APPLICATION FOR HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM)

OFFICE USE ONLY

APPLICATION #: OPM-0092

HCAI Preapproval of Manufacturer's Certification (OPM)

Type: ☐ New ☒ Renewal/Update

Manufacturer Information

Manufacturer: Woodwork Institute

Manufacturer's Technical Representative: Clare Smith

Mailing Address: 1455 Response Road, Suite 110, Sacramento, CA 95815

Telephone: (916) 372-9943 Email: clare@woodinst.com

Product Information

Product Name: Woodwork Institute Casework Anchorage

Product Type: Casework

Product Model Number: NA

General Description: Seismic Anchorage for Base Cabinets and Peninsula Cabinets

Applicant Information

Applicant Company Name: Woodwork Institute

Contact Person: Clare Smith

Mailing Address: 1455 Response Road, Suite 110, Sacramento, CA 95815

Telephone: (916) 372-9943 Email: clare@woodinst.com

Title: CEO

Registered Design Professonal Preparing Engineering Recommendations

Company Name: LTK ASSOCIATES, INC.

Name: Raymond Z. Uribes California License Number: S2479

Mailing Address: 745 Distel Drive, Suite 7, Los Altos, CA 94022

Telephone: (650) 967-8465 Email: ltk@ltkse.com

HCAI Special Seismic Certification Preapproval (OSP)

☐ Special Seismic Certification is preapproved under OSP OSP Number:

Certification Method

Testing in accordance with: ☐ ICC-ES AC156 ☐ FM 1950-16

☐ Other(s) (Please Specify):

*Use of criteria other than those adopted by the California Building Standards Code, 2019 (CBSC 2019) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2019 may be used when approved by HCAI prior to testing.

☒ Analysis

☐ Experience Data

☐ Combination of Testing, Analysis, and/or Experience Data (Please Specify):

HCAI Approval

Date: 5/4/2022

Name: Jeffrey Kikumoto Title: Senior Structural Engineer

Condition of Approval (if applicable):

WOODWORK INSTITUTE
CASEWORK SUPPORTS & ATTACHMENTS
HCAI Pre-Approval of
Manufacturer's Certification (OPM)
OPM-0092

SUPPORTS & ATTACHMENTS DESIGNED FOR:
2019 CALIFORNIA BUILDING CODE (CBC)
ASCE 7-16

IMPORTANCE FACTOR:	Ip=1.5	
DESIGN S.R.A., SHORT PERIOD:	S_{DS}=2.00	
COMP. AMP. FACTOR:	ap=1.0	(ASCE 7-16
COMP. RESPONSE MOD. FACTOR:	Rp=2.5	TABLE 13.5.1)
OVERSTRENGTH FACTOR:	Ωo=2.0	(REQ'D FOR ANCHORAGE TO CONCRETE & CMU)

THE SUPPORT AND ATTACHMENT DETAILS MAY BE USED FOR ANY LOCATION IN THE STATE OF CALIFORNIA WHERE S_{DS} IS NOT GREATER THAN 2.00 AND AT ANY HEIGHT IN THE BUILDING WHERE z/h <= 1.0.

SEISMIC FORCES:
FOR FASTENERS USED IN FRAMED WALLS OR CMU WALLS
FORCES SHOWN ON THESE DRAWINGS ARE AT ASD LEVEL
CALCULATED THUS: Fph=1.00(Wp) (ASD) Fpv=0.28(Wp) (ASD)
FOR FASTENERS USED IN CONCRETE WALLS
FORCES SHOWN ON THESE DRAWINGS ARE AT SD LEVEL
CALCULATED THUS: Fp=1.44(Wp) Ev=0.40(Wp)

THIS PRE-APPROVAL ENCOMPASSES
THE FOLLOWING:
DESIGN CRITERIA: DC-01, DC-02 & DC-03
STORAGE CABINET: SC-01, SC-02 & SC-03
WALL CABINET: WC-01, WC-02 & WC-03
BASE CABINET: BC-01, BC-02
PENINSULA CABINET: PC-01, PC-02

THIS PRE-APPROVAL COVERS ONLY
THE SUPPORTS & ATTACHMENTS OF
THE UNIT TO THE STRUCTURE.
THE SUPPORTS AND ATTACHMENTS SHALL
BE SUPPLIED & INSTALLED BY THE CONTRACTOR.

REGISTERED PROFESSIONAL ENGINEER
RAYMOND Z. URIBE'S
S2479
STRUCTURAL
STATE OF CALIFORNIA

SCALE: NONE	DATE: 5/2/2022	DESIGN CRITERIA	Drawing No.
LTK ASSOCIATES Incorporated Structural Engineers 745 Distel Drive Los Altos, CA 94022 (650) 967-8465 FAX (650) 967-5148		WOODWORK INSTITUTE 1455 Response Road, Suite 110 Sacramento, CA 95815 (916) 372-9943 woodworkinstitute.com	OPM-0092 DC-01 1 of 13

GENERAL NOTES:

1) THIS HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE CBC 2019. THE DEMAND (DESIGN FORCES) FOR USE WITH THIS OPM MUST BE BASED ON THE CBC 2019.
2) STRUCTURAL ENGINEER OF RECORD IS RESPONSIBLE FOR:
   a) THE DESIGN OF THE STRUCTURE (FLOOR, WALL, BACKING) TO SUPPORT THE FORCES DUE TO THIS EQUIPMENT LOADING. IN NO CASE SHALL WALL FRAMING BE DESINGED FOR LESS THAN THE CODE REQUIRED MINIMUM DESIGN LOADS.
   b) VERIFY THAT THE ANCHORS ARE AN ADEQUATE DISTANCE FROM ANY OPENINGS.
   c) VERIFY THAT ALL NEW OR EXISTING ANCHORS ARE ADEQUATE DISTANCE FROM THE ANCHORS SHOWN IN THIS PRE–APPROVAL. SEOR SHALL VERIFY THERE IS NO ADVERSE INTERACTION WHERE OTHER ANCHORS ARE WITHIN 18" OR 6HEF FROM THIS UNIT'S ANCHORS.

