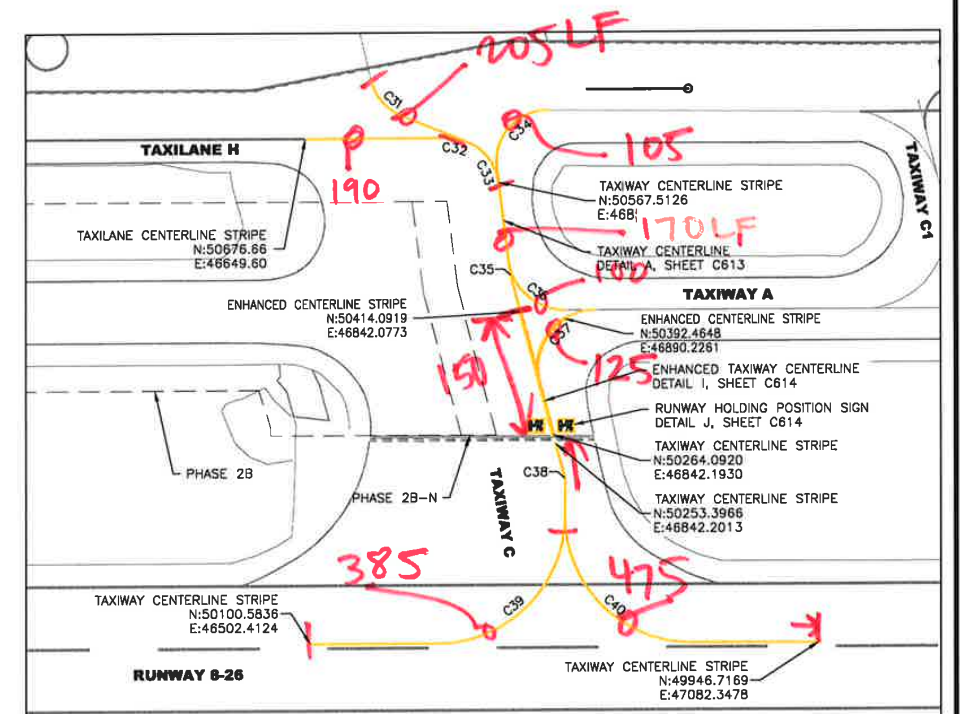
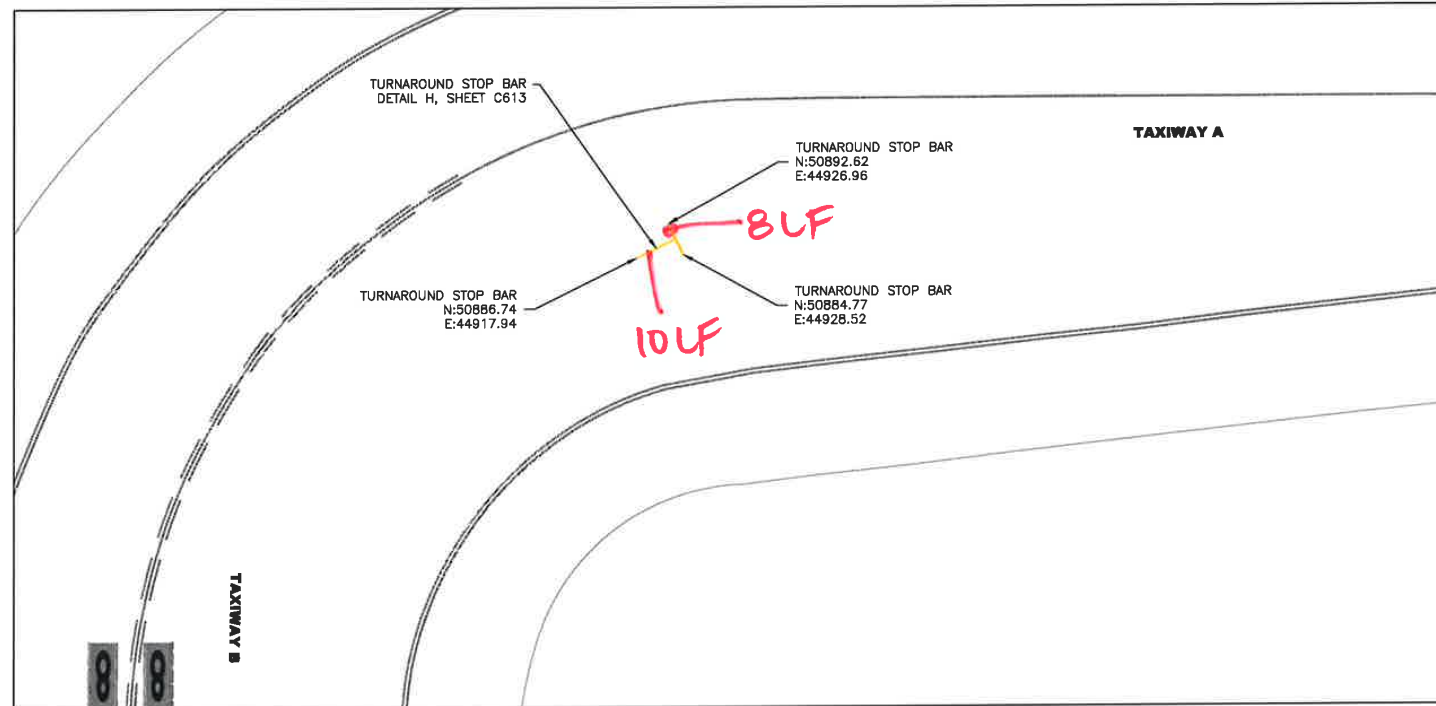
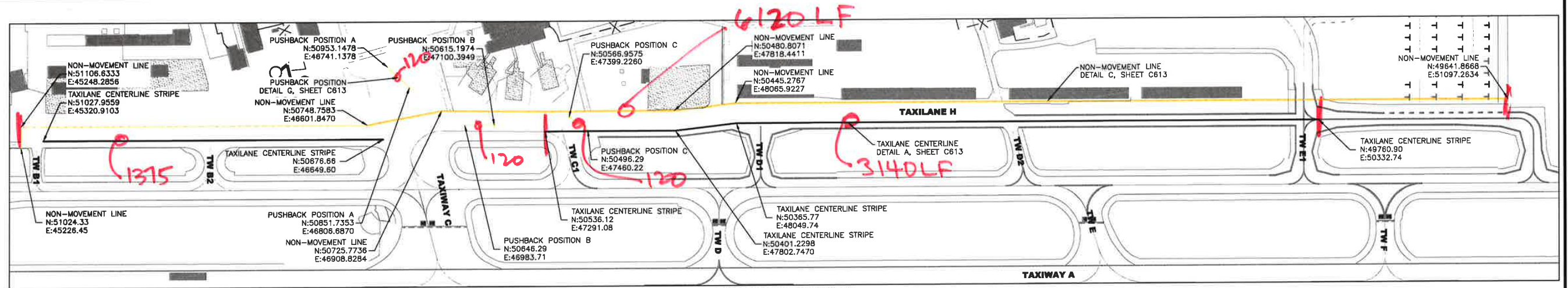


NO.	DATE	REVISION



DATE:	06/25/19
SHEET:	C607 OF 233
AS-BUILT SHEET:	

AS/CM/BS
HB
MB/NC
Designed By: AS/CM/BS
Drawn By: HB
Checked By: MB/NC
6/25/2019, 7:44 PM
C608
Date Revised: 6/25/2019, 7:44 PM
Layout Name: C608
File Path and Name: P:\2017\17244\17244.mxd; juneau\airway\c608-c612\c608-c612.dwg

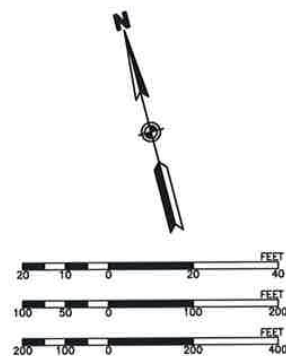


LEGEND:

- TEMPORARY AIRFIELD MARKINGS
- EXISTING AIRFIELD MARKINGS
- NEW AIRFIELD MARKINGS
- AIRFIELD MARKING CURVE ID SEE CURVE TABLE

NOTES:

- SEE CURVE TABLES ON SHEET C612.
- SEE PAVEMENT MARKING DETAIL SHEETS C613 - C614.



