SECTION 08 08 00

**COMMISSIONING OF EXTERIOR BUILDING ENVELOPE**

**BASED ON DFD MASTER SPECIFICATION DATED 02/27/15**

***This section has been written to cover most (but not all) situations that you will encounter. Depending on the requirements of your specific project, you may have to add material, delete items, or modify what is currently written. The Division of Facilities Development expects changes and comments from you.***

**P A R T 1 ‑ G E N E R A L**

**SCOPE**

This section includes commissioning forms for construction verification and functional performance testing. Included are the following topics:

PART 1 - GENERAL

Scope

Related Work

Reference

Submittals

PART 2 - PRODUCTS

(Not Used)

PART 3 – EXECUTION

***DO NOT INCLUDE ANY COMMISSIONING FORMS for PRELIMINARY review. Just edit the list below and only submit pages 08 08 00-1 through 08 08 00-2 with strikethroughs.***

Commissioning Forms

CV-08 11 00 Metal Doors and Frames

CV-08 13 00 Metal Doors

CV-08 14 00 Wood Doors

CV-08 51 00 Metal Windows

CV-08 52 00 Wood Windows

**RELATED WORK**

Section 01 91 01 or 01 91 02 – Commissioning Process

**REFERENCE**

Applicable provisions of Division 1 shall govern work under this section.

**SUBMITTALS**

Reference the General Conditions of the Contract for submittal requirements.

Reference Section 01 91 01 or 01 91 02 Commissioning Process for Construction Verification Checklist and Functional Performance Test submittal requirements.

**P A R T 2 – P RO D U C T S**

(Not Used)

**P A R T 3 – E X E C U T I O N**

**COMMISSIONING FORMS**

Commissioning forms are to be filled in as work progresses by the individuals responsible for installation and shall be completed for each installation phase.

Provide a description of the work completed since the last entry, the percentage of the total work completed for the system for that area and the step of installation or finalization.

Circle Yes or No for each commissioning form item. If the information requested for an item does not apply to the given stage of installation for the system, list it as “N/A”. Explain all discrepancies, negative responses or N/A responses in the negative responses section.

Once the work is 100% complete and the responses to each item are complete and resolved for a given commissioning forms group, mark as complete, initial and date in the spaces provided.

Provide copies of the commissioning forms to the commissioning agent 2 days prior to construction progress meetings.

***Edit the individual construction verification checklists and provide additional checklists as needed to reflect the verification requirements of assemblies, components, equipment and systems to be commissioned on this project.***

***DO NOT INCLUDE ANY of the following***

***COMMISSIONING FORMS for PRELIMINARY review. Just edit the list in Part I above and only submit pages***

***08 08 00-1 through 08 08 00-2 with strikethroughs.***

**CV-08 11 00 – Metal Doors and Frames**

**Identification/Tag: \_\_\_\_\_\_**

**Location:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Group/Item** | **Group/Task Description** | | | **Submitted** | **Delivered** |
| *A* | *MODEL VERIFICATION - FRAME* | | | | |
| 1 | Manufacturer | | |  |  |
| 2 | Model | | |  |  |
| 3 | Gauge | | |  |  |
| 4 | Depth | | |  |  |
| 5 | Finish | | |  |  |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Group/Item** | **Group/Task Description** | | | **Submitted** | **Delivered** |
| *B* | *MODEL VERIFICATION - DOOR* | | | | |
| 1 | Manufacturer | | |  |  |
| 2 | Model | | |  |  |
| 3 | Gauge | | |  |  |
| 4 | Depth | | |  |  |
| 5 | Finish | | |  |  |
| 6 | Handle Location | | |  |  |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |

| **Group/Item** | **Group/Task Description** | | | **Response** | |
| --- | --- | --- | --- | --- | --- |
| *C* | *PHYSICAL CHECKS* | | | | |
| 1 | All components are free from physical damage. | | | YES | NO |
| 2 | All components present. | | | YES | NO |
| 3 | Hardware provided per door schedule. | | | YES | NO |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |
| *D* | *INSTALLATION-FRAME* | | | | |
| 1 | Opening square, true and plumb. | | | YES | NO |
| 2 | Opening prepared for installation. | | | YES | NO |
| 3 | Imbeds and anchors installed. | | | YES | NO |
| 4 | Frame set plumb and true. | | | YES | NO |
| 5 | Backer rod and sealant provide around perimeter of each side of frame. | | | YES | NO |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |
| *E* | *INSTALLATION-DOOR* | | | | |
| 1 | Door installed true and plumb. | | | YES | NO |
| 2 | Hardware and accessories installed. | | | YES | NO |
| 3 | Door and hardware operation verified and free from restrictions of movement. | | | YES | NO |
| 4 | All components undamaged, adjusted and cleaned. | | | YES | NO |
| 5 | Key(s) provided to owner in quantity specified (if applicable). | | | YES | NO |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |

**Negative Responses**

| **Group/**  **Item** | **Date**  **Found** | **Found**  **By** | **Reason for Negative Response** | **Resolved** | **Date**  **Resolved** | **Resolution** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |

**CV-08 13 00 – Metal Doors**

**Identification/Tag: \_\_\_\_\_\_**

**Location:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Group/Item** | **Group/Task Description** | | | **Submitted** | **Delivered** |
| *A* | *MODEL VERIFICATION -* | | | | |
| 1 | Manufacturer | | |  |  |
| 2 | Model | | |  |  |
| 3 | Gauge | | |  |  |
| 4 | Depth | | |  |  |
| 5 | Finish | | |  |  |
| 6 | Handle Location | | |  |  |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |

| **Group/Item** | **Group/Task Description** | | | **Response** | |
| --- | --- | --- | --- | --- | --- |
| *B* | *PHYSICAL CHECKS* | | | | |
| 1 | All components are free from physical damage. | | | YES | NO |
| 2 | All components present. | | | YES | NO |
| 3 | Hardware provided per door schedule. | | | YES | NO |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |
| *C* | *INSTALLATION* | | | | |
| 1 | Frame set plumb and true. | | | YES | NO |
| 2 | Door installed true and plumb. | | | YES | NO |
| 3 | Hardware and accessories installed. | | | YES | NO |
| 4 | Door and hardware operation verified and free from restrictions of movement. | | | YES | NO |
| 5 | All components undamaged, adjusted and cleaned. | | | YES | NO |
| 6 | Key(s) provided to owner in quantity specified (if applicable). | | | YES | NO |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |

**Negative Responses**

| **Group/**  **Item** | **Date**  **Found** | **Found**  **By** | **Reason for Negative Response** | **Resolved** | **Date**  **Resolved** | **Resolution** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |

**CV-08 14 00 – Wood Doors**

**Identification/Tag: \_\_\_\_\_\_**

**Location:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Group/Item** | **Group/Task Description** | | | **Submitted** | **Delivered** |
| *A* | *MODEL VERIFICATION* | | | | |
| 1 | Manufacturer | | |  |  |
| 2 | Model | | |  |  |
| 3 | Material | | |  |  |
| 4 | Depth | | |  |  |
| 5 | Finish | | |  |  |
| 6 | Handle Location | | |  |  |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |

| **Group/Item** | **Group/Task Description** | | | **Response** | |
| --- | --- | --- | --- | --- | --- |
| *B* | *PHYSICAL CHECKS* | | | | |
| 1 | All components are free from physical damage. | | | YES | NO |
| 2 | All components present. | | | YES | NO |
| 3 | Hardware provided per door schedule. | | | YES | NO |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |
| *C* | *INSTALLATION* | | | | |
| 1 | Frame set plumb and true. | | | YES | NO |
| 2 | Door installed true and plumb. | | | YES | NO |
| 3 | Hardware and accessories installed. | | | YES | NO |
| 4 | Door and hardware operation verified and free from restrictions of movement. | | | YES | NO |
| 5 | All components undamaged, adjusted and cleaned. | | | YES | NO |
| 6 | Key(s) provided to owner in quantity specified (if applicable). | | | YES | NO |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |

**Negative Responses**

| **Group/**  **Item** | **Date**  **Found** | **Found**  **By** | **Reason for Negative Response** | **Resolved** | **Date**  **Resolved** | **Resolution** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |

**CV-08 51 00 – Metal Windows**

**Identification/Tag: \_\_\_\_\_\_**

**Location:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Group/Item** | **Group/Task Description** | | | **Submitted** | **Delivered** |
| *A* | *MODEL VERIFICATION* | | | | |
| 1 | Manufacturer | | |  |  |
| 2 | Model | | |  |  |
| 3 | Width / Height (in / in) | | | **/** | **/** |
| 4 | Material / Gauge | | | **/** | **/** |
| 5 | Finish | | |  |  |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |

| **Group/Item** | **Group/Task Description** | | | **Response** | |
| --- | --- | --- | --- | --- | --- |
| *B* | *PHYSICAL CHECKS* | | | | |
| 1 | All components are free from physical damage. | | | YES | NO |
| 2 | All components present. | | | YES | NO |
| 3 | Hardware provided per window schedule. | | | YES | NO |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |
| *C* | *INSTALLATION* | | | | |
| 1 | Opening square, true and plumb. | | | YES | NO |
| 2 | Opening prepared for installation. | | | YES | NO |
| 3 | Imbeds and anchors installed. | | | YES | NO |
| 4 | Head and sill flashing installed. | | | YES | NO |
| 5 | Vapor barrier is properly sealed to frame. | | | YES | NO |
| 6 | Windows set plumb and level. | | | YES | NO |
| 7 | Weep holes directed down and away from window. | | | YES | NO |
| 8 | Caulking and backer rod installed with proper tolerances. | | | YES | NO |
| 9 | All components undamaged and cleaned. | | | YES | NO |
| 10 | Factory seal of window is undamaged. | | | YES | NO |
| 11 | Window and hardware operation verified and free from restrictions of movement (if applicable). | | |  |  |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |

**Negative Responses**

| **Group/**  **Item** | **Date**  **Found** | **Found**  **By** | **Reason for Negative Response** | **Resolved** | **Date**  **Resolved** | **Resolution** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |

**CV-08 52 00 – Wood Windows**

**Identification/Tag: \_\_\_\_\_\_**

**Location:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Group/Item** | **Group/Task Description** | | | **Submitted** | **Delivered** |
| *A* | *MODEL VERIFICATION* | | | | |
| 1 | Manufacturer | | |  |  |
| 2 | Model | | |  |  |
| 3 | Width / Height (in / in) | | | **/** | **/** |
| 4 | Material | | |  |  |
| 5 | Finish | | |  |  |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |

| **Group/Item** | **Group/Task Description** | | | **Response** | |
| --- | --- | --- | --- | --- | --- |
| *B* | *PHYSICAL CHECKS* | | | | |
| 1 | All components are free from physical damage. | | | YES | NO |
| 2 | All components present. | | | YES | NO |
| 3 | Hardware provided per window schedule. | | | YES | NO |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |
| *C* | *INSTALLATION* | | | | |
| 1 | Opening square, true and plumb. | | | YES | NO |
| 2 | Opening prepared for installation. | | | YES | NO |
| 3 | Imbeds and anchors installed. | | | YES | NO |
| 4 | Head and sill flashing installed. | | | YES | NO |
| 5 | Vapor barrier is properly sealed to frame. | | | YES | NO |
| 6 | Windows set plumb and level. | | | YES | NO |
| 7 | Weep holes directed down and away from window. | | | YES | NO |
| 8 | Caulking and backer rod installed with proper tolerances. | | | YES | NO |
| 9 | All components undamaged and cleaned. | | | YES | NO |
| 10 | Factory seal of window is undamaged. | | | YES | NO |
| 11 | Window and hardware operation verified and free from restrictions of movement (if applicable). | | |  |  |
| **❑ CHECKLIST GROUP COMPLETE** | | **INITIALS:** |  | **DATE:** |  |

**Negative Responses**

| **Group/**  **Item** | **Date**  **Found** | **Found**  **By** | **Reason for Negative Response** | **Resolved** | **Date**  **Resolved** | **Resolution** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |
|  |  |  |  | **YES / NO** |  |  |