STANDARD WOODWORK CASEWORK:

MATERIAL USED IN THE CONSTTRUCTION OF THE POINT OF ATTACHMENT TO THE STRUCTURE (i.e., NAILER) SHALL BE OF THE FOLLOWING:
PLYWOOD (STRUCT 1),
MDF (GRADE 150) OR,
DOUGLAS FIR LARCH WITH A SPECIFIC GRAVITY OF 0.50 OR BETTER.
MINIMUM THICKNESS OF ¾" FOR THE PART THROUGH WHICH ATTACHMENT IS TO BE MADE.
HOLES IN CABINET FOR EXPANSION ANCHORS SHALL BE BOLT DIAMETER + 1/16".
TOE KICK ANGLE: 16 GA., 50 ksi, SHEET METAL

LOADING:

MAXIMUM CONTENT LOAD: 33 PCF

WALL BACKING:

WALL BACKING MAY BE EITHER,
3x6 FLAT DOUGLAS FIR (No. 2)
(at wood framed walls) or
16GA., 50 KSI SHEET METAL BACKING
(at metal stud framed walls)
ALL BACKING AND WALL FRAMING TO BE DESIGNED BY SEOR.

FASTENERS AT WOOD FRAMED WALLS:

SCREW FASTENERS SHALL BE:
SIMPSON STRONG DRIVE SDWH19400DB
TIMBER–HEX SCREWS,
WITH MIN. 2" PENETRATION
INTO WOOD BACKING.

FASTENERS AT METAL FRAMED WALLS:

SCREW FASTENERS SHALL BE:
SHEET METAL SCREWS (SMS)
WITH HEX WASHER HEAD
(TAPPING SCREW FASTNR'S SHALL HAVE DATA IN ACCORDANCE w/ ICC–ES AC118).
SMS SHALL HAVE MIN. 3 THREADS EXTEND BEYOND SHEET METAL BACK'G.

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EXPANSION ANCHORS IN CONCRETE:

FOR USE IN CONCRETE WALL OR FLOOR:
HILTI KWIK BOLT TZ2, ICC ESR–4266

3/8"ø ANCHORS
W/ hef=2" EMBEDMENT
INSTALLATION TORQUE: 30 ft–lb

1/2" ø ANCHORS
W/ hef=2" EMBEDMENT
INSTALLATION TORQUE: 50 ft–lb

WALLS
f'c=3000psi, NWC
MIN. WALL THICKNESS: 6"
MIN. EDGE DISTANCE: 6"

FLOORS
f'c=3000psi, LTWT OR NWC
MIN. THICKNESS:
SLAB ON METAL DECK: 3 1/4"
SLAB ON GRADE: 4"
MIN. EDGE DISTANCE 6"
METAL DECK: MIN. 20 GA., 50 ksi

EXPANSION ANCHOR TESTING IN CONCRETE:

PER CBC SECTION 1910A.5
–TORQUE TESTING SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR (FROM APPROVED INDEPENDENT AGENCY) & A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE IOR, OWNER, & ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE.
–TEST 50% OF THE ANCHORS, IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS UNTIL 20 CONSECUTIVE ANCHORS PASS, THEN RESUME INITIAL TEST FREQUENCY.
–TEST ACCEPTANCE CRITERIA,
ANCHORS TESTED w/ A CALIBRATED WRENCH MUST ATTAIN THE SPECIFIED TORQUE WITHIN 1/2 TURN OF THE NUT.

EXPANSION ANCHOR TESTING IN CMU:

TESTING OF EXPANSION ANCHORS IN CMU, SIMILAR TO CRITERIA NOTED ABOVE.

EXPANSION ANCHORS IN CMU WALLS:

UNCRACKED CMU WALL: (ALL CELLS GROUTED SOLID)
HILTI KWIK BOLT–TZ2 (ICC ESR–4561)
3/8"ø ANCHORS
w/ hef=2 1/2" EMBEDMENT
4" MIN. EDGE DIST.
INSTALLATION TORQUE: 15 ft–lb

NOTE: Expansion anchors designed to ICC–ES AC01 are limited to allowable stress design ONLY in accordance with AC01 1.2. Hence, strength design values are not acceptable. Allowable stress values can be shown provided, SEOR will verify that:

a. masonry is not cracked as defined in ICC–ES AC01 Section 2.3; the SEOR shall provide calculations to show that the masonry wall would not crack under the design earthquake loads under all service conditions; the wall has to remain elastic.
b. masonry is fully grouted in accordance w/ ESR–4561 Section 3.2;
c. conditions of use requirements in accordance w/ ESR–4561 Section 5.0 is satisfied.

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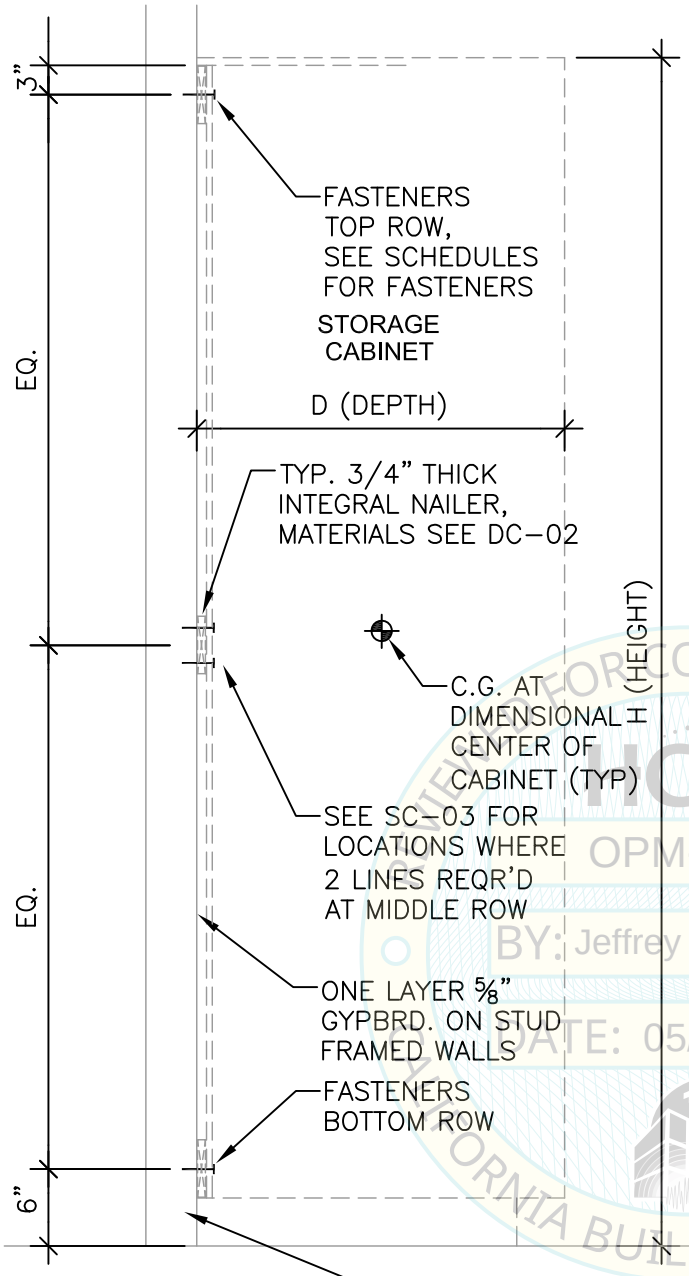