AMS
8/15/19



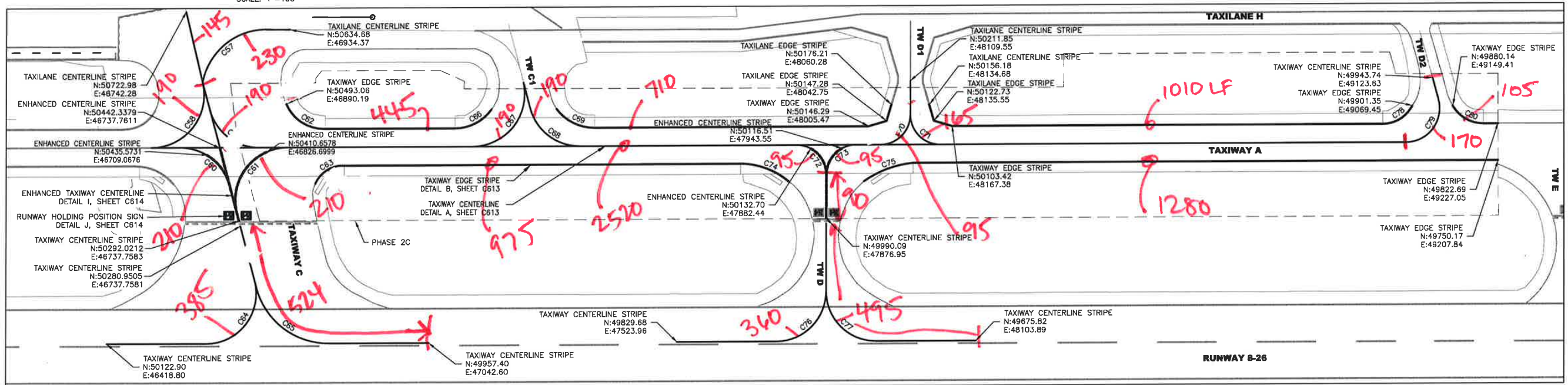
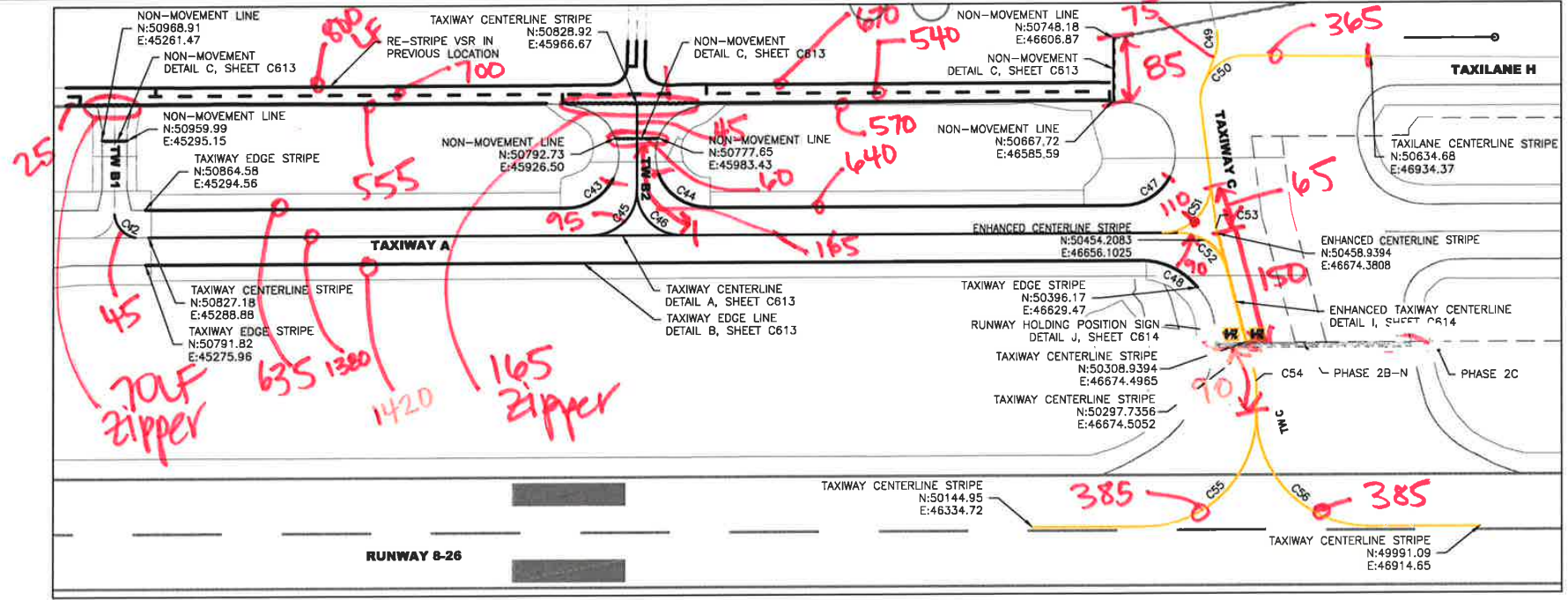
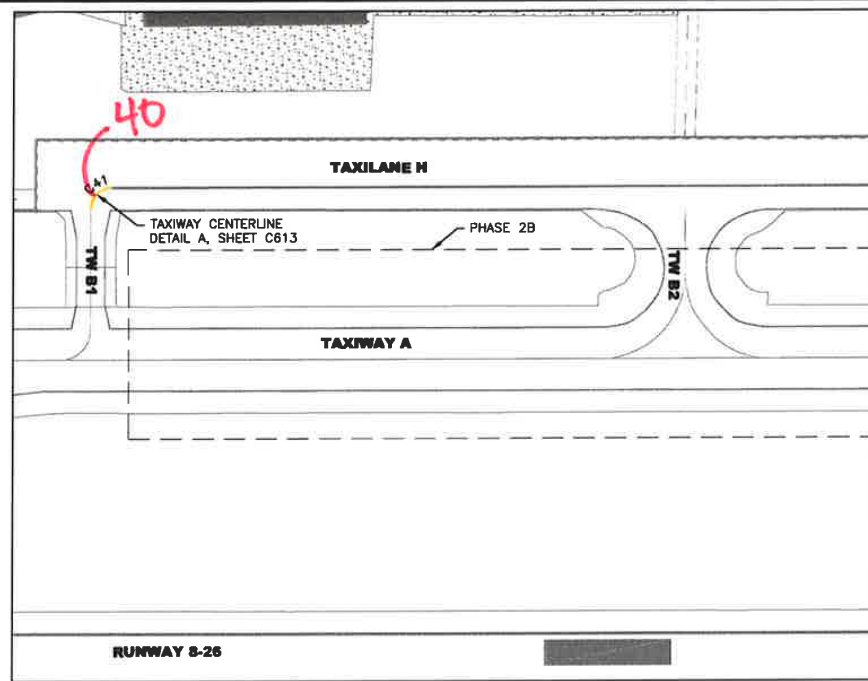
NO.	DATE	REVISION



JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION,
AND TAXIWAY E REALIGNMENT
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
PAVEMENT MARKING PLAN
(SHEET 4 OF 7)

DATE: 06/25/19
SHEET: C608 OF 233
AS-BUILT SHEET:

8/25/2019 7:44 PM
Data Received: 8/25/2019 7:44 PM
Layout Name: C609
File Path and Name: P:\2019\172849-C609\Juniataway\A\Realign\A-C612-C605-C613-C605-C612.dwg
Designed By: AS/CM/BL
Checked By: MP/RC

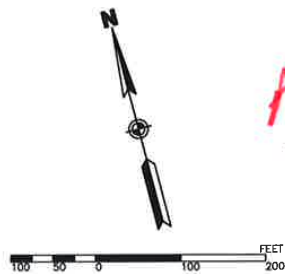


LEGEND:

- TEMPORARY AIRFIELD MARKINGS
- EXISTING AIRFIELD MARKINGS
- NEW AIRFIELD MARKINGS
- AIRFIELD MARKING CURVE ID SEE CURVE TABLE

NOTES:

- SEE CURVE TABLES ON SHEET C612.
- SEE PAVEMENT MARKING DETAIL SHEETS C613 - C614.



Amg
8/15/19



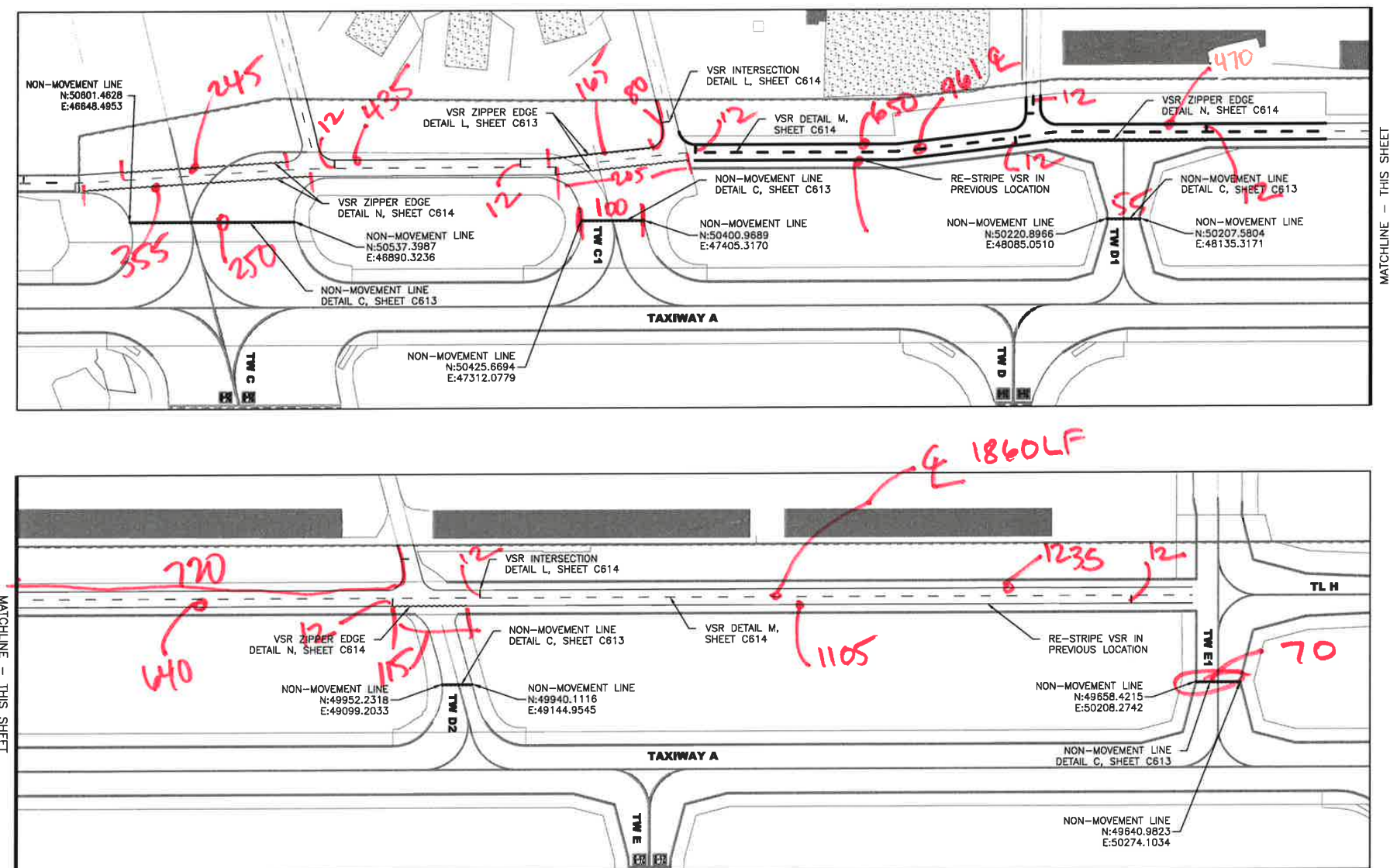
NO.	DATE	REVISION



JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION, AND TAXIWAY E REALIGNMENT
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
PAVEMENT MARKING PLAN
(SHEET 5 OF 7)

DATE: 06/25/19
SHEET: C609 OF 233
AS-BUILT SHEET:

Date Revised:	6/25/2019, 7:44 PM	Designed By:	AS/CM/BH
Layout Name:	C611	Drawn By:	HB
File Path and Name:	P:\2017\17264-jr-cs\jru_taxonomy\CA\RSAH\C605-C612\C605-C612.dwg	Checked By:	MP/RC



PHASE 2G (DAY 172)
PERMANENT MARKINGS

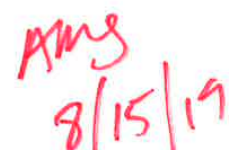
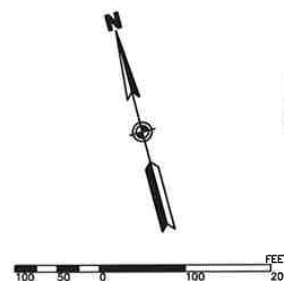
SCALE: 1"=100'

LEGEND:

- | | |
|---|---|
|  | TEMPORARY AIRFIELD MARKINGS |
|  | EXISTING AIRFIELD MARKINGS |
|  | NEW AIRFIELD MARKINGS |
| C1 | AIRFIELD MARKING CURVE ID SEE CURVE TABLE |

NOTES:

1. SEE CURVE TABLES ON SHEET C612.
2. SEE PAVEMENT MARKING DETAIL SHEETS C613 - C614.



NO.	DATE	REVISION



JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
**TAXWAY A REHABILITATION, TAXWAY D-1 RELOCATION,
AND TAXWAY E REALIGNMENT**
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
PAVEMENT MARKING PLAN
(SHEET 7 OF 7)

DATE:	06/25/19
SHEET:	C611 OF 233
AS-BUILT SHEET:	

