

Electric Distribution Map Corrections

SUMMARY

This utility procedure contains requirements and procedures for identifying, submitting, categorizing, prioritizing, processing, validating, and measuring electric distribution (ED) map correction requests. The steps outlined in this document support improvements to the electric operations Asset Registry that in turn supports management of the inherent risks associated with electric operations infrastructure.

Per [Utility Standard TD-9212S, "Electric Operations Asset Registry Governance,"](#) and other company requirements such as PAS 55 and ISO 55001, Electric Operations has an obligation to ensure that all electric asset data in the Asset Registry is unambiguous, traceable, verifiable, and complete (UTVAC), as well as properly maintained. This procedure supports these requirements and provides the blueprint for ensuring a digital twin approach between the field and the Asset Registry. Both PG&E and non-PG&E personnel are required to provide Asset Registry data corrections when different from field conditions.

Level of Use: Informational Use

TARGET AUDIENCE

- Electric infrastructure inspection planning and execution managers, supervisors, and inspectors
- Electric estimating and service planning managers, supervisors, estimators, and associate distribution engineers (ADEs)
- Maintenance and Construction (M&C) superintendents and field personnel
- Risk Management and Asset Strategy planners
- Electric mapping managers, supervisors, and ED mapping personnel
- Electric transmission (ET) and ED personnel involved in maintaining poles and line facilities
- Request for Work (RW) map correction submitters

SAFETY

The accuracy of the data in the Asset Registry is directly impacted by reported map corrections as well as the ability to validate, confirm, and verify information introduced into the system.

All business processes and business decisions that use the Asset Registry rely on its accuracy and completeness.

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BEFORE YOU START

1. REVIEW the following terms:
 - **Request for Work (RW):** A notification type in SAP that contains the information for work to be performed.
 - **Map correction:** A reported discrepancy between the Asset Registry and field conditions.
 - **Work types:** Work types in SAP further define the type of work requested in a map correction RW. The following are work types related to this RW map correction process:
 - EDMP: Electric Distribution Map Corrections
 - EDJP: Electric Distribution Joint Pole
 - ETMP: Electric Transmission Map Corrections
 - EDLB: Electric Distribution Land Base Map Corrections
 - **Source system:** A system that can be used to create and submit a map correction (i.e., Inspect app, Web Viewer, SAP).
2. Personnel in the field must **EVALUATE AND IDENTIFY** critical Asset Registry gaps as part of their work **AND ESTABLISH** procedures to comply accordingly.
3. When submitting work using Asset Registry information, **ENSURE** that the latest published version is used.
4. **ENSURE** that all tools, technologies, and processes that result in digitally submitted map corrections satisfy the following:
 - They are delivered properly.
 - They adhere to this procedure.
 - They meet PG&E's minimum documentation requirements for UTVAC, when submitted.

NOTE

A submitted request is considered a map correction when a source system creates an RW notification in SAP.

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BEFORE YOU START (continued)

5. ENSURE that each functional area (FA) that submits map corrections has a process for managing map corrections that may be returned (e.g., needs documentation, unclear request, incomplete information).

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PROCEDURE STEPS

1 Program Leadership

- 1.1 EVALUATE – stakeholders must continually REVIEW this procedure to ensure that it meets the needs and expectations of their respective programs and functional areas.
- 1.2 INCORPORATE – stakeholders must INCLUDE AND SATISFY the requirements described in this procedure in their respective training, technology, and procedures.

2 Identification and Submission

- 2.1 PG&E personnel CREATE RW notification map corrections in the Electric Distribution Geographic Information System (EDGIS) Web Viewer, in SAP, or via the Inspect app for identified data corrections and investigation of asset data discrepancies.
- 2.2 Geographical Information System (GIS) Quality Management Technology and Projects (QMT&P) and GIS Production personnel EVALUATE each RW notification submitted for completeness, verifiable evidence, accuracy of content, AND ENSURE that all data requirements are represented for the data change.

1. Timely completion of RW notifications contributes to accurate and complete asset data.

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2.3 Identifying a Map Correction – Identifying Personnel

1. WHEN identifying or becoming aware of an Asset Registry electric map discrepancy, the identifying personnel must COMPARE the information on the Asset Registry electric map to field equipment, asset information, and physical location.
2. IF any of the following discrepancies are identified,
THEN SUBMIT a map correction request:
 - An attribute of an existing asset is incorrect (e.g., barcode, California grid coordinate number, [CGC#], Operating Number, etc.).
 - The location of an existing asset is incorrect.
 - The type of equipment of an existing asset is incorrect.
 - An asset on the map does not exist in the field.
 - An asset exists in the field but does not exist on the map.
 - Land base information is incorrect.
 - Customer misassignment.
 - An asset is related to a structure incorrectly.

2.4 Submitting a Map Correction – Identifying Personnel/Submitter

1. SUBMIT a map correction via one of the following source systems:
 - Web Viewer
 - Inspect appOTHERWISE, IF neither of the above systems can be used,
THEN SUBMIT a map correction via SAP.
2. PROVIDE the following required information when submitting a map correction:
 - Asset type
 - Correction type (i.e., Add, Remove, Relocate, Attribute Update, Relate)
 - Location of correction (latitude and longitude coordinates)
 - Submitter's LAN ID

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2.4 (continued)

- Date and time submitted
- Data requirements per the [Map Correction Minimum Requirements](#), maintained by GIS QMT&P and GIS Production
- Additional data/documents, as needed to support the specific change request

3. REFER to the job aid for the source system being used:

- Web Viewer: [Job Aid TD-9001P-01-JA03, "Submit an RW Map Correction in ED Web Viewer"](#)
- Inspect app: [Job Aid TD-9001P-01-JA04, "Submit an RW Map Correction in Inspect App"](#)
- SAP: [Job Aid TD-9001P-01-JA01, "Submit an RW Map Correction in SAP"](#)

2.5 Cancelling a Map Correction – Submitter

1. IF a map correction must be cancelled, THEN TAKE the following actions:
 - a. FORWARD the confirmation email to Electric Mapping Support at: ADMIRWMapCorrections@pge.com.
 - b. CHANGE the email subject to "Delete Map Correction Request."

3 Gatekeeping

3.1 The gatekeeping process is the primary method for prioritizing and categorizing map corrections. The Map Correction Gatekeeping team REVIEWS incoming RWs AND CATEGORIZES each one using a combination of **asset type** and **correction type**.

