

**GOVERNMENT OF PUERTO RICO
PUERTO RICO PUBLIC SERVICE REGULATORY BOARD
PUERTO RICO ENERGY BUREAU**

NEPR

Received:

Jul 9, 2021

12:36 PM

IN RE:

IN RE: REVIEW OF THE PUERTO RICO
ELECTRIC POWER AUTHORITY'S 10
YEAR INFRASTRUCTURE PLAN-
DECEMBER 2020

CASE NO. NEPR-MI-2021-0002

**SUBJECT: LUMA's Presentation for Technical
Conference of July 12, 2021**

**MOTION SUBMITTING LUMA'S PRESENTATION FOR TECHNICAL
CONFERENCE OF JULY 12, 2021**

TO THE PUERTO RICO ENERGY BUREAU:

COME NOW LUMA Energy, LLC ("ManagementCo")¹, and **LUMA Energy ServCo, LLC** ("ServCo")², (jointly referred to as "LUMA"), through the undersigned legal counsel and respectfully submit the following:

1. On July 2, 2021, this honorable Energy Bureau issued a Resolution and Order granting a request by LUMA to hold a conference in this proceeding ("July 2nd Order"). The Energy Bureau convened a Technical Conference to be held on July 12, 2021 at 9:30 a.m., "to discuss the streamlining of the work involved in the submittal of the [Scopes of Work] ("SOWs") and other information requested by the Energy Bureau for its evaluation." *See* July 2nd Order at page 2.

2. In the July 2nd Order, the Energy Bureau directed that on or before July 9, 2021 at noon, LUMA should file its presentation for the Technical Conference. The main objective of the presentation is to include a proposed process for the approval, review and oversight of federally

¹ Register No. 439372.

² Register No. 439373.

funded Transmission and Distribution (“T&D”) projects by the Energy Bureau, the Federal Emergency Management Agency (“FEMA”) and the Puerto Rico Central Office for Recovery, Reconstruction and Resiliency (“COR-3”).

3. LUMA hereby submits as Exhibit 1, the Power Point™ Presentation that it proposes to offer during the July 12th Technical Conference.

WHEREFORE, LUMA respectfully requests that the Energy Bureau **accept** the Power Point™ Presentation submitted as Exhibit 1 to this Motion that LUMA proposes to offer during the Technical Conference scheduled for July 12, 2021.

RESPECTFULLY SUBMITTED.

In San Juan, Puerto Rico, this 9th day of July 2021.

I hereby certify that I filed this motion using the electronic filing system of this Energy Bureau and that I will send an electronic copy of this motion to the attorneys for PREPA, Joannely Marrero-Cruz, jmarrero@diazvaz.law and Katuska Bolaños-Lugo, kbolanos@diazvaz.law.



DLA Piper (Puerto Rico) LLC
500 Calle de la Tanca, Suite 401
San Juan, PR 00901-1969
Tel. 787-945-9107
Fax 939-697-6147
/s/ Margarita Mercado Echegaray
Margarita Mercado Echegaray
RUA NÚM. 16,266
margarita.mercado@us.dlapiper.com

Exhibit 1
Presentation in pdf format



Federally Funded Projects Submission Process

NEPR-MI-2021-0002

July 12, 2021

Agenda

- Objectives
- Process Overview
- Process Maps by Phase
- Quarterly Reporting
- Estimated Project Submittal Timeline
- Supplemental: Current Status of Projects

Objectives

1. Present the proposed LUMA / FEMA process for the review, approval and oversight of activities related to federally funded T&D projects by the Energy Bureau, COR3 and FEMA
 2. Establish a systematic, efficient and effective approach to be applied for all federally funded project work that will:
 - Establish a common understanding of expectations (information to be submitted and timing of such submissions);
 - Provide the Energy Bureau transparency of the process and work being proposed; and
 - Provide PREB on-going view of the progress of work
 3. LUMA seeks the Energy Bureau's acknowledgment of the proposed process
- Additionally, LUMA is presenting supplemental information as way of an update of the current progress
 - The update is consistent with LUMA's Initial Budgets filing and the 90-Day Supplemental Update to FEMA



Process Overview

- All Federally-Funded T&D Projects presented to date to the Energy Bureau were contemplated as part of the Programs Briefs presented in LUMA's initial Budgets and approved by the Energy Bureau.
- To initiate projects and ensure full cost recovery by FEMA, LUMA is developing Statement of Works (*Initial SOWs*) that captures basic project information sufficient to meet COR3/FEMA requirements for approval and the provision of a FEMA project number to enable the continuation of the specific project.
 - Prior to submitting to FEMA, LUMA will file with the Energy Bureau for its review
 - LUMA anticipates submitting projects in a systematic approach with consideration of resources to develop the SOW with a view of having a constant stream of projects at various stages of development



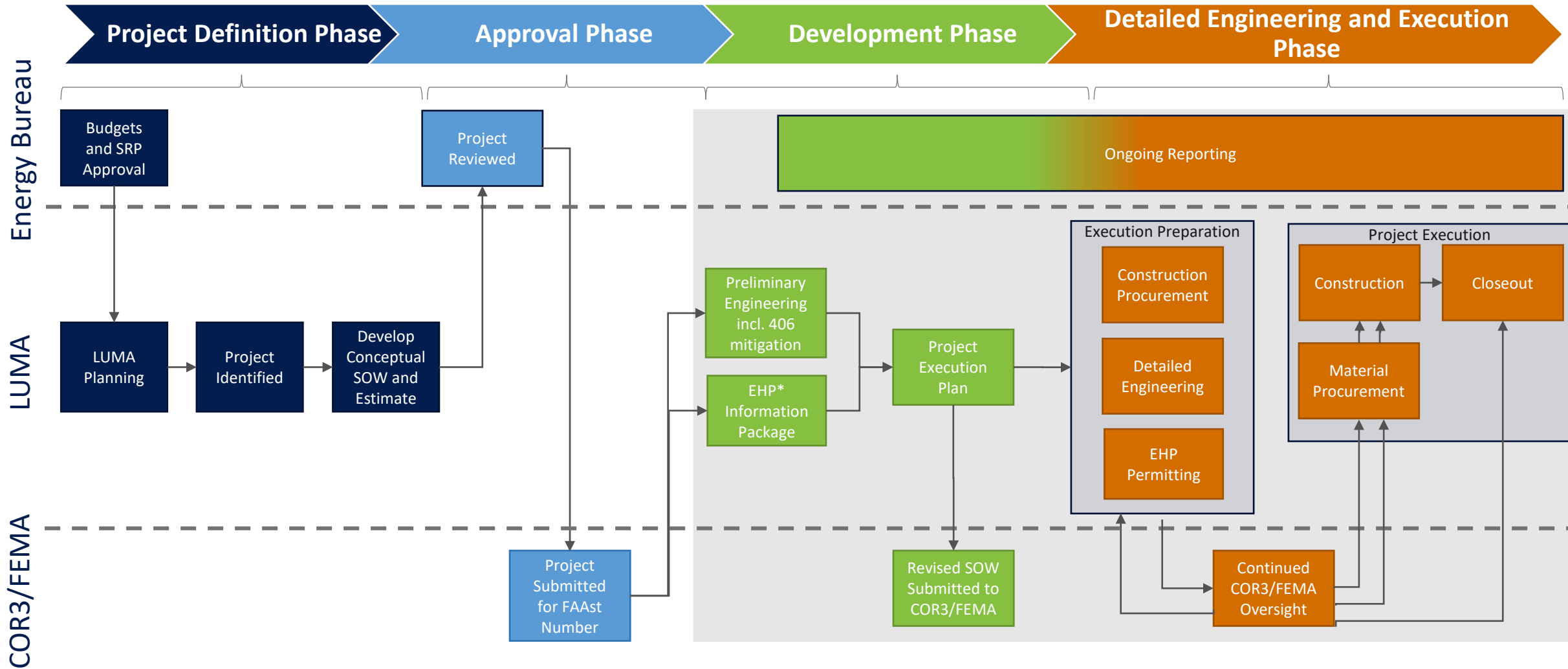
Process Overview

(Continued)

- Once FEMA provides a project number, LUMA will undertake the necessary engineering design work to further define the project scope, cost and schedule with intent to develop a *Detailed SOW* for COR3/FEMA's review & confirmation that the project may proceed to through to the procurement and construction phase.
- Throughout the procurement and construction phase, COR3/FEMA will be providing on-going execution oversight at various project milestones – as agreed to in the *Detailed SOW*.
- Throughout the procurement and construction phase, LUMA will be providing the Bureau with periodic reports to enable the oversight of project execution



