

G E N E R A L N O T E S

General:

- All material and workmanship shall conform to the drawings and the specifications, and shall conform to the 1997 Uniform Building Code, 1997 edition, as adopted by the County of Hawaii.
- The Contractor shall be responsible for coordinating the work of all trades and shall verify all dimensions and conditions prior to starting work. All discrepancies, omissions or conflicts shall be reported to the Engineer and be resolved before proceeding with the work.
- All information shown on the drawings relative to existing conditions is given as the best present knowledge, but without guarantee of accuracy. Where actual conditions conflict with the drawings, they shall be reported to the Engineer so that the proper revisions may be made. Modification of details shall not be made without written approval of the Engineer.
- Drawings indicate general and typical details of construction. Where conditions are not specifically indicated but are of similar character to details shown, similar details of construction shall be used, subject to the review by the Engineer.
- All details designated as typical shall occur in addition to any other specific detail called out.
- All connections and construction conditions not specifically shown shall be detailed by the Contractor and shall be submitted to the Engineer for review. Details shall comply with the drawings and specifications, conform to current construction practices, and meet all requirements of the latest applicable building codes.
- Shop drawings required by the specifications shall be submitted to the Engineer for review prior to fabrication.
- During construction, the Contractor shall be responsible for the safety of the job site. The Contractor shall provide adequate shoring, bracing, guys, etc., in accordance with all safety ordinances.
- The Contractor shall be solely responsible for all excavation procedures, including lagging, shoring and protection of adjacent property, structures, streets, and utilities.

Design Loads:

- Lateral loads
  - Earthquake . . . . . Seismic Zone 4
  - Wind . . . . . 80 mph, Exposure C
- Live loads
  - Roof . . . . . 20 psf
  - Offices . . . . . 100 psf
  - Exit corridors, stairs . . . . . 100 psf
  - Storage . . . . . 125 psf

Earthwork and Foundation:

- The foundation design is based on a bearing capacity of 2500 psf and all footings shall be founded on existing subgrade. 

1
- All footings shall be founded at least 20 inches below lowest adjacent grade or finish floor, whichever is lower.
- All footing excavations, fill and backfill operations shall be monitored and approved by the Engineer prior to the placement of any reinforcing steel or concrete. Contractor shall make appropriate arrangements for inspections as required.
- Clean and moisten footing trenches prior to pouring concrete.
- Do not place conduits and utility lines in footing trenches.

Reinforcing steel:

- All reinforcing bars shall conform to ASTM A615, grade 60, unless noted otherwise. Ties and stirrups shall be grade 40.
- Welded wire fabric shall conform to ASTM A82 and A185.
- Minimum concrete clear cover:
  - Concrete cast against earth . . . . . 3"
  - Concrete exposed to earth or weather
    - #5 bar and smaller . . . . . 1 1/2"
    - #6 bar and larger. . . . . 2"
- Anchor bolts, dowels and other embedded items shall be securely tied in place before concrete is poured. Dowels shall match the size and spacing of the column and wall bars unless noted otherwise.
- Splices:
  - All reinforcing shall be lapped 40 bar diameters or 24 inches minimum unless noted otherwise.
  - All reinforcing shall be lapped as indicated. Where lap or splice locations are not specifically indicated, laps or splices shall be well staggered and be approved by the Engineer.
- Welding to reinforcing bars shall be prohibited except by specific authorization of the Engineer.

Concrete:

- All concrete work shall conform to ACI 301.
- Aggregates shall conform to ASTM C33.
- Cement shall conform to ASTM C150, type I or II.
- All concrete unless otherwise noted shall be regular weight (150 pcf), hard rock type.
- Concrete strength class and maximum aggregate size shall be as follows:

Concrete: (Cont.)

Item	Concrete Class	Aggregate Size (in)
Footings	A	1"
Slabs-on-grade	A	3/4"
Sidewalks, ramps	A	3/4"
6. Placement of concrete shall be in conformance with ACI 301.		
7. Concrete shall be maintained in a moist condition for a minimum of five (5) days after placement. Alternate methods will be approved if satisfactory performance can be assured.		
8. Submit location of joints prior to placement. Joints shall be located to minimize the effects of shrinkage and placed at points of low stress.  A. All slabs-on-grade shall be poured with crack control joints not more than 20'-0" apart or as indicated on the drawings.		
9. All construction joints shall be thoroughly cleaned, all laitance removed, thoroughly wetted, and slushed with a coat of neat cement immediately before placing new concrete.		
10. Pipes other than electrical conduits shall not be embedded in structural concrete unless specifically approved. Pipes may pass through structural concrete in sleeves.		
11. The Contractor shall notify the Engineer 48 hours prior to the pouring of any structural concrete. No pour shall proceed without the consent of the Engineer.		