SECTION 004114 - BID SCHEDULE

PAY ITEM NO.	PAY ITEM DESCRIPTION	PAY UNIT	APPROX. QUANTITY	UNIT PRICE		AMOUNT	
				DOLLARS	CENTS	DOLLARS	CENTS
D701.020.0024	CPE PIPE, 24-INCH	LF	240				
D701.020.0036	CPE PIPE, 36-INCH	LF	590				
D701.040.0168	JORDAN CREEK ALUMINUM HALF ARCH PIPE	LS	ALL REQ'D	Lump	Sum		
G100.010.0000	MOBILIZATION AND DEMOBILIZATION	LS	ALL REQ'D	Lump	Sum		
G130.010.0000	FIELD OFFICE	LS	ALL REQ'D	Lump	Sum		
G135.010.0000	CONSTRUCTION SURVEYING BY THE CONTRACTOR	LS	ALL REQ'D	Lump	Sum		
G135.020.0000	EXTRA THREE PERSON SURVEY PARTY	HR	80				
G150.040.0000	EQUIPMENT RENTAL	CS	ALL REQ'D	\$ 30,000	0	\$ 30,000	0
G200.010.0000	CONTRACTOR QUALITY CONTROL PROGRAM	LS	ALL REQ'D	Lump	Sum		
G300.010.0000	CPM SCHEDULING	LS	ALL REQ'D	Lump	Sum		
G700.010.0000	AIRPORT FLAGGER OR GATE GUARD	CS	ALL REQ'D	\$ 50,000	0	\$ 50,000	0
G710.040.0000	HIGHWAY TRAFFIC CONTROL	CS	ALL REQ'D	\$ 50,000	0	\$ 50,000	0
L108.010.1008	UNDERGROUND CABLE #8 AWG, COPPER, 5KV FAA TYPE B, L-824	LF	78,800				
L108.030.0002	#2 BARE COPPER GROUND CONDUCTOR	LF	300				
L108.030.0006	#6 BARE COPPER GROUND CONDUCTOR	LF	35,125				
L108.070.0000	GROUND ROD	EA	223				
L110.030.1002	RIGID STEEL CONDUIT, 2-INCH	LF	530				
L110.080.1002	HDPE CONDUIT, 2-INCH	LF	17,700				
L110.080.1003	HDPE CONDUIT, 3-INCH	LF	22,220				
L110.130.0008	MULTI-WAY DUCT IN CONCRETE (8 CONDUITS)	LF	300				
L110.200.0000	ADJUST ELECTRICAL MANHOLE	EA	6				
L110.210.0000	ELECTRICAL MANHOLE, TYPE AIA	EA	7				

COMPANY NAME: _____

SECTION 004114 - BID SCHEDULE

PAY ITEM NO.	PAY ITEM DESCRIPTION	PAY UNIT	APPROX. QUANTITY	UNIT PRICE		AMOUNT	
				DOLLARS	CENTS	DOLLARS	CENTS
L125.010.0000	AIRPORT LIGHTING	LS	ALL REQ'D	Lump	Sum		
L125.020.0000	REGULATOR, L-829	EA	1				
L125.040.0000	TAXIWAY EDGE LIGHT, L-861T	EA	4				
L125.040.0001	TAXIWAY EDGE LIGHT BASE	EA	200				
L125.070.0000	REMOVE RUNWAY AND TAXIWAY LIGHT	EA	200				
L125.110.0000	RELOCATE AIRPORT SIGN, L-858	EA	3				
L125.130.0000	AIRPORT SIGN, L-858	EA	3				
L125.150.0000	HANDHOLE, L-867, SIZE B	EA	2				
L125.170.0000	SPARE PARTS	CS	1	\$ 10,000	0	\$ 10,000	0
L125.230.0000	RELOCATE RUNWAY GUARD LIGHT	LS	ALL REQ'D	Lump	Sum		
L125.350.0000	TEMPORARY TAXIWAY LIGHTING SYSTEM	LS	ALL REQ'D	Lump	Sum		
L125.430.0000	RETROFIT AIRPORT SIGN	EA	2				
L127.000.0000	RECONFIGURE AIRFIELD LIGHTING CONTROLS AND MONITORING SYSTEM (ALCMS)	LS	ALL REQ'D	Lump	Sum		
L130.010.0000	SURFACE SENSOR SYSTEM	LS	ALL REQ'D	Lump	Sum		
L135.010.0000	CONSTRUCT RVR IMPROVEMENTS	LS	ALL REQ'D	Lump	Sum		
P152.010.0000	UNCLASSIFIED EXCAVATION	CY	66,630				
P154.020.0000	SUBBASE COURSE	TN	39,900				
P160.010.0000	EXCAVATION OF PAVEMENT, AC	SY	37,460				
P161.050.0000	RECYCLED ASPHALT PAVEMENT PLACEMENT	CY	3,900				
P162.010.0000	PAVEMENT COLD PLANING	SY	72,260				
P165.010.0000	REMOVAL OF STRUCTURES	LS	ALL REQ'D	Lump	Sum		
P209.020.0000	CRUSHED AGGREGATE BASE COURSE	TN	20,753				
P401.010.0040	HOT MIX ASPHALT TYPE II, CLASS B	TN	8,040				
P401.010.0065	HOT MIX ASPHALT TYPE V, CLASS S	TN	28,690				

COMPANY NAME: _____

SECTION 004114 - BID SCHEDULE

PAY ITEM NO.	PAY ITEM DESCRIPTION	PAY UNIT	APPROX. QUANTITY	UNIT PRICE		AMOUNT	
				DOLLARS	CENTS	DOLLARS	CENTS
P401.080.0040	HOT MIX ASPHALT PRICE ADJUSTMENT, CLASS B	CS	ALL REQ'D	\$ 55,000	0	\$ 55,000	0
P401.080.0065	HOT MIX ASPHALT PRICE ADJUSTMENT, CLASS S	CS	ALL REQ'D	\$ 212,000	0	\$ 212,000	0
P401.020.5828	ASPHALT BINDER, PG 58-28	TN	520				
P401.020.6428	ASPHALT BINDER, PG 64-28	TN	1,590				
P401.160.0040	HOT MIX ASPHALT TYPE II, CLASS B, LEVELING COURSE	TN	1,315				
P603.010.0010	TACK COAT, STE-1	TN	61				
P620.020.0000	RUNWAY AND TAXIWAY PAINTING	LS	ALL REQ'D	Lump	Sum		
P620.060.0000	PAINTED MARKING REMOVAL	LS	ALL REQ'D	Lump	Sum		
P411.010.0010	INTELLIGENT COMPACTION FOR ASPHALT MIX PAVEMENTS	LS	ALL REQ'D	Lump	Sum		
P641.010.0000	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	LS	ALL REQ'D	Lump	Sum		
P641.030.0000	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL	LS	ALL REQ'D	Lump	Sum		
P641.060.0000	WITHHOLDING	CS	ALL REQ'D				
P641.070.0000	SWPPP MANAGER	LS	ALL REQ'D	Lump	Sum		
P650.020.0000	SOIL ANCHOR TIE-DOWN	SET	18				
P670.000.0000	HAZARDOUS AREA MARKING AND LIGHTING	LS	ALL REQ'D	Lump	Sum		
P671.040.0000	TAXIWAY CLOSURE MARKER, VINYL	EA	3				
S501.010.0000	ALRV ADDITION AND SREB MODIFICATIONS	LS	ALL REQ'D	Lump	Sum		
T901.010.0000	SEEDING	AC	25				
T905.030.0000	ORGANIC MATERIAL	CY	13,580				
T908.010.0000	MULCHING	SY	121,800				

TOTAL BID: \$ _____

COMPANY NAME: _____

BID MODIFICATION – 00 4115

BID MODIFICATION FORM

SUBMIT TO: CITY AND BOROUGH OF JUNEAU
PURCHASING DIVISION
FAX 907-586-4561

Modification Number: _____

Note: All modifications shall be made to the original bid amount(s). If more than one Modification form is submitted by any one bidder, changes from all Modification forms submitted will be combined and applied to the original bid. Changes to the modified Bid amounts will be calculated by the Owner.

PAY ITEM NO.	PAY ITEM DESCRIPTION	MODIFICATIONS TO UNIT PRICE OR LUMP SUM (<i>indicate +/-</i>)

Name of Bidder

**Juneau International Airport
Taxiway A Rehabilitation, Taxiway D-1 Relocation & Taxiway E Realignment
Contract No. BE 19-218**

Addendum No. 2

**BID MODIFICATION
004115-1**

BID MODIFICATION – 00 4115

Modification Number: _____

PAY ITEM NO.	PAY ITEM DESCRIPTION	MODIFICATIONS TO UNIT PRICE OR LUMP SUM <i>(indicate +/-)</i>

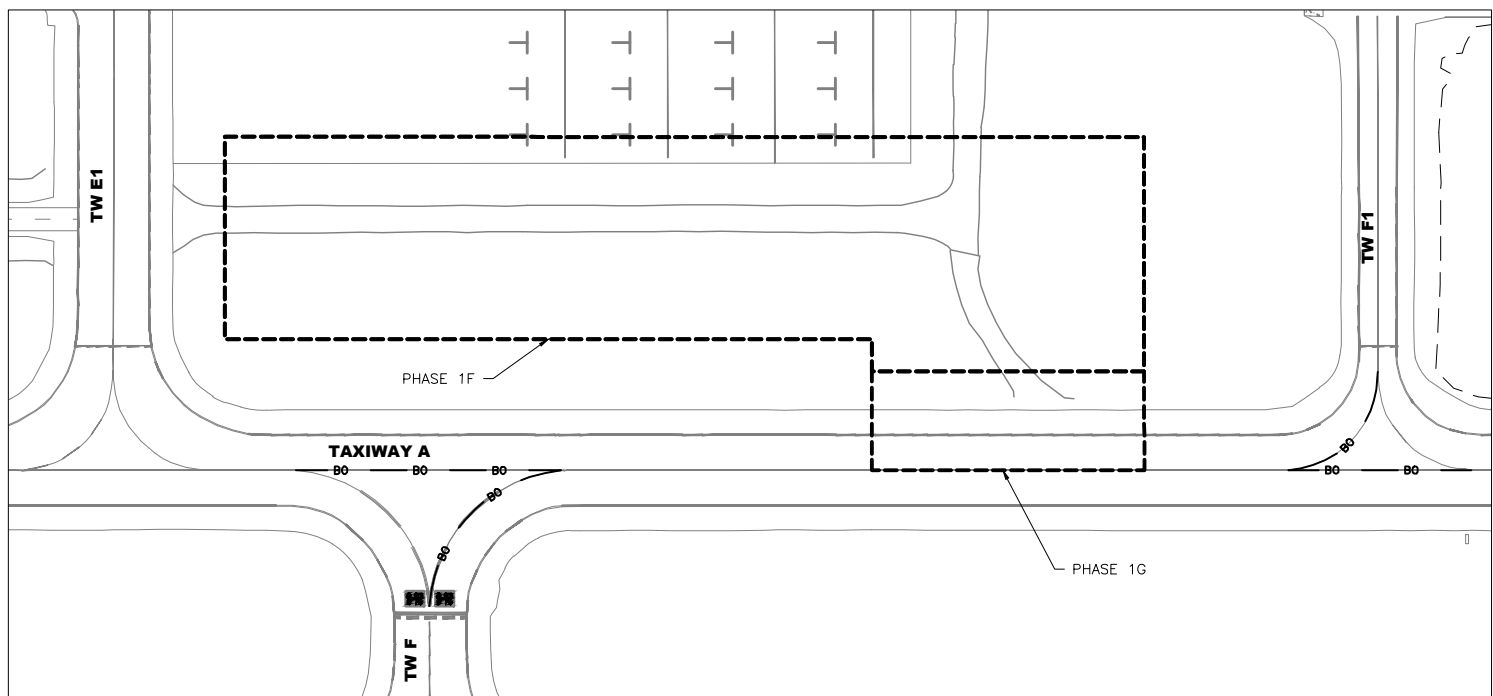
Bid Total Increase or Decrease: \$ _____

