**CITY OF DAYTON, OHIO**
DEPARTMENT OF ECONOMIC DEVELOPMENT
DIVISION OF BUILDING INSPECTION

371 WEST SECOND STREET
DAYTON, OHIO 45402
937 333-3883 • FAX 937 333-4284
www.daytonohio.gov

# RESIDENTIAL STRUCTURE ADDITIONS

The construction of additional living space to a one, two, or three family dwelling within the City of Dayton is subject to the requirements of the 2013 Residential Code of Ohio (2013 RCO). Approval of drawings and the issuance of a permit are required before work is initiated. The property owner, as well as a contractor, may apply for the building permit. Depending on the components of the addition, the work may also be subject to the provisions of the 2011 Ohio Plumbing Code (2011 OPC) and the 2014 National Electric Code (NFPA 70).

The 2013 RCO is available for viewing at: *https://codes.iccsafe.org/public/collections/OH*

The 2011 OPC can be found at: *https://codes.iccsafe.org/public/public/collections/*

The 2014 NEC can be accessed at: www.nfpa.org

## Applying for a Residential Building Permit

1. **Application Form -** Complete the upper half of the application form, including the signature and date. The application form is available at the Division of Building Inspection office, 371 W Second St, in downtown Dayton or online at: *http://www.daytonohio.gov/DocumentCenter/View/253*

2. **Site Plan -** An example site plan is attached to this document. Prepare a site plan showing property lines, the nearest streets, lot dimensions, existing structures (house, garage, shed, etc) with dimensions and distances from the property lines. Indicate the location for the addition on the site plan. Clearly label the proposed structure and show overall dimensions. Search for lot dimensions from the Montgomery County Auditor's website at: *http://www.mcegisohio.org/vpweb/vpweb.html?config=aud* In the **Quick Searches** window, go to "Select a Jurisdictions" and select "Dayton" as the jurisdiction, find your street name and then your address in the pull-down menus.

3. **Detail Drawings -** Example drawings are also attached, with references to the 2013 Residential Code of Ohio (RCO). The RCO references have been added to aid the person preparing drawings in finding the appropriate code requirements. The drawings should show as a minimum: 1) a floor plan, 2) a typical wall section, 3) foundation details, 4) wall bracing details, 5) roof details, 6) HVAC, electrical, and plumbing details if part of the project.

4. **Plan Review, Approval, and Permit Issuance**

1. **Submission -** The permit application and 3 copies of the site plan and detail drawings must be submitted to the Division of Building Inspection, 371 W. Second St in downtown Dayton.

2. **Review -** The application and drawings will be reviewed for compliance with zoning requirements, with requirements of the 2013 RCO and with codes for HVAC, electric and plumbing, as appropriate. The applicant will be contacted if additional information is needed

or if the drawings do not comply with the codes. Residential construction documents are reviewed in the order received.

3. **Building Permit Issuance –** When documents are approved, the applicant will be contacted that the permit and plans are available at the Building Inspection office. A permit fee must be paid at the time the permit is obtained. The building permit becomes invalid if work does not commence within the 12 month period following permit issuance.
4. **HVAC, Electrical and Plumbing Permits –** Separate permits for HVAC, electrical, and plumbing work must be obtained.

## Permit Fees

Permit fees are determined by the estimated cost of the construction. These fees help offset the costs to the City of Dayton for the required inspections and other related costs. Call 333-3985 or 333-6794 for an estimate of the permit fees based on your estimated construction cost.

## Inspections During Construction

There are several steps in construction of a habitable structure that require inspection.

1. **Footing –** The first inspection must take place after excavating for the footings, the forms are set, any reinforcing shown on the drawings is in place, and before any concrete is poured. This allows the depth, size and layout of the foundation to be confirmed.
2. **Waterproofing –** If foundation walls are required to be waterproofed, an inspection must be scheduled prior to backfilling the foundation.
3. **Basement Floor –** Rough-In for any plumbing, HVAC, and electrical must be made before the basement floor inspection. The basement floor inspection is made when gravel, soil pipes, and drain tiles are in place and prior to pouring the floor.
4. **Slab or Crawlspace –** The slab inspection is made when gravel, insulation, vapor barrier, heating ducts, and pipes are in place and rough-in for any plumbing, HVAC, and electrical have been approved. The crawlspace inspection is made when the floor joists are ready to be set.
5. **Electrical Rough-in –** This inspection confirms the electrical improvements are in compliance with the approved plans and the National Electric Code. The inspection is conducted before the framing inspection and prior to installing fixtures or appliances.
6. **Plumbing Rough-in –** This inspection confirms the plumbing improvements are in compliance with the approved plans and the Ohio Plumbing Code. The inspection is conducted before the framing inspection and prior to installing fixtures or appliances.
7. **HVAC Rough-in –** Installation of ductwork and piping associated with heating and cooling of the structure.
8. **Framing –** This inspection must take place prior to any insulation installation or interior finishes are installed. This allows the beams, joints, ledgers, lateral load connection, and framing connections to be confirmed. The roofing system (sheathing, underlayment and shingles) can be installed prior to this inspection. All rough-in inspections must have been completed and the work approved prior to the final framing inspection.

9. **Insulation** – Before covering the framing, the insulation in exterior walls, roof/ceiling assembly, and crawlspaces are inspected to confirm conformance with the approved drawings.
10. **Final** – When the electrical, HVAC, and plumbing improvements have been finally approved, and the siding, doors, windows, fixtures, and other finish items have been completed, the final inspection must be successfully completed before the structure Certificate of Occupancy can be issued.
11. **Certificate of Occupancy** – A new residence must have a Certificate of Occupancy before the structure can be occupied for its intended use.

## Resources

- APA Wall Bracing Calculator http://www.apawood.org/calculator
- 2013 Residential Code of Ohio – a link is given in the first paragraph, above.
- Residential Checklist of the City of Dayton.
- A variety of design software and construction videos may be found on the internet. The details provided in those resources may not meet the minimum requirements of the 2013 RCO and other applicable codes. All residential structures constructed in the City of Dayton must comply with the applicable requirements of 2013 RCO.