Concrete Masonry:

- Concrete masonry units shall conform to ASTM C90.
- Mortar shall conform to ASTM C270, type S, with a minimum 28-day compressive strength of 1,800 psi.
- Grout shall conform to ASTM C476, with a minimum 28-day compressive strength of 2,500 psi.
- Reinforcing steel in masonry shall be lapped 40 diameters minimum.
- Horizontal joint reinforcing shall conform to ASTM A82. Provide reinforcing at 24" o.c., lap 8" minimum at all splices, intersections, and corners.
- All walls shall be constructed in conventional running bond unless noted otherwise.
- All cells shall be grouted solid. Grout masonry in 8'-0" maximum lifts.
- The minimum spacing between masonry units and reinforcing steel shall be 1/2", and between parallel reinforcing bars 3/4".
- If work is stopped one (1) hour or longer, provide horizontal construction joints by stopping the grout 1 1/2" below the top of the block.
- Special inspection of concrete masonry work is not required. Masonry has been designed at half stress.

Framing Lumber:

- Framing lumber shall be Douglas Fir/Larch meeting the following minimum grades per WCLB specifications:  
  
2x4 studs, plates, blocking. . . . . Construction  
  
4x4 posts, bracing . . . . . Construction  
  
2x rafters, plates, blocking . . . . . No. 1 / 2  
  
4x rafters, beams. . . . . No. 1 / 2
- Structural plywood shall be Douglas Fir conforming to commercial standards PS1. Except as noted otherwise, provide the following minimum grade and nailing to all rafters, studs, plates, beams, etc.:
  - 5/8" roof sheathing. . . . . Struct. I, C-D, exterior with 8d @ 6" o.c. (T&G)All plywood shall bear the stamp of an APA certified mill. Lay all sheathing with face grain across supports, stagger panels.
- Maximum moisture content shall not exceed 19 percent for all structural members.
- All lumber shall be pressure treated with an approved process to protect against rot and insect damage.
- Minimum nailing shall comply with table 23-II-B-1 of the Uniform Building Code, unless noted otherwise.
- Bolt holes shall be nominal diameter of bolt plus 1/16 inch unless noted otherwise. Provide washers under heads and nuts of all bolts and lag screws bearing on wood. Provide oversize washers for anchor bolts on wood plates, typical.
- Provide 30# felt below all plates resting on concrete or masonry.
- Holes through plates, studs, and joists shall be centered in the member and shall not exceed 1/3 the member width. All holes shall be bored. Holes in joists shall be limited to the middle third of the span.
- Provide continuous 2x structural fascia at all eaves. Do not splice fascia within 12'-0" of corners.
- All pre-fabricated metal connectors shall be "Simpson Strong-tie" connectors with "ZMAX" galvanizing or approved equal. Follow the nailing schedule as specified by the manufacturer.

ORIGINAL PLAN	DESIGNED BY	CHECKED BY	DATE
NOTE BOOK	DESIGNED BY	CHECKED BY	
No.			



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6/07/05

1

Revised Footing Embedment

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GENERAL NOTES	
NORTH KONA BASEYARD RENOVATIONS	
REMOVE LEAD PAINT AND	
UPGRADE ELECTRICAL	
Project No. HWY-H-03-04M	
Scale: As Noted	Date: April 2005
SHEET No. S-1 OF S-7 SHEETS	

G E N E R A L N O T E S

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-04M	2005	ADD. 19	32

Prefabricated Wood Trusses:

1. Prefabricated wood trusses shall conform to the "Design Specification for Light Metal Plate Connected Wood Trusses" as adopted by the Truss Plate Institute.

2. All truss members shall be Douglas Fir No. 2 or better.

3. Connector plates shall be prime quality galvanized steel sheets no less than 20 gage in thickness.

4. All trusses shall be designed by the fabricator to fit the dimensions indicated on the plans and loads indicated below. Concentrated mechanical loads shall be included in the design.

A. Dead loads:

1. Metal roofing . . . . . 2.0 psf

2. Nailers . . . . . 1.0 psf

3. Plywood sheathing . . . . . 2.5 psf

4. Ceiling . . . . . 2.0 psf

5. Mech and misc . . . . . 1.0 psf

B. Live loads:

1. Roof . . . . . 20.0 psf

5. All trusses shall satisfy stress and deflection requirements. Allowable total load deflection shall be span/240, but never more than 1 inch.

6. All trusses shall be designed for uplift forces in accordance with the Uniform Building Code for elements and components.

7. Shop drawings and calculations stamped by a Structural Engineer licensed in the State of Hawaii shall be submitted to the Engineer for approval prior to fabrication. The drawings shall show all critical dimensions as well as the loads the trusses are designed to support. The drawings shall also show size and locations of all bottom chord, vertical, and diagonal member lateral bracing. The ceiling shall not be considered as bracing for truss bottom chord members.

8. The trusses are to be erected and installed in accordance with the plans, approved fabrication drawings, and installation suggestions. Design and provide bridging between the trusses.

9. Truss manufacturer shall determine actual web configuration. 1

10. All lumber shall be pressure treated with an approved process to protect against rot and insect damage for 20 years.

Structural Steel:

1. All structural and miscellaneous steel shall be fabricated and erected in accordance with AISC specifications for the design, fabrication and erection of structural steel for buildings, latest edition.