Name of Bidder

Responsible Party Signature

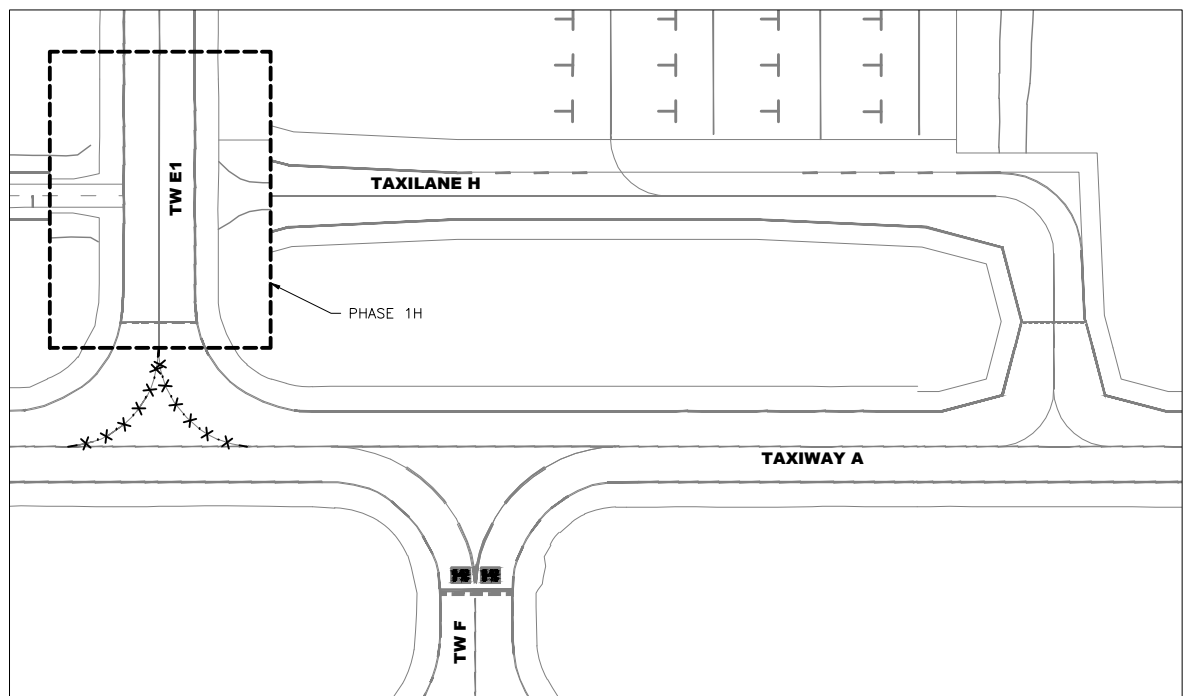
Printed Name (must be an authorized signatory for Bidder)

Date Revised:	8/16/2019, 11:53 AM	Designed By:	AS/CM/BH
Layout Name:	C602	Drawn By:	HB
File Path and Name:	P:\2017\17264UN-CBJL\JUN_Toxiway_C\RS&H\C601-C604.dwg	Checked By:	MP/RC



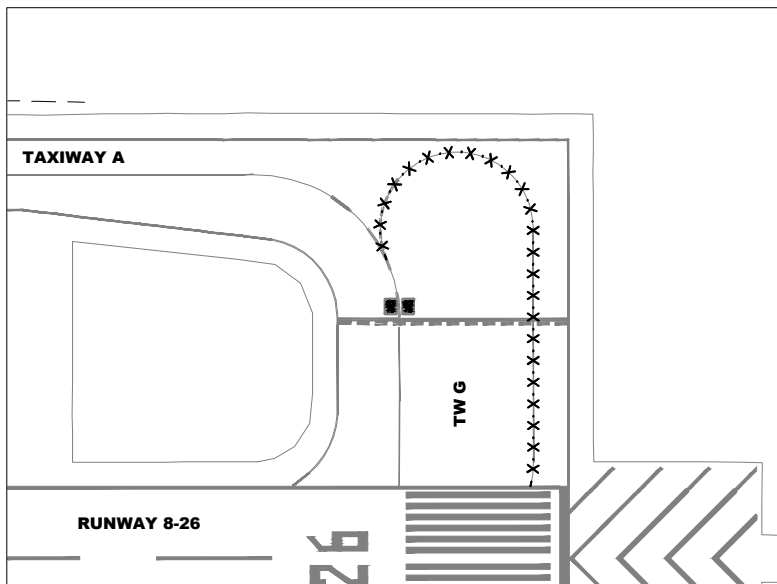
PHASE 1F/1G (DAY 76)

SCALE: 1"=100'



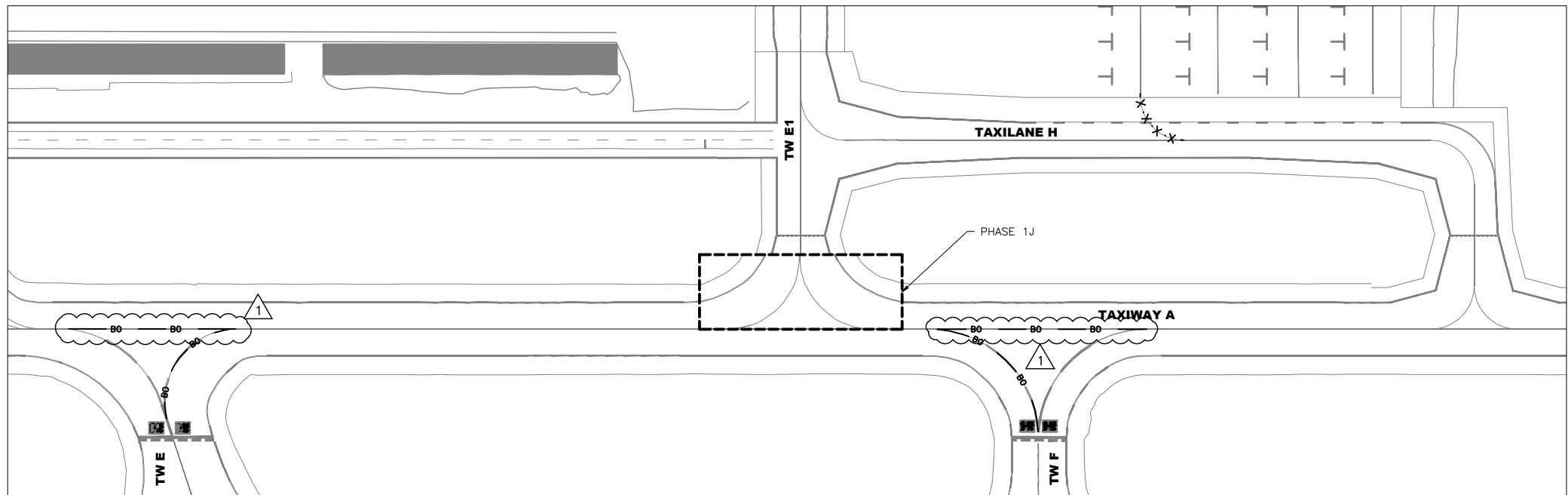
PHASE 1H (DAY 86)

SCALE: 1"=100'



PHASE 1H (DAY 86)

SCALE: 1"=100



PHASE 1J (DAY 106)

SCALE: 1"=100'

NOTES:

1. ALL CENTERLINE MARKINGS LEADING INTO CLOSED AREAS SHALL BE OBLITERATED OR BLACKED OUT WITH BLACK PAINT AT THE BEGINNING OF EACH PHASE. PAVEMENT MARKINGS SHALL BE REPLACED AT THE END OF EACH PHASE PRIOR TO OPENING, AS SHOWN ON THE PAVEMENT MARKING PLANS.
2. CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO PROTECT PAVEMENT SURFACES DURING MARKING OBLITERATION. ANY PAVEMENT SURFACES DAMAGED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
3. OBLITERATION OF PAINT MARKINGS, AS SHOWN ON THIS SHEET, SHALL BE ACCOMPLISHED WITH A COORDINATED CLOSURE OF THE AREAS INDICATED FOR EACH PHASE. THE CONTRACTOR SHALL COORDINATE WITH THE ASO AND PROJECT ENGINEER FOR A CLOSURE OF THE AREA.
4. CONTRACTOR SHALL PROTECT ALL EXISTING RUNWAY CENTERLINE, EDGE, DESIGNATION, THRESHOLD, AND TOUCHDOWN MARKINGS DURING TAXIWAY CENTERLINE OBLITERATION. ANY RUNWAY MARKINGS DAMAGED SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.
5. NIGHT CLOSURES ARE REQUIRED FOR REMOVAL OF THE TAXIWAY CENTERLINE MARKINGS THAT ARE WITHIN THE RSA. THESE CLOSURES SHALL BE COORDINATED WITH THE ASO AND PROJECT ENGINEER.
6. REMOVAL OF PAVEMENT MARKINGS ON ASPHALT PAVEMENT SHALL INCLUDE THE SEALING OF THE PAVEMENT SCAR WITH GSB--88, AND SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE FOR OBLITERATION. THIS SEALER SHALL BE APPLIED AS SOON AS PRACTICAL AFTER THE MARKINGS HAVE BEEN REMOVED.

LEGEND:

- | | |
|---|--|
|  | EXISTING AIRFIELD MARKINGS |
|  | EXISTING AIRFIELD MARKINGS TO BE OBLITERATED |
|  | EXISTING AIRCRAFT MARKINGS TO BE BLACKED OUT |
|  | PHASE LIMITS |



