BUREAU OF RECLAMATION

Grand Coulee Nathaniel Washington Power Plant G23 Stator Repair

Grand Coulee Dam
Columbia Basin Project, Washington

Solicitation No. 140R1026B0005

DRAFT

U.S. Department of the Interior
Bureau of Reclamation

SPECIFICATIONS
May 2026

This page intentionally left blank.

DRAFT

GRAND COULEE NATHANIEL WASHINGTON POWER PLANT
G23 STATOR REPAIR
COLUMBIA BASIN PROJECT, WASHINGTON

FOREWORD

Work is located at Nathaniel Washington Power Plant near Grand Coulee Dam, adjacent to the Cities of Grand Coulee and Coulee Dam, Washington, approximately 90 miles west of Spokane, Washington, in Okanogan County.

Principal components of work include replacement of damaged stator bottom bar in Generator 23 (G23), and removal and replacement of top bars for access to the damaged bottom bar.

SITE VISIT: SEE SECTION L FOR SITE VISIT INFORMATION. OFFERORS ARE STRONGLY URGED TO PARTICIPATE IN THE SITE VISIT. FAILURE BY OFFERORS TO INSPECT THE SITE WILL NOT RELIEVE THEM OF THE RESPONSIBILITY OF PROPERLY ESTIMATING THE DIFFICULTY OR COST OF SUCCESSFULLY PERFORMING THE WORK IN ACCORDANCE WITH THE SPECIFICATIONS AND WITHIN THE ALLOWED TIME. ATTENDEES ARE TO PROVIDE AND WEAR SAFETY GLASSES, BOOTS, HARD HATS, SAFETY VESTS.

FOR DATE AND PLACE OF BID OPENING, SEE "SOLICITATION, OFFER, AND AWARD," STANDARD FORM 1442.

FOR INFORMATION REGARDING BUREAU OF RECLAMATION'S PUBLICATION "RECLAMATION SAFETY AND HEALTH STANDARDS" INCLUDING REVISIONS AT https://www.usbr.gov/safety/rshs/index.html WHICH IS APPLICABLE TO WORK UNDER THIS CONTRACT, SEE CLAUSE AT "WBR 1452.223-81 SAFETY AND HEALTH."

DRAFT

This page intentionally left blank.

DRAFT

CONTINUATION OF

SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS

GRAND COULEE NATHANIEL WASHINGTON POWER PLANT

G23 STATOR REPAIR

COLUMBIA BASIN PROJECT, WASHINGTON

DRAFT

B.1 PRICE SCHEDULE

(a) Offers will be considered for award on the following Price Schedule, but no offer will be considered for award on only a part of the Price Schedule.

(b) Offers are subject to the terms and conditions of this solicitation.

(c) See the contract clause at WBR 1452.232-81, Payment for Mobilization and Preparatory Work, for CLIN 1.

(d) Definitions:

(1) CLIN – Contract Line Item Number

PRICE SCHEDULE

CLIN	Section	Supplies or Services	Quantity and Unit	Unit Price	Amount
1	WBR 1452.232 -81	Mobilization and Preparatory Work	For the lump sum of		$
2	01 31 30	Contract Document Management System	For the lump sum of		$
3	48 13 61	Repair Stator Winding	For the lump sum of		$

TOTAL FOR PRICE SCHEDULE $_____

END OF SUPPLIES OR SERVICES AND PRICES/COSTS

This page intentionally left blank.

DRAFT

BUREAU OF RECLAMATION

TECHNICAL SERVICE CENTER

WRITTEN SPECIFICATIONS SIGNATURE SHEET

Specifications Title: Grand Coulee Nathaniel Washington Power Plant G23 Stator Repair

Project Title: Columbia Basin Project, Washington

Region: Columbia-Pacific Northwest

Prepared: ROBERT CARLSON Digitally signed by ROBERT CARLSON Date: 2026.04.09 10:27:10 -06'00' P.E.

Technical Approval: CORY MAURER CORY MAURER 2026.04.09 10:47:12 -06'00' P.E.

Certified: STACEY CARLSON Digitally signed by STACEY CARLSON Date: 2026.04.22 15:52:36 -06'00' P.E.

DRAFT

This page intentionally left blank.

DRAFT

DIVISION 01 - GENERAL REQUIREMENTS

DRAFT

This page intentionally left blank.

DRAFT

SECTION 01 11 00
SUMMARY OF WORK

PART 1 GENERAL

1.01 LOCATION

A. Work is located at Nathaniel Washington Power Plant near Grand Coulee Dam, adjacent to the cities of Grand Coulee and Coulee Dam, Washington, approximately 90 miles west of Spokane, Washington, in Okanogan County.

1.02 PRINCIPAL COMPONENTS OF WORK

A. Replacement of one damaged stator bottom bar in Generator 23 (G23).

B. Removal and replacement of top bars for access to the damaged bottom bar.

1. Refer to Specification Section 48 13 61 – Stator Repairs

1.03 SPECIFICATIONS REQUIREMENTS

A. Requirements in Division 1, General Requirements, apply to Divisions 2 through 52.

B. Imperative statements in these specifications are Contractor requirements, unless otherwise stated.

C. Where specifications are written in streamlined form, words "shall be" are included by inference where a colon (:) is used within sentence or phrase.

1.04 DEFINITIONS

A. When specifications use a word or term defined in Federal Acquisition Regulations (FAR), definition of the word or term shall be in accordance with FAR sections in effect at the time solicitation was issued.

1.05 ACRONYMS

A. The following acronyms apply to specifications Divisions 1 through 52:

1. CO: Contracting Officer.
2. COR: Contracting Officer's Representative.

PART 2 PRODUCTS

Not Used

DRAFT

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

SECTION 01 12 10
OTHER CONTRACTS

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work.

1.02 OTHER WORK

A. During work under this contract, other work may be performed in the vicinity of the work by Reclamation and other contractors.

B. Cooperate and coordinate with other contractors on access to and use of work areas and contractor use areas.

C. Cooperate and coordinate with other contractors on use of temporary utilities.

D. Cooperate and coordinate with other contractors on maintaining dust-free operations.

E. Cooperate and coordinate with operation and maintenance personnel.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 01 14 10
USE OF SITE

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work.

1.02 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 - Submittals.

B. RSN 01 14 10-1, Land Use and Landscape Rehabilitation Plan:

1. For each Contractor use site on Government land.
   a. Show use location and extent of impact. Uses include but are not limited to the following:
      1) Buildings and service areas including offices, shops, warehouses, storage areas, fuel and oil storage areas, and fabrication yards.
      2) Parking areas, temporary roads, and haul routes.
      3) Utilities including air, power, and water lines; fire hydrants; and compressor station.
      4) First-aid and medical facilities.
      5) Areas for processing, storing, and disposing of waste materials from construction operations.
      6) Temporary fences.
   b. Describe methods to preserve, protect, and repair, vegetation (such as trees, shrubs, and grass) and other landscape features on or adjacent to jobsite, which are not to be removed and which do not interfere with work required under this contract. Include methods to mark work area limits, protect disturbed areas, and prevent erosion.
   c. Describe methods to protect, and repair if damaged, existing improvements and utilities at or near jobsite.
   d. Describe methods for removing temporary structures and facilities, cleanup, and rehabilitating site after completion of construction activities.
2. Submit revised drawings of changes in use of Government land made during design and erection stages or after use of Government land is in operation.

DRAFT

1.03 PROJECT CONDITIONS

A. Parking and laydown areas are limited but available to the north of the Washington Power Plant, outside the perimeter fence and gate. Contractor shall minimize space required. Final use of areas will be approved by the COR.

B. When private land is used for construction facilities, or other construction purposes, make necessary arrangements associated with use of private land.

C. Location, construction, operation, maintenance, and removal of construction facilities on Government land will be subject to approval of COR.

D. Do not interfere with work of other contractors or the Government in vicinity, or with reservations made by the Government for use of such land.

E. Housing for construction personnel will not be permitted on Government land, except housing for guards or watchmen as may be approved by COR.

1.04 BREAK FACILITIES

A. Reclamation will provide break facilities, office or similar workspace, and storage space.

1.05 WORK HOURS AND RESTRICTIONS

A. Due to security, the Contractor will only be allowed on site when an authorized Government representative, (i.e. Government inspector), is available.

B. Normal working hours are 0630 - 1700 Monday through Friday.

1. Work beyond 40 hours per week requires prior approval from the COR.

C. Deliveries should be arranged to occur on Monday through Thursday and between 0800 and 1500. If work or deliveries must occur outside of these time frames, provide COR 72 hour advance notice.

D. Material deliveries require inspections by the Government before being allowed onsite. Coordinate deliveries with COR 48-hours in advance to avoid unanticipated delays during deliveries.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 RESTORATION

A. Restore Contractor use areas to pre-construction condition.

DRAFT

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 01 14 30
INTERRUPTION OF SERVICE

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include cost in prices offered in the Price Schedule for items of work for which interruption of services are required.

1.02 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 - Submittals.

B. RSN 01 14 30-1, Interruption of Service Request:

1. Area where work will be done (by number or other description).
2. Outline procedures for accomplishing work including:
   a. Specific safety precautions to be taken.
   b. Type and location of barricades.
   c. Warning signs.
   d. Protective grounds and devices to be used.
3. Commencement time of work.
4. Duration of work.
5. Number of personnel and their classification.
6. Description of equipment to be used.
7. Information indicating that required materials are on site or data indicating shipping dates of materials not on site.

1.03 PROJECT CONDITIONS

A. Coordinate and schedule interruption of services with COR:

1. Coordinate work with Government operations.
2. No specific interruption of service request will be considered unless:
   a. COR has reasonable assurance that materials and equipment required for work will be onsite.
   b. Contractor will be prepared to perform work on date and during period of time requested for specific interruption of service.

DRAFT

3. Allowable time and available interruption of service periods will govern interruption of service requests, work scheduling, onsite delivery of materials, and required drawings and data submittals.

B. When work cannot be performed during an approved interruption of service period, notify COR that interruption of service is not required.

C. Show construction interruption of services greater than 4 hours in construction schedule.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

SECTION 01 31 19
PROJECT MANAGEMENT AND COORDINATION MEETINGS

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work.
2. If Contractor fails to attend a required meeting, an equitable adjustment will be made to the contract price.

1.02 REFERENCE STANDARDS

A. Bureau of Reclamation (USBR)

1. RSHS — Reclamation Safety and Health Standards, including revisions posted at: https://www.usbr.gov/safety/rshs/index.html

1.03 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 - Submittals:

B. RSN 01 31 19-1, Progress Review Meetings Notification:

1. Provide confirmation to COR regarding requested date and time of meeting and indicate who will be attending and affiliations.

1.04 PROJECT COORDINATION

A. The following meetings are considered significant, but do not relieve the Contractor from the responsibility of attending other meetings required by the specifications. The Preconstruction Conference described in clause at FAR52.236-26 is a separate meeting requirement from the meetings listed in this section.

1. Contractor Safety Program Review: See RSHS for requirements.
2. Progress Review Meetings:
   a. Contractor and subcontractor representatives not onsite may participate in meeting via MS Team conference, unless otherwise directed by the CO.
   b. Attendees: Responsible engineering representatives who fully comprehend the specifications with respect to technical requirements and equipment to be furnished.
   c. Purpose:
      1) Meet with COR to review progress made prior to the end date of the progress payment period.

DRAFT

2) Review with Government personnel electrical and mechanical drawings, data, and technical requirements of specifications. Schedule, Progress, and Coordination:

a) Review safety, progress made, schedule, project issues, submittals, Request for Information (RFI), and resolution necessary to meet specifications requirements.

b) Review dates that activities were started and completed, remaining duration, and percent complete.

c) Review submittals register, submittals currently in review and approval, and meeting submittals due dates or delivery time frames.

3) Discuss progress and schedule.

d. Contractor is responsible for organizing, coordinating and taking notes for the progress review meetings.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

SECTION 01 31 30
CONTRACT DOCUMENT MANAGEMENT SYSTEM

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Contract Document Management System:

1. Payment: Lump sum price offered in the Price Schedule.

1.02 DEFINITIONS

A. CDMS: Contract Document Management System.

1. Contract Documents include, but are not limited to:
   a. Specifications.
   b. Contract Drawings.
   c. Submittals.
   d. RFCs: Request for Change (Contractor generated document).
   e. RFIs: Request for Information (Contractor generated document).
   f. RFPs: Request for Proposal (Reclamation generated document).
   g. CMs: Contract Modifications.
   h. Value Engineering Proposals.
   i. Bureau of Reclamation (Reclamation) Inspection Reports.
   j. Contract Schedules.
   k. Meeting Agendas and Meeting Minutes.

1.03 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 – Submittals.

B. RSN 01 31 30-1, Approval Data:

1. Documentation of system capabilities.
2. Instructions for system use.

C. RSN 01 31 30-2, Final Data:

1. Flash drive of documents uploaded to CDMS.
   a. Includes, but not limited to the following: RFI's, Submittals and Correspondence.

DRAFT

1.04 QUALIFICATIONS

A. System provider: At least 5-years successful performance in providing required services.

1.05 CDMS REQUIREMENTS

A. CDMS shall be capable of generating, storing, tracking, categorizing, and managing Contract Documents.

B. Access:

1. Web-based:
   a. Contract Documents are stored and accessed by authorized individuals via an internet site.
   b. Compatible with web browsers MS Internet Explorer, Apple Safari, Mozilla Firefox, and Google Chrome.
2. Ability to upload Contract Documents and make available for user download in supported file formats, minimum:
   a. Portable Document Format (.pdf).
   b. MS Word.
   c. MS Excel.
   d. MS Project.
   e. Oracle Primavera P6 Project Manager.
   f. Drawing (.dwg).
   g. Contract Manager.
3. Allow Contract Documents to be prepared by Contractor or by Government.
   a. Preparing organization will control access of documents. See Document Security and Backup paragraph below.
4. Contractor and Government shall each have a project manager for CDMS:
   a. Each project manager shall have capabilities to assign users within their organization and assign user rights that control access to documents based on user class and document type.
   b. Each organization shall be capable of defining its access hierarchy.
   c. Inclusion of users will be prerogative of organizational project manager.
   d. Government shall be able to create and modify project properties (i.e., Contractor, project location, description, bid amount, project directory, etc.).
5. Email notifications shall be automatically sent to selectable users when new documents are submitted and available for viewing or alerts are generated. Examples:

DRAFT

a. Updates to project information (e.g., entry of a new submittal);

b. Changes to project information (e.g., approval of a submittal);

c. Alerts (e.g., submittal under review for >15 days without action).

6. Ability to link files; examples:

a. RFP linked to a CM.

b. Submittal linked to a Specification or Drawing.

C. Reports:

1. CDMS shall generate reports that list and sort documents by status; examples:

a. Submittals that have been approved.

b. Invoices paid to date.

c. RFIs under review.

