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**RE:**   **Project Name:**                 ARC Flash Study  
         **Project Number:**           170011736  
         **Project Location:**         Statewide  
         **RFP Opening Date and Time:**   **February 28, 2018 @ 2:00 PM local time**

2. **Question:** Based on a team where an electrical contractor submitting as the primary contractor performing the field surveys, breaker adjustment and label installation. Would the electrical engineering firm performing the calculations and technical report need to be considered a subcontractor or a vendor? If they are a subcontractor do they need to report certified payroll as well?

**Answer:** Subcontractor. The department will address certified payroll once the new PSA documents are distributed. See above change and clarification #2.

3. **Question:** It would also be helpful if we could move the bid date out one more week to March 7th.

**Answer:** See change and clarification #1.

4. **Question:** SC-1.B.4 Reference the FHWA. Is the FHWA providing funds for this project?

**Answer:** No.

5. **Question:** Do FHWA procurement regulations apply to this project?

**Answer:** No.

6. **Question:** I can find no reference to an anticipated contract award date. Do you have a schedule for award of contract?

**Answer:** Anticipated award date is March of 2018.

7. **Question:** Liquidated Damages are stated as "\$1,020.24...." Please clarify LD's.

**Answer:** The department will address this once the new PSA documents are distributed. See above change and clarification #2.

8. **Question:** 01740: What warranties are expected or anticipated? What bonds?

**Answer:** The department will address this once the new PSA documents are distributed. See above change and clarification #2.

9. **Question:** Submittal Checklist, part 8) states that criterion responses should not exceed 10 pages. Is that 10 pages total, for all criterion listed on the evaluation, or 10 pages **per** criterion?

**Answer:** The department will address this once the new PSA documents are distributed. See above change and clarification #2.

10. **Question:** Submittal Checklist, part 11.2) could you please clarify if all the documents listed (sections 00310, 00312, 00311, and 00410) should be placed in the sealed envelope?

**Answer:** The department will address this once the new PSA documents are distributed. See above change and clarification #2.

11. **Question:** The first page of the RFP requires a bid guaranty of 5% with the bid. This is common in construction bids, however, it is less common for proposals requesting engineering services. Does the DOC want a bid guaranty?

**Answer:** The department will address this once the new PSA documents are distributed. See above change and clarification #2.

**Technical Questions – The following are questions from the interested parties and the department's response:**

1. **Question:** Do we need to adjust circuit breaker settings within the 120 day requirement of substantial completion? Will we coordinate with each DOC facility and plan for unexpected equipment outages while adjusting settings? Spec reference Section 26 05 73 part 3.3.D.

**Answer:** The project duration shall be increased to 150 days. The entire scope of work shall be completed within the stated project duration.

2. **Question:** Will an engineer or someone with the state need to review and "approve" the reports before we proceed with printing arc flash labels? Spec reference Section 26 05 73 part 3.3.A.

**Answer:** RSA will review reports prior to printing labels. This review is not intended to be exhaustive, but will be used to double-check equipment names, verify that calculated values appear reasonable, etc.

3. **Question:** Is there a minimum threshold in terms of motor horsepower where motors can be neglected? The IEEE Std 1584 requires "large motors" larger than 50 HP to be modeled but some customers prefer to include motors to a smaller given size such as 20 HP. Spec reference Section 26 05 73 part 3.2.A.4. \*Repeat question from #1 submission of questions however this came from an engineer at Eaton he references the IEEE standards\*

**Answer:** The intent is to follow the IEEE standard for motor sizes.

4. **Question:** For Phase completion in order does this include just the Data collection, or complete engineering and labeling per each Phase before starting the next?

**Answer:** The Work Sequence may be modified to start phases 1-3 at the same time, although work at Anchorage Correctional Center East (ACCE) shall be started and completed last. The reason for this is that ACCE will have concurrent construction work on the power distribution system and that project needs to be completed prior to the Arc Flash Study.

5. **Question:** Is there a set amount of hours per day that escorts will be available to complete work?

**Answer:** No. Facility maintenance staff members will escort workers as needed. For proposal purposes and barring any emergency at the facility, proposers can assume that an escort will be provided during all work hours stated within the contract.

6. **Question:** Is there more than one escort available at the same time, at the same facility?

