

**BID PACKAGE FOR:
SOUTHERN INTERTIE TRANSMISSION REPAIR
W.O. E2320072
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Chugach Electric Association, Inc.

Via e-mail

INVITATION TO BID

July 16, 2024

TO: Chugach Electric Association, Inc., 2024-2025 Outside Electrical Line Construction Contract Contractors

You are invited to submit a Bid for Chugach Work Order E2320072, Southern Intertie Transmission Repair.

This project will replace the uphill (left) pole of 3-pole Structure GWPT 40-1 on the Girdwood Tap to Portage Tap 115 kV/138 kV transmission line broke during winter storms in November 2023. The dropped conductor from this pole was attached to the center pole below the center phase using a horizontal post/suspension insulator combination as a temporary repair. The structure now needs to be permanently repaired by replacing the uphill broken pole with a new pole, pole top assembly, and down guys. All new materials for the uphill pole will be required except for the two existing rock anchors and one phase of existing conductor. The existing rock hole foundation can be reused although the new wood pole (class H1) will be one class larger than the existing wood pole (class 1). The uphill phase conductor will be transferred from its temporary location on the center pole to the new insulator assembly on the uphill pole.

This project is subject to the union signatory sections of Chugach's Outside or Generation Agreements contained in Exhibit N of the 2024-2025 Outside Electrical Line Construction Contract.

Contractors are not required to be signatory to a current collective bargaining agreement with IBEW Local 1547 in order to bid on the project. The signatory requirement only becomes applicable to the successful bidder once a contract is awarded. The successful bidder can comply by either establishing that; 1) it is signatory to a current collective bargaining agreement with IBEW Local 1547; 2) by executing a collective bargaining agreement with IBEW Local 1547, or 3) by executing an agreement with IBEW Local 1547 to comply with the terms and conditions set forth in the most current agreement between IBEW Local 1547 and the Alaska Chapter National Electrical Contractors Association, Inc. If the successful bidder elects the third option, the agreement will be limited to the scope of the work and duration of the project.

Please base your bids on the following conditions:

- All Contractor bids must be valid until 5:00 pm on August 30, 2024. After that time, the Contractor shall have the option of retracting its bid. Projects awarded as late as and including the last day the Contractor's bids are valid are not subject to contractor claim for delay of award.
- Contractor shall begin work within seven (7) calendar days of Notice to Proceed. Anticipated project window dates are September 10 – September 22.
- Completion for this project is 72 hours after line de-energization switching has been completed.
- No clearing is anticipated for this project.



- As-built drawings are required.
- Liquidated damages in the amount of \$15,000.00 per day shall apply if the Contractor fails to meet the required completion period given above.
- A Bid Bond is required. A Bid Bond in the amount of 10% of the Bid shall be provided with the Bid documents. A certified check made payable to “Chugach Electric Association, Inc.” may be substituted for the Bid Bond.
- Written releases of liens are required.

A Pre-Bid Conference is scheduled for 10:00 A.M. Anchorage time, July 18, 2024 at Chugach North Campus Building N1 in the North Girdwood Conference room. Contractor representation and attendance of this Pre-Bid Conference is mandatory. A site visit is not planned for this bid.

RFB documentation is available on Chugach’s website at www.chugachelectric.com, under Inside Chugach, Bid Opportunities tab. Contractors can access the RFB documentation under the “View advertisement and associated documents” button in WO E2320072.

All bids are to be delivered either in person at Chugach’s North Campus Building N1 at the front desk, 1200 E. 1st Ave, Anchorage, Alaska or submitted by email To: supat_chanonto@chugachelectric.com CC: Marge_Wisthoff@chugachelectric.com and must be received prior to 2:00 P.M. Anchorage time, August 1, 2024.

Notice to Proceed shall not be issued until Chugach has received (1) all bonds required by this Invitation to Bid (ITB) in the required amounts and forms and properly executed by the appropriate individuals, (2) a site specific HSE plan, (3) all documentation required in the Bid Documents including insurance certificates, proof of builder’s risk insurance, and an MS Project based schedule. The contract time allowed for completion of this contract shall not be extended or suspended by any delay by Contractor in providing these documents necessary for the Notice to Proceed to be issued. If the total amount of the winning bid should exceed \$2,000,000.00, the NTP will be delayed pending Chugach Electric Association’s Board Approval.

No work shall begin until the successful Bidder has been issued a written Notice to Proceed.

A Pre-Construction Conference will be required.

All work shall be performed in compliance with all applicable local, state and federal ordinances, orders, statutes, rules and regulations.

The Contractor shall furnish all material required for the project that is not indicated on Chugach’s material issue form. Chugach must approve all Contractor-furnished material prior to installation.



The Contractor shall secure locates and assume responsibility for damage to any and all overhead and underground facilities.

Construction of this project will involve work on or around energized equipment. Outages will be granted based on the outage schedule contained in Section 3.2 in the Special Provisions of the Bid Documents.

Outages will be subject to advanced coordination/notification and Chugach electrical system requirements in effect for the time period the outage is requested. Outages are subject to system conditions.

Contractor shall take delivery of all available materials within seven (7) days of Notice to Proceed.

Contractor's workmanship shall be warranted for two (2) years following Chugach acceptance of the project completion documentation.

The Contractor will not energize new or existing primary facilities in the absence of Chugach's Site Representative unless advanced written approval is secured from Chugach.

Project is being permitted. Permitting constraint are possible, but unlikely if contractor access is by foot and helicopter.

Payment for Contractor work is accomplished through use of a Construction Completion Report (CCR) prepared by Chugach's Site Representative and signed off by the Contractor's representative. Total payment is made on actual units completed not on estimated units stated in the Bid Documents unless otherwise stated in writing. Chugach has no obligation to subsequently reconcile or assist in reconciling the Contractor's billing records.

Chugach reserves the right to define and waive irregularities, to accept or reject any or all proposals/bids, in whole or in part, and to reissue, withdraw or cancel the solicitation/project in its entirety for any reason including its subsequent determination to perform the Work in-house without liability of any type to Bidder, including but not limited to any costs associated with Bid preparations and submittal.

All questions regarding the bid documents are to be directed to Chugach's Site Engineer, Supat Chanonto, via email: supat_chanonto@chugachelectrical.com. Questions shall be submitted no later than 12:00 PM, July 22, 2024. Answers to Bidder's questions will be returned no later than 5:00 PM, July 29, 2024.

CHUGACH ELECTRIC ASSOCIATION, INC.

A handwritten signature in blue ink, appearing to read "Bill Carlson", is written over the printed name.

Bill Carlson, PE
Manager, PROJECTS

cc: W.O. E2320072 File

Bid Sheet

WORK ORDER NUMBER: E2320072 CONTRACTOR: _____

LOCATION: STR 40-1, Seward Hwy S., Mile Post 82-83 DATE: _____

BIDS ARE DUE PRIOR TO 2:00 P.M.: August 1, 2024

This bid is submitted subject to the terms of the 2024-2025 Outside Electrical Line Construction Contract between Chugach Electric Association, Inc. and the undersigned for the above project as set out in the Invitation to Bid.

Project Bid Quotation: .

Quotation Expires: August 30, 2024 5 P.M.

Contractor's Alaska License No.: _____

Insurance Expires: _____

Worker's Compensation: _____

Liability: _____

Automobile: _____

Contractor Sell Rate: _____

Contractor Labor Man-Hours: _____

EXCEPTIONS AND QUALIFICATIONS

Exceptions or qualifications taken by the Bidder to any of the documents furnished with this Invitation to Bid or clarifications to the Proposal shall be stated below and, if none, Bidder shall state "NONE".

SUBCONTRACTORS

The Bidder shall indicate below the Work intended to be subcontracted to others.

By Contractor: _____

Dated: _____

BID ACCEPTED SUBJECT TO TERMS AND CONDITIONS OF THE OUTSIDE ELECTRICAL LINE CONSTRUCTION CONTRACT

By Chugach Electric Association, Inc: _____

Dated: _____

SOUTHERN INTERTIE 115 kV/138 kV TRANSMISSION LINE
STRUCTURE GWPT 40-1 POLE ASSEMBLY REPLACEMENT
W.O. NO. E2320072

BID SCHEDULE SUMMARY

NEW CONSTRUCTION

SECTION 1 - NEW FOUNDATION ASSEMBLY UNITS	\$ _____
SECTION 2 - NEW STRUCTURE ASSEMBLY UNITS	\$ _____
SECTION 3 - NEW STRUCTURE TOP ASSEMBLY UNITS	\$ _____
SECTION 4 - NEW GUY ASSEMBLY UNITS	\$ _____
SECTION 5 - NEW CONDUCTOR ASSEMBLY UNITS	\$ _____
TOTAL NEW CONSTRUCTION	\$ _____
REMOVAL/RETIREMENT ASSEMBLY UNITS	\$ _____
TOTAL BID:	\$ _____

SOUTHERN INTERTIE 115 kV/138 kV TRANSMISSION LINE
STRUCTURE GWPT 40-1 POLE ASSEMBLY REPLACEMENT
W.O. NO. E2320072

BID SCHEDULE
NEW LINE CONSTRUCTION
SECTION 1 - FOUNDATION ASSEMBLY UNITS

BID UNIT	DESCRIPTION	QUANTITY	UNIT	LABOR	MATERIAL	LABOR & MATERIAL	EXTENDED COST
+SM31A	IMPORTED STRUCTURAL FILL FOR ONE POLE HOLE	1	EA				

TOTAL SECTION 1 - FOUNDATION ASSEMBLY UNITS: \$

+ NOTE: THIS UNIT WILL BE APPLIED ONLY IF REQUIRED AND AUTHORIZED BY CHUGACH. UNIT QUANTITY OF THIS BID UNIT MAY BE INCREASED, DECREASED AND/OR DELETED FROM THE CONTRACT WITHOUT ADJUSTMENTS TO THE UNIT PRICE.

