

# HCAI C B C FIRE-RESISTIVE STANDARD DETAILS

BY: Nanci Timmins

Reviewed for compliance with:  
 2013 California Building Code  
 2016 California Building Code  
 2019 California Building Code  
 2022 California Building Code

This CBC Fire-Resistive Standard Details document contains HCAI Pre-Approved Details (OPD), which are permitted to be incorporated into construction documents. These details have been reviewed for compliance with the 2013, 2016, 2019 and 2022 editions of the California Building Code and when used as shown, without modifications, are deemed to comply with code. They are intended to cover common conditions that occur on many projects. It is anticipated that the use of these details will facilitate the design, review and construction process.

Issue Date : 06/05/2023	
Revision :	Date :

**DRAWING INDEX**

**REVISIONS**

**FRX DRAWINGS INDEX, NARRATIVE AND FLOWCHARTS**

- FRX.00 DRAWING INDEX
- FRX.01 DRAWING INDEX
- FRX.10 NARRATIVE
- FRX.11 NARRATIVE (CONT'D)
- FRX.20 APPLICATION FLOWCHART – DEFINE PROJECT PARAMETERS AND APPLICABILITY
- FRX.21 APPLICATION FLOWCHART – SELECT APPROPRIATE DETAILS FROM OPD
- FRX.22 APPLICATION FLOWCHART – 1-HOUR RATED PARTITIONS, WALLS OR BARRIERS
- FRX.23 APPLICATION FLOWCHART – 2-HOUR RATED PARTITIONS, WALLS OR BARRIERS
- FRX.24 APPLICATION FLOWCHART – RATED WALL PENETRATIONS
- FRX.25 RATED FLOOR/CEILING PENETRATIONS

**FR0 GENERAL NOTES**

- FR0.00 GENERAL NOTES
- FR0.01 GENERAL NOTES (CONT'D)
- FR0.02 GRAPHICS LEGEND

**FR1 INTERSECTION DETAILS FOR ONE-HOUR FIRE RESISTIVE PARTITIONS, WALLS AND BARRIERS**

- FR1.00 BASIC JOINT DETAILS FOR 1-HR-FR RATED WALL ASSEMBLIES - COMPOSITE
- FR1.01 BASIC JOINT DETAILS FOR 1-HR-FR RATED WALL ASSEMBLIES - FACE JOINT
- FR1.02 BASIC JOINT DETAILS FOR 1-HR-FR RATED WALL ASSEMBLIES - END JOINT
- FR1.10 INTERSECTION OF 1-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR1.11 INTERSECTION OF 1-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR1.12 INTERSECTION OF 1-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR1.13 INTERSECTION OF 1-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR1.14 INTERSECTION OF 1-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR1.15 INTERSECTION OF 1-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR1.16 INTERSECTION OF 1-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR1.17 INTERSECTION OF 1-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR1.33 RATED INTERIOR WALL TERMINATION @ EXTERIOR WALL
- FR1.35 PARTITION TERMINATION @ GLAZING
- FR1.38 PARTITION TERMINATION @ MULLION - WRAPPED
- FR1.39 PARTITION TERMINATION TO PRECAST
- FR1.40 SHAFTWALL TERMINATION TO PRECAST

**FR2 INTERSECTION DETAILS FOR TWO-HOUR FIRE RESISTIVE PARTITIONS, WALLS AND BARRIERS**

- FR2.00 BASIC JOINT DETAILS FOR 2-HR-FR RATED WALL ASSEMBLIES - COMPOSITE
- FR2.01 BASIC JOINT DETAILS FOR 2-HR-FR RATED WALL ASSEMBLIES - FACE JOINT
- FR2.02 BASIC JOINT DETAILS FOR 2-HR-FR RATED WALL ASSEMBLIES - END JOINT
- FR2.10 INTERSECTION OF 2-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR2.11 INTERSECTION OF 2-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR2.12 INTERSECTION OF 2-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR2.13 INTERSECTION OF 2-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR2.14 INTERSECTION OF 2-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR2.15 INTERSECTION OF 2-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR2.16 INTERSECTION OF 2-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN
- FR2.17 INTERSECTION OF 2-HR-FR PARTITION, WALL AND BARRIER AT PROTECTED COLUMN

Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
DRAWING INDEX 1 OF 2

**FRX.00**

**DRAWING INDEX**

**REVISIONS**

**FR3 PENETRATION DETAILS FOR FIRE RESISTIVE RATED GYPSUM BOARD ASSEMBLIES**

- FR3.00 NOT USED
- FR3.01 RECESSED M.E.P. CABINET IN RATED PARTITION
- FR3.02 HOLLOW METAL DOOR FRAME AT 1-HOUR RATED WALL
- FR3.03 HOLLOW METAL DOOR FRAME AT 2-HOUR RATED WALL
- FR3.04 RATED WALL CONTROL JOINT DETAILS
- FR3.05 RATED WALL CONTROL JOINT DETAILS
- FR3.06 RATED WALL BLOW-OUT PATCH AT PENETRATIONS
- FR3.07 PENETRATION AT TOP OF WALL
- FR3.08 SHAFTWALL AT HORIZONTAL INTERMEDIATE TUBE STEEL, BEAM OR SUPPORT
- FR3.09 CONDUIT IN DECK FLUTE AT HEAD OF WALL OR ABOVE FIRE PROOF BEAM ASSEMBLY

**FR4 PENETRATIONS DETAILS FOR OF RATED FLOOR/CEILING ASSEMBLIES**

- FR4.00 NOT USED
- FR4.01 FLOOR SLAB PENETRATION AT WATER CLOSET WASTE LINE
- FR4.02 VERTICAL DUCT SHAFT BOTTOM DETAILS



Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
DRAWING INDEX 2 OF 2

**FRX.01**

## NARRATIVE

The Narrative and supporting Flowchart, which follows the Narrative, are provided to assist in selecting applicable details from the OPD for incorporation into the construction documents. It is to be used only as a guide and does not provide complete step-by-step instructions for use of the OPD. Narrative comment numbers correspond to the numbered items on the Flowchart.

The following steps apply to use of OPD:

### 1. Define Project Parameters

A. Construction Classification by Type of Construction.

- i. The Design Professional of Record (DPOR) in responsible charge of the project shall identify the minimum requirements for the fire resistance ratings of building elements, based on the provisions of Chapter 6 of the CBC.

B. Coordination with Primary Structural Elements.

- i. The DPOR in responsible charge shall identify with the Structural Engineer of Record (SEOR) the primary structural elements and the methods for providing the required fire protection in compliance with CBC Table 601.
- ii. The DPOR in responsible charge shall identify and coordinate the project conditions where primary structural elements and architectural and MEP systems may be in conflict.

C. Coordination of Non-Structural Building Elements.

- i. The DPOR in responsible charge shall identify the non-structural building elements to be constructed and their compliance to the requirements of CBC Chapter 7, *Fire and Smoke Protection Features*, for the specific use within the project.
- ii. The DPOR in responsible charge shall identify the unique conditions which apply to the use of the OPD under consideration.

### 2. Verify Applicability of the OPD (refer to PIN 51)

A. The OPD's allow design professionals to incorporate pre-approved details into their project construction documents when they satisfy the following conditions.

- i. The DPOR in responsible charge determines the applicability of the OPD for the specific project conditions, and the project specific details for those conditions may not otherwise be met by tested and listed assemblies of the manufacturer's products specified.
- ii. The OPD details must be directly applicable to the project conditions, without modification.

B. Substitutions of items shown in the OPD are not permitted, unless specifically allowed by the OPD itself.

C. Changes to the OPD to accommodate variations of the project conditions are not permitted. In such cases, project specific details are required.

Section Title : FIRE-RESISTIVE STANDARD DETAILS

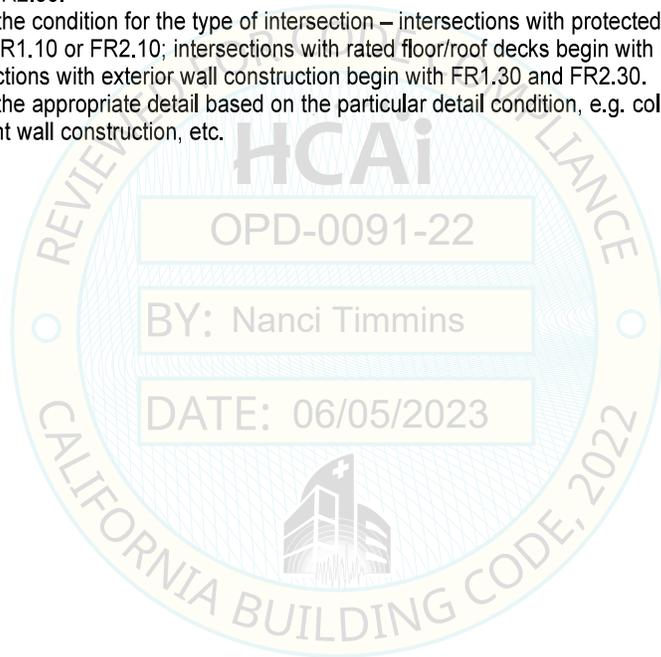
OPD No:

Sheet Title :  
NARRATIVE - PAGE 1 OF 3

FRX.10

**3. Select Appropriate Details from OPD**

- A. Review the OPD General Notes before the start of the OPD selection process. The General Notes provide detailed specifications of the materials and the workmanship associated with the details. The DPOR in responsible charge shall confirm the applicability of the OPD details and the specifications noted in this section.
- B. The protection of primary structural elements of the project shall not be compromised. Details indicating connections of miscellaneous framing to primary steel shall have protective construction (i.e. spray-applied fireproofing) replaced as acceptable to manufacturer and HCAI.
- C. Non-structural partitions of fire-resistive construction shall comply with approved tested assemblies, listed by accepted testing agencies.
- D. Select the type of condition which the detail needs to address – intersection of fire-resistive assemblies or penetrations of fire-resistive assemblies.
- E. For Intersections of fire-resistive assemblies, select the applicable fire-resistive rating for the partition components of the detail.
  - i. One-hour fire-resistive details begin with sheet FR1.00, and Two-hour fire-resistive details begin with sheet FR2.00.
  - ii. Select the condition for the type of intersection – intersections with protected columns begin with detail FR1.10 or FR2.10; intersections with rated floor/roof decks begin with FR1.20 and FR2.20; intersections with exterior wall construction begin with FR1.30 and FR2.30.
  - iii. Select the appropriate detail based on the particular detail condition, e.g. column orientation, adjacent wall construction, etc.

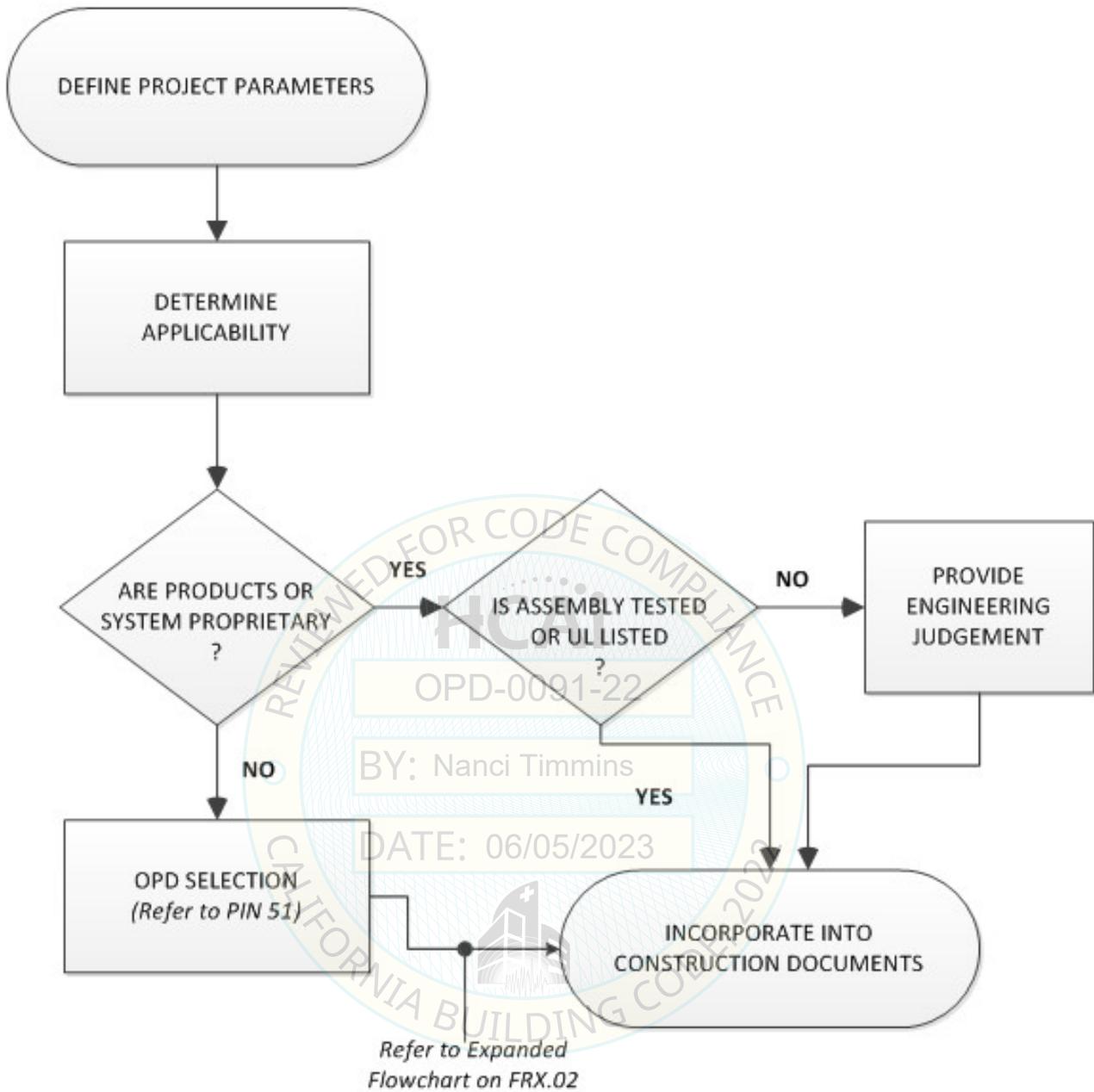


Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
NARRATIVE - PAGE 2 OF 3

**FRX.11**

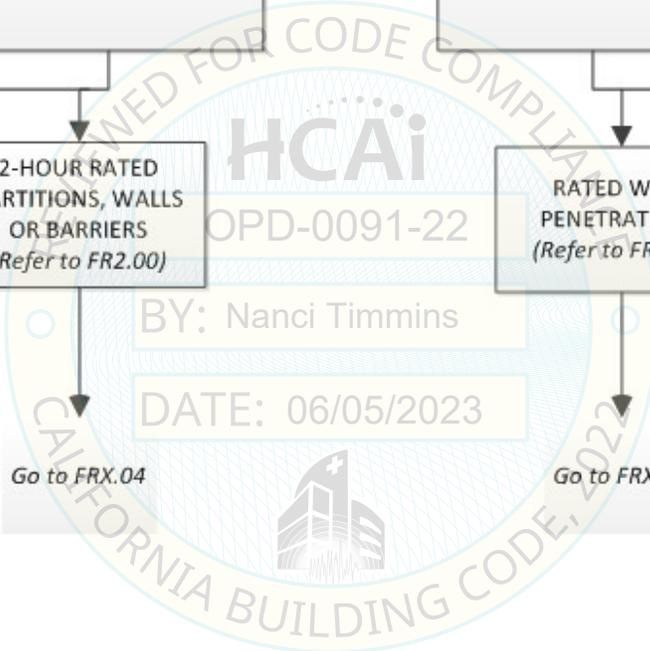
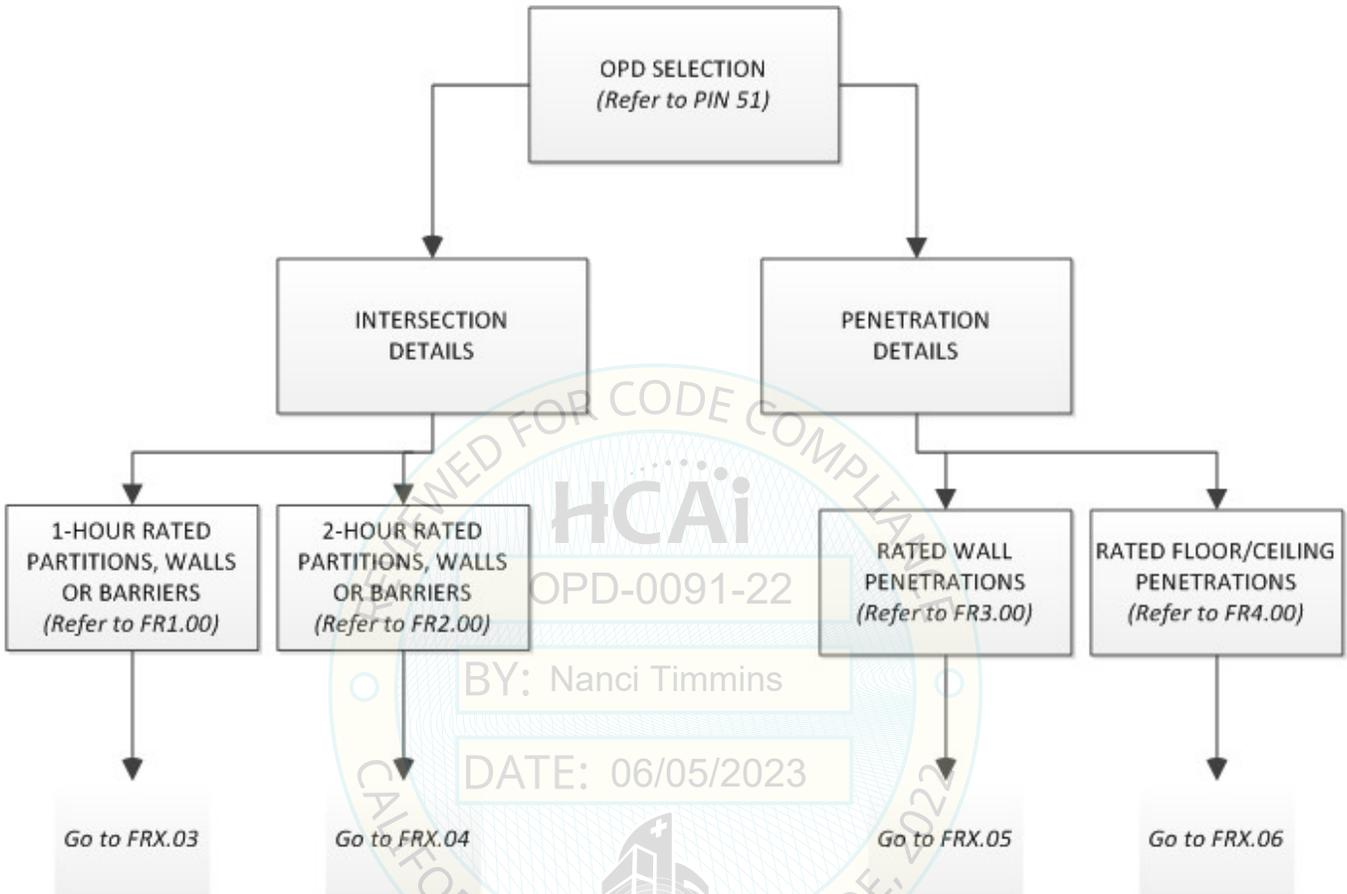


Section Title : FIRE-RESISTIVE STANDARD DETAILS

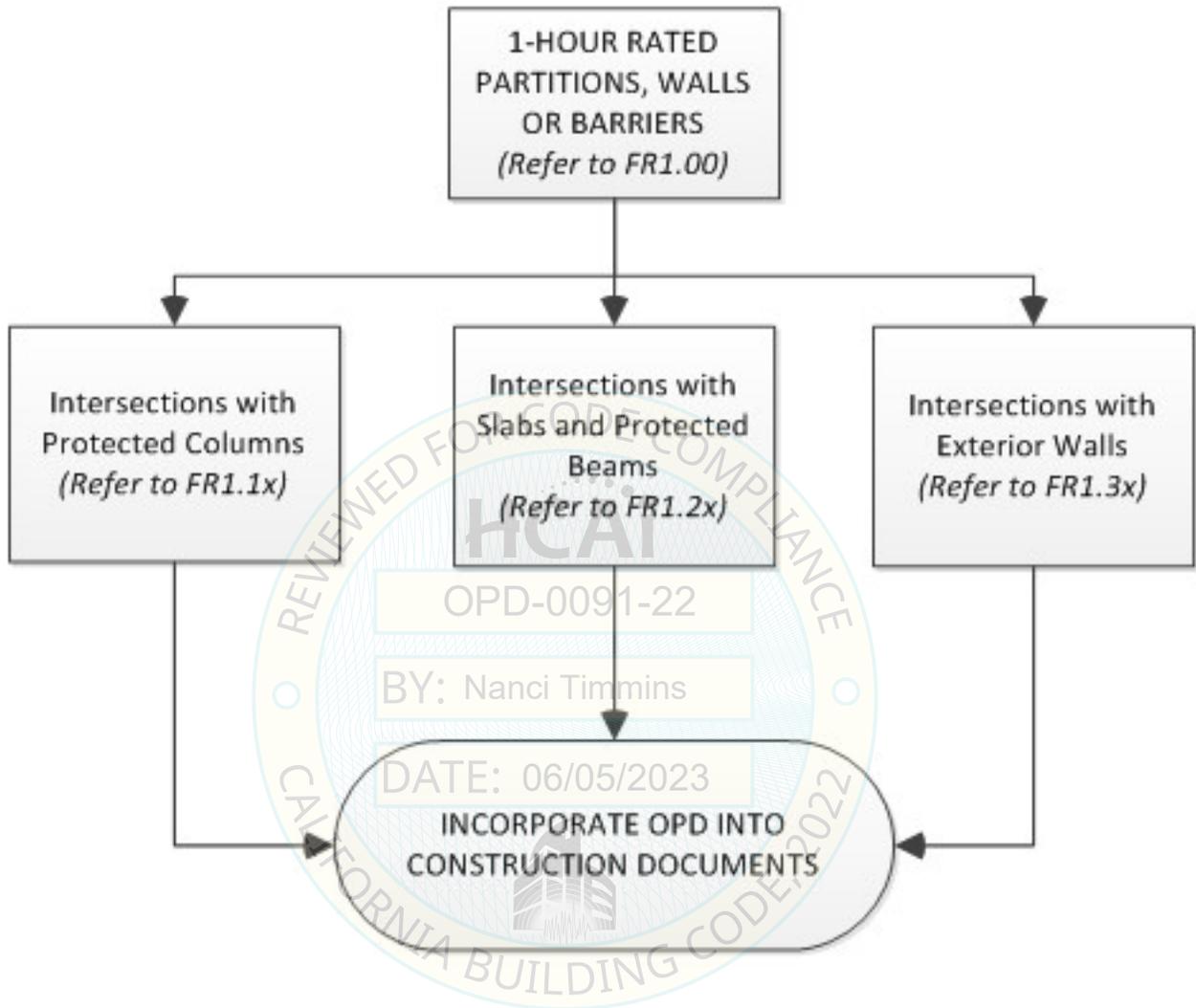
OPD No:

Sheet Title :  
APPLICATION FLOWCHART - OVERVIEW OF  
OPD USE

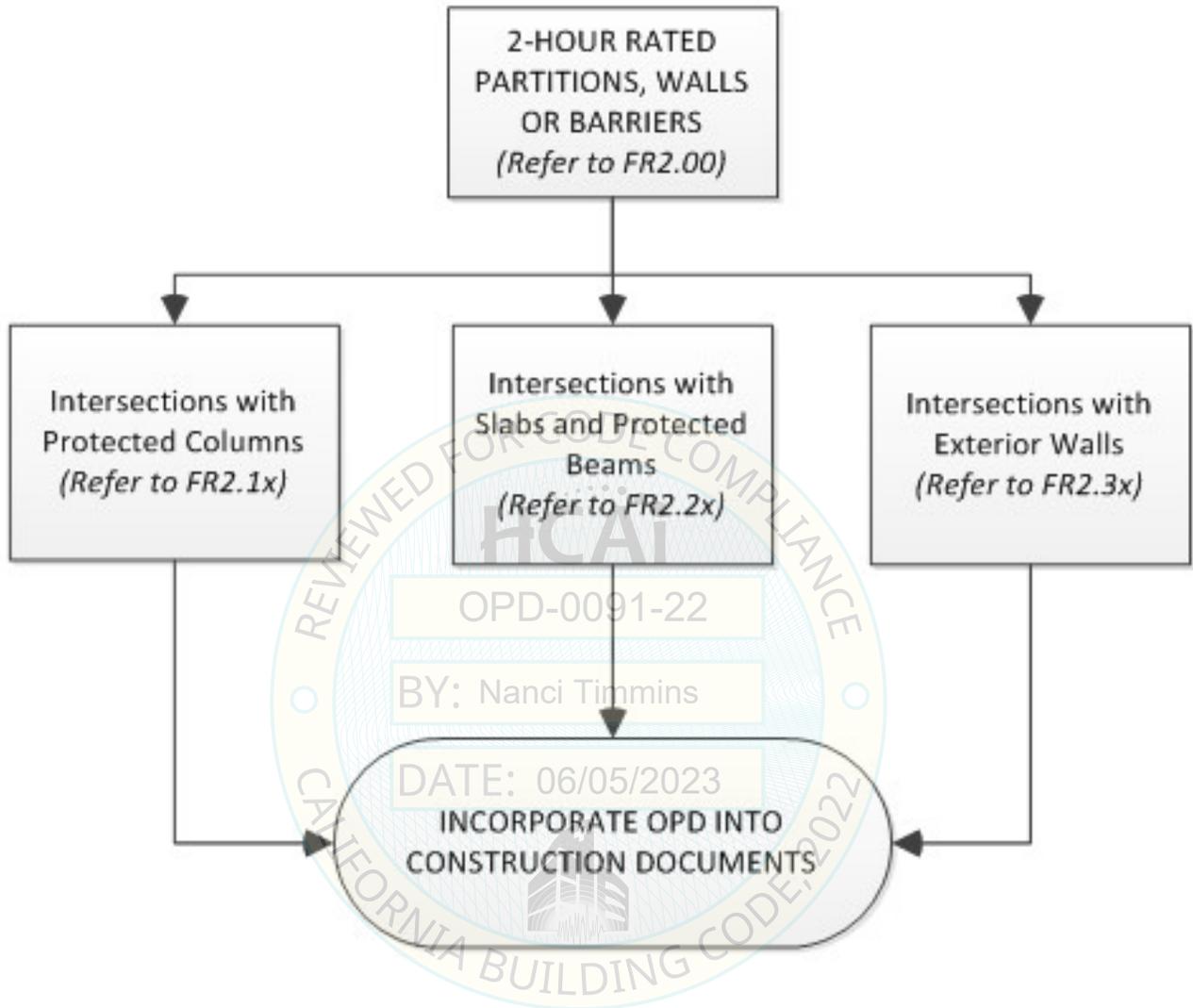
**FRX.20**



Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : APPLICATION FLOWCHART - OPD SELECTION		<b>FRX.21</b>



Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : APPLICATION FLOWCHART - RATED PARTITIONS, WALLS, AND BARRIERS		<b>FRX.22</b>

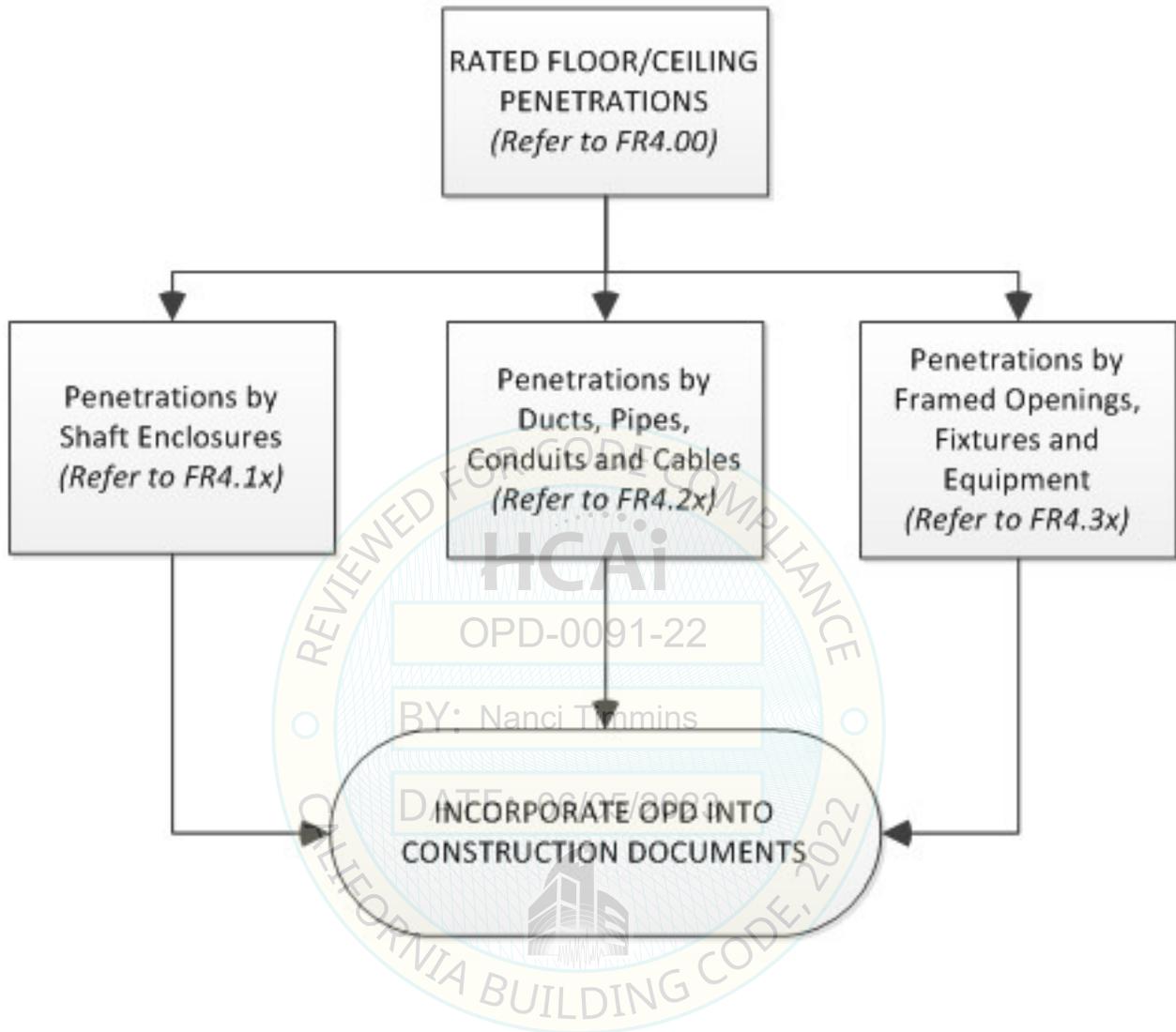


Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
**APPLICATION FLOWCHART - RATED PARTITIONS, WALLS, AND BARRIERS**

**FRX.23**

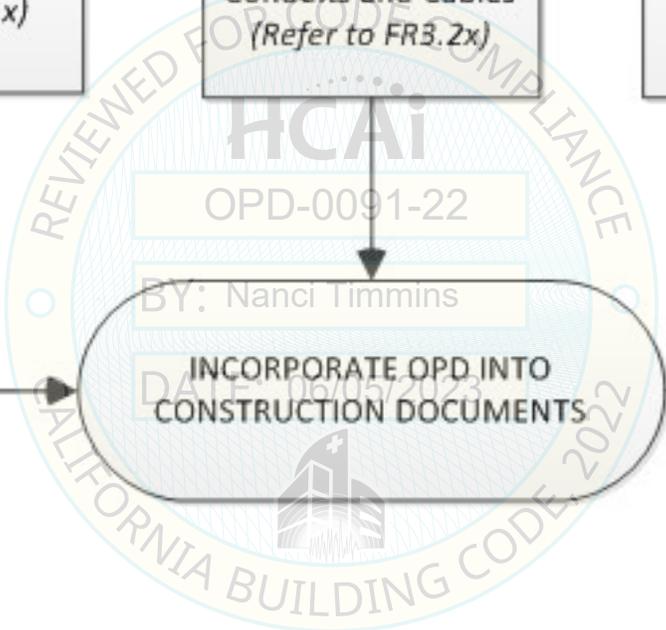
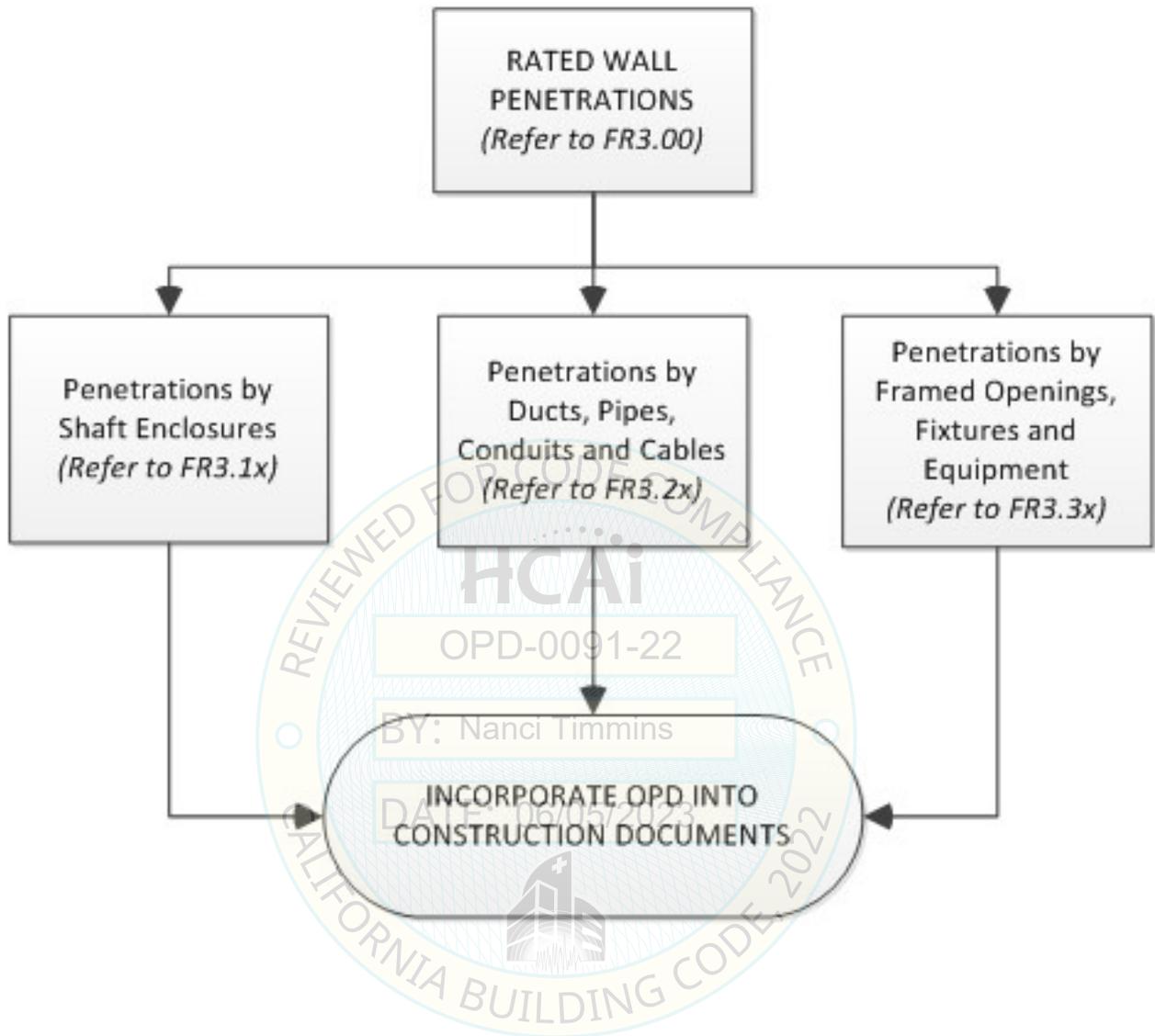


Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
APPLICATION FLOWCHART - RATED CEILING  
DETAILS

**FRX.24**



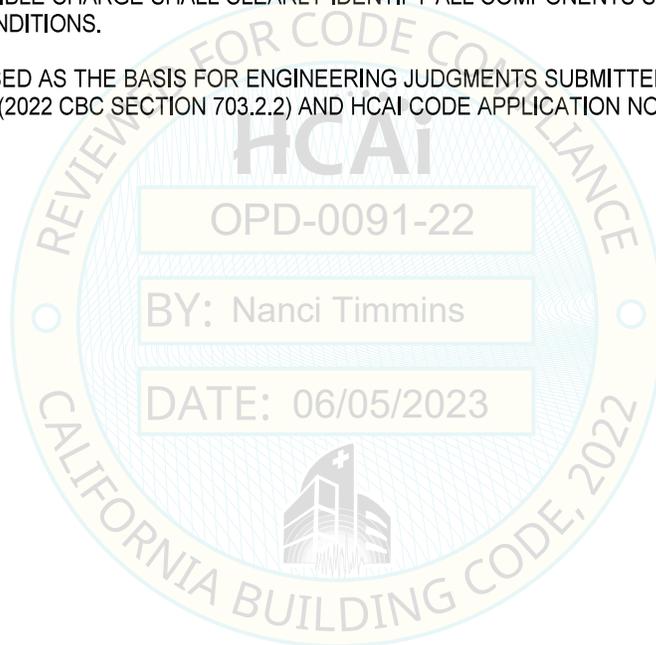
Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : APPLICATION FLOWCHART - RATED PENETRATIONS		<b>FRX.25</b>

**GENERAL NOTES**

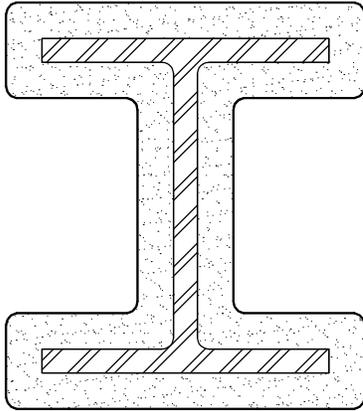
1. CONSTRUCTION, WORKMANSHIP AND MATERIAL SHALL CONFORM TO THE CALIFORNIA BUILDING CODE.
2. THE CONTRACTOR SHALL NOTIFY HCAI AND THE DESIGN PROFESSIONAL OF RECORD (DPOR) IN RESPONSIBLE CHARGE OF THE PROJECT WHERE A CONFLICT OR DISCREPANCY OCCURS BETWEEN THE CONSTRUCTION DRAWINGS AND ANY OTHER PORTION OF THE CONTRACT DOCUMENTS, FIELD CONDITIONS, OR WHERE ANY CONDITIONS ARISE NOT COVERED BY THESE DOCUMENTS WHEREIN WORK WILL NOT COMPLY WITH CODE REQUIREMENTS.
3. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO CONSTRUCT THE HOSPITAL BUILDING IN ACCORDANCE WITH THE CALIFORNIA BUILDING STANDARD CODE (CBCS), SHOULD ANY CONDITION DEVELOP NOT COVERED BY THE APPROVED CONSTRUCTION DOCUMENTS WHEREIN THE WORK WILL NOT COMPLY WITH CBCS, AN AMENDED CONSTRUCTION DOCUMENT DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY HCAI BEFORE PROCEEDING WITH THE WORK.
4. THE FIRE-RESISTANCE RATING OF BUILDING ELEMENTS, COMPONENT OR ASSEMBLIES SHALL BE DETERMINED IN ACCORDANCE WITH ASTM E 119 OR UL 263 OR IN ACCORDANCE WITH CBC SEC.703.3 (2022 CBC SEC. 703.2.2).
5. WHERE FIRE-RESISTIVE PARTITIONS, WALLS AND BARRIERS ARE CONSTRUCTED OF GYPSUM WALLBOARD TO MEET THE FIRE AND SMOKE PROTECTION FEATURES IN ACCORDANCE WITH CBC CHAPTER 7, THEY SHALL MEET THE REQUIREMENTS OF THE FOLLOWING:
  - i. THE DOCUMENTED REQUIREMENTS OF TESTING AND LISTING AGENCIES FOR MANUFACTURER'S PROPRIETARY MATERIALS AND CONSTRUCTION METHODS AS SHOWN IN THE TEST REPORT – E.G. UNDERWRITERS LABORATORIES, INTERTEK / WARNOCK-HERSEY, ETC., OR
  - ii. THE GENERIC FILE NUMBER(S) OF WALLS AND INTERIOR PARTITIONS DOCUMENTED IN THE GYPSUM ASSOCIATION'S PUBLICATION, "FIRE RESISTANCE DESIGN MANUAL, OR
  - iii. THE PRESCRIPTIVE CONSTRUCTION ITEMS LISTED IN CBC TABLE 721.1(2) FOR WALLS AND PARTITIONS.
6. WHERE STRUCTURAL MEMBERS ARE PROTECTED WITH SPRAY-APPLIED FIRE-RESISTANT MATERIALS (SFRM) THEY SHALL MEET THE FIRE-RESISTANCE RATING REQUIREMENTS OF CBC SECTION 704 AND THE FOLLOWING:
  - i. THE DOCUMENTED REQUIREMENTS OF TESTING AND LISTING AGENCIES FOR MANUFACTURER'S PROPRIETARY MATERIALS AND CONSTRUCTION METHODS AS SHOWN IN THE TEST REPORT – E.G. UNDERWRITERS LABORATORIES, INTERTEK / WARNOCK-HERSEY, ETC.
7. WHERE STRUCTURAL MEMBERS ARE PROTECTED WITH OTHER NON-COMBUSTIBLE INSULATING MATERIALS, THEY SHALL MEET THE FIRE-RESISTANCE RATING REQUIREMENTS OF CBC SECTION 704 AND THE FOLLOWING:
  - i. THE PRESCRIPTIVE CONSTRUCTION ITEMS LISTED IN CBC TABLE 721.1(1) FOR MINIMUM PROTECTION OF STRUCTURAL PARTS.

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : <b>GENERAL NOTES PAGE 1 OF 2</b>		<b>FR0.00</b>

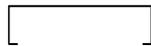
- 8. STRUCTURAL DECKS SHALL BE CONSTRUCTED TO MEET THE REQUIREMENTS OF RATED HORIZONTAL ASSEMBLIES IN ACCORDANCE WITH CBC SECTION 711, AND SHALL MEET THE REQUIREMENTS OF THE FOLLOWING:
  - i. THE DOCUMENTED REQUIREMENTS OF TESTING AND LISTING AGENCIES FOR MANUFACTURER'S PROPRIETARY MATERIALS AND CONSTRUCTION METHODS AS SHOWN IN THE TEST REPORT – E.G. UNDERWRITERS LABORATORIES, INTERTEK / WARNOCK-HERSEY, ETC., OR
  - ii. THE PRESCRIPTIVE CONSTRUCTION ITEMS LISTED IN CBC TABLE 721.1(3) FOR MINIMUM PROTECTION OF FLOOR AND ROOF SYSTEMS.
- 9. THE DPOR IN RESPONSIBLE CHARGE OF THE PROJECT SHALL VERIFY THAT THE OPD PROVIDES AN ACCEPTABLE FIRE-RESISTIVE RATING FOR SPECIFIC CONDITIONS AND WILL ALSO MEET ANY ACOUSTICAL CRITERIA THAT MAY OTHERWISE BE REQUIRED BY THE PROJECT DESIGN CRITERIA.
- 10. INDIVIDUAL DETAILS WITHIN THIS OPD TYPICALLY RELY UPON OTHER DETAILS FOR INFORMATION ESSENTIAL TO THEIR APPLICATION. OPD'S ARE TO BE USED IN CONJUNCTION WITH ALL RELATED, APPLICABLE DETAILS WITHIN THIS OPD PACKAGE INCLUDING THE GENERAL NOTES.
- 11. OPDs ALLOW OPTIONS FOR SOME COMPONENTS, SUCH AS FRAMING MEMBER SIZES, FASTENERS, ETC. THE DPOR IN RESPONSIBLE CHARGE SHALL CLEARLY IDENTIFY ALL COMPONENTS SELECTED FOR USE IN THE PROJECT-SPECIFIC CONDITIONS.
- 12. OPDs SHALL NOT BE USED AS THE BASIS FOR ENGINEERING JUDGMENTS SUBMITTED TO THE OFFICE PURSUANT TO CBC SECTION 703.3 (2022 CBC SECTION 703.2.2) AND HCAI CODE APPLICATION NOTICE 2-703.3



Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : GENERAL NOTES PAGE 2 OF 2		FR0.01



STRUCTURAL STEEL COLUMN W/ SPRAY APPLIED FIREPROOFING. REFER STRUCTURAL DRAWINGS



METAL STUD. REFER TO ARCHITECTURAL DRAWINGS FOR WALL TYPE.



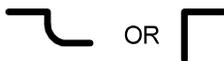
SHAFTWALL STUD. REFER TO ARCHITECTURAL DRAWINGS FOR WALL TYPE.



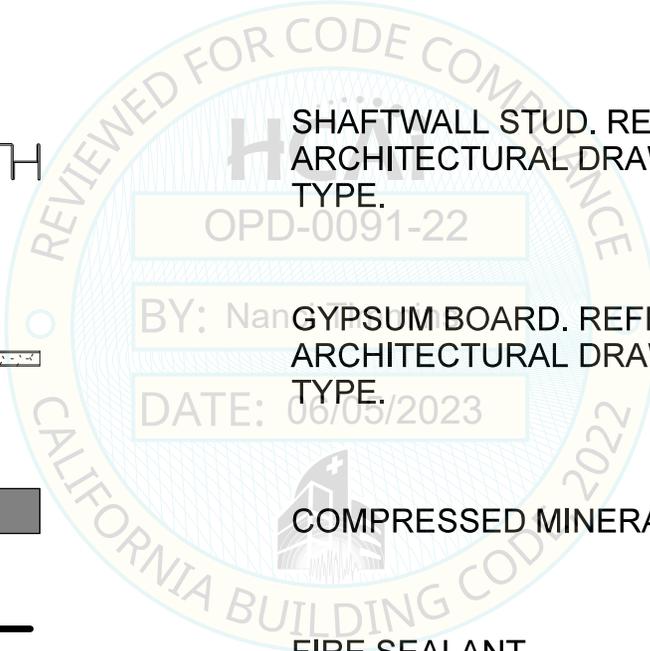
GYPSUM BOARD. REFER TO ARCHITECTURAL DRAWINGS FOR WALL TYPE.