P:\RCS FILES\RESIDENTIAL ADDITIONS\WORD Master Copies\Handout Residential Additions 8-7-17.doc

# 789 NEIGHBOR DR

EXAMPLE FOR ADDITION TO HOUSE

## LIST OF DRAWINGS

RCO 106.1.3

DWG 1 - SITE PLAN

DWG 2 - FOOTING-FOUNDATION PLAN

DWG 3 - FLOOR FRAMING PLAN

DWG 4 - ROOF AND ROOF FRAMING PLAN

DWG 5 - LAYOUT PLAN

DWG 6 - SECTION A/6

DWG 7 - SECTION A/7

DWG 8 - EXTERIOR ELEVATIONS

DWG 9 - EXTERIOR ELEVATIONS AND WALL BRACING

DWG 10 - ELECTRICAL PLAN

DWG 11 - PLUMBING

MECHANICAL (SEE DWG 10)

DRAWING BY: _____

RCO 106.2

789 NEIGHBOR DR
DAYTON, OH 454XX
937-XXX-XXXX
EMAIL@PROVIDER.COM

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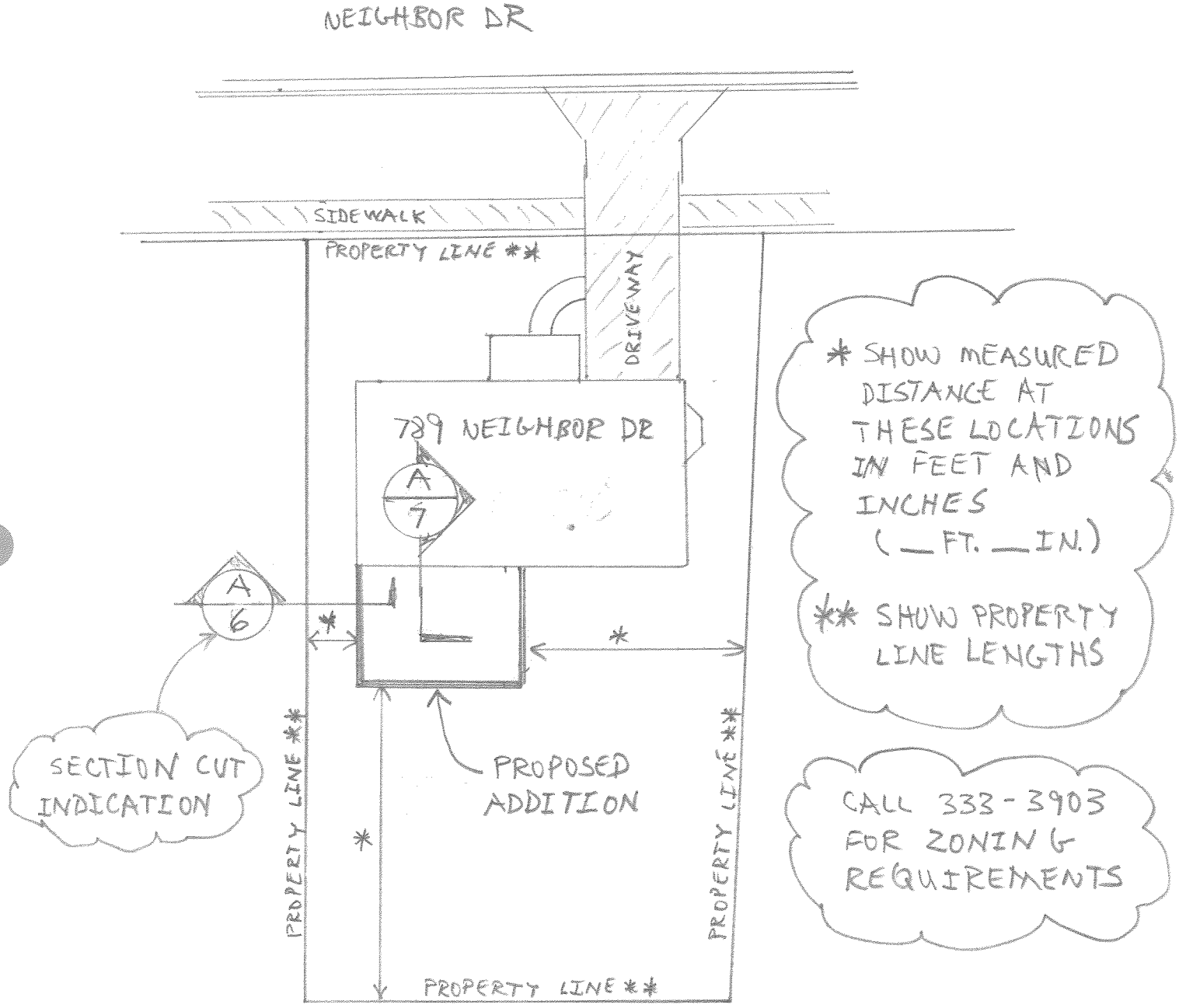
EXAMPLE FOR ADDITION TO HOUSE




* SHOW MEASURED DISTANCE AT THESE LOCATIONS IN FEET AND INCHES (__FT. __IN.)

** SHOW PROPERTY LINE LENGTHS

CALL 333-3903 FOR ZONING REQUIREMENTS

NORTH ARROW

## SITE PLAN

1" = 20'

RCO 106.1.3 #2

DWG 1

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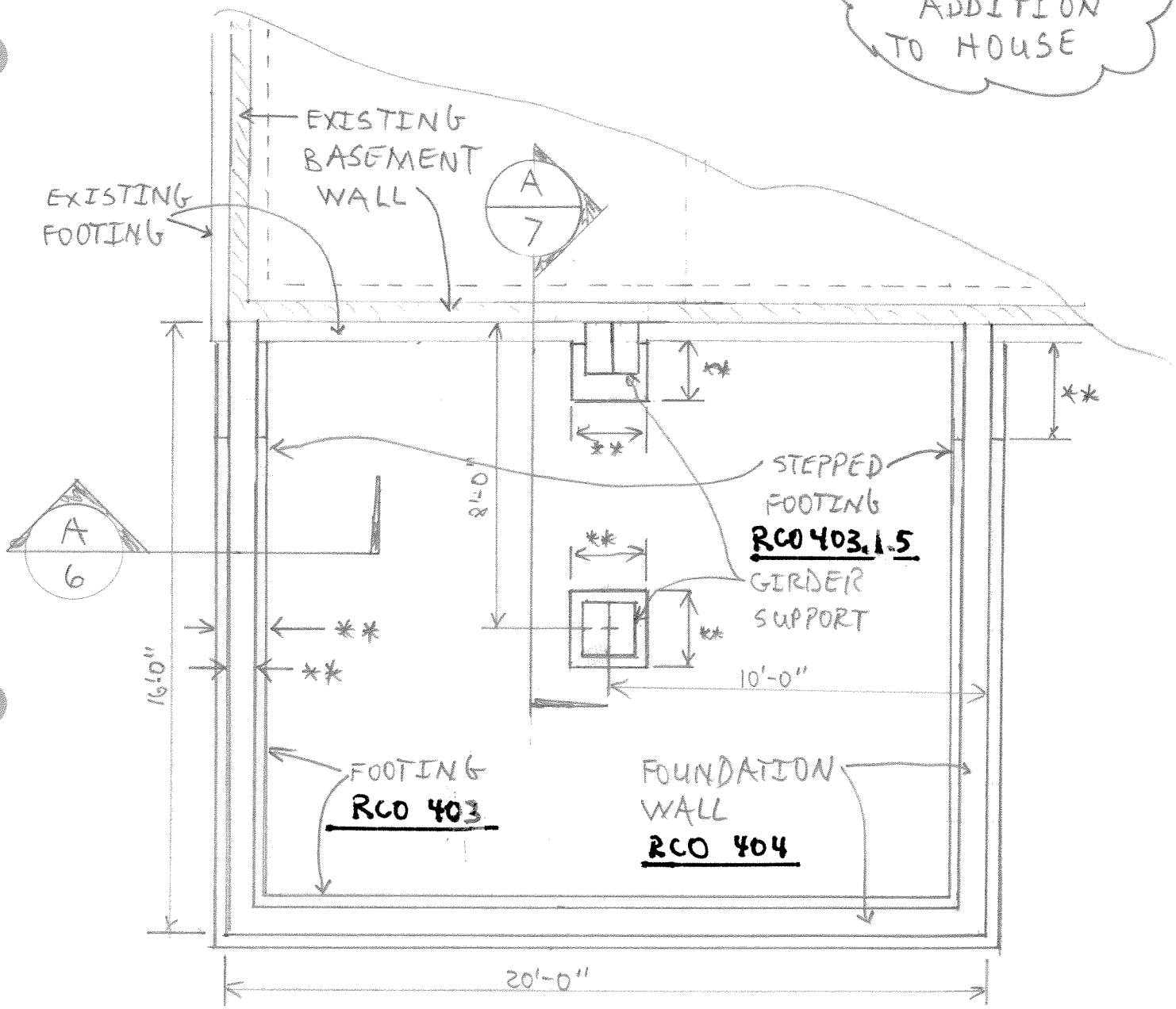