Federally-Funded Project Approval/Review Process Map

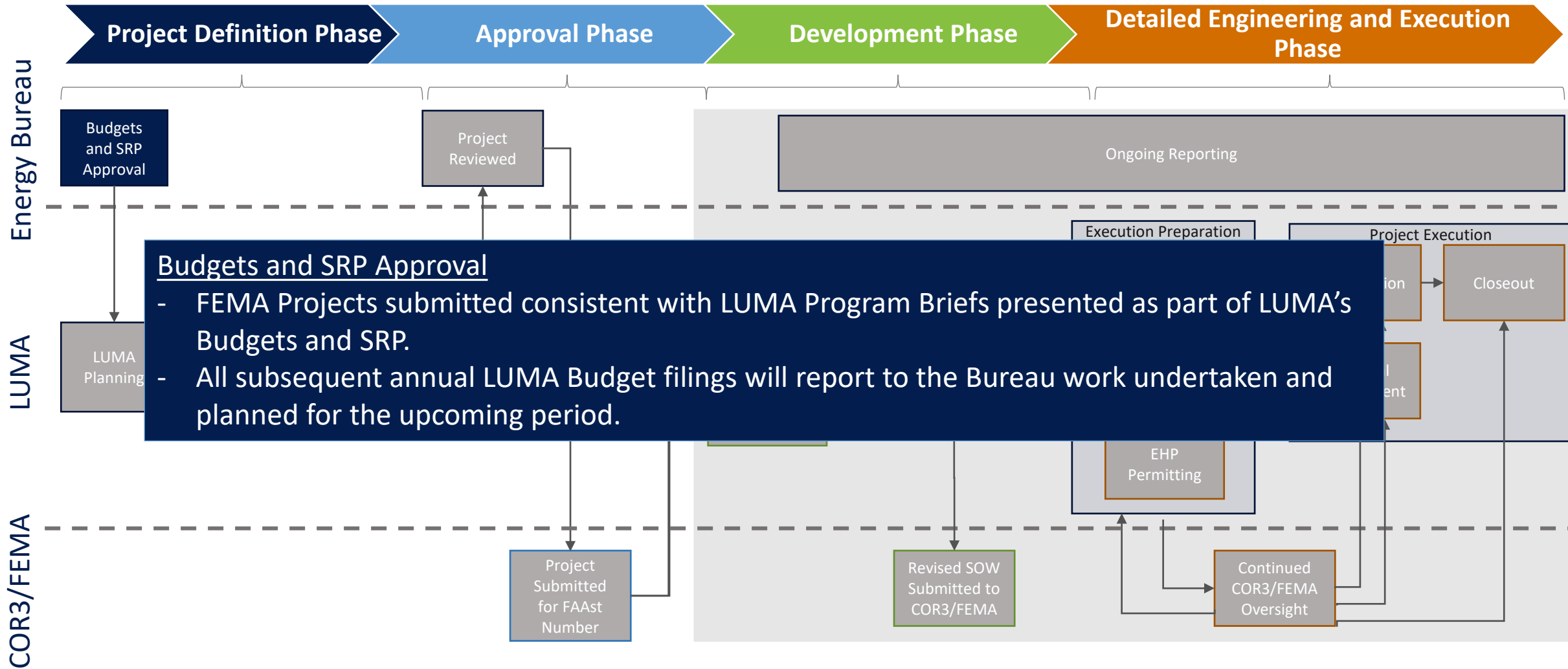


Activities eligible for federal funding

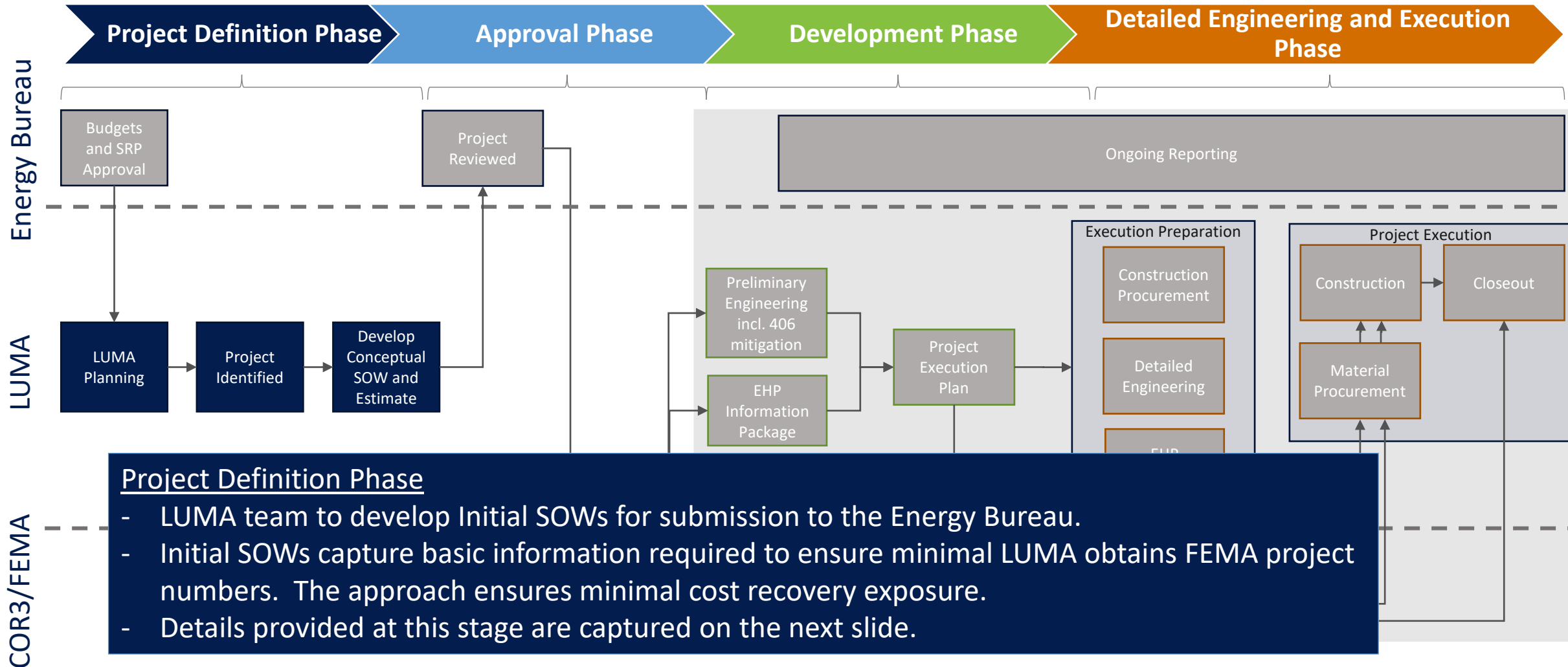


*EHP = Environmental and Historical Preservation

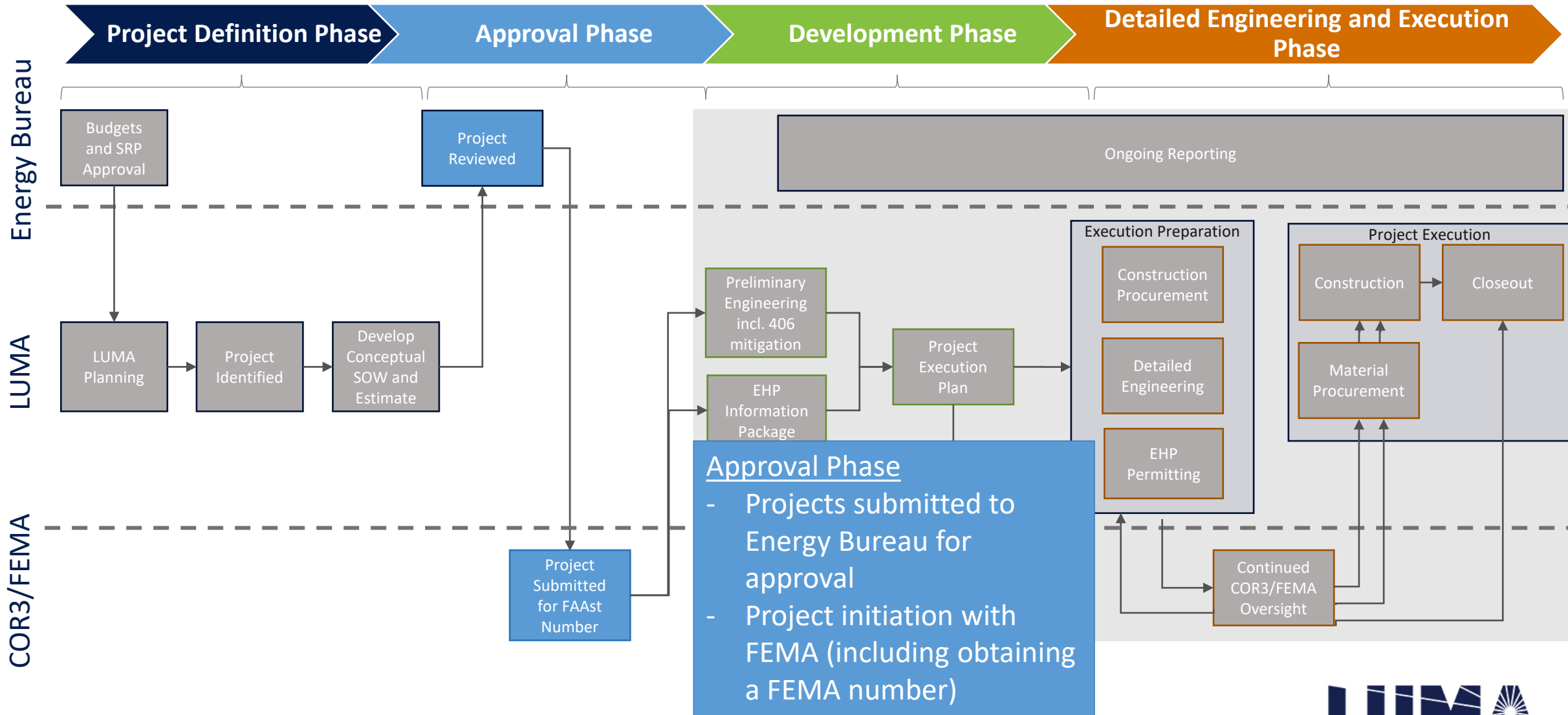
Federally-Funded Project Approval/Review Process Map



Federally-Funded Project Approval/Review Process Map



Federally-Funded Project Approval/Review Process Map



Details of the Initial Statement of Work

LUMA will comply with the Energy Bureau's direction to submit federally-funded projects to the Energy Bureau 30 days prior to submitting to COR3 and FEMA. Additionally, LUMA will ensure these projects are approved by the Energy Bureau before submitting to COR3 and FEMA.