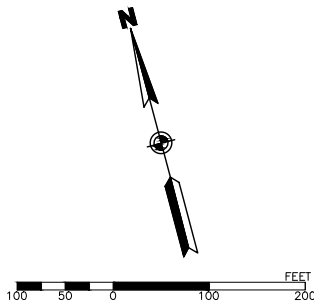
CONTRACT NO. BE19-218
ADDENDUM NO. 2

A	8/16/19	ADDENDUM NO. 2
NO.	DATE	REVISION

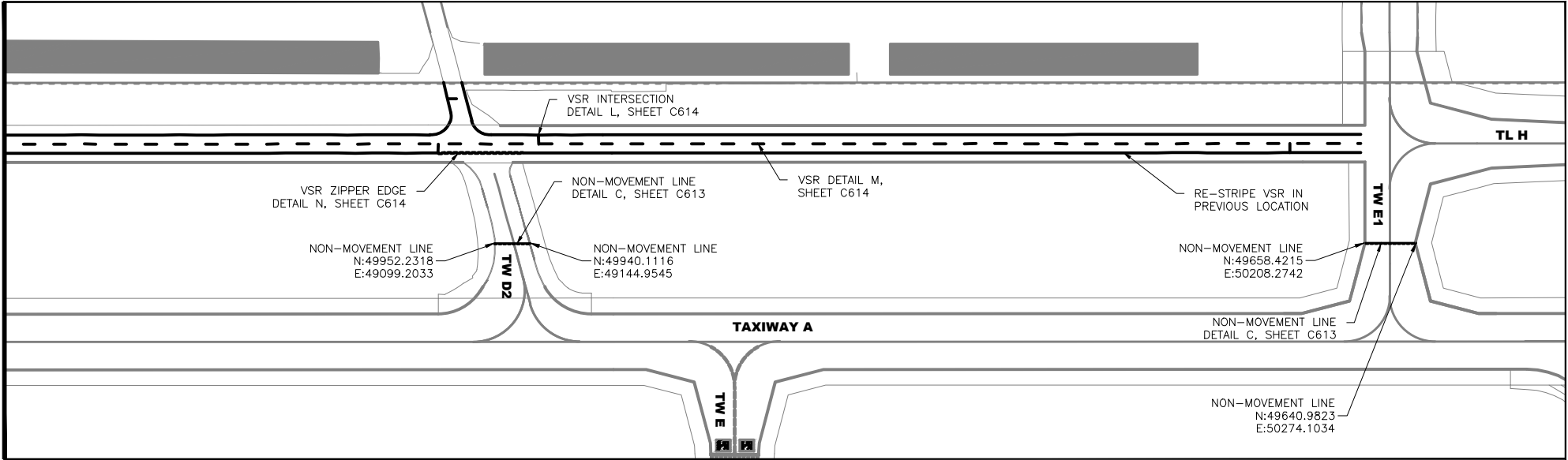
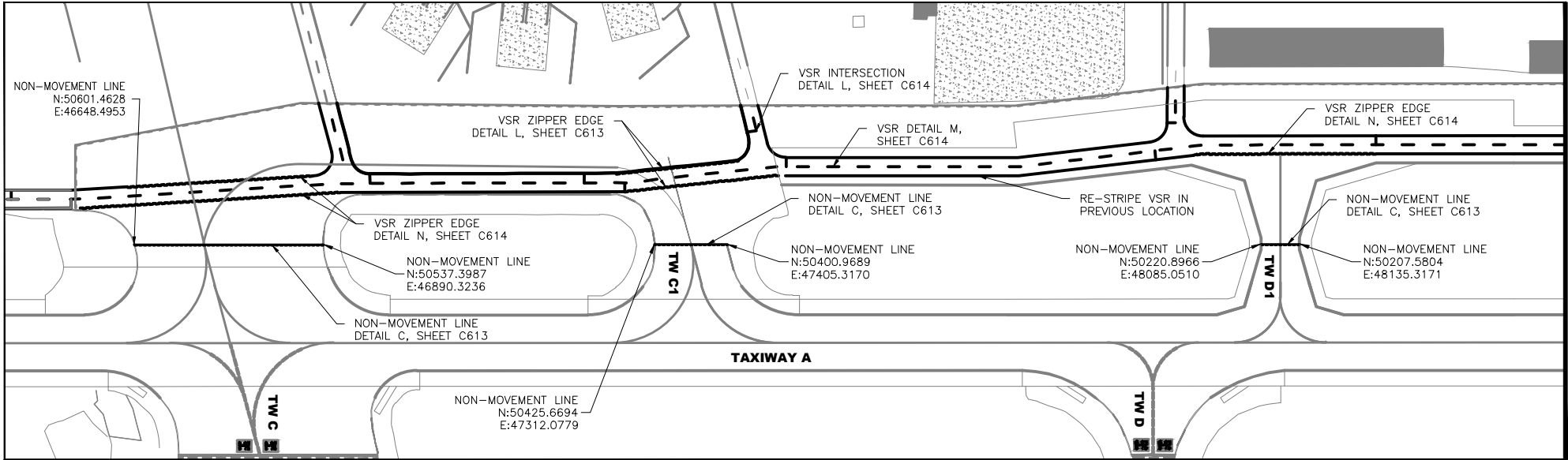


JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
**TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION,
AND TAXIWAY E REALIGNMENT**
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
PAVEMENT MARKING OBLITERATION
PLAN (SHEET 2 OF 4)

DATE:	06/25/19
SHEET:	C602 OF 233
AS-BUILT SHEET:	



Date Revised: 8/16/2019, 11:55 AM
Drawn By: AS/CM/BH
Checked By: HB
File Path and Name: P:\2017\17264-IN-CBL-JNL-Taxiway\A\PSAH\G605-C612\G605-C612.dwg



**PHASE 2G (DAY 172)
PERMANENT MARKINGS**

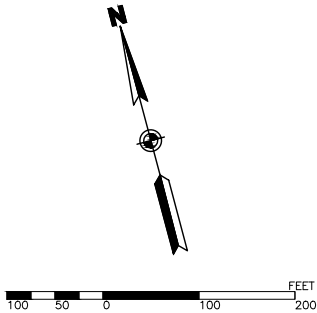
SCALE: 1"=100'

LEGEND:

- TEMPORARY AIRFIELD MARKINGS
- EXISTING AIRFIELD MARKINGS
- NEW AIRFIELD MARKINGS
- AIRFIELD MARKING CURVE ID SEE CURVE TABLE

NOTES:

- SEE CURVE TABLES ON SHEET C612.
- SEE PAVEMENT MARKING DETAIL SHEETS C613 - C614.



**CONTRACT NO. BE19-218
ADDENDUM NO. 2**

NO.	DATE	REVISION
1	8/16/19	ADDENDUM NO. 2

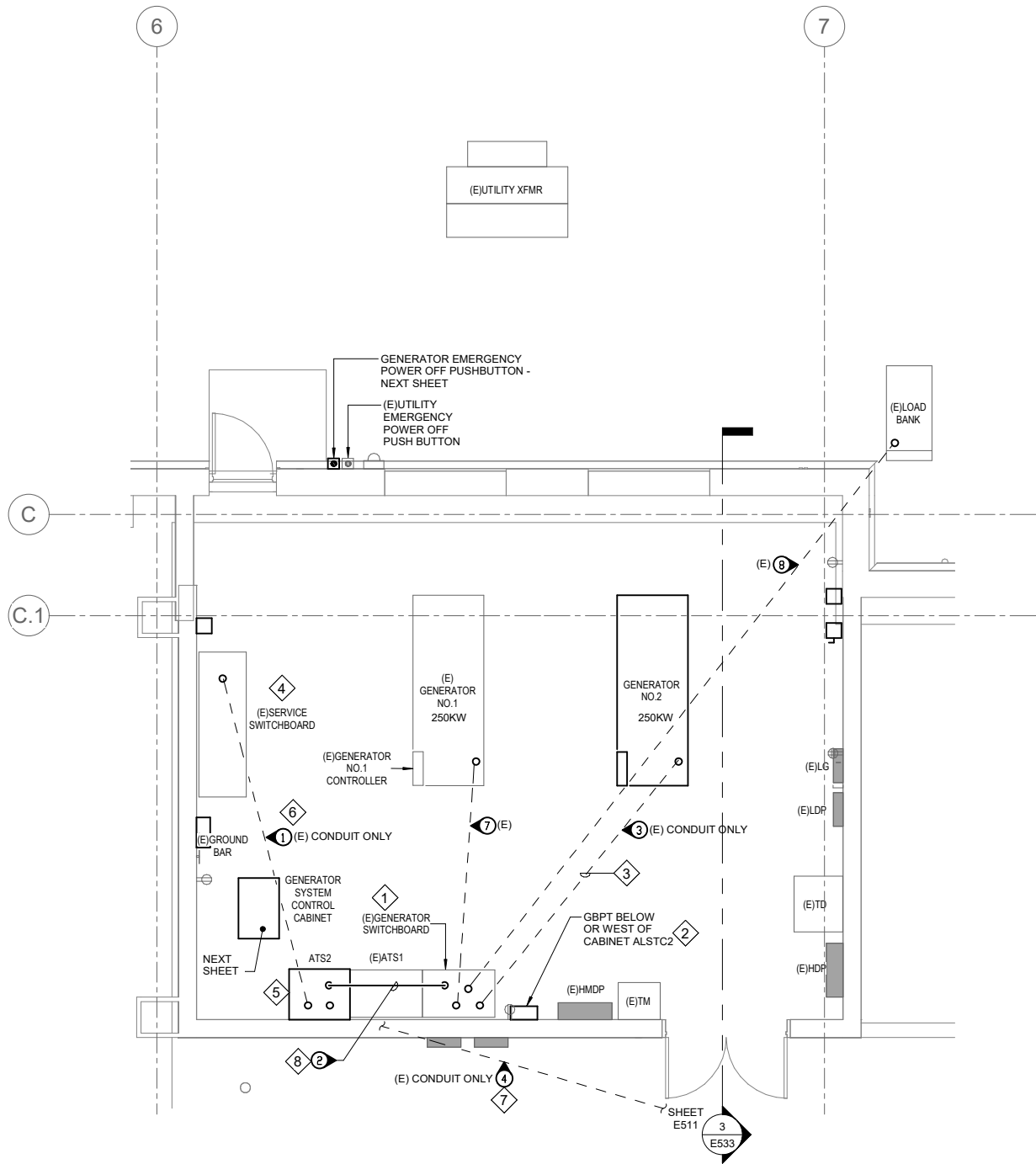


JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
**TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION,
AND TAXIWAY E REALIGNMENT**
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
PAVEMENT MARKING PLAN
(SHEET 7 OF 7)

DATE:	06/25/19
SHEET:	C611 OF 233
AS-BUILT SHEET:	

DESIGNED BY: JRM
DRAWN BY: JLC/JDS
CHECKED BY: MSG

DATE REVISED: 8/16/2019 12:31:31 PM
LAYOUT NAME: LAYOUT 1
FILE PATH AND NAME: C:\Users\jcarson\Documents\PDC-ELEC-17254IN_RV18_jcarsoncarson.rvt



1 GENERATOR/ELECTRICAL ROOM - GENERATOR POWER PLAN
E541 1/4" = 1'-0"

SHEET NOTES

1. THIS SHEET SHOWS EXISTING CONDITIONS, PROVIDE WORK AS INDICATED.
2. PROVIDE ALL WORK THIS SHEET UNDER SPECIFICAITON S-501 UNLESS INDICATED OTHERWISE.
3. SEE E522 FOR GENERAL POWER WORK IN THIS AREA..

