



Building and Safety Division • Public Information

County of Ventura • Resource Management Agency
Main Office • 800 South Victoria Avenue, Ventura, CA 93009 • (805) 654-2771
Satellite Office • 3855-F Alamo St., 2nd Fl. #2019A, Simi Valley, CA 93065 • (805) 582-8064
<http://www.vcrma.org/rma/buildingsafety/index.htm> • Building@Ventura.org

B17 - ATTACHED AND DETACHED PATIO COVER

Introduction

Patio covers are one story structures not to exceed 12 feet in height. Patio covers shall be used for only recreational, outdoor living purposes and not as carports, garages, storage rooms, or habitable rooms.

Patio covers shall be permitted to be detached from or attached to dwelling units on a level lot prior to grading.

Applicable Codes and Standards

- 2016 California Building Code, Title-24 Part 2 Volume 1 & 2
- 2016 California Residential Code, Title-24 Part 2.5
- 2016 Ventura County Building Code
- ASCE 7-10 (American Society of civil Engineers)
- NDS 2015 (National Design Specifications)
- ACI 318-14 (American Concrete Institute)

Material Notes

- Rafters: Douglas Fir-Larch #2
- Beams: Douglas Fir-Larch #1
- Knee Braces: Douglas Fir-Larch #2
- Posts: Douglas Fir-Larch #Select Structural
- Concrete Slab & Footing: Normal Weight f'c = 2,500 psi @ 28 days
- Reinforcing steel bars: ASTM A-615 Grade 40 or 60

Approved hardware (below), lag screws, bolts, and nails shall be zinc-coated and applied for exterior use

Approved Hardware:

- Angle: MiTek – MP34 (ICC-ESR #3455) | Simpson – A34 (ICC-ESR 3096) | or equivalent equal
- Column Base: MiTek – KCB (ICC-ESR #N/A) | Simpson – CB (ICC-ESR #3050) | or equivalent equal
- Column Cap: MiTek – KCC/KECC (ICC-ESR #3449) | Simpson – CC/ECC (ICC-ESR #2604) | or equivalent equal
- Hanger: MiTek – HD (ICC-ESR #3445) | Simpson – U (ICC-ESR 2549) | or equivalent equal
- Tie (Hurricane) : MiTek – RT15 (ICC-ESR #3448) | Simpson – H1 (ICC-ESR #2613) | or equivalent equal
- Screws: MiTek – WS-EXT (ICC-ESR #2761) | Simpson – SDS (ICC-ESR #2236) | or equivalent equal

Design Criteria

- Dead Load = 6.5 psf (Open Trellis) 11.0 psf (Roofed) Live Load = 20.0 psf No Snow Load
- Seismic Design Parameters: SDS = 1.0g
- Seismic Response Modification Factor, R = 1.0

SEE PATIO COVER INTRODUCTION AND SELECT A MAXIMUM ALLOWED PATIO COVER DIMENSION FROM OPTIONS AVAILABLE. FRAMING MEMBERS AND CONNECTIONS ARE PRE-SELECTED FOR SPECIFIC DIMENSION REQUIREMENTS. ANY CONNECTORS MENTIONED IN THE DETAIL AS 'APPROVED' ARE LISTED UNDER 'APPROVED HARDWARE.'

COMPLETE THE PROJECT DATA AND THE PLOT PLAN PRIOR TO PROCEEDING TO PLANNING DEPARTMENT AND BUILDING & SAFETY DEPARTMENT FOR PERMIT ISSUANCE. IF SEPTIC TANKS ARE PRESENT ON THE SITE, ENVIRONMENTAL HEALTH DEPARTMENT NEEDS TO REVIEW THE PROJECT.

PROJECT DATA:

- HIGH FIRE SEVERITY ZONE: NO YES
- PATIO COVER TYPE: ROOFED/COVERED PATIO, CLASS 'C' MIN. OPEN TRELLIS PATIO

OPEN TRELLIS PATIO: SELECT PATIO DIMENSIONS TO CHOOSE STRUCTURAL DESIGNS

	D = 8' W = 10'	D = 8' W = 12'	D = 8' W = 14'	D = 8' W = 16'	D = 12' W = 10'	D = 12' W = 12'	D = 12' W = 14'	D = 12' W = 16'	Notes
JOISTS	3x4@24"	3x4@24"	3x4@24"	3x4@24"	3x6@24"	3x6@24"	3x6@24"	3x6@24"	
BEAM	6x8	6x8	6x8	6x10	6x8	6x8	6x10	6x10	
COLUMN (END)	6x6	6x6	6x6	6x6	6x6	6x6	6x6	6x6	
COLUMN (MID)	6x6	6x6	6x6	6x6	6x6	6x6	6x8	6x8	
BRACE OPTION (1)	(2)-2x4 w/(3)-4.5"φ long Approved Screws	(2)-2x4 w/(3)-4.5"φ long Approved Screws	(2)-2x4 w/(3)-4.5"φ long Approved Screws	(2)-2x4 w/(4)-4.5"φ long Approved Screws	(2)-2x4 w/(3)-4.5"φ long Approved Screws	(2)-2x4 w/(4)-4.5"φ long Approved Screws	(2)-2x4 w/(4)-4.5"φ long Approved Screws	(2)-2x4 w/(5)-4.5"φ long Approved Screws	
BRACE OPTION (2)	4x4 w/ (1)-½"φx6" long lag @ End (1)-½"φ thru-bolt @ Mid	4x4 w/ (1)-½"φx6" long lag @ End (1)-½"φ thru-bolt @ Mid	4x4 w/ (1)-¾"φx6" long lag @ End (1)-¾"φ thru-bolt @ Mid	4x4 w/ (1)-¾"φx6" long lag @ End (1)-¾"φ thru-bolt @ Mid	4x4 w/ (1)-¾"φx6" long lag @ End (1)-¾"φ thru-bolt @ Mid	4x4 w/ (1)-¾"φx6" long lag @ End (1)-¾"φ thru-bolt @ Mid	6x6 w/ (1)-¾"φx6" long lag @ End (1)-¾"φ thru-bolt @ Mid	6x6 w/ (1)-¾"φx6" long lag @ End (1)-¾"φ thru-bolt @ Mid	