FEMA Project Scope of Work

Doc. Name: FEMA Project Scope of Work
Project Name: Distribution Feeders - Arecibo Short Term Group 1
DR-4339-PR Public Assistance

Doc. Name: FEMA Project Scope of Work
Project Name: Distribution Feeders - Arecibo Short Term Group 1
DR-4339-PR Public Assistance

Doc. Name: FEMA Project Scope of Work
Project Name: Distribution Feeders - Arecibo Short Term Group 1
DR-4339-PR Public Assistance

Contents

FEMA Project
Approvals
Overview
Introduction
Facilities
Project Scope
Preliminary
Codes and Standards
Estimate
406 Hazard
Environment
Attachments

APPROVALS
The signature

Overview	
Project Name:	Distribution Feeders - Arecibo Short Term Group 1
Project #:	10007
Region:	Arecibo
Project Sponsor:	Quyen Nguyen
Project Manager:	Jaime Equinones
Damage Number:	250081
Damaged Inventory/Asset Category:	Island Wide Distribution
FEMA Project Number: (formerly Project Worksheet)	<Provided by FEMA>

Introduction

The purpose of this document is to present and update a Project Scope of Work (SOW) with Cost Estimates to be submitted to COR3 and FEMA for projects under DR-4339-PR Public Assistance. The completed document will be reviewed by COR3 and FEMA to create and version a specific project worksheet and post fixed-cost estimates to repair, restore, or replace eligible facilities including Section 406 hazard mitigation for a specific project.

LUMA Energy provides the Operation and Maintenance of the electric service to the entire Island of Puerto Rico. Puerto Rico Electric Power Authority (PREPA) is the agency that owns the facilities, sites, and systems identified in this Scope of Work that are eligible as critical services facilities as defined in the PAAP (Section 428) and BBA 2018 guidance documents.

This document will be updated with information developed during the initial design and engineering phase through the construction phase.

QMS Doc. ID: 1110 Rev. 0
Project Doc. No: 10007-FM-SOW-0001_Rev0

Page 4 of 9

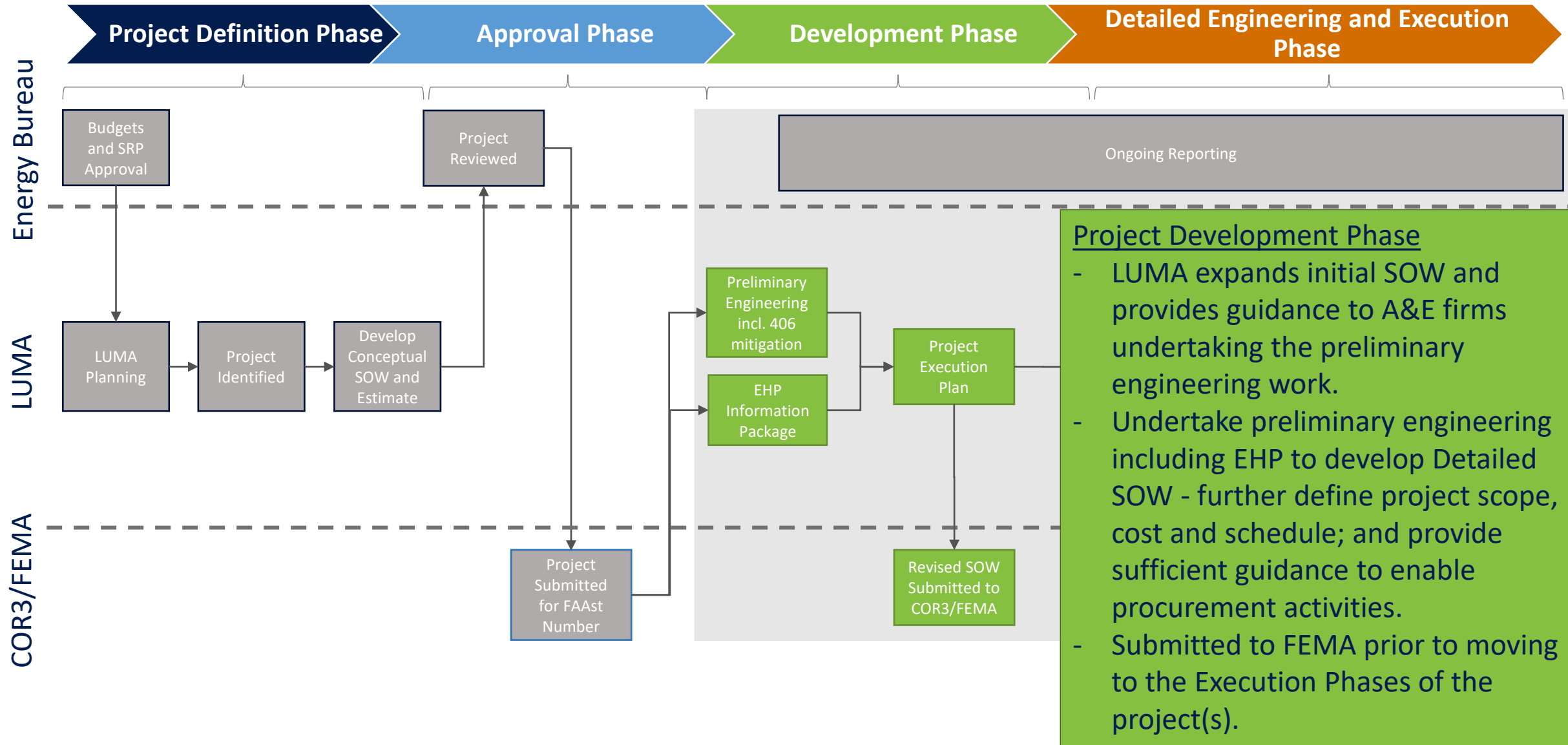
LUMA's FEMA Scope of Work Document submitted to the Energy Bureau will include:

- LUMA Approvals
- Project Overview
- Project Facilities
- Project Scope of Work (Initial / Conceptual)
- Codes and Standards
- Estimate (Level 5)
- Relevant Attachments

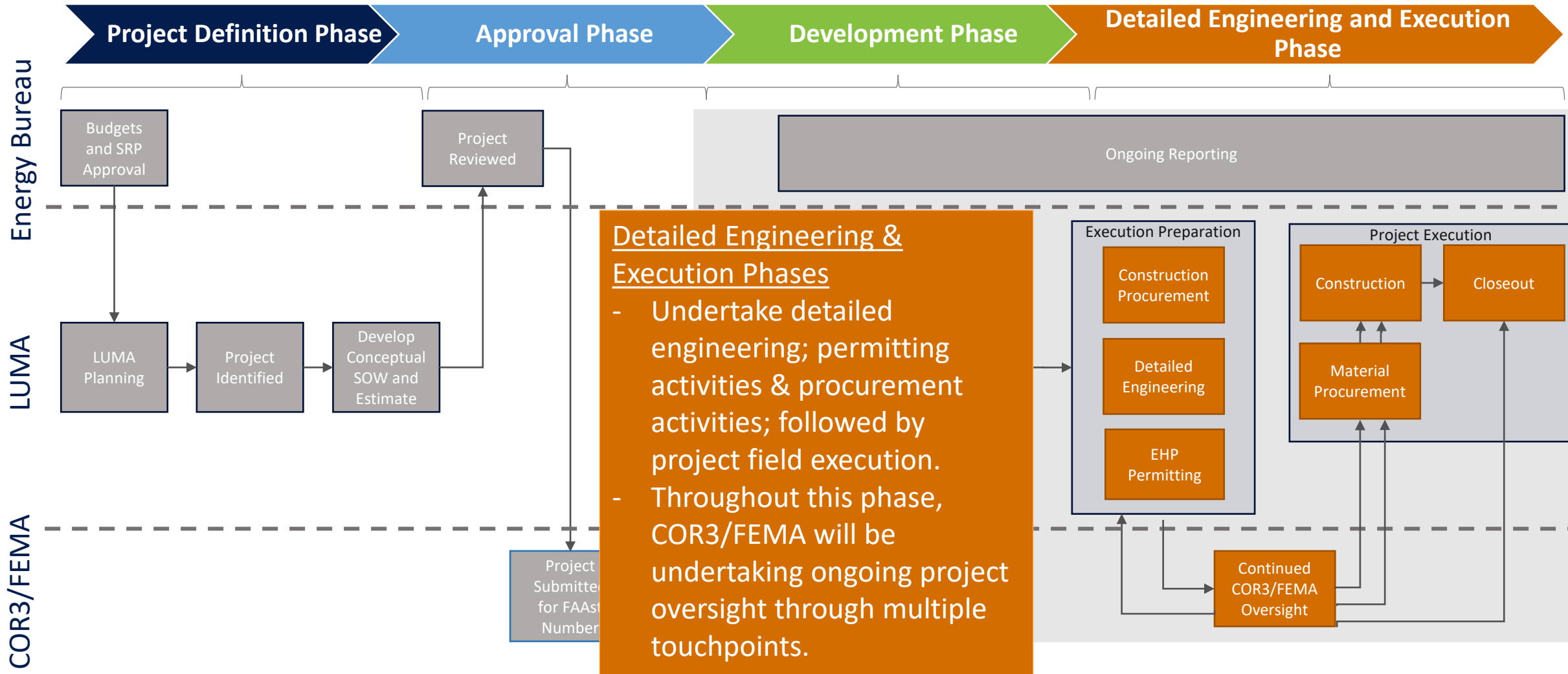
Certain required information outlined in the April 22nd Resolution and Order issued by the Energy Bureau may not be created prior to project initiation with FEMA.