SHEET KEYNOTES

1. ROVIDE WORK IN GENERATOR SWITCHBOARD, SEE E554 FOR INFORMATION.
2. PROVIDE POTENTIAL TRANSFORMER (GBPT) ENCLOSURE ADJACENT TO GENERATOR SWITCHBOARD, SEE SHEETS E544 AND E554 FOR INFORMATION. MOUNT ENCLOSURE ON A CHANNEL SUPPORT FRAME THAT SPANS OVER EXISTING EXPOSED CONDUITS TO OUTLET BOXES ON THE WALL. THE EXISTING OUTLET BOXES AND AN EXISTING PORTABLE FIRE EXTINGUISHER IN THE VICINITY OF THE OUTLET BOXES SHALL NOT BE DISTURBED. COORDINATE LOCATION OF "GBPT" WITH PROVISION OF CABINET "ALSTC2", SEE NEXT SHEET FOR INFORMATION ON "ALSTC2".
3. EXISTING UNDER-SLAB CONDUITS FOR GENERATOR 2 (FEEDER 3) ARE ARRANGED THE SAME AS THOSE FOR EXISTING GENERATOR 1. CONTRACTOR PROVISION OF GENERATOR 2 SHALL INCLUDE ALL REQUIRED CHANGES TO THE EXISTING UNDER-SLAB CONDUITS OR ALTERNATIVELY PROVIDE FEEDER 3 CONDUIT RUN(S) OVERHEAD TO THE GENERATOR SWITCHBOARD. IF THE EXISTING UNDER-SLAB CONDUIT IS USED PROVIDE FEEDER 3 CABLES AS INDICATED.
4. PROVIDE THREE "CUSTOMER METERING (CM)" CURRENT TRANSFORMERS FOR FEEDER 1 PHASE CABLES IN SERVICE SWITCHBOARD, SEE E552 FOR INFORMATION.
5. PROVIDE ATS2 ON EXISTING CONCRETE HOUSEKEEPING PAD IF PAD IS SIZED APPROPRIATELY, OTHERWISE REVISE PAD AS REQUIRED.
6. PROVIDE FEEDER 1 CABLES IN EXISTING UNDER-SLAB CONDUIT INDICATED.
7. PROVIDE FEEDER 4 CABLES IN EXISTING UNDER-SLAB CONDUIT INDICATED.
8. IF ATS2 IS "MOLDED CASE SWITCH" TYPE MATCHING ATS1 PROVIDE FEEDER 2 CONDUCTORS THROUGH ATS1 WITHOUT RACEWAY. IF ATS2 IS "CONTACTOR TYPE" PROVIDE FEEDER 2 RACEWAY OVER THE EQUIPMENT AS INDICATED.

4 2 0 4 8 12 FEET



CONTRACT NO. BE19-218
ADDENDUM NO. 2

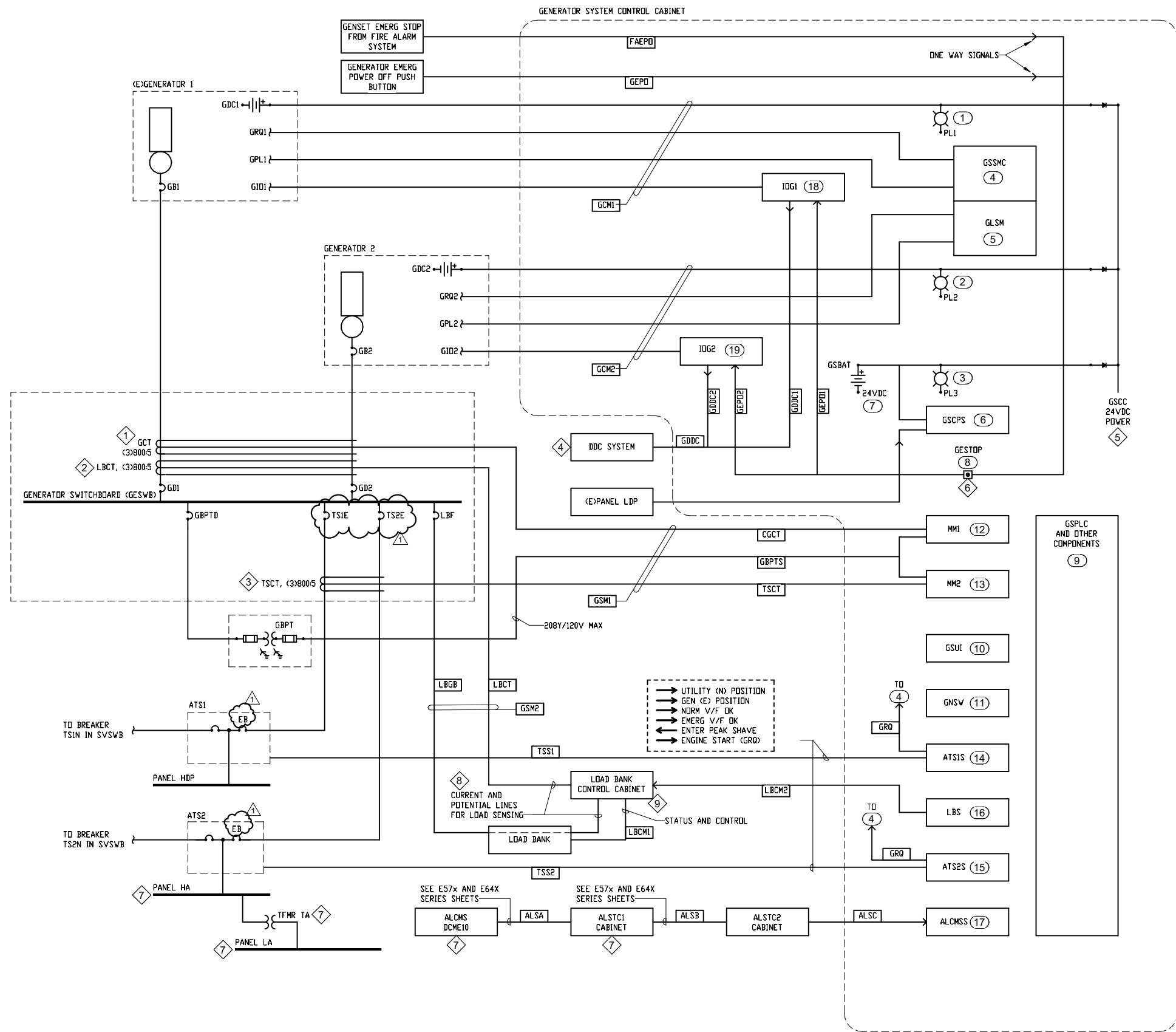
NO.	DATE	REVISION
1	08/16/19	ADDENDUM 2



JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION,
AND TAXIWAY E REALIGNMENT
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
SREB ALRV - GENERATOR POWER PLAN

DATE: 06/12/19
SHEET: E541 OF 233
AS-BUILT SHEET:

DESIGNED BY: JRM
DRAWN BY: JLC/JDS
CHECKED BY: MSC
DATE REVISED: 8/16/2019 12:31:33 PM
LAYOUT NAME: LAYOUT 1
FILE PATH AND NAME: C:\Users\jordan\Documents\PDG-ELEC-17264IN_RV18-jordan\jordan.ctb



SHEET NOTES

1. PROVIDE ALL WORK THIS SHEET UNDER SPECIFICATION S-501 UNLESS INDICATED OTHERWISE.
2. THIS SHEET IS NOT A POWER ONE-LINE, SEE SHEET E552 FOR THE ONE-LINE.
3. THIS SHEET SHOWS A FUNCTIONAL DIAGRAM OF COMPONENTS AND CIRCUITS TO COORDINATE THE E54X-SERIES SHEETS. THE DIAGRAM IS NOT COMPLETE AND CONTRACTOR SHALL PROVIDE ALL COMPONENTS AND CIRCUITS NEEDED FOR A COMPLETE AND FUNCTIONAL GENERATOR CONTROL SYSTEM.
4. SEE PREVIOUS TWO SHEETS FOR GENERATOR SYSTEM CONTROL SIGNALING PATHWAYS, CIRCUITS, AND FLOOR PLANS.
5. SEE NEXT TWO SHEETS FOR GENERATOR SYSTEM CONTROL CABINET COMPONENTS AND SEQUENCE OF OPERATION.

SHEET KEYNOTES

1. ROUTE PHASE CABLES FOR BOTH GENERATORS THROUGH CURRENT TRANSFORMER "GCT" WINDOW TO SENSE TOTAL GENERATOR SET OUTPUT.
2. ROUTE PHASE CABLES FOR BOTH GENERATORS THROUGH CURRENT TRANSFORMER "LBCT" WINDOW TO SENSE TOTAL GENERATOR SET OUTPUT FOR THE LOAD BANK CONTROLLER (LBCT LOCATION SHOWN COMPLIES WITH EXISTING LOAD BANK PRODUCT DATA). SEE KEYNOTE BELOW ASSOCIATED WITH THE LOAD BANK BLOCKS.
3. ROUTE PHASE CABLES FOR BOTH TRANSFER SWITCHES THROUGH CURRENT TRANSFORMER "TSCT" WINDOW TO SENSE TOTAL GENERATOR SYSTEM BUILDING LOAD EXCLUDING THE LOAD BANK.
4. THE BLOCK "DDC SYSTEM" INDICATES DDC INPUT/OUTPUT AND LOGIC THAT PLACES HVAC EQUIPMENT IN "GENERATOR RUN MODE" WHEN A GENERATOR ENGINE IS RUNNING.
5. ALL CONTROL COMPONENTS IN THE GENERATOR SYSTEM CONTROL CABINET SHALL BE ENTIRELY POWERED 24VDC FROM THE "GSCC LOCAL BATTERY (AND CHARGER)" AND THE 24VDC ENGINE POWER SYSTEMS ON BOTH GENERATORS.
6. THE "GENERATOR EMERGENCY STOP" (GESTOP) OPERATOR ON THE GSCC FRONT PANEL ASSERTS IMMEDIATE EMERGENCY STOPPING OF BOTH GENERATOR SETS. THIS GSCC-MOUNTED OPERATOR SHALL NOT ASSERT AN "UTILITY EMERGENCY POWER OFF (UEPO)" SIGNAL TO THE SERVICE DISCONNECT BREAKERS IN THE SERVICE SWITCHBOARD.
7. PANEL HA, TRANSFORMER TA, PANEL LA, DCME10, AND ALSTC1 ARE LOCATED IN THE ALRV.
8. THE FINAL ARRANGEMENT OF POTENTIAL AND CURRENT SENSING WIRING TO THE LOAD BANK SYSTEM IS TO BE DETERMINED BY THE CONTRACTOR. EXISTING CONTROL POWER, AND POWER FOR LOAD BANK CONTACTOR CABINET SPACE HEATER ARE NOT SHOWN ON THIS DIAGRAM - SEE SHEETS E522 AND E542 FOR INFORMATION ON THESE CIRCUITS.
9. EXISTING LOAD BANK: PROVIDE ADDITIONAL COMPONENTS, WIRING, INTEGRATION, AND COMMISSIONING FOR "SITE LOAD CONTROL" FUNCTION: THE SITE LOAD CONTROL FUNCTION ENABLES AUTOMATIC LOAD BANK OPERATION WHEN EITHER OR BOTH GENERATORS ARE ONLINE TO MAINTAIN MINIMUM GENERATOR SYSTEM LOAD AT SET-POINT REQUIRED BY THE GENERATOR MANUFACTURERS (APPROXIMATELY 35%). LOAD BANK NAMEPLATE DATA: ASCO AVTRON 4000-SERIES, AVTRON PROJECT NO. KC16070027, MODEL LSH125/D34879-2.1-10-13, S/N 1463516, 125KW, 480V 3-PHASE, CONTROL POWER 120VAC, SCHEMATIC NO. D34887, OPTIONS 1.10.13. COMPLY WITH ALL LOAD BANK MANUFACTURER REQUIREMENTS.