- **Asset type:** The type of asset for which the Asset Registry update is being requested.
- **Correction type:** The requested action for updating the Asset Registry.

3.2 Gatekeeping for Prioritization and Categorization

1. The Gatekeeping team CATEGORIZES map corrections according to the [Map Correction Categorization Matrix](#), maintained by GIS QMT&P and GIS Production.
2. IF an RW must be updated to a different category after the gatekeeping phase, THEN the mapping supervisor(s) responsible for managing the transmission and distribution (T&D) RW map corrections CONTACTS the gatekeeping team lead to update the data in the categorization database.

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3.3 Gatekeeping for Transmission Pole RWs from ED Mapping

1. IF a distribution mapper receives an RW that involves transmission facilities, THEN they must CHANGE the work type code (WTC) to “ETMP” so that the RW will be appropriately picked up by ET Mapping.
2. REFER to [Job Aid TD-9001-01-JA05, “RW Map Correction Transmission Pole RWs from ED Mapping.”](#) for instructions on how to reassign the notification to an ET mapper and remove the ED mapper.

4 Map Correction Prioritization

- 4.1 As map corrections are received, GIS QMT&P and GIS Production CATEGORIZE them into an **asset type** and a **correction type**. The resulting categorization is used to derive the criticality, production method, and quality control (QC) method for that map correction.
- 4.2 The categories are documented in the [Map Correction Categorization Matrix](#), which is used to prioritize and manage RW notifications. The asset types used for RW categorization align with the asset types published in Asset Strategy’s asset management plans.
- 4.3 Criticality
 1. Criticality is derived from a combination of asset types and correction types determined by the intake/gatekeeping steps. Using the Consolidated Asset Priority Index (CAPI), where the asset type’s ranking is “High,” and where the correction type is one of the following shown in [Table 1, “RW Map Correction Types,”](#) below, the workload is considered **Critical**. Each asset type in the CAPI has a summary ranking which is determined by input from stakeholders across the organization.

Table 1. RW Map Correction Types

Correction Type	Description
Add	An asset to be added to the Asset Registry.
Remove	An asset to be removed from the Asset Registry.
Relocate	An asset to be moved to a different location in the Asset Registry.
Multiple*	The change request spans multiple work types.

*Multiple is not a correction type; it is a change request that spans multiple work items and does affect criticality.

2. All other asset type and correction type combinations are considered **Non-Critical**.
3. Undetermined Criticality Determination

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4.3 (continued)

- a. There may be RW map corrections that have yet to receive a calculated CAPI criticality and ranking. Until the CAPI is updated, any RW map corrections without a categorized asset type or correction type in the CAPI are considered **Undetermined Criticality**.
 - b. Undetermined Criticality map corrections are prioritized immediately after Critical and before Non-Critical map corrections to mitigate any potential risk of the RW map correction being Critical.
4. Asset Types Not Previously Addressed in the CAPI
- a. Asset types not previously addressed in the CAPI are categorized as “Other” and ranked as “Low Risk.” This “Low Risk” ranking is used during the GIS QMT&P and GIS Production RW mapping process if the gatekeeper is unable to categorize an RW map correction into the current asset type.
5. Idle Correction Type
- a. The “Idle” correction type is not a map correction, per [Table 1, “RW Map Correction Types,”](#) on Page 6, but it does affect the map correction process during gatekeeping. Gatekeepers CONSIDER the criticality and prioritization rankings of the Idle correction type to determine criticality and prioritization.

4.4 Ranking

1. **Ranking** (i.e., High, Medium, Low) is derived using a combination of asset types and correction types as described in Table 2, “RW Map Correction Rankings,” below.
2. The ranking determines the production method and QC method of a map correction.

Table 2. RW Map Correction Rankings

Ranking	Criteria
High	Asset type – CAPI Asset Rank H Correction type – Add, Remove, Replace, or Multiple
Medium	Asset type – CAPI Asset Rank H Correction type – Not: Add, Remove, Replace, or Multiple
Medium	Asset type – CAPI Asset Rank M Correction type – Add, Remove, Replace, or Multiple
Low	Asset type – CAPI Asset Rank M Correction type – Not: Add, Remove, Replace, or Multiple
Low	Asset type – CAPI Asset Rank L Correction type – Any

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4.4 (continued)

3. The criticality and ranking of each asset type/correction type is defined in the [Map Correction Categorization Matrix](#).
4. REFER to this matrix for any exceptions to the above rules.

4.5 Prioritization

1. Map corrections are prioritized within the categories below, in the following order, for mapping and review:
 - a. Critical RWs in wildfire areas
 - b. Critical RWs in non-wildfire areas
 - c. Undetermined Criticality RWs in wildfire areas
 - d. Undetermined Criticality RWs in non-wildfire areas
 - e. Non-Critical RWs in wildfire areas
 - f. Non-Critical RWs in non-wildfire areas

NOTE

“First In First Out” (oldest to newest) is used within each prioritization category when no conflicting priorities or escalations are present.

Specific priorities determined by Asset Knowledge Management (AKM) and GIS QMT&P and GIS Production leadership may supersede this priority.

5 Validation

5.1 Waste Elimination

1. IF it is determined that an RW should not or cannot be moved forward in the process, so that the RW is considered process waste,

THEN REFER to [Table 3, “Waste Summary,”](#) on Page 9, which details the types of waste and how they are handled.

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5.1 (continued)

Table 3. Waste Summary

Waste Type	Countermeasure	Process Owner
Duplicate RWs	<p>RESEARCH to find duplicates, defined by the same asset type and correction type (and attribute, if applicable).</p> <ul style="list-style-type: none"> IF duplicates are found, CANCEL all but one RW. <p>IF there are multiple map corrections for the same asset and same update, but the update requests conflict,</p> <p>THEN CREATE a Corrective Action Program (CAP) to the asset owner for asset information AND to Control Center Operations for operating information (e.g., switch numbers, fuse numbers). The CAP references the RWs and the RWs are cancelled.</p> <p>FOLLOW the steps outlined in Job Aid TD-9001P-01-JA06, "Close a Map Correction in SAP," to cancel an RW.</p> <p>Tools to use:</p> <ul style="list-style-type: none"> SAP query Web Viewer map correction layer Foundry GIS Priority Ranking Dashboard 	Mapper
Incomplete Documentation (IDOC)	<p>When an RW map correction is submitted without all the required information as per Map Correction Minimum Requirements, Mapping cannot accurately update GIS.</p> <p>When an RW is received with missing information, mappers must MARK the RW as "IDOC" (Incomplete Documentation). This indicates that the RW is missing the required information to be processed and is on hold, pending additional information.</p> <p>For instructions on how to mark an RW as IDOC, REFER to Job Aid TD-9001P-01-JA07, "RW Map Correction Incomplete Documentation (IDOC) Process."</p> <p>For instructions on adding IDOC Reason Codes, REFER to Job Aid TD-9001P-01-JA08, "RW Map Correction Instructions for Adding IDOC Reason Codes."</p> <p>SEE Section 5.3, "Incomplete Documentation (IDOC) Process" on Page 10 for more information on the IDOC process and workflow.</p>	Mapper
No Mapping Required (NMR)	<p>The requested correction in the RW is already reflected in GIS.</p> <p>IF no update is required,</p> <p>THEN CANCEL the RW. REFER to Job Aid TD-9001P-01-JA06, "Close a Map Correction in SAP," for instructions.</p>	Mapper