SOUTHERN INTERTIE 115 kV/138 kV TRANSMISSION LINE
STRUCTURE GWPT 40-1 POLE ASSEMBLY REPLACEMENT
W.O. NO. E2320072

BID SCHEDULE
NEW LINE CONSTRUCTION
SECTION 2 - STRUCTURE ASSEMBLY UNITS

BID UNIT	DESCRIPTION	QTY	UNIT	LABOR	MATERIAL	LABOR & MATERIAL	EXTENDED COST
70' - 85', WOOD	70' TO 85' WOOD POLE, ANY CLASS	1	EA				

TOTAL SECTION 2 - STRUCTURE ASSEMBLY UNITS: \$

SOUTHERN INTERTIE 115 kV/138 kV TRANSMISSION LINE
 STRUCTURE GWPT 40-1 POLE ASSEMBLY REPLACEMENT
 W.O. NO. E2320072

BID SCHEDULE
 NEW LINE CONSTRUCTION
 SECTION 3 - STRUCTURE TOP ASSEMBLY UNITS

BID UNIT	DESCRIPTION	QUANTITY	UNIT	LABOR	MATERIAL	LABOR & MATERIAL	EXTENDED COST
STM-2B	138kV SUSPENSION, 1 PHASE	1	EA				
TG-29C	SWINGING ANGLE BRACKET, MEDIUM DUTY	1	EA				

TOTAL SECTION 3 - STRUCTURE TOP ASSEMBLY UNITS: \$

SOUTHERN INTERTIE 115 kV/138 kV TRANSMISSION LINE
 STRUCTURE GWPT 40-1 POLE ASSEMBLY REPLACEMENT
 W.O. NO. E2320072

BID SCHEDULE
 NEW LINE CONSTRUCTION
 SECTION 4 - GUY ASSEMBLY UNITS

BID UNIT	DESCRIPTION	QUANTITY	UNIT	LABOR	MATERIAL	LABOR & MATERIAL	EXTENDED COST
STG-21CY	DOUBLE GUY, TWO RODS	1	EA				

TOTAL SECTION 4 - GUY ASSEMBLY UNITS: \$

SOUTHERN INTERTIE 115 kV/138 kV TRANSMISSION LINE
STRUCTURE GWPT 40-1 POLE ASSEMBLY REPLACEMENT
W.O. NO. E2320072

BID SCHEDULE
NEW LINE CONSTRUCTION
SECTION 5 - CONDUCTOR ASSEMBLY UNITS

BID UNIT	DESCRIPTION	QUANTITY	UNIT	LABOR	MATERIAL	LABOR & MATERIAL	EXTENDED COST
DRAKE TRANSFER	TRANSFER 1 PHASE OF 795 ACSR "DRAKE" CONDUCTOR	1	LS				
**MANHOUR	MANHOUR	200	EA				

TOTAL SECTION 5 - CONDUCTOR ASSEMBLY UNITS: \$

SOUTHERN INTERTIE 115 kV/138 kV TRANSMISSION LINE
STRUCTURE GWPT 40-1 POLE ASSEMBLY REPLACEMENT
W.O. NO. E2320072

BID SCHEDULE
REMOVAL/RETIREMENT
REMOVAL/RETIREMENT ASSEMBLY UNITS

BID UNIT	DESCRIPTION	QUANTITY	UNIT	LABOR	MATERIAL	LABOR & MATERIAL	EXTENDED COST
*WOOD POLE	WOOD POLE OF ANY SIZE	1	EA.				
*TEMP INSUL	TEMPORARY 138 kV INSULATOR ASSEMBLY	1	EA.				

TOTAL - REMOVAL/RETIREMENT ASSEMBLY UNITS: \$

BID BOND

KNOW ALL MEN BY THESE PRESENT, That we, _____

of _____

_____ as Principal, and _____

_____ a corporation organized under the laws of _____

_____ and authorized to transact surety business in the State of Alaska, of _____ as Surety, are held and firmly bound unto Chugach Electric Association, Inc., as Obligee in the full and just sum of (\$ _____) dollars, lawful money of the UNITED STATES, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal is herewith submitting its proposal for

The condition of this obligation is such that if the aforesaid Principal will, within the time required, enter into a formal contract and give a good and sufficient bond to secure the performance of the terms and conditions of the contract, then this Obligation to be void; otherwise the Principal and Surety will pay unto the Obligee the amount stated above.

Signed, sealed, and delivered _____, 20__.

WITNESS AS TO PRINCIPAL:

Signature:

Print Name:

Principal

By: _____

Title: _____

(Seal)

Corporate Surety

Business Address

By: _____

Attorney-in-Fact

CONTRACTOR'S BOND

Bond Number: _____

1. Know all men that we, _____, as Principal, and _____, as Surety, are held and firmly bound unto CHUGACH ELECTRIC ASSOCIATION, INC. (hereinafter "Chugach") and unto all persons, firms and corporations who or which may furnish materials for or perform labor on the Work for the Project known as Southern Intertie Transmission Repair awarded to Principal by Chugach under the Outside Electrical Line Construction Contract (OELCC) executed by the parties on _____, 20____ and to its successors in the penal amount of _____ dollars (\$ _____), as hereinafter set forth and for the payment of which sum well and truly to be made, we bind ourselves, our executors, administrators, successors and assigns jointly and severally by these present.
2. The condition of this obligation is such that if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of the OELCC and any Projects thereunder and any amendments thereto, whether such amendments are for additions, decreases, or changes in materials, their quantity, kind of price, labor costs, mileage, routing or any other purpose whatsoever, and whether such amendments are made without notice to the Surety, and shall fully indemnify and hold harmless Chugach from all costs and damages which it shall suffer or incur by reason or any failure so to do, and shall fully reimburse and repay Chugach for all outlay and expense which Chugach shall incur in making good any such failure or performance on the part of the Principal and shall promptly make payment to all persons working on or supplying labor or materials for use in the construction of the Projects hereunder, in respect of such labor or materials furnished and used therein, to the full extent thereof, and in respect of such labor or materials furnished but not so used, the extent of the quantities estimated in the Projects to be required for the construction of the Projects, and shall well and truly reimburse Chugach for any excess in cost of construction of said Projects over the cost of such construction as provided in the Projects, occasioned by a default of the Principal under the Projects, then this obligation shall be null and void but otherwise shall remain in full force effect.
3. It is expressly agreed that this bond shall be deemed automatically and immediately amended, without formal and separate amendments hereto, upon any amendment to this Contract or the Projects hereunder so as to bind the Principal and the Surety to the full and faithful performance of the Projects as so amended provided only that the total amount of all increases in the costs of construction shall not exceed twenty percent (20%) of the amount of maximum price set forth in the construction contract. The terms "Amendment" wherever used in this bond and whether referring to this bond or the Projects shall include any alternation, addition, extension, modification, amendment, rescission, waiver, release or annulment, or any character whatsoever.
4. It is expressly agreed that any amendment which may be made by agreement between the Principal and Chugach in the terms, provisions, and conditions of a Project, or to the terms, provisions, and conditions of this Contract shall not in any way release the Principal and the Surety, or either of them or their respective executors, administrators, successors or assigns, from liability hereunder. The Surety hereby acknowledges receipt of notice of any amendment, indulgence, or forbearance, made, granted or permitted.

5. This bond is made for the benefit of all persons, firms and corporations who or which may furnish any materials or perform any labor for or on account of the construction to be performed on any projects, and they, and each of them, are hereby made obliges hereunder with the same force and effect as if their names were written herein as such, and they and each of them may sue hereon.

IN WITNESS WHEREOF, the undersigned have caused this instrument to be executed and their respective corporate seals to be affixed and attested by their duly authorized representative this day of _____, 20_____.

Principal
By: _____

Attest: _____ Its: _____

Secretary

Surety
By: _____

Attest: _____ Its: _____

Address of Surety's Home Office

By: _____
Resident Agent of Surety
(For service of process)

Signatures

The Contractor's Bond must be signed with the full name of the Contractor. If the Contractor is a partnership, a partner must sign the Contractor's bond in the partnership name. If the Contractor is a corporation, the Contractor's bond must be signed in the corporate name by a duly authorized officer and the corporate seal affixed and attested by the Secretary of the corporation. A typewritten copy of all such names and signatures shall be appended.

Power of Attorney

The Contractor's Bond must be accompanied by a power of attorney authorizing execution on behalf of the Surety by a duly authorized Alaska resident agent of the Surety.

BID UNIT DESCRIPTIONS

These descriptions are provided for the units not covered in the 2024-2025 Outside Electrical Line Construction Contract.

NEW LINE CONSTRUCTION

SECTION 1 – FOUNDATION ASSEMBLY UNITS

FOUNDATION ASSEMBLY UNITS

Foundation assembly units include furnishing and installing miscellaneous materials, miscellaneous labor and providing miscellaneous equipment for backfilling and proper disposal of excess materials necessary to provide a complete foundation assembly as indicated on contract Drawings and Specifications.

<u>UNIT</u>	<u>DESCRIPTION</u>
+SM31A	This unit consists of furnishing, delivering, and installing imported Type II backfill material (Municipality of Anchorage Specification) for one (1) pole embedded directly into the ground as shown on the Drawings. It includes all miscellaneous labor, materials, and equipment for furnishing and hauling backfill material to the site, backfilling and compacting, and for hauling and disposing off the right of way of the material displaced by the imported backfill. This unit will be applied only if required and authorized by Chugach. Unit quantity of this bid unit may be increased, decreased, and/or deleted from the contract without adjustments to the unit price.

SECTION 2 – STRUCTURE ASSEMBLY UNITS

Structure assembly units include furnishing and installing miscellaneous materials, miscellaneous labor and providing miscellaneous equipment necessary to provide a complete structure assembly as indicated on contract Drawings and Specifications. All structure handling, structure unloading and structure hauling from Chugach delivery site, structure hauling from the Contractor storage site, and blocking required for temporary storage is also included in this unit. Any work needed on existing facilities required for the installation of new structure including but not limited to cover-up, temporary guys, temporary cross-arms, etc., and adjustment of structures after wire stringing due to settlement or structure movement is included in these units.

<u>WOOD POLES</u> 70'-85' WOOD	This Wood Pole structure unit consist of the installation of one (1) direct embedded wood pole of the length indicated, of any class, installed in place. Excavation, placement and compaction of native backfill material necessary to provide a complete pole installation is included in this unit. Also included in this unit is the furnishing and installation of casing, if used at the Contractor's
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discretion. Furnishing and delivering imported backfill is not included in this unit. This unit does not include the structure top assembly unit or other parts attached to the structure, which are separate units.