2. Generate alerts when documents requiring action approach or exceed allowable time.

3. Generate customizable summary reports; examples include:

a. Submittal Turn-around.

b. RFI Turn-Around.

c. CM Processing Turn-Around.

d. Total CM costs.

e. Total CM Request Exposure.

4. Reports shall be printable, exportable as searchable .pdf or printer -friendly HTML, and exportable to Excel, XML, or CSV.

5. Ability to link from an item in a report directly to the item by clicking on it:

a. For example: in a submittal report, clicking on a submittal that is 15-days old takes you directly to information on that submittal.

6. Capable of producing a complete and logically organized set of documents within CDMS in both .pdf and .xml format.

D. Document Security and Backup:

1. SSL encryption for secured data exchange between browser and server (Secure access to documents and information).

2. Allow document access security until authoring party chooses to share it with others:

a. Show parties that have access to a document.

b. Extent of document sharing shall be determined by authoring party.

DRAFT

c. Once documents are shared, track documents so that changes cannot occur without a record of changes.

3. Backup/Archiving to FTP site of documents to which an organization has access on a regular (minimum monthly) basis.

4. Documents shall be downloadable to FTP sites where Government and other organizations can each access their own data confidentially.

E. General Tracking and Control:

1. Documents shall be grouped into categories (Submittals, RFI, RFP, CM, Payments, Daily Inspection Reports, and Meeting Minutes).

2. CDMS shall track:

a. When documents were received or returned, as well as status of documents (e.g., Under Review; or Returned, Approved or Rejected, etc.).

b. Document changes, including who entered or changed document and date change was made.

c. When a reviewer has opened an item.

F. Submittal Tracking and Control:

1. Ability to create master list of submittals ("Schedule of Submittals".)

2. Customizable standard submittal form for entering information:

a. Required information includes:

1) Required submittal number (RSN), title, description, and specification section.

b. Upload submittal data in electronic format.

3. Track date received, date response due, date returned, and status:

a. Status designations may be modified to fit Government standard designations – Approved, approved subject to identified changes, or not approved.

4. Supply Submittal Tracking form for Government to enter review comments and action taken. Allow customizing of submittal tracking form:

a. Allow for Government to route submittal to third parties (e.g., consultant, internal design or operations and maintenance groups, etc.) by generating design-review transmittals with each submittal package item, to track status of individual sub-items within submittal package, and to route each sub-item to the appropriate reviewers.

5. Ability to generate automatic notification after specified days without response.

G. RFI Tracking and Control:

1. Supply standard RFI form to enter information.

DRAFT

2. Ability to create or attach documents to the RFI form or links to other documents within CDMS.

3. Ability for Government to route RFI to appropriate reviewers and for reviewers to enter comments into standard response form.

H. Inspection Reports Tracking and Control:

1. Ability to attach Reclamation standard inspection and report forms into CDMS and ability to create customizable inspection forms in CDMS. Typical forms:

   a. Daily Inspection Report (DIR).

   b. Survey requests.

   c. Plant inspection reports.

   d. Testing reports.

2. Ability to link or attach photos to forms and link forms to other documents within CDMS.

I. Cost Tracking and Payment Request Management:

1. Ability to import payment bid items cost from MS Excel spreadsheets.

2. Ability to edit percent complete and payment amount each month. Format to be spreadsheet, e.g. items available for editing at once, rather than needing to edit one item at a time, save, open next item and edit that, etc.

J. Correspondence:

1. Ability to generate letters and memos:

   a. Ability to attach documents to letters and memos, and to reference other documents within CDMS.

   b. Ability to automatically assign sequential numbers to letters and memos.

2. Ability to generate responses to letters and memos:

   a. System automatically generates memo suffixes; e.g., 1st response to Memo 32 to be 32.1, 2nd response to be 32.2, etc.

3. Official correspondence from Reclamation to Contractor shall contain Reclamation's official letterhead and corresponding logos.

4. Ability to generate meeting agendas and meeting minutes and to attach documents to the minutes:

   a. CDMS shall automatically assign sequential meeting numbers.

K. Miscellaneous Tracking and Controls:

1. Ability to generate logs tracking RFIs, CORs, COs, Submittals, Payments, Memos, DIRs, survey requests, plant inspection reports, and testing reports.

DRAFT

2. Ability to filter logs based on criteria, e.g., for Submittals: Specification Section, Days Out, Status (approved, partially approved, approved subject to identified changes and resubmit, or not approved.); for RFI's: Days out, Status (Open/Closed), Specification Section/Dwg No., and Responsibility/Ball-In-Court.
3. Ability to sort logs based on a criterion, e.g., for Submittal, Specification Section, Days Out, Status, or other criteria determined by COR.
4. Ability to provide forms to match Reclamation's CM Form and Progress Payment Form or other forms when needed.
5. Ability to track Cost Exposure with links to RFI and CM requests.
6. Ability to measure productivity benchmarks on a project, such as computing average review days for RFIs and submittals, categorize CMs, and track total CM percentages by category.
7. Ability for keyword search of documents in database.
8. Ability to allow online Payment Requests (electronic invoicing) by Contractor.

L. Budget and Funding Source Tracking:

1. Ability to enter funding sources and assign contract line items to multiple funding sources.

PART 2 PRODUCTS

A. Commercially available products having essential characteristics of Parts 1 and 3.

PART 3 EXECUTION

3.01 IMPLEMENTATION

A. CDMS shall be in place and operating before Contractor transmits any Contract Documents, to Government, except RSN 01 31 30-1, Approval Data:

1. CDMS operation includes COR, or other authorized Government representative, having program control to assign users and user rights to Government personnel to access appropriate areas of the system.

B. Contractor shall input entries to the Schedule of Submittals before making submittals. Include:

1. RSNs listed in Table 01 33 00A – List of Submittals.
2. Scheduled submittal date.

C. Contractor shall provide a report of submittal status monthly or as requested by COR. Submittal status report shall be in a table format and include:

1. Required Submittal Number (RSN).

DRAFT

2. Section Title.
3. Submittal Title.
4. Date Submitted.
5. Date of Response.
6. Approval Status (approved, partially approved, approved subject to identified changes and resubmit, or not approved.)
7. Days in Review.
8. Due Date.

D. CDMS shall be operational until final project closeout.

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 01 32 10
CONSTRUCTION PROGRAM

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Costs:

1. Developing Baseline Schedule: Include in lump sum price offered in the Price Schedule for Mobilization and Preparatory Work.
2. Updating and Using Construction Program: Include as part of Contractor's overhead.

1.02 DEFINITIONS

A. Schedule: The Critical Path Method (CPM) of planning and scheduling a construction project where activities are arranged based on activity relationships and network calculations determine when activities can be performed and the critical path of the project.

B. Project Calendar(s): Cross reference of numerical work days with calendar days. Project calendars serve as the basis for day/date conversion and assign work days and non-workdays.

C. Resources: Equipment, labor or crews, materials, subcontractors, fabricators, manufacturers, and consultants.

D. Out of Sequence Work: An activity that starts before its predecessor activities are completed.

1.03 REFERENCE STANDARDS

A. Associated General Contractors of America (AGC)

1. AGC Manual — Construction Planning and Scheduling Manual, 2004

1.04 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 - Submittals.

1. Furnish database files in format compatible with Oracle Primavera P6 Professional Project Management.
2. Upon request, provide information and data used to develop and maintain the Construction Program to the CO.

DRAFT

B. RSN 01 32 10-1, Representative Information:

1. Designation of authorized representative to develop and maintain Construction Program. Include resume with training and experience.

C. RSN 01 32 10-2, Baseline Schedule:

1. Include:

a. Construction Program/Schedule database.

b. Definition of project calendars.

c. Primavera layout file (.plf).

d. Primavera file extension (.xer)

e. Gantt chart (Bar chart) for project on 11 by 17-inch print(s) and in portable document format (.pdf).

f. Activity report including logic constraints consisting of predecessors, successors, and constraint dates.

g. Tabular listings of resources and resource limitations used to produce baseline schedule. Correlate resources with schedule assumptions and offered price. Resource listings may be independent of schedule database.

h. Narrative explanation of project schedule development. Include impacts of resource limitations and weather conditions on project schedule development. Include planned number of work hours per day and hours per day for subcontractors.

D. RSN 01 32 10-3, Updated Schedule Reports:

1. This submittal is required for a proper invoice for progress payments in accordance with the clauses at FAR 52.232-27 - Prompt Payment for Construction Contracts and WBR 1452.232-82 – Other Invoice Requirements. In accordance with subparagraph (a)(i)(A) of the clause at FAR 52.232-27 - Prompt Payment for Construction Contracts, Government disapproval of this submittal will be considered failure of the Contractor to comply with contract requirements and payment due date may be delayed until 14 days after submittal contents are approved.

2. Include:

a. Construction Program database with updated activity and milestone data.

b. Definition of project calendars if revised from baseline calendars.

c. Primavera layout file (.plf).

d. Primavera file extension (.xer)

e. Gantt chart for project on 11 by 17-inch print(s) and in portable document format (.pdf).

f. Narrative report specifically stating status of project.

DRAFT

1) When negative float exists, cite specific actions and conditions which caused "behind schedule" condition and provide proposed course of action to complete the project within the specified delivery time. When float changed from previous month's updated schedule, explain reason for change.

2) List of Contractor-initiated changes to current schedule stating reason for action taken and unresolved issues relating to the Construction Program. Government reserves the right to reject Contractor-initiated changes to current schedule which negatively impact Government action which was initiated on the basis of current schedule.

3) Discuss contract milestones and significant activities that were started, continued, or completed during the update period or scheduled during the next update period.

g. Submittal Register:

1) List submittals as listed in Table 01 33 00A.

2) Update Submittal Register monthly to include submittals and revised submittals. Register fields shall include RSN name and number, date submitted, date of response, status (e.g., approved, not approved, resubmittal required).

3) This register document is separate from scheduling database.

E. RSN 01 32 10-4, Time Impact Analysis:

1. Include:

a. Construction Program database with proposed revised activity and milestone data.

b. Proposed revised schedule due to change or delay. Highlight or list added, changed, or deleted activities.

c. Primavera layout file (.plf).

d. Primavera file extension (.xer)

e. Gantt chart for project on 11 by 17-inch print(s) and in portable document format (.pdf).

f. Narrative report explaining results and conclusions.

1.05 QUALIFICATIONS

A. Representative: Experienced in developing and maintaining construction schedules and knowledgeable of activities and progress on-site to develop and maintain accurate and reliable schedules. Experience shall include scheduling for at least two other projects of comparable complexity and Primavera P6 training offered by certified instructors.

DRAFT

1.06 GENERAL

A. Develop, maintain, and use Construction Program to plan, monitor, evaluate, and report accomplishment of work.

1.07 SCHEDULES

A. Prepare construction schedules using Critical Path Method outlined in AGC Manual. Use a computer software program to perform mathematical analysis of scheduling data.

1. Prepare schedule based on required sequence and interdependence of activities. Logically sequence activities.
2. Prepare detailed activity network for accomplishing required work organized by Work Breakdown Structure (WBS). Utilize WBS in lieu of activity codes for organization of schedule. If activity codes are utilized in addition to WBS, use unique activity code names assigned as project codes rather than global codes.
3. Activities except "Award" shall have predecessor activities and activities except "Contract Complete" shall have successor activities.
4. Meet contract requirements; milestone(s) in accordance with the clause at FAR 52.211-10, Commencement, Prosecution, and Completion of Work; and relevant clauses and specification sections. Include interim milestone dates, Government interface dates, contract completion date, and other time or seasonal constraints specified in contract documents.
5. Include work of subcontractors, Government interfaces, and contract milestones.
6. Schedule activities to occur as early as possible without unwarranted constraints.
7. Adjust Construction Program/schedule for seasonal weather conditions. Provide a narrative explaining the expected weather and plan for incorporation in schedule. Consider work influenced by high or low ambient temperatures or precipitation. Utilize Primavera P6 calendars to depict historical weather days that impact work. Assign weather calendars to work impacted by weather.
8. Reference activities to contract line item number (CLIN) and specification section identified in the Schedule using user-defined fields.
9. Define activities to level of detail resulting in their durations being no greater than 20 workdays.
    a. Durations for administrative activities (e.g., submittals and reviews) fabrication, manufacturing, and typical level of effort activities (e.g., dewatering, storm water management) will not be subject to workday duration limitation.
10. Include separate activities for submittal preparation and submittal reviews when submittal addresses work that involves significant quantities, long lead times, is on the critical path or near critical path, or as requested by the COR. Assign Government submittal review activities to a seven-day calendar with durations as

DRAFT

specified in Section 01 33 00 - Submittals. Include Required Submittal Number (RSN) in activity description.

11. Include separate activities for fabrication or manufacturing when work involves significant quantities, long lead times, is on the critical path or near critical path, or as requested by the COR

12. Include contract title, contract number, and Contractor's name on transmittal cover sheet and each sheet of Gantt chart.

13. For each activity on Gantt chart, display activity identification number, activity description, planned or original duration, start date, finish date, total float, and calendar identification. Do not display early start and late start fields.

14. Include table of abbreviations used in the schedule, listed and defined alphabetically.

15. Use finish to start logic relationships between activities. Do not utilize start to start, finish to finish, or start to finish logic relationships. Do not use positive or negative lead or lag times.

16. Use durations in units of whole workdays.

17. Provide best estimate of time required to complete activity considering quantity of work, work conditions, location of work, and planned resources for activity.

18. Equate durations of Government reviews and other identified actions to maximum number of calendar days specified in their respective paragraphs.

19. Establish workday calendar(s) and use these in the schedule to translate activity's workday duration into calendar dates. Use unique calendar names; do not use software default calendar names. Save calendars as project calendars, not global calendars.

B. Baseline Schedule:

1. Represents Contractor's as-planned approach to accomplishing the work. Do not include actual start dates, percent completes, or actual finish dates.

C. Updated Schedule:

1. Meet monthly with COR at Government's project office, or at a location approved by the COR, to review progress made to end date of progress payment period. Establish dates that activities were started and completed and remaining duration for each activity started but not completed during the period.

   a. Discuss and mutually agree upon changes to the schedule.

   b. Out-of-sequence activities are not allowed. Revise logic to reflect change in work plan.

   c. Finalize updated Construction Program database with mutually agreed upon changes.

DRAFT

2. Following receipt of executed contract modification, incorporate activity data stipulated in modification into current schedule for inclusion in next scheduled progress update. Provide appropriate logic relationships for revised activities.

3. Assign a unique project file name for each schedule update.

1.08 TIME IMPACT ANALYSIS

A. Provide time impact analysis when required by the CO for contract changes (e.g., change order, proposed modification, or value engineering change proposal) to support a request for equitable adjustment to the contract due to delay or accelerated schedule.

B. The CO may use time impact analysis to determine if time extension or reduction to contract milestone dates is justified.

1. Changes, additions, or deletions to activities; activity durations; activity time frames; or activity predecessors and successors will not automatically determine that extension or reduction of contract time is warranted or due the Contractor.