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5.2 Special Scenarios

1. REFER to [Table 4, "Special Scenarios,"](#) below, which outlines scenarios requiring additional steps for validation.

Table 4. Special Scenarios

Scenario	Countermeasure	Process Owner
Related to Existing As-Builts	<p>If a map correction requests updates to an asset within the scope of an existing as-built, the mapper MAKES one of the following determinations:</p> <ol style="list-style-type: none"> 1. As-built is with Mapping (active DC14 task or beyond): <ol style="list-style-type: none"> a. CANCEL the RW. The map updates are prioritized and executed via the existing as-built. b. FOLLOW the steps outlined in Job Aid TD-9001P-01-JA06, "Close a Map Correction in SAP." 2. As-built is not with Mapping: <ol style="list-style-type: none"> a. UPDATE GIS as requested in the RW. b. USE the as-built Job Prefix attribute "PM" AND the Job Number attribute to populate the asset in GIS. c. USE the RW map correction information to make the updates. This information is subject to all standards and requirements of the map correction process. d. REFER to Job Aid TD-9001P-01-JA09, "Job Prefix Standards for Assets Installed on RW Related to Existing As-Built." <p>Tools to use:</p> <ul style="list-style-type: none"> • SAP query • Web Viewer map correction layer • Web Viewer WIP cloud layer • Foundry GIS Priority Ranking Dashboard 	Mapper
Joint Pole Related	SEE Subsection 7.5, "Joint Pole Map Corrections," on Page 15.	Mapper

5.3 Incomplete Documentation (IDOC) Process

1. This section describes how a mapper PROCESSES an RW map correction with missing information AND REQUESTS the missing information from the map correction submitter to resolve the IDOC.
2. IF the RW map correction has incomplete documentation,

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5.3 (continued)

THEN the mapper SETS the notification to "IDOC" AND SELECTS the IDOC Reason Code.

- a. REFER to [Job Aid TD-9001P-01-JA08, "RW Map Correction Instructions for Adding IDOC Reason Codes,"](#) for details on selecting the appropriate IDOC Reason Codes.

3. IF the RW map correction with incomplete documentation contains some information that can be mapped,

THEN the mapper PERFORMS the following steps:

- a. Partially MAP the map correction.
- b. ENTER a note in the SAP notification Repair Data comments/long text detailing what was partially mapped.
- c. LEAVE the map correction in IDOC status with the proper IDOC Reason Code selected until complete documentation is received.
 - (1) REFER to [Job Aid TD-9001P-01-JA08](#) for details on selecting the appropriate IDOC Reason Codes.

4. The mapper EMAILS the RW map correction submitter and respective supervisor to obtain the missing/incomplete information.

- a. IF the mapper RECEIVES the information from the submitter to clear the IDOC,
THEN the mapper UPDATES the status in SAP to "IDCR" (IDOC Resolved)
AND MAPS the notification.
- b. OTHERWISE, IF the mapper DOES NOT RECEIVE the information from the submitter,

THEN the mapper LEAVES the notification in IDOC status where it will age until the information is received.

- (1) The RW map correction process lead SENDS a monthly report containing outstanding IDOCs to mapping supervisor(s).
- (2) The mapping supervisor(s) DISTRIBUTE the outstanding IDOCs to the affected mappers.
- (3) The mappers FOLLOW UP with the submitters and respective supervisors to obtain the missing information.

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5.3 (continued)

- REFER to [Figure 1, "RW Map Correction IDOC Process Flow,"](#) below, for a visual representation of this process.