- TRELLIS MATERIAL: 2x2 TO 2x4 (FLAT) DOUGLAS FIR-LARCH STUD GRADE.
- IF THE PROJECT IS LOCATED IN THE HIGH-FIRE SEVERITY ZONE, ALL MEMBERS SHALL BE FIRE-TREATED.

ROOFED/COVERED PATIO COVER: SELECT PATIO DIMENSIONS TO CHOOSE STRUCTURAL DESIGNS

	D = 8' W = 10'	D = 8' W = 12'	D = 8' W = 14'	D = 8' W = 16'	D = 12' W = 10'	D = 12' W = 12'	D = 12' W = 14'	D = 12' W = 16'	Notes
JOISTS	2x8@24"	2x8@24"	2x8@24"	2x8@24"	2x12@24"	2x12@24"	2x12@24"	2x12@24"	
BEAM	6x10	6x10	6x12	6x12	6x10	6x10	6x12	6x14	
COLUMN (END)	6x6	6x6	6x6	6x6	6x6	6x6	6x6	6x6	
COLUMN (MID)	6x6	6x6	6x8	6x8	6x8	6x8	6x8	6x8	
BRACE OPTION (1)	(2)-2x4 w/(4)-4.5"φ long Approved Screws	(2)-2x4 w/(6)-4.5"φ long Approved Screws	(2)-2x4 w/(6)-4.5"φ long Approved Screws	(2)-2x4 w/(6)-4.5"φ long Approved Screws	(2)-2x4 w/(6)-4.5"φ long Approved Screws	(2)-2x4 w/(7)-4.5"φ long Approved Screws	(2)-2x4 w/(8)-4.5"φ long Approved Screws	(2)-2x4 w/(8)-4.5"φ long Approved Screws	
BRACE OPTION (2)	4x4 w/ (2)-½"φx6" long lag @ End (2)-½"φ thru-bolt @ Mid	4x4 w/ (2)-½"φx6" long lag @ End (2)-½"φ thru-bolt @ Mid	4x4 w/ (2)-¾"φx6" long lag @ End (2)-¾"φ thru-bolt @ Mid	4x4 w/ (2)-¾"φx6" long lag @ End (2)-¾"φ thru-bolt @ Mid	4x4 w/ (2)-¾"φx6" long lag @ End (2)-¾"φ thru-bolt @ Mid	4x4 w/ (2)-¾"φx6" long lag @ End (2)-¾"φ thru-bolt @ Mid	6x6 w/ (2)-¾"φx6" long lag @ End (2)-¾"φ thru-bolt @ Mid	6x6 w/ (2)-¾"φx6" long lag @ End (2)-¾"φ thru-bolt @ Mid	