**Answer:** Yes, with limitations multiple escorts can be made available.

7. **Question:** I was at the Arc Flash pre bid this morning. I needed clarification on a question that was brought up regarding RSA Engineering. Are they the owner's Engineer

and are they eligible to bid this project? Having done all the recent design work they would have a great deal of familiarity with this project.

**Answer:** RSA Engineering has been retained by the State of Alaska for professional services for the duration of the project. RSA Engineering is not eligible to bid on the AK DOC Arc Flash Study project.

8. **Question:** A question came up this morning about each engineering company bringing an electrician to open electrical panels during the site visits. There seemed to me to be a general audience consensus that this should be done since engineers do not normally open panels. My question is, is it a requirement that each company bring an electrician? There is a cost factor to this, plus the number of people going on site visits doubles. If an electrician is required to open panels, can the State furnish one electrician for all engineering companies. Two questions here.

**Answer:**

- a. There is no requirement that each company bring an electrician onsite. However, it is recommended to bring an electrician onsite so that all the needed information can be sufficiently gathered.
  - b. The State cannot provide one electrician for any work related to this project.
9. **Question:** Are the original design drawings available? The original design drawings would show circuits to lights, motors, etc., which would be useful for data entry into the electrical analysis program we have. Without these drawings, we will have to do more approximation of cable lengths, etc.

**Answer:** Some original building drawings are available. Available building drawings will be provided upon request by the Arc Flash Contractor who is awarded the contract.

10. **Question:** During the tour, I asked Dan whether panel schedules were available from RSA. This is just a repeat of that question.

**Answer:** Panel schedules may be available at the facility or in the panels themselves. The DOC or RSA do not maintain a list of panel schedules for DOC Facilities.

11. **Question:** We use a program here for electrical analysis called EasyPower. This may be early to ask, but EasyPower was not on the list of programs bidders could use. EasyPower is at least equal to many on the list, and is the software used by ConocoPhillips. The cost of these programs is high, so we want to use EasyPower.

**Answer:** This software would be treated as an approved equal, provided it meets the requirements of the RFP. It appears to include salient features, and no noticeable disqualifications.

12. **Question:** I believe the 120-days may be a little tight for completion. Can this be extended another month to 150-days?

**Answer:** Yes. The project duration shall be increased to 150 days.

13. **Question:** Specification Section 26 05 73 Arc Flash Study Paragraph 1.1(A)(3)(e) denotes "Load Flow Analysis". Please confirm if the requirement can be eliminated? IF not please identify scope of deliverables for this Item as it can be a somewhat subjective

scope.

**Answer:** Load Flow Analysis may be eliminated from the scope.

14. **Question:** Can we receive cad files of the existing floor plans and one-line diagrams?

**Answer:** All floor plans and one-line diagrams included in the RFP will be made available in AutoCAD.

15. **Question:** To keep a level bidding field. Can we assume that we are only bidding the number of panels and equipment currently denoted on the RFP drawings? A great deal of time could be spent finding all of the smaller disconnects, motor starters, lighting contactors Etc. that are not shown on the drawings. And with it, a range of missing labels for equipment not found during the surveys.

**Answer:** Yes.

16. **Question:** Can we assume that the wire sizes that are identified on the drawings and feeder schedules are correct and do not require verification?

**Answer:** Wire sizes indicated on drawings and feeder schedules were not visually verified during the RFP preparation. These sizes generally came from record drawings, and per 260573.3.2.A(5), will require verification when panels are opened. Alternate methods for unknown feeder sizes, such as modeling +/- sizes based on overcurrent protection, should be included in the RFP response if appropriate.

17. **Question:** Will the DOC be isolating areas where panel boards are located in Hallways with high inmate foot traffic?

**Answer:** Yes.

18. **Question:** We noticed during the job walk that some of the hallways with PB's in them were narrow and didn't provide much room for us to put up our work area barriers.

**Answer:** This is potentially a hazard to have inmates walking behind electricians while Panel Board doors are open or bus is exposed.

a. The DOC will isolate the work areas to the most feasible extent.

19. **Question:** Will the DOC allow the awarded contractor to start on Phase 1, 2 & 3 at the same time?

**Answer:** The Work Sequence may be modified to start phases 1-3 at the same time, although work at Anchorage Correctional Center East (ACCE) shall be started and completed last. The reason for this is that ACCE will have concurrent construction work on the power distribution system and that project needs to be completed prior to the Arc Flash Study.