## FOOTING - FOUNDATION PLAN

1/4" = 1'-0"

DWG 2

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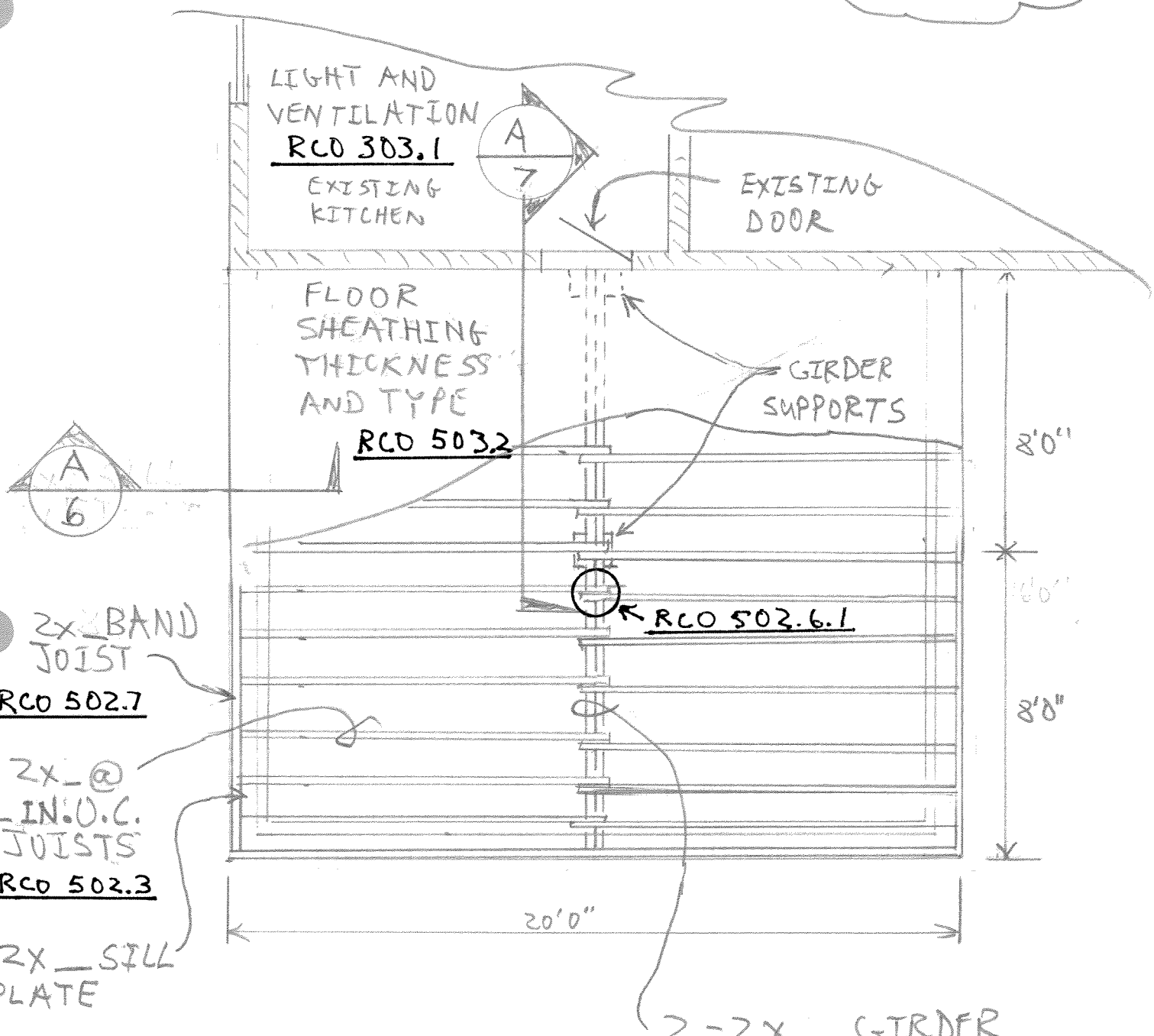
EXAMPLE FOR ADDITION TO HOUSE




N

FLOOR FRAMING PLAN

¼" = 1'-0"