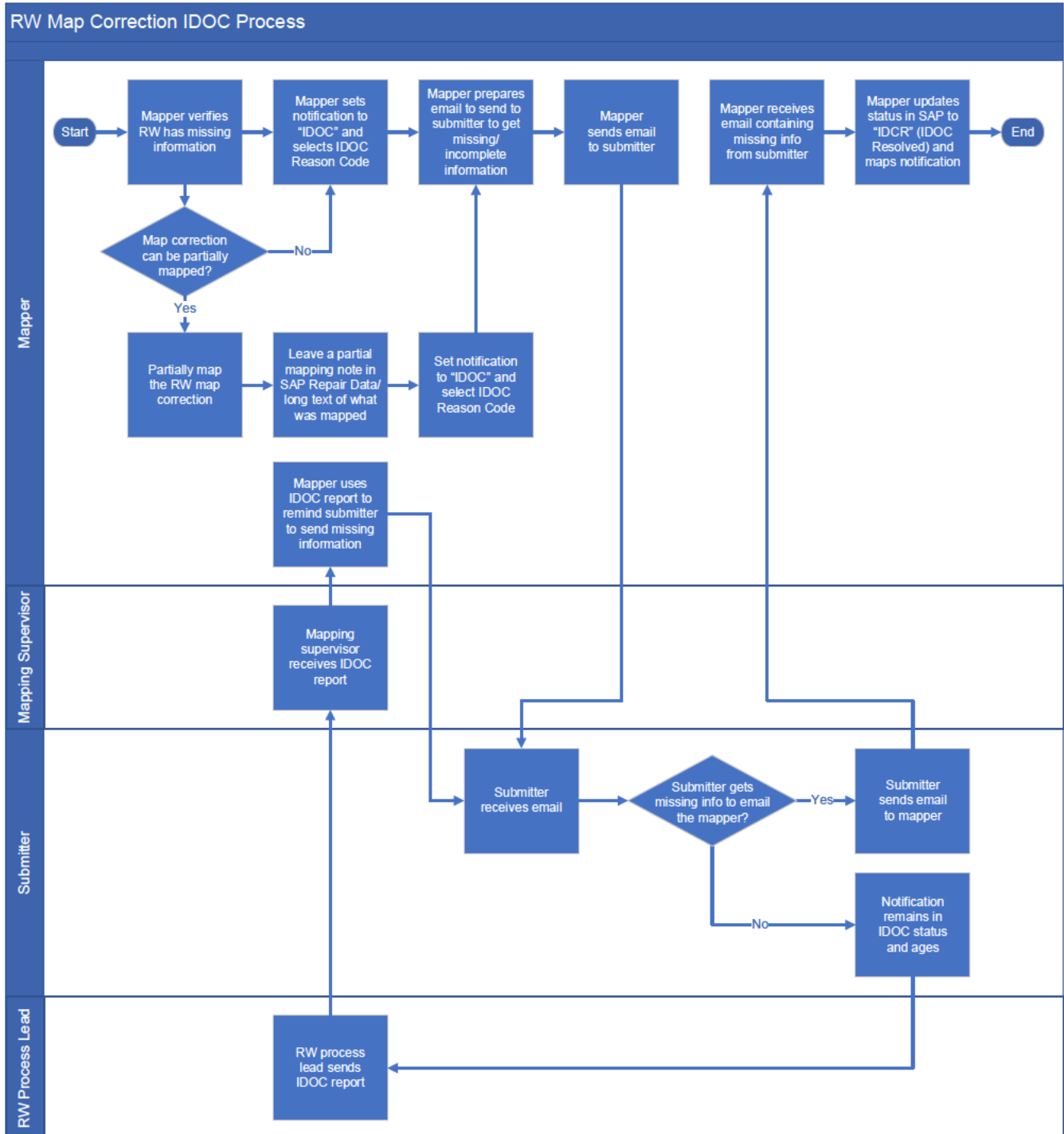


Figure 1. RW Map Correction IDOC Process Flow

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5.4 Pole Validation Mapper Guidelines for Pole Removals RWs

1. All PG&E mappers and non-PG&E personnel tasked with processing pole removal RWs in GIS must VALIDATE the absence or presence of poles in the field while reviewing an RW.
2. REFER to the following job aids for standardized guidelines on how to process pole removal RWs:
 - [Job Aid TD-9001P-01-JA10, "Pole Validation Mapper Guidelines for Pole Removal RWs"](#) – This job aid is for all mappers tasked with processing pole removal RWs in GIS. It provides guidelines which standardize how mappers are required to validate the absence or presence of poles in the field while reviewing an RW.
 - [Job Aid TD-9001P-01-JA11, "ET Process for Manual Deactivation of Records in SAP"](#) – This job aid is for mappers. It provides guidelines which standardize how mappers are required to manually deactivate ET asset records in SAP.
 - [Job Aid TD-9001P-01-JA12, "ED Process for Manual Deactivation of Records in SAP"](#) – The job aid is for ED mappers. It provides guidelines which standardize how mappers are required to manually deactivate ED asset records in SAP.

6 Assignment

- 6.1 The process for work assignments varies between PG&E mappers and non-PG&E personnel. In both scenarios, map correction work is assigned based on criticality and ranking with the aim of improving cycle times and volume and increasing timely processing.
- 6.2 PG&E Mapper Assignment
 1. PG&E mappers ASSIGN themselves Critical and Undetermined Criticality RWs using the Critical RWs Report, obtained ad hoc from Microsoft Power BI. The electric mapping supervisor manually REFRESHES this report daily with new RW gatekeeping data. The report is sorted from High to Low priority in the "Status/Action" column.
 2. PG&E mappers ASSIGN themselves to the next-highest priority RW available, per [Subsection 4.3, "Criticality,"](#) on Page 6. A mapper ENTERS their LAN ID into the "Mapping LAN ID" column.
- 6.3 Non-PG&E Personnel Assignment
 1. The non-PG&E personnel production manager RECEIVES a complete RW Pending Report (obtained from Microsoft Power BI), refreshed daily. The production manager FILTERS for criticality AND IMPORTS the data into an independent database for prioritization and assignment per [Subsection 4.5, "Prioritization,"](#) on Page 8.

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7 Map Corrections

1. The method for updating GIS data with the requested update in the RW notification is based on the asset type and correction type of the requested update and is defined in the [Map Correction Categorization Matrix](#).
2. Mapping personnel PERFORM the map updates requested in the RW map correction per the current mapping standards.

7.2 Manual Updates by PG&E

1. A PG&E mapper PERFORMS updates using Asset Registry editing tools based on the change requested in a single validated map correction.
 - a. Always MAP High ranked map corrections using this method.
 - b. IF Medium- and Low-ranked map corrections cannot be updated via a bulk update method,

THEN a PG&E mapper or a non-PG&E personnel PERFORMS the Asset Registry update.
2. A PG&E mapper PERFORMS a manual Asset Registry update, as follows:
 - a. OPEN EDGIS.
 - b. OPEN a new session in Session Manager:
 - (1) NAME the new session using the naming convention *RW[Notification#]*.
 - (2) ENTER the RW notification details in the GIS session's "Description" field. The new session is created.
 - c. PERFORM Asset Registry updates according to the RW notification request.
 - d. IF mappers have passed the Map 4 exam, they RUN the quality assurance/quality control (QA/QC) tool AND POST their own session,

OTHERWISE, mappers who have not passed the Map 4 exam, or non-PG&E personnel, RUN the QA/QC tool, SAVE the session, AND THEN SUBMIT it to the GIS editing application DC-15 box for audit.
 - e. UPDATE the RW in SAP.

IF the mappers have passed the Map 4 exam,

THEN they UPDATE the RW details AND CLOSE the RW notification.

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7.2 (continued)

OTHERWISE, mappers who have not passed the Map 4 exam, or non-PG&E personnel, UPDATE the RW details, RUN the QA/QC tool, AND SEND it to a QA/QC mapper for review and closure.

7.3 Bulk Updates

1. Typically, a mapper manually REVIEWS, EVALUATES, AND MAPS a map correction on a one-by-one basis. However, targeted subsets of map corrections using submission data prepopulated within an RW notification are candidates for the bulk upload process.
 - a. This process entails gathering, processing, and QCing the necessary information to upload multiple updates directly into GIS, reducing the manual work and cycle time of individual map corrections.
2. Candidates for bulk upload are map corrections with all of the following:
 - Low operational risk
 - Low consequence to data integrity
 - High confidence in data accuracy
3. REFER to [Job Aid TD-9001P-01-JA13, "RW Map Correction Bulk Upload GIS Updates,"](#) for instructions on how to upload updates in bulk directly into GIS.