COMPRESSED MINERAL WOOL



FIRE SEALANT



Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
**GRAPHICS LEGEND**

**FR0.02**

RATED GYPSUM WALLBOARD  
ASSEMBLY CONSTRUCTION PER  
CBC-721 OR LISTED SYSTEM

DOUBLE STUD OR EXTENDED FLANGE  
DEPTH OF SINGLE STUD AS REQ'D FOR  
GYPSUM WALLBOARD ATTACHMENT

METAL FRAMING PER  
ARCHITECTURAL/ STRUCTURAL  
DRAWINGS

FR1.02

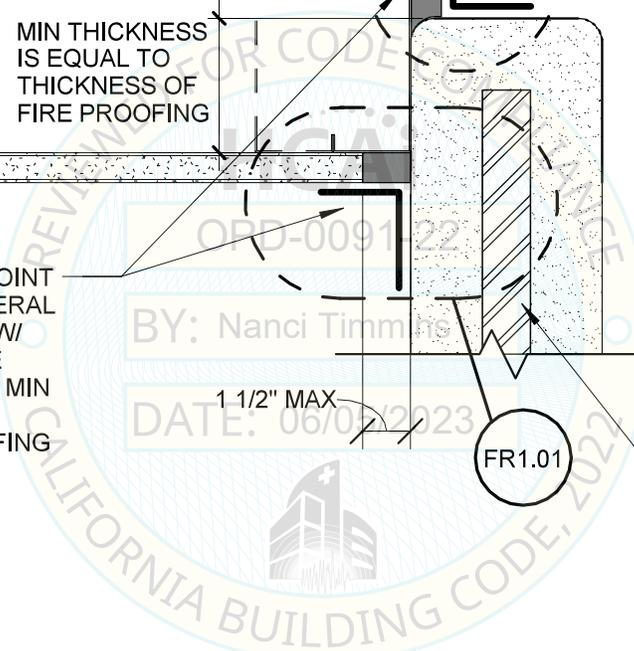
MIN THICKNESS  
IS EQUAL TO  
THICKNESS OF  
FIRE PROOFING

TYPICAL FIRE-RESISTIVE JOINT  
COMPRISED OF 4 PCF MINERAL  
WOOL COMPRESSED 50% W/  
LISTED (ANSI/UL 2079) FIRE  
SEALANT/SPRAY OVERLAP MIN  
1/2" OVER GYP. BD. AND 2"  
OVER COLUMN FIREPROOFING

1 1/2" MAX

FR1.01

STRUCTURAL STEEL  
COLUMN W/ FIREPROOF  
PER CBC-721 OR LISTED  
DESIGN



Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
BASIC JOINT DETAIL FOR 1-HR FIRE RATED  
WALL ASSEMBLIES - COMPOSITE AT JOINTS

FR1.00

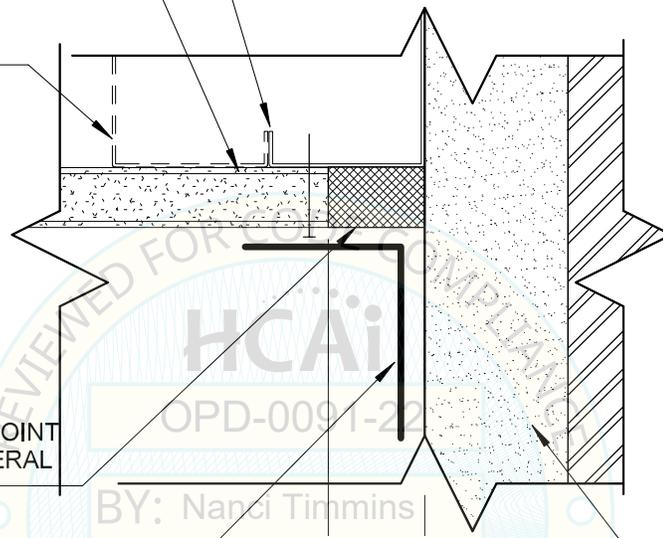
METAL FRAMING PER ARCHITECTURAL/ STRUCTURAL DRAWINGS

RATED GYPSUM WALLBOARD ASSEMBLY CONSTRUCTION PER CBC-721 OR LISTED SYSTEM

DOUBLE STUD WHERE OCCURS

TYPICAL FIRE-RESISTIVE JOINT COMPRISED OF 4 PCF MINERAL WOOL COMPRESSED 50%

LISTED (ANSI/UL 2079) FIRE SEALANT/SPRAY OVERLAP MIN 1/2" OVER GYP. BD. AND 2" OVER COLUMN FIREPROOFING



STRUCTURAL STEEL COLUMN W/ FIREPROOF PER CBC-721 OR LISTED DESIGN

NOTES:

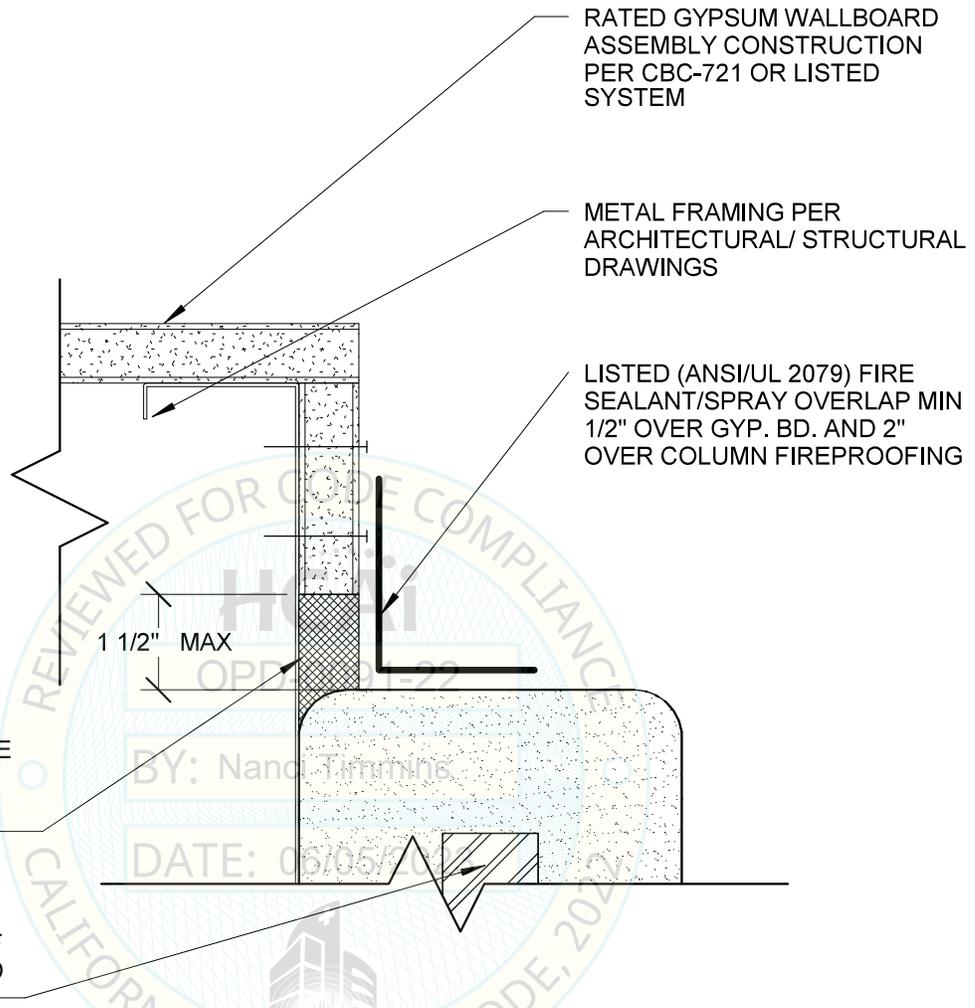
1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL TO OR GREATER THAN THE WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).

Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
**BASIC JOINT DETAIL FOR 1-HR FIRE-RATED  
 WALL ASSEMBLIES - FACE JOINT**

**FR1.01**



RATED GYPSUM WALLBOARD ASSEMBLY CONSTRUCTION PER CBC-721 OR LISTED SYSTEM

METAL FRAMING PER ARCHITECTURAL/ STRUCTURAL DRAWINGS

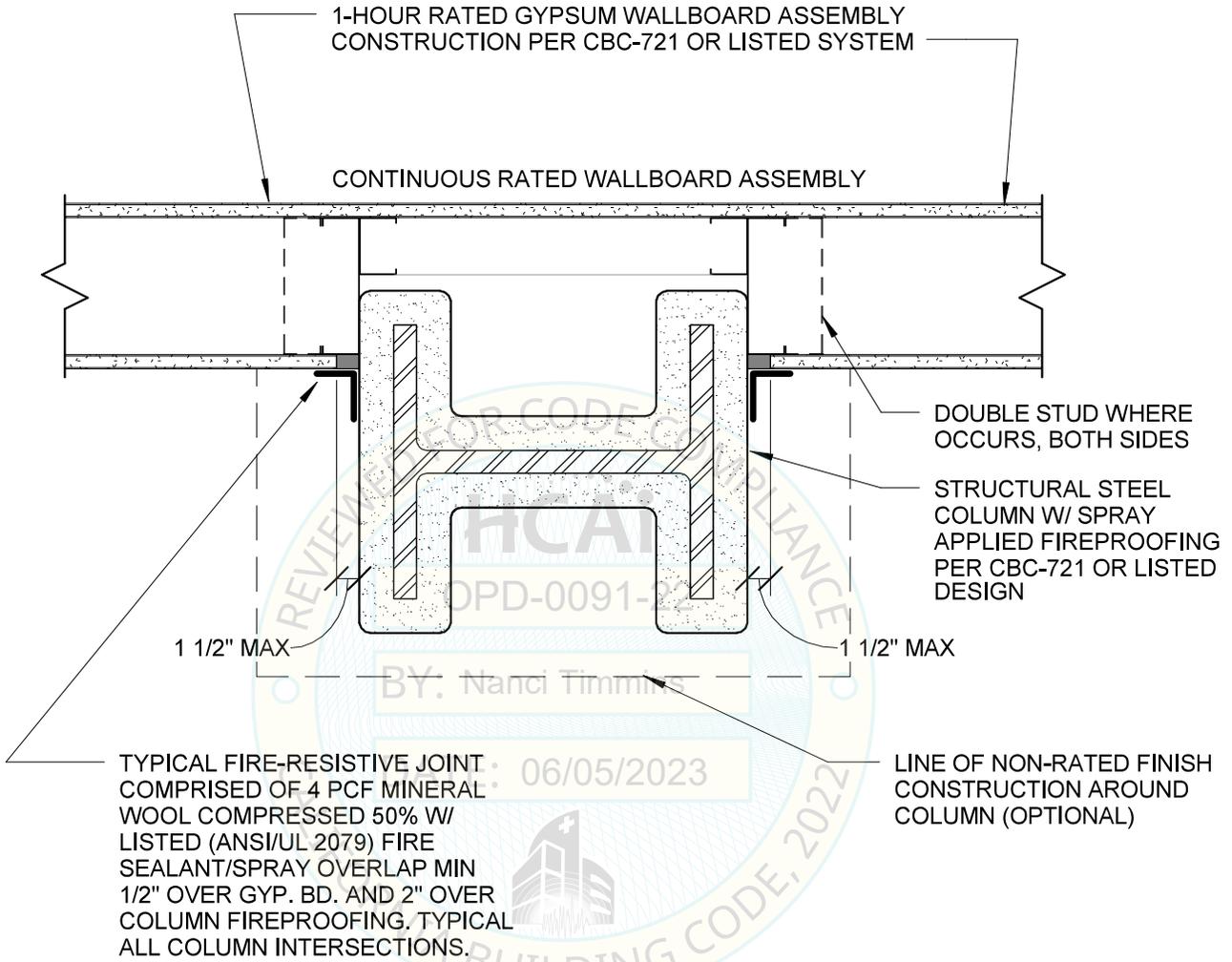
LISTED (ANSI/UL 2079) FIRE SEALANT/SPRAY OVERLAP MIN 1/2" OVER GYP. BD. AND 2" OVER COLUMN FIREPROOFING

1 1/2" MAX

TYPICAL FIRE-RESISTIVE JOINT COMPRISED OF 4 PCF MINERAL WOOL COMPRESSED 50%

STRUCTURAL STEEL COLUMN W/ FIREPROOF PER CBC-721 OR LISTED DESIGN

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : BASIC JOINT DETAIL FOR 1-HR FIRE-RATED WALL ASSEMBLIES - END JOINT		FR1.02



1 1/2" MAX

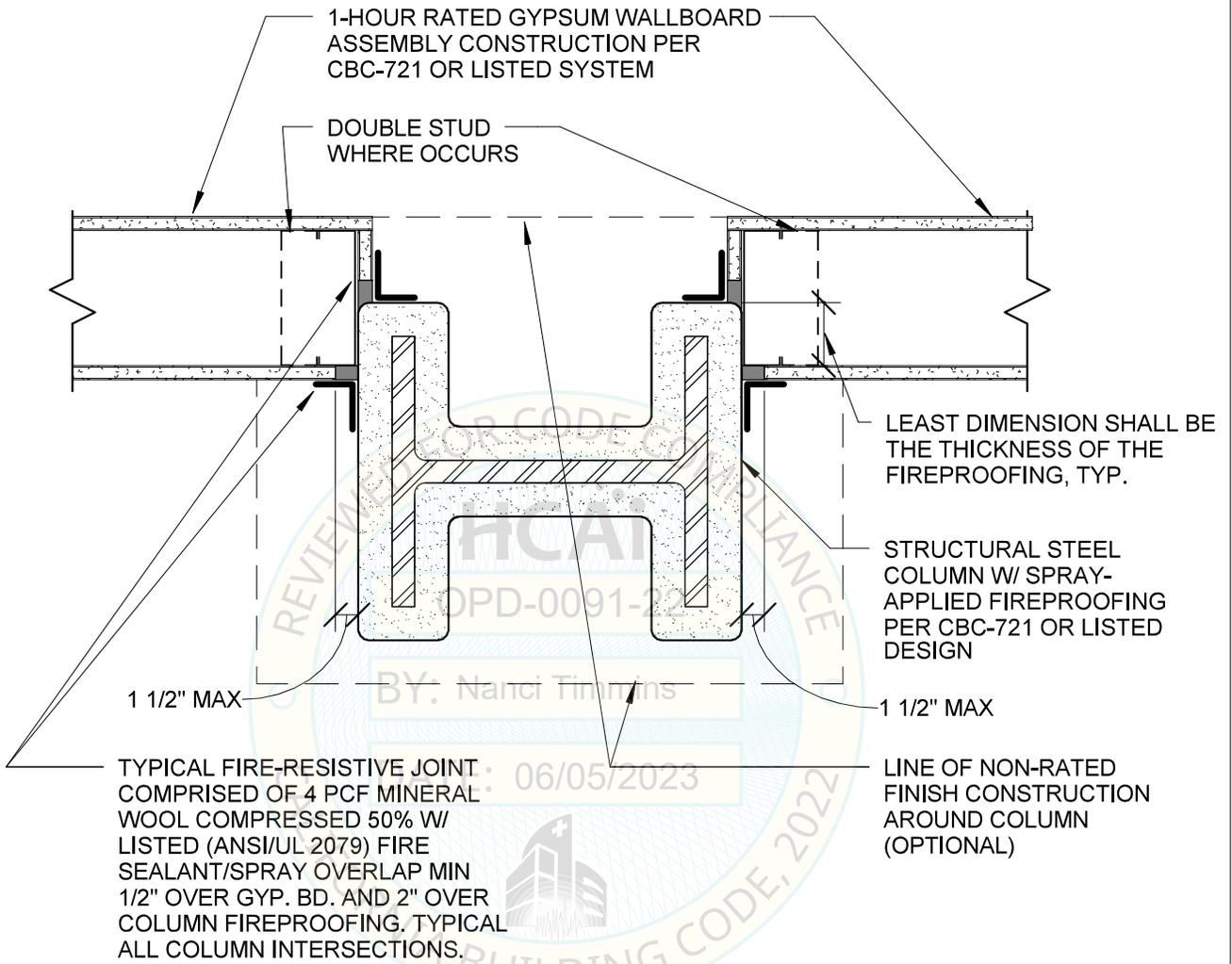
1 1/2" MAX

TYPICAL FIRE-RESISTIVE JOINT :  
 COMPRISED OF 4 PCF MINERAL  
 WOOL COMPRESSED 50% W/  
 LISTED (ANSI/UL 2079) FIRE  
 SEALANT/SPRAY OVERLAP MIN  
 1/2" OVER GYP. BD. AND 2" OVER  
 COLUMN FIREPROOFING. TYPICAL  
 ALL COLUMN INTERSECTIONS.

LINE OF NON-RATED FINISH  
 CONSTRUCTION AROUND  
 COLUMN (OPTIONAL)

- NOTES:
1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
  2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
  3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
  4. SEE FR1.00, FR1.01, FR1.02 FOR JOINT DESCRIPTION

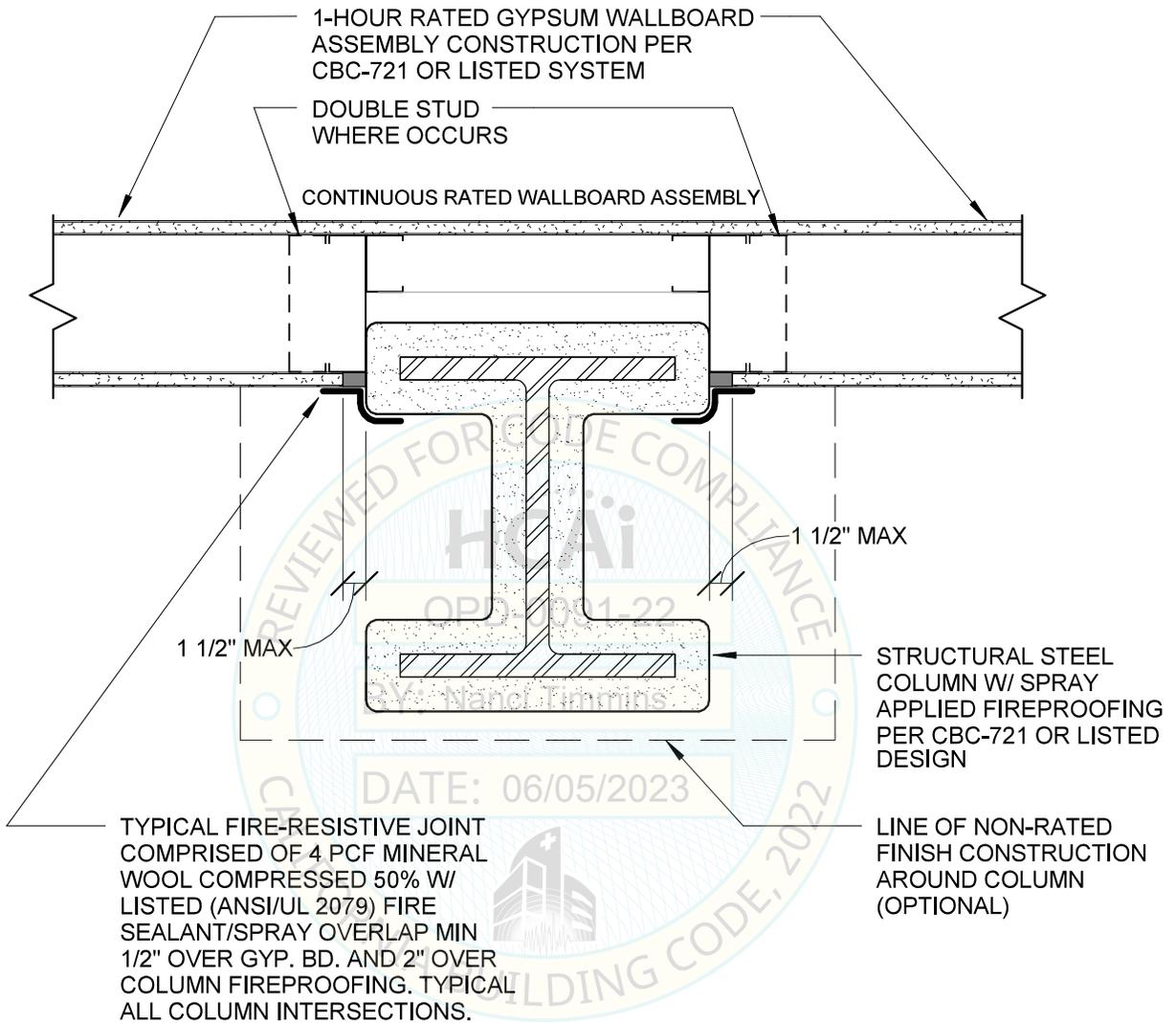
Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : INTERSECTION OF 1-HR FIRE PARTITION, WALL AND BARRIER AT PROTECTED COLUMN		FR1.10



NOTES:

1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
4. SEE FR1.00, FR1.01, FR1.02 FOR JOINT DESCRIPTION

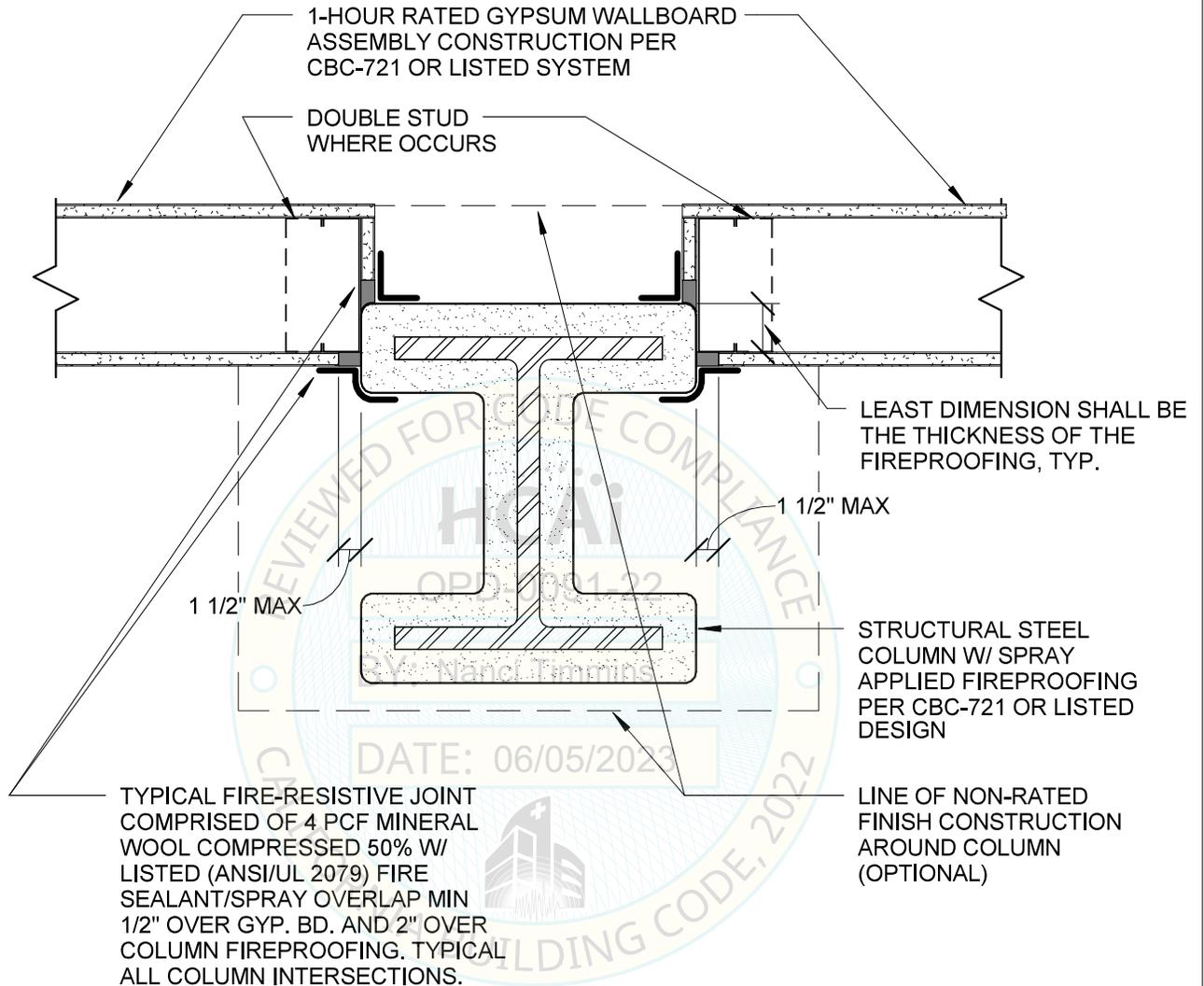
Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : <b>INTERSECTION OF 1-HR FIRE PARTITION, WALL AND BARRIER AT PROTECTED COLUMN</b>		<b>FR1.11</b>



NOTES:

1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
4. SEE FR1.00, FR1.01, FR1.02 FOR JOINT DESCRIPTION