C. Perform time impact analyses using data in most recent approved schedule update prior to change or delay event.

1. Prepare proposed revised schedule and narrative description describing and highlighting changes or delays.

2. Prepare summary comparing results of two schedule analyses: One using current schedule data from last approved updated schedule prior to event requiring analysis, and one using proposed schedule data incorporating changes or delays.

a. Show contract milestones and activities whose periods of performance have shifted as result of change which affects production and/or manufacture schedules, material orders, construction seasons, and labor and/or equipment utilization.

b. For activities directly affected by change or delay, include the current and proposed items:

1) Activity description.

2) Types and quantities of major pieces of equipment, principal manpower, and pacing materials (materials that affect activity start, duration, or finish).

3) Activity duration.

4) Narrative containing rationale used in developing the proposed logic relationships and activity data.

c. Data date for impacted schedule used in comparison shall be the same as approved updated schedule data date.

d. Base schedule comparisons on status of work and available float at time the CO directs or proposes change to the work, the Contractor submits a

DRAFT

value engineering change proposal, or when a delay occurs as shown in approved updated schedule.

1.09 REVIEW AND EVALUATION

A. Baseline Schedule:

1. Within 21 calendar days after receipt of baseline schedule:
   a. COR will approve or not approve proposed baseline schedule.
   b. Upon request from the CO, meet with COR for a joint review of proposed baseline schedule.
   c. If schedule is not approved, revise and resubmit within 7 calendar days following date of rejection letter.
2. Do not proceed with onsite work, except mobilization and surveying, until baseline schedule has been approved by the Government.

B. Updated schedules:

1. Submit updated Construction Program schedule monthly.
2. Submit updated schedule at least seven days prior to the submission of each invoice request for progress payment.
3. If updated schedule is not approved, revise and resubmit updated schedule within 7 calendar days following date of rejection letter.
4. The COR will schedule pre-submittal meeting with the Contractor's representative each month to review draft updated schedule prior to the Contractor submitting RSN 01 32 10-3, Updated Schedule.

C. Failure to include elements of the work in schedules will not release Contractor from completing required work under the contract.

D. Performance will be evaluated by the Government using approved CPM schedules.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 01 33 00
SUBMITTALS

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work.

1.02 DEFINITIONS

A. Days: Calendar days.

B. Required Submittal Number (RSN): Identifies items to be submitted together as a complete submittal.

C. Submittal Types, as listed in Table 01 33 00A - List of Submittals:

D. A - Approval:

1. Government will respond as to adequacy of submittal.
2. Approval Submittals: Considered "shop drawings" within the terms of the clause at FAR 52.236-21, Specifications and Drawings for Construction.

E. I - Informational:

1. The Government will acknowledge receipt of Informational submittals.
2. The Government may reject an Informational submittal when the submittal does not comply with the contract. The Contractor shall correct mistakes or deficiencies in rejected Informational submittals and resubmit.
3. Informational Submittals: Considered "shop drawings" within the terms of the clause at FAR 52.236-21, Specifications and Drawings for Construction, except that approval by the Government is not required.

F. CDMS: Construction Document Management System.

1.03 REFERENCE STANDARDS

A. American Society of Mechanical Engineers (ASME)

1. ASME Y14.1-12 — Decimal Inch Drawing Sheet Size and Format

B. National Institute of Building Sciences (NIBS)

DRAFT

1. NIBS NCS-14 United States National CAD Standards, Version 6

1.04 SUBMITTAL REQUIREMENTS

A. In case of conflict between requirements of this section and requirements included elsewhere in these specifications, requirements included elsewhere take precedence.

B. General:

1. Prepare in English.
2. Label with contract number and title, and RSN.
3. Measurement Units: US Customary Units.

C. Drawings:

1. Minimum Identification in Title Block:
   a. Contract number and title.
   b. Contractor or supplier's title and drawing number.
   c. Date.
2. Reserve 3- by 3-inch space next to title block for review stamps.
3. Print Size: D size (22 inches by 34 inches).
4. Draw to scale using computer drafting or drafting equipment, unless otherwise specified.
   a. Lettering shall be neat when drawing preparation with drafting equipment is allowed.
5. Final Drawings:
   a. Show as-built changes, including revision dates, made during installation. Indicate changes by clouding.
6. Final Electronic Drawings: When final electronic drawings are required:
   a. Drawing format: AUTOCAD, Version 2018 or later, or as approved by the COR.
   b. Compile using 'eTransmit' utility in AutoCAD.
   c. Show as-built changes, including revision dates, made during installation. Indicate changes by clouding.
   d. Original plots: D size (22 inches by 34 inches).
   e. Government will provide an electronic AutoCAD template.

D. Product Data:

DRAFT

1. Mark manufacturer's data for commercial products or equipment, such as catalog cut sheets.
    a. Identify manufacturer's name, type, model, size, and characteristics.
    b. Illustrate that product or equipment meets requirements of specifications.
    c. Mark items to be furnished in a manner that will photocopy (no highlighter).
    d. Strike through items that do not apply.

E. Certifications:
1. Certifications by a Registered Professional: Signed and sealed by registered professional.
2. Manufacturer’s Certifications: Signed by authorized representative of manufacturer.

F. Photographs:
1. When requested.
2. Each COR requested view.
    a. Include contract number, name of equipment and view title.
    b. Format:
    c. Digital Photographs on CD, DVD, or SDHC card in jpeg format. Four Megapixels minimum. With accompanied prints if requested and of a size requested by the COR.
    d. Prints only: Only if specifically requested.
    e. Professional quality 8- by 10-inch color.
        1) Identify with adhesive labels on back.
            a) Do not type directly on back of photograph.

G. Samples Submittals:
1. Label with complete manufacturer's product identification.
2. Include type and quantity of materials specified in the referenced section in each “set” of samples.
3. Samples: Representative of product to be installed.
4. Label each sample with contract number and title.

1.05 SUBMITTALS PROCEDURES

A. Submit only checked submittals. Submittals without evidence of Contractor's approval will be returned for resubmission.

DRAFT

B. Submit complete sets of required materials for each RSN as specified in "Submittals Required" column in Table 01 33 00A - List of Submittals. A complete set includes all listed items for RSNs with multiple parts.

C. Include the following information in transmittal letters:

1. Contract number and title.
2. RSN for each attached submittal.
3. Responsible code.
4. Number of sets for each RSN.
5. Identify submittal as initial or resubmittal.

D. Resubmittal of submittals not approved:

1. Mark changes such that they are readily identifiable and show revision date.
2. Describe reasons for significant changes in transmittal letter.
3. Resubmit returned submittals within 28 days after receiving the comments, unless otherwise directed.
4. Requirements for initial submittals apply to resubmittals.

1.06 REVIEW OF SUBMITTALS

A. Time Required:

1. Submittal review will require 21 days for review of each submittal or resubmittal, unless otherwise specified.

B. Return of Submittals:

1. Approval Submittals: One set of submittals required for approval will be returned either approved, approved subject to identified changes, or not approved.
   a. Revise and resubmit submittals not approved.
   b. Do not change designs without approval of the CO after drawings, documentation, and technical data have been approved.
2. Informational Submittals: The Government will acknowledge Informational submittals.
   a. Informational submittals will not be returned when they comply with the specifications.
   b. Informational submittals that do not comply with the specifications may be returned for resubmittal or additional information may be requested.

C. Provide the CO with a copy of all correspondence and related documents, pertaining to this contract that it addresses to representatives of the Government. This does not pertain to the Submittal Requirements as they are outlined herein.

DRAFT

1.07 ELECTRONIC TRANSMITTALS

A. Except as noted, transmit electronically through Government supported CDMS Site. Contact information will be provided to the Contractor after award.

B. CDMS submittal shall meet the requirements of Article 1.05 Submittal Procedures.

C. Only one complete set shall be submitted with each CDMS submittal.

D. Each submittal shall be submitted separately.

E. Electronic file size shall not exceed 40 Megabytes (MB). Electronic files in excess of 40 MB must be transmitted as hard copy transmittals on suitable storage medium, flash drive or other.

F. Submit data in required format; e.g., survey data ASCII, electronic drawings AutoCAD .dwg.

G. Where format is not specified, preferred format is searchable portable document format (.pdf).

H. The Government, at the discretion of the COR, may require the Contractor to resubmit as hardcopy any transmittals which appear unclear or illegible in their electronic format.

I. Time required for review of each submittal or resubmittal begins on the next business day after transmittal of a complete set and ends the day the response is transmitted.

J. CDMS submittals will be responded to through CDMS.

K. Submittals required by the specifications, but not listed in Table 01 33 00A - List of Submittals:

1. Submit in accordance with this section.
2. Submit to COR, unless otherwise specified.

1.08 HARD COPY TRANSMITTALS

A. Transmit hard copies of transmittals when required by Table 01 33 00A - List of Submittals or these specifications. If there is a conflict between these specifications and Table 01 33 00A - List of Submittals, Table 01 33 00A - List of Submittals shall govern.

B. Addresses for codes listed in Table 01 33 00A - List of Submittals:

1. CO: Contracting Officer, Bureau of Reclamation, Attn CPN-7300, 1150 North Curtis Road, Suite 100, Boise, ID 83706-1234.
2. COR: Contracting Officer Representative, Bureau of Reclamation, Grand Coulee Field Station, Attn: CPN-3560, PO Box 630, Grand Coulee, WA 99133-0620.,

DRAFT

3. FE: Field Engineer, Bureau of Reclamation, Grand Coulee Field Station, Attn: CPN-3550, P.O. Box 620, Grand Coulee, WA 99133-0620.

4. PM: Project Manager, Bureau Manager, Grand Coulee Field Station, Attn: GCP-1102, P.O. Box 620, Grand Coulee, WA 99133-0620.

5. TSC: Technical Service Center, Bureau of Reclamation, Attn: 86-68510, P.O. Box 25007, Denver CO 80225-0007; Express Mail: Sixth and Kipling, Building 67, Room 152.

C. Send original transmittal letter with appropriate number of sets to office listed in "Responsible Code" column in Table 01 33 00A - List of Submittals.

1. Send copy of transmittal letter with appropriate number of sets to offices that are not the responsible code but show "Sets to be sent" in Table 01 33 00A - List of Submittals. When "Sets to be sent" is 0, send a copy of transmittal letter to that office.

D. Time required for review of each submittal or resubmittal begins when complete sets of materials required for a particular RSN are received and extends through return mailing postmark date.

E. Post copy of transmittal letter to Government supported CDMS Site. Government will post copy of response to Government supported CDMS Site.

F. Hard copies of the following are required:

1. Original signed copies of bonds and insurance.

2. Paint samples or color chips.

3. Physical samples.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

DRAFT

Table 01 33 00A - List of Submittals

* Submittal Types: A - Approval, I - Information
** Y indicates Yes, the submittal is required to be shown on the Construction Schedule - see Section 01 32 10 - Construction Program
*** CO indicates Contracting Officer, COR indicates Contracting Officer Representative, FE indicates Field Engineer, and TSC indicates Technical Service Center

RSN	Clause or Section Title	Submittals required	Due date or Delivery time	Type *	CP **	Respon-sible code	No. of sets to be sent to: ***			
							CO	COR	FE	TSC
1	Release of claims (1452.204-70)	Release of claims (DI-137) against United States	After completion of work and prior to final payment	A		CO	1	0	0	0
2	Payroll and Basic Records (52.222-8)	Certified payrolls	Weekly for each week any contract work is performed on site	I		COR	CDMS			
3	Labor standards data (52.222-11)	(1) List of subcontractors (2) Statement and Acknowledgment Form (SF-1413) for each subcontract	Within 14 days after award of contract, and within 14 days after Notice to Proceed	I		COR	CDMS			
4	Equal opportunity (52.222-26)	Information required by Executive Order 11246 (SF-100)	Within 30 days following Notice to Proceed	I		COR	CDMS			
5	Bonds (52.228-15)	Performance and payment bonds	Within 10 days of award	A		CO	1	0	0	0
6	Estimate of Percentage of Recovered Material Content of EPA-Designated Items (52.223-9)	Estimate the percentage of the total recovered material content for EPA designated item(s) delivered and/or used in contract performance	On completion of the contract (no later than with submittal of final voucher)	I		COR	CDMS			
7	Security Requirements (WBR 1452.237-80)	Security Program	Submitted and approved before mobilization	A		COR	CDMS			
8	Liability Insurance	Acceptable evidence showing that insurance has been obtained	Within 10 days of award	A		CO	1	0	0	0
01 14 10-1	Use of Site	Land Use and Landscape Rehabilitation Plan	Submitted and approved at least 28 days before use of Government land	A		COR	CDMS			

DRAFT

Table 01 33 00A - List of Submittals

* Submittal Types: A - Approval, I - Information

** Y indicates Yes, the submittal is required to be shown on the Construction Schedule - see Section 01 32 10 - Construction Program

*** CO indicates Contracting Officer, COR indicates Contracting Officer Representative, FE indicates Field Engineer, and TSC indicates Technical Service Center

RSN	Clause or Section Title	Submittals required	Due date or Delivery time	Type *	CP **	Respon-sible code	No. of sets to be sent to: ***			
							CO	COR	FE	TSC
01 14 30-1	Interruption of Service	Interruption of Service Request	Submitted at least 14 days before interruption of service	I		COR	CDMS			
01 31 19-1	Project Management and Coordination	Progress Review Meetings Notification	Monthly	I		COR	CDMS			
01 31 30-1	Contract Document Management System	Approval Data	Submitted and approved within 14 days after issuance of the Notice to Proceed	A		COR	E-mail or hardcopy			
01 31 30 -2	Contract Document Management System	Final Data	Submitted within 14 days after Project Closeout	I		COR	Flash Drive			
01 32 10-1	Construction Program	Representative Information	Submitted and approved within 7 days after receipt of Notice to Proceed	A		COR	E-mail or hardcopy			
01 32 10-2	Construction Program	Baseline Schedule	Submitted and approved within 21 days after receipt of Notice to Proceed	A		COR	E-mail or CDMS			
01 32 10-3	Construction Program	Updated Schedule Reports	Submitted and approved with monthly requests for progress payments	A		COR	CDMS			
01 32 10-4	Construction Program	Time Impact Analysis	Submitted and approved within 28 days after a delay or acceleration order by the Contracting Officer	A		COR	CDMS			
01 35 10-1	Safety Data Sheets	Complete LHM and SDS	Submitted at least 14 days before starting on site work	I		COR	CDMS			
01 35 10-2	Safety Data Sheets	Updated LHM and SDS	Submitted at least 14 days before jobsite delivery of each hazardous material	I		COR	CDMS			

DRAFT

Table 01 33 00A - List of Submittals

* Submittal Types: A - Approval, I - Information

** Y indicates Yes, the submittal is required to be shown on the Construction Schedule - see Section 01 32 10 - Construction Program

*** CO indicates Contracting Officer, COR indicates Contracting Officer Representative, FE indicates Field Engineer, and TSC indicates Technical Service Center