7.4 Barcode Tool Update

1. The Barcode Data Load tool provides a repeatable, semi-automated process to update GIS pole FeatureClass (FC) barcode attributes from SAP notification Repair Data comments, reducing the outstanding RW volume to meet ED RW target cycle time metrics.
2. REFER to [Job Aid TD-9001P-01-JA14, "RW Barcode Data Load Tool,"](#) for further information on the Barcode Data Load tool, including acceptance criteria.

7.5 Joint Pole Map Corrections

1. IF the RW involves a jointly owned structure,

THEN TAKE additional action, based on the nature of the request, using [Table 5, "Joint Pole Map Correction Actions,"](#) on Page 16.

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7.5 (continued)

Table 5. Joint Pole Map Correction Actions

Map Correction	Action
<p>Solely Owned to Joint Owned Non-Contacted to Contacted</p>	<p>The mapper UPDATES the ownership attribute of the existing asset in GIS.</p> <p>The mapper ENTERS the standard comment on the RW: <i>Mapping has updated pole/anchor ownership on <insert SAPID for pole, GUID for anchor>; updates to be reviewed by the Joint Utility Team.</i></p> <p><i>Joint Utility Team – Confirm ownership and close notification. If further map updates are required, return to mapping with instructions and add a comment "Return to Mapping."</i></p> <p>The mapping auditor or direct posting mapper REASSIGNS the RW to EDJP.</p>
<p>Jointly Owned to Solely Owned Contacted to Non-Contacted</p>	<p>The mapper UPDATES the ownership attribute of the existing asset in GIS.</p> <p>The mapper ENTERS the standard comment on the RW: <i>Mapping has updated pole/anchor ownership on <insert SAPID for pole, GUID for anchor>; updates to be reviewed by the Joint Utility Team.</i></p> <p><i>Joint Utility Team – Confirm ownership and close notification. If further map updates are required, return to mapping with instructions and add a comment "Return to Mapping."</i></p> <p>The mapping auditor or direct posting mapper REASSIGNS the RW to EDJP.</p>
<p>Add a Joint Pole/Anchor/Contact Pole</p>	<p>The mapper ADDS the pole as joint in GIS.</p> <p>The mapper ENTERS the standard comment on the RW: <i>Mapping has added joint pole/anchor < insert SAPID for pole, GUID for anchor > to GIS; updates to be reviewed by the Joint Utility Team.</i></p> <p><i>Joint Utility Team – Confirm ownership and close notification. If further map updates are required, return to mapping with instructions and add a comment "Return to Mapping."</i></p> <p>The mapping auditor or direct posting mapper REASSIGNS the RW to EDJP.</p>
<p>Remove a Joint Pole/Contacted Pole</p>	<p>If NOT a communication-only pole:</p> <p>The mapper REMOVES the pole from GIS AND CONTINUES the normal mapping process.</p> <p>If a communication-only pole:</p> <p>DO NOT REMOVE the pole from GIS.</p> <p>The mapper ENTERS the standard comment on the RW: <i>Pole is communication only – Confirm whether this pole can be removed and reassign notification back to mapping (EDMP) with desired action.</i></p> <p>REASSIGN the RW to EDJP.</p>
<p>Non-Ownership Update of a Joint Pole</p>	<p>The mapper UPDATES GIS per the normal mapping process.</p>

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8 QA Review

8.1 Once mapped, updates are processed through a QC review. The QC plan ensures that the products of the map correction process adhere to PG&E and GIS QMT&P and GIS Production standards, which provide assurance that the data being updated in the Asset Registry is unambiguous, traceable, verifiable, accurate, and complete (UTVAC).

8.2 Map Corrections QC Review

1. Based on the criticality, the map correction output uses the QC plan, which defines and controls the quality objectives and helps identify and prevent sources of poor quality.
 - a. Critical RW map corrections are QC'd completely by a PG&E mapper.
 - b. Non-Critical RW map corrections are QC'd completely by a PG&E mapper or using the random sample approach described in [Table 6, "Map Correction Baseline Metrics,"](#) on Page 18.
2. GIS QMT&P and GIS Production RETAINS the QC review results for evaluation and trend analysis used for process improvement.
3. REFER to [Job Aid TD-9001P-01-JA15, "RW Map Correction QC Sampling,"](#) for instructions on how to perform QC sampling for manual and bulk updates.
4. REFER to [Appendix A, "Map Correction QC Plan,"](#) on Pages 29–30.

8.3 Measures

1. Metrics
 - a. REFER to [Table 6, "Map Correction Baseline Metrics,"](#) on Page 18, which details the baseline metrics for measuring the performance of the map correction process.

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8.3 (continued)

Table 6. Map Correction Baseline Metrics

Metric	Measure
Distribution RW Map Corrections, Open Total	Number of open RWs
Critical, Wildfire	
Critical, Non-Wildfire	
Non-Critical, Wildfire	
Non-Critical, Non-Wildfire	
Transmission RW Map Corrections, Open Total	
Critical, Wildfire	
Critical, Non-Wildfire	
Non-Critical, Wildfire	
Non-Critical, Non-Wildfire	
Distribution RW Map Correction, Cycle Time	Number of days between RW creation date and RW closed date
Critical	
Non-Critical	
Transmission RW Map Correction, Cycle Time	
Critical	
Non-Critical	
Quality	Quality score result from EDGIS RW Map Correction Quality Score Evaluation

2. Standards for Measurements

These measurements adhere to the following standards as ratified by the process owner.

a. All RW Notifications Versus Map Corrections

(1) "Other" RW work: Collectively counted as a single category until further notice. Categorized by basic string matches in the "Notification Description" field.

- Labeled "16O" or "16Y"
- Labeled "EW3"

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- Labeled “FAS”
 - Labeled “temp service”
 - Labeled “IDLE FACILIT” (“facilit” to allow for “facilities” and “facility”)
 - Labeled “IVARA”
- (2) The remaining population is considered “Map Correction” work.
- b. Critical Versus Non-Critical
- (1) Critical and Non-Critical: Defined by the [5MM Consolidated Asset Priority Index](#) (CAPI), which establishes the ranking (i.e., High, Medium, Low) of the asset type, as well as the work to be performed to correct the information or correction type.