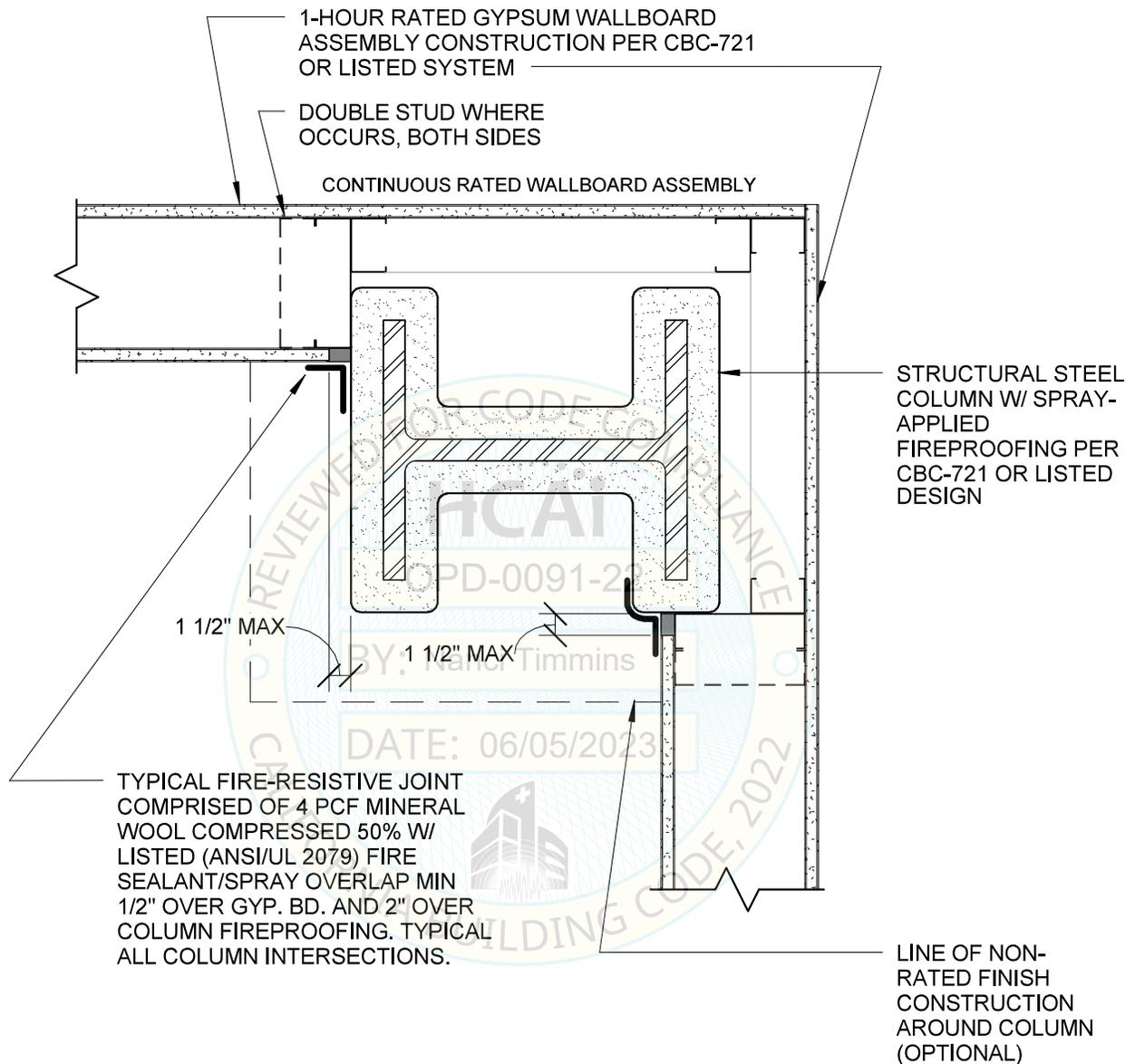
Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : INTERSECTION OF 1-HR FIRE PARTITION, WALL AND BARRIER AT PROTECTED COLUMN		FR1.12



NOTES:

1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
4. SEE FR1.00, FR1.01, FR1.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : INTERSECTION OF 1-HR FIRE PARTITION, WALL AND BARRIER AT PROTECTED COLUMN		FR1.13



TYPICAL FIRE-RESISTIVE JOINT COMPRISED OF 4 PCF MINERAL WOOL COMPRESSED 50% W/ LISTED (ANSI/UL 2079) FIRE SEALANT/SPRAY OVERLAP MIN 1/2" OVER GYP. BD. AND 2" OVER COLUMN FIREPROOFING. TYPICAL ALL COLUMN INTERSECTIONS.

**NOTES:**

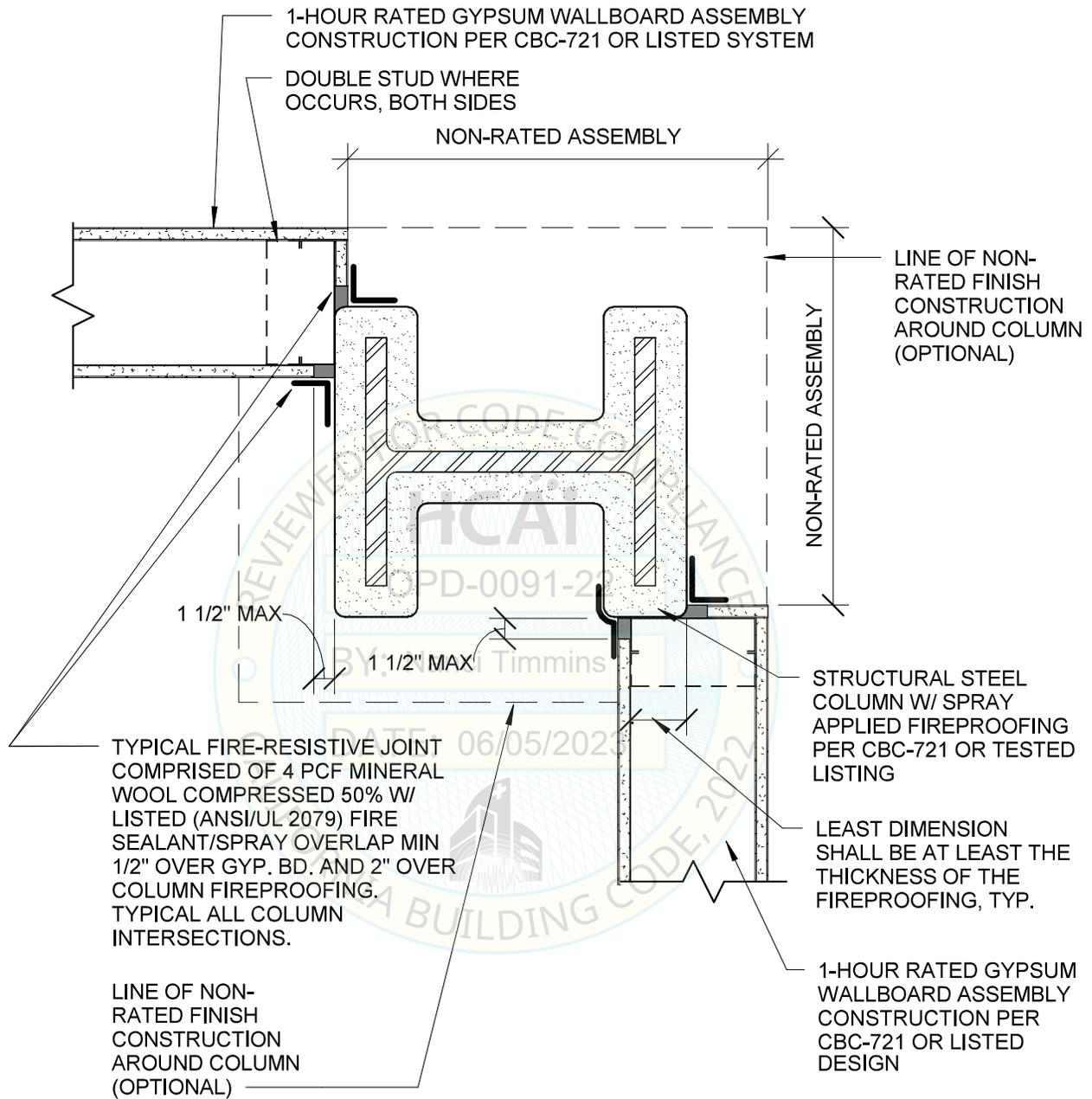
1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
4. SEE FR1.00, FR1.01, FR1.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
**INTERSECTION OF 1-HR FIRE PARTITION, WALL  
 AND BARRIER AT PROTECTED COLUMN**

**FR1.14**



**NOTES:**

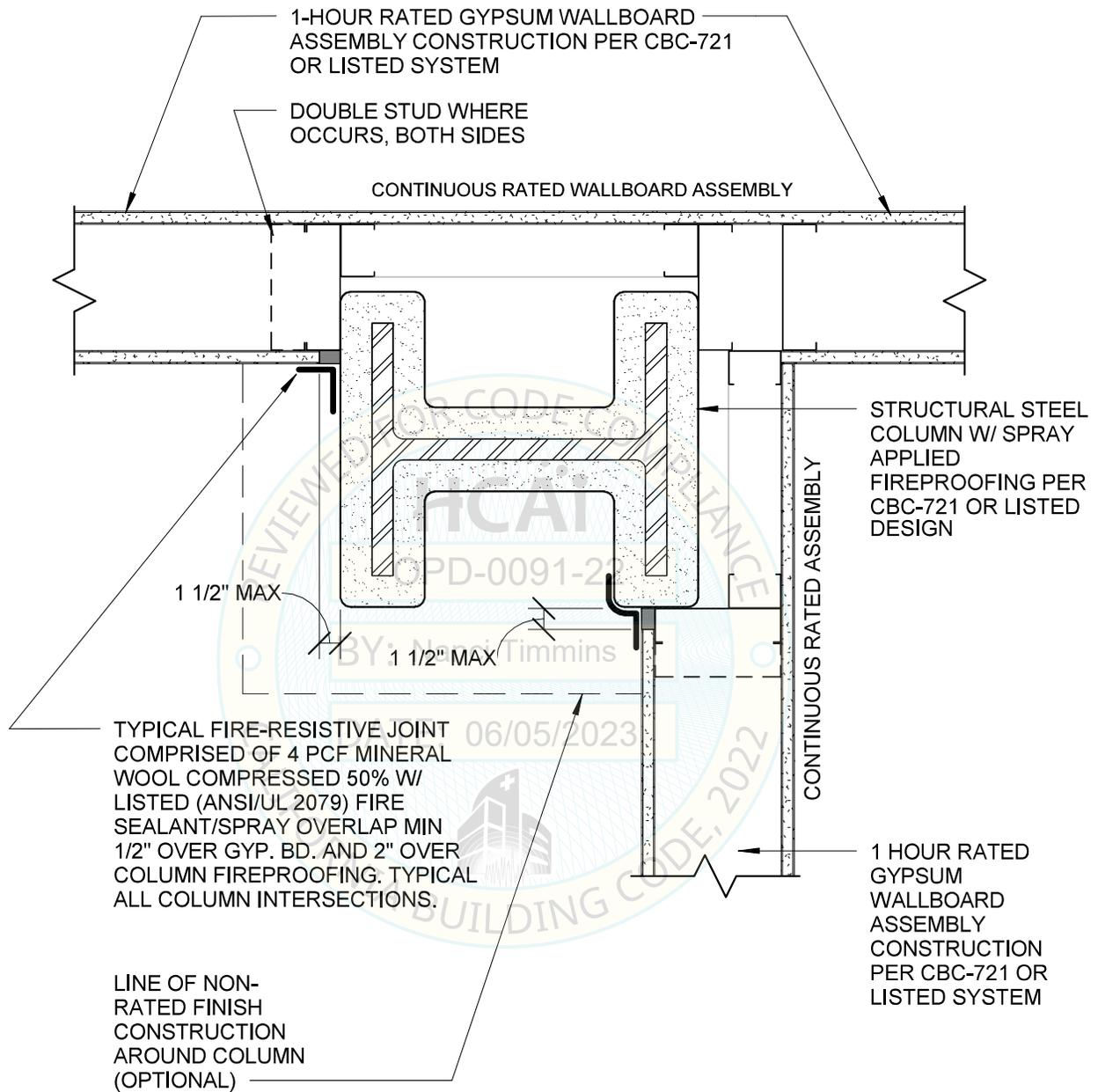
1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
4. SEE FR1.00, FR1.01, FR1.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
**INTERSECTION OF 1-HR FIRE PARTITION, WALL  
 AND BARRIER AT PROTECTED COLUMN**

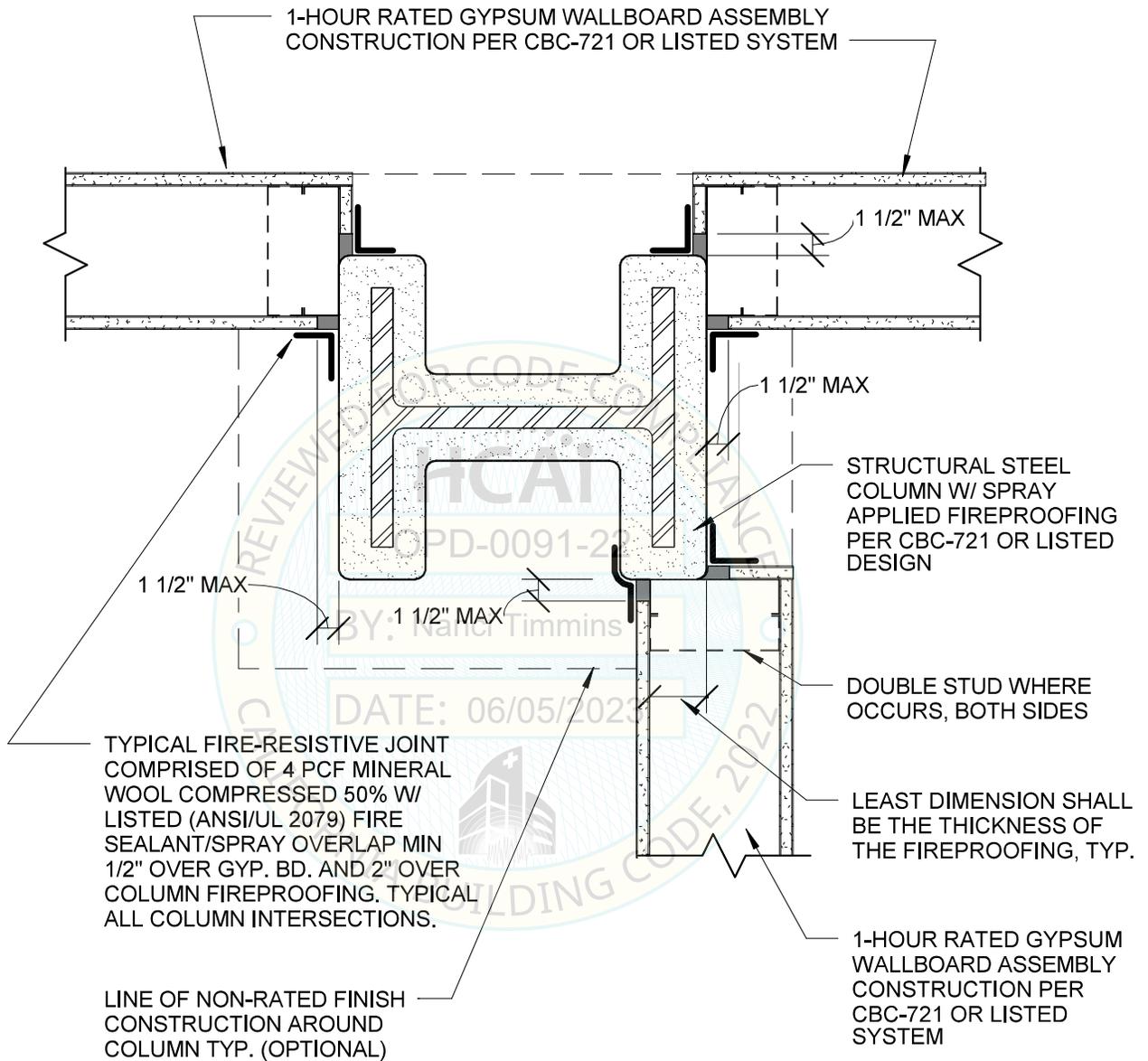
**FR1.15**



NOTES:

1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
4. SEE FR1.00, FR1.01, FR1.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : INTERSECTION OF 1-HR FIRE PARTITION, WALL AND BARRIER AT PROTECTED COLUMN		FR1.16



**NOTES:**

1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
4. SEE FR1.00, FR1.01, FR1.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : <b>INTERSECTION OF 1-HR FIRE PARTITION, WALL AND BARRIER AT PROTECTED COLUMN</b>		<b>FR1.17</b>

GYPSUM BOARD  
EXTENDS PER PLAN

MIN 5/8" DEPTH LISTED  
(ANSI/UL 2079) FLEXIBLE  
FIRE SEALANT

MINERAL WOOL

RATED WALL  
SEE PLAN

1/2"

GYPSUM BOARD AT INTERIOR  
FACE OF EXTERIOR WALL  
EXTENDS VERTICALLY FROM  
FLOOR TO FLOOR AND  
HORIZONTALLY FROM STUD TO  
STUD MIN. AS NEEDED TO  
RECEIVE WIDTH OF INTERIOR  
RATED PARTITION WALL.

BATT INSULATION

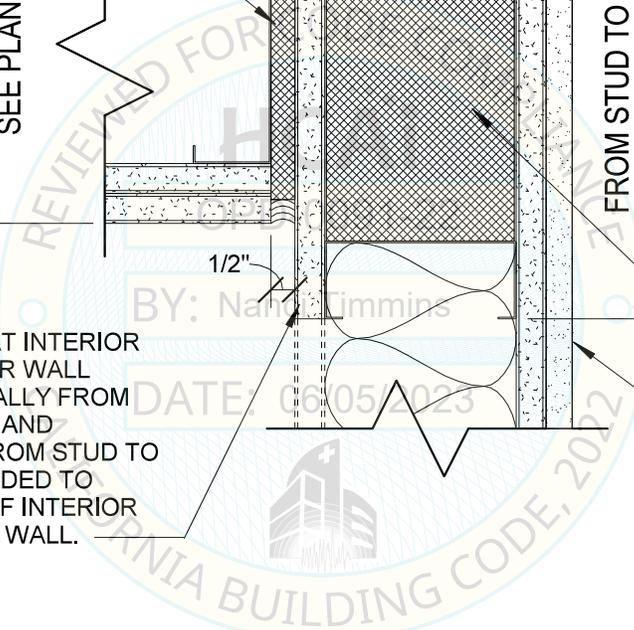
EXTERIOR STUDS PER  
STRUCTURAL

FOIL FACE

FROM STUD TO STUD  
MIN. WIDTH

MINERAL WOOL,  
TIGHT FIT WITH FOIL  
FACE ON ONE SIDE

EXTERIOR WALL SYSTEM

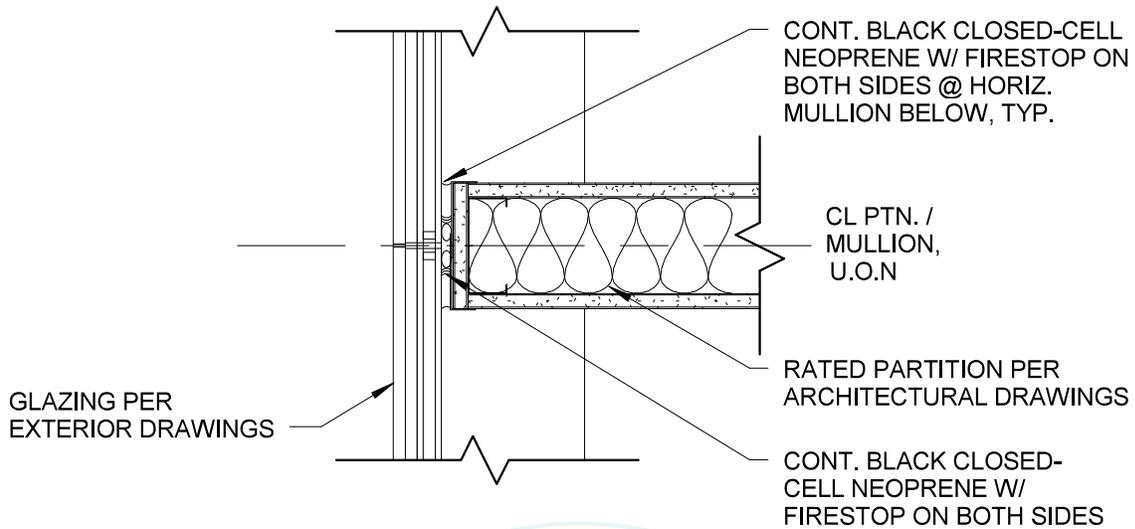


Section Title : FIRE-RESISTIVE STANDARD DETAILS

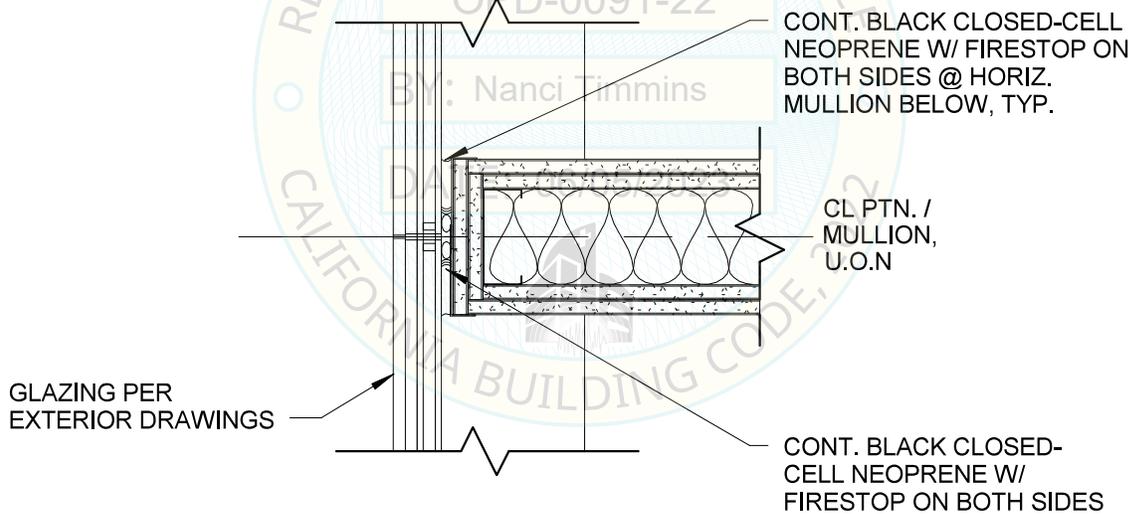
OPD No:

Sheet Title :  
RATED INTERIOR WALL TERMINATION AT  
EXTERIOR WALL

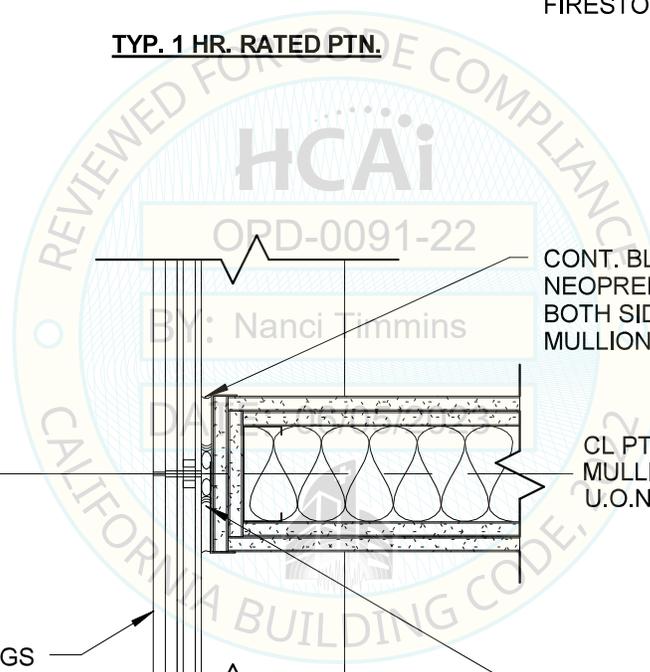
FR1.33



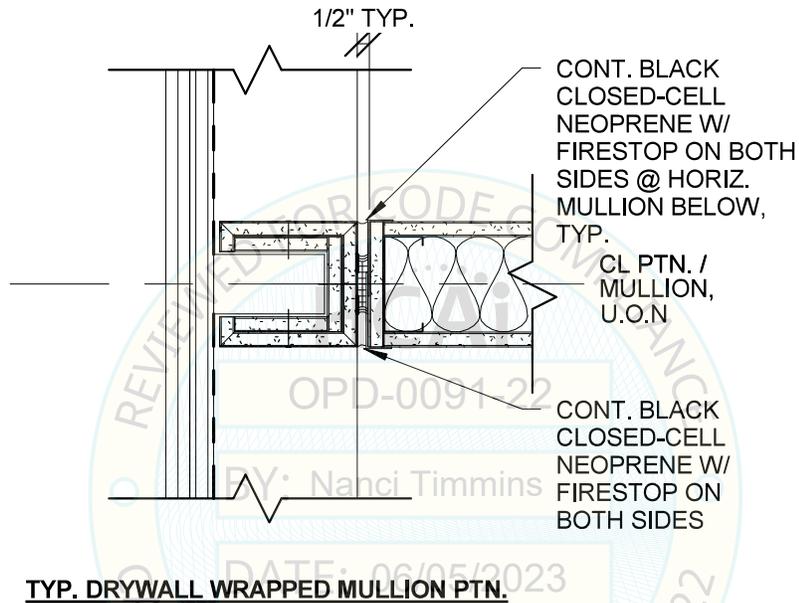
**TYP. 1 HR. RATED PTN.**



**TYP. 2 HR. RATED PTN.**

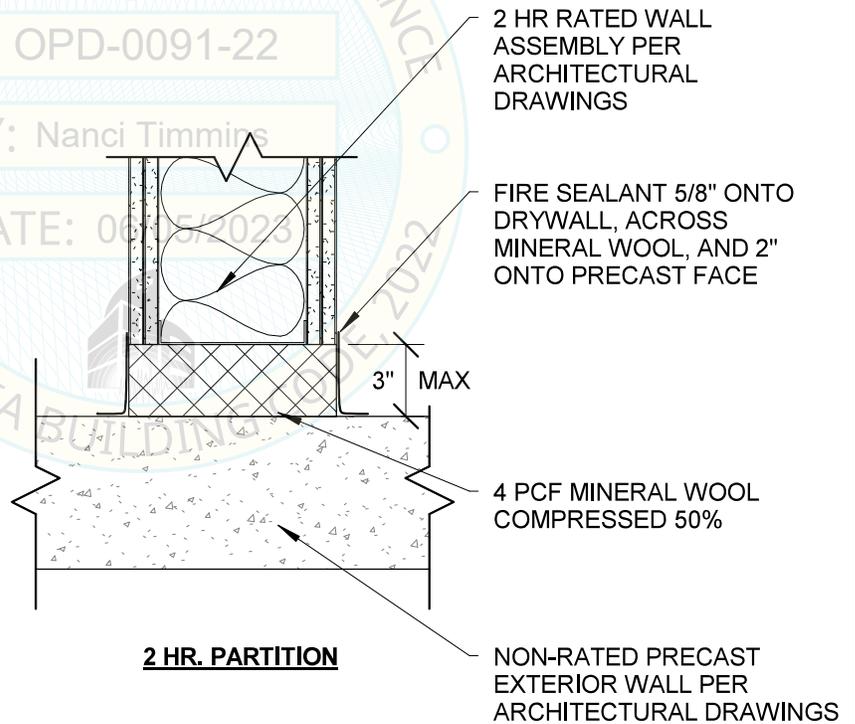
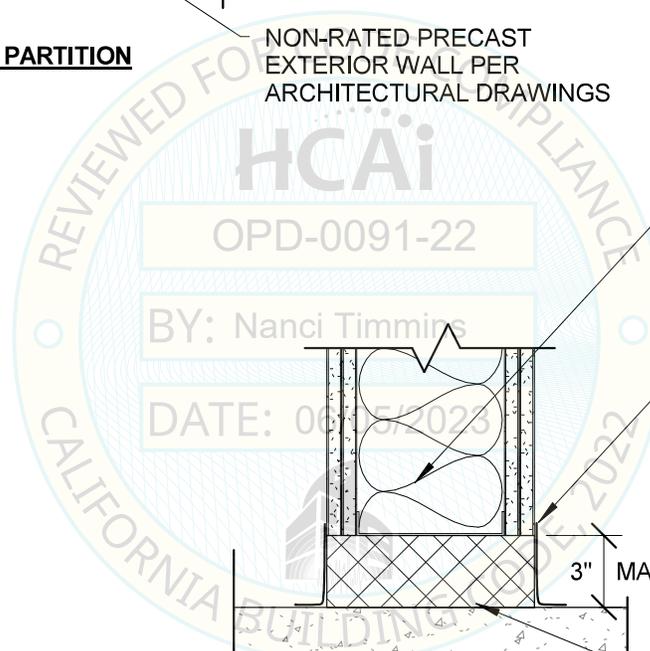
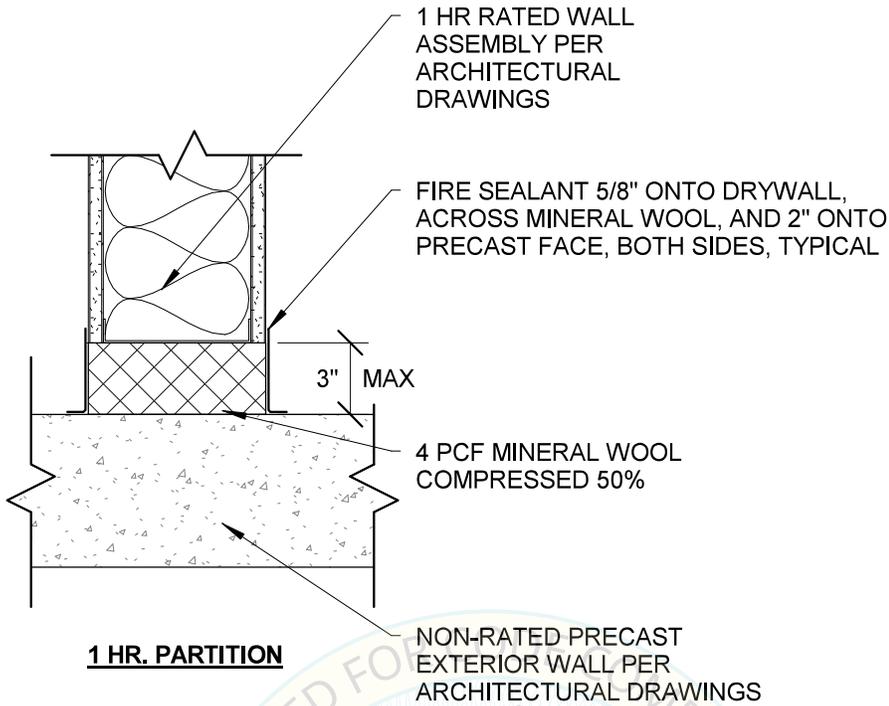


Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : PARTITION TERMINATION @ GLAZING		FR1.35



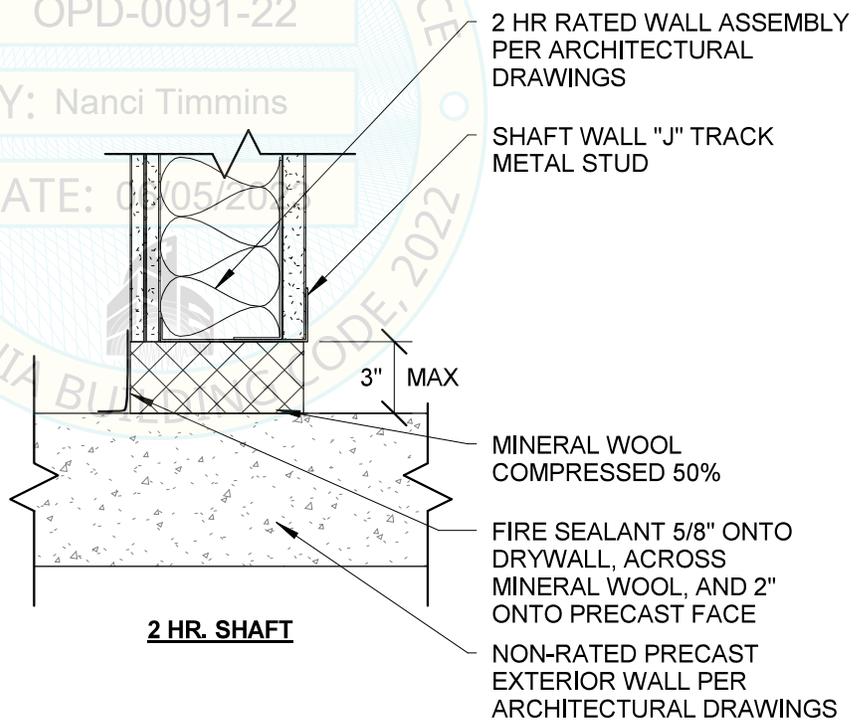
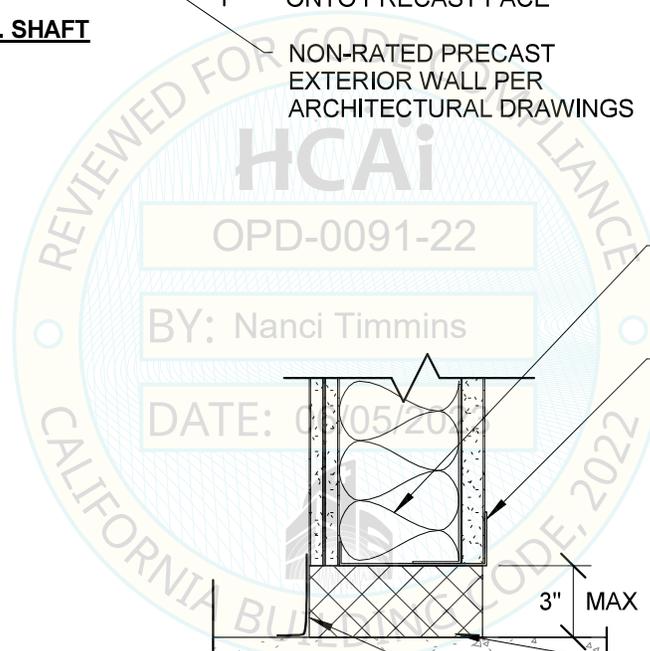
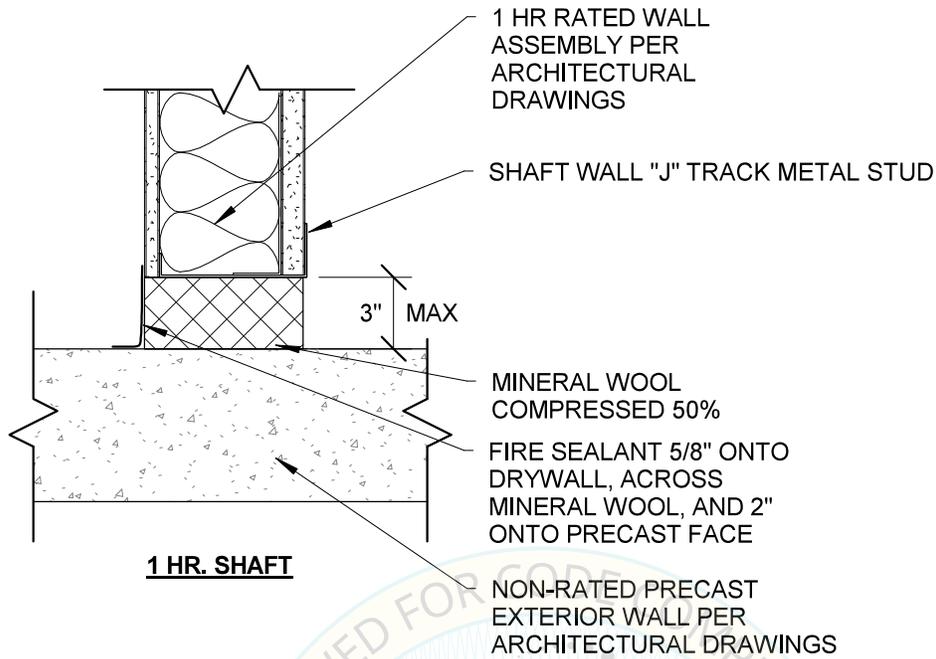
NOTE:  
 1. JOINT TRANSITIONS FROM VERTICAL AND HORIZONTAL MULLIONS TO RATED PARTITION ARE TO BE SEISMICALLY COMPATIBLE WITH BUILDING MOVEMENTS.

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : PARTITION TERMINATION @ MULLION - WRAPPED		FR1.38



NOTE:  
 1. PRECAST PANELS SHOWN ARE CURTAIN WALL SUPPORTED CONCRETE PANELS WITH SEISMIC DRIFT MOVEMENTS. CONCRETE PRECAST MATERIAL TO BE FULL DEPTH OF PANEL.

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : PARTITION TERMINATION TO PRECAST		FR1.39



NOTE:  
 1. PRECAST PANELS SHOWN ARE CURTAIN WALL SUPPORTED CONCRETE PANELS WITH SEISMIC DRIFT MOVEMENTS. CONCRETE PRECAST MATERIAL TO BE FULL DEPTH OF PANEL.

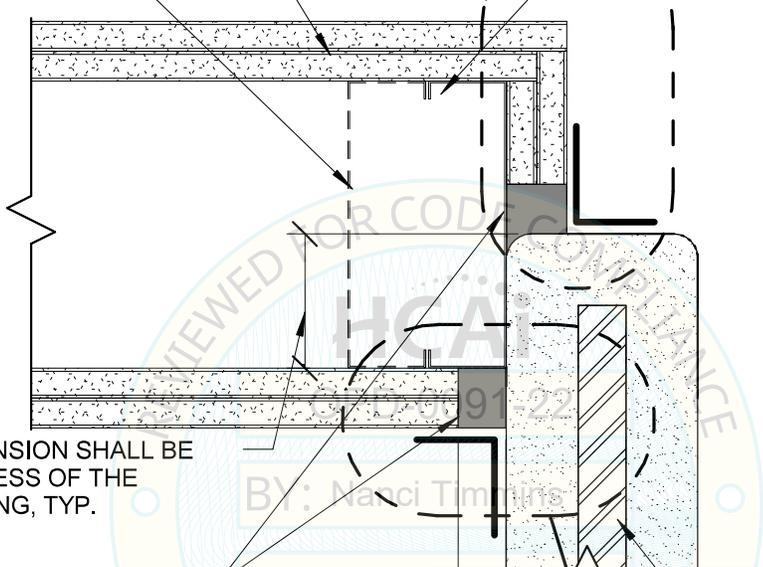
Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : <b>SHAFTWALL TERMINATION TO PRECAST</b>		<b>FR1.40</b>

RATED GYPSUM WALLBOARD  
ASSEMBLY CONSTRUCTION  
PER CBC-721 OR LISTED  
SYSTEM

DOUBLE STUD  
WHERE OCCURS

FR2.02

METAL FRAMING PER  
ARCHITECTURAL/ STRUCTURAL  
DRAWINGS



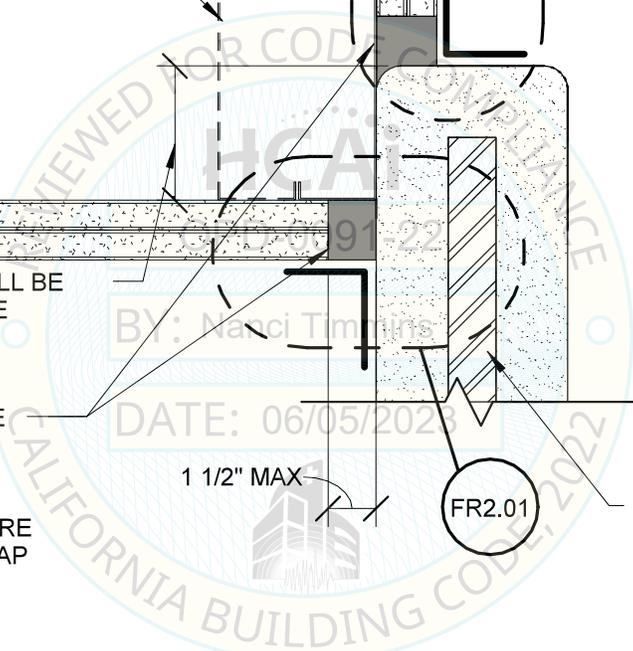
LEAST DIMENSION SHALL BE  
THE THICKNESS OF THE  
FIREPROOFING, TYP.

TYPICAL FIRE-RESISTIVE  
JOINT COMPRISED OF 4  
PCF MINERAL WOOL  
COMPRESSED 50% W/  
LISTED (ANSI/UL 2079) FIRE  
SEALANT/SPRAY OVERLAP  
MIN 1/2" OVER GYP. BD.  
AND 2" OVER COLUMN  
FIREPROOFING.

1 1/2" MAX

FR2.01

STRUCTURAL STEEL  
COLUMN W/ FIREPROOF  
PER CBC-721 OR LISTED  
DESIGN



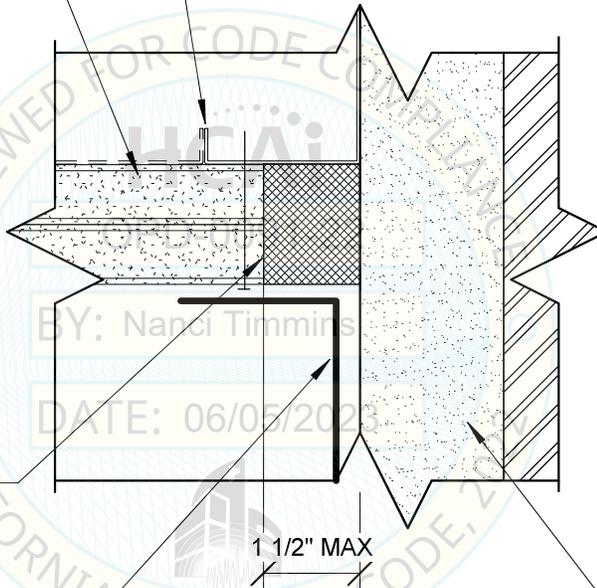
Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : BASIC JOINT DETAIL FOR 2-HR FIRE-RATED WALL ASSEMBLIES - COMPOSITE @ JOINTS		FR2.00

METAL FRAMING PER ARCHITECTURAL/  
STRUCTURAL DRAWINGS

2 HR FIRE RESISTANCE RATED  
WALL ASSEMBLY PER  
ARCHITECTURAL DRAWINGS

TYPICAL FIRE-RESISTIVE JOINT  
COMPRISED OF 4 PCF MINERAL  
WOOL COMPRESSED 50%

LISTED (ANSI/UL 2079) FIRE  
SEALANT/SPRAY OVERLAP MIN  
1/2" OVER GYP. BD. AND 2" OVER  
COLUMN FIREPROOFING.



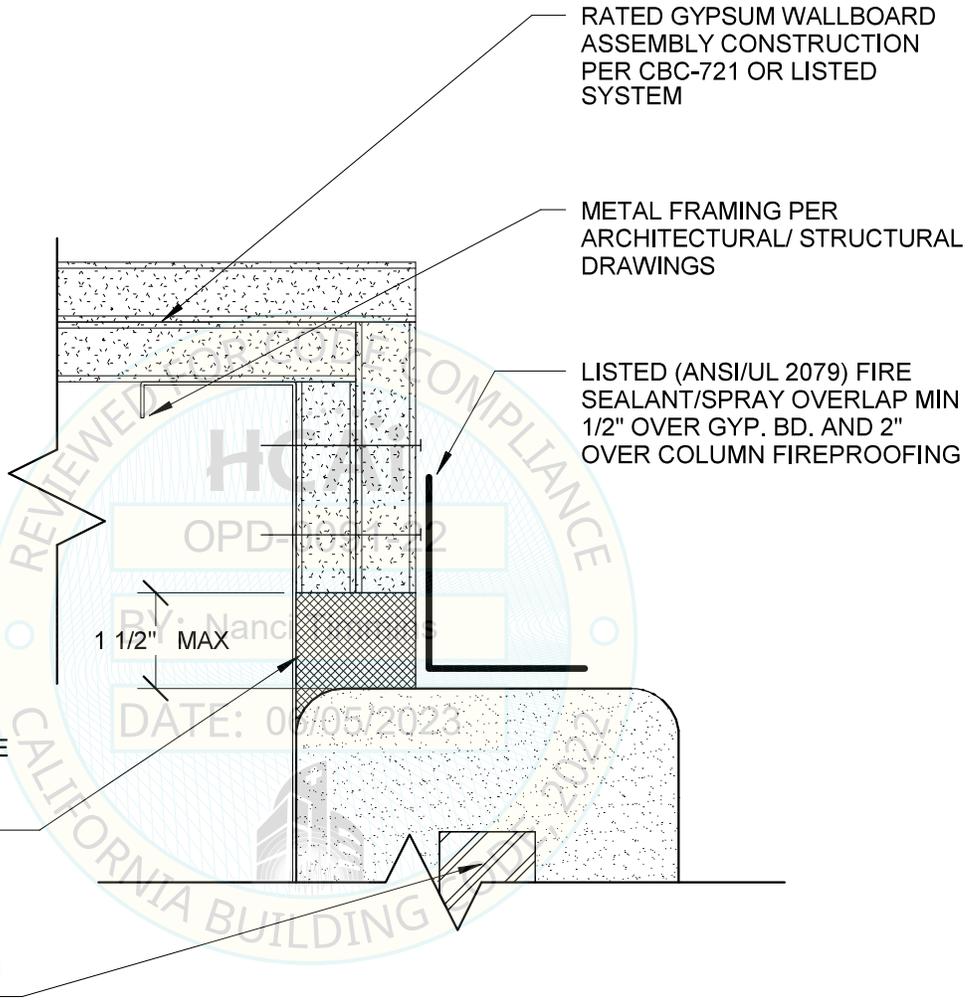
STRUCTURAL STEEL  
COLUMN W/ FIREPROOF  
PER CBC-721 OR LISTED  
DESIGN

Section Title : FIRE-RESISTIVE STANDARD DETAILS

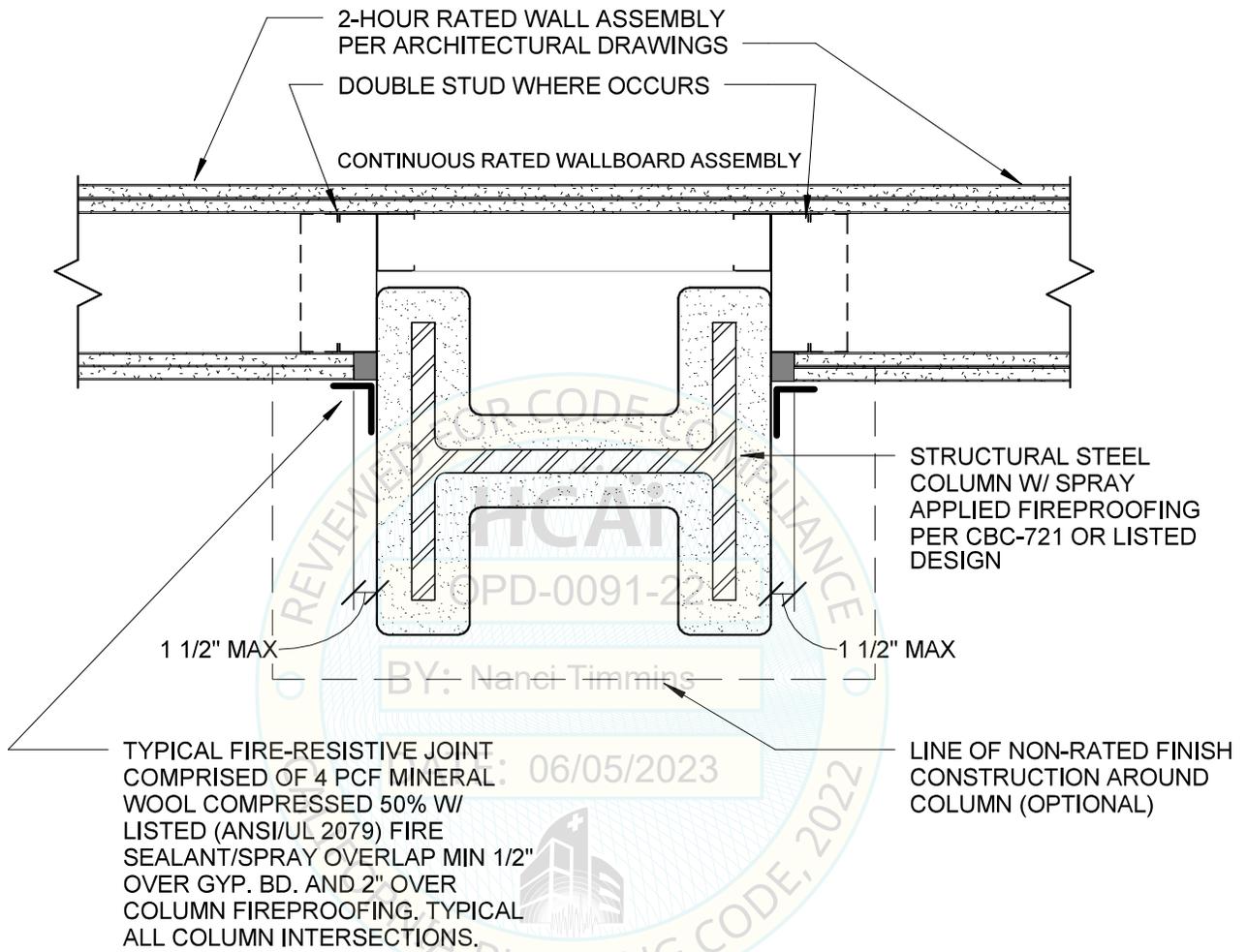
OPD No:

Sheet Title :  
**BASIC JOINT DETAIL FOR 2-HR FIRE-RATED  
WALL ASSEMBLIES - FACE JOINT**

**FR2.01**



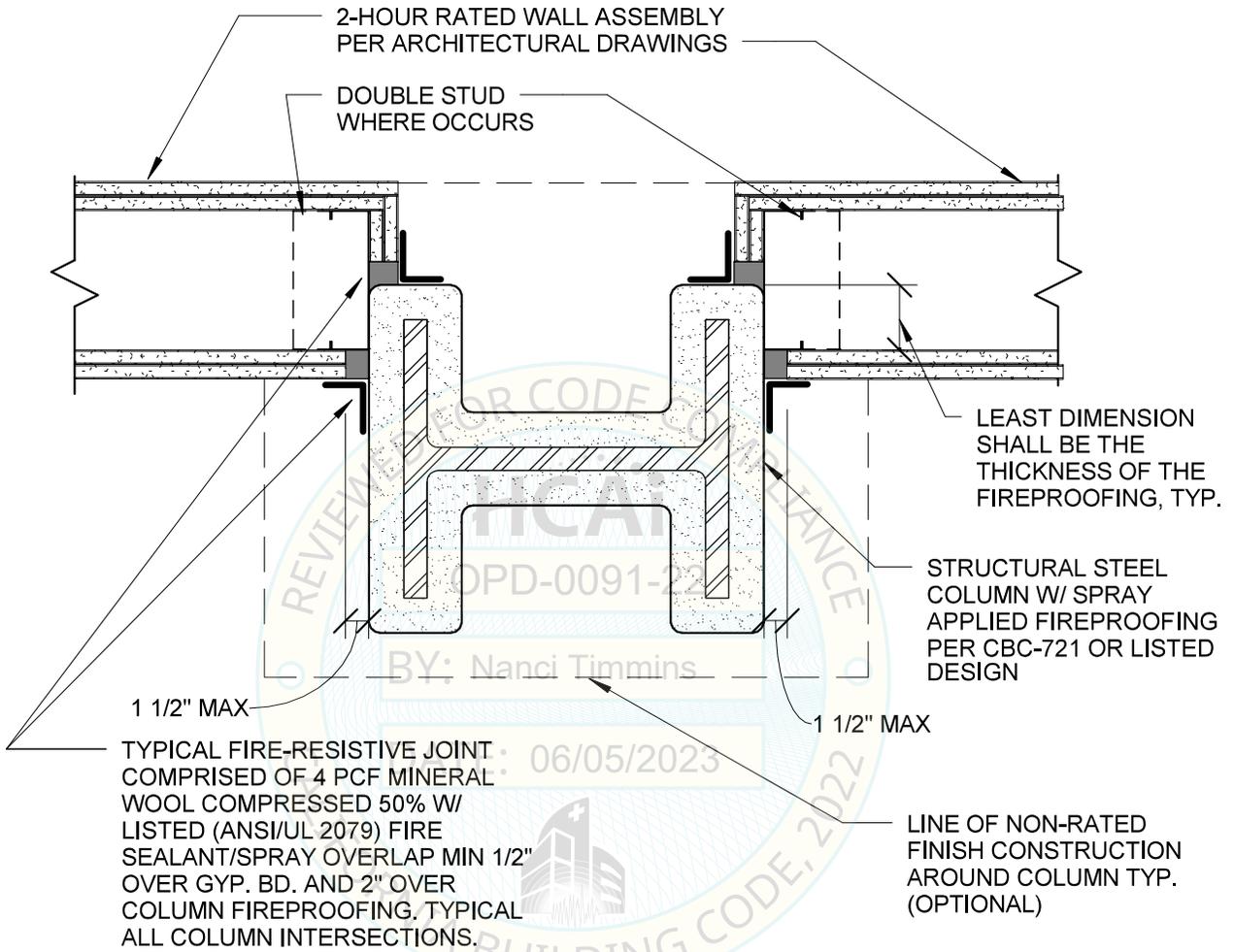
Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : BASIC JOINT DETAIL FOR 2-HR FIRE-RATED WALL ASSEMBLIES - END JOINT		FR2.02



NOTES:

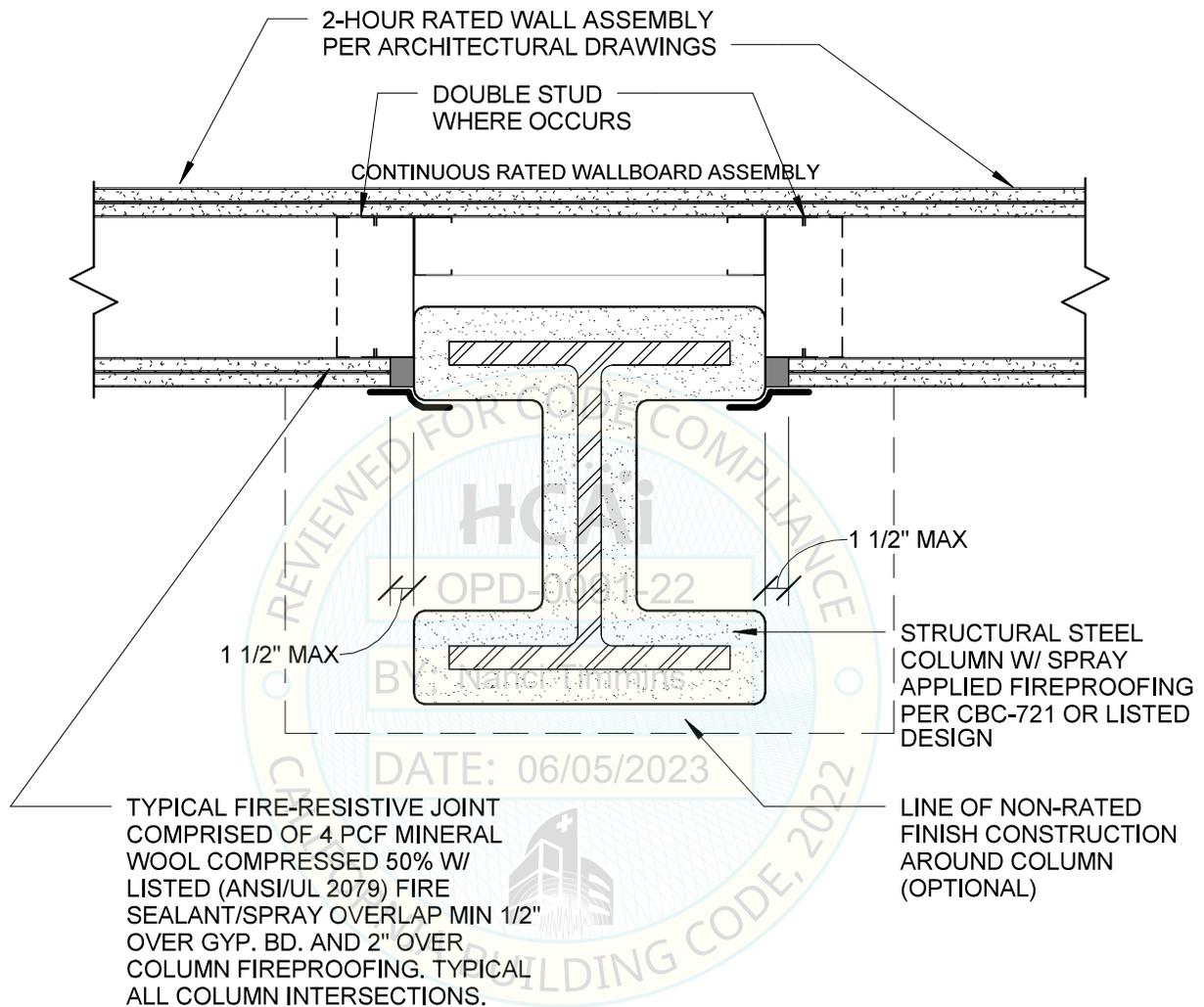
1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
4. SEE FR2.00, FR2.01, FR2.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : INTERSECTION OF 2-HR FIRE PARTITION, WALL AND BARRIER AT PROTECTED COLUMN		FR2.10



- NOTES:
1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
  2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
  3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
  4. SEE FR2.00, FR2.01, FR2.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : INTERSECTION OF 2-HR FIRE PARTITION, WALL AND BARRIER AT PROTECTED COLUMN		FR2.11



NOTES:

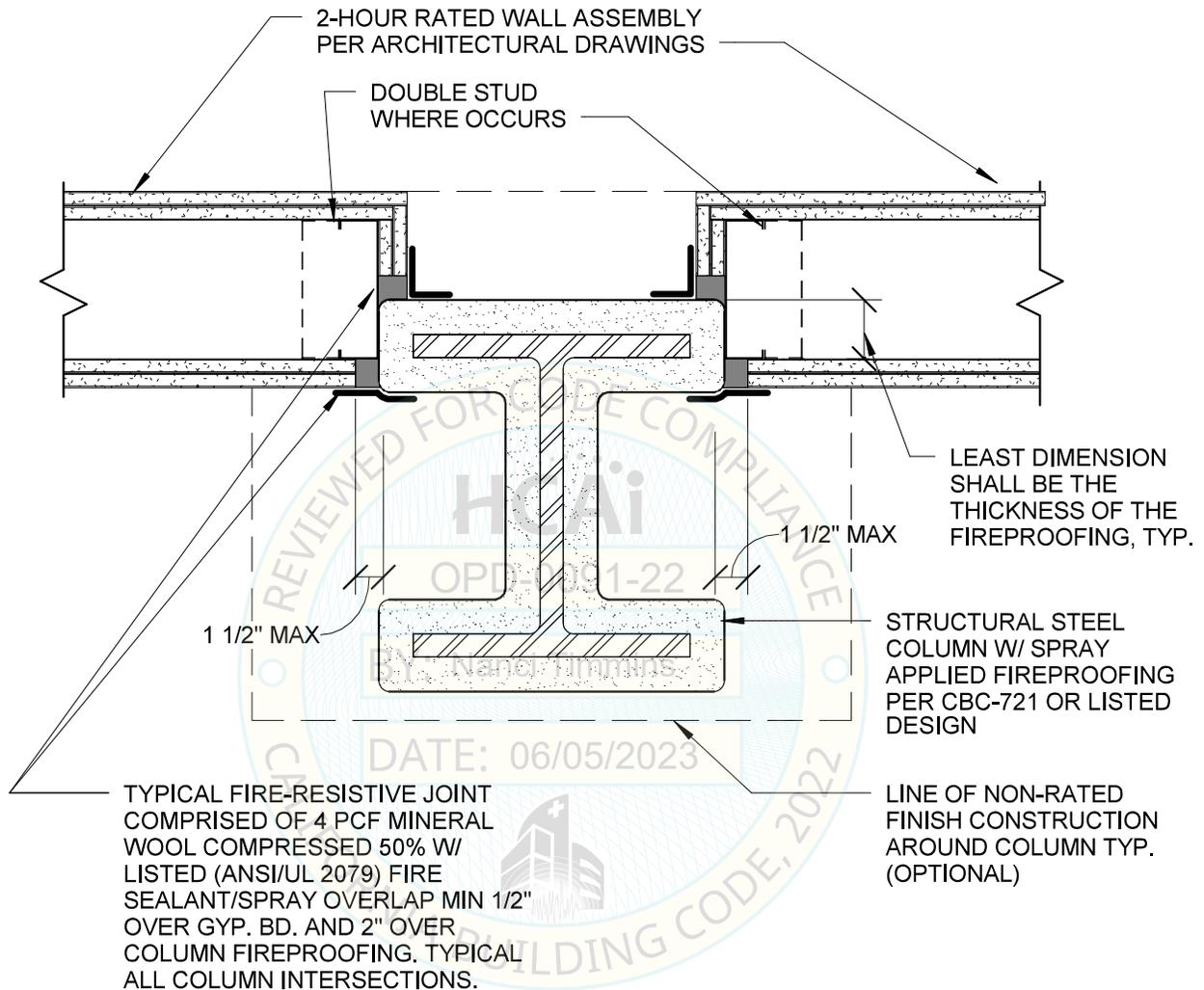
1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
4. SEE FR2.00, FR2.01, FR2.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
INTERSECTION OF 2-HR FIRE PARTITION, WALL  
AND BARRIER AT PROTECTED COLUMN

FR2.12



NOTES:

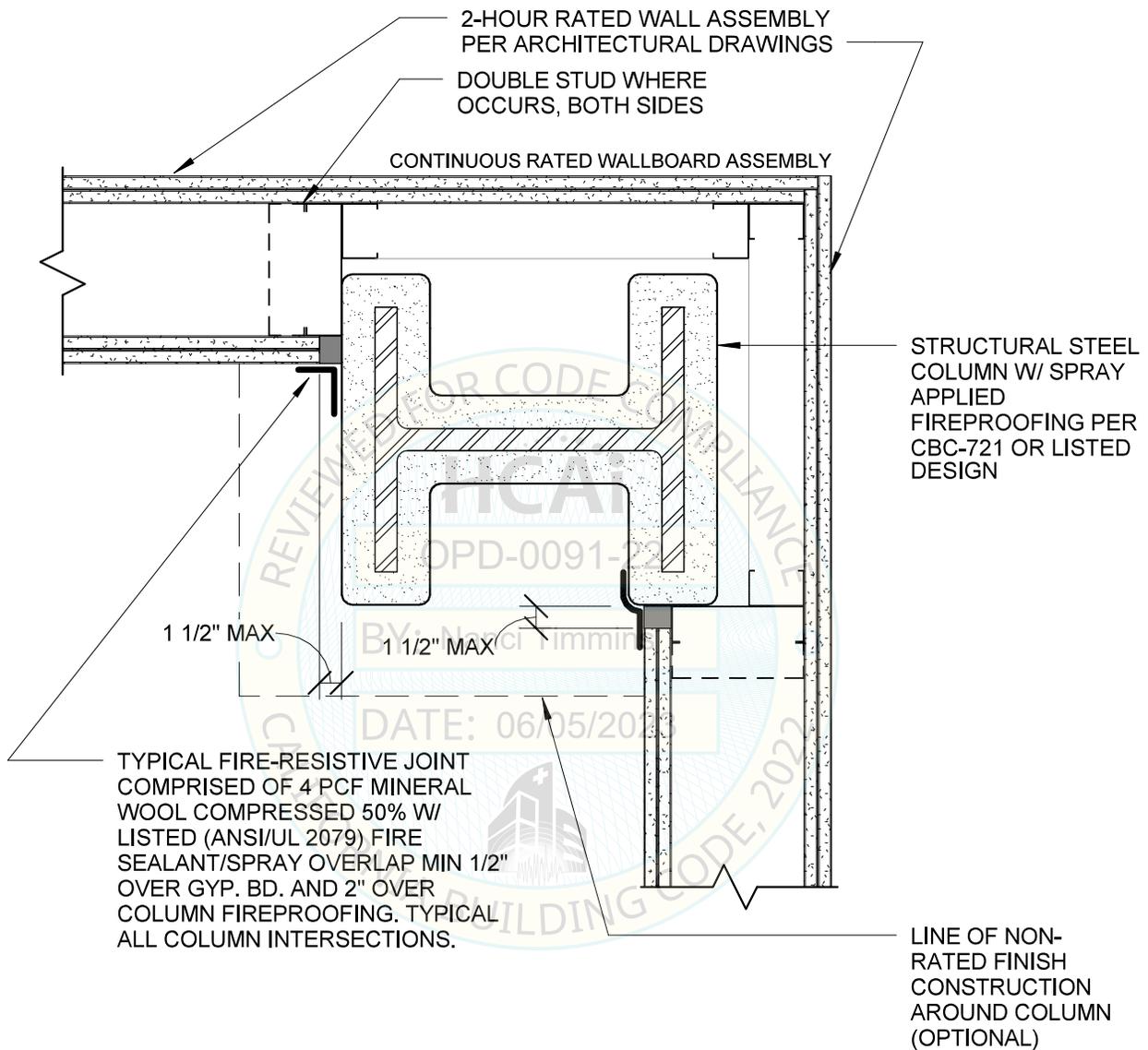
1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
4. SEE FR2.00, FR2.01, FR2.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
**INTERSECTION OF 2-HR FIRE PARTITION, WALL  
 AND BARRIER AT PROTECTED COLUMN**

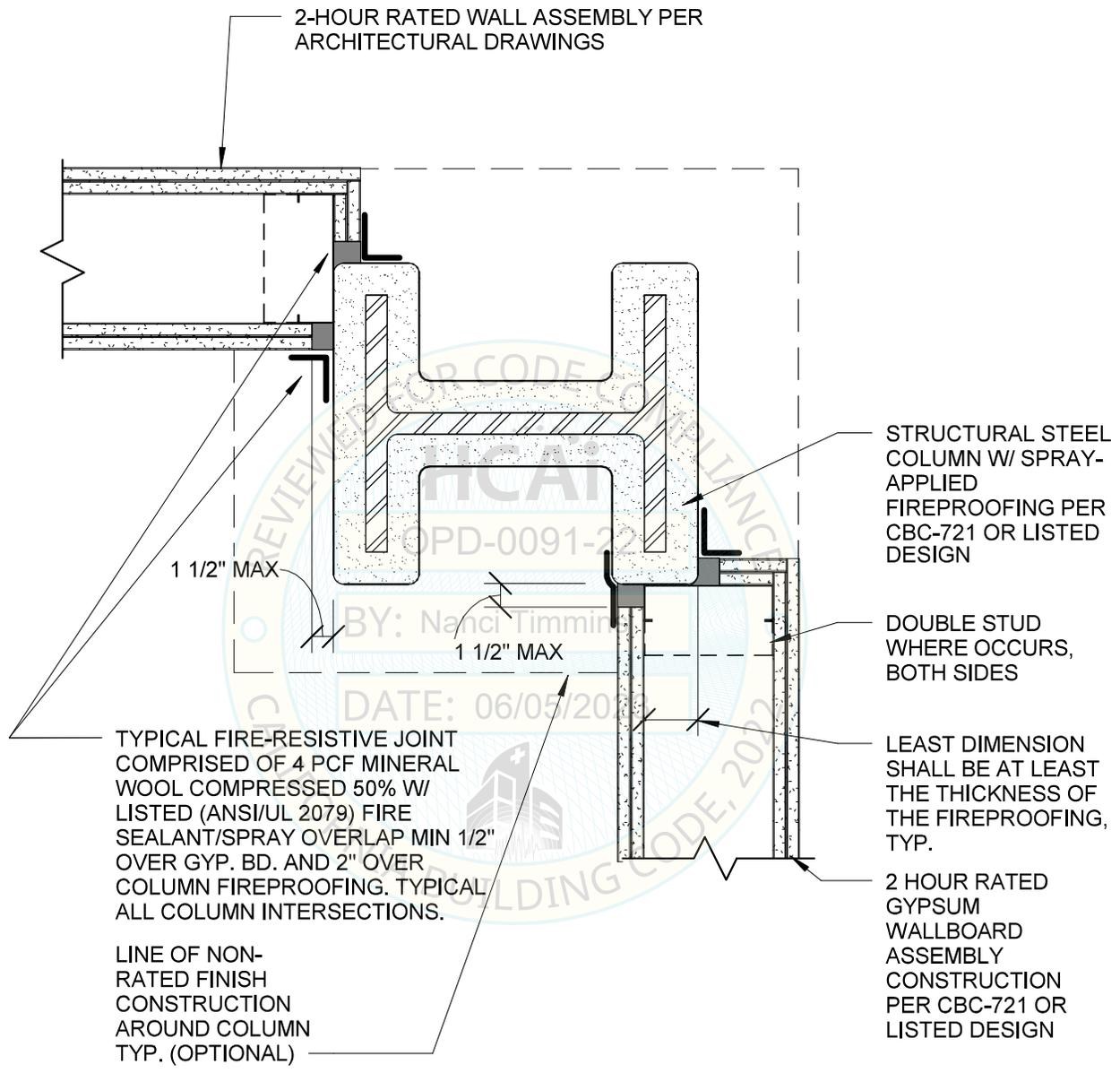
**FR2.13**



NOTES:

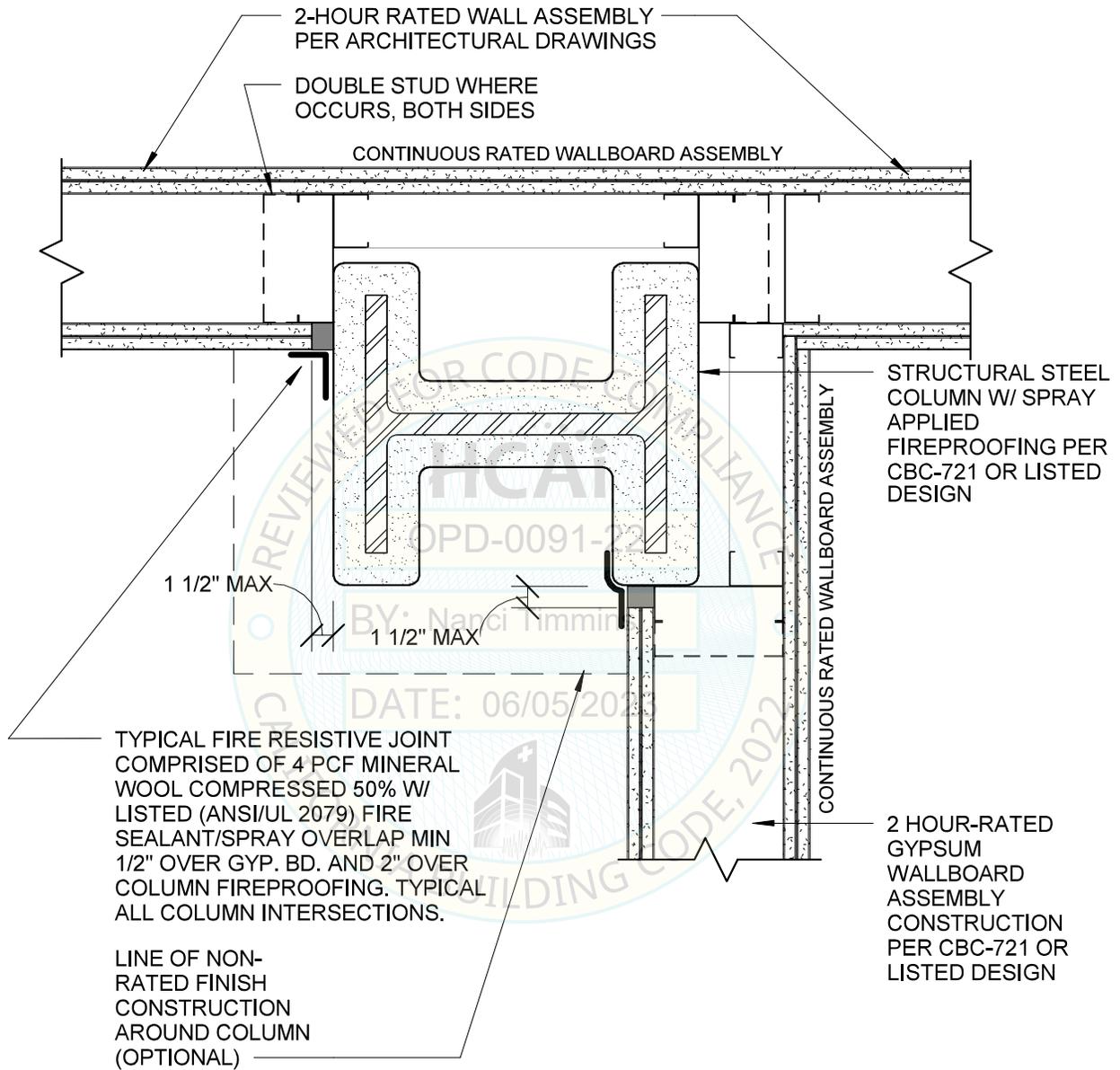
1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
4. SEE FR2.00, FR2.01, FR2.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : INTERSECTION OF 2-HR FIRE PARTITION, WALL AND BARRIER AT PROTECTED COLUMN		<b>FR2.14</b>