SECTION 3 – STRUCTURE TOP ASSEMBLY UNITS

<u>UNIT</u>	<u>DESCRIPTION</u>
STM-2B, TG-29C	These structure top assembly units consist of the installation of hardware, insulators, conductor clamps and ties, or dead-end assemblies required to support one phase of power conductor. Any required blocking provided by the Contractor for temporary storage shall be included in these bid units. Re-tightening of factory installed hardware shall be included in these units. Also included in these units are any required field drilled holes, field cut pole gains, supply of treatment and treating of the drilled holes and pole gains, and replacement of damaged poles due to miss-drilling of holes by Contractor. These units include the installation of Chugach furnished materials as listed in the List of OFM. These units include all miscellaneous labor and materials. These units also include all equipment for handling, hauling and assembly necessary to provide a complete structure top assembly installation. These units do not include the structure, signs or conductor.

SECTION 4 – GUY ASSEMBLY UNITS

GUY AND ANCHOR ASSEMBLY UNITS

Guy assembly units include all handling and hauling from Chugach’s storage site. Units also include the supply and installation of all miscellaneous labor and material for a complete guy assembly unit installation.

<u>UNIT</u>	<u>DESCRIPTION</u>
STG-21CY	These guying units consist of installing guy wire, clevis, shackles, links, guy insulators, rollers, preformed dead-ends and other guy wire appurtenances for a complete guy assembly in accordance with the drawings and specifications. These units include the installation of Chugach furnished materials as listed in the List of OFM and furnishing miscellaneous materials. All re-tensioning of guy wire after installation of conductors is included in this unit. These units do not include pole eye plates or anchors.

SECTION 5 – CONDUCTOR AND CABLE ASSEMBLY UNITS

CONDUCTOR AND CABLE ASSEMBLY

A conductor or cable assembly unit includes installation of Chugach furnished materials and the furnishing and installation of all miscellaneous labor, materials and equipment for a complete

conductor or cable installation. These units include all conductor or cable handling, hauling from Chugach storage site, and cutting, splicing, sagging, clipping, and testing in accordance with the specifications. These units include returning to Chugach Warehouse of excess conductor or cable, all empty reels that are returnable to the manufacturer, and disposal of reels that are not returnable.

<u>UNIT</u>	<u>DESCRIPTION</u>
DRAKE TRANSFER,	This conductor unit consists of relocating existing conductor from existing pole to new pole. It includes temporarily securing the conductor and installation of connectors. All labor and miscellaneous materials associated with clipping, erection and removal of temporary guard structures, cover up, etc. for the conductor shall be included in this unit.
**MANHOUR	This unit includes all labor and miscellaneous support tools required to perform one hour of Chugach-directed work.

REMOVAL/RETIREMENT ASSEMBLY UNITS

REMOVAL ASSEMBLY UNITS

<u>UNIT</u>	<u>DESCRIPTION</u>
*WOOD POLE	This unit includes all labor, tools, equipment and transportation required to remove and dispose of a wood pole. The cost of disposal of all discarded materials is included in this unit.
*TEMP INSUL	This unit includes all labor, tools, equipment and transportation required to remove and dispose of the temporary 138 kV insulator assembly consisting of a horizontal post and suspension insulator combination. The cost of disposal of all discarded materials is included in this unit.

**Note: This unit will be applied only if required and authorized by Chugach. Unit quantity of this bid unit may be increased, decreased, and/or deleted from Contract without adjustments to the unit price.

LIST OF OWNER FURNISHED MATERIALS
SOUTHERN INTERTIE 115kV/138kV TRANSMISSION LINE
STRUCTURE GWPT 40-1 REPLACEMENT
W.O. NO. E2320072

BID UNITS	ID ON DWGS.	Description	Approximate Weight, lbs.	Quantity Required	Spares	Quantity Ordered	Unit	Chugach ID No.	Catalog Number/ Remarks
WOOD POLES									
70' - 85', WOOD		70/H1 WOOD POLE		1		1	ea.	3886	
INSULATORS									
STM-2B	1	INSULATOR, SUSPENSION, Y-CLEVIS BALL, 138kV, 25K		1		1	ea.	#20005	HUBBELL #5110081201
HARDWARE									
STM-2B	2	ARMOR GRIP SUSPENSION, 795 ACSR "DRAKE"		1		1	ea.	18972	PREFORMED #AGS-5130
STM-2B	3	ANCHOR SHACKLE, 30K		1		1	ea.	955	HUBBELL #AS-25
STM-2B	4	SOCKET EYE		1		1	ea.	3167	PREFORMED #SE-5154
TG-29C	5	BRACKET, SWINGING ANGLE, 24" OFFSET, W/DEADEND TEE AND 7/8" HARDWARE		1		1	ea.	Reuse Existing	Reuse Existing
GUY MATERIALS									
STG-21CY	3	ANCHOR SHACKLE, 30K		2		2	ea.	955	HUBBELL #AS-25
STG-21CY	6	PREFORMED GRIP FOR 25M ALUMOWELD		4		4	ea.	876	PREFORMED #AWDE-4130
STG-21CY	7	THIMBLE CLEVIS, 3/4" PIN		2		2	ea.	#954	MACLEAN #CT-88H
STG-21CY	8	GUY WIRE, 25M ALUMOWELD		200		200	ft.	5158	
STG-21CY	9	YOKE PLATE, 50K		1		1	ea.	#19832	HUGHES #AS2355-H
STG-21CY	10	GUY MARKER, 8', YELLOW		2		2	ea.	2750	PREFORMED #PG-5750

PART 1

SPECIAL PROVISIONS

FOR

SOUTHERN INTERTIE 115 kV/ 138 kV TRANSMISSION LINE

STRUCTURE GWPT 40-1 POLE ASSEMBLY REPLACEMENT

W.O. E2320072

July 16, 2024

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These special provisions supplement the provisions of the 2024-2025 Chugach Electric Association, Inc. Outside Electrical Line Construction Contract and the Technical Specifications.

SECTION 1

SUMMARY OF WORK

1.1 SECTION INCLUDES

- Description of Project
- Work
- Contractor use of Premises
- Permits and Licenses
- Supplementary Instructions to Contractors.

1.2 DESCRIPTION OF THE PROJECT

The uphill (left) pole of 3-pole Structure GWPT 40-1 on the Girdwood Tap to Portage Tap 115 kV/138 kV transmission line broke during winter storms in November 2023. The dropped conductor from this pole was attached to the center pole below the center phase using a horizontal post/suspension insulator combination as a temporary repair. The structure now needs to be permanently repaired by replacing the uphill broken pole with a new pole, pole top assembly, and down guys. All new materials for the uphill pole will be required except for the two existing rock anchors and one phase of existing conductor. The existing rock hole foundation can be reused although the new wood pole (class H1) will be one class larger than the existing wood pole (class 1). The uphill phase conductor will be transferred from its temporary location on the center pole to the new insulator assembly on the uphill pole.

The line is energized at 115 kV but is designed for 138 kV operation. The existing uphill wood pole and the temporary insulator assembly on the center pole will be retired. Existing conductors are 795 kcmil, ACSR "Drake" (dia. = 1.108", wt. = 1.094 lbs/ft, rated breaking strength = 31,500 lbs).

The work shall be completed by September 30, 2024.

1.3 WORK

- A. The Work consists of all obligations, duties, and responsibilities necessary to the successful completion of the Contract assigned to or undertaken by the Contractor under the Contract Documents, including all labor,

materials, equipment, and other incidental operations to provide a complete facility, and the furnishing thereof.

1.4 CONTRACTOR USE OF PREMISES

The Contractor shall:

- A. Limit the use of the premises to Work, storage of project materials and equipment, and access.
- B. Coordinate use of premises under direction of Chugach.
- C. Obtain and pay for use of additional storage and Work areas needed for operations under this Contract. Chugach has not identified or obtained any area near the project location for use as a laydown yard or assembly area.
- D. Furnish all temporary utilities and sanitary facilities, temporary controls, and construction facilities at the site for construction purposes and comply with all local, state, and federal codes, regulations, and laws. No additional compensation will be made for costs associated with the forgoing.
- E. Ingress and Egress
 - 1. Should use of private property be desired by the Contractor for stockpiling material, parking, field office location, ingress and/or egress to the right-of-way or other construction operations, permission must be granted in a written agreement between the property owner and the Contractor that holds Chugach Electric Association, Inc. harmless from any act of the Contractor. See Appendix C for sample of "Permission to Enter Property" form.

1.5 PERMITS AND LICENSES

- A. Except as otherwise provided in the Contract Documents (Appendix E), the Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the Work. Copies of all permit related correspondence as well as the permits are to be transmitted to Chugach.

1.6 SUPPLEMENTARY INSTRUCTIONS TO CONTRACTORS

- A. Substitutions and Product Options:

1. At time of bidding, unless otherwise specified in the Specifications, Contractor may, on an "approved equal" or substitution-basis, propose other equipment that he considers comparable with or superior to the specified items. In the absence of a listing of such equipment, it will be assumed that the Contractor intends to furnish the items as specified.
2. Contractor shall provide sufficient information and data necessary for a full evaluation of any equipment proposed on an "approved equal" or substitution-basis. At a minimum, information shall include complete description, physical dimensions, manufacturer's name and model number, price, time for delivery, and a specific listing of any characteristics which differ from those specified and could require engineering changes to equipment, buildings, structures, and services. Failure to supply adequate or accurate information may result in rejection of Contractor's proposal.
3. The determination of the suitability of "approved equals" or substitutions for the service intended, and final acceptance thereof, shall be by Chugach. The successful Contractor shall be liable for the cost of any subsequent engineering changes that are clearly attributable to negligence on the part of the Contractor to furnish proper information with his proposal.
4. If any revisions to Drawings or Specifications are required to conform equipment, materials, or work to national, state, and local laws, codes, ordinances, and regulations; Contractor shall give notice when submitting its bid and include a statement listing the additions to or deductions from the bid price required by the revisions.
5. If the Contractor fails to give notice, it shall provide the equipment, materials, and Work as intended by the above without extra cost to Chugach.