NOTE

The term “Critical” for RWs is based on the CAPI requirements.

- c. Wildfire Versus Non-Wildfire
- (1) Wildfire status: Declared as **Wildfire** or **Non-Wildfire (NWF)** includes and supersedes other wildfire status types (HFTD, HFRA, Tier 2, etc.). RWs without a positive Wildfire or Non-Wildfire status are considered Wildfire for risk management purposes.
- (2) Any positive combination of the following in the “User Status” field is considered Wildfire status:
- Tier 2 (Often noted as TER2 or T2)
 - Tier 3 (Often noted as TER2 or T2)
 - HFTD (high fire threat district)
 - HFRA (high fire risk area)
 - Zone 1 (Often noted as ZNE1)
 - Wildfire

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8.3 (continued)

(3) A positive notation of the following is considered Non-Wildfire status:

- T0
- TER0
- Non-Wildfire

d. IDOC Versus Non-IDOC

(1) A positive IDOC status can be the following:

- An RW that contains “IDOC” in the “System Status” field **and** does not contain “IDCR” (IDOC Resolved) in the “User Status” field.
- An RW that contains “IDOC” in the “System Status” field without a Notification Complete (NOCO) or Completion Date.

(2) All others are non-IDOC.

e. Open Versus NOCO:

- (1) Completion Date and Notification Complete are automatically populated and are interchangeable. Completion Date offers a cycle time to completion.
- (2) Open: Without “NOCO” in System Status, **or** without a Completion Date.
- (3) NOCO: Notification Complete “NOCO” exists in the “System Status” field, **or** has a Completion Date.
- (4) Jobs considered “cancelled” (CNCL in the “User Status” field) count towards NOCO.

3. Targets

a. Open RW Targets

The target for the number of open RWs is measured in units and varies based on current business risk.

b. Cycle Time Targets

The cycle time targets are detailed in [Table 7, “Cycle Time Targets,”](#) on Page 21.

Electric Distribution Map Corrections

8.3 (continued)

Table 7. Cycle Time Targets

Line of Business	Risk Ranking	Criticality	Target
Distribution	High	Critical	Less than (<) 15 days median
Distribution	Medium	Non-Critical	< 90 days median
Distribution	Low	Non-Critical	< 120 days median
Transmission	High	Critical	< 15 days median
Transmission	Medium	Non-Critical	< 30 days median
Transmission	Low	Non-Critical	< 90 days median

c. Quality Targets

The target scores for the quality reviews are as follows:

- Map performance review – 80% passing rate (maximum points varies)
- Dashboard metric review – 80% passing rate (24 points)
- Gatekeeping quality review – 80% passing rate (24 points)

8.4 Quality Evaluations

1. Using the RW map correction quality evaluation forms helps ensure that the map correction process is effective and identifies areas in which further training, continuous improvement, or measurement of process is necessary.
 - [Attachment 1, “RW Map Performance Review Form”](#)
 - [Attachment 2, “RW Dashboard Review Form”](#)
 - [Attachment 3, “RW Gatekeeping Review Form”](#)
2. USE the final evaluation scores to determine process control and necessary continuous improvement for the RW map correction process.
3. After an evaluation is complete, EMAIL the evaluation forms to the RW process owner.
 - a. The RW process owner TRACKS the scores for trends and to determine further continuous improvement to the RW map correction process. MEASURE the scores from the map performance review, the dashboard metric review, and the gatekeeping quality review to derive the total quality score for the RW map correction process.

Electric Distribution Map Corrections

8.4 (continued)

4. REFER to [Job Aid TD-9001P-01-JA16, "RW Map Correction Quality Forms,"](#) for further information on using RW map correction quality evaluation forms.

9 Closing a Map Correction

- 9.1 After each RW is reviewed for and meets the UTVAC requirements, the RW is closed. When an RW is closed, an automated email is sent to the submitter, notifying them that the map update is complete.
- 9.2 The reviewing mapper CLOSES all RWs after the related session is reviewed and posted:
 1. OPEN the RW in SAP.
 2. CLICK the **Complete** (flag) button.
 3. CLICK the **Save** button in the popup window.
- 9.3 The RW System Status is set to NOCO, ensuring that:
 - The RW is identified as a fully complete and closed work item in SAP.
 - The automated email notification to the RW submitter is sent after the map changes have been posted.
- 9.4 REFER to [Job Aid TD-9001P-01-JA02, "Process a Map Correction RW Notification in SAP,"](#) for further instructions on how to process an RW in SAP.

END of Instructions

DEFINITIONS

Asset Registry: A complete system of record of physical asset information. Currently, GIS is used as the Asset Registry.

Asset type: The type of asset for which an Asset Registry update is being requested.

Correction: A revision, addition, or deletion to/from a map diagram.

Correction type: The requested action to update the Asset Registry.

Corrective Action Program (CAP): An enterprise program that is trusted, valued, and effectively used to identify, evaluate, trend, and track the resolution of known and perceived issues.

Electric Distribution Map Corrections

DEFINITIONS (continued)

Consolidated Asset Priority Index (CAPI): Developed to ensure that critical assets receive priority focus in all programmatic mapping work including, but not limited to, as-built, RW map corrections, and synchronization efforts. The CAPI ranks asset types/subcomponents based on operational and asset risks. The CAPI is used to prioritize programmatic mapping work.

Criticality: Derived from a combination of asset type and correction type using the CAPI to determine a critical or non-critical work correction.

Discrepancy: An inconsistency identified between field conditions and the electric map.

Distribution facilities: Conductors, cables, wires, and associated equipment that operate at voltages up to 50,000 volts (V).

Geographical Information System (GIS) users: All staff who use tools or applications based on GIS data.

GIS QMT&P and GIS Production process lead: The process lead in charge of managing the operational and process improvement aspect of the RW Map Correction Process.

High fire risk area (HFRA): Mapping terminology that aligns with other California utilities' use of maps supplemental to the California Public Utilities Commission (CPUC) HFTD map. While the HFTD is a foundational tool used to identify areas of elevated or extreme wildfire risk for utilities, it was not developed at the electric asset level and is not operationally informed for the Public Safety Power Shutoff (PSPS) program scoping and execution. HFRA refinements may also serve to inform future adjustments or recommendations to improve the HFTD map.

