

**DON PEDRO HYDROELECTRIC PROJECT  
FERC NO. 2299**

**AMENDMENT OF APPLICATION**

**EXHIBIT F – GENERAL DESIGN DRAWINGS**



Prepared by:  
Turlock Irrigation District  
P.O. Box 949  
Turlock, CA 95381

and

Modesto Irrigation District  
P.O. Box 4060  
Modesto, CA 95352

September 2017

This Page Intentionally Left Blank.

**Table of Contents**

<b>Section No.</b>	<b>Description</b>	<b>Page No.</b>
<b>EXHIBIT F – GENERAL DESIGN DRAWINGS</b>		<b>II</b>
<b>1.0</b>	<b>REQUEST FOR PRIVILEGED TREATMENT – CEII</b>	<b>1-1</b>
<b>2.0</b>	<b>GENERAL DESIGN DRAWINGS</b>	<b>2-1</b>
<b>3.0</b>	<b>SUPPORTING DESIGN REPORT</b>	<b>3-1</b>

**List of Tables**

<b>Table No.</b>	<b>Description</b>	<b>Page No.</b>
Table 2.0-1.	Exhibit F General Design Drawings for the Don Pedro Project.	2-1
Table 3.0-1.	Summary of Part 12 Dam Safety Inspection Reports for the Don Pedro Project.	3-1

**List of Appendices**

Appendix F-1	Exhibit F Drawings Filed only with the Federal Energy Regulatory Commission as Critical Energy Infrastructure Information (CEII)
Appendix F-2	Supporting Design Report Filed only with the Federal Energy Regulatory Commission as Critical Energy Infrastructure Information (CEII)

This Page Intentionally Left Blank.

## EXHIBIT F – GENERAL DESIGN DRAWINGS

---

The following excerpt from the Code of Federal Regulations (CFR) at 18 CFR § 4.41(g) describes the required content of this Exhibit<sup>1</sup>.

*Exhibit F consists of general design drawings of the principal project works described under paragraph (b) of this section (Exhibit A) and supporting information used as the basis of design. If the Exhibit F submitted with the application is preliminary in nature, applicant must so state in the application. The drawings must conform to the specifications of § 4.39.*

- (1) *The drawings must show all major project structures in sufficient detail to provide a full understanding of the project, including:
  - (i) Plans (overhead view);
  - (ii) Elevations (front view);
  - (iii) Profiles (side view); and
  - (iv) Sections.*
- (2) *The applicant may submit preliminary design drawings with the application. The final Exhibit F may be submitted during or after the licensing process and must show the precise plans and specifications for proposed structures. If the project is licensed on the basis of preliminary designs, the applicant must submit a final Exhibit F for Commission approval prior to commencement of any construction of the project.*
- (3) *Supporting design report. The applicant must furnish, at a minimum, the following supporting information to demonstrate that existing and proposed structures are safe and adequate to fulfill their stated functions and must submit such information in a separate report at the time the application is filed. The report must include:
  - (i) An assessment of the suitability of the site and the reservoir rim stability based on geological and subsurface investigations, including investigations of soils and rock borings and tests for the elevation of all foundations and construction materials sufficient to determine the location and type of dam structure suitable for the site;
  - (ii) Copies of boring logs, geology reports and laboratory test reports;
  - (iii) An identification of all borrow areas and quarry sites and an estimate of required quantities of suitable construction material;
  - (iv) Stability and stress analyses for all major structures and critical abutment slopes under all probable loading conditions, including seismic and hydrostatic forces induced by water loads up to the Probable Maximum Flood as appropriate; and
  - (v) The bases for determination of seismic loading and the spillway Design Flood in sufficient detail to permit independent staff evaluation.*
- (4) *The applicant must submit two copies of the supporting design report described in paragraph (g)(3) of this section at the time preliminary and final design drawings are submitted to the Commission for review. If the report contains preliminary drawings, it must be designated a “Preliminary Supporting Design Report.”*

---

<sup>1</sup> 18 CFR § 4.51(g) cross-references Exhibit F requirements published at 18 CFR § 4.41(g).

This Page Intentionally Left Blank.