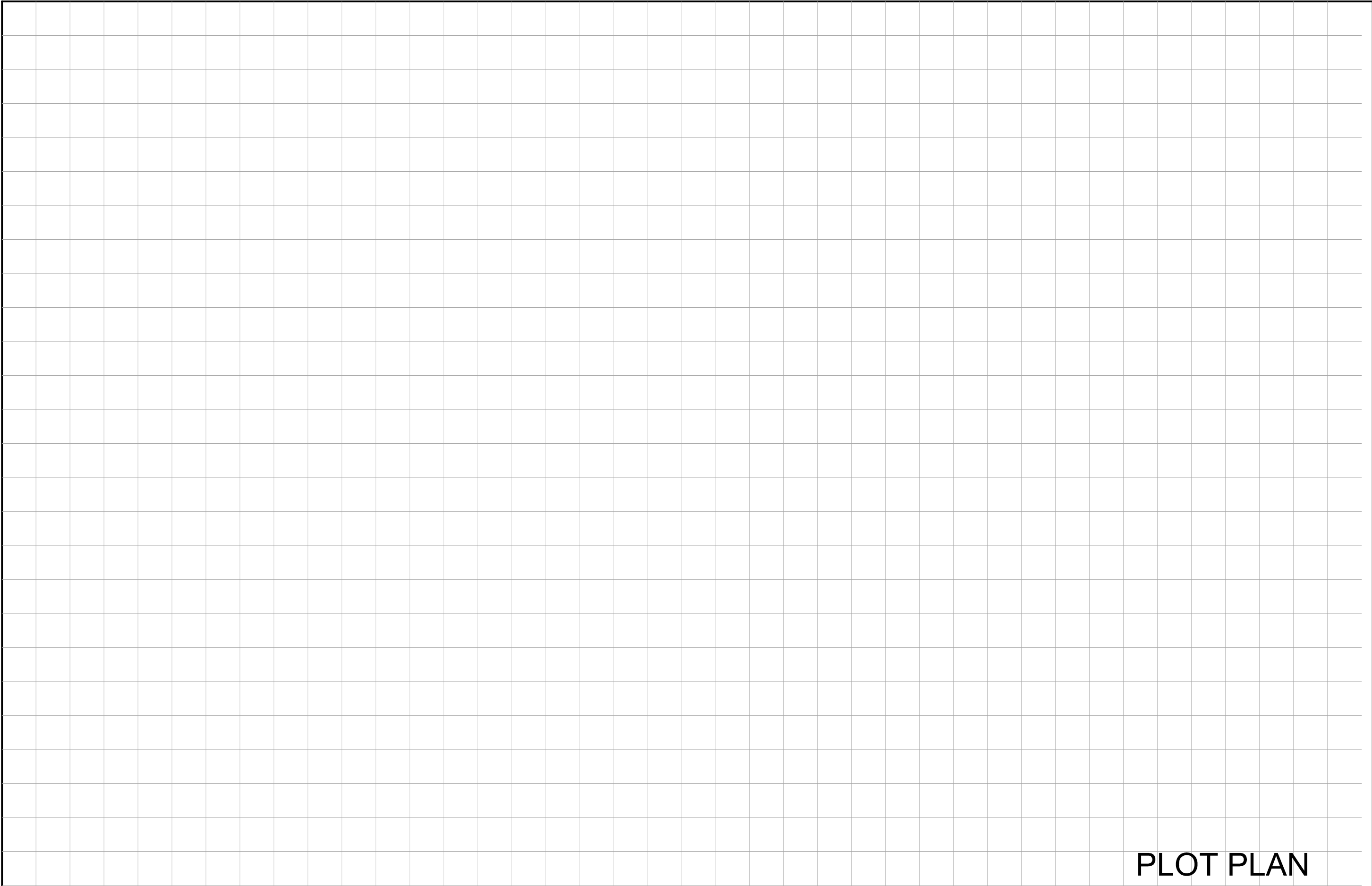
- ROOFING MATERIAL: 1-LAYER OF ASPHALT SHINGLE CLASS ___ w/ ICC-ESR # ___ OVER 1-LAYER OF 30# FELT UNDERLAYMENT FOR SLOPED ROOF. 1-LAYER OF BITUMEN ROOFING, CLASS ___ w/ ICC-ESR # ___ FOR FLAT ROOF (¼:12 RATIO)
- ROOF SHEATHING: ½-INCH THICK UNBLOCKED APA RATED OSB OR CDX OR BETTER PLYWOOD (SPAN RATING 32/16 FOR BOTH) SHEATHING WITH 8d COMMON NAILS AT 6 INCHES ON CENTER (BOUNDARY NAILING, B.N. AND EDGE NAILING, E.N.) AND 12 INCHES ON CENTER (FIELD NAILING, F.N.)
- IF THE PROJECT IS LOCATED IN THE HIGH-FIRE SEVERITY ZONE, ROOFING MATERIAL SHALL BE CLASS 'A' AND ALL MEMBERS SHALL BE FIRE-TREATED OR COVERED IN TYPE 'X' DRYWALL OR STUCCO PER ELEVATIONS.



DATE:
VENTURA COUNTY
BUILDING OFFICIAL
RUBEN BARRERA, CBO

APN:
OWNER'S NAME:
PERMIT NUMBER:

PROJECT ADDRESS



PLOT PLAN

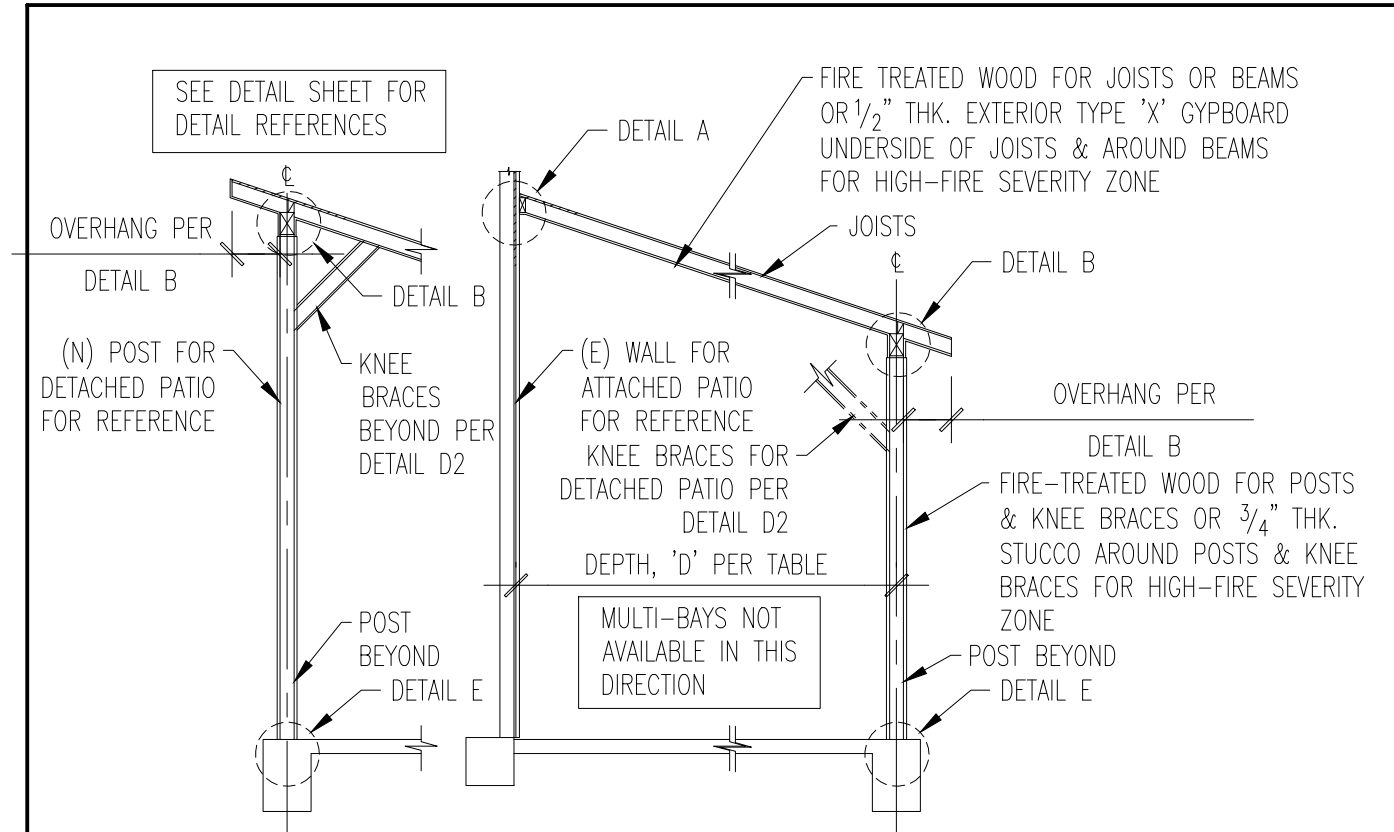
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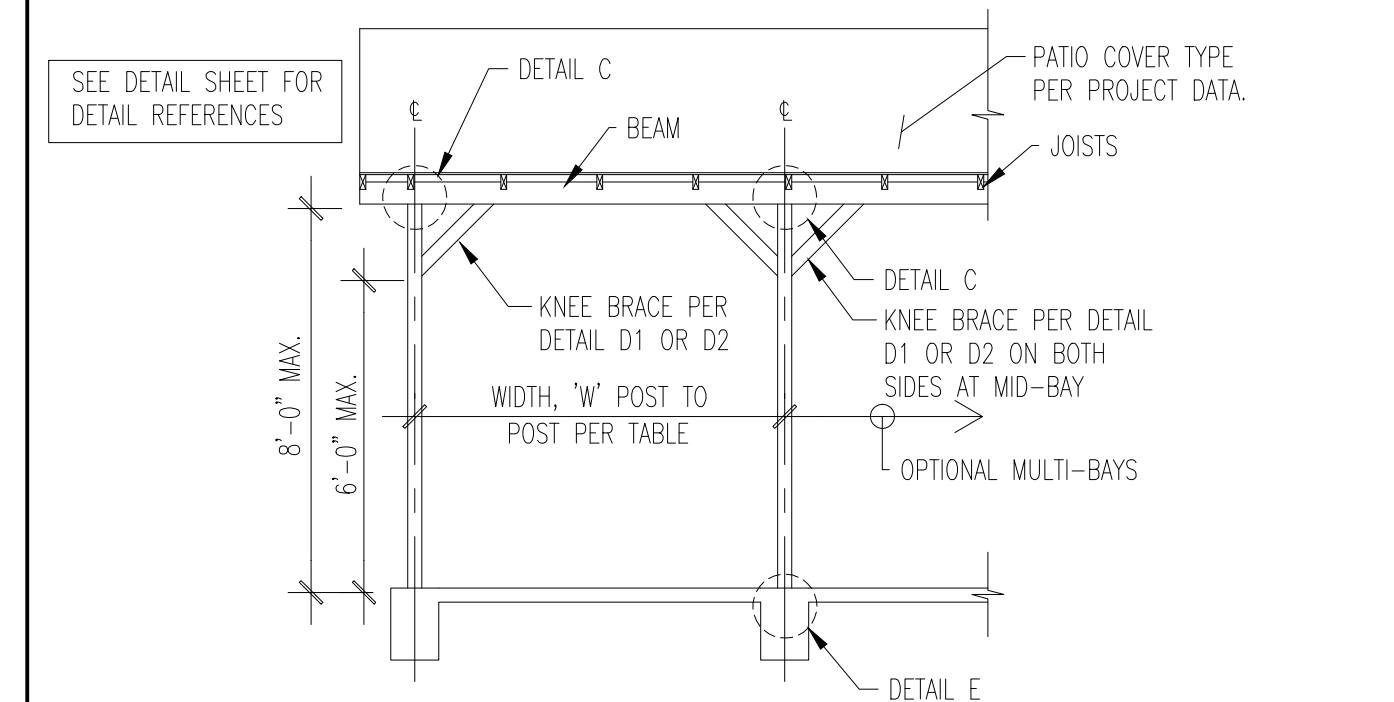
PROJECT ADDRESS