High fire threat district (HFTD): Categorized as HFTD or non-HFTD. HFTD includes Zone 1 and Tiers 2 and 3. Non-HFTD includes all other geographical areas and is sometimes noted as Tier 1 or Tier 0.

Location: Specific geographic area on an electric map.

Location number: A number designated on a map correction form that directly correlates to the general area where the correction is to be performed.

Map: Any PG&E diagram, sketch, or diagrammatic drawing of a defined geographic area displaying electrical facilities and/or land base.

Overhead (OH) facilities: Electric distribution conductors, cables, wires, structures, and associated equipment constructed above ground level.

Process waste: A non-value-add activity.

Request for Work (RW) notification: Work type created in SAP to track work requests between departments.

Electric Distribution Map Corrections

DEFINITIONS (continued)

Status: The following are statuses throughout the RW map correction cycle. The criteria specified for each status are supported by the procedures in this document.

- Open: An RW is considered “Open” until the SAP primary system status = **NOCO** (Notification Complete).
- New: An RW is considered “New” when the SAP primary user status = **NEW** (New).
- Assigned: An RW is considered “Assigned” when the SAP primary user status = **ASGN** (Assigned).
- Incomplete Documentation (IDOC): After review, if an RW is missing necessary information to accurately determine the change request and perform the map correction, the mapper selects the SAP secondary user status **IDOC** (Incomplete Documentation).
- Quality Assurance/Quality Control (QA/QC) Review: When map updates are complete and are being scrutinized by a reviewing mapper, the SAP primary user status is set to **COMP** (Complete).

NOTE

Primary user status “Complete” is separate and different from system status “Complete.”

- Complete: An RW is considered complete when the RW primary system status = **NOCO** (Notification Complete).

Submitters: All staff who submit RW notification map corrections via any of the recognized methods described in this document. They are responsible for providing all the necessary information required to accurately identify and validate a map correction request.

Underground (UG) facilities: Electric distribution conductors, cables, wires, structures, and associated equipment constructed at or below ground level, including pad-mounted equipment.

IMPLEMENTATION RESPONSIBILITIES

The director of Asset Knowledge Management (AKM) approves, reviews, and distributes this procedure and ensures that the supporting documentation is communicated to the targeted audience.

- GIS QMT&P and GIS Production managers ensure that electric GIS management, including the mapping supervisor, conduct tailboards on this procedure and its supporting job aids.

Electric Distribution Map Corrections

IMPLEMENTATION RESPONSIBILITIES (continued)

- The GIS QMT&P and GIS Production process lead ensures that this procedure is communicated to all relevant personnel (see the [Target Audience](#) on Page 1).

GOVERNING DOCUMENT

[Utility Standard TD-2050S, “Electric Distribution and Transmission Line As-Built Packages”](#)

[Utility Standard TD-8123S, “Electric System \(T/S/D\) Patrol, Inspection, and Maintenance Program”](#)

COMPLIANCE REQUIREMENT / REGULATORY COMMITMENT

Records and Information Management:

Information or records generated by this procedure must be managed in accordance with the Enterprise Records and Information Management (ERIM) program policy, standards, and Enterprise Records Retention Schedule (ERRS). Refer to [GOV-7101S, “Enterprise Records and Information Management Standard,”](#) and related standards. Management of records includes, but is not limited to:

- Integrity
- Storage
- Retention and Disposition
- Classification and Protection

REFERENCE DOCUMENTS

Developmental References:

NA

Supplemental References:

[5MM Consolidated Asset Priority Index](#)

[Map Correction Categorization Matrix](#)

[Map Correction Minimum Requirements](#)

[Problem Action Reporting \(PAR\) Site](#)

[Session Feedback Form](#)

[Utility Standard TD-9212S, “Electric Operations Asset Registry Governance”](#)

Electric Distribution Map Corrections

APPENDICES

[Appendix A, "Map Correction QC Plan"](#)

[Appendix B, "List of Acronyms"](#)

ATTACHMENTS

[Attachment 1, "RW Map Performance Review Form"](#)

[Attachment 2, "RW Dashboard Review Form"](#)

[Attachment 3, "RW Gatekeeping Review Form"](#)

Job Aids:

- [TD-9001P-01-JA01, "Submit an RW Map Correction in SAP"](#)
- [TD-9001P-01-JA02, "Process a Map Correction RW Notification in SAP"](#)
- [TD-9001P-01-JA03, "Submit an RW Map Correction in ED Web Viewer"](#)
- [TD-9001P-01-JA04, "Submit an RW Map Correction in Inspect App"](#)
- [TD-9001P-01-JA05, "RW Map Correction Transmission Pole RWs from ED Mapping"](#)
- [TD-9001P-01-JA06, "Close a Map Correction in SAP"](#)
- [TD-9001P-01-JA07, "RW Map Correction Incomplete Documentation \(IDOC\) Process"](#)
- [TD-9001P-01-JA08, "RW Map Correction Instructions for Adding IDOC Reason Codes"](#)
- [TD-9001P-01-JA09, "Job Prefix Standards for Assets Installed on RW Related to Existing As-Builts"](#)
- [TD-9001P-01-JA10, "Pole Validation Mapper Guidelines for Pole Removal"](#)
- [TD-9001P-01-JA11, "ET Process for Manual Deactivation of Records in SAP"](#)
- [TD-9001P-01-JA12, "ED Process for Manual Deactivation of Records in SAP"](#)
- [TD-9001P-01-JA13, "RW Map Correction Bulk Upload GIS Updates"](#)
- [TD-9001P-01-JA14, "RW Barcode Data Load Tool"](#)
- [TD-9001P-01-JA15, "RW Map Correction QC Sampling"](#)
- [TD-9001P-01-JA16, "RW Map Correction Quality Forms"](#)

Electric Distribution Map Corrections

DOCUMENT REVISION

This utility procedure supersedes the following documents:

- Utility Procedure TD-9001P-01 “Electric Distribution Map Corrections,” Rev. 1, dated 04/07/2022
- TD-9001P-01-F01, “Patrol/Inspection Map Correction Form,” Rev. 0, dated 03/25/2013
- TD-9001P-01-F02, “Map Correction Transmittal Form,” Rev. 0, dated 03/25/2013
- TD-9001P-01-JA01, “Create a Map Correction RW Notification,” Rev. 0, dated 03/25/2013
- TD-9001P-01-JA02, “Process a Map Correction RW Notification,” Rev. 0, dated 03/25/2013

DOCUMENT APPROVER

██████████, Director, Asset Knowledge Management

DOCUMENT OWNER

██████████, Senior Manager, GIS QMT&P

DOCUMENT CONTACT

██████████, Manager, GIS Compliance and Improvement

██████████, Business System Specialist, GIS Standards and Training

REVISION NOTES

Where?	What Changed?
Entire document – general update	Edited to clarify content and to conform to Guidance Document Management (GDM) writing and formatting requirements.
Summary	Updated verbiage for clarification.
Target Audience	Widened the audience to include all ET and ED personnel involved in maintaining poles and line facilities and all RW map correction submitters.
Before You Start	Added terminology information. Added verbiage to state that all technologies and the process adhere to this new procedure.