2. All structural steel shapes and plates shall conform to ASTM A36.

3. All welds shall conform to the "Standard Code for Arc and Gas Welding", of the American Welding Society and be done by certified welders. Unless a larger size of fillet weld is specified on the plans, provide the minimum size of weld per AISC Chapter J, section J2 and Table J2.4.

4. Bolts shall conform to ASTM A307, unless noted otherwise.

5. Pipe columns shall conform to ASTM A53, grade B, unless noted otherwise.

6. Steel tubes shall conform to ASTM A501.

7. Continuous inspection is not required for field welds. Field welds are designed at half stress, unless noted otherwise.

8. Contractor shall submit shop drawings for review prior to fabrication.

9. All washers, bolts, steel shapes, plates, pipes and tubes shall be hot-dip galvanized.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
NOTE BOOK No.	CHECKED BY	

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6/07/05	7	Note Revised
DATE	REVISION	

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

GENERAL NOTES

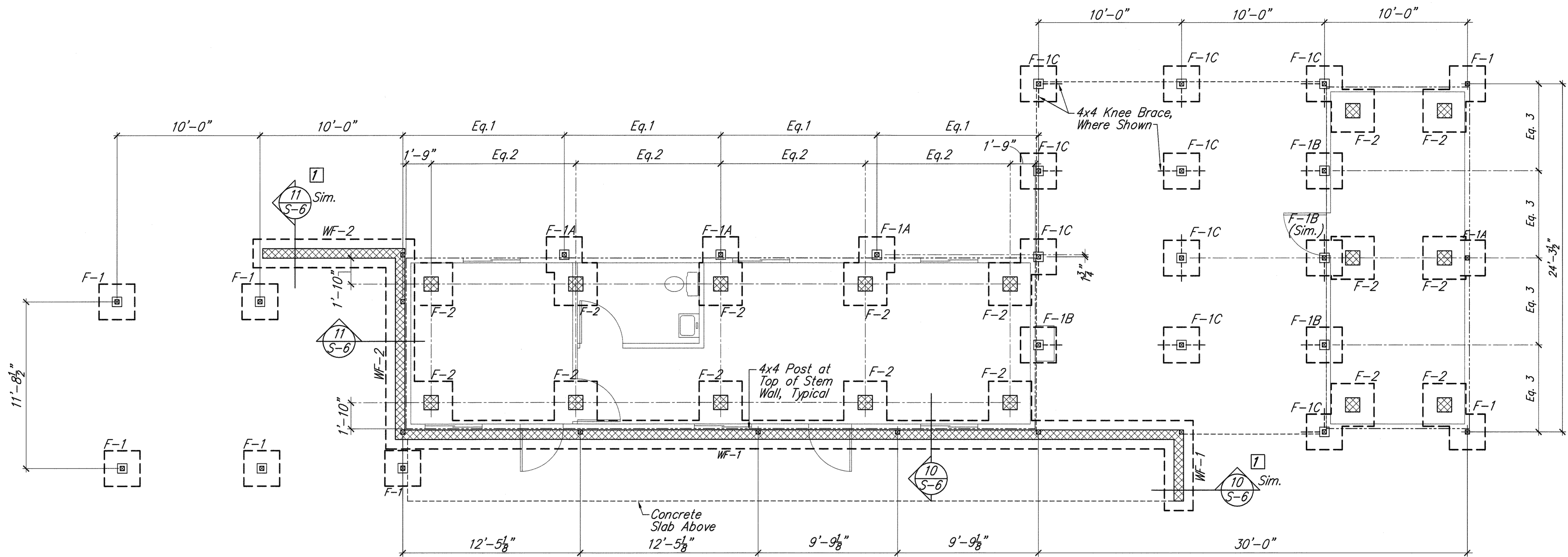
NORTH KONA BASEYARD RENOVATIONS  
REMOVE LEAD PAINT AND  
UPGRADE ELECTRICAL  
Project No. HWY-H-03-04M

Scale: As Noted      Date: April 2005

SHEET No. S-2 OF S-7 SHEETS

ADD.19

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-04M	2005	ADD. 20	32



# 1 **FOUNDATION PLAN**

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

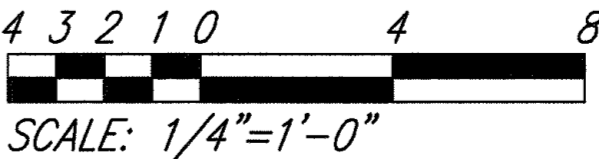
## FOUNDATION and SLAB-ON-GRADE NOTES:

- Slab-On-Grade Shall Be 4" Min. Thick Concrete, Reinforced with 6x6 - W2.9xW2.9 WWF (Chaired To Mid-Depth), over 6" Thick Compacted Select Borrow Subbase. See Sheet S-6. 1
- TS-1 . . . Denotes Thickened Slab Edge Type, On Detail 2/S-6.
- F-1 . . . . Denotes Footing Type, See Detail 5/S-6.
- F-1A . . . Denotes Footing Type, See Detail 6/S-6.
- F-1B . . . Denotes Footing Type, See Detail 7/S-6.
- F-1C . . . Denotes Footing Type, See Detail 8/S-6.
- F-2 . . . . Denotes Footing Type, See Detail 9/S-6. Verify Trailer Support Locations with Manufacturer.
- WF-1 . . . Denotes Wall Footing Type, See Detail 10/S-6.
- WF-2 . . . Denotes Wall Footing Type, See Detail 11/S-6.
- C.C.J. . . . Denotes Crack Control Joint, See Detail 3/S-6. 1
- E.J. . . . . Denotes Expansion Joint, See Detail 4/S-6. 1

## LEGEND:

- . . . . Denotes 4x4 Post.
- . . . . Denotes 4x4 Knee Brace
- . . . . Denotes Concrete Slab-on-Grade.