END OF SECTION

SECTION 2

MEASUREMENT AND PAYMENT

2.1 SECTION INCLUDES

- Measurement Methods
- Measurement by Weight
- Lump-Sum Measurement

2.2 MEASUREMENT METHODS

- A. Measurement methods specified in the Bid Schedule of the Contract shall govern if they differ from methods specified in this Section.
- B. The Contractor shall compute all quantities and submit calculations for approval by Chugach.
- C. All costs in connection with the Work specified herein will be considered to be included with the related item of Work in the Bid Schedule, or incidental to the Project.
- D. Measurement Standards: All Work to be paid for at a Contract price per unit of measurement shall be measured by Chugach in accordance with United States Standard Measures.

2.3 MEASUREMENT BY WEIGHT

- A. Material to be measured and paid for by weight and not measured by handbook weights, shall be weighed on accurate, State of Alaska approved scales, furnished by and at the expense of the Contractor. A ton is defined as 2,000 pounds avoirdupois.

2.4 LUMP-SUM MEASUREMENT

- A. Lump-sum measurement shall be for the entire item, unit of Work, structure, or combination thereof, as listed in the Bid Schedule.
- B. If the Contractor requests progress payments for lump-sum items or amounts in the Bid Schedule, such progress payments will be made in accordance with a well-balanced, detailed program of payment-apportioning, prepared by the Contractor and submitted to Chugach for approval.
- C. Such program for each applicable lump-sum item shall show estimated quantities and unit prices therefore as allocated by the Contractor to the

different features of the Work and major subdivisions thereof. The summation of extensions of quantities and unit prices and related costs shall total, in each case, the exact amount to be paid under the lump-sum Contract Price for the item.

- D. Such programs will be used for computing progress payments as provided herein but will not be used to determine the amount of the final payment for the Work of this Contract. Final payment will be based on actual percentage of Work completed by the Contractor.

END OF SECTION

SECTION 3

COORDINATION, OUTAGES, FIELD ENGINEERING AND PROJECT DOCUMENTS

3.1 SECTION INCLUDES

- Coordination
- Outages
- Project Record Documents

3.2 COORDINATION

- A. Contractor shall coordinate scheduling, submittals, and Work for the various activities with Chugach to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Chugach's system operation may require other crafts to perform work at or near this project. Contractor shall coordinate activities with Chugach's site representative to avoid delays and interference.
- C. After Chugach occupancy of premises, coordinate access to site with Chugach for correction of defective Work and Work not in accordance with Contract documents.
- D. The Contractor is responsible for coordinating with all utilities for locates.

3.3 OUTAGES

- A. All Work around and near energized facilities shall be coordinated with Chugach's Power Dispatch Center. The Contractor shall take all required measures to ensure safety of personnel and existing facilities.
- B. Switching will be completed by Chugach.
- C. Outages must be scheduled a minimum of five (5) Chugach working days in advance of the outage and be approved by Chugach. Outage requests shall be entered through the computerized "Integrated Transmission Outage Application (ITOA)".

3.4 PROJECT RECORD DOCUMENTS

- A. As-Built Drawings
 - 1. Maintain on the Site a separate set of marked-up full-scale Contract Drawings. The drawing shall be maintained in a current

condition at all times until completion of the Work and shall be available for review by Chugach at all times. All variations from the Contract Drawings, for whatever reason, including those occasioned by modifications, optional materials, and the required coordination between trades shall be indicated. These variations shall be shown in the same general detail utilized in the Contract Drawings. Coordinate changes with Chugach's site representative. Upon completion of the Work, the marked-up drawings shall be furnished to Chugach for incorporation into final as-built drawings.

2. Store Record Documents separate from documents used for construction.
3. Record information concurrent with construction progress.

B. Structure Setting Reports

1. Submit copy of the Structure Setting Report (Appendix D) for each structure installed to Chugach's Representative not later than three (3) days after structure is installed. Reports shall include structure number, type, and station, pole location within the structure (left, right, or center), pole length and class, embedment depth, brief description and depth of materials encountered, and nature of backfill material used. If bedrock is encountered, list the depth and method of bedrock excavation.

END OF SECTION

SECTION 4
SUBMITTALS AND SCHEDULES

4.1 SECTION INCLUDES

- Submittal Procedures
- Plan of Construction

4.2 SUBMITTAL PROCEDURES

The Contractor shall submit pertinent data as required in other parts of these Contract Documents for Chugach's approval:

- A. Transmit each submittal with Chugach-accepted form.
- B. Sequentially number the transmittal forms. Resubmittals are to have the original submittal number with an alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or Supplier, pertinent drawing sheet and detail number(s), and Specification section number, as appropriate.
- D. Apply Contractor's stamp, signed or initialed, certifying that review, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents. Chugach will not review submittals until the Contractor has reviewed them.
- C. Schedule submittals to expedite the Project and deliver to Chugach. Coordinate submission of related items. Allow seven (7) calendar days for Chugach's and Engineer's review.
- F. If substitutions become necessary after Contract award and initial approval of Contractor furnished materials, the contractor shall submit all information as required in the bid and include a detailed explanation as to causes for the substitution.
- G. Provide space on submittals for Contractor's and Chugach's review stamps.
- H. Revise and resubmit submittals as required, identify all changes made since previous submittal.

- I. Distribute copies of approved submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- J. No material and/or procedure requiring Chugach's approval shall be used or implemented until such approval has been given.

4.3 PLAN OF CONSTRUCTION

- A. A detailed Plan of Construction shall be submitted with the bid and shall include:
 - 1. The name of all proposed subcontractors and work to be performed.
 - 2. A representative list of projects over the last five (5) years in which similar construction, access, and terrain conditions as this project were involved.
 - 3. A detailed plan indicating how the contractor plans to execute the project work. At a minimum, the work plan shall indicate:
 - a. Where the contractor plans to stage materials for the project.
 - b. If the contractor intends to use a helicopter, what size of helicopter, when is it scheduled and how much of the project will be set by helicopter. If a helicopter is used on the project, the Contractor shall provide safety and lift plans associated with the use of the helicopter.
 - c. Access sites to be developed.
 - d. Equipment intended for use on the project.

END OF SECTION

SECTION 5

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

5.1 SECTION INCLUDES

- Temporary Utilities
- Construction Facilities

5.2 TEMPORARY UTILITIES

The Contractor shall:

- A. Supply all temporary electric power required for construction of the project.
- B. Provide and maintain adequate lighting for construction operations at all times.
- C. Obtain potable water as needed for the Work.
- D. Provide sanitary facilities at the site as required by law or regulation.

5.3 CONSTRUCTION FACILITIES

A. Protection of Installed Work

The Contractor shall:

- 1. Protect installed Work and provide special protection where specified in individual Specification sections.
- 2. Provide temporary and removable protection for installed products. Control activity in immediate work area to minimize damage.

B. Barriers

The Contractor shall:

- 1. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- 2. Protect stored materials, site, and structures from damage.

C. Security

1. Provide security and facilities to protect Work from unauthorized entry, vandalism, or theft.

D. Parking

1. All parking shall be on right-of-way or in areas that the Contractor has obtained approval to park.

E. Cleaning

1. Maintain areas free of waste materials, debris and rubbish. Maintain Site in a clean and orderly condition.
2. Remove waste materials, debris and rubbish from site weekly and dispose off-site in compliance with all local, State and Federal regulations.
3. The Contractor shall be responsible for all equipment washing required to prevent the spread of invasive species and shall provide all facilities as required. This requirement is inclusive in the cost of the contract and no further compensation shall be offered by Chugach.
4. All access point/road intersections shall be kept free from dirt and debris. Clean-up and maintenance of intersections shall be the responsibility of the Contractor and performed as directed by the Chugach representative or Project Engineer.

G. Traffic Control

1. Traffic control plans are considered incidental to the cost of the contract and no further compensation will be offered by Chugach.

H. Removal of Utilities, Facilities and Controls

1. Remove temporary above grade or buried utilities, equipment, facilities, materials prior to final inspection.
2. Clean and repair damage caused by installation or use of temporary Work.

END OF SECTION

SECTION 6
MATERIAL AND EQUIPMENT

6.1 SECTION INCLUDES

- Material and Equipment Quantities
- Products
- Transportation and Handling
- Storage and Protection

6.2 MATERIAL AND EQUIPMENT QUANTITIES

- A. Material and equipment quantities shown on drawings are the engineer's best estimate and shall be verified by the Contractor. Discrepancies shall be brought to Chugach's attention and conflicts resolved in a timely manner so to not interfere with scheduled completion of the work.

6.3 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work. Products do not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components authorized for reuse.
- B. The Contractor shall not reuse materials, except as specifically permitted by the Contract Documents.

6.4 TRANSPORTATION AND HANDLING

The Contractor shall:

- A. Exercise due care in the handling of all materials. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to assure that products comply with requirements, quantities are correct and products are undamaged.

6.5 STORAGE AND PROTECTION

The Contractor shall:

- A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate-controlled enclosures.
- B. For exterior storage of products, put on sloped supports, above ground.
- C. Provide off-site storage and protection when Site does not permit on-site storage or protection.
- D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- E. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- G. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.
- H. Provide security measures to prevent the theft or vandalism of stored materials and installed facilities. Security of the Work and materials is the responsibility of the Contractor. The cost of all security measures is inclusive in the cost of the contract and no further compensation will be paid by Chugach.

END OF SECTION

SECTION 7

CHUGACH FURNISHED MATERIAL

7.1 SECTION INCLUDES

- Chugach Furnished Material
- Transfer of Material
- Damage to Chugach Furnished Material
- Installation of Chugach Furnished Material

7.2 CHUGACH FURNISHED MATERIAL

- A. All owner furnished material is listed in the "List of Owner Furnished Materials." If material does not appear on this list, the Contractor shall provide it.
- B. The costs associated with the Owner Furnished Material listed represent original costs to Chugach and may or may not be replacement costs.
- C. The Contractor shall include the Chugach furnished materials for this project in its insurance posted for the work.