RCO 502.2

DWG 3

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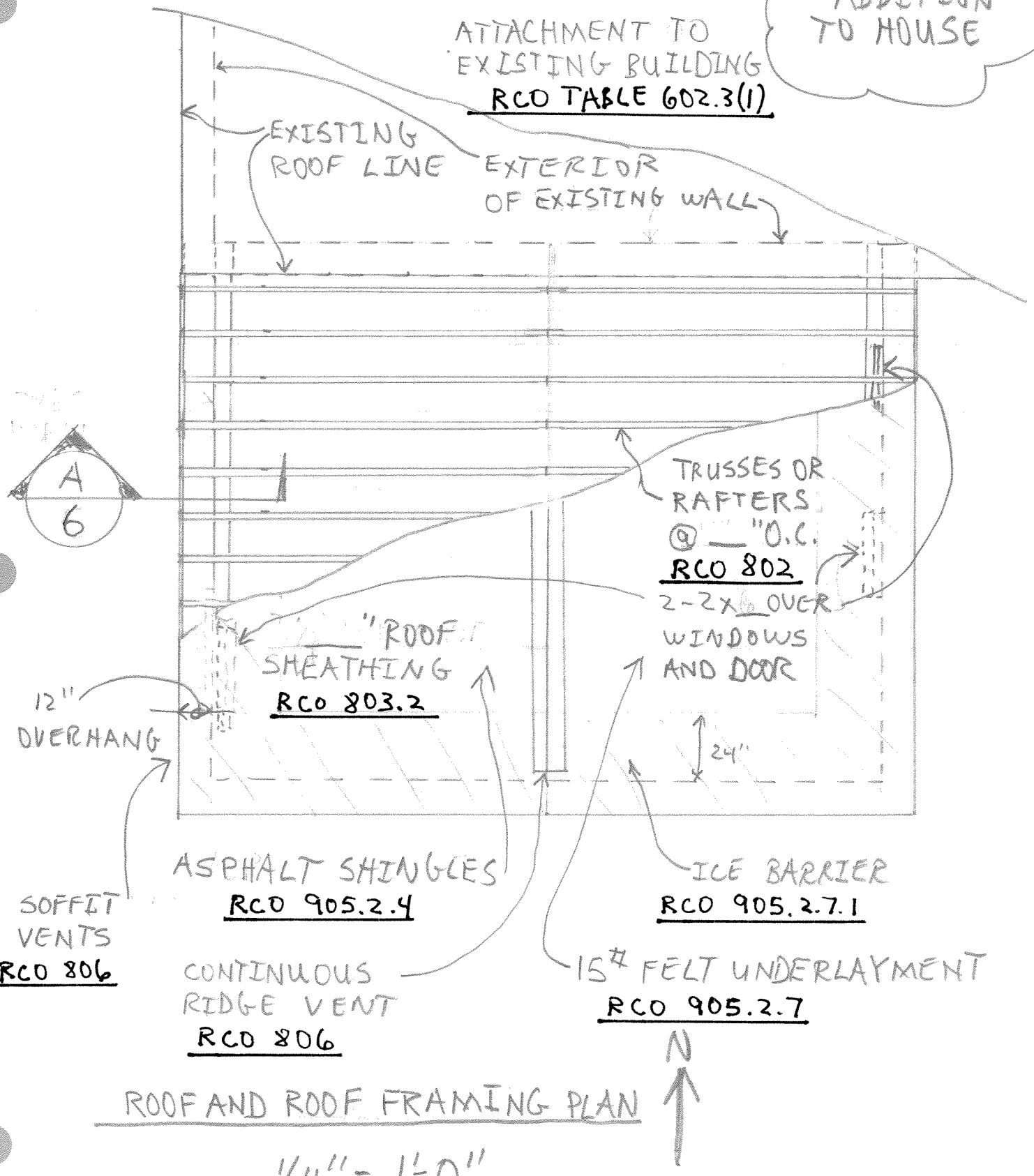
EXAMPLE FOR ADDITION TO HOUSE




ROOF AND ROOF FRAMING PLAN

1/4" = 1'-0"

PWG

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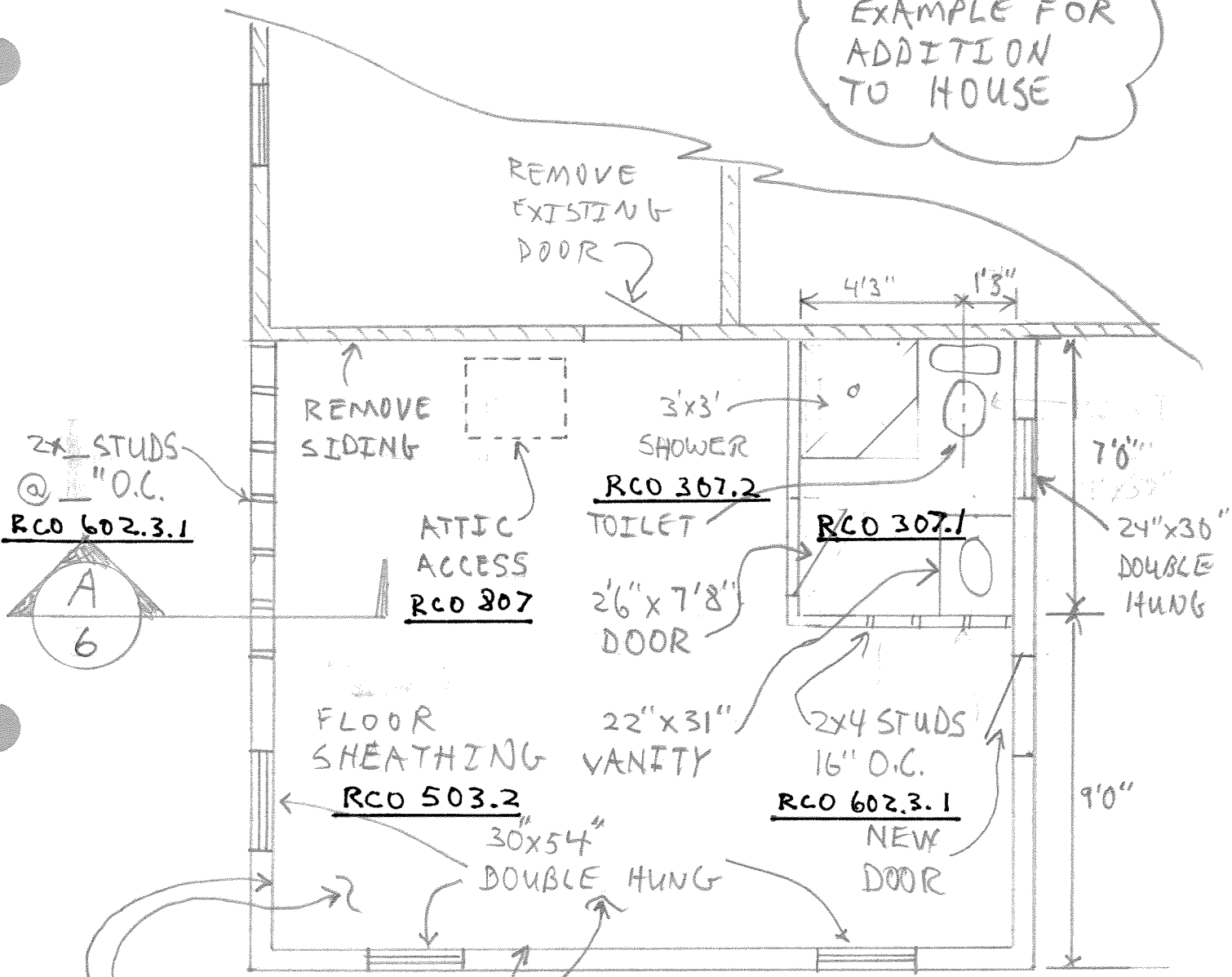
EXAMPLE FOR ADDITION TO HOUSE




INSULATION IN CRAWLSPACE, WALLS, AND CEILING
RCO 1102.1

## LAYOUT PLAN

1/4" = 1'-0"