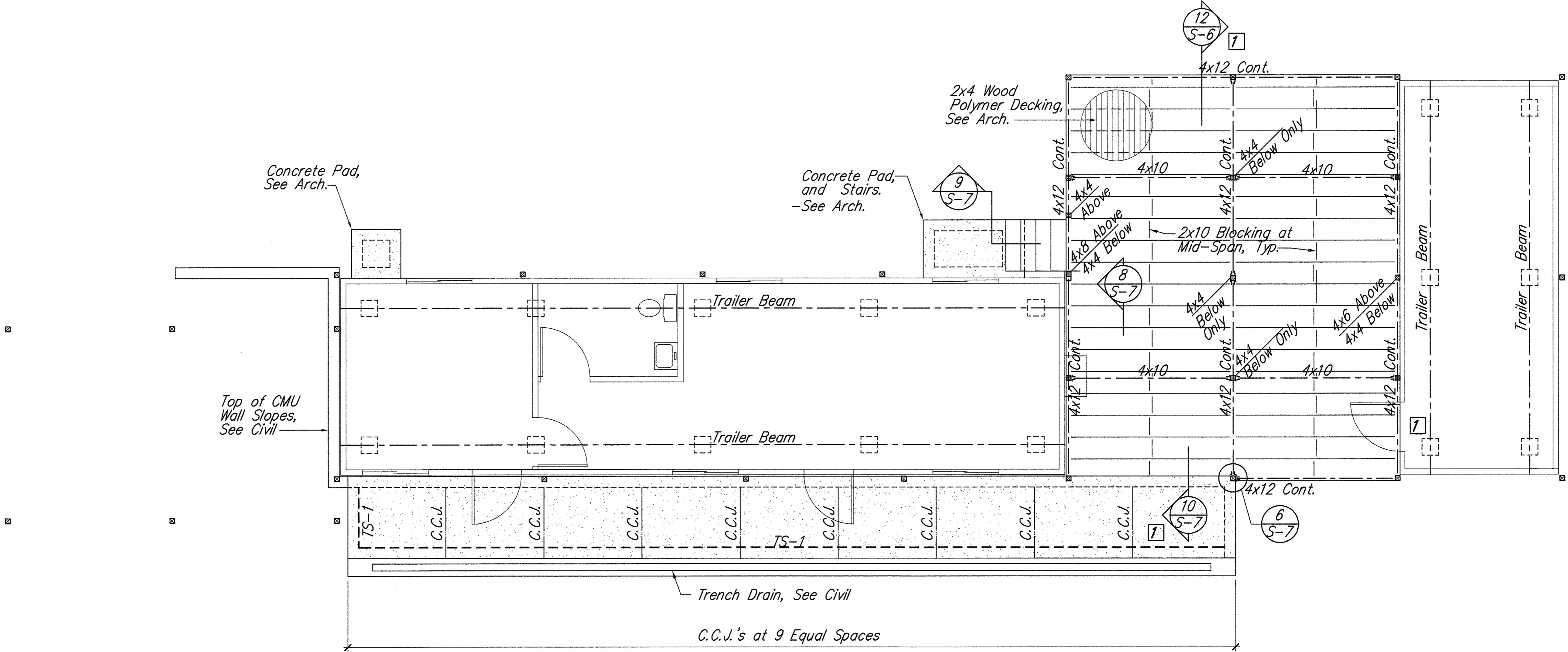
## GRAPHIC SCALE:



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6/07/05	1 Revised Notes, Added Detail Marks
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION  <b>FOUNDATION PLAN</b>  <b>NORTH KONA BASEYARD RENOVATIONS</b> <b>REMOVE LEAD PAINT AND</b> <b>UPGRADE ELECTRICAL</b> <b>Project No. HWY-H-03-04M</b> Scale: As Noted Date: April 2005 SHEET No. <b>S-3</b> OF <b>S-7</b> SHEETS	

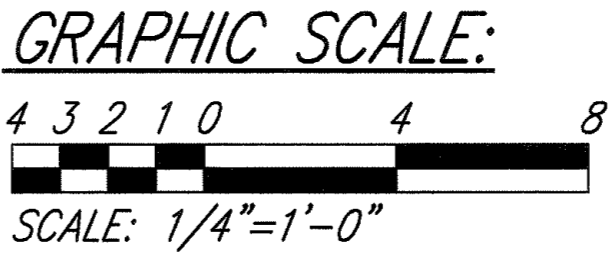
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-04M	2005	ADD. 21	32