1 GENERATOR SYSTEM CONTROL DIAGRAM
E544 NO SCALE

CONTRACT NO. BE19-218
ADDENDUM NO. 2



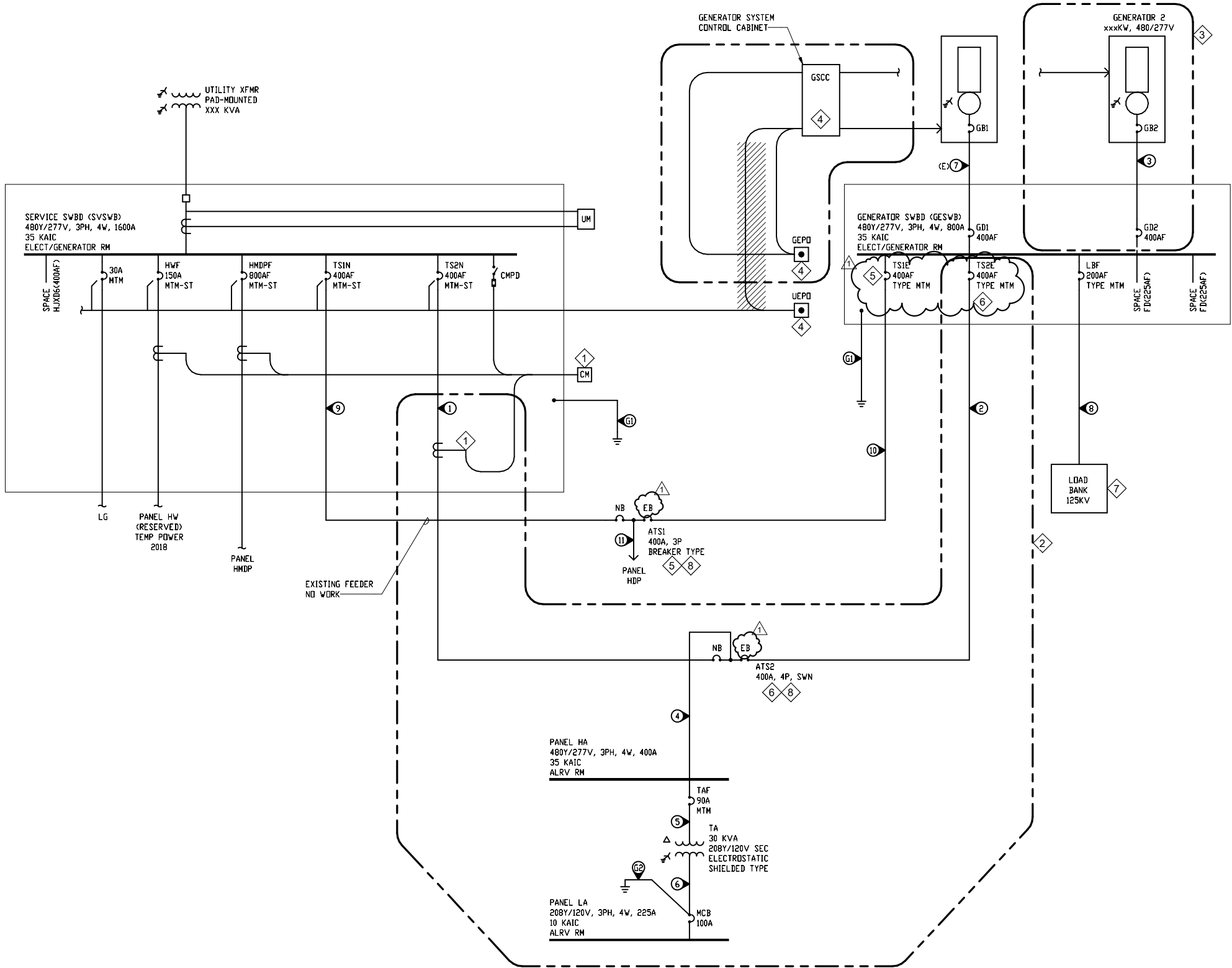
NO.	DATE	REVISION
1	08/16/19	ADDENDUM 2



JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION,
AND TAXIWAY E REALIGNMENT
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
SREB ALRV - GENERATOR SYSTEM CONTROL DETAILS

DATE: 06/12/19
SHEET: E544 OF 233
AS-BUILT SHEET:

DATE REVISED: 8/16/2019 12:31:34 PM
LAYOUT NAME: LAYOUT 1
FILE PATH AND NAME: C:\Users\jcarson\Documents\PDG-ELEC-17264IN_RV18_jcarsoncarson.ctb
DESIGNED BY: JRM
DRAWN BY: JLC/JDS
CHECKED BY: MSC



SHEET NOTES

1. THIS SHEET SHOWS EXISTING CONDITIONS, PROVIDE WORK AS INDICATED.
2. PROVIDE ALL WORK THIS SHEET UNDER SPECIFICATION S-501 UNLESS INDICATED OTHERWISE.
3. EXISTING CONDITION INFORMATION ON THIS SHEET FROM SREB INITIAL PHASE OPERATION AND MAINTENANCE MATERIALS; ADJUSTED FOR "SREB PHASE 1B CONFORMED" DRAWINGS DATED MAY 31, 2018 REVISION 1; ELECTRICAL DRAWING SHEET E2.1A TITLED "SINGLE LINE DIAGRAM - POWER DISTRIBUTION SYSTEM".
4. POWER SYSTEM WORK SHOWN ON THIS SHEET IS NOT COMPLETE, COORDINATE WORK WITH THE E54X-SERIES SHEETS.
5. SEE NEXT SHEET FOR GROUNDING ONE-LINE DIAGRAM.

SHEET KEYNOTES

1. IN EXISTING SERVICE SWITCHBOARD PROVIDE CUSTOMER METERING CURRENT SENSORS ON FEEDER 1 WITH WIRING INDICATED DOWNSTREAM OF EXISTING BREAKER "TS2N". NO CORRESPONDING POTENTIAL SENSING WIRING IS REQUIRED, SHARED POTENTIAL SENSING EXISTS (BREAKER CMPD). COORDINATE WITH AIRPORT TO CONNECT ADDED METERING WIRING TO THE EXISTING CUSTOMER METER (CM) AND PROVIDE CUSTOMER METER PROGRAMMING FOR THE ADDED FEEDER.
2. PROVIDE ATS2, FEEDERS 1, 2, 4, 5 AND 6, PANELS HA AND LA, AND TRANSFORMER TA. SEE NEXT SHEET FOR CORRESPONDING GROUNDING ONE-LINE.
3. PROVIDE GENERATOR 2, FEEDER 3, AND BREAKER GD2.
4. WITH GENERATOR 2 PROVIDE EXTERIOR ENCLOSED GENERATOR EMERGENCY POWER OFF (GEPO) SWITCH. INCLUDE WIRING TO CONNECT GENERATOR 1 TO THE GEPO SWITCH. WHEN GENERATOR 2 IS FULLY COMMISSIONED AND FUNCTIONAL DISCONNECT GENERATOR 1 FROM EXISTING UEPO SWITCH AND CONNECT IT TO THE GEPO SWITCH. SEE GENERATOR SYSTEM CONTROL SHEETS FOR ADDITIONAL INFORMATION ON THE GEPO SWITCH WIRING THROUGH THE GENERATOR SYSTEM CONTROL CABINET (GSCC). THE "GSCC" INCLUDES A GENERATOR EMERGENCY STOP SWITCH (GESTOP) THAT LIKE THE "GEPO" SWITCH, SHALL IMMEDIATELY SHUT DOWN THE GENERATORS WHEN PRESSED.
5. REFER TO EXISTING ATS1: EXISTING INSTALLATION LACKS BREAKER "TS1E". THIS MOLDED CASE SWITCH TYPE TRANSFER SWITCH IS INTEGRAL TO THE GENERATOR SWITCHBOARD ASSEMBLY. SEE SHEET E554 FOR WORK AND ADDITIONAL INFORMATION.
6. PROVIDE ATS2: THE EXISTING GENERATOR SWITCHBOARD (GESWB) IS CONFIGURED TO ACCEPT ATS2 (MOLDED CASE SWITCH TYPE SIMILAR TO ATS1) BY ADDING IT TO THE RIGHT SIDE OF ATS1. THE ONE-LINE DIAGRAM SHOWS THIS INSTALLATION. SEE SHEET E554 FOR WORK AND ADDITIONAL INFORMATION.
7. EXISTING LOAD BANK REQUIRES ADDITIONAL COMPONENTS, WIRING, INTEGRATION, AND COMMISSIONING FOR "SITE LOAD CONTROL" FUNCTION. THE CONTRACTOR HAS AN OPTION TO REPLACE THE LOAD BANK PER THE SPECIFICATIONS. SEE SHEET E54X-SERIES SHEETS FOR ADDITIONAL INFORMATION.
8. THIS WORK INCLUDES A GENERATOR START CIRCUIT FROM ATS2 TO THE "GSCC". FOR THE EXISTING ARRANGEMENT IT APPEARS THE GENERATOR START SIGNAL IS WIRED DIRECTLY BETWEEN ATS1 AND GENERATOR 1. THIS WORK SHALL REPLACE THE EXISTING ATS1 TO GENERATOR 1 START SIGNAL CIRCUIT WITH A CIRCUIT THAT ROUTES THE SIGNAL THROUGH THE GENERATOR SYSTEM CONTROL CABINET (GSCC). THE COMBINED GENERATOR START SIGNALS SHALL THEN CONTINUE TO BOTH GENERATORS.
9. PROVIDE GROUNDING OF TRANSFORMER TA ELECTROSTATIC SHIELD IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