20. **Question:** In order to meet the 120 day project schedule we feel there needs to be multiple sites addressed at the same time. (Phase 4 Greater Anchorage area: This will take multiple crews as well and carry the longest field time allocation).

**Answer:** The project duration shall be increased to 150 days.

21. **Question:** Does the 120 day project time pertain to fully completing the project including placing labels on gear?

**Answer:** The project duration shall be increased to 150 days. The 150 day project duration includes placing labelling on all the electrical equipment per the specification.

22. **Question:** If labels are allowed to be placed on gear after the 120 Arc Flash study and report are completed & submitted, what is the time frame associated with needing to complete labeling on gear?

**Answer:** The 150 day project duration includes placing labelling on all the electrical equipment per the specification.

23. **Question:** Has the DOC determined the range of motors that need to be included in the Arc Flash study? \*\*There was mentioned of excluding all the small motors....i.e. 15HP and below\*\*

**Answer:** The intent is to follow the IEEE standard for motor sizes.

24. **Question:** Is there a single line power distribution drawing available for each location? \*\*This is outside of the single line already provided with package. This would give us a 10,000ft view of the power grid\*\*

**Answer:** Available information has been included in the RFP. Additional information, such as grid/distribution, will need to be requested from local utilities.

25. **Question:** Load Flow Analysis: Is this truly needed and if so do you plan on extending the 120 days to accommodate for this type of study? \*\*After further discussions with Eaton this is a very time consuming process and necessarily isn't need to complete the Arc Flash Study as it's presented in proposal\*\* This was brought up by a few engineering firms in our pre proposal meeting.

**Answer:** Load Flow Analysis has been removed from the project scope of work.

26. **Question:** Work flow progress: Will any lock downs or other forms of DOC "stops" to any work being performed that is outside the control of our technicians be added to the back end of project completion time?

**Answer:** Yes.

27. **Question:** Page 194/198 (2.2(G)) shows a requirement to list the Hazard Risk Category. Hazard Risk Categories have been removed from NFPA 70E. Can these be removed from the required calculations?

**Answer:** Yes.

28. **Question:** The arc flash label also shows Hazard Risk Categories as required (2.3(G)). Can these be omitted?

**Answer:** Yes.

29. **Question:** Have any previous studies been performed at any of the sites?

**Answer:**

- a. Yes, Goose Creek Correctional Center had an arc flash study done during original construction.
- b. If yes, can the reports be made available along with the program files?
  - i. There is a PDF available. The original program file is not readily available.

30. **Question:** Page 197/198 (3.3(A)) shows applying labels to transformers. If labels are to be applied to transformers what voltage should be shown on the labels?

**Answer:** Remove transformers from this list.

31. **Question:** Page 198/198 (3.3(D)) states adjustments to circuit breakers per the study be done. It is not possible to accurately quote this part of the scope until the studies have been completed. Can this be quoted near the end of the project?

**Answer:** Yes, this can be negotiated. Note that per the section quoted, the intent is to make these adjustments during the return site visit.

32. **Question:** Page 13/198 section four (4) shows a work sequence that is done in four phases. Is it allowed to complete the phases concurrently?

**Answer:** The Work Sequence may be modified to start phases 1-3 at the same time, although work at Anchorage Correctional Center East (ACCE) shall be started and completed last. The reason for this is that ACCE will have concurrent construction work on the power distribution and that project needs to be completed prior to the Arc Flash Study.

33. **Question:** Page 191/198 (1.1(e)) shows Load Flow Analysis as a deliverable. While this can be performed along with the arc flash analysis this is not normally executed during an arc flash study. Can this item be excluded from the deliverables?

**Answer:** Load Flow Analysis has been removed from the project scope of work.

34. **Question:** 01540.3.07: The use of cameras is strictly limited and controlled. Will the contractor be allowed to take photographs?

**Answer:** Yes, see below answer.

35. **Question:** 260573.2.4: Deficiency reporting requires photography. Will this be permitted and if so under what conditions? Are the contractor's responsibilities limited to reporting the deficiency?

**Answer:** Yes, photographs are limited to electrical equipment, nearby connections and pathways. Inmates, corridors or exit doors shall not be photographed.