STANDARD WOODWORK CASEWORK:

DIMENSIONS:

D = 12 & 24" (max)
H = 96" (max)
LENGTH = 12" (min) TO 48" (max)

LOADING:

APPROXIMATE EMPTY WEIGHT OF CABINET: 6 pcf

WALL BACKING & STUDS:

SEE DESIGN CRITERIA DWG. No. DC-02

FASTENERS / ANCHORS:

FOR FASTENER AND ANCHOR TYPES, SEE DWG. No. DC-02 & DC-03
FOR FASTENER & ANCHOR LOCATIONS AND SPACING SEE DWG'S. SC-02 & SC-03

SCALE: NONE	DATE: 5/2/2022	STORAGE CABINET SUPPORTS & ATTACHMENTS	Drawing No.

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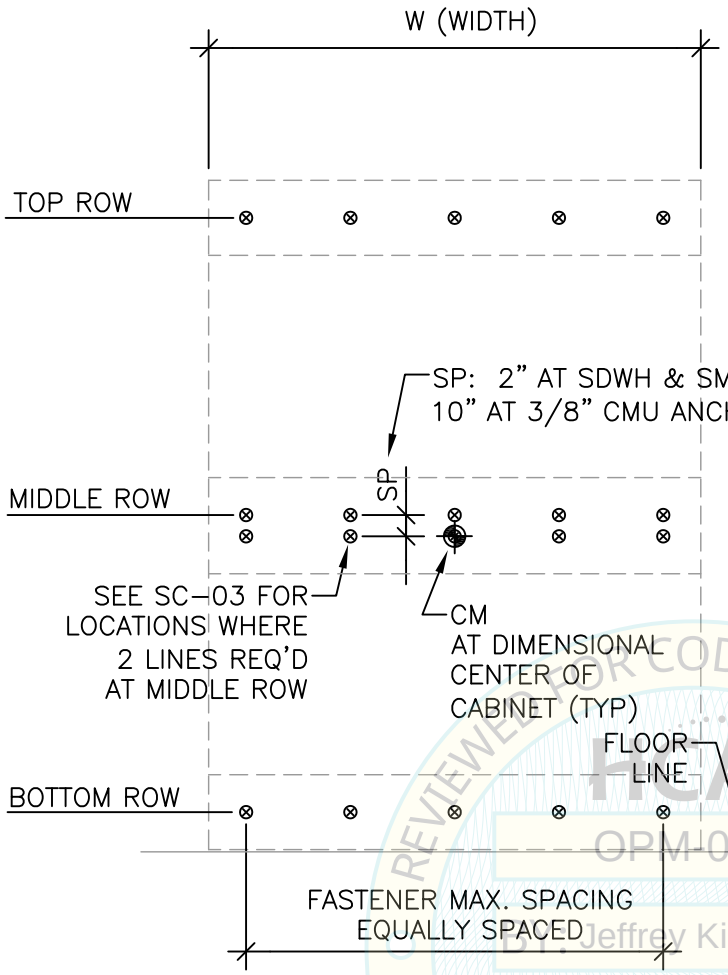

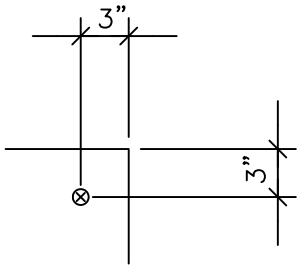

FASTENER SPACING
AT CORNERS

FASTENERS & ANCHORS:

1) FOR FASTENER AND ANCHOR TYPES, SEE DRAWING DC-02 & DC-03.

2) FOR FASTENER AND ANCHOR SPACING, SEE DRAWING SC-03.

STORAGE CABINET
ELEVATION OF BACK PANEL FASTENER LOCATIONS

NOTES:

1) SEE NOTES ON DRAWING DC-01, DC-02 & DC-03.
2) CABINET DIMENSIONS SHOWN ARE MAXIMUM SIZES. FOR CABINETS OF OTHER SIZES USE FASTENER SPACING FOR NEXT LARGER CABINET SIZE.
3) MATERIAL SHOWN AS: WOOD, METAL, CMU, CONCRETE IS THE TYPE OF WALL CONSTRUCTION TO WHICH THE FASTENERS WILL BE ATTACHED. SEE DRAWING DC-02 FOR MATERIAL SPECIFICS AND BACKING REQUIREMENTS FOR STUD WALL TYPES.
4) FASTENERS TO BE SPACED EQUALLY IN EACH ROW (OR LINE).

SCALE: NONE	DATE: 5/2/2022	STORAGE CABINET SUPPORTS & ATTACHMENTS	Drawing No.