PATIO - SIDE ELEVATION

SCALE: NOT TO SCALE

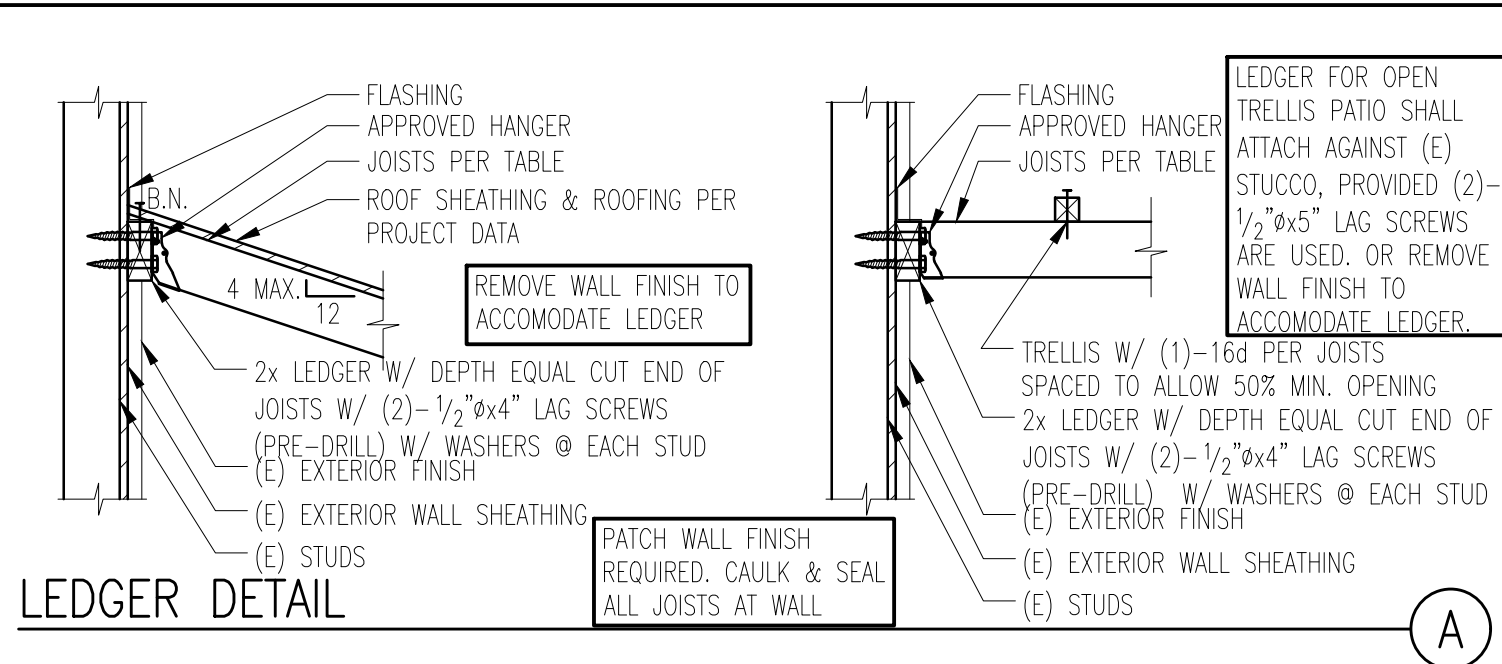
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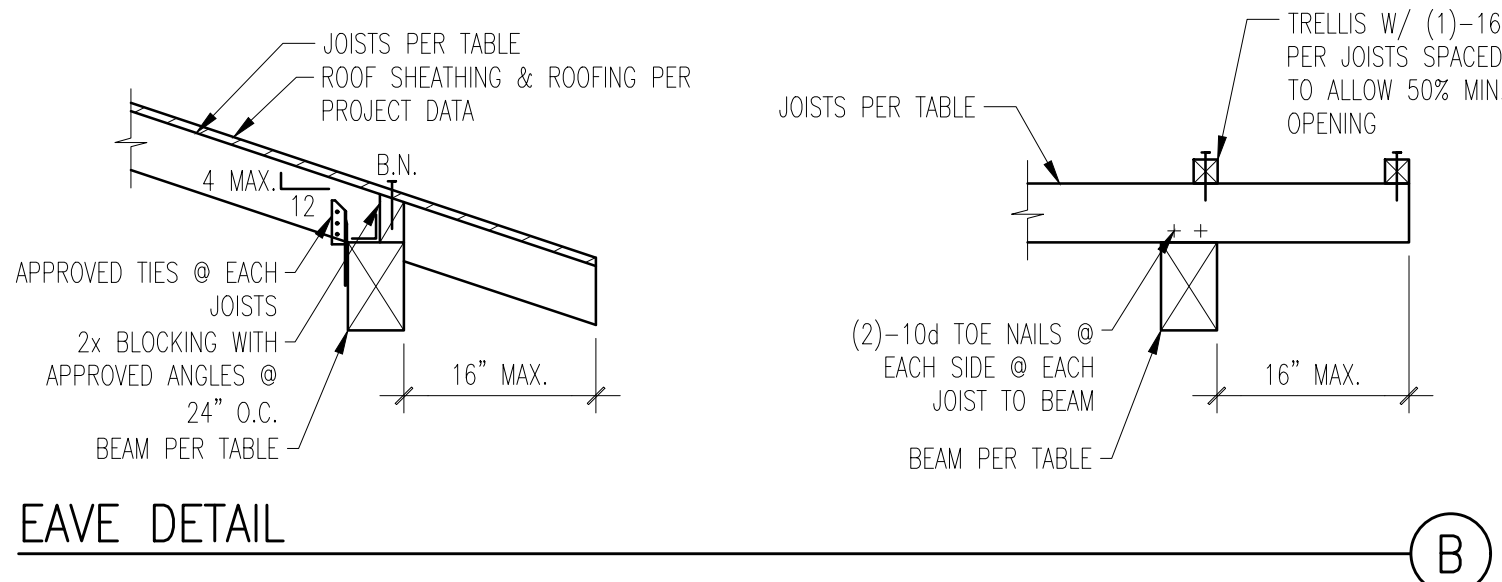
PATIO - FRONT ELEVATION