RSN	Clause or Section Title	Submittals required	Due date or Delivery time	Type *	CP **	Respon-sible code	No. of sets to be sent to: ***			
							CO	COR	FE	TSC
01 35 20-1	Safety and Health	General Safety and Health Provisions, Written Safety Program, and Regular Safety Inspection Records	Submitted and approved before starting onsite work. See Section 1.03 of RSHS.	A	Y	COR	CDMS			
01 35 20-2	Safety and Health	Proposed JHA Template	Submitted and approved at least 28 days before beginning on site work.	A		COR	CDMS			
01 35 20-3	Safety and Health	Job Hazard Analyses (JHAs) and Exposure Assessments (EAs)	Submitted at least 14 days before performing work	I		COR	CDMS			
01 35 30-1	Contractor‘s Onsite Safety Personnel	Qualifications	Submitted and approved prior to employment	A		COR	CDMS			
01 35 30-2	Contractor’s Onsite Safety Personnel	Safety Inspection Reports	At least once each week	I		COR	CDMS			
01 54 20-1	Use of Government Crane	Crane Use Schedule	Submit weekly	I		COR	CDMS			
01 56 10-1	Protection of Existing Installations	Plan for Protecting Existing Installations	Submitted and approved at least 28 days before starting onsite work	A		COR	CDMS			
01 64 40-1	Government-Furnished Products	Shortage Report	Submitted within 3 days following joint inspection with Government	I		COR	CDMS			
01 74 00-1	Cleaning and Waste Management	Waste Production and Disposal Plan	Submitted and approved at least 28 days before starting onsite work	A		COR	CDMS			
01 74 00-2	Cleaning and Waste Management	Waste Production and Disposal Records	Submitted within 5 days of waste disposal	I		COR	CDMS			

DRAFT

Table 01 33 00A - List of Submittals

* Submittal Types: A - Approval, I - Information
** Y indicates Yes, the submittal is required to be shown on the Construction Schedule - see Section 01 32 10 - Construction Program
*** CO indicates Contracting Officer, COR indicates Contracting Officer Representative, FE indicates Field Engineer, and TSC indicates Technical Service Center

RSN	Clause or Section Title	Submittals required	Due date or Delivery time	Type *	CP **	Respon-sible code	No. of sets to be sent to: ***			
							CO	COR	FE	TSC
01 74 00-3	Cleaning and Waste Management	Environmental Consultant Resume	Submitted at least 28 days before beginning environmental assessment	I		COR	CDMS			
01 74 00-4	Cleaning and Waste Management	Environmental Site Assessment	Submitted within 14 days of completion of work	I		COR	CDMS			
01 78 30-1	Project Record Documents	Electronic Media Release Form	At Preconstruction conference	A		COR	CDMS			
48 13 61-1	Generator Stator Repairs	Spare Bars Testing Procedures	Submitted and approved at least 14 days before beginning tests	A	Y	COR	CDMS			
48 13 61-2	Generator Stator Repairs	Spare Bars Testing Results	Submitted within 14 days of completion of tests	A		COR	CDMS			
48 13 61-3	Generator Stator Repairs	Repair Procedures	Submitted and approved at least 14 days before beginning repairs	A	Y	COR	CDMS			
48 13 61-4	Generator Stator Repairs	Final Test Records	Submitted within 14 days of completion of work	I		COR	CDMS			

DRAFT

END OF SECTION

SECTION 01 35 10
SAFETY DATA SHEETS

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work.

1.02 DEFINITIONS

A. LHM: List of Hazardous Materials.

B. SDS: Safety Data Sheet.

1. Referred to as Material Safety Data Sheets in the clause at 52.223-3, Hazardous Material Identifications and Material Safety Data - Alternate 1.

1.03 APPLICATION

A. For the purposes of this contract, "delivered under this contract" in paragraph (b) of the clause at FAR 52.223-3, Hazardous Material Identification and Material Safety Data - Alternate 1, includes:

1. Materials delivered to Government.
2. Materials incorporated into work.
3. Materials used by the Contractor during contract performance at the jobsite.

1.04 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 - Submittals.

B. RSN 01 35 10-1, Complete LHM and SDS.

C. RSN 01 35 10-2, Updated LHM and SDS:

1. Comply with paragraph (e) of clause at FAR 52.223-3, Hazardous Material Identification and Material Safety Data - Alternate 1.

1.05 DELIVERY

A. Do not deliver hazardous materials to jobsite which are not included on original or previously updated LHM and SDS before receipt of updated LHM and SDS by COR.

DRAFT

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

SECTION 01 35 20
SAFETY AND HEALTH

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include cost of complying with this Section in prices offered in the Price Schedule for other items of work.

1.02 REFERENCE STANDARDS

A. Bureau of Reclamation (USBR)

1. RSHS — Reclamation Safety and Health Standards, including revisions posted at https://www.usbr.gov/safety/rshs/index.html

B. Code of Federal Regulations (CFR)

1. 29 CFR 1926 — Safety and Health Regulations for Construction, Latest Edition

C. State of Washington

1. WAC — Washington Administrative Code (WAC), 2011 Edition

1.03 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 – Submittals.

B. RSN 01 35 20-01, General Safety and Health Provisions, Written Safety Program, and Regular Safety Inspection Records:

1. Site specific.

C. RSN 01 35 20-02, Proposed JHA Template:

1. Provided by Contractor and subcontractors for each distinct phase. For example, Governor, Excitation or Protection.

D. RSN 01 35 20-3, Job Hazard Analyses (JHAs) and Exposure Assessments (EAs):

1. In accordance with Article 1.05.D. and Article 1.05.E.
2. Define phases of work for which JHAs and EAs shall be provided.
3. In accordance with the approved JHA format.
4. Information specified in RSHS.

DRAFT

1.04 DOCUMENTATION AND RECORDS

A. Prepare and retain all safety plans, programs, training content, and training records that are applicable to the scope of the work and make them available to the COR unless they are already included in the written safety program. Some examples include but are not limited to:

1. Asbestos Exposure Assessment and Training Records.
2. Benzene Written Program and Training Records.
3. Cadmium Written Compliance Program and Training Records.
4. Chromium VI Training Records.
5. Confined Space and PRCS Written Program and Training Records.
6. Forklifts and Other Industrial Trucks Training Records.
7. Electrical Safety Requirement Training Records.
8. Emergency Action Plans Written Program and Training Records.
9. Fall Protection Written Program and Training Records.
10. Fire Protection and Prevention Written Program and Training Records.
11. Flammable and Combustible Liquids Written Spill Control Plan.
12. General Safety and Health Provisions, Written Safety Program, and Regular Safety Inspection Records.
13. Hazard Communication Written Program and Training Records.
14. Inorganic Arsenic Training Records, if applicable.
15. Ladder Written Compliance Program and Training Records.
16. Lead Written Program and Training Records.
17. Lockout/Tagout: Refer to RSHS Section 1.13 Hazardous Energy Control Program (HECP) Training Records.
18. Bloodborne Pathogens Exposure Control Plan, Training Records.
19. Methylenedianiline Training Records, if applicable.
20. Occupational Noise Exposure Written Program and Training Audiometric Testing Records.
21. Personal Protective Equipment (PPE) Hazard Assessments and Training Records.
22. Power Operated Hand Tools Training Records.
23. Respiratory Protection Written Program and Training Records.
24. Safety Training and Education Written Program and Training Records.
25. Scaffolds Training Records.
26. Steel Erection Training Records, if applicable.
27. Welding, Cutting, and Brazing Written Program and Training Records.

DRAFT

28. Hot Work Permit.

1.05 SAFETY AND HEALTH

A. Under no circumstances will on site work, including mobilization, be permitted until the Safety Program has been considered acceptable by the COR.

B. Fully participate in a Contractor Safety Program Review meeting, according to RSHS, prior to mobilization. If applicable, include subcontractor management representatives.

C. The minimum work crew at any time on the construction site will consist of no less than 2 people and in accordance with other contractual obligations.

D. Develop Job Hazard Analyses (JHA) for each distinct phase of work under the contract.

1. Work will not begin on each phase of work until a JHA is provided to the COR in accordance with submittals required above.
2. Activities involving hazardous materials shall have the appropriate Material Safety Data Sheet(s) attached to the JHA.
3. The JHA shall be completed in accordance with the approved JHA format.

E. Establish work place exposure assessments in accordance with federal, state, and local regulations and standard industrial hygiene practices to ensure personnel exposures are below regulated levels and exposures are maintained as low as reasonably achievable.

1. Exposure assessments shall be provided to the COR prior to any activity, after any changes in a work condition, as specified in applicable regulations, upon request, and at least annually.
2. In no case will any phase of work commence until an exposure assessment for that portion of the work has been accepted by the COR.
3. Exposure assessments shall be performed for operations that:
   a. Use hazardous material or physical agents including toxic, reactive, biohazard, corrosive, flammable, or those that have radiological properties.
   b. Use PPE (e.g., respirators, chemical-resistant clothing, and chemical resistant gloves)
   c. Require grinding, crushing, cutting, or other abrasive measures.
   d. Involve tasks or operations that release metals (e.g., welding, grinding, soldering, brazing, cutting, burning, gouging, plasma cutting, laser cutting)
   e. Involve mixing, handling, storage, removal, or application of thinner, catalysts, solvents, adhesives, epoxies, sealants, base coats, middle coats, top coats, fillers, or resins.
   f. Involve mixing, handling, storage, and application of pesticides/ herbicides.

DRAFT

g. Involve work tasks, operations, or equipment that generate noise levels which equal or exceed 85 decibel A-Weighted (dBA) as an 8-hour Time-Weighted-Average.

h. Involve entry into a confined space.

i. Involve work-related medical surveillance program, or medical monitoring associated with work tasks, operations, regulatory task requirements, or unacceptable exposure.

j. Involve handling or working with or on equipment that handle bodily fluids or biological hazards.

k. Involve batching, mixing, cutting, chipping, crushing, coring, or drilling concrete.

l. Involve entry into an area, or conducting a work task or working on equipment, contaminated with rodent feces, dander, or nests.

F. Perform all training as required by federal, state, and local regulations prior to any activity that requires it.

1. Training records must be submitted to the COR upon request.

2. In no case shall an employee perform work until all required training is complete.

G. In addition to RSHS Section 1.03, Contractor Requirements, fully comply with all other sections of RSHS, 29 CRF 1926, WAC, and all other federal, state, and local codes and regulations as they apply.

1. The RSHS handbook can be downloaded at the website provided above for use in connection with the specifications in accordance with the notice titled "Notice of Safety and Health Requirements and of Safety Handbook Availability – Reclamation."

2. Construction Safety and Health Standards promulgated by the Secretary of Labor may be obtained from any regional or area office of the Occupational Safety and Health Administration of the U.S. Department of Labor.

3. The F-HECP is available for viewing at the Grand Coulee Construction Office, Grand Coulee Dam.

a. Contact COR to schedule review.

b. A minimum of 2 of the contractor's personnel are required to take a 4-hour training course and pass a written test, administered by the facility.

c. Training and testing are required by the F-HECP, therefore 1 of the 2 personnel trained shall be the on-site superintendent.

H. Be cognizant of and ensure compliance with requirements set forth in paragraphs above.

1. Contractor's responsibility applies to all operations, including those of the Contractor's Subcontractors.

DRAFT

2. When violations of safety and health requirements contained in these specifications or referenced standards are called to the Contractor's attention by the CO or COR, immediately correct the condition to which attention has been directed.
3. Either oral or written notice shall be deemed sufficient. When the Contractor fails or refuses to promptly correct a compliance directive, the CO or the COR may issue an order to stop all or any part of the work.
4. When satisfactory corrective action is taken, an order to resume work will be issued.
5. The Contractor shall not be entitled to extension of time, nor to claim for damage, or to additional compensation by reason of either the directive or the stop order.
6. Failure of the CO or the COR to order discontinuance of any or all of the Contractor's operations shall not relieve the Contractor of the responsibility for the safety of personnel and property.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 01 35 30
CONTRACTOR'S ONSITE SAFETY AND HEALTH PERSONNEL

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work.

1.02 REFERENCE STANDARDS

A. Bureau of Reclamation (USBR)

1. RSHS — Reclamation Safety and Health Standards, including revisions posted at https://www.usbr.gov/safety/rshs/index.html

1.03 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 - Submittals.

B. RSN 01 35 30-1, Qualifications:

1. Full-time Contractor's Onsite Safety Representative.

C. RSN 01 35 30-2, Safety Inspection Reports:

1. Prepare detailed weekly and activity specific, when necessary, safety inspection reports listing noted deficiencies, digital photos, abatement dates and follow-up action for all jobsite activities.
2. Inspection report shall include findings of jobsite walk-through with Government representative.

1.04 QUALIFICATIONS

A. Full-time Contractor's Onsite Safety Representative:

1. Competent supervisory employee with current safety and health related training, experience and duties on at least three projects of similar nature, size, complexity, and work to be performed as the current project.
2. OSHA Construction 30-Hour Training Course including applicable elective subjects, Confined Space Entry; Cranes, Derricks, Hoists, Elevators, and Conveyors; Ergonomics; Fire Protection and Prevention; Materials Handling, Storage, Use and Disposal; Motor Vehicles, Mechanized Equipment; Rollover Protective Structures and Overhead Protection; and Signs; Signals and Barricades; Powered Industrial Vehicles; Safety and Health Programs; Scaffolds; Steel

DRAFT

Erection; Tools - Hand and Power; Welding and Cutting. Current first aid CPR certification.

3. Include resume with current telephone numbers of references, description of safety representative responsibilities, and copies of training certifications.

1.05 APPLICATION

A. Designate an employee as the Full-time Contractor's Onsite Safety Representative prior to start of construction.

B. Contractor's Full-time Onsite Safety Representative Authorities, Duties, and Responsibilities:

1. Responsible for effectively implementing the Contractor's Safety Program.
2. The Safety Representative shall coordinate all emergency response activities.
3. Recommend controls for observed hazards or predicted hazards.
4. Full authorization to correct unsafe acts on the spot, including the authority to stop work to correct safety and health problems.
5. Lead weekly safety meetings at the jobsite.
6. Onsite, during any and all construction activities.
7. Assemble, review, and sign each Job Hazard Analysis (JHA).
   a. Review of JHA with employees.
8. Verify the correct use of respiratory protection and personal protective equipment.
9. Conduct and prepare weekly safety inspections in conjunction with the onsite government representative listing noted deficiencies, their abatement dates, follow up action. The report shall be available for review onsite.
10. Provide direct oversight and assemble a detailed report of all incident reviews, near-misses, accidents, and emergency response or rescue actions.
11. The Onsite Safety Representative may have other non-safety duties.

1.06 QUALITY ASSURANCE

A. Contractor's Full-time Onsite Safety Representative:

1. The effectiveness of the Contractor's Onsite Safety Representative in prosecuting the safety program will be subject to continued review and approval by the COR.
2. Should the Contractor's onsite safety representative's effort be deemed insufficient the Contractor may be required to provide the services of a qualified, full-time safety and health representative at no additional cost to the Government.