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STANDARD WOODWORK CASEWORK

NOTES:
SEE NOTES ON DWG.
DC–01, DC–02 & DC–03

DIMENSIONS
D = 12" & 24" (max)
H = 96" (max)
LENGTH = 12" (min) to 48" (max)

LOADING:
APPROXIMATE EMPTY WEIGHT
OF CABINET: 6 pcf

WALL BACKING
SEE DESIGN CRITERIA DWG. No. DC–02

FASTENERS / ANCHORS:
FOR FASTENER & ANCHOR TYPES,
SEE DWG. No. DC–02 & DC–03 (UNO)
FASTENER SPACING IN EACH ROW:

12" DEEP CABINET

SCREWS TO WOOD BACKING:
SIMPSON SDWH, 3" FROM EACH END,
14" o.c. BETWEEN, 2 LINES AT MIDDLE
T max. = 103 lbs, V max. = 89 lbs
(Forces are ASD)

SCREWS TO METAL BACKING:
#14 SMS, 3" FROM EACH END,
14" o.c. BETWEEN, 2 LINES AT MIDDLE
T max. = 103 lbs, V max. = 89 lbs
(Forces are ASD)

ANCHORS TO CMU:
3/8" HKB–TZ2, 2 1/2" EMBEDMENT
3" FROM EACH END, 14" o.c. BETWEEN
T max. = 382 lbs, V max. = 354 lbs
(Forces are ASDxOmega)

ANCHORS TO CONCRETE:
3/8" HKB–TZ2, 2" EMBEDMENT
3" FROM EACH END, 14" o.c. BETWEEN,
T max. = 591 lbs, V max. = 510 lbs
(Forces are SDxOmega)

24" DEEP CABINET

SCREWS TO WOOD BACKING:
SIMPSON SDWH, 3" FROM EACH END,
14" o.c. BETWEEN, 2 LINES AT MIDDLE
T max. = 211 lbs, V max. = 155 lbs
(Forces are ASD)

SCREWS TO METAL BACKING:
#14 SMS, 3" FROM EACH END,
5.25" o.c. BETWEEN, 2 LINES AT MIDDLE
T max. = 185 lbs, V max. = 69 lbs
(Forces are ASD)

ANCHORS TO CMU:
3/8" HKB–TZ2, 2 1/2" EMBEDMENT
3" FROM EACH END, 14" o.c. BETWEEN,
2 LINES REQ'D AT MIDDLE ROW
T max. = 408 lbs, V max. = 309 lbs
(Forces are ASDxOmega)

ANCHORS TO CONCRETE:
3/8" HKB–TZ2, 2" EMBEDMENT
3" FROM EACH END, 14" o.c. BETWEEN,
T max. = 1175 lbs, V max. = 890 lbs
(Forces are SDxOmega)

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SCALE: NONE	DATE: 5/2/2022	STORGE CABINET SUPPORTS & ATTACHMENTS	Drawing No.

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SC-03
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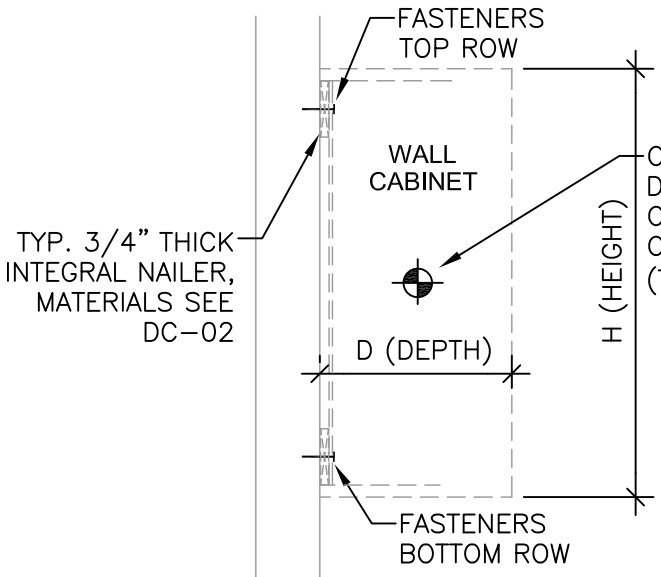


STANDARD WOODWORK CASEWORK:

DIMENSIONS:
D = 14" & 18" MAX.
H = 48" (max)
LENGTH = 12" (min.) TO 48" (max.)

LOADING:
APPROXIMATE EMPTY WEIGHT
OF CABINET: 6 pcf

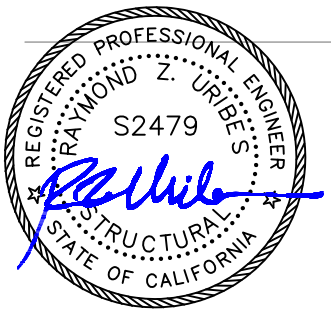
WALL BACKING & STUDS:
SEE DESIGN CRITERIA DWG. No. DC-02

FASTENERS / ANCHORS:
FOR FASTENER & ANCHOR TYPES,
SEE DWG. No. DC-02 & DC-03.
FOR FASTENER & ANCHOR LOCATIONS
AND SPACING SEE DWG'S. WC-02 & WC-03.

ONE LAYER 5/8" GYPBRD. ON STUD FRAMED WALLS.

WALL CONSTRUCTION MAY BE OF:
CONCRETE, CMU, OR WOOD / STEEL
STUD FRAMING, SEOR TO DESIGN
WALL AND CHECK IF CABINETS
ON BOTH SIDES.

MINIMUM FLOOR CONSTRUCTION:
3 1/4" THICK, 3000 PSI
SAND LTWT CONC. OVER MIN. 20 GA.
METAL DECK. SEOR TO CHECK
FLOOR TO SUPPORT CABINET LOADS.



SCALE: NONE	DATE: 5/2/2022	WALL CABINET SUPPORTS & ATTACHMENTS	Drawing No.