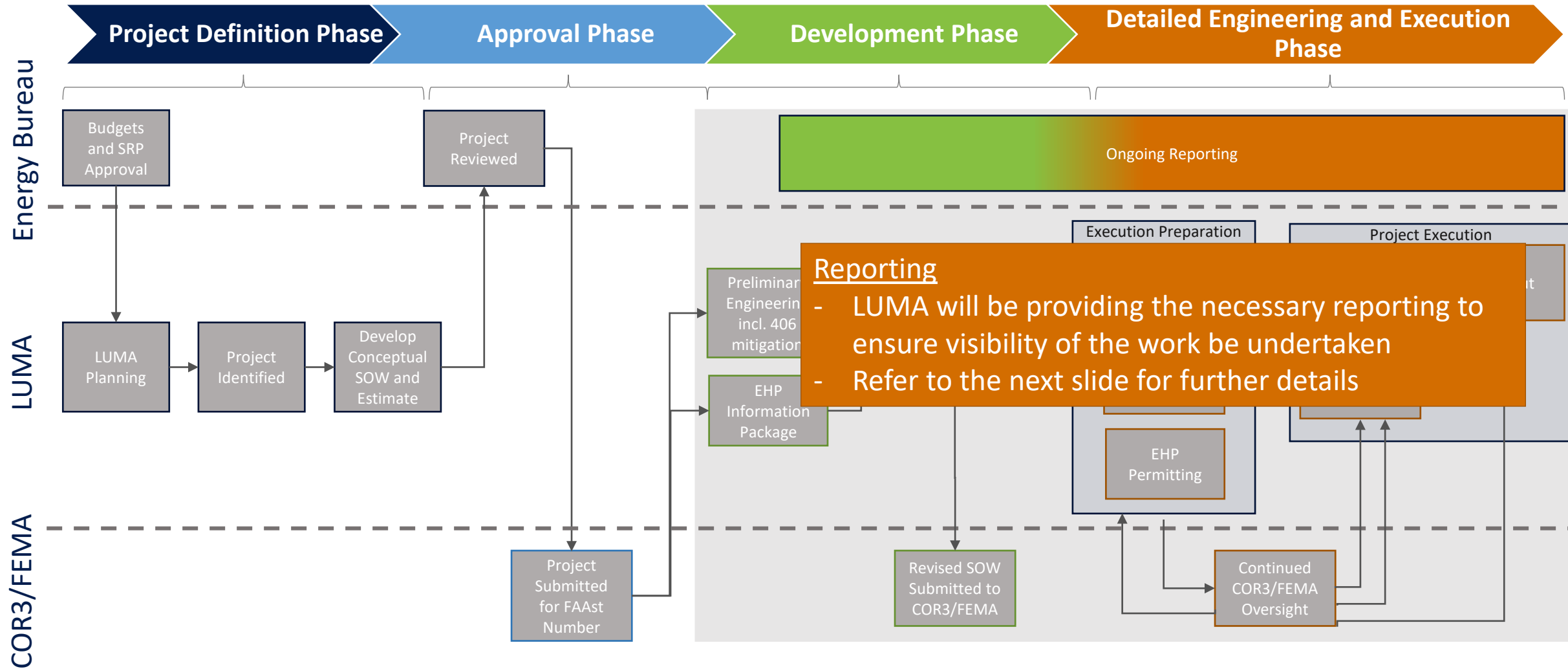
Federally-Funded Project Approval/Review Process Map



Federally-Funded Project Approval/Review Process Map



Federally-Funded Project Approval/Review Process Map



Reporting

- **Within the Initial Budgets and the System Remediation Plan reporting requirements, multiple reports will be provided to the Energy Bureau which will contain the following data organized by Program Brief to fulfil requirements coming from:**
 1. System Remediation Plan (NEPR-MI-2020-0019) June 23, 2021 Resolution & Order:
 1. Actual spending amounts reflecting in detail variances from the SRP filing
 2. Detailed timeline per portfolio
 3. Schedule status updates, and where behind schedule a comparison to the initial SRP timeframe, cause of delay and corrective actions implemented
 2. Initial Budgets (NEPR-MI-2021-0004) May 31, 2021 Resolution & Order:
 1. Actual spending amounts detailing variances from the Initial Budgets filing
 2. Funding, withdrawals and outstanding balances in the Operating Budget, the Capital Budget and the Generation Budget Accounts
 3. Federal Funding activity including cumulative and incremental funding (both applied for or received by) with source, and projects categorized by portfolio for new and those currently under review, along with agency review status

The Report will also provide a List of new FEMA Project SOW's expected to be submitted to the Energy Bureau during the next quarter.

- **As part of this docket (NEPR-MI-2021-0002) LUMA will continue to submit the 90-day update to the FEMA Workplan**



Supplemental Information – Current Progress



Status of Projects

- As LUMA assumes responsibility for T&D FEMA projects post June 1, 2021, it continues to review and refine the initial list of projects submitted to the Energy Bureau by PREPA on March 26, 2021
 - This consists reorganizing projects within the original April 26th submission
 - The reorganization resulted in 139 projects currently contemplated
- Additionally, LUMA has begun project planning on approximately 15 projects, which will be provided one basic projects definitions have been created

Mapping to previous filings

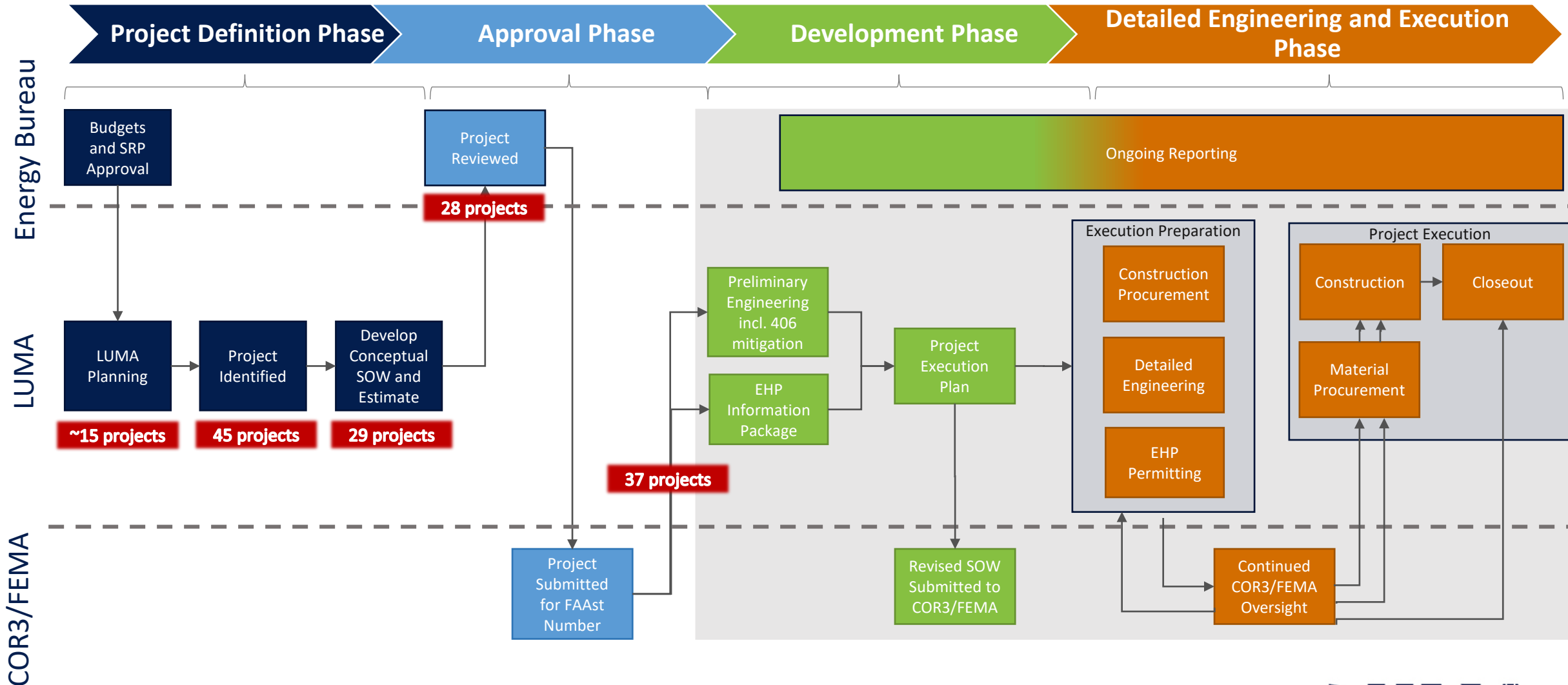
Category	April 14 th	April 9 th	July 9 th
Transmission	43	43	38
Distribution	98	7	25
Substation	44	44	48
IT, Buildings & Environmental		38	28
Total	185	132	139

Current Status of Projects

Project Status	As of July 9 th
Development (A&E) Phase	37
Approval Phase (Submitted to PREB)	28
Initial SOW Under Development	29
Project Initiation	45
Total Defined Projects	139
Project Planning	~15
Total	154

