1. Purpose of this Standard

The purpose of this standard is to ensure that the various divisions of Document Management are defined and understood, with the variances in requirements, processes, and securities explained in their respective standards.

2. Risks of non-compliance

Some of the risks of not having, or not complying with these standards are:

- All elements of managing documentation and data are not considered or implemented into organizations
- Vital and critical processes are overlooked, leading to errors or omissions in data quality
- Roles and responsibilities will not be clear, leading to tasks or activities being forgotten or missed in the management of data

3. Overview

There are four main divisions of Document and Data Management.

- Corporate governance documentation management
  - Policies
  - Procedures
  - Standards
  - Work Instructions
  - Safety Policies
  - Quality Policies, etc.
- Modifiable documentation management
  - Facility documents
  - Facility drawings
- Publishing documentation
  - Project/activity documentation
  - Engineering documentation
  - Facility documentation, quality, and regulatory compliance
  - Site Document Control, etc.
- Supplier documentation management
  - Supplier documentation
  - Fabrication documentation and data, etc.

4. The Corporate Document Control division

Corporate documentation is documentation, including drawings, which are utilized by an organization to ensure that the minimum standards are always communicated for compliance and consistency across all business units and their projects. It identifies to the personnel within a company, and suppliers of goods or services to the company the company's expectations for work to be performed.

Corporate Document Management is the process by which this documentation is created, reviewed, updated, and distributed. It ensures that project specific clarifications and deviations are created. The management of the corporate documentation requires a high level of control during continual improvement and updating processes to ensure that changes do not inadvertently affect other departments or existing projects in a negative manner, while seeking to improve and obtain commonality.

Corporate governance documentation management relates to the creation, modification, publication, and file management of corporate governance documentation.

Corporate governance documentation should not be easily modified, preventing an individual's preferences from adjusting how an organization operates and performs its business. Work in progress documentation also needs to be protected from inappropriate use of standards before they are implemented.

There must be a continual improvement schedule set for all corporate governance documentation. This could be annually, every two years, or every five years as required by corporate or regulations affecting aspects of the organization. Corporate governance documentation that is technical in nature should be reviewed annually, corporate governance documentation on operating procedures, for example, should be reviewed at least every two years. Corporate administration governance, such as an employee handbook, could be reviewed every five years, or as an organization grows and requires it to be reviewed.

5. The Modifiable File Management division

Modifiable documentation files include word processing, spread sheeting, all computer-aided design and drafting (CADD) software and a host of other modifiable file types. Management of modifiable facility drawing and facility document, legal documentation, and financial files (for example) is highly detailed and intricate, however, management of other modifiable files may only require minimal structure.

To achieve the appropriate level of training to manage highly controlled modifiable files, their reference files, and concurrent projects is intense and lengthy.

These processes involve not only the same requirements as managing other elements of Document Management, but it includes the support, understanding and management of the reference files and their relationships to the parent files. It involves the control of the modifiable files in a strict chain of custody (as you would with evidence in a police investigation) when required, an awareness of the methods and risks to concurrent engineering, and understanding how to move the files to those who would modify them.

Modifiable facility document and drawing file management pertains to the management of the facility document and drawings that will be continually updated for a site in their modifiable format.

Strict attention to chain of custody of these files is imperative to prevent duplication (with conflicting content) of published drawings used for construction and operations. Additional training in the related software applications of these files may be required.

As part of the control of these files there must be appropriate sign in, signed out, updating, and reference only management procedures. This is particularly important during concurrent engineering or concurrent activities, where it is necessary for more than one individual or organization to modify a file at the same time (between engineering contractors, or organizations and their lawyers, for example).

Other modifiable file management is dependent on the type of file, the type of organization, and other variables determined by the organization's processes.