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WC-01
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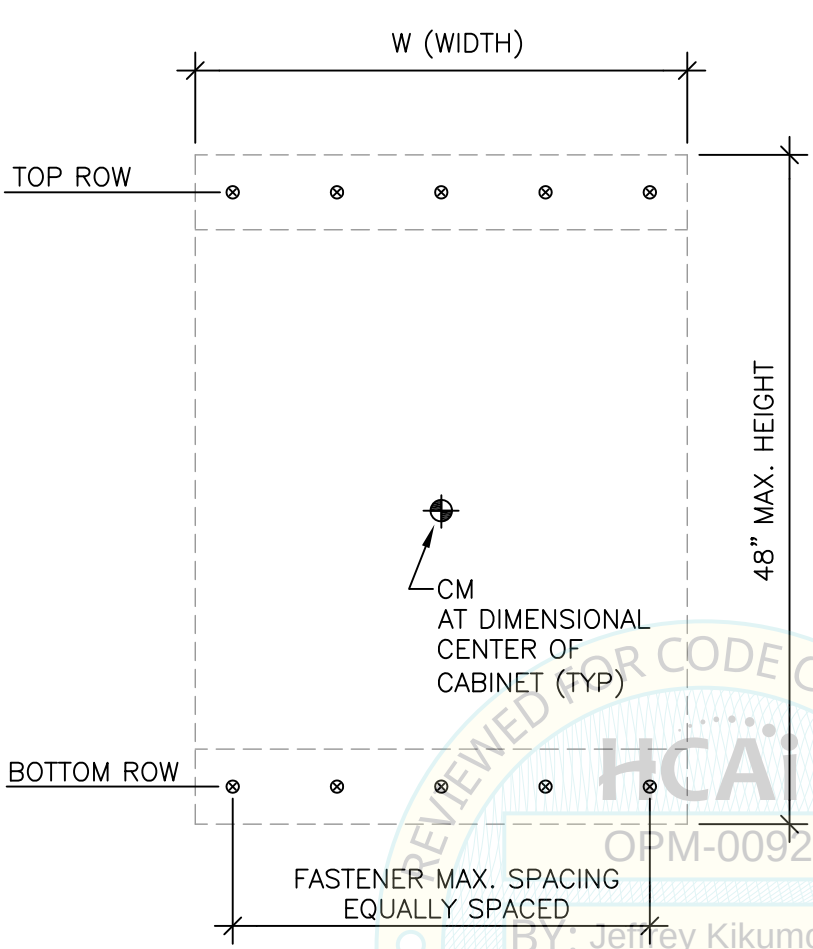

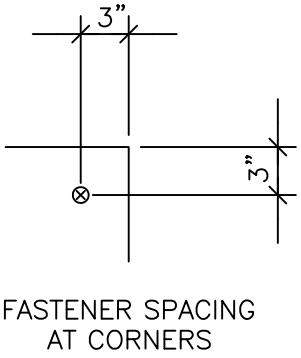

FASTENER SPACING
AT CORNERS

FASTENERS & ANCHORS:

1) FOR FASTENER AND ANCHOR TYPES, SEE DRAWING DC–02 & DC–03.

2) FOR FASTENER AND ANCHOR SPACING, SEE DRAWING WC–03.

WALL HUNG CABINET
ELEVATION OF CABINET BACK
FASTENER LOCATIONS

NOTES:

1) SEE NOTES ON DRAWING DC–01, DC–02 & DC–03.
2) CABINET DIMENSIONS SHOWN ARE MAXIMUM SIZES. FOR CABINETS OF OTHER SIZES USE FASTENER SPACING FOR NEXT LARGER CABINET SIZE.
3) MATERIAL SHOWN AS: WOOD, METAL, CMU, CONCRETE IS THE TYPE OF WALL CONSTRUCTION TO WHICH THE FASTENERS WILL BE ATTACHED. SEE DRAWING DC–02 FOR MATERIAL SPECIFICS AND BACKING REQUIREMENTS FOR STUD WALL TYPES.
4) FASTENERS TO BE SPACED EQUALLY IN EACH ROW (OR LINE).

SCALE: NONE	DATE: 5/2/2022	WALL CABINET SUPPORTS & ATTACHMENTS	Drawing No.

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WC-02

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STANDARD WOODWORK CASEWORK

NOTES:
SEE NOTES ON DWG.
DC–01, DC–02 & DC–03

DIMENSIONS
D = 14" & 18" (max)
H = 48" (max)
LENGTH = 12" (min) to 48" (max)

LOADING:
APPROXIMATE EMPTY WEIGHT
OF CABINET: 6 pcf

WALL BACKING
SEE DESIGN CRITERIA DWG. No. DC–02

FASTENERS / ANCHORS:
FOR FASTENER & ANCHOR TYPES,
SEE DWG. No. DC–02 & DC–03 (UNO)
FASTENER SPACING IN EACH ROW:

14" DEEP CABINET

SCREWS TO WOOD BACKING:
SIMPSON SDWH, 3" FROM EACH END,
8.4" o.c. BETWEEN
T max. = 104 lbs, V max. = 144 lbs
(Forces are ASD)

SCREWS TO METAL BACKING:
#14 SMS, 3" FROM EACH END,
8.4" o.c. BETWEEN
T max. = 104 lbs, V max. = 144 lbs
(Forces are ASD)

ANCHORS TO CMU:
3/8" HKB–TZ2, 2 1/2" EMBEDMENT
3" FROM EACH END, 14" o.c. BETWEEN
T max. = 341 lbs, V max. = 423 lbs
(Forces are ASDxOmega)

ANCHORS TO CONCRETE:
3/8" HKB–TZ2, 2" EMBEDMENT
3" FROM EACH END, 14" o.c. BETWEEN,
T max. = 611 lbs, V max. = 493 lbs
(Forces are SDxOmega)

18" DEEP CABINET

SCREWS TO WOOD BACKING:
SIMPSON SDWH, 3" FROM EACH END,
8.4" o.c. BETWEEN
T max. = 104 lbs, V max. = 144 lbs
(Forces are ASD)

SCREWS TO METAL BACKING:
#14 SMS, 3" FROM EACH END,
8.4" o.c. BETWEEN
T max. = 104 lbs, V max. = 144 lbs
(Forces are ASD)

ANCHORS TO CMU:
3/8" HKB–TZ2, 2 1/2" EMBEDMENT
3" FROM EACH END, 10.5" o.c. BETWEEN
T max. = 341 lbs, V max. = 423 lbs
(Forces are ASDxOmega)

ANCHORS TO CONCRETE:
3/8" HKB–TZ2, 2" EMBEDMENT
3" FROM EACH END, 10.5" o.c. BETWEEN,
T max. = 611 lbs, V max. = 493 lbs
(Forces are SDxOmega)