DRAFT

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 01 42 10
REFERENCE STANDARDS

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work.

1.02 REFERENCE STANDARDS

A. Referenced editions of standard specifications, codes, and manuals form a part of this specification to the extent referenced.

B. These specifications take precedence when conflicting requirements occur between specifications and referenced standard.

1.03 JOBSITE REFERENCE STANDARDS

A. Maintain at fabrication site, access to referenced standard specifications, codes, and manuals required for work in progress at fabrication site. Make available for use by the Government.

B. Maintain onsite, access to referenced standard specifications, codes, and manuals required for onsite work in progress. Make available for use by the Government.

1.04 AVAILABILITY

A. Code of Federal Regulations (CFR): Available online at

1. https://www.ecfr.gov/, authorized by the National Archives and Records Administration (NARA).

B. Bureau of Reclamation Documents:

1. Reclamation Safety and Health Standards (RSHS) may be downloaded at https://www.usbr.gov/safety/rshs/index.html.
2. Bureau of Reclamation manuals and other publications including significant scientific, technical, and engineering works are available upon request of the CO.

C. Industrial and Governmental Documents:

1. When a reference has a joint designation (e.g., ANSI/IEEE) these specifications generally cite the proponent organization (e.g., IEEE).
2. Addresses for obtaining industrial and governmental (other than Federal and Bureau of Reclamation specifications and standards) specifications, standards,

DRAFT

and codes are listed in Table 01 42 10A – Addresses for Specifications, Standards, and Codes.

Table 01 42 10A – Addresses for Specifications, Standards, and Codes

Acronym	Name and Address	Telephone
AGC	Associated General Contractors of America 333 John Carlyle Street, Suite 200 Alexandria, VA 22314 www.agc.org	703-548-3118
ASME	American Society of Mechanical Engineers 3 Park Avenue New York, NY 10016-5990 www.asme.org	800-843-2763
IEEE	Institute of Electrical and Electronics Engineers 3 Park Avenue,17th Floor New York, NY 10016-5997 www.ieee.org	212-419-7900
NFPA	National Fire Protection Association One Batterymarch Park P.O. Box 9101 Quincy, MA 02269-9101 www.nfpa.org	800-344-3555 617-770-3000
NIBS	National Institute of Building Sciences 1090 Vermont Avenue, NW., Suite 700 Washington, DC 20005-4905 www.nibs.org	202-289-7800
OSHA	U. S. Department of Labor Occupational Safety & Health Administration 200 Constitution Avenue NW Washington, DC 20210 https://www.osha.gov	800-321-OSHA 800-321-6742

DRAFT

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 01 46 00
QUALITY PROCEDURES

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work.

1.02 DEFINITIONS

A. Quality Assurance: Inspection and tests performed by Government to ensure compliance with terms of contract.

B. Quality Control: Activities performed by Contractor to ensure work conforms to contract requirements.

1. The clause at FAR 52.246-12 - Inspection of Construction, requires Contractor to establish an inspection system to ensure quality.
2. Quality Control includes activities in addition to specified Contractor Quality Testing to ensure work conforms to contract requirements.

C. Contractor Quality Testing: Specified tests performed by Contractor.

1. Government may use test results for Quality Assurance.
2. Contractor may use test results as part of Contractor's Quality Control.
   a. Government anticipates tests will be part of Contractor's Quality Control Program.
   b. Tests do not relieve Contractor of providing adequate quality control measures in accordance with the clause at FAR 52.246-12 - Inspection of Construction.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 01 51 00
TEMPORARY UTILITIES

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work.

1.02 REFERENCE STANDARDS

A. Institute of Electrical and Electronics Engineers (IEEE)

1. IEEE C2-2023 National Electrical Safety Code (NESC)

B. National Fire Protection Association (NFPA)

1. NFPA 70-2026 National Electrical Code (NEC)

1.03 TEMPORARY ELECTRICITY

A. Electric power of limited capacity will be available for work to be performed under these specifications.

1. Single-phase 110-volt and three-phase 480-volt power is available at maintenance receptacles. Contractor shall provide necessary adaptors.
2. No charge will be made for power obtained from this source.

B. Provide generators, transmission lines, distribution circuits, transformers, and other electrical equipment and facilities required for obtaining power and distributing power to points of use.

C. Comply with IEEE C2 clearances and spacing for temporary communications and supply lines and NFPA 70.

D. Remove temporary equipment and facilities upon completion of work under this contract.

1.04 SANITARY FACILITIES

A. Restroom facilities will not be available for Contractor use.

B. Provide temporary sanitary facilities in the Contractor lay-down area as approved by the COR.

DRAFT

1.05 TEMPORARY COMPRESSED AIR

A. Compressed air will be available at existing outlets to extent that use does not interfere with plant maintenance operations and is not wasted.

1. May not be suitable for all uses.
2. COR will designate outlet for obtaining compressed air.
3. Verify availability with COR before use.
4. No charge will be made for use of compressed air.
5. Pressure: Typically between 85 to 100 psi.
6. Provide means of conveying compressed air to points of use.
7. Service air system occasionally has oil in the air lines. Contractor shall filter service air when used for breathing air.

1.06 TEMPORARY WATER

A. Provide water required for construction purposes.

B. Provide means of conveying water to points of use.

C. Remove temporary equipment and facilities upon completion of work under this contract.

D. Provide drinking water for Contractor personnel.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

SECTION 01 54 20
USE OF GOVERNMENT CRANE

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include cost in prices offered in the Price Schedule for equipment requiring use of Government crane.

1.02 REFERENCE STANDARDS

A. American Society of Mechanical Engineers (ASME)

1.	ASME B30.2-2011	Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist)
2.	ASME B30.26-2010	Rigging Hardware

B. Bureau of Reclamation (USBR)

1.	RSHS	Reclamation Safety and Health Standards, including revisions posted at http://www.usbr.gov/ssle/safety/RSHS/rshs.html

C. Code of Federal Regulations (CFR)

1.	29 CFR 1910.179	Occupational Safety and Health Standards - Overhead and Gantry Cranes

1.03 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 - Submittals.

B. RSN 01 54 20-1, Crane Use Schedule:

1. Week schedule: Schedule for following week.
2. Long term plan: 6 week running schedule.

1.04 PROJECT CONDITIONS

A. Government-owned crane in powerplant may be used for:

1. Unloading and loading equipment, parts, tools, and supplies at powerplant.
2. Removing existing equipment from powerplant.

DRAFT

3. Moving equipment, parts, tools, and supplies within powerplant.

B. Crane Capacity: 10 ton and 50 ton hooks.

1.05 CRANE USE

A. Government will provide crane operator. Operation of crane by Contractor personnel is not permitted.

B. Contactor shall provide experienced, competent crane signaler.

C. Safety: Comply with ASME B30.2, RSHS, and 29 CFR 1910.179. Where there is a conflict between the standards, the more stringent shall prevail.

D. Provide slings, shackles, and rigging required for use of crane in accordance with ASME B30.26.

E. Contractor is responsible for proper rigging of equipment and connections to crane.

1. Comply with ASME B30.2 and 29 CFR 1910.179.

1.06 SCHEDULING

A. Make written request for each use of Government crane to COR at least 48 hours before crane is required.

B. Coordinate use of Government crane with COR during weekly coordination meetings.

C. Government use of cranes will have priority over Contractor use; however the Government will make cranes available for Contractor use to the maximum amount possible while still accomplishing Government maintenance and operations.

1. Normal Government maintenance work hours are 6:30 am to 5:00 pm, Monday through Thursday.

D. Each crane will not be available for use during a period of 6 hours each month when the Government performs preventative crane maintenance. Also, each crane will not be available for two days each year when the Government performs extensive annual maintenance.

E. Prepare crane use schedule after weekly coordination meeting:

1. Schedule shall cover 6 weeks.

2. Schedule for upcoming week shall be detailed. Start and stop times for crane(s) shall be listed with anticipated deviations of no more than 2 hours.

3. Schedule for out weeks may be less detailed with approximate times required for crane(s). Deviations from the scheduled times during weeks 2 and 3 should not be more than 1 day. Deviations from the schedule for weeks 4 through 6 should not be more than one week.

DRAFT

F. Notify COR at least 48 hours before changes to requested crane use during the current week.

G. Show crane use for major lifts on construction schedule.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 01 55 00
VEHICULAR ACCESS AND PARKING

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work.

1.02 REGULATORY REQUIREMENTS

A. Meet requirements established by jurisdictional authority for use of existing roadways and haul routes; including seasonal or other limitations or restrictions, payment of excess size and weight fees, and posting of bonds conditioned upon repair of damage.

B. Comply with applicable regulations for haul routes over public highways, roads, or bridges.

1.03 SITE CONDITIONS

A. Rights-of-way for access to work from existing roads will be established by Government.

1. In accordance with clause at FAR 52.236-10, Operations and Storage Areas, use only established roadways, parking areas, and haul routes; or temporary roadways, parking areas, or haul routes constructed by Contractor when and as authorized by CO.

PART 2 PRODUCTS

2.01 MATERIALS

A. Materials to maintain and repair existing roadways, parking areas, and haul routes: In accordance with requirements of jurisdictional authority.

B. Materials to maintain, and repair temporary roadways, parking areas, and haul routes: As approved by COR.

PART 3 EXECUTION

3.01 EXAMINATION

A. Investigate condition of available public or private roads for clearances, restrictions, bridge-load limits, bond requirements, and other limitations that affect or may affect access and transportation operations to and from jobsite.

DRAFT

3.02 ESTABLISHED ROADWAYS AND PARKING AREAS

A. Established roadways and parking areas are available for Contractor's use subject to existing restrictions and approval of the COR.

B. Tracked vehicles are not allowed.

C. Existing parking facilities may be used by construction personnel.

3.03 HAUL ROUTES

A. Use existing available public highways, roads, or bridges as haul routes subject to applicable local regulations.

B. Minimize interference with or congestion of local traffic.

C. Provide barricades, flaggers, and other necessary precautions for safety of public where haul routes cross public highways or roads.

3.04 MAINTENANCE

A. Snow removal for convenience of Contractor or to facilitate work operations of Contractor is considered to be normal required maintenance.

END OF SECTION

DRAFT

SECTION 01 56 10
PROTECTION OF EXISTING INSTALLATIONS

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work, except as specified.
2. Costs for repair of installations damaged by the Contractor's operations are the Contractor's responsibility.

1.02 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 – Submittals:

B. RSN 01 56 10-1, Plan for Protecting Existing Installations.

1.03 PROJECT CONDITIONS

A. Drawings included in these specifications show items of existing materials and equipment but may not show all equipment and materials existing at the jobsite.

B. Protecting existing installations includes protecting the terrazzo flooring.

C. Refer to Section 48 13 61- Generator Stator Repairs, Article 3.04 for additional information.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 PROTECTION

A. Provide protection for personnel and existing facilities from harm due to the Contractor's operations. Protection shall be subject to approval of the Government.

B. Arrange protective installations to permit operation of existing equipment and facilities by the Government while work is in progress.

C. Refer to Section 48 13 61- Generator Stator Repairs, paragraph 3.06.C for additional information.

DRAFT

3.02 REMOVAL OF PROTECTIVE INSTALLATIONS

A. Remove protective installations after purpose has been served. Materials furnished by the Contractor to provide protection remain property of the Contractor.

3.03 REPAIR

A. Repair, at Contractor's expense, damage to existing installations due to Contractor's operations or Contractor's failure to provide proper protection. At the Government's option, damage may be repaired by the Government, and the Contractor will be backcharged repair costs.

END OF SECTION

DRAFT

SECTION 01 57 20
ENVIRONMENTAL CONTROLS

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work, except as specified.
2. Costs for damages and work stoppage are the Contractor's responsibility.

1.02 REFERENCE STANDARDS

A. Bureau of Reclamation (USBR)

1. RSHS — Reclamation Safety and Health Standards, including revisions posted at https://www.usbr.gov/safety/rshs/

1.03 REGULATORY REQUIREMENTS

A. Comply with Federal, State, and local laws and regulations.

B. Comply with RSHS.

C. Conform to most stringent requirement in cases of conflict between specifications, regulatory requirements, and RSHS.

D. Contractor shall be responsible for damages resulting from dust originating from Contractor operations in accordance with clause at FAR 52.236-7, Permits and Responsibilities.

E. The CO may stop construction activity in violation of Federal, State, or local laws and additional expenses resulting from work stoppage will be responsibility of Contractor.

1.04 DUST CONTROL

A. Provide dust control and abatement during performance of work.

B. Prevent, control, and abate dust pollution on rights-of-way provided by Government or elsewhere during performance of work.

C. Provide labor, equipment, and materials, and use efficient methods to prevent dust nuisance or damage to persons, property, or activities.

DRAFT

1.05 AIR POLLUTION CONTROL

A. Use reasonably available methods and devices to prevent, control, and otherwise minimize atmospheric emissions or discharges of air contaminants.

B. Do not operate equipment and vehicles that show excessive exhaust gas emissions until corrective repairs or adjustments reduce such emissions to acceptable levels.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. When the Price Schedule includes a separate item for furnishing a material, include cost of furnishing, hauling, storing, and handling in the price offered in the Price Schedule for the item.
2. When the Price Schedule does not included a separate item for furnishing a material, include cost of furnishing, hauling, storing, and handling in the price offered in the Price Schedule for work for which the material is required.

1.02 DEFINITIONS

A. Essential Characteristics: As used in these specifications, the term "essential characteristics" is synonymous with the term "salient characteristics."

B. Salient Characteristics: Those qualities of an item that are essential to ensure that the intended use of the item can be satisfactorily realized.

1.03 REFERENCE STANDARDS

A. American Society of Mechanical Engineers (ASME)

1. ASME B1.1-2024 — Unified Inch Screw Threads, (UN, UNR, and UN Thread Forms)
2. ASME B1.20.1-2013 (2018) — Pipe Threads, General Purpose, Inch

B. Bureau of Reclamation (USBR)

1. RSHS — Reclamation Safety and Health Standards, including revisions posted at https://www.usbr.gov/safety/rshs/

1.04 DELIVERY, STORAGE, AND HANDLING

A. Transport and handle manufactured products in accordance with manufacturer's instructions.

B. Store and protect manufactured products in accordance with manufacturer's instructions and RSHS. Obtain instructions from the manufacturer before delivery of materials to jobsite. Maintain a copy of instructions at jobsite.

DRAFT

C. Protect materials from adverse effects of moisture, sunlight, ultraviolet light, or weather during storage at jobsite.

D. Remove and replace damaged items with new items.

E. Store curing compounds, sealants, adhesives, paints, coatings, sealers, joint compounds, grouts, and similar products at the temperature and environmental conditions recommended by manufacturer.

PART 2 PRODUCTS

2.01 MATERIALS

A. Provide materials required for completion of work except Government-furnished materials specified in Section 01 64 40 – Government-Furnished Products.