**1 FLOOR FRAMING PLAN**  
SC: 1/4"=1'-0"

- FLOOR FRAMING NOTES:**
- Floor Framing Shall Be 2x10 Joists @ 16" o.c., Max. with Simpson LUS28 Joist Hangers, Each End, Typical.
  - Provide Beam Hangers at the Following Framing Conditions:
    - 4x10 Beam to Beam: Simpson HUS410TF Top Flange Hanger.
    - 4x12 Beam to Post: Simpson AC4 Post Cap, Each Side.
    - 4x12 Beam to Beam: Simpson HUS412TF Top Flange Hanger.
    - 4x12 Beam to Post at Corner: Simpson ACE Post Cap, Each Side.
    - 4x12 Beam to Beam at Corner: Simpson HUS412TF Top Flange Hanger.
  - For Balance of Notes, See Foundation Plan.

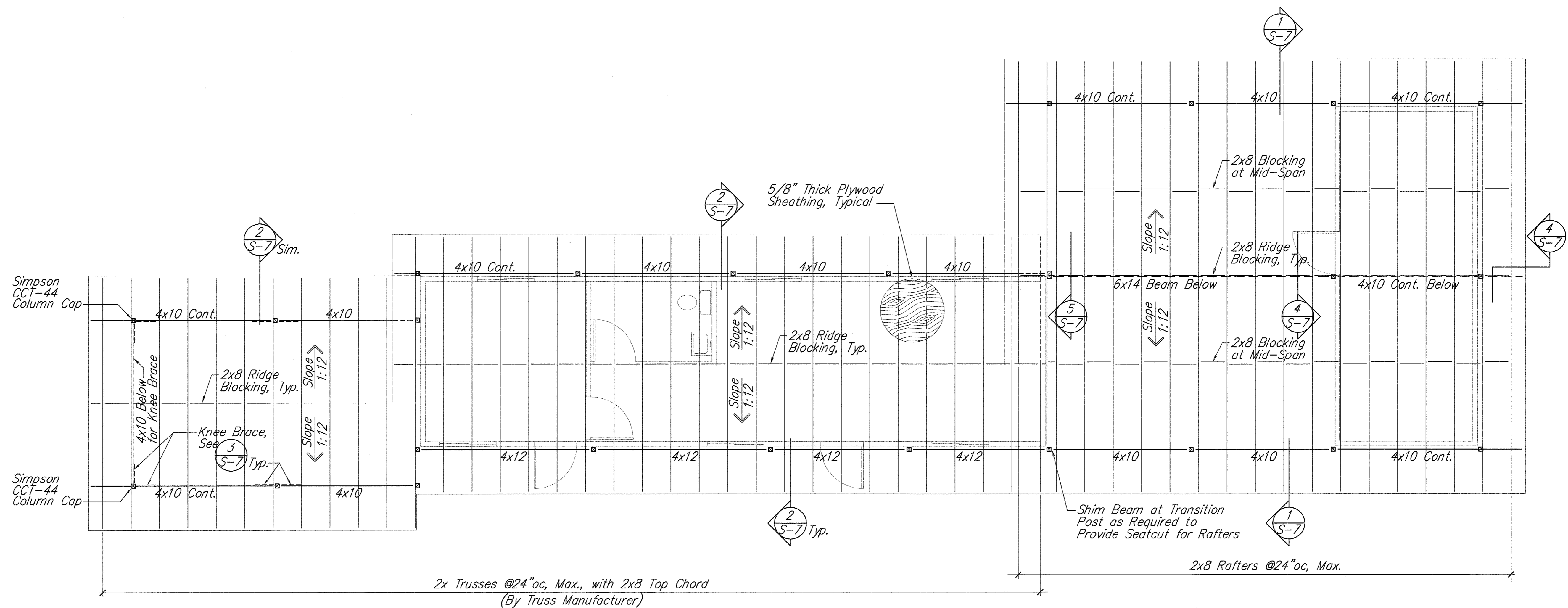
- LEGEND:**
- . . . . Denotes 4x4 Post Above and Below, Typical
  - . . . . Denotes 4x4 Post Below Only.
  - . . . . Denotes 4x4 Post Above Only.
  - ▨ . . . . Denotes Concrete Slab-on-Grade.