7.3 TRANSFER OF MATERIAL

- A. Chugach furnished materials and equipment may have been previously unpackaged for inspection. The Contractor shall repackage the material and equipment as necessary for transport and storage, subject to the approval of Chugach.
- B. Chugach will load Chugach furnished materials from the Chugach Warehouse and weighing less than 9,000 pounds onto Contractor's trucks. The Contractor shall be responsible for loading all Chugach furnished materials from the Chugach Warehouse weighing more than 9,000 pounds.
- C. After the acceptance of Chugach furnished items, the Contractor shall place them at the point of installation or in areas provided by the Contractor. Chugach may direct that certain items be stored in heated storage buildings. The Contractor is responsible for transporting Chugach furnished material from the specified storage location to the jobsite. The Contractor is responsible for off-loading Chugach furnished material at the jobsite.

- D. After acceptance, Chugach furnished items are the Contractor's responsibility. The Contractor shall appropriately store and protect all Chugach furnished items upon acceptance.

7.4 DAMAGE TO CHUGACH FURNISHED MATERIAL

- A. The Contractor shall repair or replace any Chugach furnished items damaged by the Contractor's handling and storage at no additional cost to Chugach.

7.5 INSTALLATION OF CHUGACH FURNISHED MATERIAL

- A. Except as otherwise specified, installation Work shall be the responsibility of the Contractor and all mistakes in installation and damage shall be corrected at no cost to Chugach.
- B. The Contractor will not be held liable for faulty manufacture of Chugach furnished items or for mistakes in the manufacturer's drawings.

END OF SECTION

SECTION 8
CONTRACT CLOSEOUT

8.1 SECTION INCLUDES

- Closeout Procedures
- Closeout Documents
- Final Clean-up

8.2 CLOSEOUT PROCEDURES

- A. Notify Chugach to perform a preliminary inspection for the purpose of determining the state of completion of the Work. Contractor shall notify Chugach at least seven (7) days in advance of the time this inspection is to be performed. From the information gathered from this inspection, Chugach will prepare a punch list of Work to be performed, corrected, or completed before the project will be accepted. The Contractor, prior to final inspection, shall complete all Work on the punch list.
- B. Contractor shall accompany Chugach and their representatives on the final inspection tour as well as any principal subcontractors that Chugach may request to be present.
- C. If the Work has been completed in accordance with the Contract Documents and no further corrective measures are required, Chugach will issue a Certificate of Completion and will accept the project.

8.3 CLOSEOUT DOCUMENTS

- A. The following documents in addition to those specified in the OELCC shall be completed and signed by authorized representatives of Chugach and/or Contractor before final payment is made:
 - 1. Summary of Construction Units
 - 2. Certified as-built drawings including (if applicable) shop drawings and other product information
 - 3. Structure Setting Reports

8.4 FINAL CLEAN-UP

- A. The Contractor shall maintain the site in a clean and orderly condition. All equipment, packaging materials, temporary facilities, retired facilities, etc., shall be removed within 10 working days of construction completion.

END OF SECTION

PART 2

TECHNICAL SPECIFICATIONS

FOR

SOUTHERN INTERTIE 115KV/138KV TRANSMISSION LINE

STRUCTURE GWPT 40-1 POLE ASSEMBLY REPLACEMENT

W.O. E2320072

July 16, 2024

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I. GENERAL

A. TECHNICAL SPECIFICATIONS

1. The following sections form the Technical Specifications:

- I. General
- II. Wood Structures
- III. Guys and Anchors
- IV. Insulators and Hardware
- V. Conductors

B. STANDARD OF WORK AND SCHEDULES

- 1. All work shall be done in a thorough and workman-like manner in accordance with the Specifications and Drawings.
- 2. The requirements of the National Electrical Safety Code (NESC), Accredited Standards Committee C2-2023, shall be followed wherever applicable to the work, except where local regulations or specification requirements are more stringent, in which case the more stringent requirements shall govern.

C. STAKING SHEETS, DRAWINGS AND MAPS

- 1. All Staking Sheets, Drawings and Maps accompanying this Technical Specification or listed herein shall be considered a part of this Technical Specification. The specific Drawings included as part of this Technical Specification are listed, indexed and included in Appendix A. The structure schedule included in the Drawings shall be used in lieu of staking sheets.
- 2. If the Drawings specify a requirement different from the Technical Specification, the Drawings govern.

D. LOCATIONS OF STRUCTURES AND APPURTENANCES

- 1. Structures and other major items to be constructed shall be placed in locations shown on the Drawings. The Contractor shall be responsible for determining the proper location of the structures and appurtenances to be installed.

E. SPECIAL REQUIREMENTS

- 1. The Contractor shall be responsible for anchor, foundation and structure location and orientation for proper alignment.

END OF SECTION

II. WOOD STRUCTURES

A. STRUCTURE INSPECTION, HANDLING, AND DISTRIBUTION

1. The Contractor shall immediately notify Chugach of freight damage or mis-fabrication of structures. The framing, boring, and gaining, if required, must agree with the structure detail drawings for the specific structures to be erected.
2. The structure lengths and classes shall agree with the structure units specified for the structures to be erected, shown on the Plan and Profile drawings and shown on the Structure Lists.
3. Structures shall be handled with care so as not to damage the wood or preservative treatment. Structures shall be lifted off of the structure hauler at designated structure locations. They shall not be rolled or dragged along the ground. Lifting slings shall be used and shall be fabricated from a material that protects the wood from damage. Structure tongs are not permitted when handling structures.
4. If structures are stored after delivery, they shall be carefully arranged and placed on wide blocking to prevent crushing. No structure shall come in contact with standing water or the ground. No structure will have an unsupported length greater than 20 feet. The blocking shall be provided by the Contractor.

B. FIELD DRILLING AND TREATING

1. All field drilled holes shall be thoroughly treated with a heavy application of copper naphthenate.
2. Unused holes or holes that are mis-drilled shall be plugged prior to erection using treated wood-dowel pins three (3) inches in length. When a hole is mis-drilled, Chugach shall be notified. A structure will be rejected by Chugach if two or more mis-drilled holes occur at a connection. If a structure is rejected due to mis-drilling of holes by the Contractor, the Contractor shall replace the damaged structure at no additional cost to Chugach.
3. Structures shall be supplied with flat roofs. Tops of structures shall not be cut except with the expressed approval of Chugach. If cutting is deemed necessary, the structure top shall be cut off at a slope of 15 degrees, thoroughly treated with copper naphthenate and covered with a mastic type cap.
4. Under no circumstances shall the butt of any structure be cut.

C. STRUCTURE FRAMING

1. The Contractor shall frame individual poles on flat or uniformly sloping terrain located at or near the structure site. Framing on rolling terrain where structures become unsupported should be avoided. If assembly on uniform terrain is not possible, the Contractor shall temporarily support the poles to prevent racking during assembly.
2. All grid gain teeth must be fully embedded into the wood. Grid gains shall be seated by a combination of tightening assembly bolts and hammering on wood blocking.
3. All hardware at a connection shall be compatible with the fastener diameter. The holes in the hardware shall be 1/16-inch greater than the fastener diameter, unless otherwise noted.
4. Fasteners shall be sized so that they extend not less than ½-inch or more than two (2) inches beyond the face of the last nut or locknut. Galvanized erection bolts shall not be cut off unless Chugach allows it for special requirements. Where bolts are not of proper length due to variations in the material, the Contractor shall replace the fasteners with ones of proper length.
5. Spring washers shall be installed only where specified. The curved portion of the spring washer shall be installed horizontally to facilitate inspection of wood shrinkage in the future. Spring washers shall be flattened when the connection is made.
6. Guying attachments, where specified, shall be oriented as shown on the Construction Documents.

D. EXCAVATION, SETTING, AND BACKFILL

1. Wood structures shall be embedded to the depths indicated on the Drawings and not to exceed three (3) inches deeper.
2. Unless otherwise specified, excavated holes for wood structures shall be approximately nine (9) inches larger than the butt diameter of the structure. The excavated hole shall be at least as large at the bottom as at the top.
3. Accumulated water shall be removed from holes prior to setting structures or other structures.
4. Excavated material meeting the criteria for select backfill shall be used for backfilling. Where excavated material does not meet the criteria for select backfill, as determined by Chugach's representative or the Project Engineer,

the Contractor shall import select backfill material. Select backfill material for poles shall be sand and gravel soils; free of rock fragments larger than four (4) inches, lumps of clay, friable material, ice, snow, organic matter, refuse, or any foreign matter; containing adequate fines, but not more than 10% passing No. 200 sieve. Backfill material shall be compactable and suitable for providing a dense, supportive soil mass, free of voids, not frozen. Municipality of Anchorage Type II-A material may be used as imported select backfill material.

5. Structures shall be set plumb before backfill is placed and after placing the backfill the structures shall remain plumb. If the structures are out of plumb, the backfill shall be removed and replaced.
6. Backfill shall be placed around the structure in layers not exceeding six (6) inches in depth, with each layer mechanically tamped before the next layer is added. The backfill shall be compacted to a density equal to or greater than that of the surrounding undisturbed soil.
7. Native soil shall be banked up and tamped around the structure to a height of 12 inches above the natural grade and shall be sloped away from the structure.
8. After completion of wire work, all structures shall be re-inspected to check that structures remain plumb and that backfill has not settled. All structures shall be adjusted as required and backfill added to fill voids caused by settlement or structure movement.
9. Neatly distribute unsuitable and excess excavation material around the structure site. Do not distribute excavated material in roadways, streams, ditches, drains or culverts.
10. The Structure Setting Report in Appendix D shall be completed for each structure and submitted to Chugach within three (3) days of structure setting completion.

E. SIGNS

1. Contractor shall remove the structure signs from the existing poles and install them on the new poles at the same elevation and orientation.

F. SPECIAL REQUIREMENTS

1. Wood poles to be retired shall be completely removed from the pole hole and disposed of as required by law. The vacated pole holes shall be used for setting the new poles.