B. Provide type and quality described in these specifications. Make diligent effort to procure specified materials from all available sources.

C. Furnish new materials conforming to referenced standards unless otherwise specified.

D. For materials not covered by these or referenced specifications, furnish materials of standard commercial quality.

E. If materials to be used deviate from or are not covered by recognized specifications and standards, submit, for approval, justification for and exact nature of the deviation, and complete specifications for materials proposed for use.

F. Make parts accurately to standard gauge where possible.

1. Use unified screw threads conforming to ASME B1.1 or B1.20.1 for threads, including but not limited to those of bolts, nuts, screws, taps, pipes, and pipefittings.

2. For internal connections only, the Contractor may deviate from ASME standards, provided a complete set of taps and dies are furnished as required to facilitate repair or replacement.

G. Permanently mark fasteners with a symbol identifying the manufacturer and with symbol(s) indicating grade, class, type, and other identifying marks in accordance with reference or applicable standard.

2.02 WORKMANSHIP

A. Accurately manufacture and fabricate materials in accordance with best modern practice and requirements of these specifications, notwithstanding minor errors or omissions therein.

DRAFT

B. Use liberal factors of safety and adequate shock-absorbing features in designs, especially for parts subjected to variable stress or shock, including alternating or vibrating stress or shock.

C. Include provisions which prevent components from loosening for shock-absorbing features and parts subject to vibration.

2.03 GOVERNMENT CONTRACT SOURCE QUALITY ASSURANCE

A. Materials will be subject to Government Inspection at following locations, as determined by the CO:

1. At place of production or manufacture.
2. At shipping point.
3. At jobsite.

B. To allow sufficient time to provide for inspection, submit at time of issuance, copies of purchase orders, including drawings and other pertinent information, covering material on which inspection will be made as advised by the CO, or submit other evidence if such purchase orders are issued verbally or by letter.

C. Inspection of materials at locations specified above or waiving of inspection shall not be construed as being conclusive as to whether materials and equipment conform to contract requirements nor shall the Contractor be relieved thereby of the responsibility for furnishing materials meeting the requirements of these specifications.

D. Acceptance of materials will be made only at the jobsite.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install products in accordance with manufacturer's recommendations unless otherwise specified.

3.02 GOVERNMENT CONTRACT FIELD QUALITY ASSURANCE

A. Final inspection and acceptance of materials will be made only at the jobsite after installation and testing.

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 01 64 40
GOVERNMENT-FURNISHED PRODUCTS

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Except as specified below for backcharges and expenses to the Contractor, include cost of unloading, hauling, inspecting, storing, protecting, handling, and caring for products furnished by the Government in prices offered in the Price Schedule for work in which products are to be used.

B. Backcharges and Expenses to the Contractor:

1. The Contractor will be charged for, or required to replace, any product lost or damaged after delivery and inspection.
2. The Contractor will be backcharged for products lost or damaged beyond repair after delivery and inspection or for products not incorporated in the work and not returned to the Government. The backcharge amount will be the initial Government product cost at point of delivery or the Government replacement cost at point of delivery, whichever is higher. This amount will include reasonable charges for Government warehousing and handling.
3. When directed by the CO to replace products lost or damaged by the Contractor, such replacement shall be at the Contractor's expense.
4. Repair of products damaged by the Contractor shall be at the Contractor's expense.

1.02 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 - Submittals.

B. RSN 01 64 40-1, Shortage Report.

1. Written report of shortage in or damage to Government-furnished products.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Products furnished by the Government will be provided to the Contractor following receipt of Notice to Proceed.

B. After delivery date, load and haul products from point of delivery to work site.

C. If directed by the CO during progress of work, replace products lost or damaged by the Contractor, with equivalent grades of products as approved by the CO and deliver products to the jobsite as directed.

DRAFT

D. Repair products damaged after delivery to the Contractor, which in the opinion of the CO can be repaired satisfactorily.

E. Protect products from distortion, dust, water, or other damage.

F. Place products on timber blocking furnished by the Contractor, if necessary, for proper protection of products.

G. Protect painted and coated surfaces from damage during transportation, inspection, handling, and storage. Protect surfaces of products which are furnished unpainted.

H. The Government reserves the right to direct the Contractor to provide means of protection for Government-furnished products which reasonably might be required for their storage and care; however, the exercise of or failure to exercise this right shall not be deemed to relieve the Contractor of primary responsibility for protecting Government-furnished products

I. Return unused Government-furnished products to the Government at points convenient to the work, as directed.

1.04 ACCEPTANCE AT SITE

A. Schedule a joint inspection of products with the CO to determine existing condition. The Contractor shall be responsible for damage sustained by products after this inspection.

B. Report to the CO in writing, within 24 hours after inspection, any shortage in or damage to products when delivered.

PART 2 PRODUCTS

2.01 PRODUCTS

A. The Government will furnish products listed in Table 01 64 40A - Government-Furnished Products.

Table 01 64 40A - Government-Furnished Products

Item No.	Description	Estimated quantity	Estimated delivery date
1	Spare stator bars	15	Upon receipt of Notice to Proceed

PART 3 EXECUTION

Not Used

DRAFT

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 01 74 00
CLEANING AND WASTE MANAGEMENT

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work except as specified.
2. Cost of environmental site assessments are the Contractor's responsibility.

1.02 REFERENCE STANDARDS

A. Bureau of Reclamation (USBR)

1. RSHS — Reclamation Safety and Health Standards, including revisions posted at https://www.usbr.gov/safety/rshs/index.html

B. Code of Federal Regulations (CFR)

1. 40 CFR 261.3 — Definition of Hazardous Waste
2. 49 CFR 171-179 — Transportation - Hazardous Waste Regulations

1.03 DEFINITIONS

A. Hazardous waste: Defined as hazardous by 40 CFR 261.3; or by other Federal, State, or local laws or regulations.

1.04 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 - Submittals.

B. RSN 01 74 00-1, Waste Production and Disposal Plan:

1. For each type of waste, list estimated quantity and planned disposal location.

C. RSN 01 74 00-2, Waste Production and Disposal Records:

1. For each type of waste, list quantity and disposal location in format provided.

DRAFT

a. Format:

Month	Amount of Waste Generated in Pounds	Amount Recycled in pounds	Amount Stockpiled for Re-use in pounds	Amount Disposed of in Pounds	Disposal Location

2. Include certifications that waste was properly disposed.

3. Hazardous wastes manifests.

D. RSN 01 74 00-3, Environmental Consultant Resume:

1. Describe experience on similar project.

E. RSN 01 74 00-4, Environmental Site Assessment.

1.05 QUALIFICATIONS

A. Environmental consultant: Minimum 2 years experience in conducting environmental site assessments for similar construction.

1.06 REGULATORY REQUIREMENTS

A. Comply with Federal, State, and local laws and regulations.

B. Comply with RSHS.

C. Conform to most stringent requirement in cases of conflict between specifications, regulatory requirements, and RSHS.

1.07 PROJECT CONDITIONS

A. Report waste materials discovered at jobsite to COR.

1. Cease work in areas where waste may be hazardous until waste materials are investigated by the Government.

2. If waste is hazardous, the CO may order delays in time of performance or changes in work, or both.

3. If such delays or changes are ordered, an equitable adjustment will be made in the contract in accordance with applicable clauses of the contract.

PART 2 PRODUCTS

Not Used

DRAFT

PART 3 EXECUTION

3.01 PROGRESS CLEANING

A. Keep work and storage areas free from accumulations of waste materials and rubbish.

3.02 FINAL CLEANUP

A. Remove temporary plant facilities, buildings, concrete footings and slabs, rubbish, unused materials, concrete forms, and other similar materials which are not part of permanent work.

B. Leave premises "broom clean."

3.03 DISPOSAL

A. Nonhazardous waste materials:

1. Reuse at jobsite or reuse or recycle waste materials removed from jobsite whenever possible.

B. Hazardous Waste Disposal:

1. Dispose by removal from jobsite.
2. Recycle hazardous waste whenever possible.
3. Dispose of hazardous waste materials that are not recycled at appropriately permitted treatment or disposal facilities.
4. Transport hazardous waste in accordance with 49 CFR 171-179.

C. Certification: Certify that wastes are disposed of in accordance with Federal, State, and local regulations.

3.04 SITE ASSESSMENT

A. Upon completion of work, perform site assessment at following areas for work done under these specifications:

1. Hazardous waste accumulation areas.
2. Petroleum dispensing and storage areas where aggregate storage of petroleum at jobsite was over 110 gallons.
3. Hazardous material storage areas.

B. Employ qualified environmental consultant to perform assessments.

C. Demonstrate and document by appropriate analytical sampling that site contamination is less than State action cleanup levels.

DRAFT

3.05 RECORDS

A. Keep records of types and amounts of waste materials produced.

B. Keep records of waste material disposal.

END OF SECTION

DRAFT

SECTION 01 78 30
PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Cost:

1. Include in prices offered in the Price Schedule for other items of work.

1.02 SUBMITTALS

A. Submit the following in accordance with Section 01 33 00 – Submittals.

B. RSN 01 78 30-1, Electronic Media Release Form.

1. Refer to Article 1.03 Electronic Drawings below.

1.03 ELECTRONIC DRAWINGS

A. CADD Files, will be distributed upon request, after:

1. Notice to Proceed.
2. Contractor signs form in Section 51 00 50 – Electronic Media Release.

1.04 TEST REPORTS

A. Provide test reports as required in Section 48 13 61 – Stator Repair.

1.05 AS-BUILT DRAWINGS

A. As-built drawings are not required.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

DIVISIONS 02 THROUGH 45 – NOT USED

DRAFT

This page intentionally left blank.

DRAFT

DIVISION 48 – ELECTRICAL POWER GENERATION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 48 13 61
GENERATOR STATOR REPAIRS

PART 1 GENERAL

1.01 MEASUREMENT AND PAYMENT

A. Repair Stator Winding:

1. Payment: Lump sum price offered in the Price Schedule

1.02 REFERENCE STANDARDS

A. Institute of Electrical and Electronics Engineers (IEEE)

1.	IEEE 43 - 2013	Testing Insulation Resistance of Electric Machinery
2.	IEEE 56 - 2016	Insulation Maintenance of Electric Machines
3.	IEEE 62.2 – 2004(2009)	Diagnostic Field Testing of Electric Power Apparatus – Electrical Machinery
4.	IEEE 95 - 2002(2012)	Insulation Testing of AC Electrical Machinery (2300 V and Above) with High Direct Voltage
5.	IEEE C50.12 - 2025	50 Hz and 60 Hz Synchronous Generators and Generator/Motors Coupled to Hydraulic Turbines Rated 5 MVA and Above

1.03 SUBMITTALS

A. Submit in accordance with Section 01 33 00 - Submittals.

B. RSN 48 13 61-1; Spare Bars Testing Procedures

1. Procedures and testing method for testing and verifying the government furnished spare bars.

C. RSN 48 13 61-2; Spare Bars Testing Results

1. Furnish the test results of the testing of the spare bars.

D. RSN 48 13 61-3; Repair Procedures:

1. Step-by-step repair procedure description.
2. List and description of materials.
3. Test Procedures: Provide procedures and test parameters for each test to be performed on spare bars and repaired winding.

E. RSN 48 13 61-4; Final Test Records:

DRAFT

1. Test results for each test performed on installed bars and for repaired winding.
2. Summary of bars replaced with serial numbers and slot locations where they were installed.

1.04 PROJECT CONDITIONS

A. Generator G23 has a damaged stator bar which needs to be replaced.

1. The damaged bar is located in the bottom of slot 187.
2. Two cooling tubes in the bar have been plugged because they were leaking cooling water.

B. Generator characteristics are shown in Table 48 13 61A – Winding Characteristics.

Table 48 13 61A – Winding Characteristics

Parameter	Value
Rating	825,640 kVA
Voltage Rating	15 kV
Current Rating	31,779 A
Stator Cooling	Water Cooled
Poles	84
Slots Per Pole per Phase	2-1/7
Winding Type	Wave
Number of Turn in Bar	Single Turn Roebel Bar Winding
Number of Layers	2
Number of Parallel Circuits	6
Number of Slots	540
Number of Bars in a Parallel Circuit	30
Number of Bars to Reversing Connection	18

PART 2 PRODUCTS

2.01 GOVERNMENT-FURNISHED MATERIALS

A. Reclamation will be responsible for lock out and tag out of the unit, providing spare materials unless noted otherwise, removal of rotor poles, reinstallation of the poles, and reassembly of Generator G23 unless otherwise noted (for example, note the requirement for the Contractor to provide locks for each employee).

B. Reclamation will remove covers and baffles to provide access to the repair area.

C. Reclamation will provide the following to perform the repair work:

1. Stator bar lifting, support, and handling device.
2. Crane and crane operator for bar lifting.

DRAFT

3. Wrapping table for applying putty and paper on the bar.
4. Bar extraction and installation tool was provided to Reclamation at completion of the machine rewinds. Contractor to determine if adequate for bar installation.
5. Nitrogen gas for filling stator winding cooling tubes.

PART 3 EXECUTION

3.01 SCOPE OF REPAIRS

A. Perform repairs and return generator to Government for service at continuous operation at 825,640 kVA and 0.975 power factor.

B. Bars are referenced to top (front) of core slots (closest coil-half to airgap).

C. Remove and replace the bottom bar in slot 187.

D. Remove and replace a minimum of 14 top bars in order to access the damaged bottom bar.

E. Repair work will be required to be performed with a number of rotor poles removed from the installed rotor.

3.02 GENERAL

A. Provide tools and equipment to perform repairs and testing including AC Hipot test set for winding tests.

1. Determine size and capacity of test equipment to perform required tests.

B. Employ means of accounting for each item, tool or equipment brought in and out of the generator (e.g. toolbox checklist).

C. Installation of bars includes preparing slot, wedging bars with wedges and filler material, brazing and making bar connections, securing bar and painting.

D. Inform the Government of unusual situations discovered during repair and provide recommendations on resolution of discovered problems.

3.03 ARMATURE WINDING REPAIR

A. Work under the existing Grand Coulee Facility Hazardous Energy Control Program (HECP), a copy of which is available in Appendix A. Work will be performed through a Government-issued Special Work Permit in accordance with the HECP.

1. Facility HECP training will be required for applicable employees, which is defined as a minimum of four hours in Reclamation FIST 1-1 Section 3.2. FIST 1-1 is available at https://www.usbr.gov/power/data/fist_pub.html. At least one

DRAFT

Contractor employee who has passed the HECP training shall be onsite anytime work is being performed onsite.

2. Provide locks for each employee to perform the lock-out and tag out procedures. The process to verify the existing clearance and to perform a Job Hazard Analysis (JHA) with the Reclamation clearance holder will take up to 2 business days.