DWG 5

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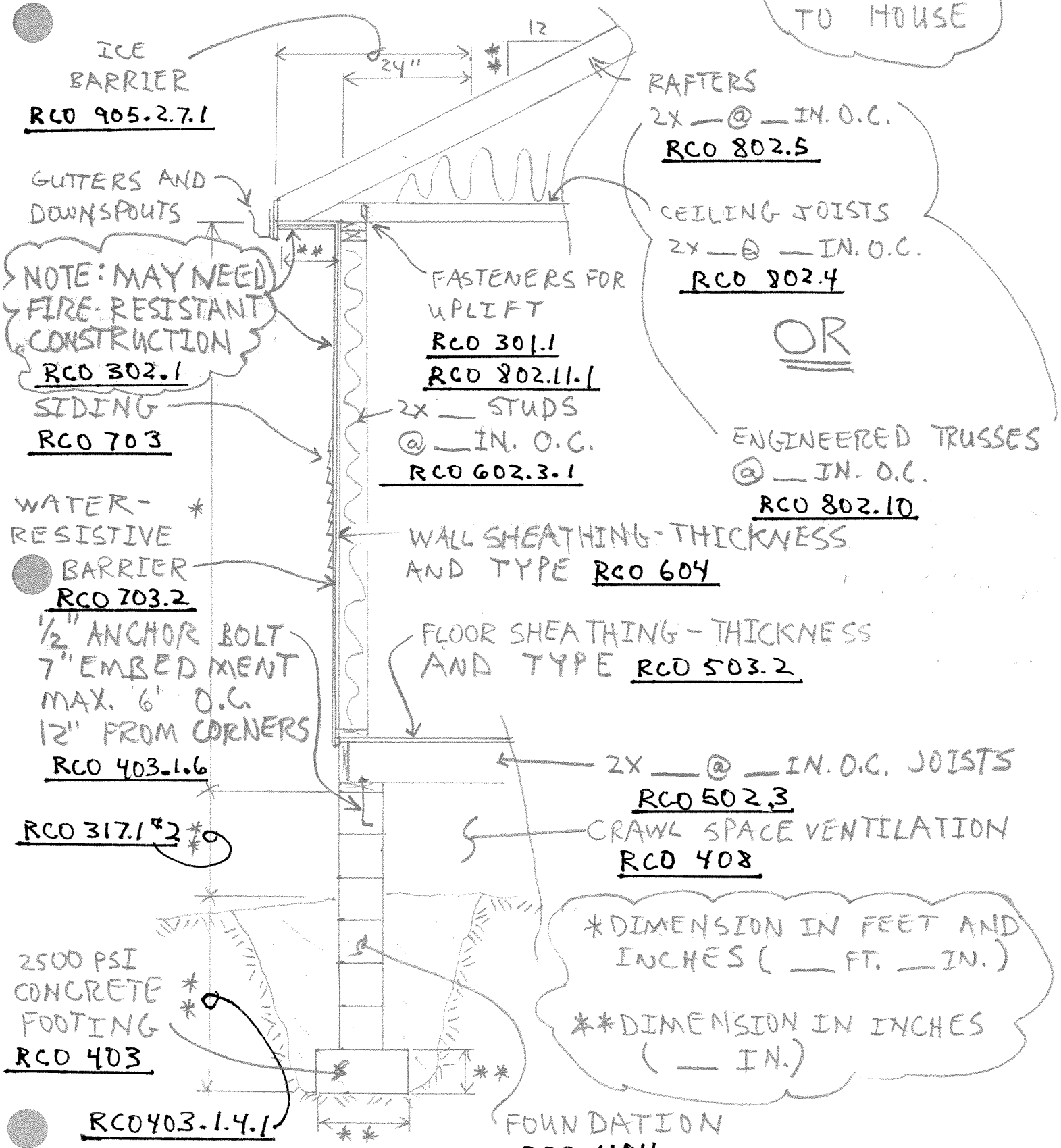
EXAMPLE FOR ADDITION TO HOUSE




*DIMENSION IN FEET AND INCHES (__FT. __IN.)

**DIMENSION IN INCHES (__IN.)

SECTION A/6

SCALE: 1/2" = 1'-0"

DWG 6

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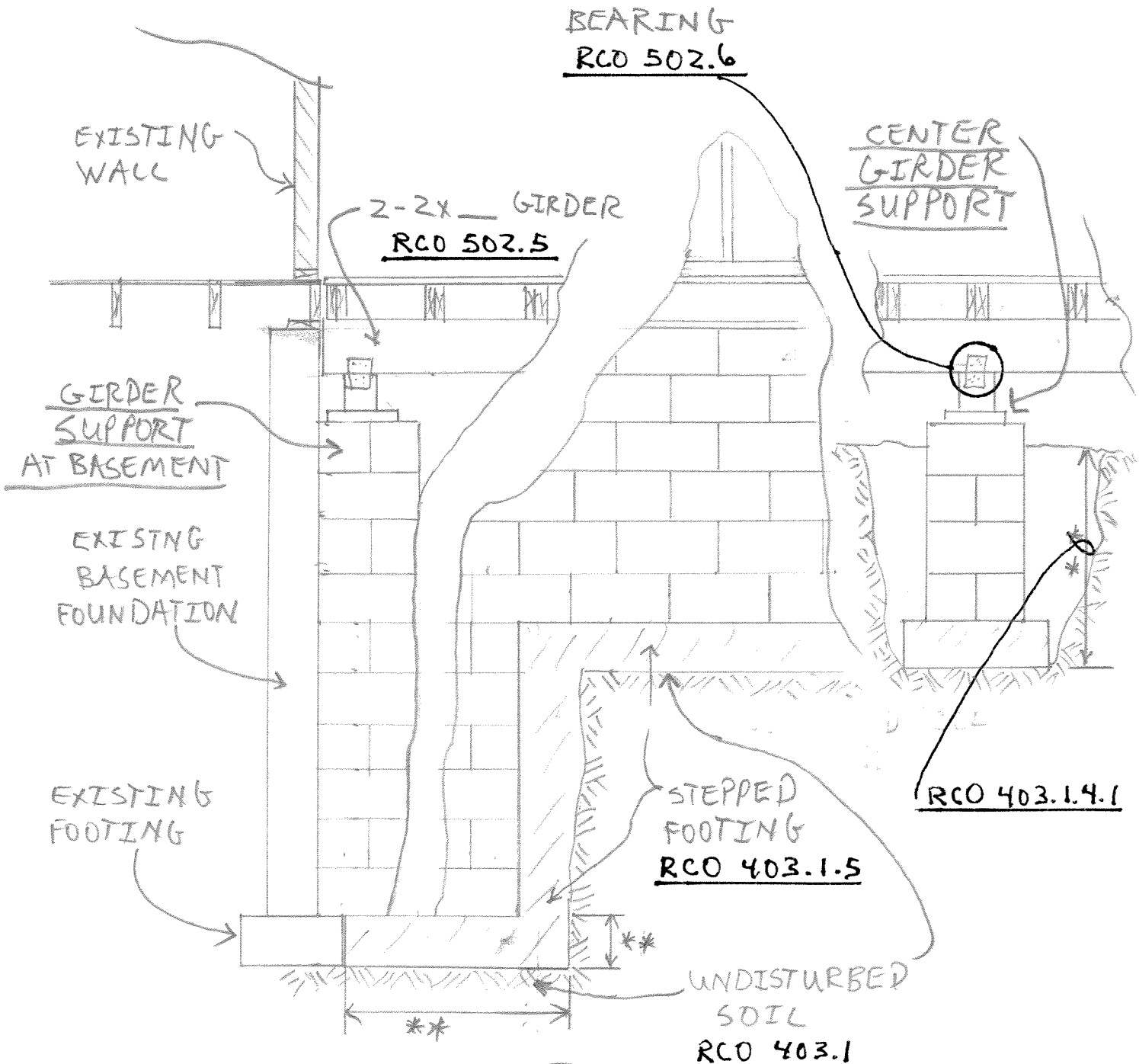
EXAMPLE FOR ADDITION TO HOUSE