SCALE: NOT TO SCALE

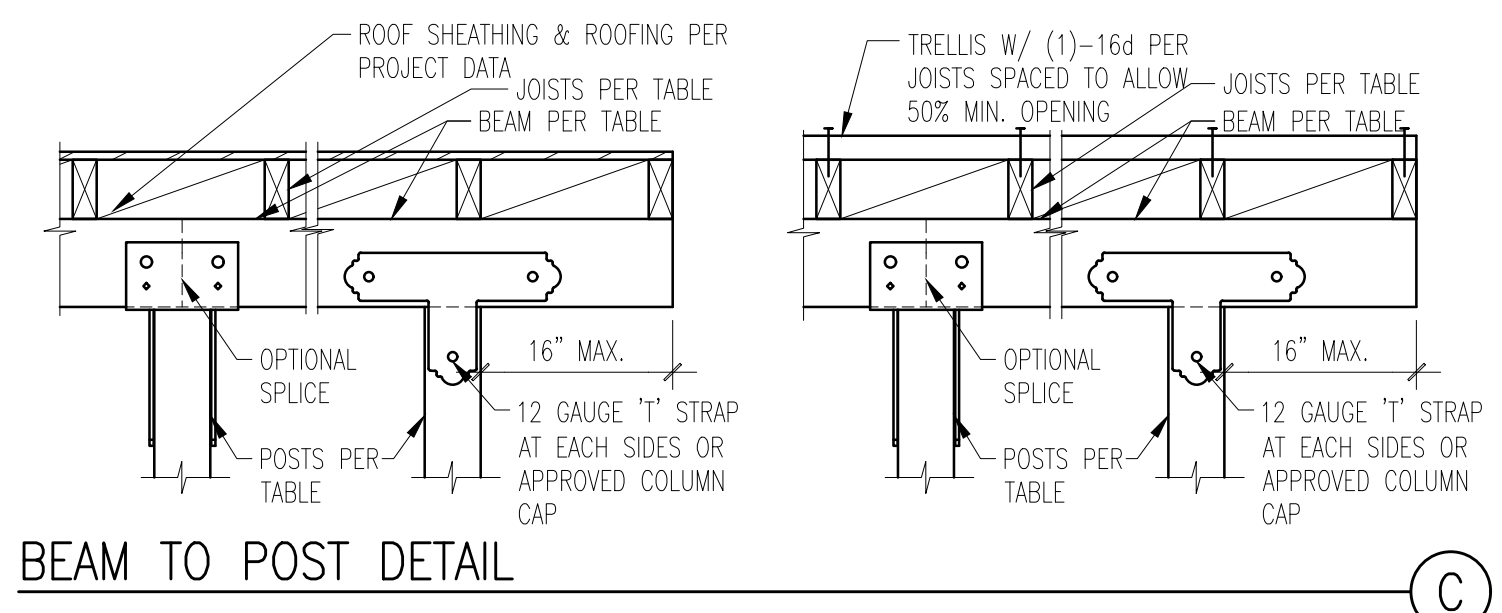
2
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LEDGER DETAIL