END OF SECTION

III. GUYS AND ANCHORS

A. GUY INSTALLATION

1. Guys shall be installed and attached to the structures shown on the drawings before conductors are attached. Each guy shall be pre-tensioned to remove any slack in the guy, but not to rake the structure more than 12 inches towards the guy. Guys shall be re-tensioned after the conductors are installed to plumb the structures and to equalize tensions in the guys. If slack guys are found, they shall be readjusted so that all guys in any structure have approximately equal tension. Minimum tension in any guy shall be 2,500 lbs.
2. Install guy grips in accordance with the manufacturer's recommendations. Leave four (4) inches of guy strand visible in grip after installation.
3. Place guy markers on each down guy at the anchor in accordance with the manufacturer's recommendations.

B. SPECIAL REQUIREMENTS

1. If the preformed grips must be removed and reapplied more than two times to resize or tension the guy, the Contractor shall furnish and install a new grip.
2. Existing rock anchors may be used to attach the new guys to provided they are in good condition.

END OF SECTION

IV. INSULATORS AND HARDWARE

A. REFERENCE TO DRAWINGS

1. Insulators and insulator hardware assemblies shall be fully assembled and installed as shown on the structure assembly drawings. Items of hardware and insulators shall be inspected for missing parts, defects and proper fit before installation. Defective or missing pieces shall be replaced.

B. HANDLING AND STORAGE

1. Insulators and hardware shall be stored in their appropriate shipping containers until installation. They shall be properly supported and stacked so as not to damage the individual items. They shall be blocked up off the ground so that they cannot come in contact with the ground or standing water.
2. Insulators shall be carefully handled to prevent damage to any portion of the insulator.
3. Insulators that are damaged in any way shall be replaced with units that are not defective. The cost for replacement of previously accepted units shall be borne by the Contractor.
4. All insulators shall be wiped clean with a clean, soft, non-abrasive cloth prior to installation.
5. Non-ceramic insulators shall be handled per the manufacturer's recommendation.

C. INSTALLATION

1. All connections shall be made in accordance with the drawings. Bolts shall be torqued to the manufacturer's specifications. Cotter keys, where required, shall be fully inserted.
2. Cotter key eyes on insulators and hardware items shall be oriented toward the structure, or in such a way as to facilitate easy removal during hot line maintenance.
3. Pins and bolts to insulator string assemblies shall be oriented with the head upright wherever possible.

D. SPECIAL REQUIREMENTS

None

END OF SECTION

V. CONDUCTORS

A. GENERAL

1. All conductor installation shall be done in accordance with the manufacturer's recommendations. The "Guide to the Installation of Overhead Transmission Line Conductors", IEEE 524, shall be used as reference.
2. It is very important to avoid damaging the wire or the associated fittings in any way. It shall be the Contractor's responsibility to protect the wire and fittings against damage. If the wire and associated materials are damaged due to Contractor's mishandling or faulty equipment, the Contractor shall replace the damaged sections, including furnishing of necessary materials, in a manner satisfactory to Chugach and at no additional cost to Chugach.

B. PRELIMINARY SUBMITTALS

1. Prior to starting construction, submit a written description of all equipment and techniques proposed for use in the installation of the conductors, including a description of access, and manufacturer's specifications for the installation equipment.

C. TOOLS AND EQUIPMENT

1. Tools and equipment for wire work shall be of the proper size and type for the job and shall be in good working condition. Sheaves, tensioners, pullers, wire grips, compressors, and dies shall be properly sized for the specific wires to be installed. All tools and equipment shall receive the written approval of Chugach prior to their use.
2. Stringing blocks shall be neoprene lined, free running, and of the proper diameter and groove size for the wire being pulled.

D. CLIPPING

1. The Contractor shall be cognizant of and take into consideration the strength limitations of all structures in so far as the application of temporary wire stringing loads.
2. U-bolts on suspension clamps and strain dead-end clamps shall be evenly torqued to the manufacturer's recommended values. Keeper plates shall be in place and properly seated. Conductor strands within the area of the fitting shall be clean. The cleaning method is to use a steel brush, cotton rags and solvents.

E. TEMPORARY GROUNDS

1. During the wire work, the Contractor shall take all necessary steps to ensure proper temporary grounding of the structures, cables, and equipment. All applicable federal, state, Chugach Electric Association, and local safety regulations shall be strictly adhered to.
2. A record of all temporary conductor grounds shall be kept with a copy supplied to Chugach to ensure that they are all removed, and the line can be safely energized at the end of the construction period.

F. SPECIAL REQUIREMENTS

1. All wire tools and equipment shall have Chugach's written approval prior to use.
2. Existing conductors shall be transferred to the new structure maintaining the existing tension. Suspension insulators on new and adjacent structures shall be plumb after conductor work is completed.

END OF SECTION

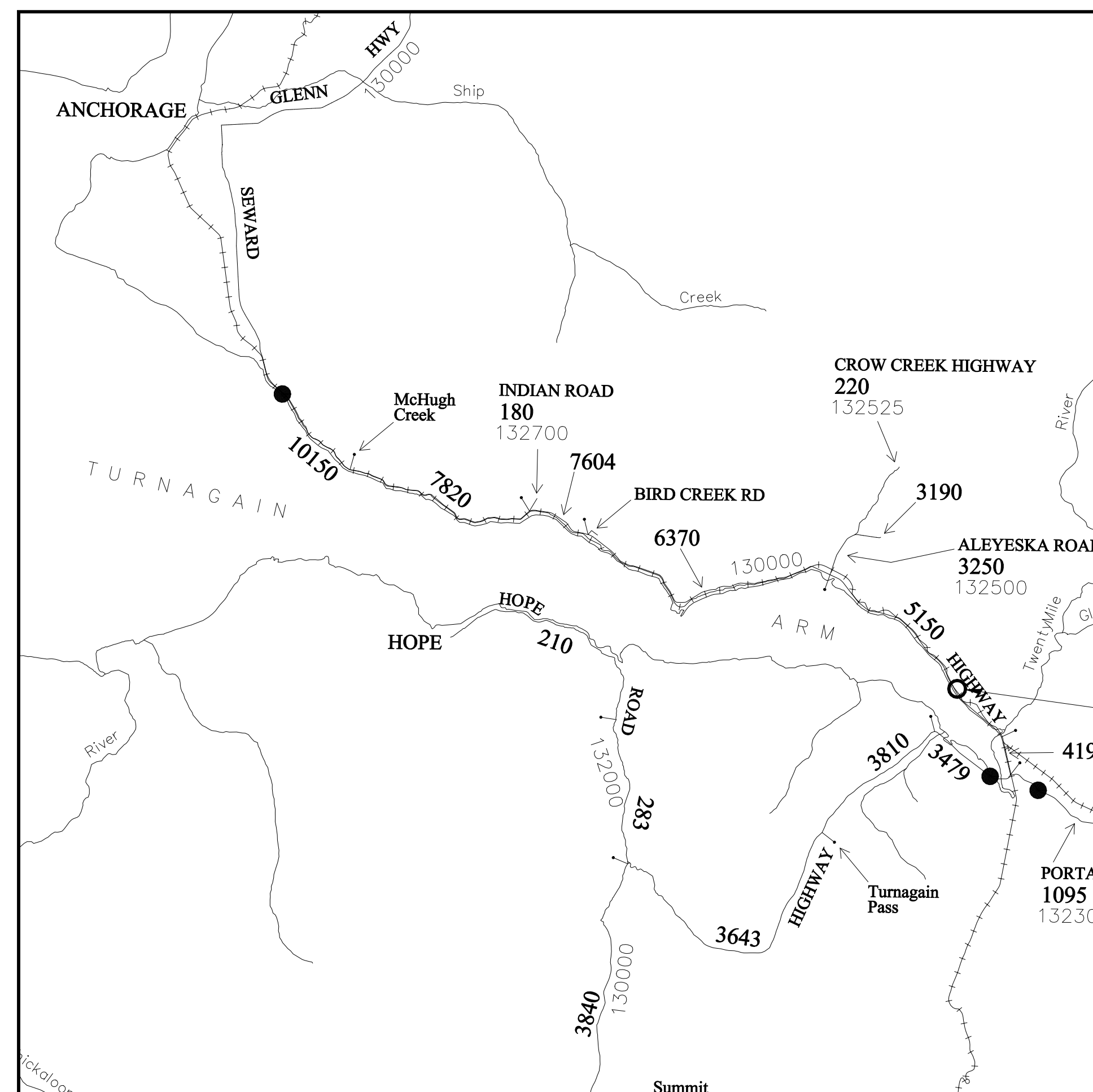
CHUGACH ELECTRIC ASSOCIATION, INC.

115KV/138KV TRANSMISSION LINE

SOUTHERN INTERTIE TRANSMISSION

STRUCTURE GWPT 40-1 POLE ASSEMBLY REPLACEMENT

W.O. E2320072



VICINITY MAP

DRAWING INDEX				
PAGE	DRAWING NUMBER	SHEET NUMBER	TITLE	NOTES
1	GWPT-MC-INDEX	1 OF 1	VICINITY MAP & DRAWING INDEX	
2	GWPT-PP-0004	1 OF 1	PLAN & PROFILE STR GWPT 39-1 TO GWPT 40-4	
3	GWPT-SS-0018	1 OF 1	STRUCTURAL & ASSEMBLY STRUCTURE GWPT 40-1 POLE ASSEMBLY REPLACEMENT	
4				
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7				
8				
9				
10				
11				
12				

Electric Power Systems
Consulting Engineers
3305 ARCTIC BLVD, STE 201, ANCHORAGE, AK 99503
TEL: (907) 522-1953 CERTIFICATE OF AUTHORIZATION: AECC 738

PROJECT: SOUTHERN INTERTIE TRANSMISSION REPAIR				
ENG./DESIGN.: SUPAT CHANONTO (CEA) / GREG HUFFMAN (EPS) W.O. # E2320072				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
0	ISSUED FOR CONSTRUCTION	KER 06/07/24	GDH 06/07/24	

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	X	XX	-	-	XXX	XX/XX/XX



Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME: 115KV/138KV TRANSMISSION LINE
GIRDWOOD TAP - PORTAGE TAP
VICINITY MAP & DRAWING INDEX