SECTION A/7

SCALE: 1/2"=1'-0"

DWG 7

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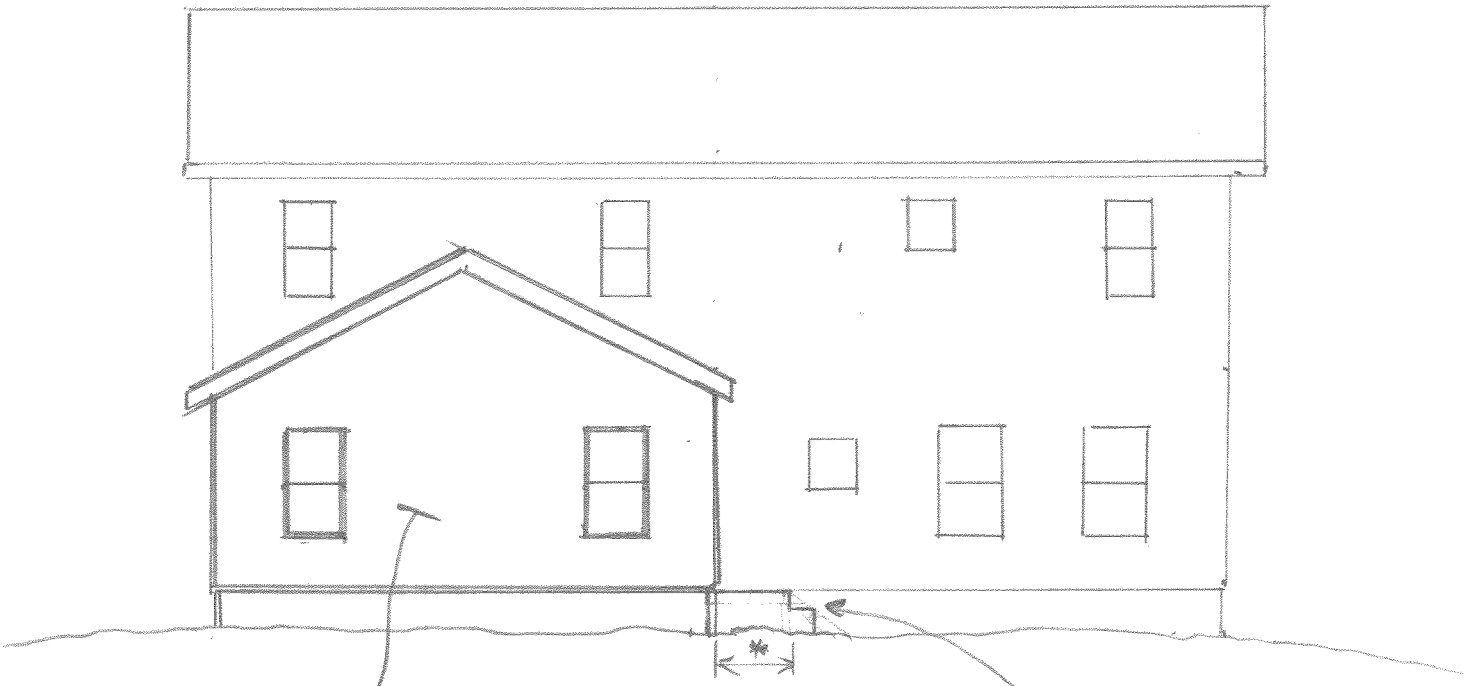
EXAMPLE FOR ADDITION TO HOUSE



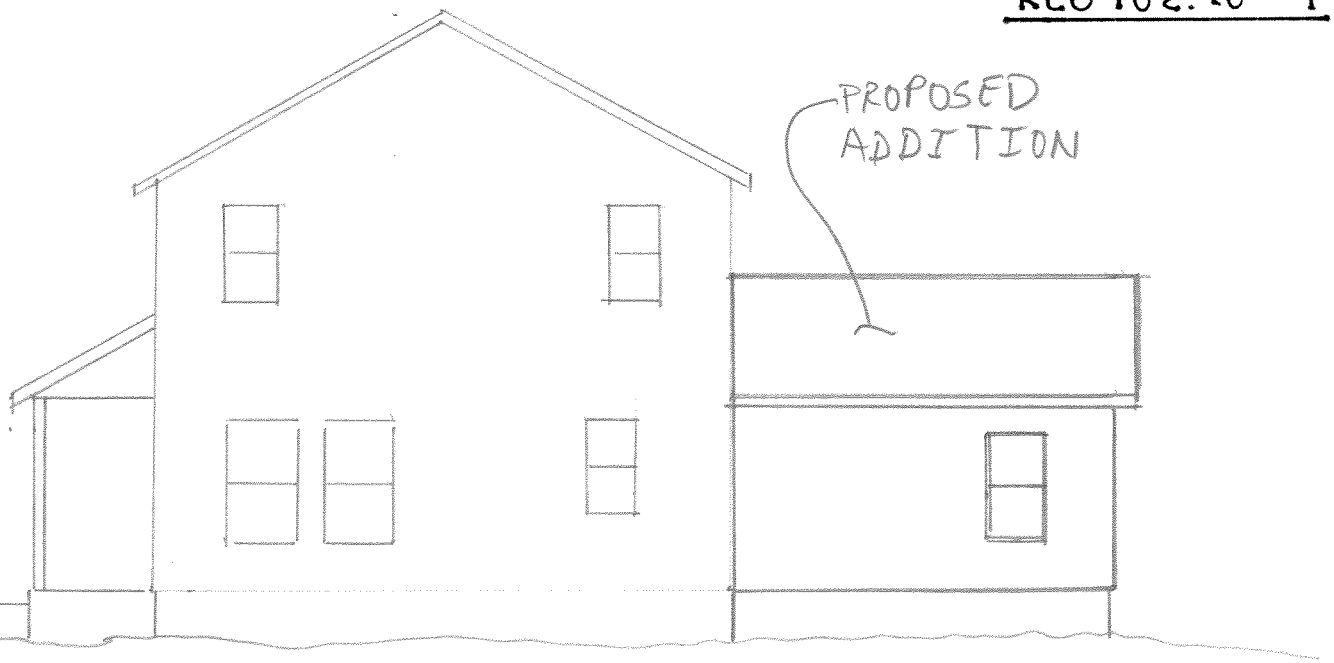

PROPOSED ADDITION

## SOUTH ELEVATION

SCALE: 1/8" = 1'-0"

LANDING AND STAIRS

RCO 102.10 #9



PROPOSED ADDITION

## WEST ELEVATION

SCALE: 1/8" = 1'-0"