EAVE DETAIL



BEAM TO POST DETAIL

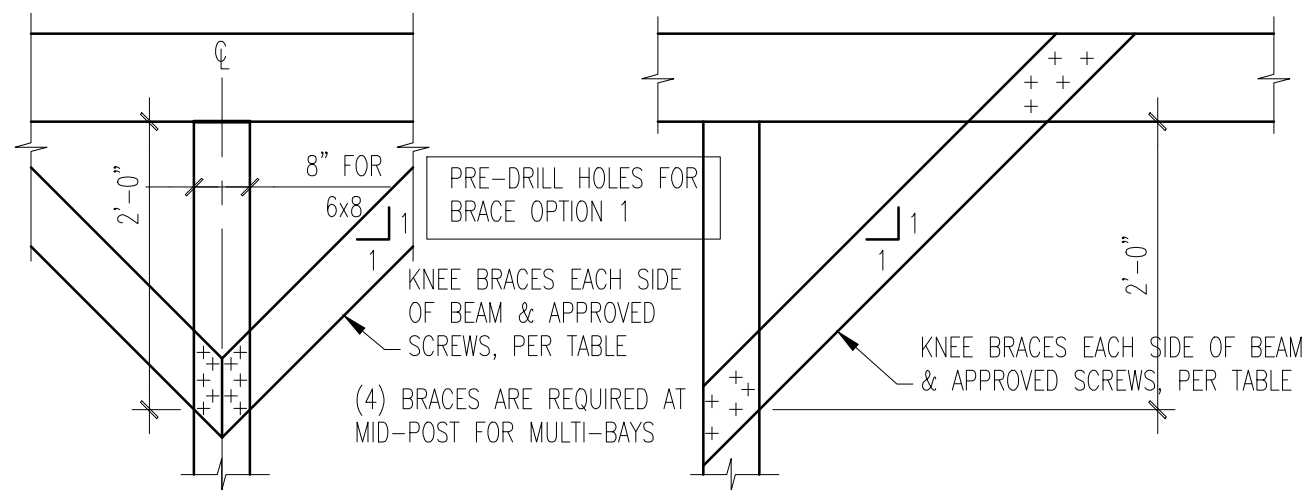
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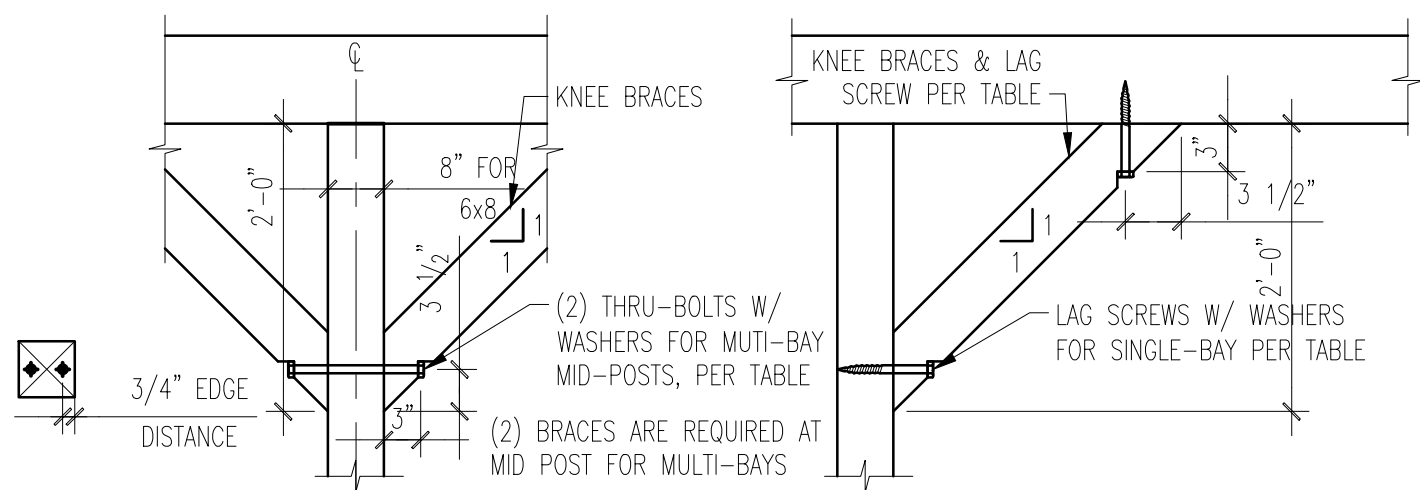
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BRACE OPTION 1 IS NOT AVAILABLE FOR DETACHED PATIO