- NOTES:
1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
  2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
  3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
  4. SEE FR2.00, FR2.01, FR2.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : INTERSECTION OF 2-HR FIRE PARTITION, WALL AND BARRIER AT PROTECTED COLUMN		FR2.15



NOTES:

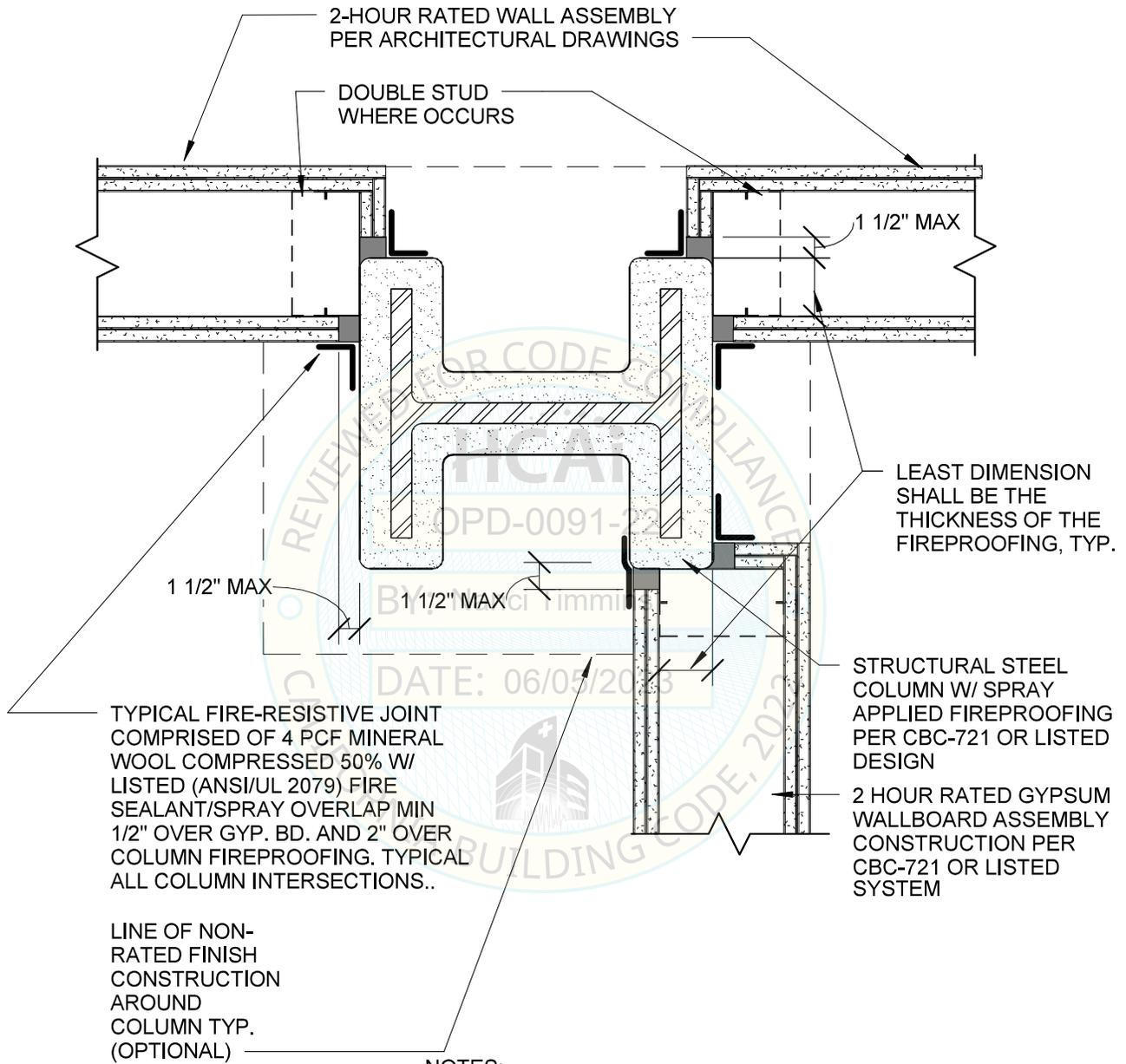
1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
4. SEE FR2.00, FR2.01, FR2.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

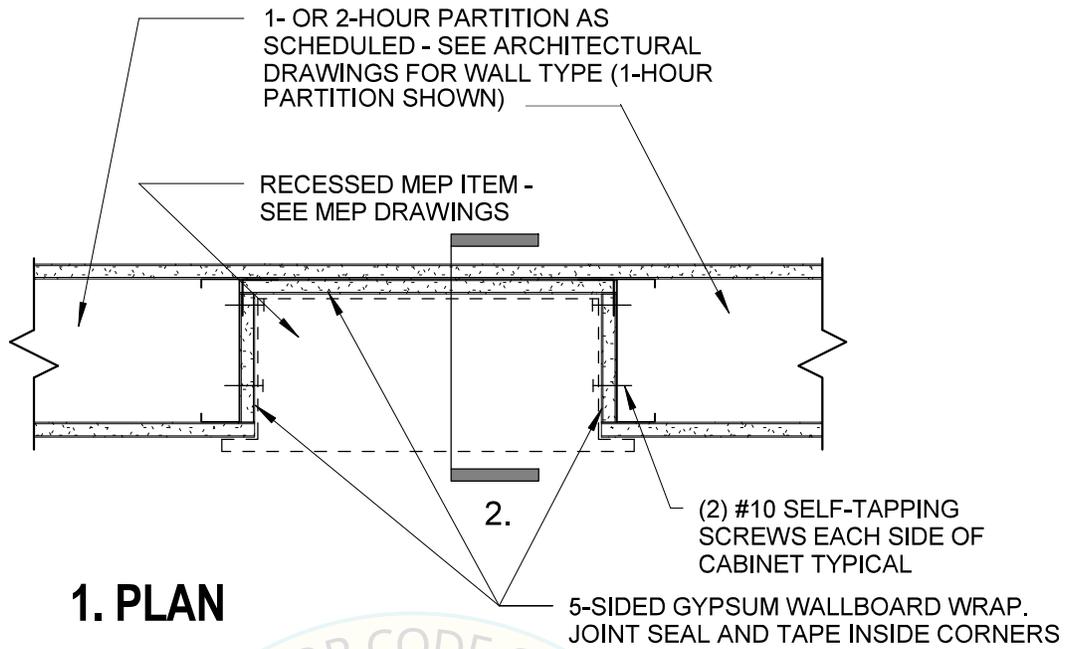
Sheet Title :  
**INTERSECTION OF 2-HR FIRE PARTITION, WALL  
 AND BARRIER AT PROTECTED COLUMN**

**FR2.16**

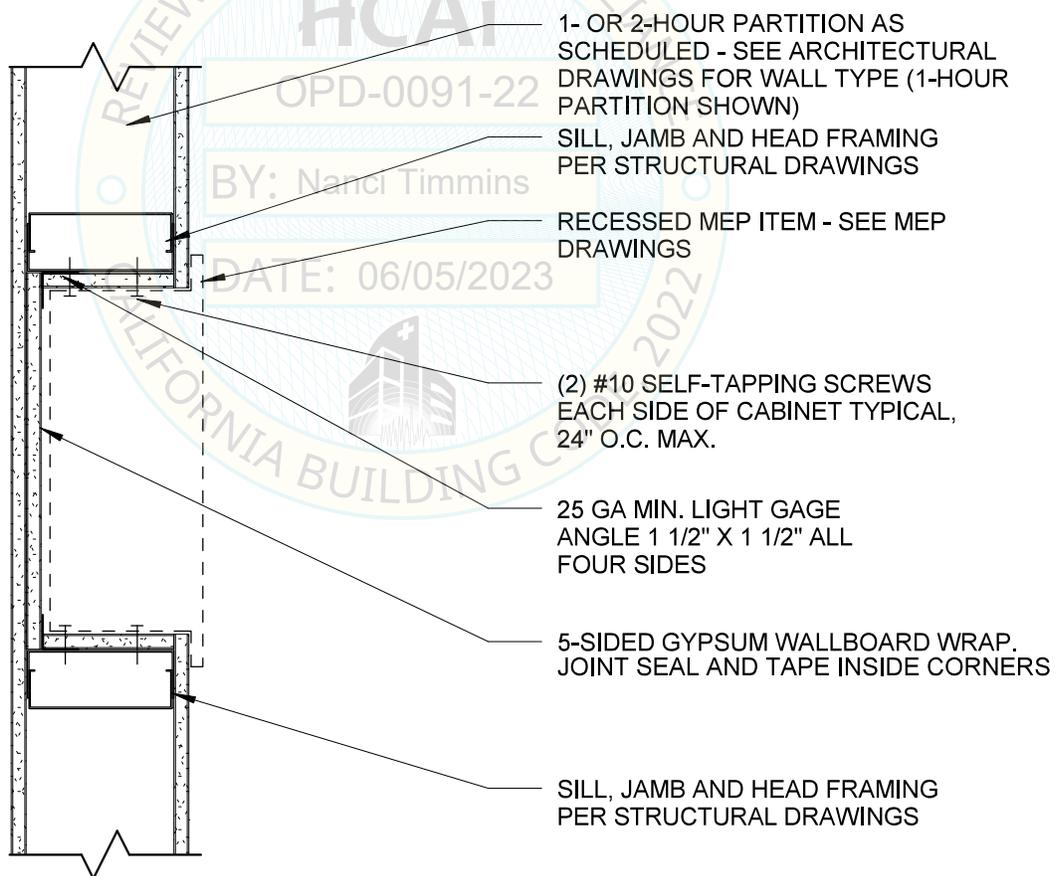


- NOTES:
1. MAXIMUM SEPARATION BETWEEN EDGE OF GYPSUM WALLBOARD AND FACE OF FIREPROOFING IS 1 1/2".
  2. THE FIRE-RESISTIVE RATING OF STEEL COLUMN MUST BE EQUAL OR GREATER THAN WALL RATING.
  3. "WET" THICKNESS OF SEALANT TO BE MIN. 1/8" TESTED IN ACCORDANCE WITH ASTM E1966 (ANSI/UL 2079).
  4. SEE FR2.00, FR2.01, FR2.02 FOR JOINT DESCRIPTION

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : INTERSECTION OF 2-HR FIRE PARTITION, WALL AND BARRIER AT PROTECTED COLUMN		FR2.17



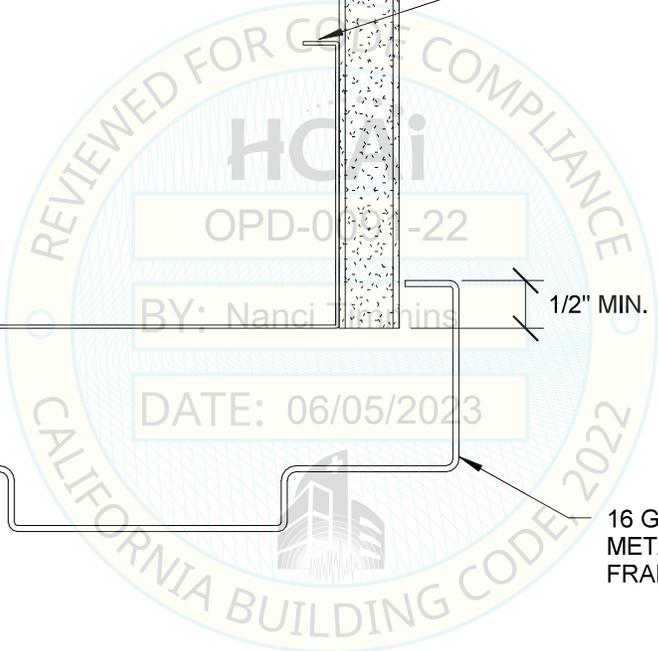
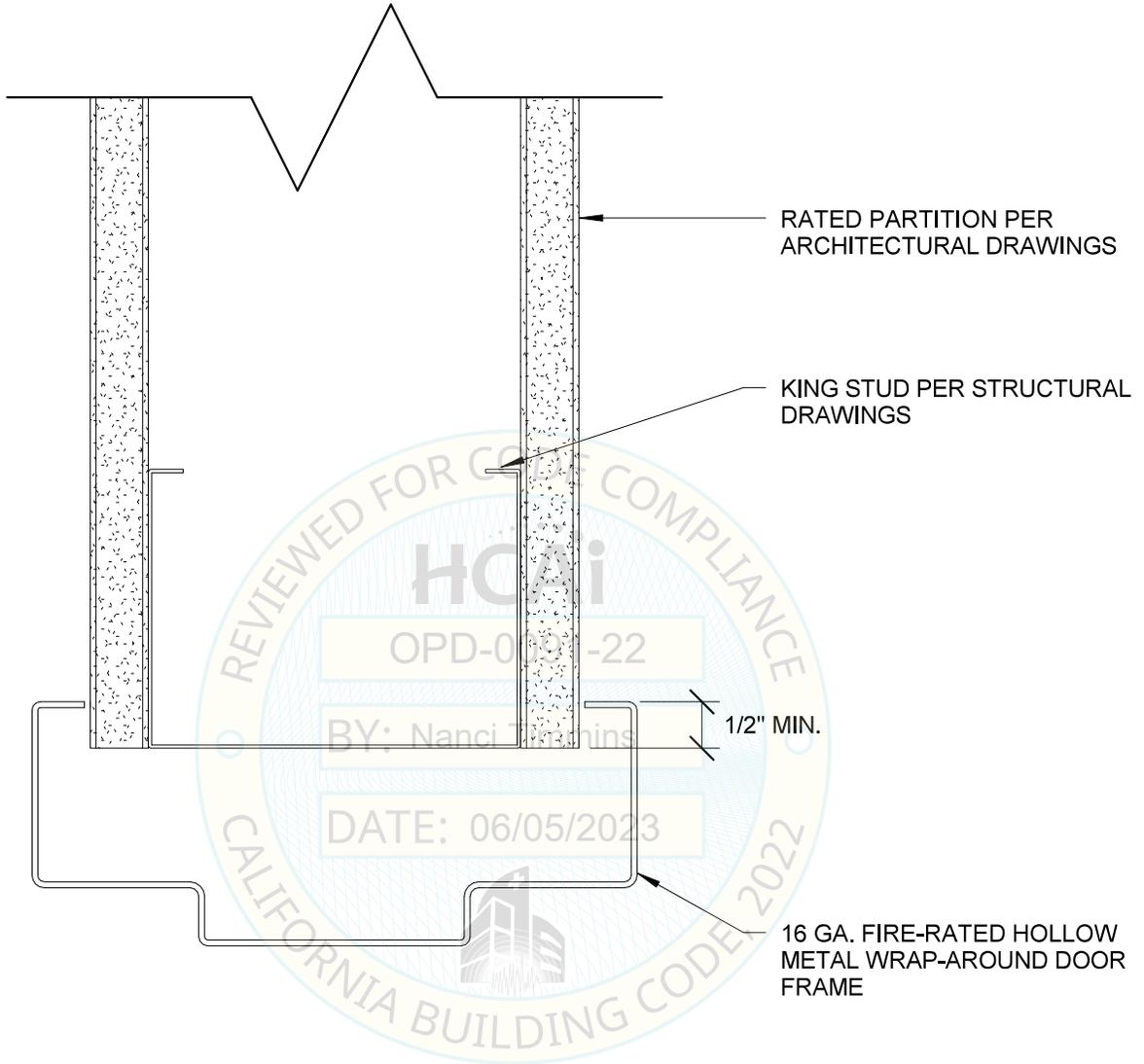
**1. PLAN**



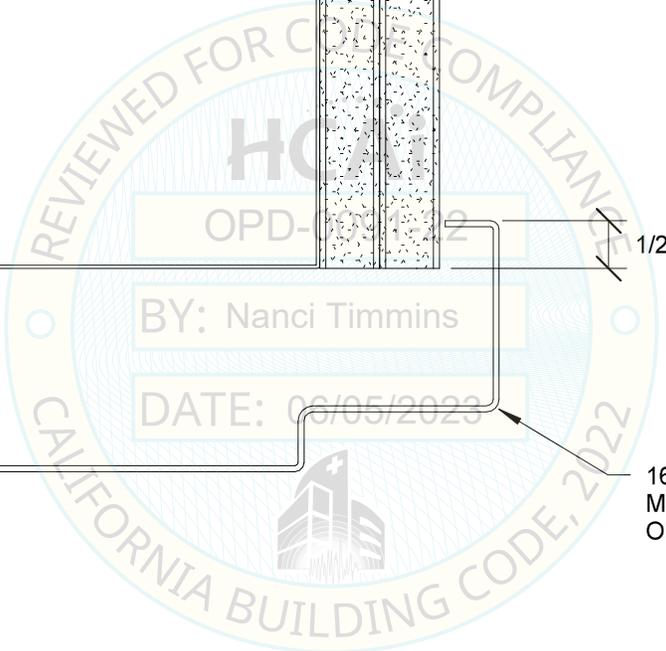
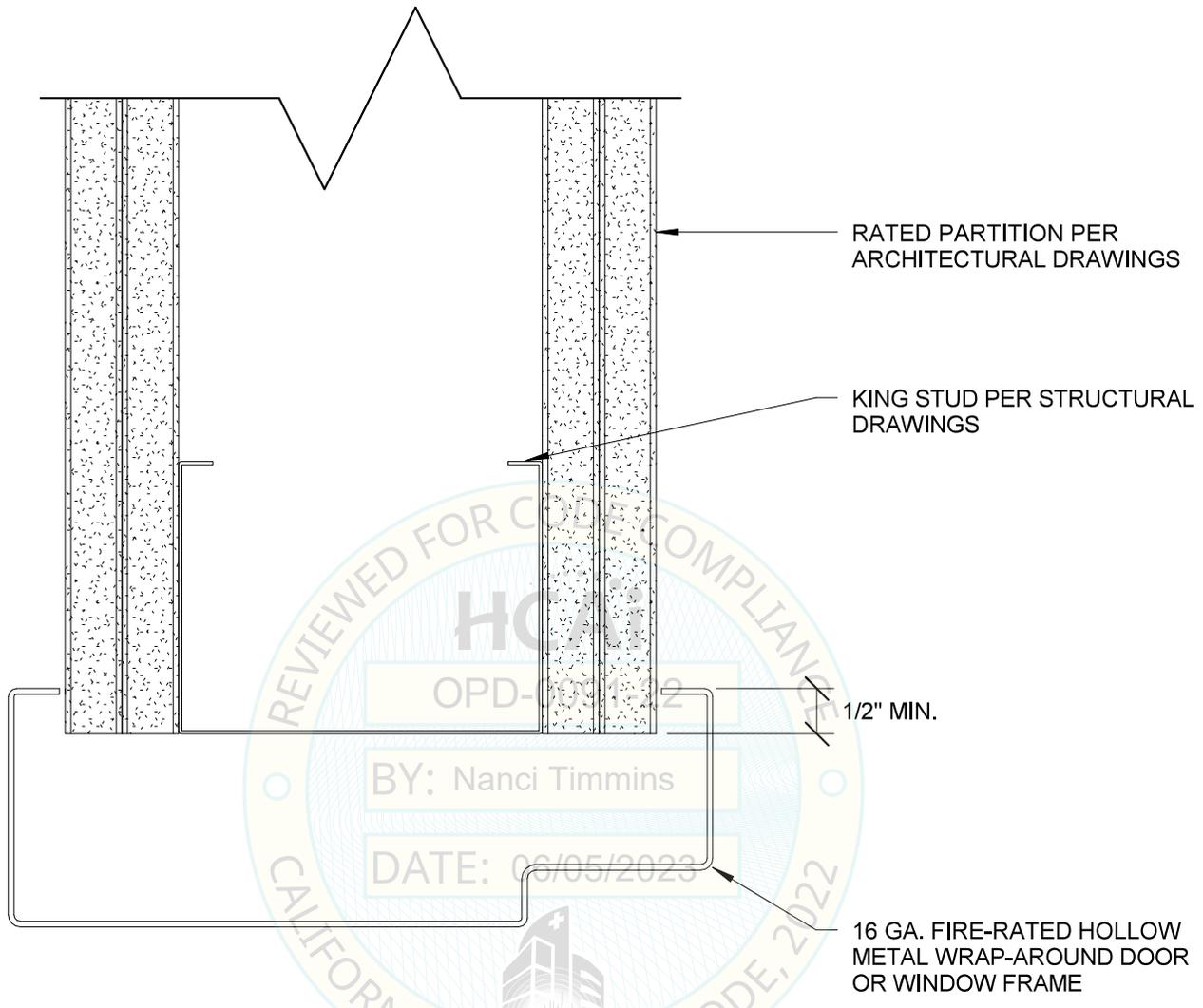
**2. SECTION**

NOTE:  
ALL PENETRATIONS TO MEET CBC SECTION 714

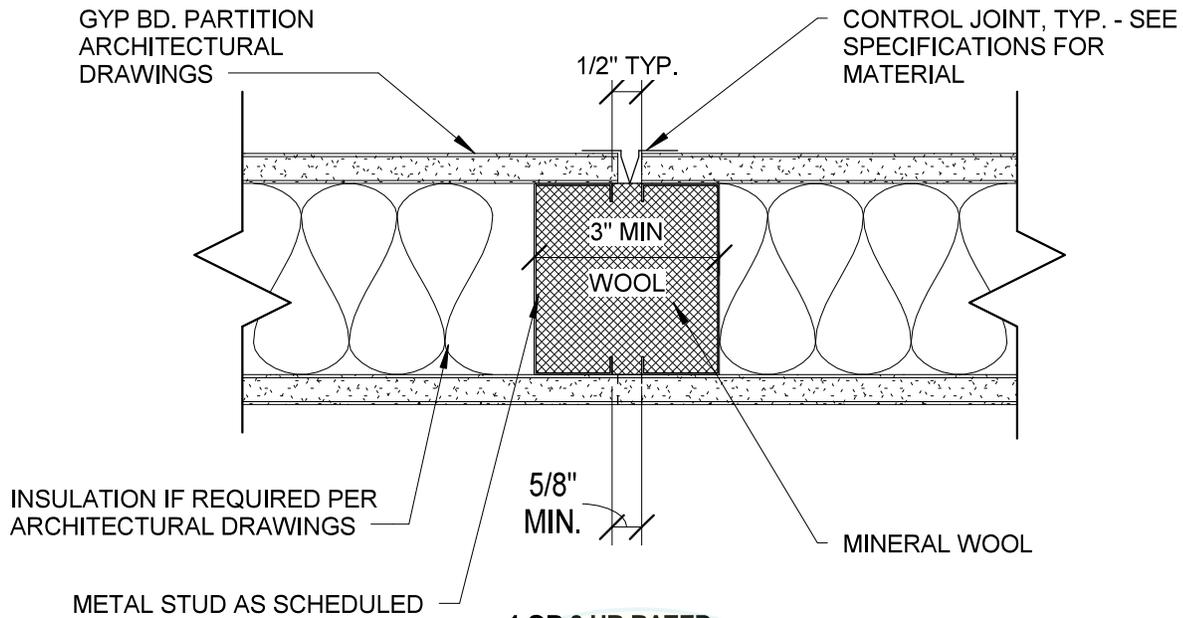
Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : 1-HR. "5-SIDED BOX" @ RECESSED M.E.P. CABINETS		<b>FR3.01</b>