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WC-03
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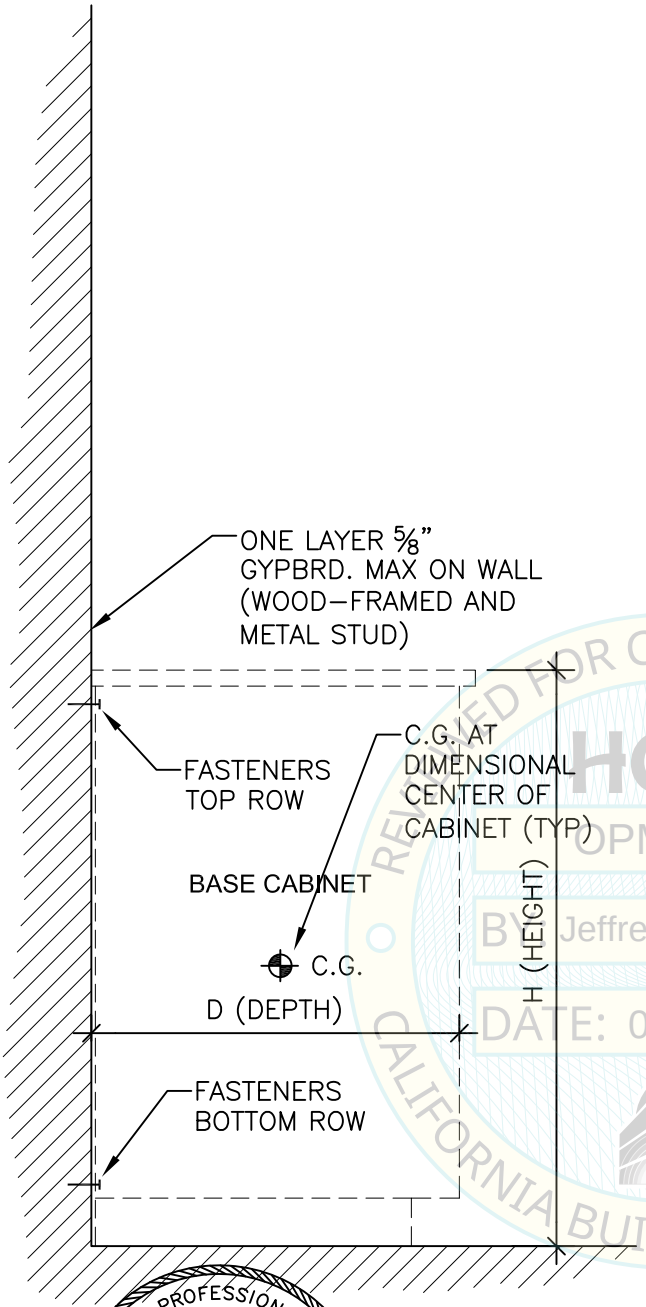

STANDARD WOODWORK CASEWORK

NOTES:

SEE NOTES ON DWG.
DC–01, DC–02 & DC–03

DIMENSIONS

D = 24" (max)
H = 36" (max)
LENGTH = 12" (min) to 48" (max)

LOADING:

APPROXIMATE EMPTY WEIGHT
OF CABINET: 6 pcf

WALL BACKING

SEE DESIGN CRITERIA DWG. No. DC–02

FASTENERS / ANCHORS:

FOR FASTENER & ANCHOR TYPES,
SEE DWG. No. DC–02 & DC–03 (UNO)
FASTENER SPACING IN EACH ROW:

SCREWS TO WOOD BACKING:
SIMPSON SDWH, 3" FROM EACH END,
12" o.c. BETWEEN
T max. = 153 lbs, V max. = 94 lbs
(Forces are ASD)

SCREWS TO METAL BACKING:
#14 SMS, 3" FROM EACH END,
12" o.c. BETWEEN
T max. = 153 lbs, V max. = 94 lbs
(Forces are ASD)

ANCHORS TO CMU:
3/8" HKB–TZ2, 3" FROM EACH END,
14" o.c. BETWEEN, 2 1/2" EMBEDMENT
T max. = 387 lbs, V max. = 312 lbs
(Forces are ASDxOmega)

ANCHORS TO CONCRETE:
3/8" HKB–TZ2, 3" FROM EACH END,
21" o.c. BETWEEN, 2" EMBEDMENT
T max. = 557 lbs, V max. = 449 lbs
(Forces are SDxOmega)

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WOODWORK INSTITUTE
1455 Response Road, Suite 110
Sacramento, CA 95815
(916) 372-9943
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BC-01
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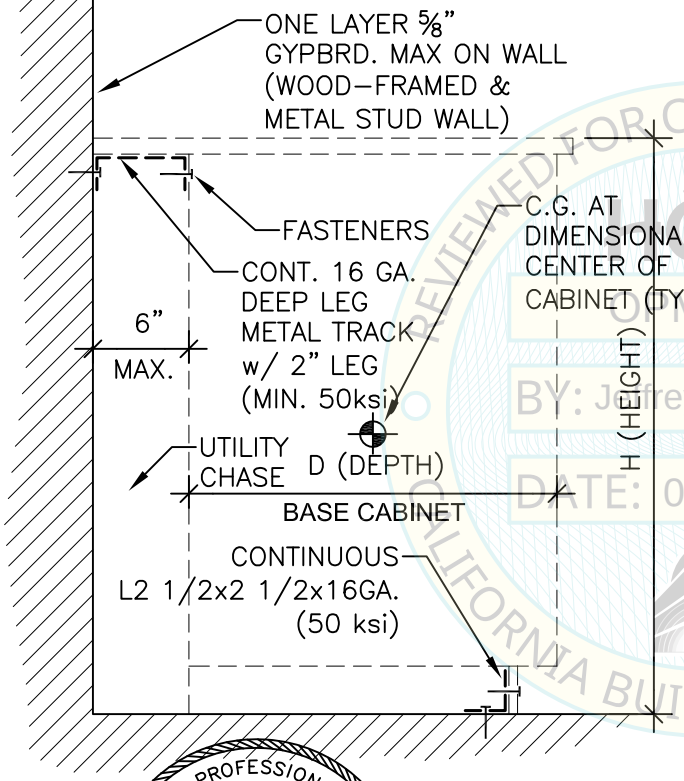
STANDARD WOODWORK CASEWORK
CABINETS WITH INTEGRAL TOE