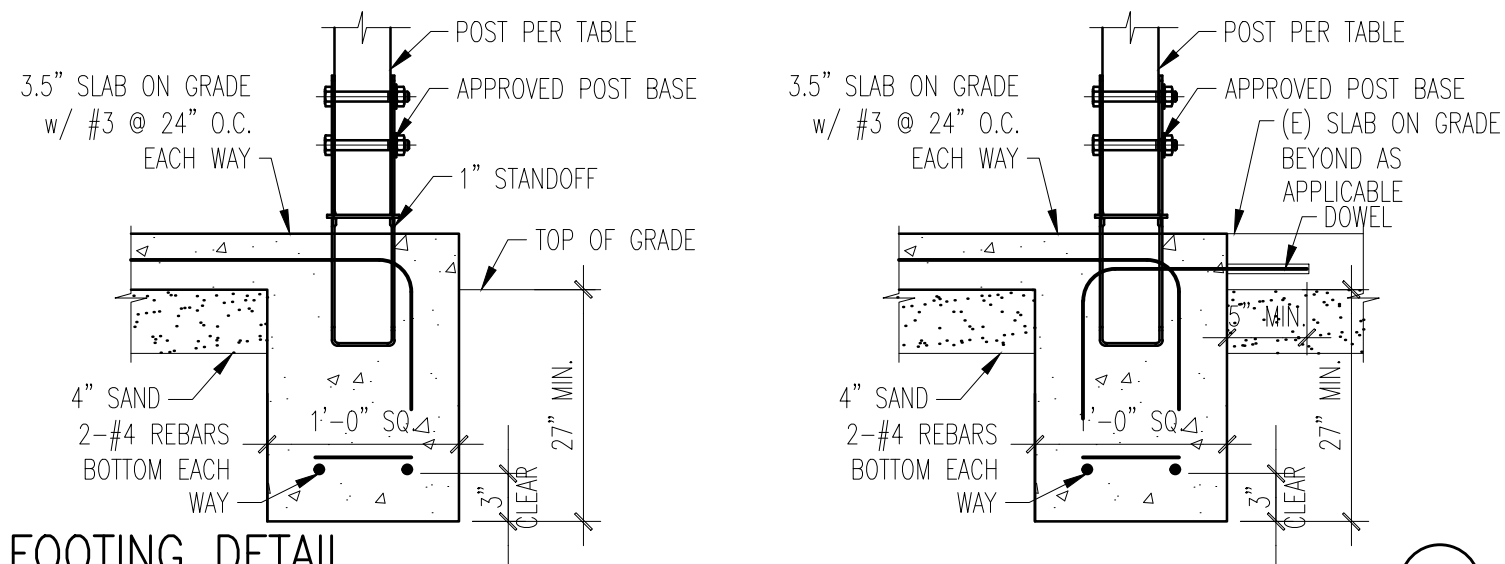
BRACE DETAIL - OPTION 1

D1



BRACE DETAIL - OPTION 2

D2



FOOTING DETAIL

E

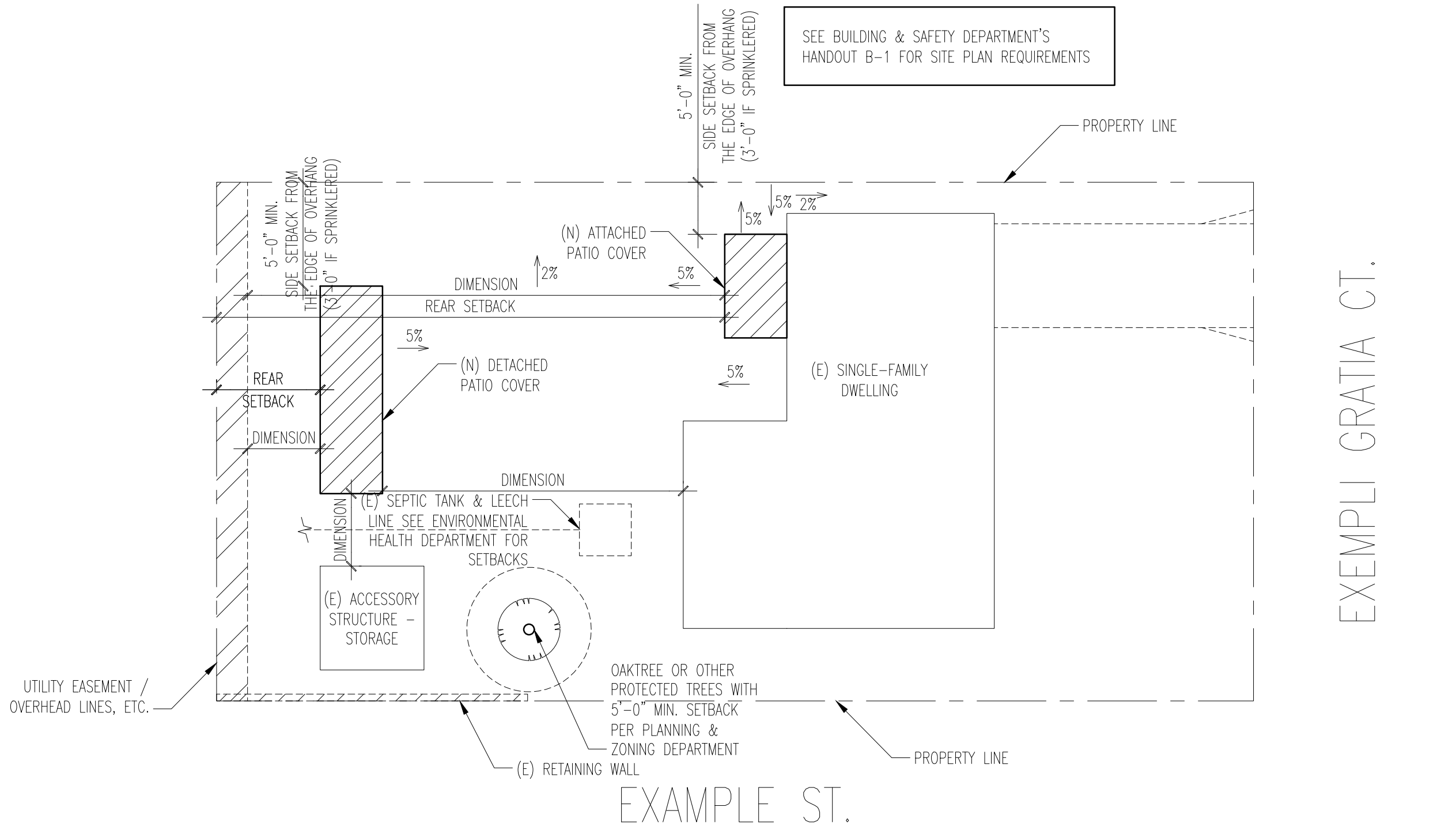
KNEE BRACES FOR BOTH OPTION 1 AND 2 MAY BE CUT, TRIMMED, NOTCHED, AND/OR SHAVED TO ACHIEVE ARCHITECTURAL FEATURES AS LONG AS THE MINIMUM SIZE PER TABLE IS MAINTAINED



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SEE BUILDING & SAFETY DEPARTMENT'S
HANDOUT B-1 FOR SITE PLAN REQUIREMENTS

EXEMPLI GRATIA CT.

EXAMPLE ST.

SAMPLE SITE PLAN

Scale: NOT TO SCALE



DATE:
VENTURA COUNTY
BUILDING OFFICIAL
RUBEN BARRERA, CBO

APN: 000-0-000-000
OWNER'S NAME: PLOT EXAMPLES
PERMIT NUMBER: C19-000000

PROJECT ADDRESS
1800 EXEMPLI GRATIA CT.
LOCALE, CA 00000