DWG 8

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EXAMPLE FOR ADDITION TO HOUSE


EAST ELEVATION

SCALE: 1/8" = 1'-0"

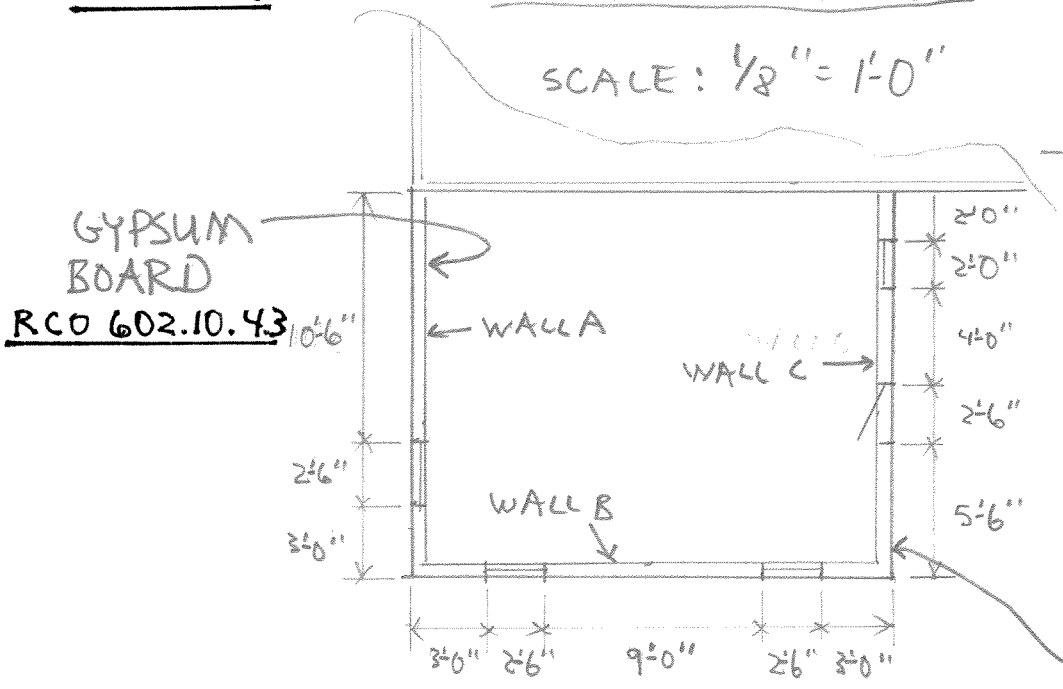


TABLE 602.10.3(1):
NEED AT LEAST 3.5 FT OF BRACED WALL PANEL FOR 20 FT SPACING

BRACED WALL LENGTHS:
WALL A: 13'-6"
WALL B: 15'-0"
WALL C: 11'-6"

RCO 602.10.3

USING METHOD CS-WSP RCO 602.10.4

WALL BRACING DETAIL RCO 602.10

SCALE: 1/8" = 1'-0"

DWG 9

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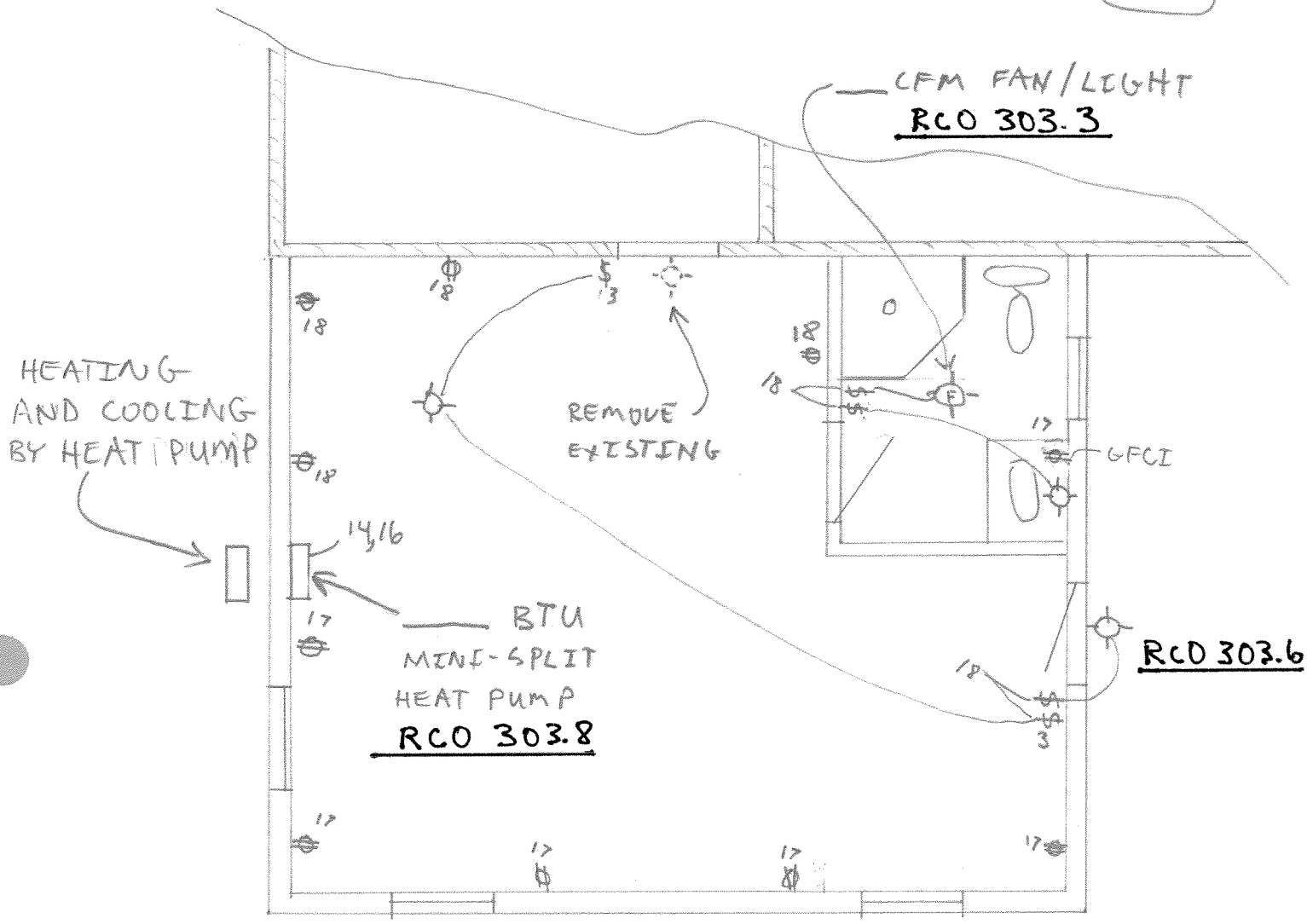
EXAMPLE FOR ADDITION TO HOUSE




## ELECTRICAL PLAN

SCALE: 1/4" = 1'-0"