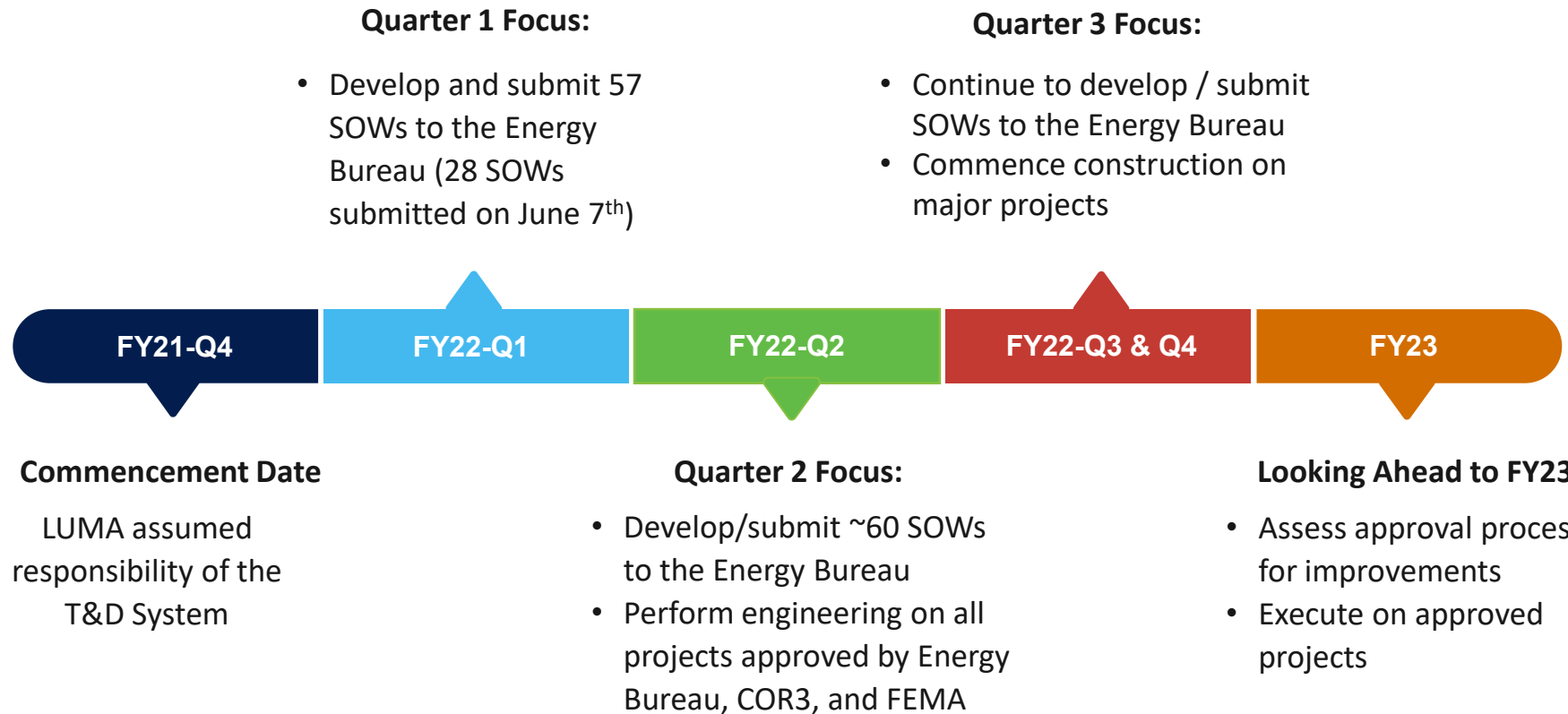


Federally-Funded Project Approval/Review Process



Estimated Project Submittal Timeline

LUMA has focused on defining the official process and templates for submitting scopes of work to the Energy Bureau, COR3 and FEMA for review that meets COR3 and FEMA requirements and standards.



Closing Remarks and Next Steps

LUMA would like to thank the Energy Bureau for the opportunity to participate in this session and establish an effective and efficient process for seeking approval on federally-funded projects. We look forward to collaborating with the Energy Bureau in this process.

Next Steps

Federally-Funded Project Approval Process

- Receive feedback and achieve alignment with the Energy Bureau on the Federally-Funded Project Review/Approval Process
- Present process to COR3 / FEMA to ensure common understanding
- First quarterly reporting post September 2021

Project Advancement

- Advancing 57 SOWs to PREB through end of Q1 FY 2022 – 28 submitted and 29 remain to be submitted
- Continue project initiation and planning of remaining 60 projects
- LUMA to continue to provide updates as projects advance through Project Definition Phase



Sample Initial SOW







Document Name:
FEMA Project Scope of Work

Project Name:
Distribution Feeders - Arecibo Short Term Group 1

Revision: 0
Date: 24JUN2021

APPROVALS

The signatures below formally approve the FEMA Project Scope of Work Template.

Grant Manager's Name	Signature	Date
Hernando Gee		7/6/2021
Department VP's Name	Signature	Date
Donato Cortez		7/7/21



Document Change Control

This table contains a history of the revisions made to this document.

Rev.	Date of Issue	Brief Description of Change
0	24JUN2021	Issued for Use



Contents

FEMA Project Scope of Work.....	1
Approvals.....	1
Overview.....	4
Introduction.....	4
Facilities.....	5
Project Scope.....	6
Preliminary Engineering.....	7
Codes and Standards.....	7
Estimate.....	8
406 Hazard Mitigation Proposal.....	8
Environmental & Historic Preservation Requirements.....	8
Attachments.....	9



Overview

Project Name:	Distribution Feeders - Arecibo Short Term Group 1
Project #:	10007
Region:	Arecibo
Project Sponsor:	Quyên Nguyen
Project Manager:	Jaime Quinones
Damage Number:	250081
Damaged Inventory/Asset Category:	Island Wide Distribution
FEMA Project Number: <i>(formerly Project Worksheet)</i>	<Provided by FEMA>

Introduction

The purpose of this document is to present and update a Project Scope of Work (SOW) with Cost Estimates to be submitted to COR3 and FEMA for projects under DR-4339-PR Public Assistance. The completed document will be reviewed by COR3 and FEMA to create and version a specific project worksheet and post fixed-cost estimates to repair, restore, or replace eligible facilities including Section 406 hazard mitigation for a specific project.

LUMA Energy provides the Operations and Maintenance of the electric service to the entire island of Puerto Rico. Puerto Rico Electric Power Authority (PREPA) is the agency that owns the facilities, sites, and systems identified in this Scope of Work that are eligible as critical services facilities as defined in the PAAP (Section 428) and BBA 2018 guidance documents.

This document will be updated with information developed during the initial design and engineering phase through the construction phase.



Facilities

Facilities List

The facilities listed below are part of the feeder systems in the Arecibo Region. These interconnected and inter-functional distribution feeders (sites) establish the electrical distribution system. The feeders all originate from a substation (start) and serve customers along a route to various locations (end). GPS Coordinates for the start and end point of each electrical feeder project are noted in the table below and depicted on the attached feeder maps. These feeders are a subset of projects identified in the Distribution Feeders – Arecibo Short Term projects in the PREPA 10-Year Infrastructure Plan.

Name	Number	GPS Start	GPS End	Voltage Level (kV)
Dominguito	8010-01	18.41962 -66.76419	18.34727 -66.81873	7.2
Manatí 13.2 kV	8404-03	18.43292 -66.45595	18.41402 -66.48785	13.2
Manatí 13.2 kV	8404-04	18.43292 -66.45595	18.4244 -66.47527	13.2
Cruce Davila	8501-02	18.43091 -66.56307	18.43371 -66.61310	4.16
Ciales	8701-01	18.32748 -66.47385	18.30271 -66.48116	8.32
Ciales	8701-02	18.32748 -66.47385	18.34210 -66.47007	8.32

Facilities Description

The specific facilities included in this project are: poles and structures (including their foundations), framing and insulators, load break switches (manual and automated), capacitor banks, voltage regulators, transformers (including lightning arresters and fuse cut-outs), conductors, guy wires, anchoring, grounding assemblies, underground cable, underground cable systems, fault interrupting equipment (fuses, reclosers, and sectionalizers), and any other associated components.



Project Scope

Scope of Work Description (e.g., Plan for Repair)

Feeders will undergo comprehensive distribution modeling, analysis, and simulation to validate planning criteria such as: conductor loading, voltage parameters, power factor, reliability metrics, distribution automation device placement, and coordination of protective devices. The engineering team will perform assessments of overhead facilities and document damaged assets to be repaired or replaced. The results of these assessments will help define the scope of restoration to industry standards. Note that this project is based on a damage assessment sample that was extrapolated across the entire distribution system, therefore existing documentation of hurricane damage may not be available. For both overhead and underground facilities, the engineering team will conduct a route study to verify underground cable system routing, identify conflicts with foreign utilities, test subsurface conditions, research right-of-way and easement availability, identify environmental and cultural impact, and identify highway/rail/waterway crossings.

Structure foundations will be designed and engineered to confirm structural soundness and stability. Damaged structures/poles will be replaced with higher class (strength) structures/poles made of steel, concrete, or fiberglass composite. Damaged crossarms will be replaced with composite, galvanized, or stainless steel crossarms. Porcelain insulators and any other damaged insulator will be replaced with silicone rubber insulators.

Missing or damaged grounding assemblies will be replaced to fulfill system grounding integrity. Damaged conductor spans will be replaced between poles and re-sagged per codes and standards. Damaged structure guying elements will be repaired or replaced, such as slack guy wires or pulled anchors.

In order to comply with codes and standards and to allow for construction access, vegetation removal will be considered in the scope of work. The scope of vegetation removal will be defined during the preliminary engineering phase. The preliminary engineering phase may also find that soil boring or testing is needed to make sure conditions are suitable for installation of structures/poles or underground cable systems. When possible, facilities will remain along their existing route and within the existing right-of-way.

The final SOW (plans and specifications) will be completed by Q2 2022 and construction will be completed by 2023.

Type of Project

Indicate whether the intended plan is a(n):

1. **Restoration to Codes/Standards:** Restores the facility(s) to pre-disaster function and to approved codes/standards
2. **Improved Project:** Restores the pre-disaster function of the facility(s) and incorporates improvements including any:
 - a. Other improvements, not required by codes and standards
 - b. Changes in facility size, capacity, dimension, or footprint



3. Alternate Project: Does not restore the pre-disaster function of the damaged facility(s)

Choose One (Restoration, Improved or Alternate)
If improved, provide the changes in facility size, capacity, dimension, or footprint. If alternate, provide rationale for recommendation.
Restoration to Codes and Standards
This work will be in compliance with FEMA (Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR February 2020)

Note: If preliminary A&E work has not been completed, the type of work designation is considered initial and is based on currently available information. The type of work designation may be revised based on the results of the completed preliminary A&E work.