36. **Question:** 260573.3.1.D: States the equipment to be evaluated is listed in the RFP? What does this mean and where is it listed? It seems to be a circular loop as 2.3.4 is not a valid section number.

**Answer:** Equipment listed on one line diagrams, equipment referenced in specification, etc. Note that 2.3.4 should be 2.2.F.

37. **Question:** 260573.3.2.B.1: Equipment; calls for us to use tags? What tags? Are we to furnish tags?

**Answer:** Yes, equipment labelling is specified in section 260573.2.3 – Arc Flash Warning Labels.

38. **Question:** 260573.3.2.D: This says DOC will provide PPE for facility personnel aiding in the collection of data. Please confirm this.

**Answer:** The DOC will not provide PPE for the Contractor or Subcontractors. DOC will provide PPE to facility personnel after completion of the Arc Flash Study.

39. **Question:** 260573.3.3.B: Where is the referenced section 2.3.4 for ANSI rated metal clad switchgear?

**Answer:** This reference should be 2.2.F.

40. **Question:** Which version of NFPA 70E? OSHA has adopted 2018 version of 70E.

**Answer:** Update 2015 NFPA 70E references to 2018.

41. **Question:** 01010.1.02.A.7 References an equipment log. Where is this document to be found?

**Answer:** Equipment is as shown on one-line diagrams and floor plans.

42. **Question:** 01041.1.4.C: Who will the resident engineer be? One for each facility or one for the entire project?

**Answer:** One resident engineer for the entire project; Jeremy Maxie with RSA Engineering.

43. **Question:** 01200: Project Meetings: Please clarify what meeting schedule(s) are expected.

**Answer:** Project meetings are expected to take place once every two weeks.

44. **Question:** 01720: Is this section applicable to this RFP and if so what portions are applicable?

**Answer:** The requirements stated within spec section 01720 are part of the project scope of work.

45. **Question:** Do you anticipate the contractor will be required to install Barriers? Per NFPA 70E and 01500.1.12 and 1.13.

**Answer:** Yes, if installing barriers is required by NFPA 70E to perform the work of the Arc Flash Study.



46. **Question:** 01730: What if any O&M Manuals will be required?

**Answer:** O&M Manuals are not required.

47. **Question:** 01730.1.6: Are manuals required? The entire section does not seem relevant to this project.

**Answer:** O&M Manuals are not required.

48. **Question:** 01730.1.7: What instruction of owner personnel will the contractor be expected to furnish?

**Answer:** None. Training will be conducted internally.

49. **Question:** 01731: Is any cutting and patching anticipated or will any be anticipated as part of the scope of work?

**Answer:** Cutting and patching may be required although it is not anticipated.

50. **Question:** 01732: Is any demolition anticipated or will any be required as part of the scope of work?

**Answer:** Demolition may be required although it is not anticipated.

51. **Question:** 260873.2.2C: I interpret this as saying we have to label unlabeled equipment subject to Arc Flash labeling. Note the specs say "marked" and do not use the term label. Please clarify this section.

**Answer:** Interpretation is correct, Contractor shall label unlabeled equipment subject to Arc Flash labeling.

52. **Question:** 260572.2.4.C & D: References a spread sheet. Where is this spreadsheet to be found?

**Answer:** Spreadsheet refers to the Deficiency Log included in the RFP documents.

53. **Question:** 260573.3.1.D: Is there a list of equipment to be examined somewhere in the RFP?

**Answer:** Equipment is listed on the one-line diagrams for each facility. Equipment is characterized in the Arc Flash Study specification.

End of Addendum #3

Please be reminded that all addendums must be acknowledged on your bid proposal.

Sincerely,

Evan Patterson  
Procurement Officer

cc: Dan Aicher, Project Manager, DOC  
Clifton Reagle, Facilities Manager, DOC

Attached: DOC Arc Flash Survey Site Report

October 10, 2017

Bettisworth North Architects and Planners  
2600 Denali Street, Suite 710  
Anchorage, AK 99503

ATTENTION: Roy Rountree

Dear Roy,

**REFERENCE: DOC Arc Flash Survey and Report  
Site Visit Report**

In preparation for DOC's arc flash study RFP, we visited the DOC facilities listed below to visually compare the existing conditions to record drawings of the power systems. As part of these site visits, we noted items that could not be verified without further investigation, as well as code violations and/or safety concerns observed.