6. The Published Document Control division

The Publishing Document Control division captures the process of guaranteeing documentation which is supplied to the Document Control group for processing follows the defined procedures. Those procedures for Document Control will cover aspects such as proactive quality checks; correct issue stages are adhered to, appropriate numbering and revision stages are reflected, traceability and that project requirements are met, etc. This group will certify that the purpose of the content of the drawing or document is clearly identified mitigating the effects of misrepresentation of information, and will ensure accurate distribution, upload/storage and security. This group's efforts directly affect the transition into records and information management, long term storage, retrieval, archiving, and destruction.

Quality control is the responsibility of all groups or individuals at all touch points of a file. Sole responsibility of quality checks at the exit point is not acceptable. This also ensures manpower costs are evenly distributed and applicable to any project it serves.

The number one role of Document Control is to ensure that all documentation and data is processed correctly according to best practices and standards. This directly affects safety, the performance of those relying on the information, and the ability to provide evidence of due diligence. Through quality control relating to the communication of information, ensuring legal and regulatory requirements (that govern how content is communicated) are met, and following the standards and best practices in Document Management, Document Control provides the last line of defense in managing information. Note that the technical content is not the responsibility of Document Control, only the accurate document management methods are.

Processing the documentation and data files includes maintaining and updating the system in which live documentation and data published files are managed.

6.1. The Site Document Control (a sub-division of Published Document Control)

Site Document Controllers are required to control the incoming documentation that is required to be distributed to the fabrication and construction teams, as well as understanding the requirements and workflows of the documentation that is generated by the work site. These could be in the form of

reports, results, requests for information (RFI), quality and inspection documents or design change requests, and reline markups of documentation for As Builting purposes (See DMC-DM-STD-011 for common issue stages). Site Document Controllers process and maintain the integrity of site inventory documentation that leads directly to contractors, the asset management system, change management plans and schedules of engineered drawings due to maintenance or small alteration projects, and preservation reports to name a few.

7. The Supplier Documentation Management division

Supplier Document Management deals with receiving documentation and data from vendors, manufacturers, fabricators, or service suppliers. This includes documentation received from sub-vendors and/or fabricators. Expectations are set for each particular order at the time a request for quote/proposal is initially submitted to bidders, and thereafter following the issuance of a purchase order or contract. Expectations including the schedule, file format, final documentation, and review expectations.

A DDR (Documentation and Data Requirements) form – also known by other names – is created and completed, and then presented for discussion and agreement between the purchasing organization and the supplier during the bid clarification period. The DDR and its supporting processes will mitigate the majority of the frustrations surrounding managing incoming goods or service supplier information; both from the supplier's and from the receiver's perspective. Vendor Document Management includes the expediting of the documentation and data required. Vendor Document Management, when implemented correctly and diligently, can have a significant positive impact on project costs and schedule.

8. What is Controlled data

Information that requires control (in various levels of intensity) is contained in all files that may be used as evidence, or distributed with the intent of being used for decision, investigation, approval, or any other similar action. Controlled data also includes information sent to other parties, where the distribution of such data may be tracked for evidence of delivery or receipt.

Files that are sent as Information Only may also require control, unless they are work in progress files being sent for collaboration. Collaboration files may need to be evidenced as sent, in which case they shall be controlled.

There are different levels of control, depending on the category and classification of file.

Refer to DMC-DM-STD-003 for Documentation and Data categories and classifications.

	Facility Drawings and Documents	**Project Documents**	**Corporate Drawings and Documents**
Hard Copy	Strictly Controlled - For archive/litigation only	Strictly Controlled - For archive/litigation only	Strictly Controlled - For archive/litigation only
Published Soft Copy	Controlled – Used by internal and external groups	Controlled – Used by Project execution group	Controlled – Used internally in the organization, and can be sent to contractors for their compliance
Modifiable Soft Copy	Strictly Controlled – Used by specific groups who gain authority to modify	Loosely Controlled – Used by Project execution group	Strictly Controlled – Used by specific groups who gain authority to modify

Digital data in databases is typically controlled in specific expert systems and software applications, and only updated by those who understand the data. Varies for each database depending on the content.