1 POWER ONE-LINE DIAGRAM
E552 NO SCALE

CONTRACT NO. BE19-218
ADDENDUM NO. 2



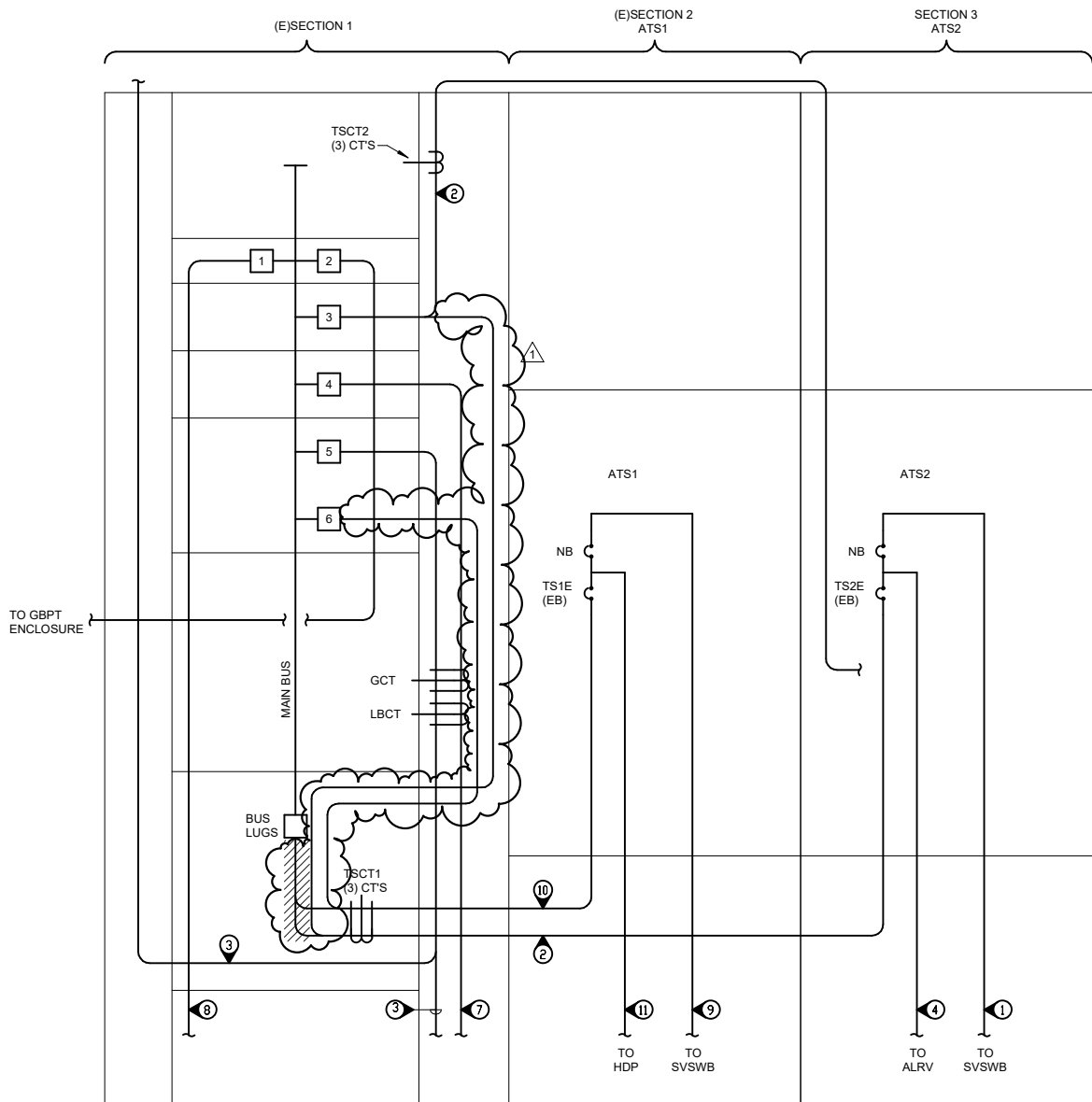
NO.	DATE	REVISION
1	08/16/19	ADDENDUM 2



JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION,
AND TAXIWAY E REALIGNMENT
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
SREB ALRV - ELECTRICAL ONE-LINE DIAGRAM

DATE: 06/12/19
SHEET: E552 OF 233
AS-BUILT SHEET:

DATE REVISED: 8/16/2019 12:31:35 PM
LAYOUT NAME: LAYOUT 1
FILE PATH AND NAME: C:\Users\jcarson\Documents\PDG-ELEC-17254IN_RV18-jcarsoncarson.ctb
DESIGNED BY: JRM
DRAWN BY: JLC/JDS
CHECKED BY: MSC



1 ELEVATION - GENERATOR SWITCHBOARD (GESWB)
1 1/2" = 1'-0"

GENERATOR SWITCHBOARD (GESWB) AND AUTOMATIC TRANSFER SWITCH 1 (ATS1)
EATON POW-R-LINE PRL-C SWITCHBOARD
480Y/277V, 3PH, 4W, 800A
G.O. NO. SAN0793504; ITEM 1, SECT 1 OF 2
MFG. AT SES, DATE 7/28/2017
SECTION 2 IS ATS1:
EATON TRANSFER SWITCH, MOLDED CASE SWITCH TYPE
400A, 3 POLE, 3PH, 3/4 WIRE
CAT. NO. ATV3LDA30400XKU
G.O. NO. 33H636311
CONTROLLER: ATC-300+, NP70C1254H05
CONTROLLER STICKER: 6D32360G42 05488; 02/17; PCB70C1251G06 REV 30; FIRMWARE V4.1

ATS2 IS MOLDED CASE SWITCH TYPE - GENERATOR SWITCHBOARD DISTRIBUTION DEVICES

SPACE OR SWBD CKT	DESIGNATION OR ITEM	EXISTING OR PROVIDE	RATING / FUNCTIONAL INFORMATION	PRODUCT / COMMENTS
1	LBF	EXISTING	BREAKER, 200A 3P, MTM	HFD225AF SERIES BREAKER, 65KAIC - NO WORK
2	GBPTD	PROVIDE	GENERATOR BUS PT DISCONNECT	BREAKER, 15A 3P, MTM, 65KAIC - SEE SN6
3	TS2E	PROVIDE	BREAKER, 400A 3P, MTM	KD400 SERIES BREAKER, 65KAIC - SEE SN3
		EXISTING	SPACE	
4	GD1	EXISTING	BREAKER, 400A 3P, MTM	HDK 65K SERIES, 65KAIC - SEE SN4
		PROVIDE		
5	GD2	PROVIDE	BREAKER, 400A 3P, MTM	SIMILAR TO BREAKER GD1, ALSO SEE SN5
6	TS1E	EXISTING	BREAKER, 400A 3P, MTM	HDK 65K SERIES, 65KAIC - SEE SN4
	SPARE	EXISTING	BREAKER, 400A 3P, MTM	HDK 65K SERIES, 65KAIC - SEE SN4
7	N/A	EXISTING	BUS LUGS AT BOTTOM	WORK - SEE SN2
	-TS1E-	EXISTING	-BUS LUGS AT BOTTOM-	400A BREAKER IN ATS1 - NO WORK - SEE SN2

ATS2 IS CONTACTOR TYPE - GENERATOR SWITCHBOARD DISTRIBUTION DEVICES

SPACE OR SWBD CKT	DESIGNATION OR ITEM	EXISTING OR PROVIDE	RATING / FUNCTIONAL INFORMATION	PRODUCT / COMMENTS
1	LBF	EXISTING	BREAKER, 200A 3P, MTM	HFD225AF SERIES BREAKER, 65KAIC - NO WORK
2	GBPTD	PROVIDE	GENERATOR BUS PT DISCONNECT	BREAKER, 15A 3P, MTM, 65KAIC - SEE SN6
3	TS2E	PROVIDE	BREAKER, 400A 3P, MTM	KD400 SERIES BREAKER, 65KAIC - SEE SN7
4	GD1	EXISTING	BREAKER, 400A 3P, MTM	HDK 65K SERIES, 65KAIC - SEE SN4
		PROVIDE		
5	GD2	PROVIDE	BREAKER, 400A 3P, MTM	SIMILAR TO BREAKER GD1, ALSO SEE SN5
6	TS1E	EXISTING	BREAKER, 400A 3P, MTM	HDK 65K SERIES, 65KAIC - SEE SN4
	SPARE	EXISTING	BREAKER, 400A 3P, MTM	HDK 65K SERIES, 65KAIC - SEE SN4
7	N/A	EXISTING	BUS LUGS AT BOTTOM	WORK - SEE SN2
	-TS1E-	EXISTING	-BUS LUGS AT BOTTOM-	400A BREAKER IN ATS1 - NO WORK - SEE SN2

SCHEDULE NOTES (SNx):

- INFORMATION IN THIS SCHEDULE FROM "SREB PHASE 1B CONFORMED" DRAWINGS DATED MAY 31, 2018 REVISION 1; AND SREB INITIAL PHASE OPERATION AND MAINTENANCE MATERIALS.
- ATS1 IS MOLDED CASE SWITCH TYPE, WHILE PERFORMING WORK UNDER NOTE SN4 REPLACE EXISTING FEEDER 10 WITH CONDUCTORS BETWEEN ATS1 "EB" LUGS AND BREAKER TS1E. BREAKER TS1E IS INTEGRAL TO BREAKER TYPE ATS1.
- IF ATS2 IS MOLDED CASE SWITCH TYPE, PROVIDE BREAKER TS2E IN GENERATOR SWITCHBOARD AS INDICATED. BREAKER TS2E SUPPLIES FEEDER 2 PASSING THROUGH THE SWITCHBOARD INTERIOR. CURRENT TRANSFORMER TSCT1 IS 800:5 AND ENCIRLES PHASE CONDUCTORS OF FEEDERS 2 AND 10. DO NOT PROVIDE FEEDER 2 AND CURRENT TRANSFORMER TSCT2 INDICATED AT THE TOP OF SWITCHBOARD SECTION 1. IF ATS2 IS BREAKER TYPE, BREAKER TS2E IS INTEGRAL TO ATS2 - CONNECT ATS TO BUS LUGS AT BOTTOM OF MAIN BUS SIMILAR TO ATS1. CURRENT TRANSFORMER TSCT1 IS 800:5 AND ENCIRLES PHASE CONDUCTORS OF FEEDERS 2 AND 10. DO NOT PROVIDE FEEDER 2 AND CURRENT TRANSFORMER TSCT2 INDICATED AT THE TOP OF SWITCHBOARD SECTION 1.
- DISCONNECT EXISTING BREAKER GD1 FROM GENERATOR SET AND RELOCATE AS A SPARE BREAKER TS1E (AT CIRCUIT 6) IN THE SWITCHBOARD. PROVIDE BREAKER SIMILAR TO EXISTING GD1 BUT EQUIPPED WITH N.O./N.C. AUXILIARY CONTACTS AND 24VDC SHUNT SHUNT TRIP ACCESSORY.
- PROVIDE BREAKER GD2 THIS PROJECT, EQUIPPED WITH N.O./N.C. AUXILIARY CONTACTS AND 24VDC SHUNT SHUNT TRIP ACCESSORY, OTHERWISE TYPE AND SIZE FOR GENERATOR 2 REQUIREMENTS.
- PROVIDE GENERATOR BUS METERING PT DISCONNECT (GBPTD) BREAKER.
- IF ATS2 IS CONTACTOR TYPE, PROVIDE TS2E IN GENERATOR SWITCHBOARD AS INDICATED. BREAKER TS2E SUPPLIES FEEDER 2 EXITING THE TOP OF SWITCHBOARD SECTION 1 WITH 400:5 CURRENT TRANSFORMERS TSCT2 ENCIRCLING THE FEEDER 2 PHASE CONDUCTORS. DO NOT PROVIDE FEEDER 2 BETWEEN THROUGH THE SWITCHBOARD INTERIOR BUS LUGS AND ATS2. PROVIDE 400:5 CURRENT TRANSFORMERS TSCT1 ENCIRCLING PHASE CONDUCTORS OF FEEDER 10 AND CONNECT THE SECONDARIES OF TSCT1 AND TSCT2 IN PARALLEL.

SHEET NOTES

- THIS SHEET SHOWS EXISTING CONDITIONS, PROVIDE WORK AS INDICATED.
- PROVIDE ALL WORK THIS SHEET UNDER SPECIFICATION S-501 UNLESS INDICATED OTHERWISE.
- EXISTING CONDITION INFORMATION ON THIS SHEET FROM SREB INITIAL PHASE OPERATION AND MAINTENANCE MATERIALS; ADJUSTED FOR "SREB PHASE 1B CONFORMED" DRAWINGS DATED MAY 31, 2018 REVISION 1; ELECTRICAL DRAWING SHEET E2.1A TITLED "SINGLE LINE DIAGRAM - POWER DISTRIBUTION SYSTEM".
- POWER SYSTEM WORK SHOWN ON THIS SHEET IS NOT COMPLETE, COORDINATE WORK WITH THE E54X-SERIES SHEETS.



CONTRACT NO. BE19-218
ADDENDUM NO. 2

NO.	DATE	REVISION
1	08/16/19	ADDENDUM 2



JUNEAU INTERNATIONAL AIRPORT
JUNEAU, ALASKA
TAXIWAY A REHABILITATION, TAXIWAY D-1 RELOCATION,
AND TAXIWAY E REALIGNMENT
CONTRACT No. BE19-218 / A.I.P. NO. 3-02-0133-080-2019
SREB ALRV - GENERATOR SWITCHBOARD

DATE: 06/12/19
SHEET: E554 OF 233
AS-BUILT SHEET: