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## SECTION 01781 - PROJECT RECORD DOCUMENTS

This Section uses the term "Architect." Change this term to match that used to identify the design professional as defined in the General and Supplementary Conditions.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:

Adjust list below to suit Project.

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.

- B. Related Sections include the following:

List below only procedures that the reader might expect to find in this Section but are specified elsewhere.

1. Division 1 Section "Summary of Multiple Contracts" for coordinating Project Record Documents covering the Work of multiple contracts.
2. Division 1 Section "Closeout Procedures" for general closeout procedures.
3. Division 1 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
4. Divisions 2 through 16 Sections for specific requirements for Project Record Documents of the Work in those Sections.

#### 1.3 SUBMITTALS

Revise first paragraph and subparagraphs below if Contractor is allowed to submit marked-up Record Drawings in operation and maintenance manuals. See Evaluations.

## A. Record Drawings: Comply with the following:

1. Number of Copies: Submit [**one**] <Insert number> set(s) of marked-up Record Prints.

Retain subparagraph above or subparagraph and associated subparagraphs below. Below involves Architect in Record Drawing procedure, which creates potential liability. See Evaluations.

2. Number of Copies: Submit copies of Record Drawings as follows:

- a. Initial Submittal: Submit [**one**] <Insert number> set(s) of [**corrected Record Transparencies**] [**plots from corrected Record CAD Drawings**] and [**one**] <Insert number> set(s) of marked-up Record Prints. Architect will initial and date each [**transparency**] [**plot**] and mark whether general scope of changes, additional information recorded, and quality of drafting are acceptable. Architect will return [**transparencies**] [**plots**] and prints for organizing into sets, printing, binding, and final submittal.

Revise number of sets in first two subparagraphs below to suit Project. Architect should retain a set of Record Drawings for future reference on Project. Carefully evaluate postoccupancy services, liability defense, and similar considerations when establishing the number required.

- b. Final Submittal: Submit [**one**] <Insert number> set(s) of marked-up Record Prints, [**one**] <Insert number> set(s) of Record Transparencies, and [**three**] <Insert number> copies printed from Record Transparencies. Print each Drawing, whether or not changes and additional information were recorded.

Retain subparagraph above or subparagraph and associated subparagraphs below with "Initial Submittal" Subparagraph above. Retain above with "corrected Record Transparencies" option in "Initial Submittal" Subparagraph; retain below with "plots from corrected Record CAD Drawings" option.

- c. Final Submittal: Submit [**one**] <Insert number> set(s) of marked-up Record Prints, [**one**] <Insert number> set(s) of Record CAD Drawing files, [**one**] <Insert number> set(s) of Record CAD Drawing plots, and [**three**] <Insert number> copies printed from record plots. Plot and print each Drawing, whether or not changes and additional information were recorded.

- 1) Electronic Media: [**3-1/2-inch diskettes, formatted for 1.44 MB**] [**CD-R**].

B. Record Specifications: Submit [**one copy**] [<Insert number> copies] of Project's Specifications, including addenda and contract modifications.C. Record Product Data: Submit [**one copy**] [<Insert number> copies] of each Product Data submittal.

1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

## PART 2 - PRODUCTS

## 2.1 RECORD DRAWINGS

Paragraph and subparagraphs below contain normal recording procedures regardless of requirements for final output.

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.
1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an understandable drawing technique.
    - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
  2. Content: Types of items requiring marking include, but are not limited to, the following:

Revise list below to suit Project.

- a. Dimensional changes to Drawings.
- b. Revisions to details shown on Drawings.
- c. Depths of foundations below first floor.
- d. Locations and depths of underground utilities.
- e. Revisions to routing of piping and conduits.
- f. Revisions to electrical circuitry.
- g. Actual equipment locations.
- h. Duct size and routing.
- i. Locations of concealed internal utilities.

Retain Work Change Directive in first subparagraph below if using EJCDC Document 1910-8.

- j. Changes made by Change Order or [**Construction**] [**Work**] Change Directive.
  - k. Changes made following Architect's written orders.
  - l. Details not on the original Contract Drawings.
  - m. Field records for variable and concealed conditions.
  - n. Record information on the Work that is shown only schematically.
3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
  4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
  5. Mark important additional information that was either shown schematically or omitted from original Drawings.

6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

Paragraph and subparagraphs below describe a procedure for assembling nearly correct reproducible Drawings. Add requirements for special printing methods on specific material, such as moisture-sensitive prints on mylar film. Delete if not required.

- B. Record Transparencies: Immediately before inspection for Certificate of Substantial Completion, review marked-up Record Prints with Architect[ **and Construction Manager**]. When authorized, prepare a full set of corrected transparencies of the Contract Drawings and Shop Drawings.
  1. Incorporate changes and additional information previously marked on Record Prints. Erase, redraw, and add details and notations where applicable.
  2. Refer instances of uncertainty to Architect[ **through Construction Manager**] for resolution.
  3. Owner will furnish Contractor one set of transparencies of the Contract Drawings for use in recording information.

Retain subparagraph above or below.

4. Print the Contract Drawings and Shop Drawings for use as Record Transparencies. Architect will make the Contract Drawings available to Contractor's print shop.

In paragraph and subparagraphs below, architects may want to delete titleblock information from CAD files provided to Contractor. See Evaluations. Consult Owner for format required. Note that DXF format may not provide a clean translation from one CAD program to another.

- C. Record CAD Drawings: Immediately before inspection for Certificate of Substantial Completion, review marked-up Record Prints with Architect[ **and Construction Manager**]. When authorized, prepare a full set of corrected CAD Drawings of the Contract Drawings, as follows:
  1. Format: Same CAD program, version, and operating system as the original Contract Drawings.

Retain subparagraph above or first subparagraph below.

2. Format: [DWG] [DXF] [DGN], Version <Insert designation>, operating in [Microsoft Windows] [Apple Macintosh] operating system.
3. Incorporate changes and additional information previously marked on Record Prints. Delete, redraw, and add details and notations where applicable.
4. Refer instances of uncertainty to Architect[ **through Construction Manager**] for resolution.
5. Architect will furnish Contractor one set of CAD Drawings of the Contract Drawings for use in recording information.
  - a. Architect makes no representations as to the accuracy or completeness of CAD Drawings as they relate to the Contract Drawings.
  - b. CAD Software Program: The Contract Drawings are available in <Insert name and version of CAD program and operating system>.

First paragraph below describes a logical requirement, but it cannot be effectively enforced unless specifically mentioned in Change Order and unless Contractor has included cost in the proposal. See Evaluations for circumstances where other new Drawings might be justified.

- D. Newly Prepared Record Drawings: Prepare new Drawings instead of preparing Record Drawings where Architect determines that neither the original Contract Drawings nor Shop Drawings are suitable to show actual installation.
1. New Drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.
  2. Consult Architect[ **and Construction Manager**] for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. Integrate newly prepared Record Drawings into Record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.
- E. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  2. Record Transparencies: Organize into unbound sets matching Record Prints. Place transparencies in durable tube-type drawing containers with end caps. Mark end cap of each container with identification. If container does not include a complete set, identify Drawings included.
  3. Record CAD Drawings: Organize CAD information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each CAD file.
  4. Identification: As follows:
    - a. Project name.
    - b. Date.
    - c. Designation "PROJECT RECORD DRAWINGS."
    - d. Name of Architect[ **and Construction Manager**].
    - e. Name of Contractor.

## 2.2 RECORD SPECIFICATIONS

This Article contains normal recording procedures regardless of requirements for final output. If necessary, these procedures could be expanded into more elaborate requirements.

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

Delete two subparagraphs below if provisions are too elaborate, or revise to suit Project.

2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.

3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.

Retain first subparagraph below with or without subparagraph above, where this record is desired.

4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
5. Note related Change Orders[, **Record Product Data,**] and Record Drawings where applicable.

## 2.3 RECORD PRODUCT DATA

This Article contains minimum Record Product Data submittal requirements adequate for most projects.

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
  1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.

If possible, a Change Order proposal should include resubmitting updated Product Data. This eliminates the need to mark up the previous submittal.

3. Note related Change Orders[, **Record Specifications,**] and Record Drawings where applicable.

Insert requirements for Record Samples if needed. See Evaluations.

## 2.4 MISCELLANEOUS RECORD SUBMITTALS

Examples of miscellaneous Record Submittals in this Article include documentation of foundation depths, special measurements, tests and inspections, surveys, mix records, and inspections by authorities having jurisdiction. If necessary, add a list of specific submittals.

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

## PART 3 - EXECUTION

### 3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.

- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's[ **and Construction Manager's**] reference during normal working hours.

END OF SECTION 01781