Preliminary Engineering

Is architectural and engineering funding required to help define the intended scope of work?

Yes

Codes and Standards

Which of the following types of codes, specifications, and standards apply to the restoration, replacement, relocation, or alternate scope of work?

The following will be referenced when applying specific codes, specifications, and standards to the project design:

1. Consensus-based codes, per FEMA (Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR February 2020).
2. Industry standards per FEMA Recovery Policy FP-104-009-5, Version 2, Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program.
3. FEMA Recovery Interim Policy FP-104-009-11 Version 2.1, Consensus-Based Codes, Specifications, and Standards for Public Assistance.
4. LUMA's latest Design Criteria Document (DCD) which aggregates the design considerations of the vast majority of the consensus-based codes, specifications, and standards listed in FEMA Recovery Interim Policy 104-009-11 Version 2.1 (December 20, 2019).

Codes, Specifications, and Standards

Yes If yes, describe how incorporated below.
Applicable codes and standards will be identified and incorporated into the plans and specifications.



Industry Standards

Yes If yes, describe how incorporated below.
Applicable codes and standards will be identified and incorporated into the plans and specifications.

Estimate

Cost estimates to complete the work have been generated at a class 5 level, which is between -50% and +100% of the final project cost. The estimate includes materials, construction labor and equipment, engineering, permitting, management, and contingencies.

Estimated Budget for Architectural & Engineering to Design:	\$2.79M
Estimated Budget for Procurement & Construction:	\$50.79M
Estimated Overall Budget for the Project:	\$53.58M

406 Hazard Mitigation Proposal

406 Mitigation Opportunity Scope of Work

During the preliminary design phase, LUMA will develop and propose 406 Hazard Mitigation proposals consistent with the damages. These proposals will be documented with BCAs.

406 Mitigation Opportunity Cost Estimate

Estimated Budget for Architectural & Engineering to Design:	Unknown at this time
Estimated Budget for Procurement:	Unknown at this time
Estimated Budget for Construction:	Unknown at this time
Estimated Overall Budget for the Project:	Unknown at this time


Note: If available, detailed engineering cost estimates will be included as an attachment.

Environmental & Historic Preservation Requirements

EHP considerations will be identified and evaluated during the preliminary design phase and submitted to FEMA for review. Requirements will be incorporated into the final design and construction documents to be approved by FEMA prior to construction activities.



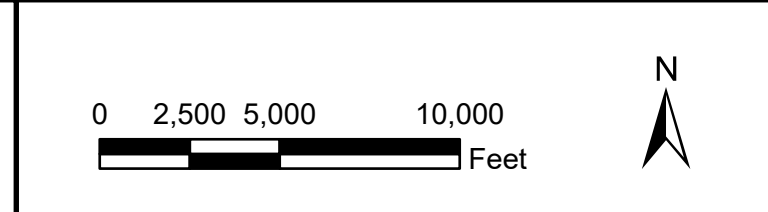
Attachments

Document Name	Description
<N/A>	Project Cost Estimates
<N/A>	Engineering Studies and Designs
 Arecibo Short Term Group 1 (Distributio	Location Maps and Site Picture

Path: Z:\Clients\TND\PREPA127500_PREPA10YR_PGM\Environmental\01 - Geospatial\DataFiles\ArcDocs\Circuit Maps\CircuitMaps.aprx
COPYRIGHT © 2017 BURNS & MCDONNELL ENGINEERING COMPANY, INC.



- ▲ Critical Load
- End
- Start
- Proposed Critical Load Underground
- Proposed Main Feeder Overhead Hardening
- OH Primary Conductor Circuit
- UG Primary Conductor Circuit

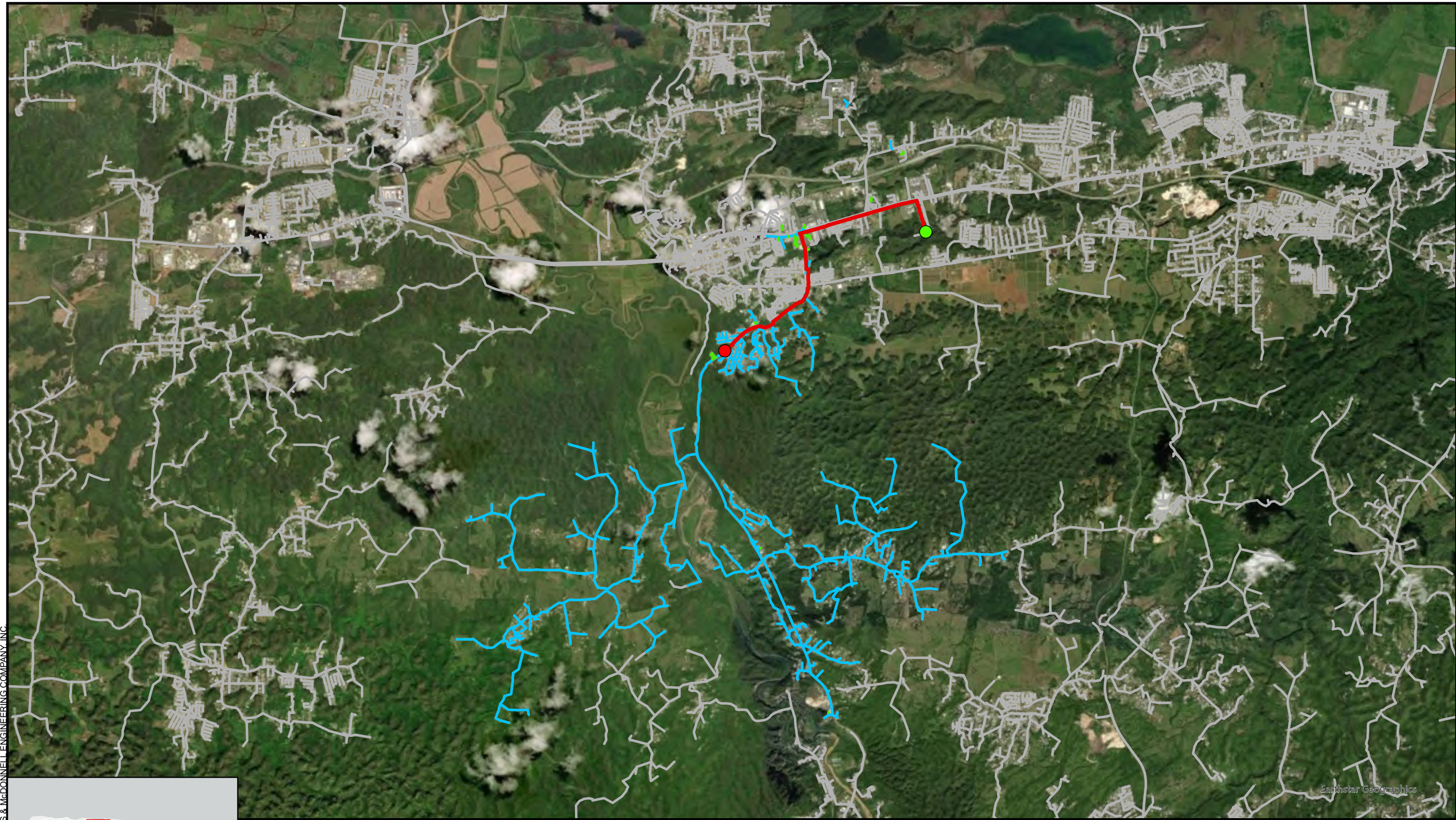


Circuit: 8010-01

Esri, HERE, Garmin, FAO,
NOAA, USGS, NPS

Issued: March 9, 2021








Path: Z:\Clients\TND\PREPA127500_PREPA10YR-PCM\Environmental\01 - Geospatial\DataFiles\ArcDocs\Circuit Maps\CircuitMaps.aprx
COPYRIGHT © 2017 BURNS & MCDONNELL ENGINEERING COMPANY, INC.




Earthstar Geographics



Esri, HERE, Garmin, FAO,
NOAA, USGS, NPS

	Critical Load		Proposed Critical Load Underground
	End		Proposed Main Feeder Overhead Hardening
	Start		OH Primary Conductor Circuit
			UG Primary Conductor Circuit