N

ELECTRICAL WORK MUST BE SIZED FOR THE INTENDED LOAD

ALL MATERIALS AND METHODS MUST COMPLY WITH THE 2014 NATIONAL ELECTRIC CODE (NFPA 70)

DWG 10

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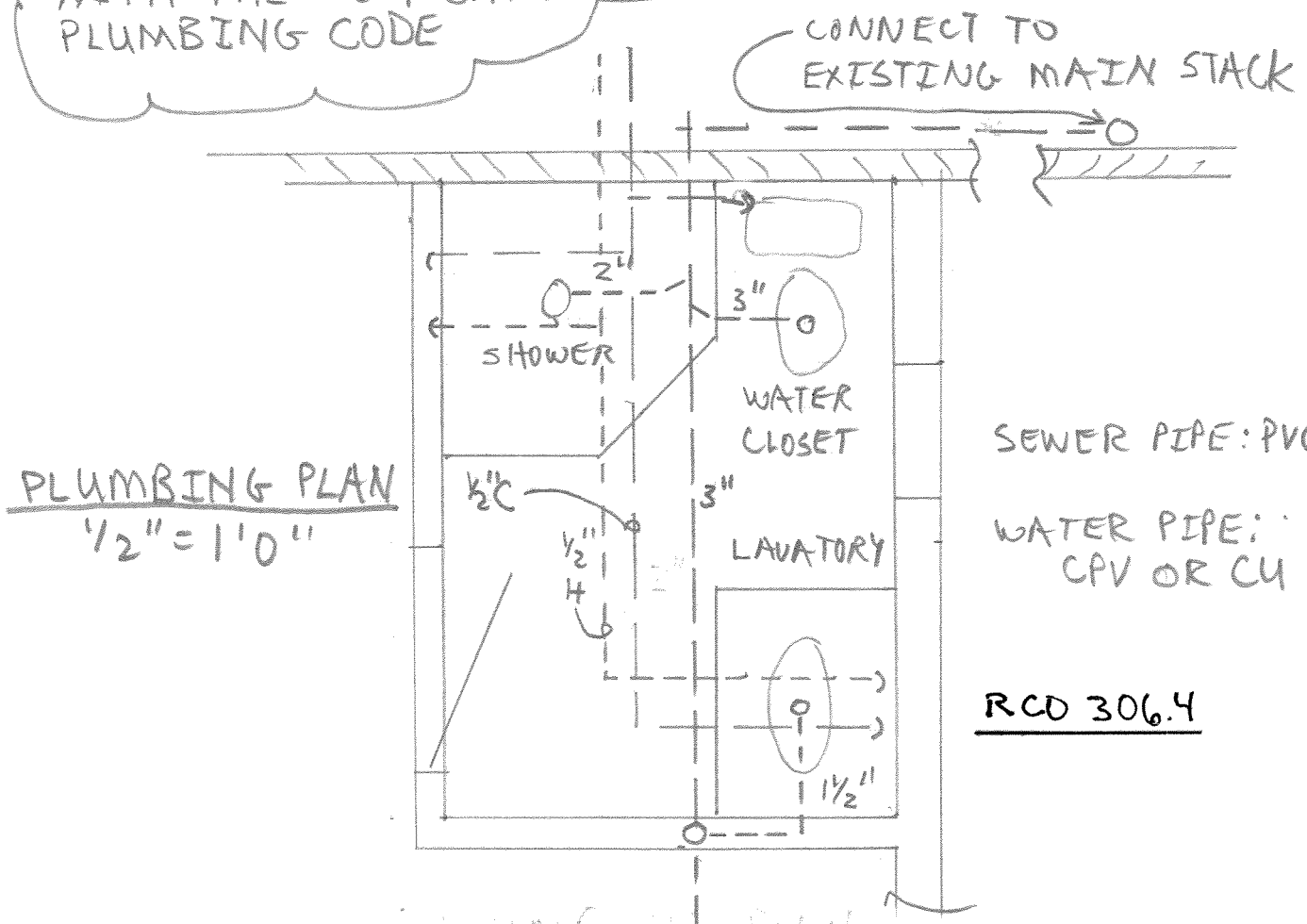
EXAMPLE FOR ADDITION TO HOUSE

ALL MATERIALS AND METHODS MUST COMPLY WITH THE 2011 OHIO PLUMBING CODE

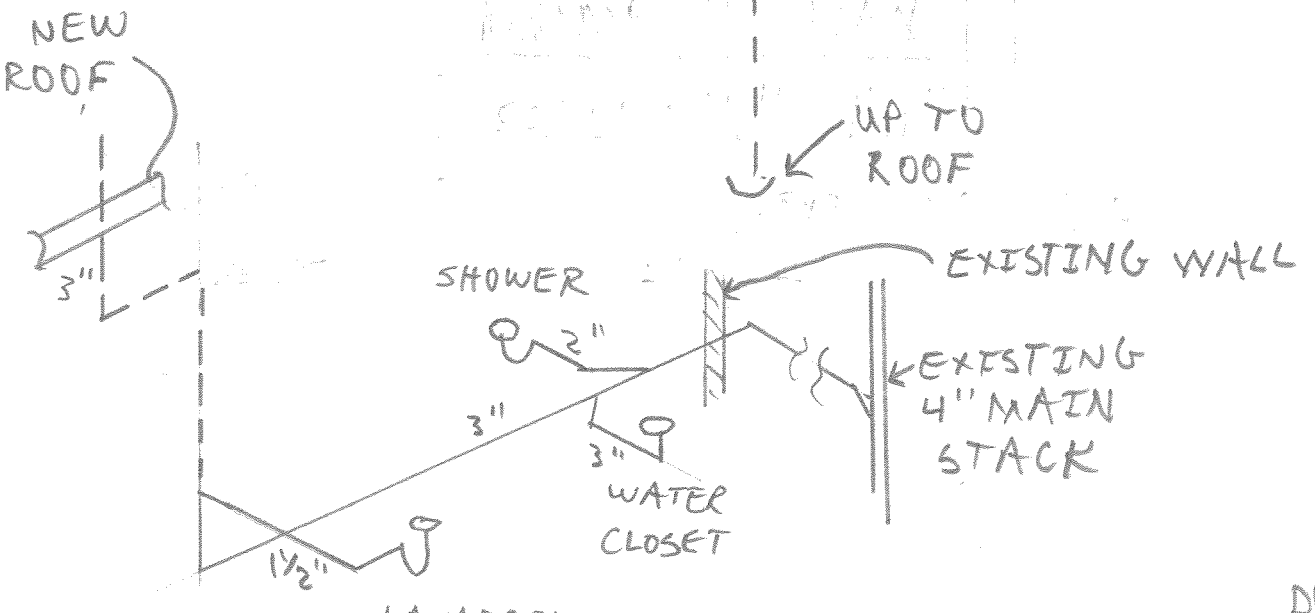



PLUMBING PLAN
1/2" = 1'0"

SEWER PIPE: PVC

WATER PIPE: CPV OR CU

RCO 306.4




ISOMETRIC

DWG 11

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