NOTES:
SEE NOTES ON DWG.
DC–01, DC–02 & DC–03

DIMENSIONS
D = 36" (max)
H = 42" (max)
LENGTH = 12" (min) TO 48" (max)

LOADING:
APPROXIMATE EMPTY WEIGHT
OF CABINET: 6 pcf

WALL BACKING
SEE DESIGN CRITERIA DWG. No. DC–02



FASTENERS / ANCHORS:
FOR FASTENER & ANCHOR TYPES
SEE DWG. No. DC–02 & DC–03 (UNO)
FASTENER SPACING IN EACH ROW:

SCREWS AT CABINET TO METAL TRACK:

#14 SMS, 3" FROM EACH END,
8.4" o.c. BETWEEN
T max. = 114 lbs, V max. = 114 lbs
(Forces are ASD)

CABINET TO WALL FASTENERS:

SCREWS TO WOOD BACKING:
SIMPSON SDWH, 3" FROM EACH END,
8.4" o.c. BETWEEN
T max. = 141 lbs, V max. = 114 lbs
(Forces are ASD)

SCREWS TO METAL BACKING:
#14 SMS, 3" FROM EACH END,
7" o.c. BETWEEN
T max. = 125 lbs, V max. = 98 lbs
(Forces are ASD)

ANCHORS TO CMU:
3/8" HKB–TZ2, 3" FROM EACH END,
14" o.c. BETWEEN, 2 1/2" EMBEDMENT
T max. = 396 lbs, V max. = 341 lbs
(Forces are ASDxOmega)

ANCHORS TO CONCRETE:
3/8" HKB–TZ2, 3" FROM EACH END,
21'o.c. BETWEEN, 2" EMBEDMENT
T max. = 734 lbs, V max. = 655 lbs
(Forces are SDxOmega)

FLOOR ANCHORS:
AT TOE KICK TO 16 GA. L
#12 SMS, 3" FROM EACH END,
12" o.c. BETWEEN
T max. = 171 lbs, V max. = 171 lbs
(Forcs are ASD, not concurrent)

AT 16 GA. L TO FLOOR
1/2" HKB–TZ2, 3" FROM EACH END
21" o.c. BETWEEN, 2" EMBEDMENT
V max. = 655 lbs/anchor (SD)(Omega)

SCALE: NONE	DATE: 5/2/2022	BASE CABINET w/ CHASE SUPPORTS & ATTACHMENTS	Drawing No.

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STANDARD WOODWORK CASEWORK

CABINETS SHALL HAVE INTEGRAL TOE.

DIMENSIONS

D (max) = 36"
H (max) = 36"
LENGTH = 12" (min) TO 48" (max)

LOADING:

APPROXIMATE EMPTY WEIGHT
OF CABINET: 6 pcf

FLOOR SUPPORT

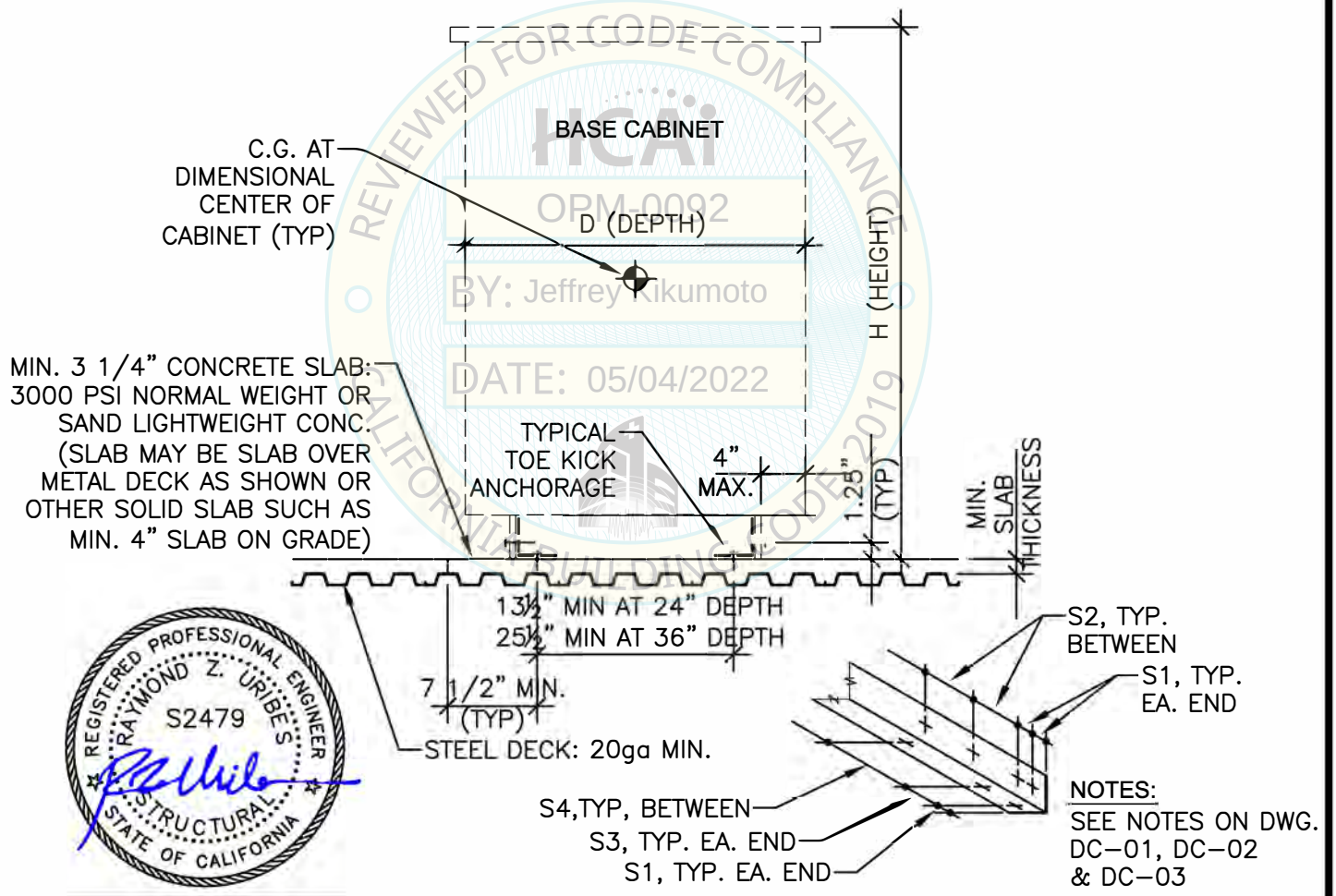
CONT. 2 1/2" x 2 1/2" x 16 GA.
BENT SHEET METAL ANGLE (FY=50KSI)