0 2,500 5,000 10,000 Feet

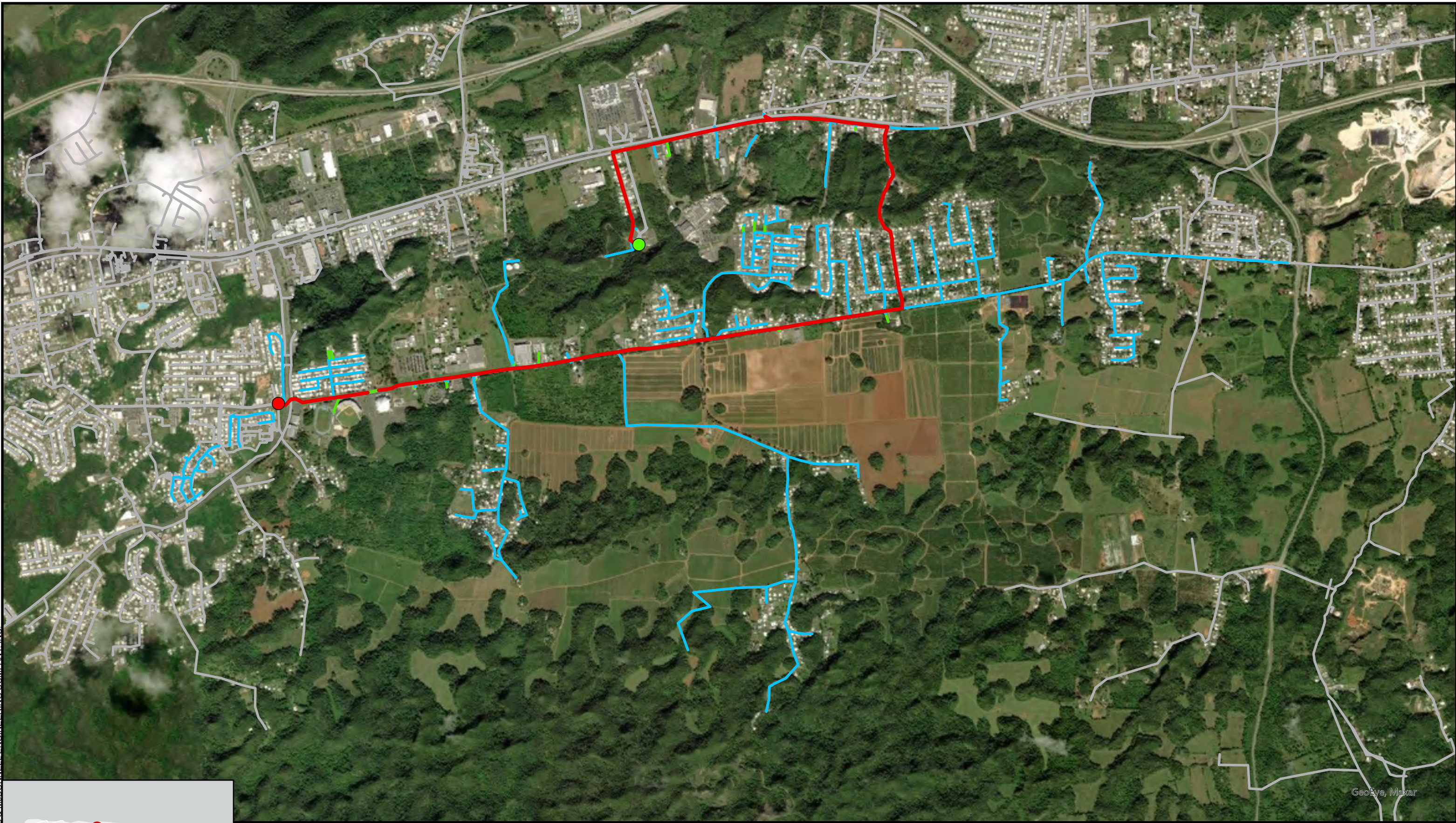


Source: ESRI and Burns & McDonnell Engineering.



Circuit: 8404-03








Path: Z:\Clients\TND\PREPA127500_PREPA10YR_PGM\Environmental\01 - Geospatial\DataFiles\ArcDocs\Circuit Maps\CircuitMaps.aprx
COPYRIGHT © 2017 BURNS & MCDONNELL ENGINEERING COMPANY, INC.

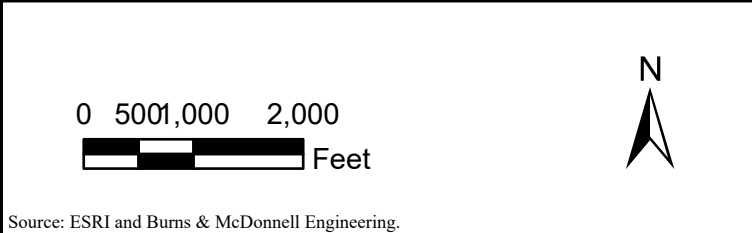


GeoEye, Maxar



Esri, HERE, Garmin, FAO,
NOAA, USGS, NPS

 Critical Load	 Proposed Critical Load Underground
 End	 Proposed Main Feeder Overhead Hardening
 Start	 OH Primary Conductor Circuit
	 UG Primary Conductor Circuit

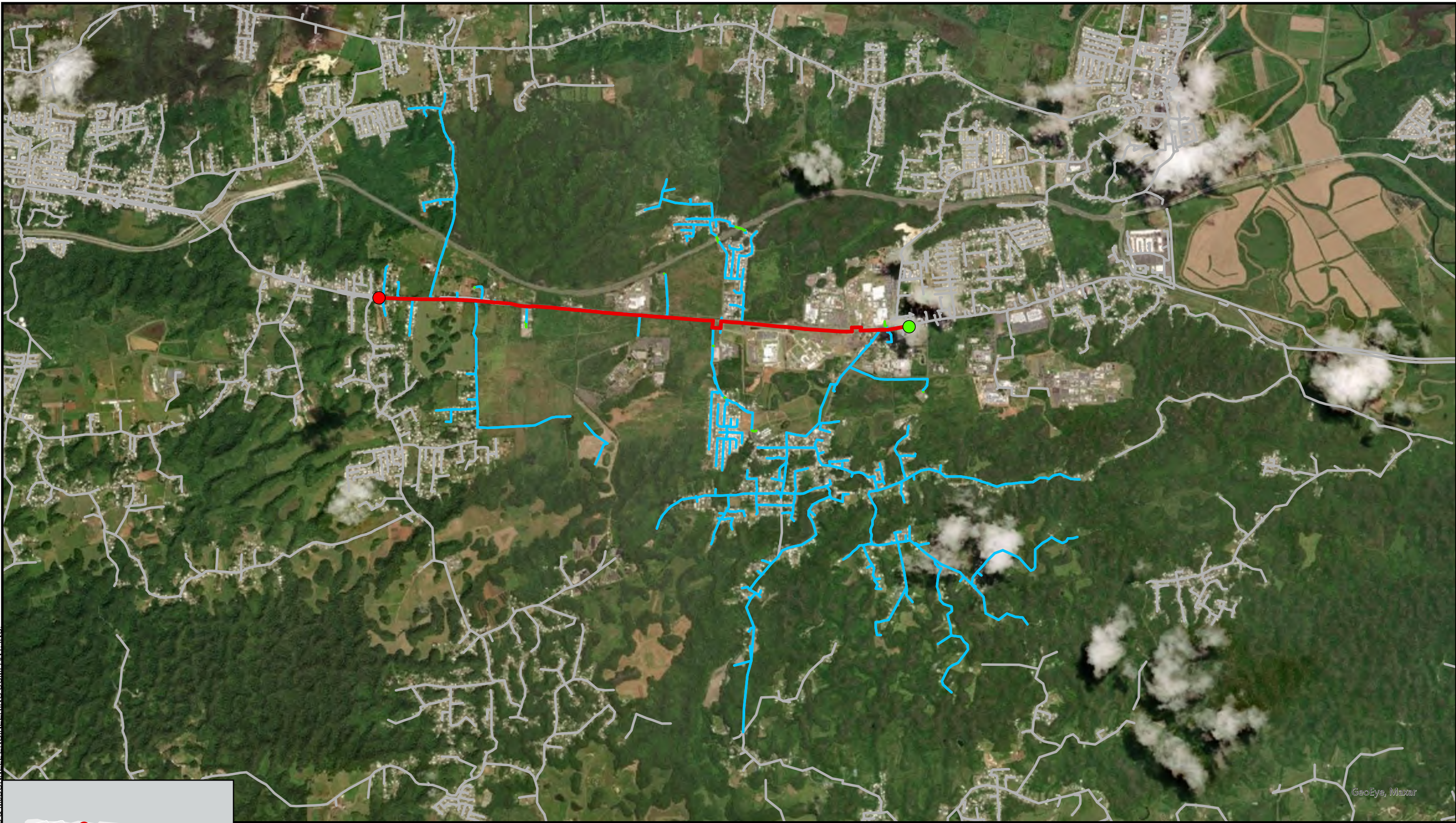


Source: ESRI and Burns & McDonnell Engineering.



Circuit: 8404-04








Path: Z:\Clients\TND\PREPA127500_PREPA10YR_PGM\Environmental\01 - Geospatial\DataFiles\ArcDocs\Circuit Maps\CircuitMaps.aprx
COPYRIGHT © 2017 BURNS & MCDONNELL ENGINEERING COMPANY, INC.

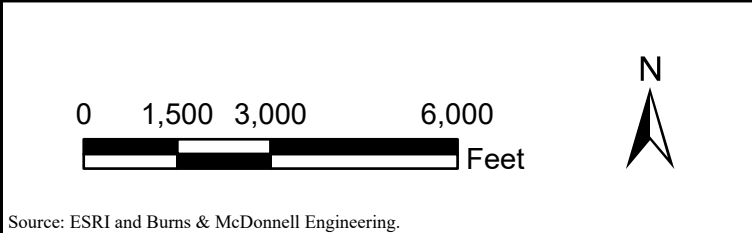


GeoEye, Maxar



Esri, HERE, Garmin, FAO,
NOAA, USGS, NPS

	Critical Load		Proposed Critical Load Underground
	End		Proposed Main Feeder Overhead Hardening
	Start		OH Primary Conductor Circuit
			UG Primary Conductor Circuit