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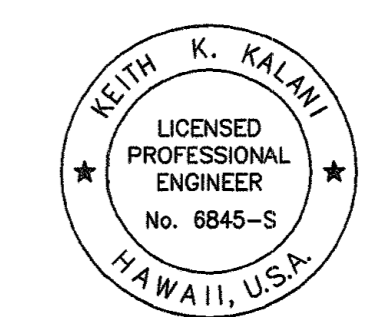
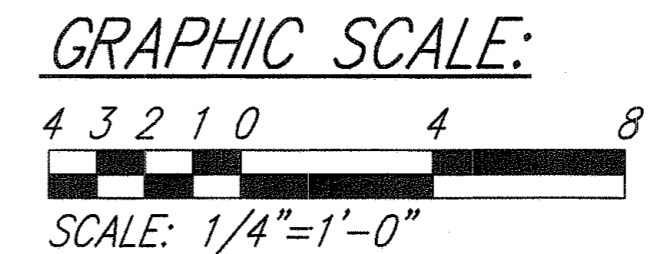
6/07/05	1 Relocated Door, Revised Added Detail Mark
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>FLOOR FRAMING PLAN</b>	
<b>NORTH KONA BASEYARD RENOVATIONS</b>	
<b>REMOVE LEAD PAINT AND</b>	
<b>UPGRADE ELECTRICAL</b>	
<b>Project No. HWY-H-03-04M</b>	
Scale: As Noted	Date: April 2005
SHEET No. <b>S-4</b> OF <b>S-7</b> SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-04M	2005	22	32



**1 ROOF FRAMING PLAN**  
 SC: 1/4"=1'-0"

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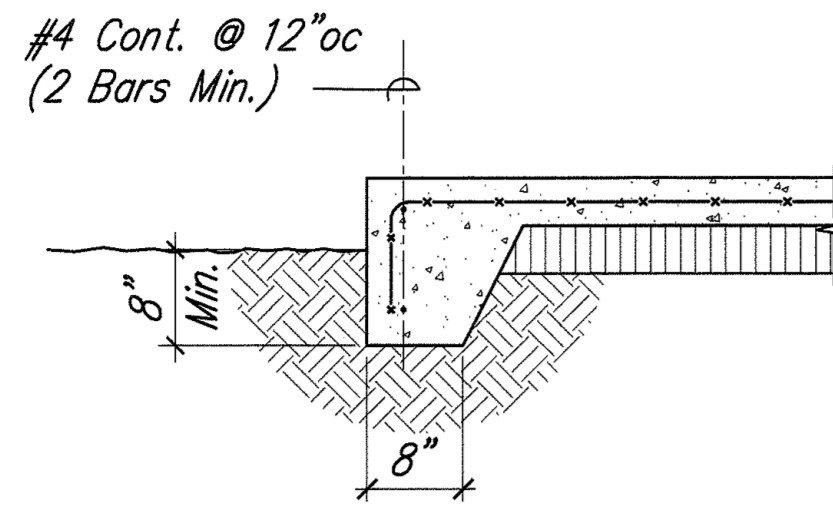
**ROOF FRAMING PLAN**