FASTENERS:

AT CABINET BASE TO FLOOR SUPPORT USE:
#12 SHEET METAL SCREWS,
S1 = 3" MAX., S2 = 9"o.c. MAX.
T = 100 lbs, V = 147 lbs
(Forces are ASD, not concurrent)

FLOOR ANCHORS

AT FLOOR SUPPORT TO CONCRETE SLAB
USE: 1/2"ø HILTI KWIK BOLT–TZ2
w/ 2" EMBEDMENT,
S1 = 2" MAX., S3 = 9" MAX., S4 = 9" MAX.
Tu = 856 lbs, Vu = 526 lbs
(Forces are SDxOmega)
SEE EXPANSION ANCHOR NOTES DWG. DC–03



NOTES:
SEE NOTES ON DWG. DC–01, DC–02 & DC–03

REGISTERED PROFESSIONAL ENGINEER
RAYMOND Z. URIBE'S
S2479
STRUCTURAL
STATE OF CALIFORNIA

SCALE: NONE	DATE: 5/2/2022	PENINSULA CASEWORK SUPPORTS & ATTACHMENTS	Drawing No.

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PC-01
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STANDARD WOODWORK CASEWORK

CABINETS SHALL HAVE INTEGRAL TOE.

DIMENSIONS

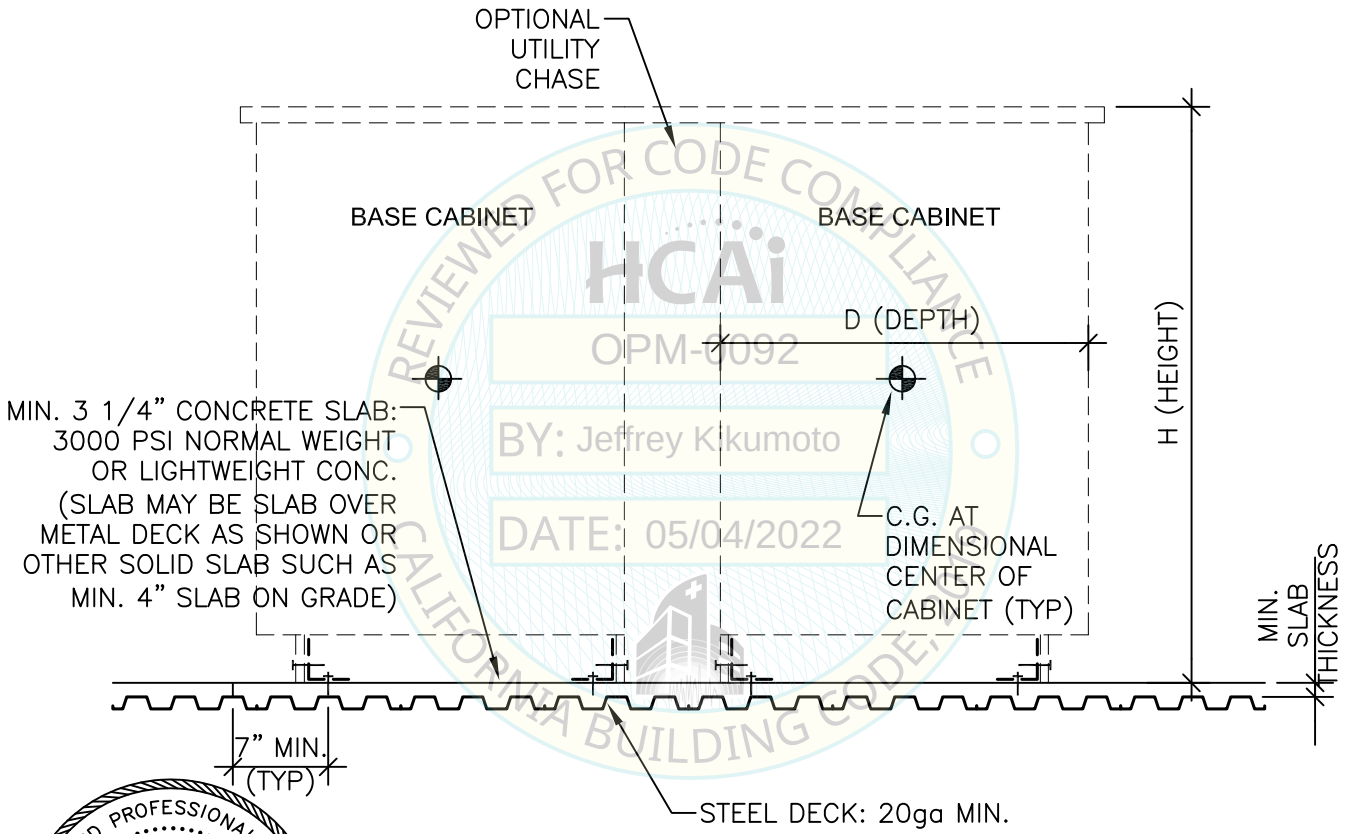
D (max) = 36"
H (max) = 36"
LENGTH = 12" (min) TO 48" (max)

LOADING:

APPROXIMATE EMPTY WEIGHT
OF CABINET: 6 pcf

FLOOR SUPPORTS & ATTACHMENTS:

TYPICAL DETAILS, SEE PC–01



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NOTES:

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SCALE: NONE	DATE: 5/2/2022	PENINSULA CASEWORK SUPPORTS & ATTACHMENTS	Drawing No.
LTK ASSOCIATES Incorporated Structural Engineers 745 Distel Drive Los Altos, CA 94022 (650) 967- 8465 FAX (650) 967-5148		WOODWORK INSTITUTE 1455 Response Road, Suite 110 Sacramento, CA 95815 (916) 372-9943 woodworkinstitute.com	PC-02 13 of 13