CONFIDENTIAL

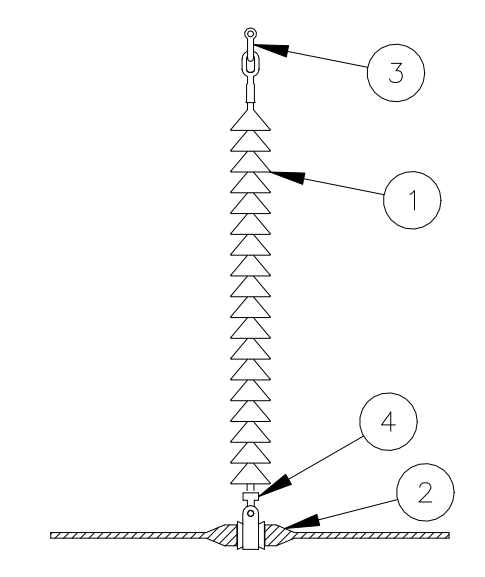
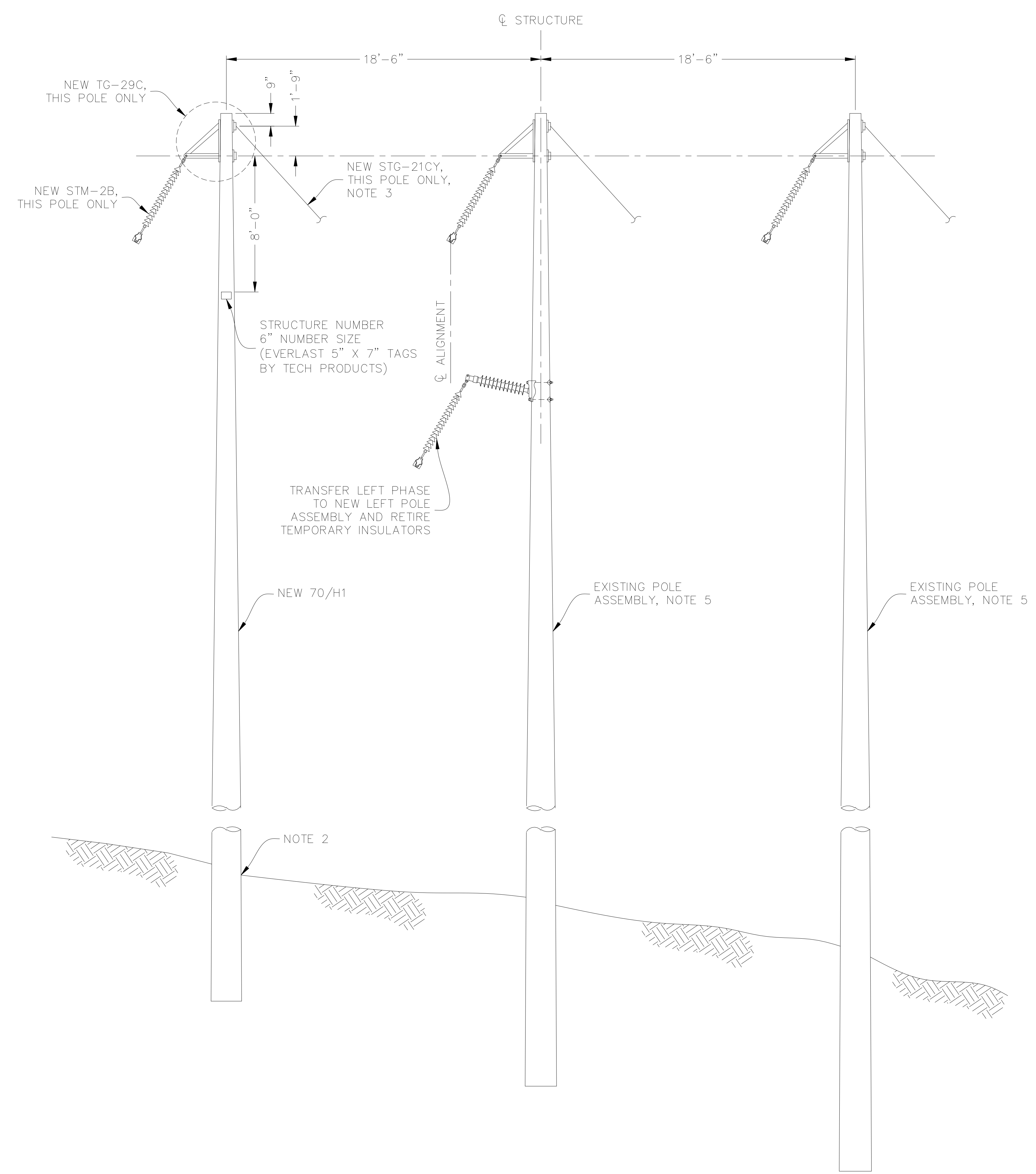
DRAWING NO.: GWPT-MC-INDEX

SHEET 0001 OF 1
PAGE OF

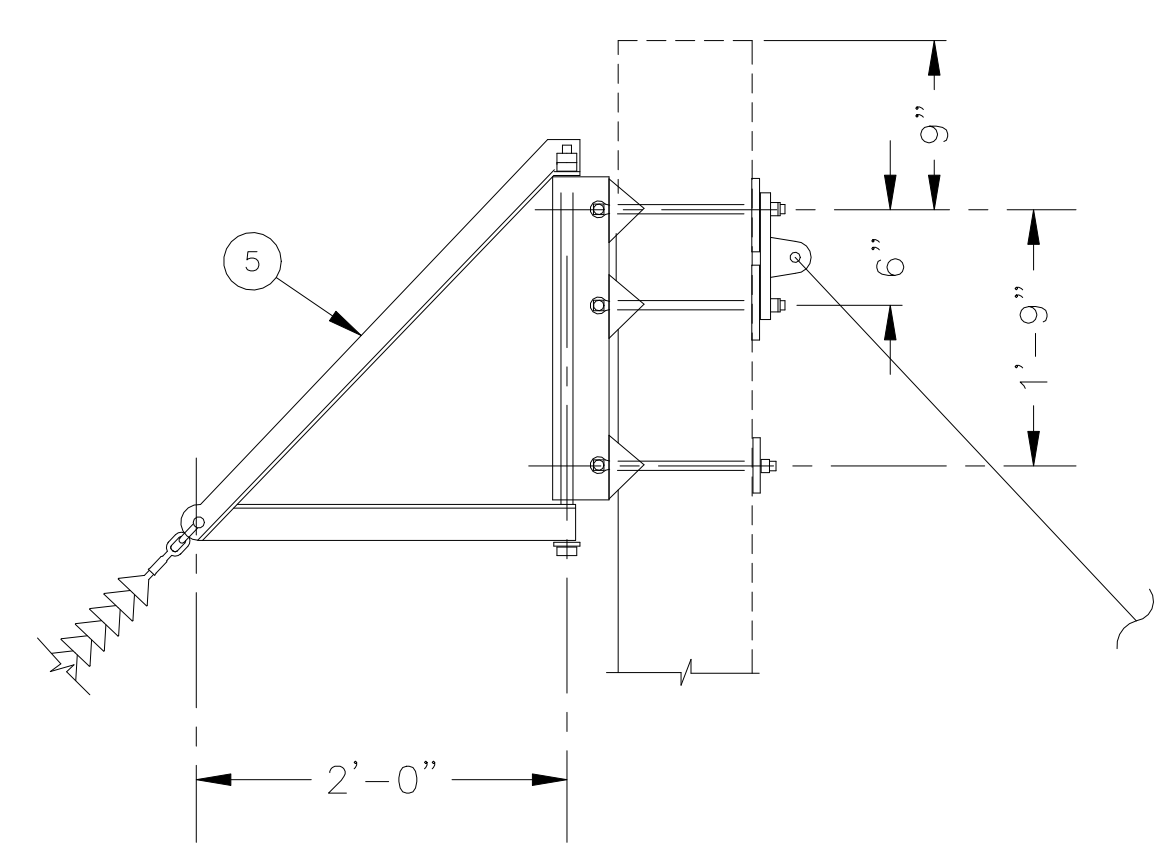
LIST OF MATERIALS FOR STM-2B, TG-29C, TG-21A & STG-21CY

ITEM	QTY/ASM				DESCRIPTION	MANUFACTURE/CATALOG #
	STM-2B	TG-29C	TG-21A	STG-21CY		
1	1	-	-	-	INSULATOR, SUSPENSION, Y-CLEVIS BALL, 138kV, 25K	HUBBELL #5110081201
2	1	-	-	-	ARMOR GRIP SUSPENSION, 795 ACSR "DRAKE"	PREFORMED #AGS-5130
3	1	-	-	2	ANCHOR SHACKLE, 30K	HUBBELL #AS-25
4	1	-	-	-	SOCKET EYE	PREFORMED #SE-5154
5	-	1	-	-	BRACKET, SWINGING ANGLE, 24" OFFSET, W/ DEADEND TEE AND 7/8" HARDWARE	HUGHES #2848-A
6	-	-	2	4	PREFORMED GRIP FOR 25M ALUMOWELD	PLP #AWDE-4130
7	-	-	1	2	THIMBLE CLEVIS, 3/4" PIN	MACLEAN #CT-88H
8	-	-	AS REQ'D	AS REQ'D	GUY WIRE, 25M ALUMOWELD	-
9	-	-	-	1	YOKE PLATE, 50K	HUGHES #AS2355-H
10	-	-	1	2	GUY MARKER, 96", YELLOW	PREFORMED #PG-5750