3.04 CONTRACTOR INITIAL SITE VISIT

A. Perform a site visit prior to performing the repairs and within 30 calendar days after receipt of Notice to Proceed:

1. Inspect the materials and tools provided by Reclamation and confirm the materials are adequate in quantity and quality.
2. Report any concerns to the COR in writing immediately.

3.05 SPARE BAR TESTS

A. Perform testing on the spare bars prior to the repair:

1. Perform dimensional inspection, leak tests, and electrical tests on spare bars to be installed in the stator winding during the winding repair.
   a. Perform Direct-Current High-Potential (DC HiPot) testing to validate stator bar insulation integrity. Contractor to determine test method and test voltage value.
2. Provide necessary testing equipment and tools.
3. Pack and reseal the un-used spare bars for long-term storage.

3.06 ARMATURE WINDING REPAIR

A. Provide labor, equipment, and tools needed to perform the work, including calibration of available Government test equipment.

B. Provide a minimum of the following materials: putty, paper, epoxies, insulation tape, lashing materials, tan colored insulating paint, Sil-Fos, and brazing materials.

C. Prepare the work area by protecting and covering components to protect existing installations. Provide adequate protection of adjacent bars during bar removal and installation.

D. Remove the existing damaged bottom bar and the 14 top bars from the stator core:

1. Disconnect the damaged bottom bar and the 14 top bars from the electrical circuit and from the cooling water piping.
2. Remove bars carefully and preserve bars as much as possible. Cutting the brazed area is acceptable. Reclamation will keep removed bars.
3. Clean and prepare stator slots for installation of spare bars.

DRAFT

E. Install the replacement bars and make up the connections to the winding circuit and the cooling water system.

1. Install spare bars in accordance with approved procedures and original equipment manufacturer installation procedures.
2. Reconnect the new bars to the existing electrical circuit and water-cooling.
3. Provide induction brazing machine for their use during removal and installation as needed.
4. Provide induction brazing coil that fits the existing bar design.

3.07 WINDING TESTS

A. Reclamation will prepare the water-cooled winding for high-voltage insulation testing. The entire winding will be drained, and all Teflon water supply and return hoses will either be made dry or disconnected from the winding. The winding will be placed under a nitrogen blanket and capped when the water is drained.

B. Reclamation will remove the 18-flex links on the generator neutral connection for conductor resistance testing.

C. Reclamation will perform a DC Ramp test as a baseline test and at completion of the repair work for information only.

3.08 CONTRACTOR AS-FOUND (BASELINE) TESTS

A. Perform as-found Insulation Resistance (IR), Polarization Index (PI), and Alternating-Current High-Potential (AC HiPot) testing on each phase.

1. AC HiPot test voltage at 22.5 kVac (1.5 x VL-L) in accordance with IEEE 56.
2. Insulation Resistance and Polarization Index testing performed in accordance with IEEE 43.

B. Perform temperature-corrected winding conductor resistance testing on each parallel circuit in each phase (18 total tests).

1. Record the winding temperature at time of testing and correct the resistances to 20 degrees C.
2. Calculate the equivalent resistance of the entire phase based on the individual parallel circuit measurements. Then calculate the average winding resistance of all three phases and calculate the percent difference from average for each phase. The percent difference from average should not be greater than 0.5 percent for each phase.

3.09 CONTRACTOR INSTALLATION TESTS

A. Perform the following tests during installation of the replacement bars:

DRAFT

1. Measure the resistance between the bars and the core slot walls. Measure at locations near the top, middle and bottom of the stator core.
2. Measure the ripple spring compression after wedging of the bars.
3. Perform IR and PI testing followed by Direct-Current High-Potential (DC HiPot) testing to validate stator bar insulation integrity. Perform these tests prior to connecting the new bars to the existing stator windings.
4. Determine test method and value of test voltage is sufficient to reveal damages or cracks caused by stresses imposed during installation and wedging.

B. Perform the following winding test after repairs are complete:

1. Perform IR, PI, and AC HiPot tests on each phase:
   a. AC HiPot test voltage at 22.5 kVac (1.5 x VL-L) in accordance with IEEE 56.
   b. Insulation Resistance and Polarization Index testing performed in accordance with IEEE 43.
2. Perform a final temperature-corrected winding conductor resistance test for each parallel circuit (18 total tests) and compare to the as-found data.
   a. Record the winding temperature at time of testing and correct the resistances to 20 degrees C.
   b. The final parallel circuit measurements should be no greater than 0.5 percent higher than the as-found data. Calculate the equivalent resistance of the entire phase based on the individual parallel circuit measurements. Calculate the average winding resistance of all three phases and then calculate the percent difference from average for each phase. The percent difference from average should not be greater than 0.5 percent higher for each phase.

END OF SECTION

DRAFT

DIVISION 51 – INFORMATION AVAILABLE TO OFFERORS

DRAFT

This page intentionally left blank.

DRAFT

SECTION 51 00 00
INFORMATION AVAILABLE TO OFFERORS

PART 1 GENERAL

1.01 ORDER OF PRECEDENCE

A. In case of differences between sections in Division 51 - Information Available to Offerors and sections in other divisions of the specifications, the requirements in the other divisions will govern.

B. The Government assumes no responsibility for deductions, interpretations, or conclusions made by the Contractor based on information made available by the Government.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

This page intentionally left blank.

DRAFT

SECTION 51 00 10
PHOTOGRAPHS

PART 1 GENERAL

1.01 PHOTOGRAPHS

A. Photographs for the subject work under this contract are provided.

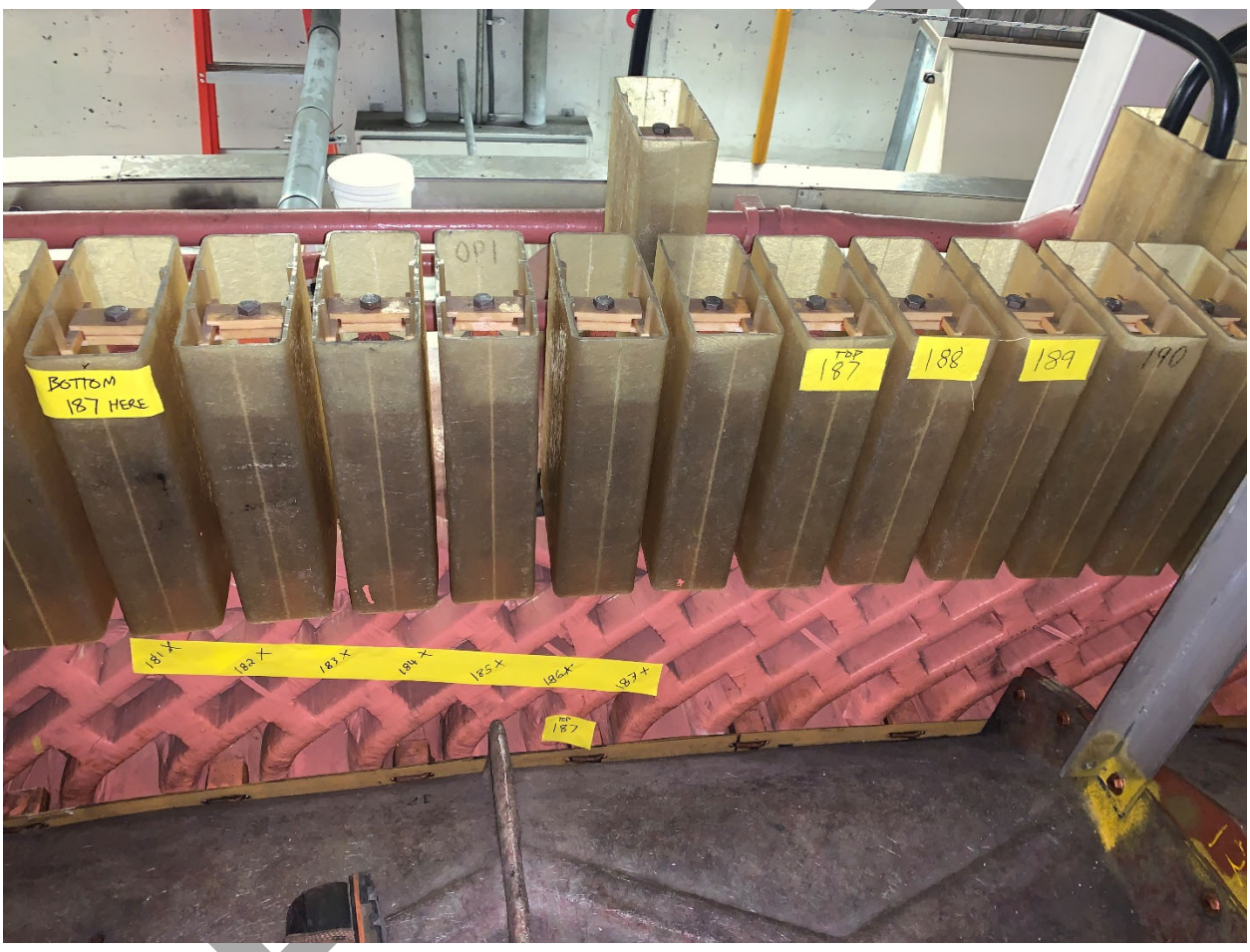

Photo 51 00 10-1: Grand Coulee Nathaniel Washington Power Plant, G23 top end-turns showing slot 187

Photo 51 00 10-2: Grand Coulee Nathaniel Washington Power Plant, G23 bottom end-turns showing slot 187

DRAFT

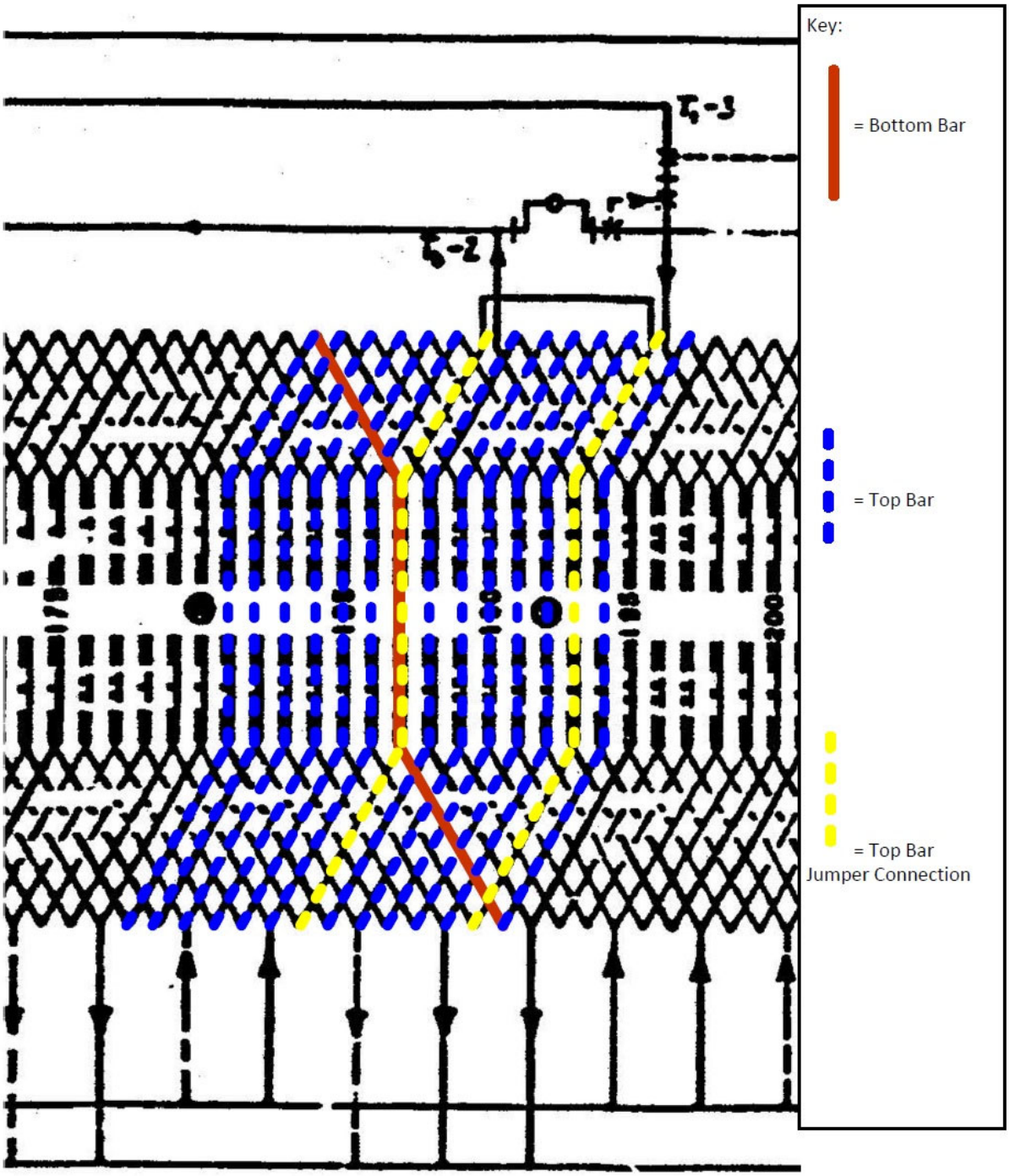

Photo 51 00 10-3: Grand Coulee Nathaniel Washington Power Plant, G23 winding diagram excerpt showing bottom bar in slot 187

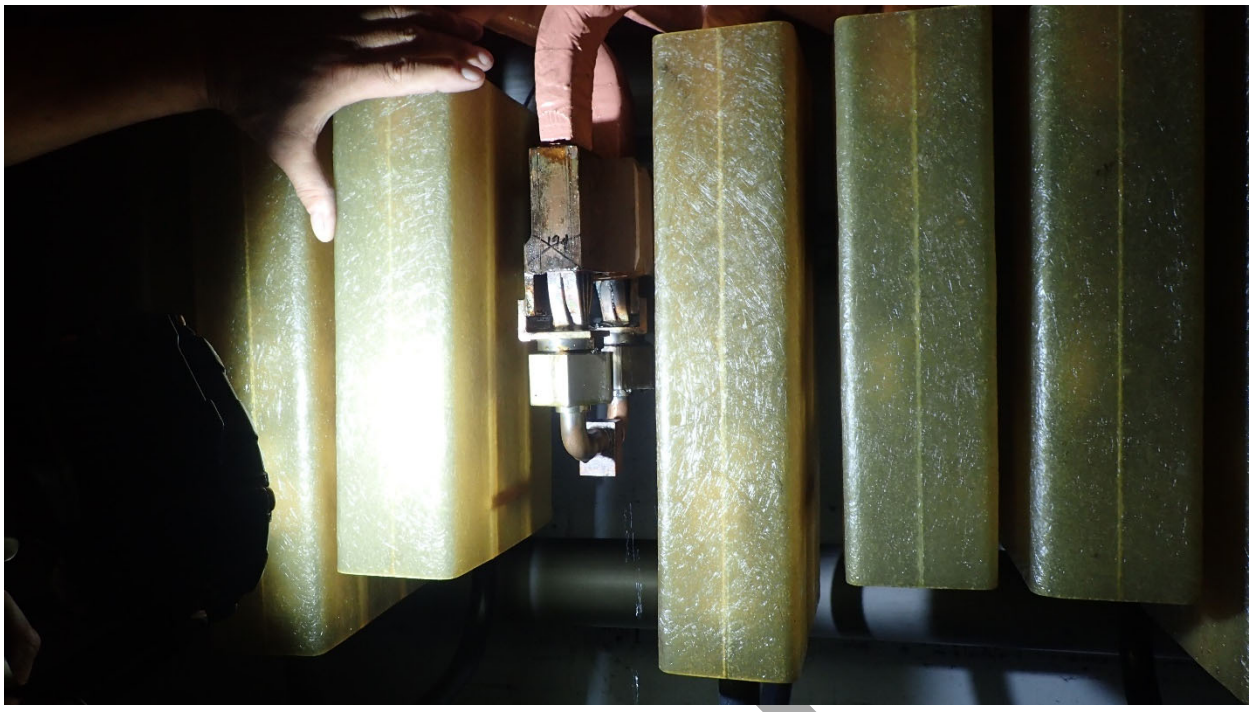

Photo 51 00 10-4: Grand Coulee Nathaniel Washington Power Plant, G23 lower end of bottom bar in slot 187 showing the water leak