**NORTH KONA BASEYARD RENOVATIONS**  
**REMOVE LEAD PAINT AND**  
**UPGRADE ELECTRICAL**  
**Project No. HWY-H-03-04M**

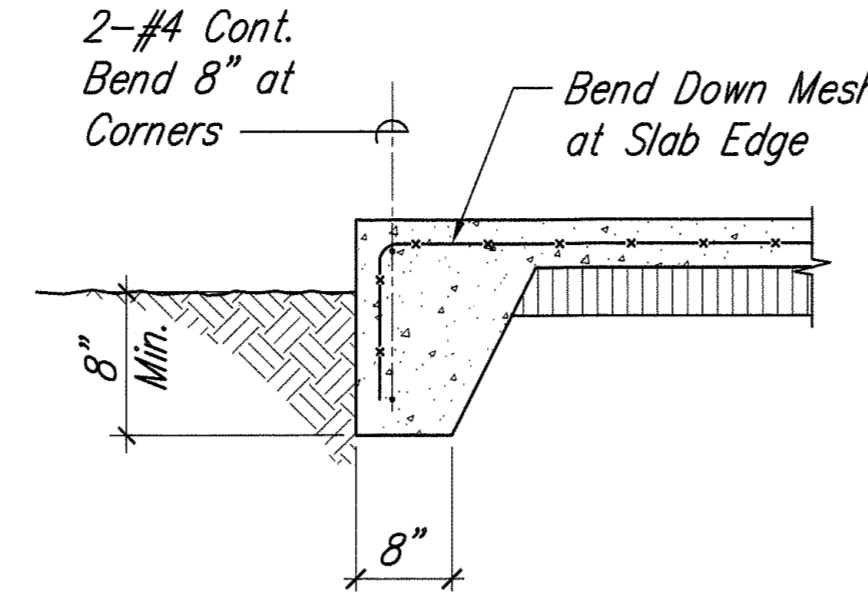
Scale: As Noted Date: April 2005

SHEET No. **S-5** OF **S-7** SHEETS

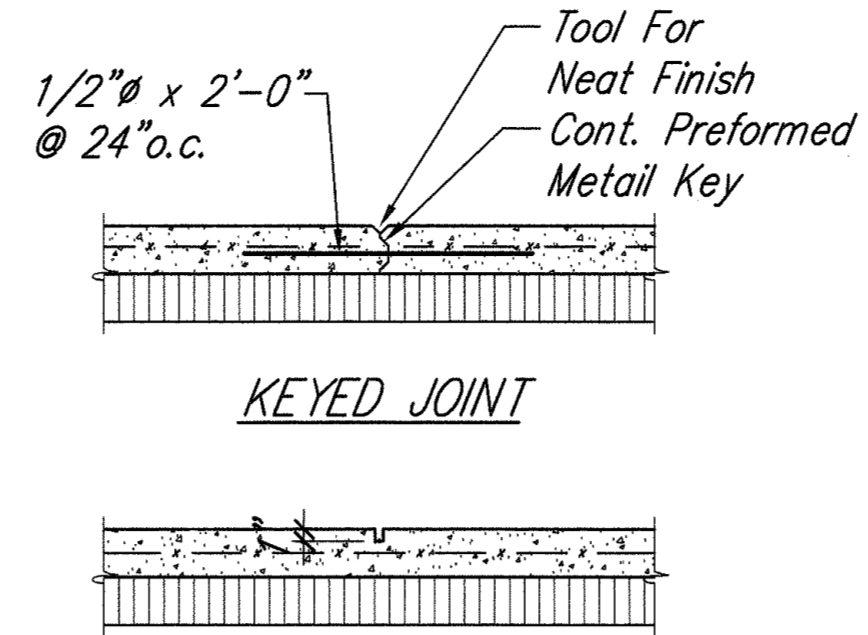
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-04M	2005	ADD. 23	32



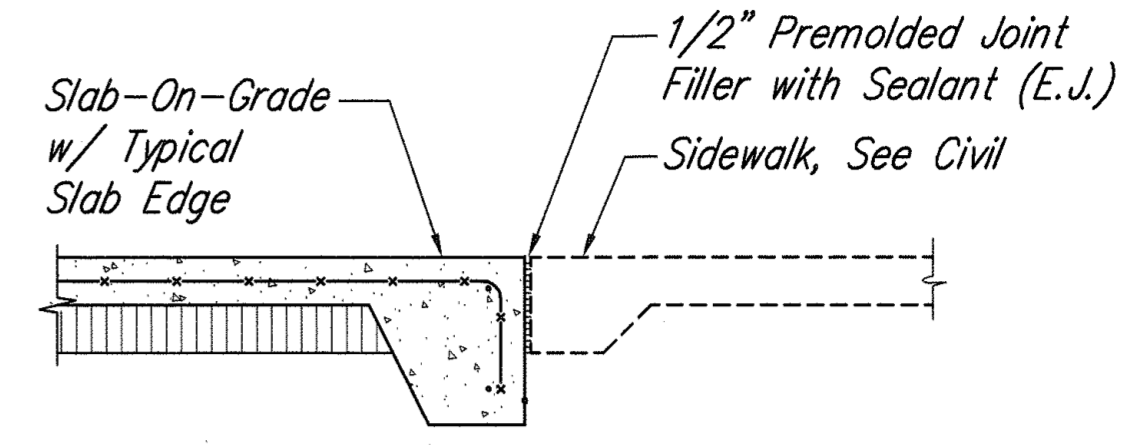
1 TYP. SLAB EDGE DETAIL  
SC: 3/4" = 1'-0"