Electric Distribution Map Corrections

REVISION NOTES (continued)

Where?	What Changed?
Section 2	Added the different tools and methods for submitting a map correction with respective job aids. Updated content on identifying and submitting a map correction.
Section 3	Added “Gatekeeping” section on categorizing the criticality of an RW map correction.
Section 4	Added “Prioritization” section with added content on how to prioritize RW Map corrections.
Section 5	Added “Validation” section on how to address duplicate RWs, incomplete documentation, no mapping, and how to manage RW map corrections that are related to as-builts.
Section 6	Added “Assignment” section on how to assign RW map correction to PG&E mappers and non-PG&E mappers.
Section 7	Removed “Record Retention Requirement” section. Added “Map Corrections” section on the different methods of updating GIS data with the requested update in the RW map correction.
Section 8	Added “QA Review” section with the new QA/QC approach, including updated cycle time goals for RW map corrections.
Section 9	Added “Closing A Map Correction” section on how to properly close an RW map correction.
Definitions	Added Asset Type, Asset Registry, CAP, CAPI, Criticality, HFRA, and HFTD.
Governing Document	Added a new governing document, Utility Standard TD-8123S.
Reference Documents	Added map correction tools.
Appendices	Added Appendices A and B.
Attachments	Removed obsoleted forms. Added new attachments.
Document Contact	Updated document contact information.

Electric Distribution Map Corrections

Appendix A, Map Correction QC Plan Page 1 of 2

The QC plan for map corrections is defined in the table below.

Table 8. Map Correction QC Plan

Criticality	Method	Asset Registry Editor	PG&E Sampling	Population Size	Tools	In Case of QC Failure
Critical (H)	Manual	Mapper	100% QC by PG&E senior mapper Note: RWs are audited individually.	All	EDGIS checklist Version differences QA/QC tool Annual audit plan	Reviewer completes the Session Feedback Form to capture findings and provide corrective action to the mapper; the mapper corrects and resubmits.
Critical (H)	Manual	Mapper who has passed the Map 4 exam (supervisor discretion)	100% self-QC using QA/QC tool or peer PG&E senior mapper Note: RWs are audited individually.	All	EDGIS checklist Version differences QA/QC tool Annual audit plan	If errors are found during the self-check, the mapper corrects and re-reviews before posting the session.
Non-Critical (M)	Manual	Non-PG&E personnel (contractor)	Random sampling provided by GIS QMT&P and GIS Production RW mapping supervisor to senior mapper 95% confidence level with 5% margin of error and 5% error rate	5-day spread (minimum 30 RWs; if minimum is not met within 5 days, each RW is reviewed individually)	EDGIS checklist Version differences QA/QC tool Annual audit plan	Fails entire batch and sends all RWs back to the contractor to correct the issue(s) and resubmit the batch for QC. Auditor provides reason(s) for the failure. The contractor determines the cause of failure and corrective action.

Electric Distribution Map Corrections

Appendix A, Map Correction QC Plan Page 2 of 2

Table 8. Map Correction QC Plan (continued)

Criticality	Method	Asset Registry Editor	PG&E Sampling	Population Size	Tools	In Case of QC Failure
Non-Critical (M)	Bulk update	Non-PG&E personnel (contractor)	Random sampling plan 95% confidence level with 5% margin of error and 5% error rate Compare updated data to requested data	All updates from a single bulk upload		Fails entire batch and sends all RWs back to the contractor to correct the issue(s) and resubmit the batch for QC. Auditor provides reason(s) for the failure. The contractor determines the cause of failure and corrective action.
Non-Critical (L)	Manual	Non-PG&E personnel (contractor)	Random sampling provided by GIS QMT&P and GIS Production RW mapping supervisor to senior mapper 95% confidence level with 5% margin of error and 5% error rate	5-day spread (minimum 30 RWs; if minimum is not met within 5 days, each RW is reviewed individually)	Version differences QA/QC tool Annual audit plan	Fails entire batch and sends all RWs back to the contractor to correct the issue(s) and resubmit the batch for QC. Auditor provides reason(s) for the failure. The contractor determines the cause of failure and corrective action.
Non-Critical (L)	Bulk update	Non-PG&E personnel (contractor)	Random sampling plan 95% confidence level with 5% margin of error and 5% error rate Compare updated data to requested data	All updates from a single bulk upload		Fails entire batch and sends all RWs back to the contractor to correct the issue(s) and resubmit the batch for QC. Auditor provides reason(s) for the failure. The contractor determines the cause of failure and corrective action.

Electric Distribution Map Corrections

Appendix B, List of Acronyms

Page 1 of 2

The following acronyms are commonly used in the context of electric distribution map correction requests and related work:

CAP: Corrective Action Program

CAPI: Consolidated Asset Priority Index

COA: Completed on Arrival

EC: Electric Corrective

EDGIS: Electric Distribution Geographic Information System

EDJP: Electric Distribution Joint Pole

EDLB: Electric Distribution Land Base Map Corrections

EDMP: Electric Distribution Map Corrections

ETMP: Electric Transmission Map Corrections

FDA: Facility/Damage/Activity

FMEA: Failure Mode Effect Analysis

GIS: Geographical Information System

GIS QMT&P: Geographical Information System Quality Management Technology and Projects

HFRA: High Fire Risk Area

HFTD: High Fire Threat District

MC: Map Correction

NOCO: Notification Complete

OH: Overhead

PAR: Problem Action Reporting

PSPS: Public Safety Power Shutoff

PTT: Pole, Test and Treat

Electric Distribution Map Corrections

Appendix B, List of Acronyms

Page 2 of 2

List of Acronyms (continued)

QEW: Qualified Electrical Worker

RW: Request for Work

UG: Underground

WSIP: Wildfire Safety Inspection Program

WTC: Work Type Code