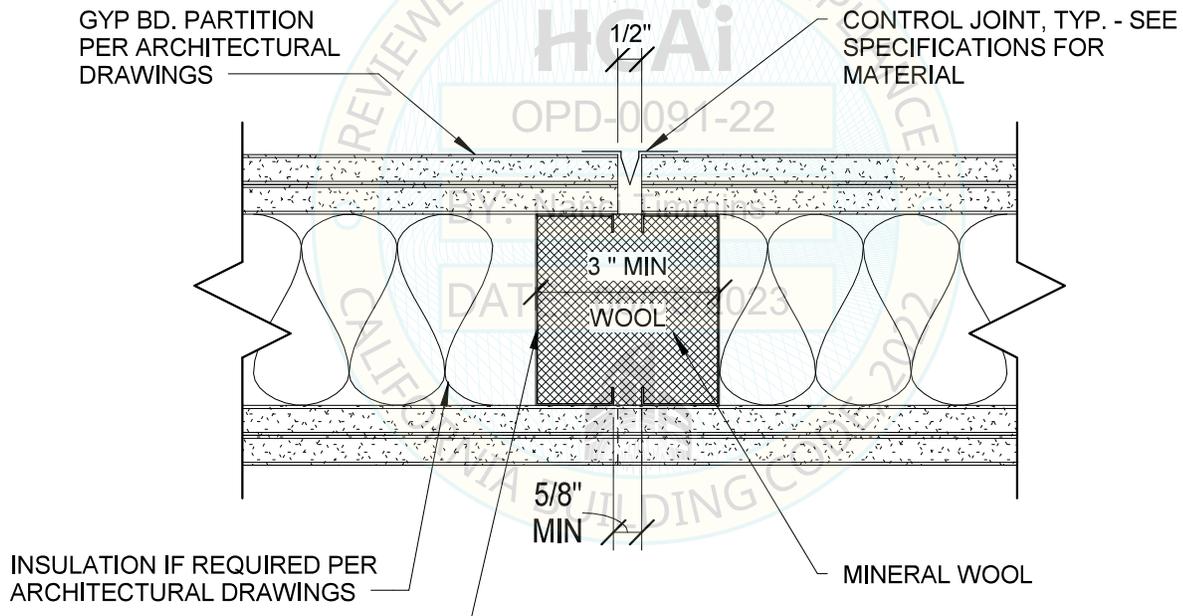
Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : HOLLOW METAL DOOR JAMB @ 1 HR-RATED WALLS		FR3.02



Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : HOLLOW METAL DOOR JAMB @ 2HR-RATED WALL		<b>FR3.03</b>



**1 OR 2 HR RATED PARTITION**



**2 HR RATED PARTITION**

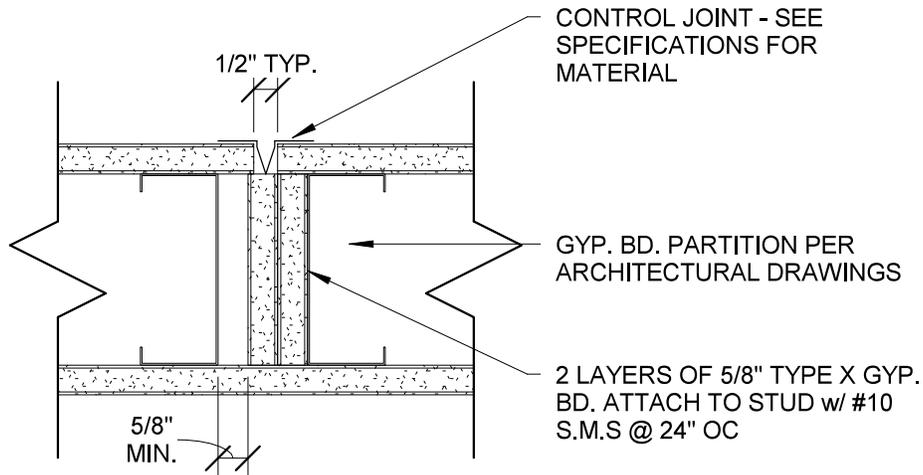
- NOTE:
- CONTROL JOINT MATERIAL MAY TERMINATE 6" ABOVE CEILING LINE. CONTINUE JOINT WITH GYP. BD. TAPE - DO NOT FILL JOINT WITH TAPING COMPOUND.
  - THROUGH JOINTS ARE NOT PERMITTED. OFFSET CONTROL JOINT AT BOTH SIDES OF WALL A MINIMUM OF ONE STUD BAY

Section Title : FIRE-RESISTIVE STANDARD DETAILS

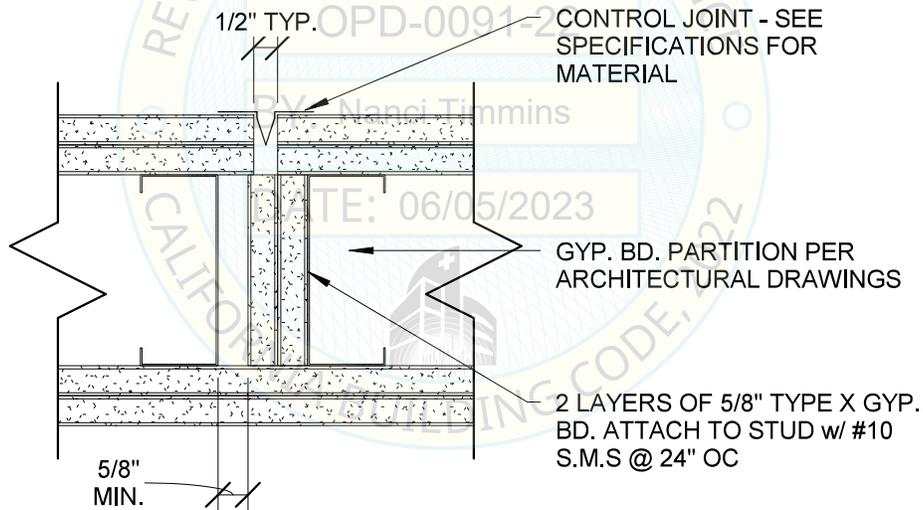
OPD No:

Sheet Title :  
**GYP. BD. CONTROL JOINT @ RATED PARTITIONS - MINERAL WOOL**

**FR3.04**



**1 HR. RATED PARTITION**



**2 HR. RATED PARTITION**

NOTE:  
CONTROL JOINT MATERIAL MAY TERMINATE 6" ABOVE CEILING LINE. CONTINUE JOINT WITH GYP. BD. TAPE - DO NOT FILL JOINT WITH TAPING COMPOUND.

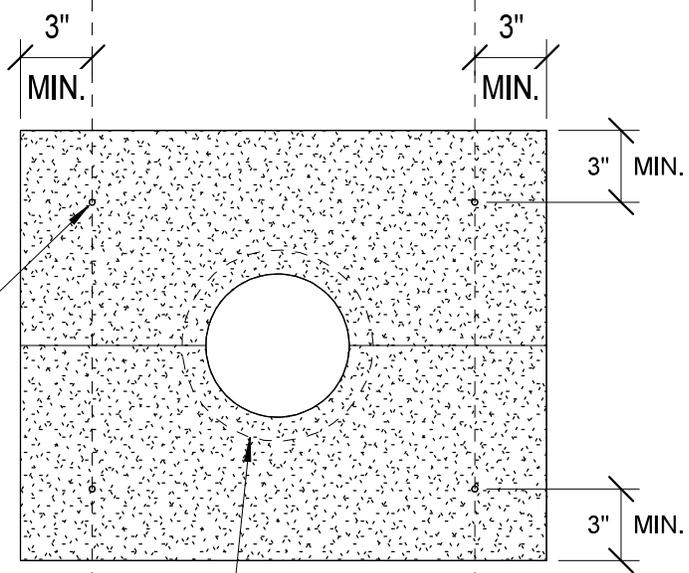
Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
GYP. BD. CONTROL JOINT @ RATED PARTITIONS - GYP. BD.

FR3.05

TYPE 'S' SCREWS (MIN. 4 PER SECTION) PER HOLES OVER 3" DIA.



OVER-SIZED HOLES (BEYOND) ON EXIST. PARTITION

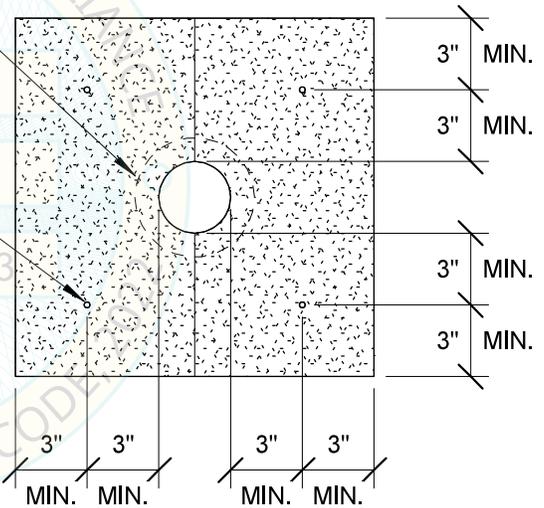
SELF TAPPING GYP. BD. SCREWS (MIN. 2 PER SECTION) PER HOLES UP TO 3" DIA.

5/8" TYPE 'X' GYP. BD.

SCREW - SEE NOTES

JOINT COMPOUND

EXIST. MTL STUD & GWB, IN FOREGROUND & GYP. BD.



NOTES:

1. BUTTER BACK SIDE OF PATCH WITH JOINT COMPOUND OR GYPSUM FIRE SEALANT
2. LEAVE ALL SCREWS EXPOSED

Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
**1-HR RATED WALL BLOW-OUT  
 PATCH @ PENETRATION**

**FR3.06**

CONCRETE SLAB -  
SEE STRUCTURAL  
DRAWINGS

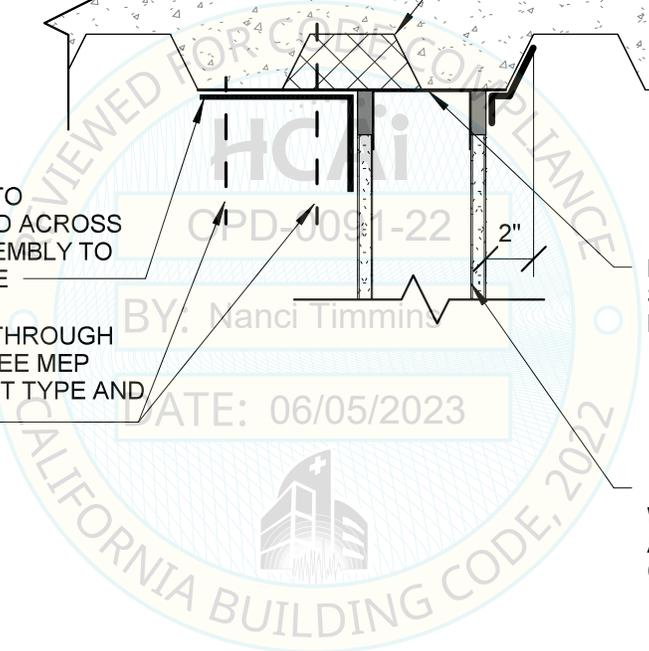
CONTINUOUS  
COMPRESSED MINERAL  
WOOL @ FLUTE VOID  
ABOVE HEAD OF WALL

FIRE SEALANT 5/8" ONTO  
VERTICAL GYP. BD. AND ACROSS  
CONCRETE DECK ASSEMBLY TO  
OUTER EDGE OF FLUTE

MECHANICAL SUPPORT THROUGH  
FIRE SEALANT SPRAY - SEE MEP  
DRAWINGS FOR SUPPORT TYPE AND  
LOCATIONS

FLUTE STRAP - SEE  
STRUCTURAL DRAWINGS  
FOR TYPE AND SPACING.

1- OR 2-HR RATED HEAD-OF-  
WALL JOINT SYSTEM PER  
ARCHITECTURAL DRAWINGS  
(1-HR PARTITION SHOWN)

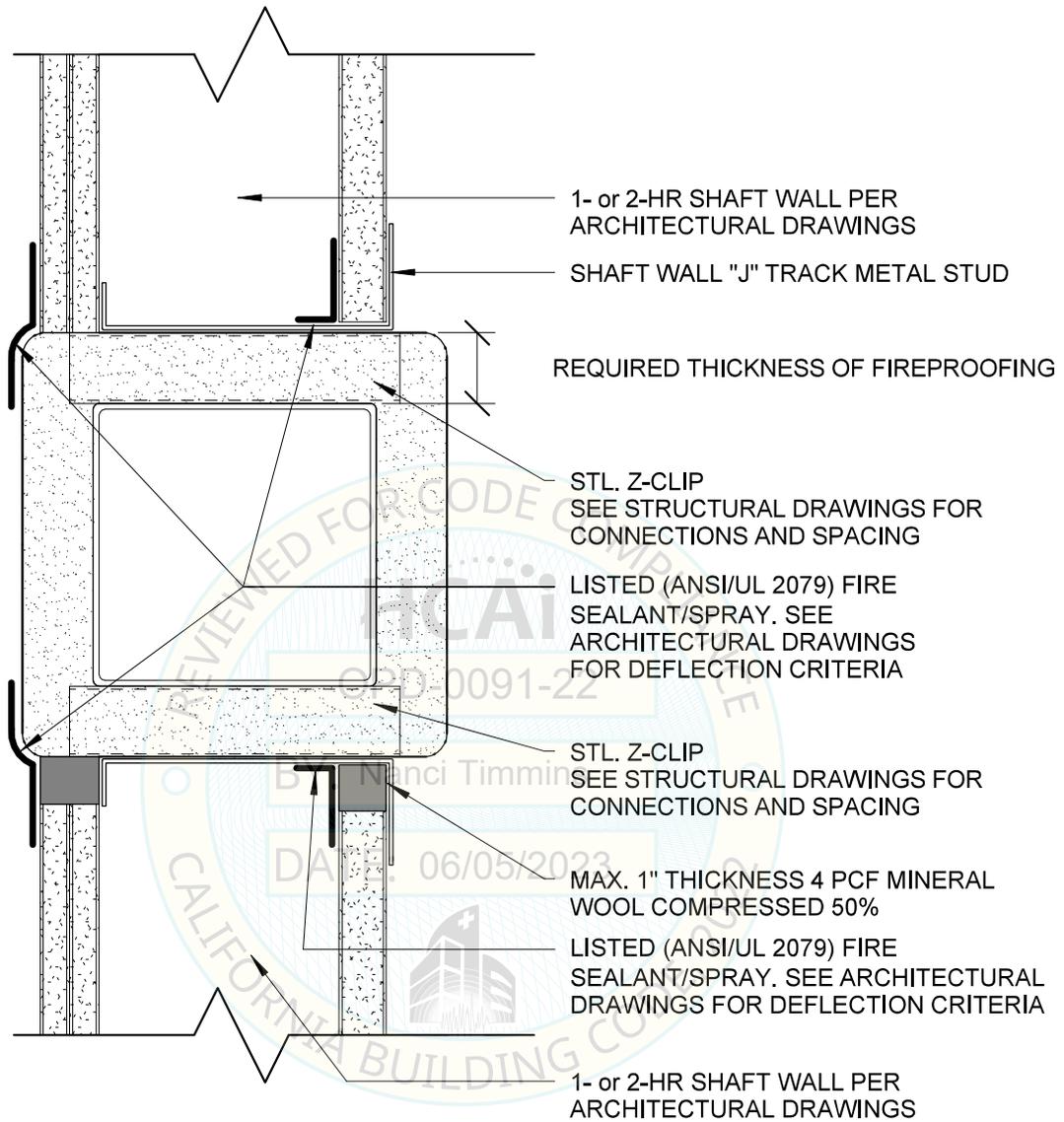


Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

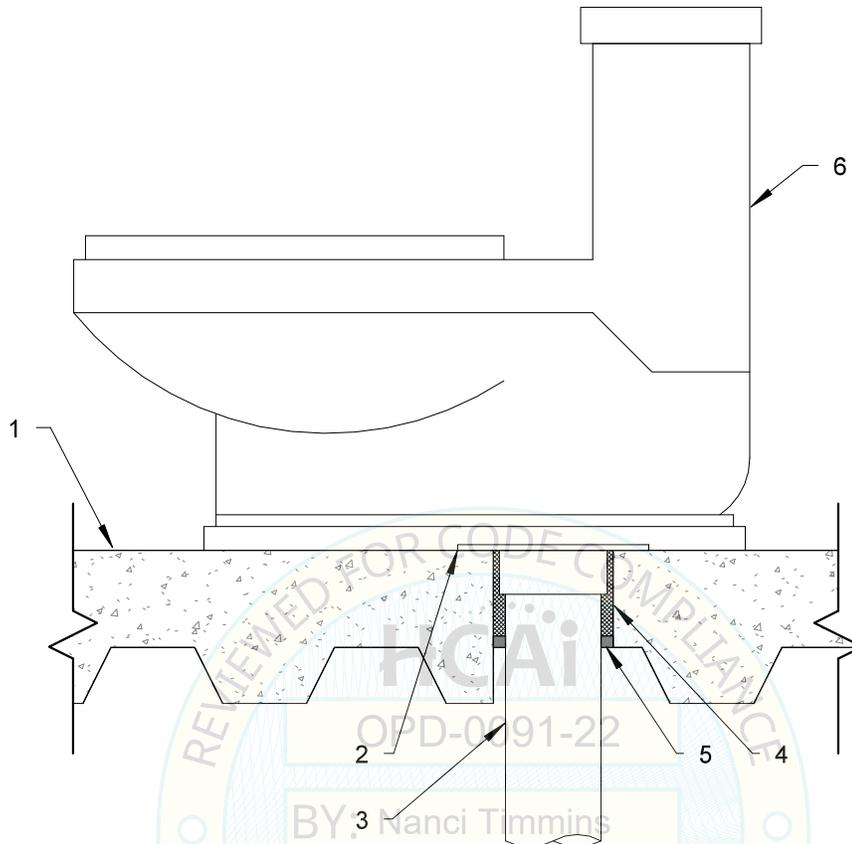
Sheet Title :  
PENETRATION AT TOP OF WALL

FR3.07



**SHAFT SIDE**

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : SHAFT WALL @ HORIZONTAL INTERMEDIATE TUBE STEEL, BEAM OR SUPPORT		FR3.08



1. CONCRETE FLOOR OVER METAL DECKING ASSEMBLY (MINIMUM 2-1/2" THICK) (2-HR. FIRE-RATING).
2. CAST IRON CLOSET FLANGE SIZED TO ACCOMMODATE DRAIN PIPE AND SECURED TO CONCRETE FLOOR WITH CONCRETE ANCHORS.
3. MAXIMUM 4" NOMINAL DIAMETER CAST IRON PIPE.
4. MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED AND RECESSED FROM BOTTOM OF CONCRETE FLOOR TO ACCOMMODATE SEALANT.
5. INTUMESCENT FIRESTOP SEALANT.
6. FLOOR MOUNTED WATER CLOSET.

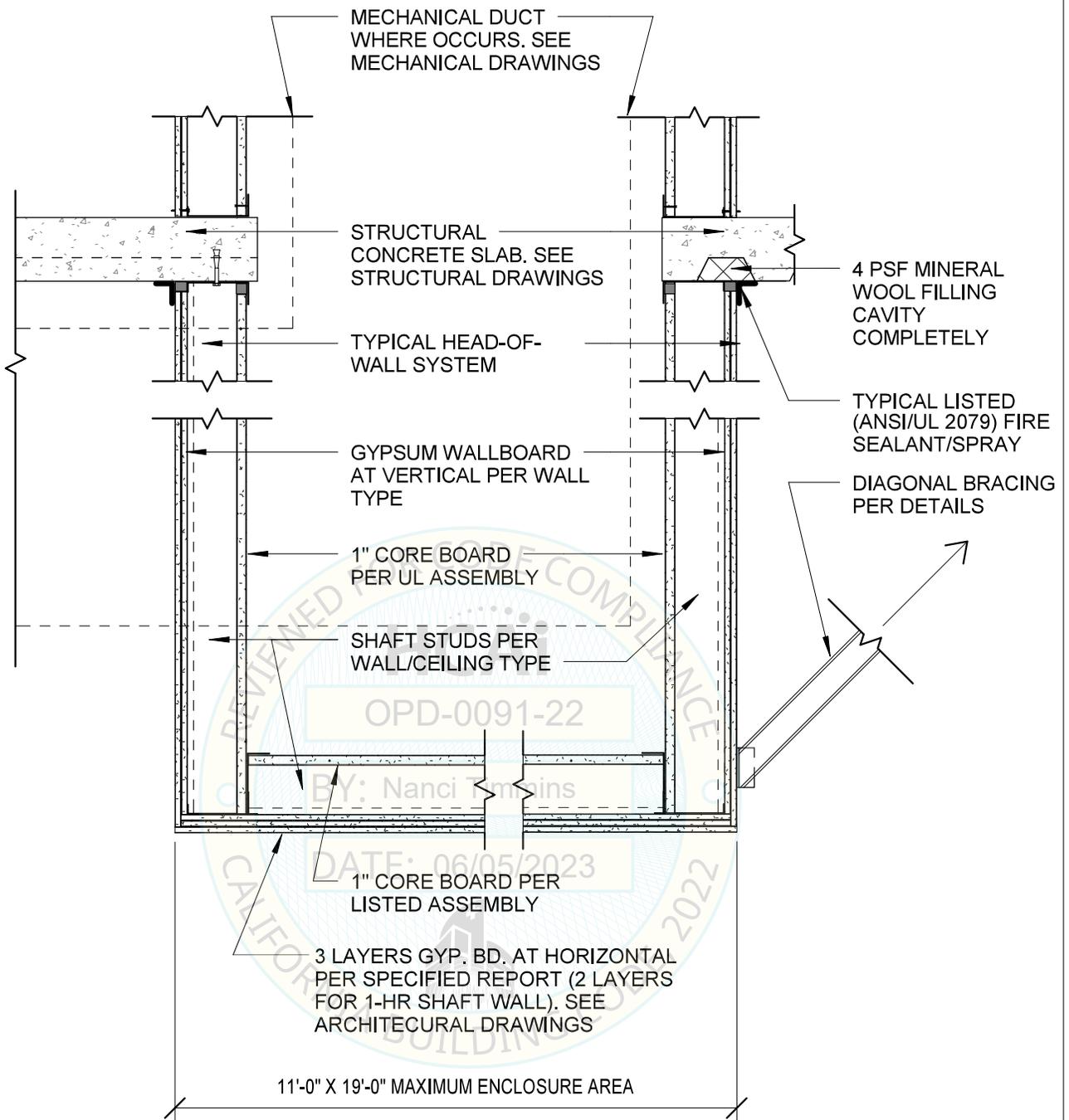
NOTES: 1. MAXIMUM DIAMETER OF OPENING = 5"  
 2. ANNULAR SPACE = MINIMUM 3/8"

Section Title : FIRE-RESISTIVE STANDARD DETAILS

OPD No:

Sheet Title :  
 FLOOR SLAB PENETRATION OR WATER  
 CLOSET WASTE LINE

FR4.01



11'-0" X 19'-0" MAXIMUM ENCLOSURE AREA

**NOTES:**

1. DETAIL BASED ON ICC ES LEGACY REPORT ER-3579.
2. REPORTS NER-258, NER-506, ER-2541, AND ER-4924 MAY BE SUBSTITUTED FOR ER-3579 WITH APPROPRIATE ALTERATIONS TO HORIZONTAL DRYWALL CONFIGURATION.
3. PROVIDE REPORT ON DOCUMENTS OF RECORD AND REFERENCE LOCATION.

Section Title : FIRE-RESISTIVE STANDARD DETAILS		OPD No:
Sheet Title : 1- or 2-HR VERTICAL DUCT SHAFT BOTTOM DETAILS		<b>FR4.02</b>