## **1.0 REQUEST FOR PRIVILEGED TREATMENT – CEII**

---

In accordance with 18 CFR Part §388.112, the Districts are requesting special treatment as Critical Energy Infrastructure Information (CEII) by the Federal Energy Regulatory Commission (FERC) for the Exhibit F General Design Drawings and Supporting Design Report (SDR). The Districts are requesting that the General Design Drawings and SDR be given special treatment because the drawings clearly show the location of the critical Project features and design information. For this reason, the Districts have filed the Exhibit F General Design Drawings and SDR with FERC as CEII. The CEII information has been filed with FERC in October 2017, concurrent with filing of the public information of this Amendment of Application (AFLA). The duration of the CEII designation should be indefinite, or until such time as the CEII regulations or the Project no longer exists.

In accordance with FERC’s CEII Regulations, the following statement regarding access to CEII is provided:

*Procedures for obtaining access to Critical Energy Infrastructure Information (CEII) may be found at 18 CFR §388.113. Requests for access to CEII should be made to the Commission’s CEII Coordinator.*

## 2.0 GENERAL DESIGN DRAWINGS

---

The General Design Drawings show overall plan views, elevations, and sections of the principal project works in sufficient detail to provide a full understanding of the Don Pedro Project. The drawings are prepared in accordance with FERC's regulations and provide plan views, elevations, and sections of the principal project works. The drawings were developed from the FERC-approved Exhibit L and F drawings, which depict the as-built condition of the Don Pedro Project as described in Exhibit A of this AFLA.

As noted above in Section 1.0, these drawings are designated CEII, are included in the version of Exhibit F filed only with FERC as Appendix F-1, and are summarized in Table 2.0-1.

**Table 2.0-1. Exhibit F General Design Drawings for the Don Pedro Project.**

<b>Drawing No.</b>	<b>Description</b>
F-1	General Project Layout
F-2	Rockfill Dam – Section and Details
F-3	Dikes A, B & C – Plans and Sections
F-4	Diversion Tunnel
F-5	Inlet Works
F-6	Outlet Works
F-7	Power Tunnel – Plan and Profile
F-8	Power Tunnel – Intake and Gate Shaft
F-9	Unit 4 Tailrace Tunnel
F-10	Spillway
F-11	Powerhouse Service Area
F-12	Powerhouse Generator Floor
F-13	Powerhouse Turbine Floor
F-14	Powerhouse Valve Floor
F-15	Powerhouse Longitudinal Section
F-16	Powerhouse Transverse Sections
F-17	Powerhouse Electrical - Main Single Line Diagram
F-18	Switchyard Electrical - Main Single Line Diagram
F-19	Switchyard Electrical Layout – South End
F-20	Switchyard Electrical Layout – North End and Sections
F-21	General Project Layout – Proposed Infiltration Gallery and Fish Counting and Barrier Weir
F-22	Proposed Infiltration Gallery
F-23	Proposed Fish Counting and Barrier Weir



### 3.0 SUPPORTING DESIGN REPORT

---

Section 4.41(g)(3) requires that an applicant for new license file a Supporting Design Report with the license application. The purpose of the Supporting Design Report is to demonstrate "...that existing structures are safe and adequate to fulfill their stated functions...". As noted above in Section 1.0, the Supporting Design Report is designated CEII and is included in the version of Exhibit F filed only with FERC as Appendix F-2.

Since the Don Pedro Project began operation, a FERC-approved independent inspector has inspected the Don Pedro Project nine times and has submitted to FERC Independent Safety Inspection Reports once every five years in conformance with 18 CFR part 12, Safety of Water Power Projects and Project Works. Table 3.0-1 summarizes these past reports, the date they were filed, and the names of the FERC-approved independent inspector who performed each of these Part 12 inspections. The Districts are not proposing any modifications to the principal civil works as part of this license application.

**Table 3.0-1. Summary of Part 12 Dam Safety Inspection Reports for the Don Pedro Project.**

<b>Independent Inspector</b>	<b>No. / Date Filed</b>
William A. Rettberg, GEI Consultants	Ninth Part 12 Safety Inspection Report / July 2016
William A. Rettberg, GEI Consultants	Eighth Part 12 Safety Inspection Report / June 2011
Peter J. Hradilek, HDR Engineering, Inc.	Seventh Part 12 Safety Inspection Report / April 2006
Wayne D. Edwards, HDR Engineering, Inc	Sixth Part 12 Safety Inspection Report / June 2001
Harza Corp	Fifth Part 12 Safety Inspection Report / June 1996
Bechtel Corp	Fourth Part 12 Safety Inspection Report / June 1991
Bechtel Corp	Third Part 12 Safety Inspection Report / May 1986
Carl V. Taylor	Second Part 12 Safety Inspection Report / June 1981
Carl V. Taylor	First Part 12 Safety Inspection Report / June 1976