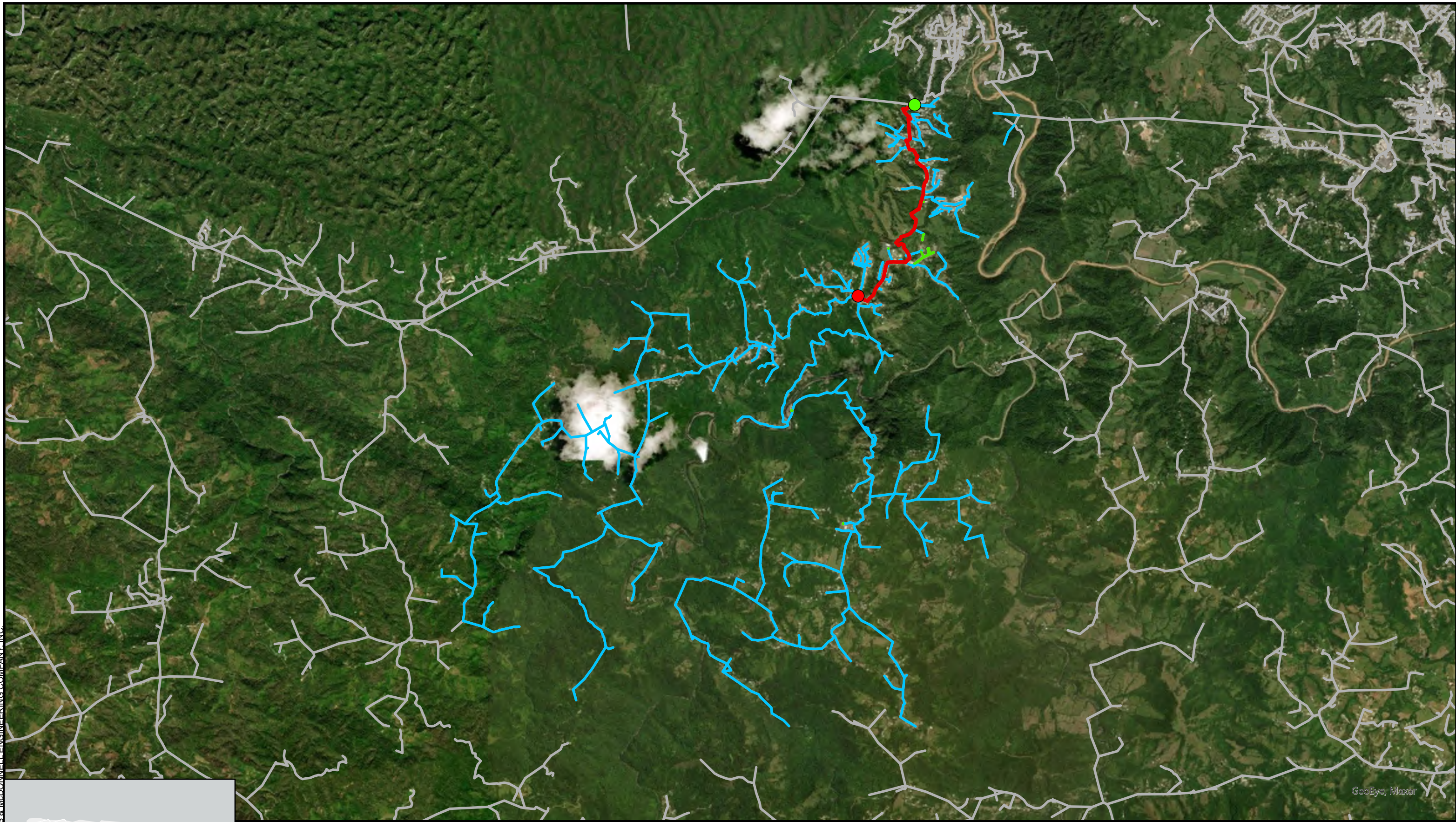


Source: ESRI and Burns & McDonnell Engineering.



Circuit: 8501-02








Path: Z:\Clients\TND\PREPA127500_PREPA10YR_PGM\Environmental\01 - Geospatial\DataFiles\ArcDocs\Circuit Maps\CircuitMaps.aprx
COPYRIGHT © 2017 BURNS & MCDONNELL ENGINEERING COMPANY, INC.

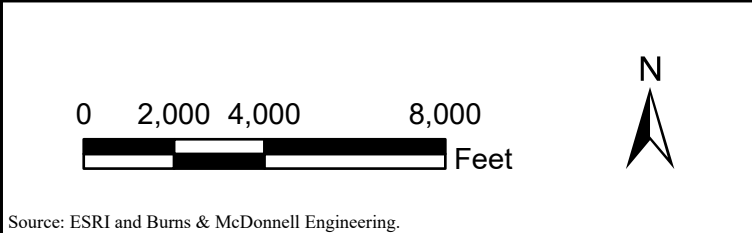


GeoEye, Maxar



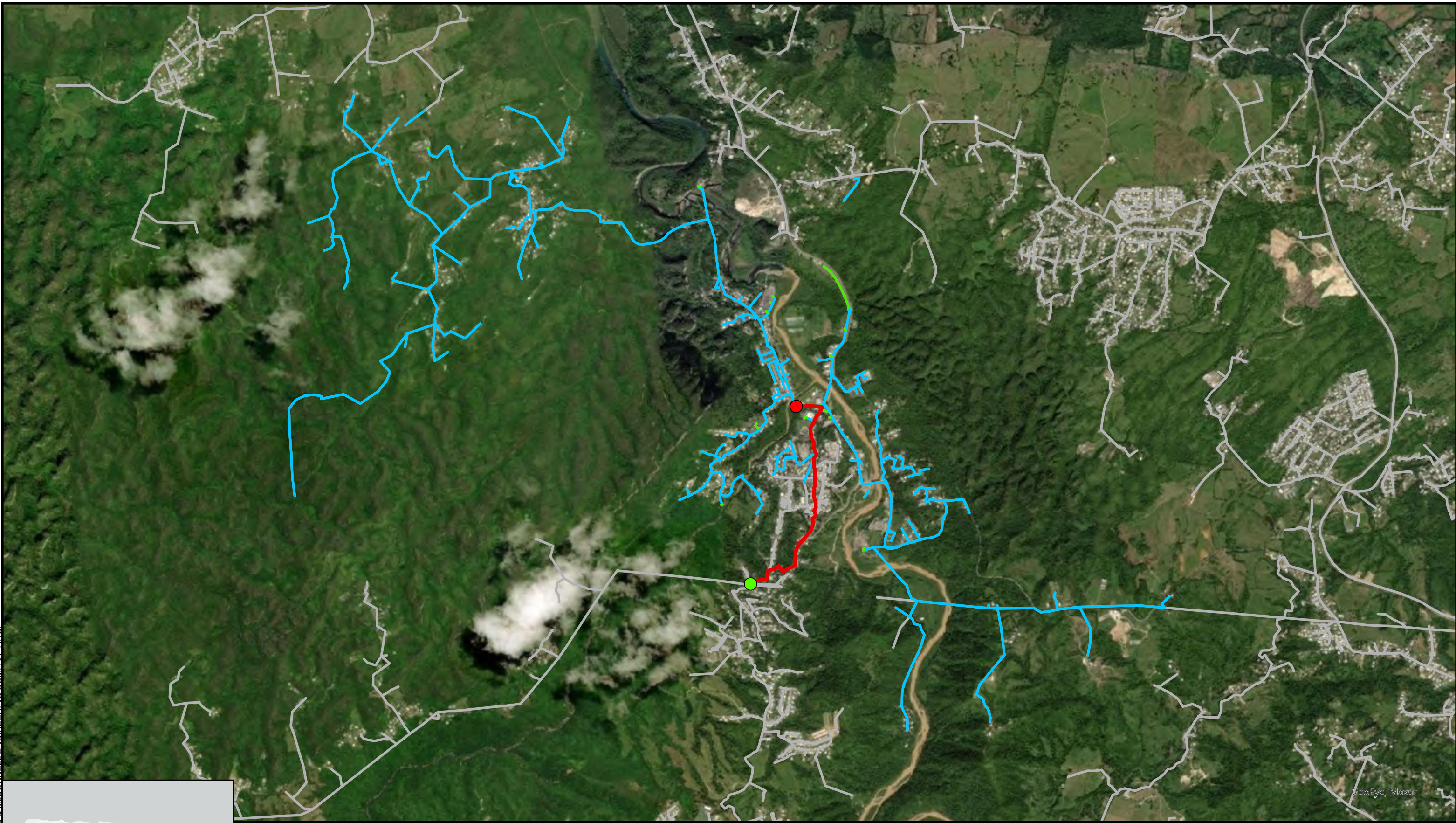
Esri, HERE, Garmin, FAO,
NOAA, USGS, NPS

	Critical Load		Proposed Critical Load Underground
	End		Proposed Main Feeder Overhead Hardening
	Start		OH Primary Conductor Circuit
			UG Primary Conductor Circuit










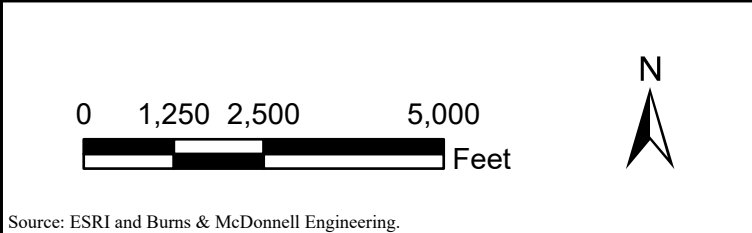
Circuit: 8701-01

Path: Z:\Clients\TND\PREPA127500_PREPA10YR_PGM\Environmental\01 - Geospatial\DataFiles\ArcDocs\Circuit Maps\CircuitMaps.aprx
COPYRIGHT © 2017 BURNS & MCDONNELL ENGINEERING COMPANY, INC.



Esri, HERE, Garmin, FAO,
NOAA, USGS, NPS

	Critical Load		Proposed Critical Load Underground
	End		Proposed Main Feeder Overhead Hardening
	Start		OH Primary Conductor Circuit
			UG Primary Conductor Circuit



Source: ESRI and Burns & McDonnell Engineering.



Circuit: 8701-02