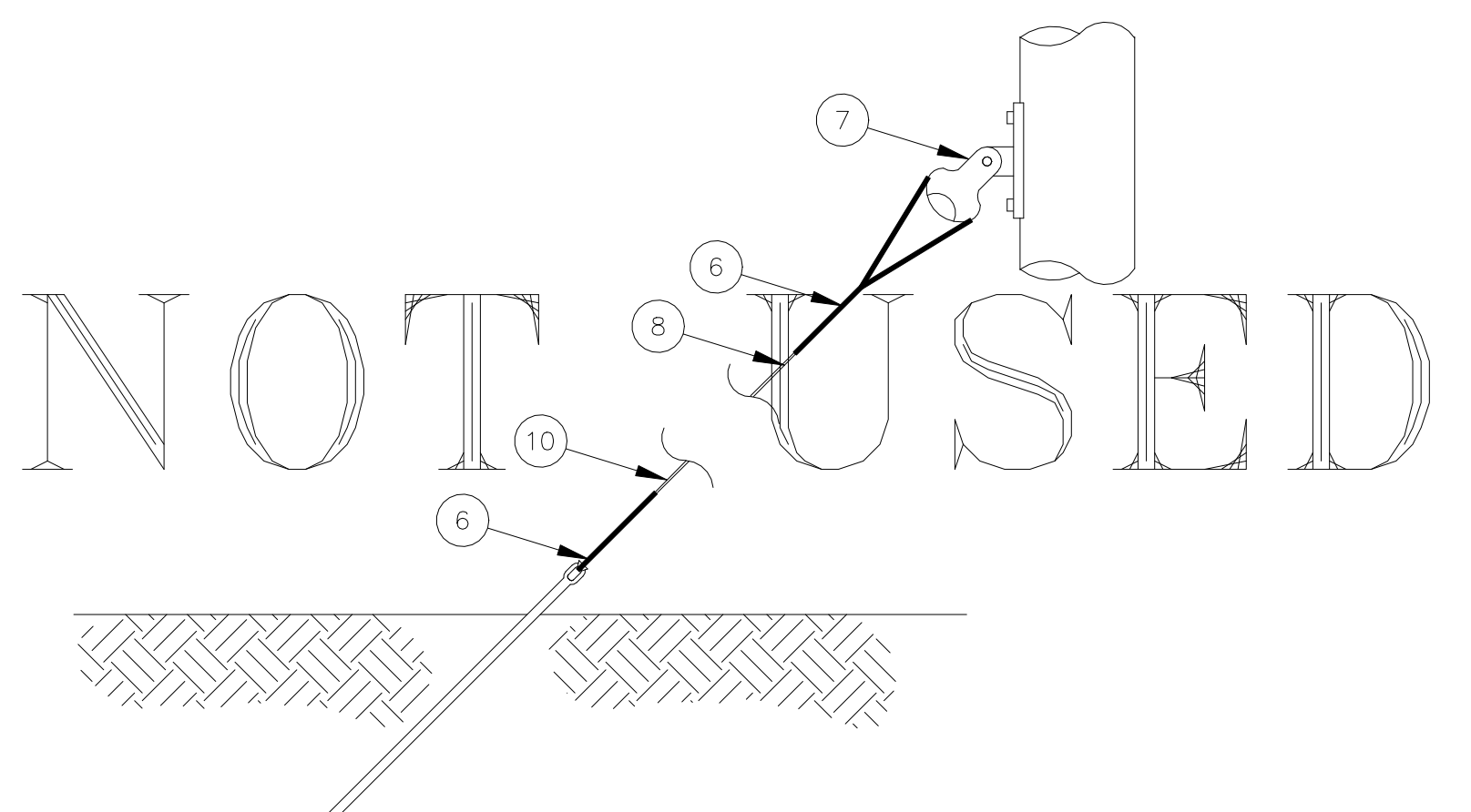
- NOTES:
- FIELD DRILLED HOLES SHALL BE THOROUGHLY TREATED WITH A LIBERAL APPLICATION OF A 5% COPPER NAPHTHENATE SOLUTION.
 - REMOVE EXISTING CLASS 1 POLE FROM ROCK HOLE AND INSTALL NEW POLE MATCHING EXISTING EMBEDMENT. BACKFILL WITH GRANULAR MATERIAL.
 - ALL MATERIALS ON THE LEFT (UPHILL) POLE SHALL BE NEW EXCEPT EXISTING CONDUCTOR AND ROCK ANCHORS.
 - ATTACH NEW DOWN GUYS TO EXISTING ROCK ANCHORS.
 - CENTER AND RIGHT (DOWNHILL) POLES, INSULATORS, AND GUYS SHALL REMAIN.



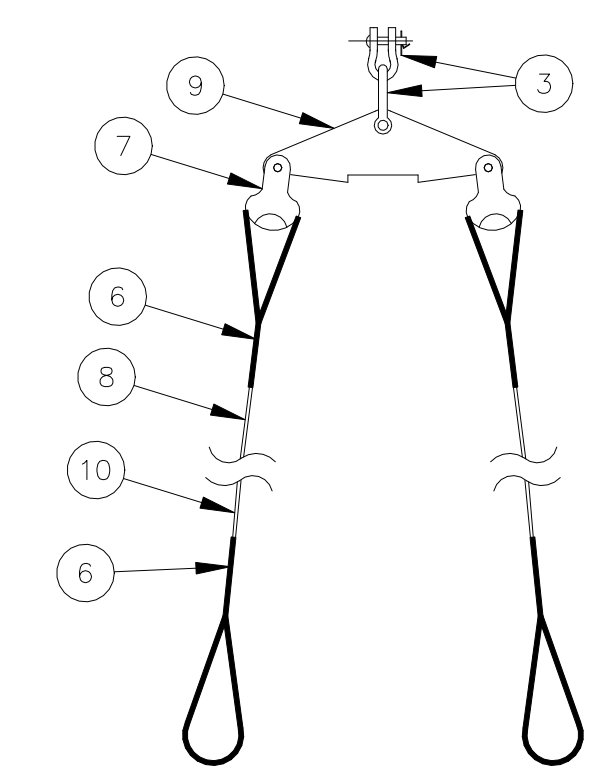
STM-2B
TANGENT ASSEMBLY
AND ANGLES TO 30°



TG-29C
MEDIUM DUTY, BRACKETS
INSULATOR AND GUY ATTACHMENT
(7000 LBS MAX)



TG-21A
SINGLE GUY TO ONE ROD
(25,000 LBS MAX)



STG-21CY
DOUBLE GUY TO TWO RODS
(30,000 LBS MAX)

TYPE STH-13
(STRUCTURE 40-1 REPLACEMENT)

Electric Power Systems
Consulting Engineers
3305 ARCTIC BLVD, STE 201, ANCHORAGE, AK 99503
TEL: (907) 522-1953
CERTIFICATE OF AUTHORIZATION: AEGC 736

PROJECT: SOUTHERN INTERTIE TRANSMISSION REPAIR					NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
ENG./DESIGN.: SUPAT CHANONTO (CEA) / GREG HUFFMAN (EPS) W.O. # E2320072											
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP						
0	ISSUED FOR CONSTRUCTION	KER 06/07/24	GDH 06/07/24								



Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME: 115KV/138KV TRANSMISSION LINE
GIRDWOOD TAP - PORTAGE TAP
STRUCTURAL & ASSEMBLY
STRUCTURE GWPT 40-1 POLE ASSEMBLY REPLACEMENT

CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE
NEW
DRAWING NO.: GWPT-SS-0018

SHEET 0001 OF 1
PAGE OF

SUGGESTED CONTRACTOR HSE PLAN WORK SHEET AND CHECKLIST

WORK HAZARD ASSESSMENT AND MITIGATION PLAN

1. _____ Have you reviewed the project Work scope and analyzed it for potential hazards such as confined space entry, excavations, falls, electrical safety, and other OSHA recognized hazards?
2. _____ Have you included a written assessment of the hazards from question 1 that includes a list of them and discusses how you will handle each of them? **(Your response for handling them can be to list your existing appropriate procedure.)**
3. _____ Have you reviewed Chugach Electric Association Procedure 10.5, Confined Space Entry?

MSDS INFORMATION

1. _____ Will you be using or creating chemicals that must have Material Safety Data Sheets (MSDSs) or Safety Data Sheets (SDSs) on them?
2. _____ If you answered “yes” to question 1, have you provided a separate list of those chemicals with your bid?
3. _____ Have you reviewed the requirements of Chugach Electric Association Safety Procedure 7.3, Hazard Communications?

ENERGY ISOLATION PROCEDURE/PLAN

1. _____ Have you reviewed the project Work scope to determine from the scope the need for energy isolation (lockout/tagout)?
2. _____ If you answered “yes” to question 1, do you have a written energy isolation procedure?
3. _____ Have you attached a copy of the procedure?

PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. _____ Have you reviewed the project Work scope to determine the type of PPE you are required to provide for your crew, and included a list of it with your HSE?
2. _____ If the project Work is located at Chugach’s Beluga generating plant, have you reviewed Chugach Electric Association Procedure 11.7, Visitor Checklist?

EMERGENCY RESPONSE PLAN

1. _____ Have you reviewed the project Work scope to determine from the scope the types of emergencies that may be reasonably anticipated due to the work tasks or work location? **(This can include such topics as First Aid, emergency evacuation, fire hazard, etc.)**

2. _____ Based on your review, have you included a list or discussion of your response plan for those emergencies? **(Make sure you consider existing conditions such as weather, remote location, and existing resources in developing your plans.)**

HAZARDOUS MATERIAL/HAZARDOUS WASTE MITIGATION and RESPONSE PLAN

1. _____ Have you reviewed the project Work scope to determine the type of hazardous material you may be handling, and the type of hazardous waste your operation may generate?

2. _____ Have you included a discussion of your plan for safely handling and disposing of these materials and wastes?

3. _____ Have you included a discussion of your response plan in case of a release?

Chugach Electric Association Inc. STRUCTURE SETTING REPORT

Project Name: Southern Intertie Transmission Repair
Line Section: GWPT

Work Order No.: E2320072

Structure No.: 40-1 Station: _____ Setting Date: _____

Structure Type: _____ _____ Wood _____ Steel

	Left Pole	Center Pole	Right Pole
Offset From Centerline			
Elevation Difference From Centerline			
Pole Length/Class			
Total Embedment Depth			
Description and Depth of Materials Encountered			
Depth to Sound Rock if Applicable			
Method of Rock Excavation if Applicable			
Backfill (N=Native, I=Import)			
Casing Diameter and Length if Used			

Remarks: _____

Chugach Site Representative

Contractor's Foreman

This tabulation to be made in duplicate with one (1) copy to the foreman at the end of each day's checking. The original copy to be retained in Chugach Site Representative's files.