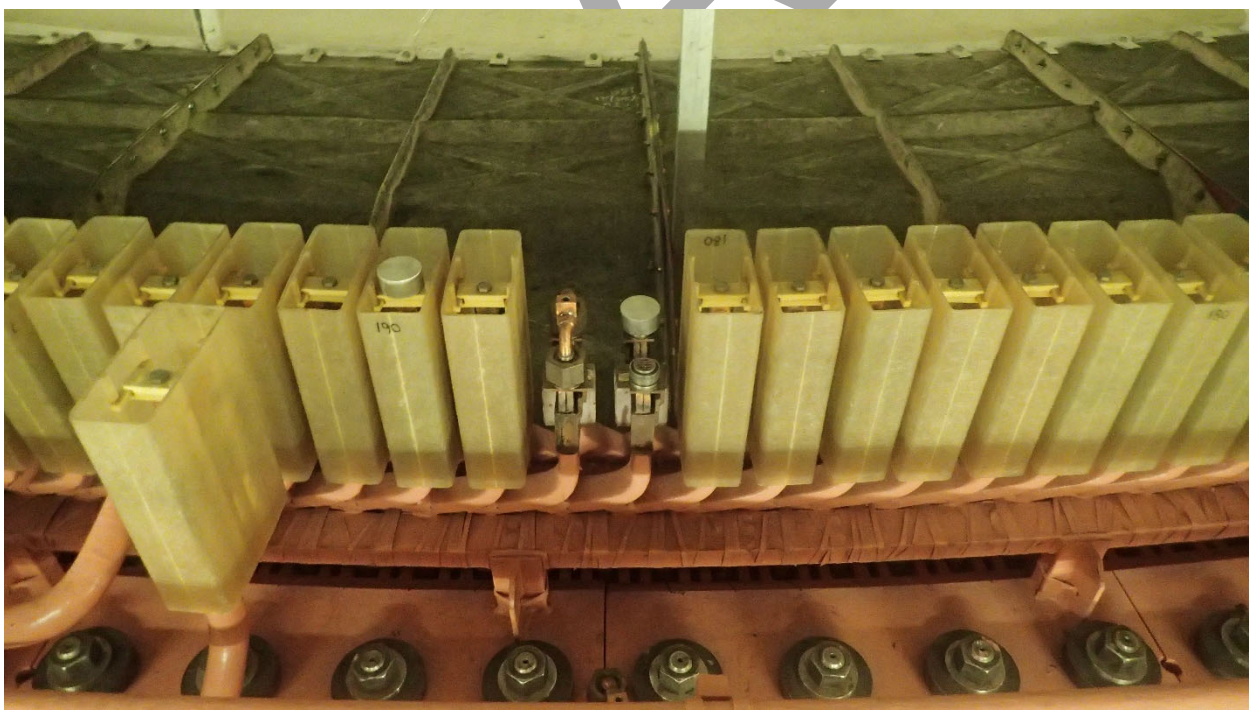

Photo 51 00 10-5: Grand Coulee Nathaniel Washington Power Plant, G23 top end of bottom bar in slot 187 during temporary repair

Photo 51 00 10-6: Grand Coulee Nathaniel Washington Power Plant, G23 lower end of bottom bar in slot 187 with plugged cooling-water

Photo 51 00 10-7: Grand Coulee Nathaniel Washington Power Plant, G23 Upper end of bottom bar in slot 187 with plugged cooling-water

DRAFT

Photo 51 00 10-8: Grand Coulee Nathaniel Washington Power Plant, Upper end stator connections and rotor poles

Photo 51 00 10-9: Grand Coulee Nathaniel Washington Power Plant, G22-G24 stator bar slot paper folding table

DRAFT

IV. SPECIFICATIONS

Input Requirements

Power: 460 VAC, 60Hz, 220 Amperes

Ground: Through power connection and grounding pad provided on unit.

Output Characteristics

Series Resonant Mode

Output Voltage:	60 KV @ 1500 KVA
Voltage @ Taps:	40 KV @ 1500 KVA
	30 KV @ 1500 KVA
Output Current:	60 KV 25 Amps
	40 KV 37.5 Amps
	30 KV 50 Amps
Tuning Range:	60KV .0145 mfd to 1.43 mfd
	40KV .0334 mfd to 3.73 mfd
	30KV .058 mfd to 7.03 mfd
Design Q:	15

Parallel Resonant Mode

Output Voltage:	60KV @ 100 KVA
Output Current:	1.7 Amps
Duty Cycle:	5 minutes on, 25 minutes off

Metering

Output Current (A)	0-50 Amps AC
	5 Amp movement Acc ± 1% F.S.
Output Voltage (V1)	0-8/16 KV AC
(V2)	0-40/80KV AC
	150 VAC movement Acc ± 1% F.S.
Power Factor (PH)	0-1-0
	120 VAC, 5 Amp, movement Acc ± 1%

Photo 51 00 10-10: AC Hipot, series resonant test set specifications

PART 1

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

SECTION 51 00 20

GRAND COULEE CRATED PARTS INVENTORY

PART 1 GENERAL

1.01 GENERAL

A. Grand Coulee crated parts inventory and photographs of the crated parts is attached below:

Item	Crate Marking	Description 1	Description 2	Notes		
1	6115-061-0082	G6115000610082RC Drawing # OD1.2670-3738650/1222-MD-78-91	Jumper Bars	Reference	Quantity	Status
				Fig. C-3	8	Sealed
				Total	8	
				Inventory	8	
2	6125-061-0070	G6125000610070RC DWG# OD1-2690-362537B, STATOR BAR CONFIGURATION MANUFACTURER DWG# 1222-MD-78-1	Top Bar			
				Fig. C-1	7 (estimated)	Opened
				Fig. C-4	18	Sealed
				Fig. C-5	90	Sealed
				Total	115	
				Inventory	118	
3	6125-061-0058	G6125000610058RC WATER-COOLED ARMATURE WINDING REPLACEMENTS, SIEMENS DWG #OD1-2690-362537B, STATOR BAR CONFIGURATION MANUFACTURER DWG #1222-MD-78-1 *3PP G22-24 GENERATOR STATOR, FOR TOP STATOR BAR SEE G6125-00-061-0070R, 2-CP-10-11290	Bottom Bar			
				Fig. C-2	55	Sealed
				Fig. C-4	4	Sealed
				Total	59	
				Inventory	59	

DRAFT

Figure 51 00 20-1: Top bars; originally 10 bars, estimated 7 bars left; seal has been broken. Inventory # 6125-061-0070

DRAFT

Figure 51 00 20-2: Bottom bars, 55 bars, unopened. Inventory # 6125-61-0058

DRAFT

Figure 51 00 20-3: Jumper bars, 8 phase jumpers. Inventory # 6115-061-0082

DRAFT

Figure 51 00 20-4: Bottom and top bars, 4 bottom bars, 18 top bars. Bottom bars – 6125-061-0058. Top bars – 6125-061-0070

DRAFT

Figure 51 00 20-5: Top bars, 90 top bars

DRAFT

SIEMENS

GRAND COULEE SPARE PARTS		
Refer to Specification Table C-4, item E14 The following spare parts will be furnished.		
90	top bars	D1.2690-362537B/1
60	bottom bars	D1.2690-362537B/2,3
150	end connectors	D1.2670-343358C
2	jumpers	D1.2670-358891C/2
33	end caps (boots)	D1.2380-362713D/1,2,3
360	slot sticks with gauging holes	D1.2670-373564/2
450	slot sticks without gauging holes	D1.2670-373564/3
189	center separator 0.157" thick	D1.2670-373564/9
189	slot filler 0.025" thick	D1.2670-373564/12
189	slot filler 0.015" thick	D1.2670-373564/12
189	slot filler 0.010" thick	D1.2670-373564/12
189	slot filler 0.040" thick	D1.2670-373564/12
189	slot filler 0.140" thick	D1.2670-373564/12
180	ripple springs 8.8" lg	D1.2670-373564/4
270	ripple springs 9.13" lg	D1.2670-373564/5
150	slot liner	D1.2670-373564/6,7
*12,400 meters	insulation tape	--
*	insulation putty (123 kg Part 1 & 81 Part II)	--
2000	full size lamination	D1.2890-362554F
68	air vent spacer lamination	D1.2890-362554F
68	1st step back lamination	D1.2890-362554F
68	2nd step back lamination	D1.2890-362554F
5	teflon hose assemblies (with 1-loose connector and ample shrink tubing)	D1.2388-373362/1,2
*limited shelf life (Delivery per Specification Section F.3.)		

Siemens Power Corporation Page 1 of 1 Revised: 4/17/96
GCSPARE

Figure 51 00 20-6: Siemens original spare parts list

PART 2 GENERAL

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

DRAFT

SECTION 51 00 50

ELECTRONIC MEDIA RELEASE

U.S. Bureau of Reclamation
Electronic Media Release

U.S. Bureau of Reclamation, Contract Number/Solicitation Number: _____

This release for electronic media is dated the ___ day of _____ (month), ____ (year), between _____ (RECIPIENT) and U.S. Bureau of Reclamation, for the exchange of electronic media (CD ROMs, DVD, Flash Drives, External Hard Disk Drives, etc.) containing information on the _____ project (hereinafter referred to as the PROJECT) for use by the RECIPIENT.

Therefore, RECIPIENT and U.S Bureau of Reclamation (Reclamation), agree as follows:

1. All data and intellectual property contained on the electronic files remains the property of U.S. Bureau of Reclamation and may not be copied or distributed to any other party without the written permission of U.S. Bureau of Reclamation.
2. The electronic files provided to RECIPIENT by U.S. Bureau of Reclamation, for the PROJECT may be used or adapted by RECIPIENT for their own use. If RECIPIENT chooses to alter in any way, in whole or in part, the electronic files provided for the PROJECT or any future project(s), RECIPIENT agrees that the use of the altered files shall be without liability or legal exposure to U.S. Bureau of Reclamation.
3. Because information and data provided electronically may be altered, whether inadvertently or otherwise, U.S. Bureau of Reclamation, reserves the right to retain copies of the electronic file(s) and to remove from the electronic files provided to RECIPIENT all identification (such as logo, surveyor's seal, etc.) reflecting the involvement of U.S. Bureau of Reclamation, in their preparation.
4. The electronic files are provided solely as a convenience to RECIPIENT by U.S. Bureau of Reclamation and shall not be considered "Drawings of Record" or "Construction Documents." All documents considered "Drawings of Record" or "Construction Documents" will be hardcopy drawing sheets with signatures or scanned files of the hardcopy drawings with signatures.
5. RECIPIENT is advised to check all electronic media for viruses and malware before loading the files. RECIPIENT is solely responsible for intercepting and disabling viruses, if any, that may be transmitted with the electronic files and hereby agrees to indemnify and hold U.S. Bureau of Reclamation harmless from and against all claims of any type or nature asserted by RECIPIENT or any party as a result of viruses transmitted with the electronic files.
6. Files distributed electronically are subject to data erosion, erasure, and/or alteration, and computer systems and software become obsolete in time. By accepting these electronic files, RECIPIENT acknowledges these risks and agrees to waive all claims against U.S. Bureau of Reclamation, should data erosion, erasure, and/or alteration of these electronic files occur.

DRAFT

7. RECIPIENT agrees to defend, indemnify, and hold U.S. Bureau of Reclamation, harmless from all claims, injuries, damages, losses, expenses, and costs, including attorney's fees, arising out of breach of this agreement, or the modification or reuse of the electronic files.

ACCEPTED FOR RECIPIENT:	RELEASED BY U.S. BUREAU OF RECLAMATION:
By: _____	_____
Title: _____	_____
Date: _____	_____

END OF SECTION

DRAFT

DIVISION 52 – DRAWINGS

DRAFT

This page intentionally left blank.

DRAFT

SECTION 52 00 00
DRAWINGS

PART 1 GENERAL

1.01 DISCREPANCIES, ERRORS, OR OMISSIONS

A. Inform the CO of discrepancies discovered on drawings.

B. In case of discrepancies, written specifications take precedence over drawings unless otherwise specified.

1.02 PROJECT CONDITIONS

A. Where there are differences as determined by the CO between details and dimensions shown on drawings and details and dimensions of existing features at jobsite, use details and dimensions of existing features at jobsite.

1.03 INFORMATION DRAWINGS

A. Drawings marked "For Information Only" in the drawing list are included to show existing features about which knowledge is required to perform work under this contract. These drawings do not show work to be performed under this contract.

B. If there are differences as determined by the CO between details and dimensions shown on these drawings and those of existing features at jobsite, use details and dimensions of existing features at jobsite.

1.04 STANDARD DRAWINGS

A. Standard drawings may show details which are not a part of work under this contract. Disregard details shown on these drawings which are not applicable to work under this contract.

1.05 LIST OF DRAWINGS

A. Drawings listed in Table 52 00 00A - List of Drawings, are made a part of Section C - Description/Specifications.

PART 2 PRODUCTS

Not Used

DRAFT

PART 3 EXECUTION

Not Used

Table 52 00 00A - List of Drawings

Sheet No.	Drawing No.	Title
General:		
1	222-D-22022	Grand Coulee Dam – Location Map
2	222-117-27327	Grand Coulee Dam – Vicinity Map
Information Drawings:		
3	1222-M-D-78-1	Stator Bars Configuration – Sheet 1
4	1222-M-D-78-2	Stator Bars Configuration – Sheet 2
5	1222-M-D-78-3	Stator Bars Configuration – Sheet 3
6	1222-M-D-78-14	Armature Winding Voltage Profile
7	1222-M-D-78-99	Stator Winding Diagram – 1DH9153-6WS42-Z

END OF SECTION

DRAFT