A. The following facilities were part of this project:

1. Anchorage Correctional Center – East and West (ACC-E and ACC-W - Anchorage)
2. Anvil Mountain Correctional Center (AMCC - Nome)
3. Fairbanks Correctional Center (FCC - Fairbanks)
4. Goose Creek Correctional Center (GCCC - Wasilla)
5. Hiland Mountain Correctional Center (HMCC – Eagle River)
6. Ketchikan Correctional Center (KCC - Ketchikan)
7. Lemon Creek Correctional Center (LCCC - Juneau)
8. Mat-Su Pre-Trial (MSPT – Palmer)
9. Palmer Correctional Center (PCC – Palmer)
10. Point McKenzie Correctional Farm (PMCF – Wasilla)
11. Spring Creek Correctional Center (SCCC – Seward)
12. Wildwood Correctional Center (WCC – Kenai)
13. Yukon Kuskokwim Correctional Center (YKCC – Bethel)

B. Age and condition of the existing power distribution equipment was observed. As DOC's maintenance and operations budgets need to account for aging equipment, the various manufacturers and series of equipment are listed here, with approximate ages where known, and facilities where that equipment was found.

Manufacturer	Series	Age – yrs	Facilities
GE	A	10-20	ACC-E
GE	NLAB	25-35	AMCC
Square D	NQ	15 or less	Various (replacements), not primary anywhere
Square D	NQOD	15-25	Various (replacements)
Square D	NQOB	25-35	ACC-W, FCC, LCCC, MSPT, PCC, SCCC
Federal Pacific		35+	KCC – equipment dated 1981
Westinghouse		35+	FCC, HMCC, LCCC, WCC
Eaton/Cutler-Hammer	Pow-R-Lin PRL1A	<10	GCCC
ITE		35+	PCC

- C. See attached reference drawings for all facilities, which include a power one-line diagram and floor plans/site plans with equipment locations.
- D. The following general comments are made, as they apply to almost all facilities.

1. Typically, equipment was in acceptable to very good condition, with working clearance observed, covers installed, blank space fillers installed, panel schedules either typed or hand-written and appearing reasonably accurate. Very few noticeable safety concerns or potentially hazardous equipment installations were observed.
  2. Nameplates for panelboards should include at a minimum the name of the panel, its source, and voltage. In addition, phase and minimum AIC rating would typically be included in specification requirements for new panels. The only facilities where nameplates meeting these minimum requirements were found were ACC-E and GCCC.
  3. A fairly common item noted is that fire alarm circuits are not marked red and either equipped with a handle lock or otherwise made secure from being turned off inadvertently.
  4. In a number of facilities, equipment was added to exterior buildings without local disconnecting means installed. Noted locations are included in the facilities spreadsheet.
  5. There are panelboards installed in locations that would typically be avoided in current design due to clearance issues, such as pipe chases and crawl spaces. When these panels are replaced, we recommend moving them and extending the circuits if possible.
  6. Feeder sizes were not investigated, as this inspection was visual only without opening up equipment. Feeder sizes shown on the exhibit drawings are pulled from record drawings, and a number of feeders are shown with an 'X'. As part of the arc flash study, feeder sizes must be verified by the Contractor. All updated information from that study will be incorporated into final drawings for DOC's records.
  7. Motor information is not included. We assume the Contractor will determine what type and level of motor information is necessary for the study and verify on-site.
- E. See attached spreadsheet for items noted during these site visits for specific facilities. Included in this spreadsheet are:
1. Safety concerns noted, and we recommend follow-up by DOC and corrective action either by maintenance personnel, or through inclusion in the Arc Flash RFP:
  2. Violations of current electrical code. Note that some of these items may have been allowed at the time of construction/installation, and would need to be addressed only when new work is being performed.
  3. Items that could not be verified without further investigation involving opening panels and tracing feeders, and we would recommend be included in the Arc Flash RFP.
  4. General observations of equipment conditions, labeling, equipment locations, etc., that may not fall into one of the categories above.
- F. See attached draft specification for DOC review and comment for the arc flash study RFP.

If you have any questions concerning the above, please do not hesitate to call me.

Sincerely,



Jeremy Maxie, L.C., P.E., RCDD  
Electrical Project Engineer

jam/hhm  
17-0580/L6206