2 TS-1 SLAB EDGE  
SC: 3/4" = 1'-0"

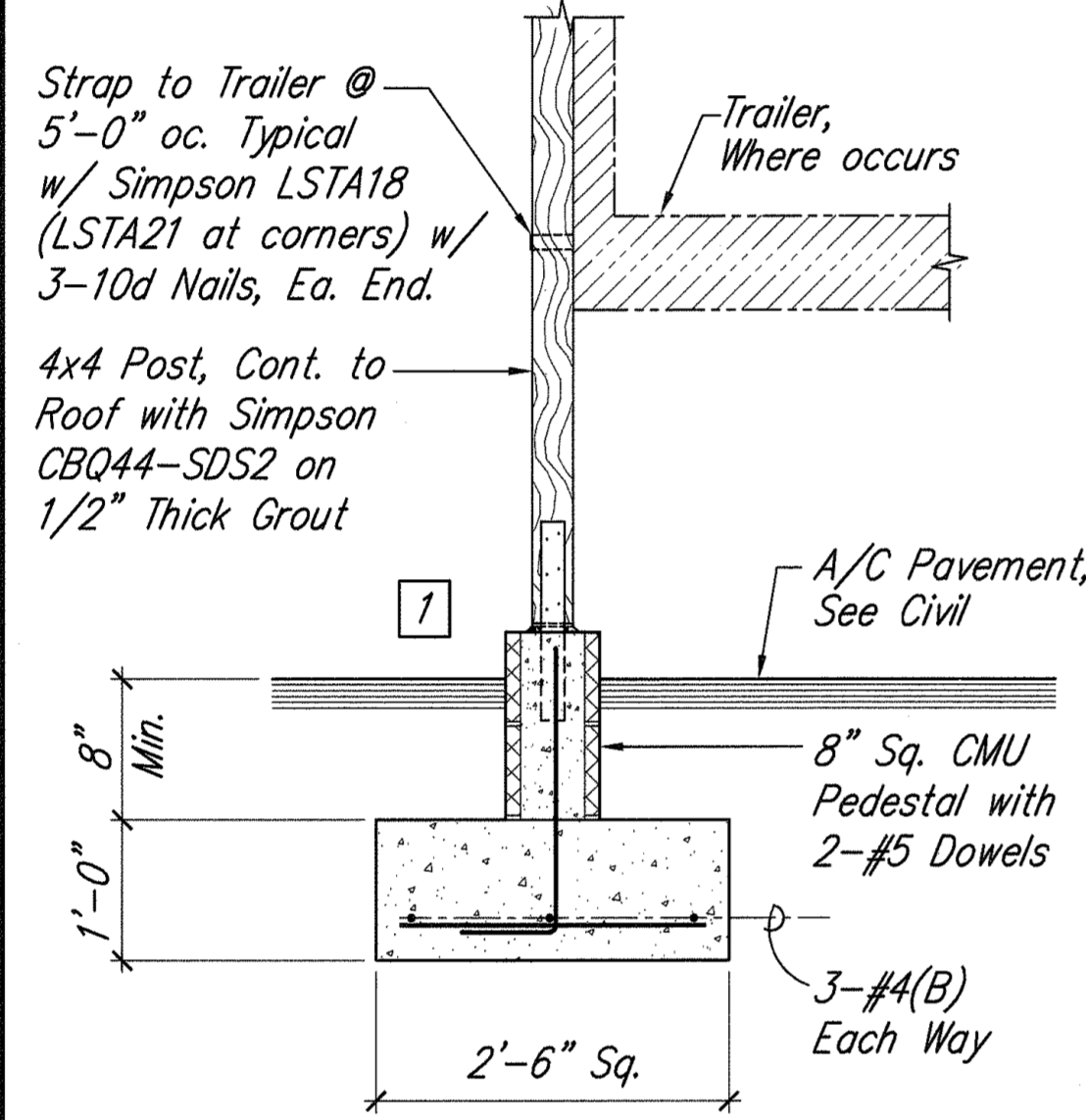


3 TYP. CRACK CONTROL JOINT DETAIL (C.C.J.)  
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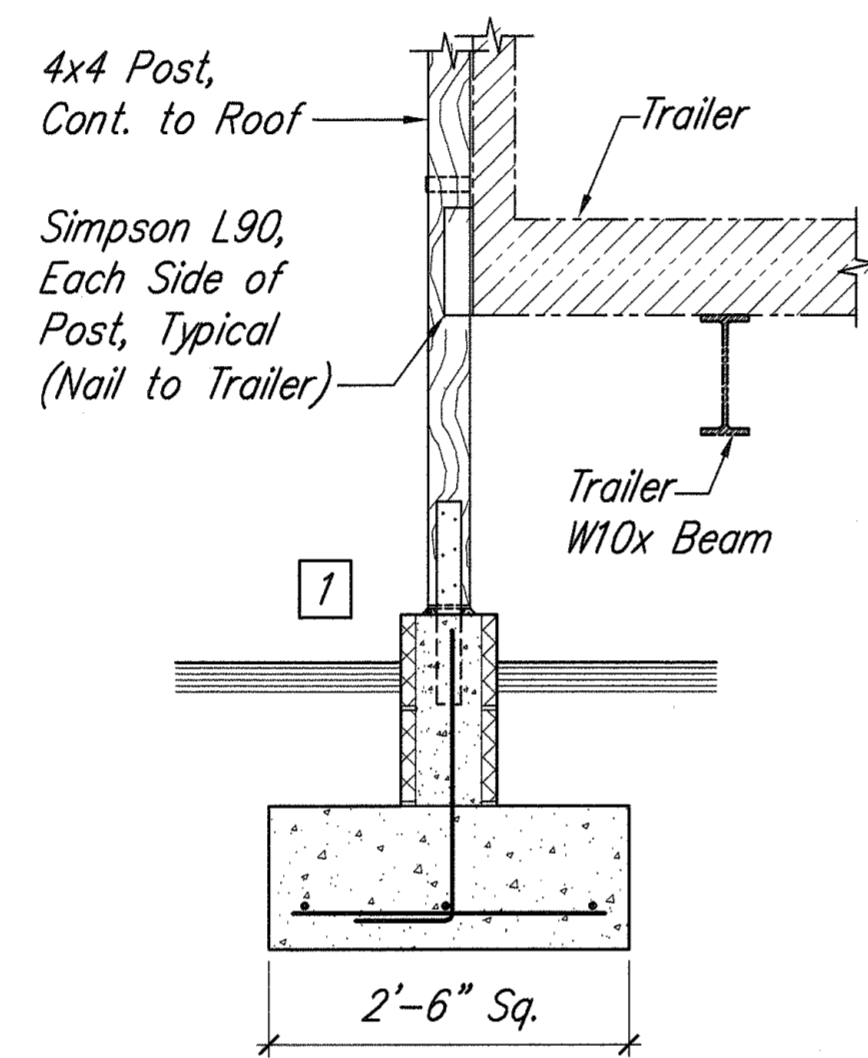


4 TYP. EXPANSION JOINT at SLAB EDGE (E.J.)  
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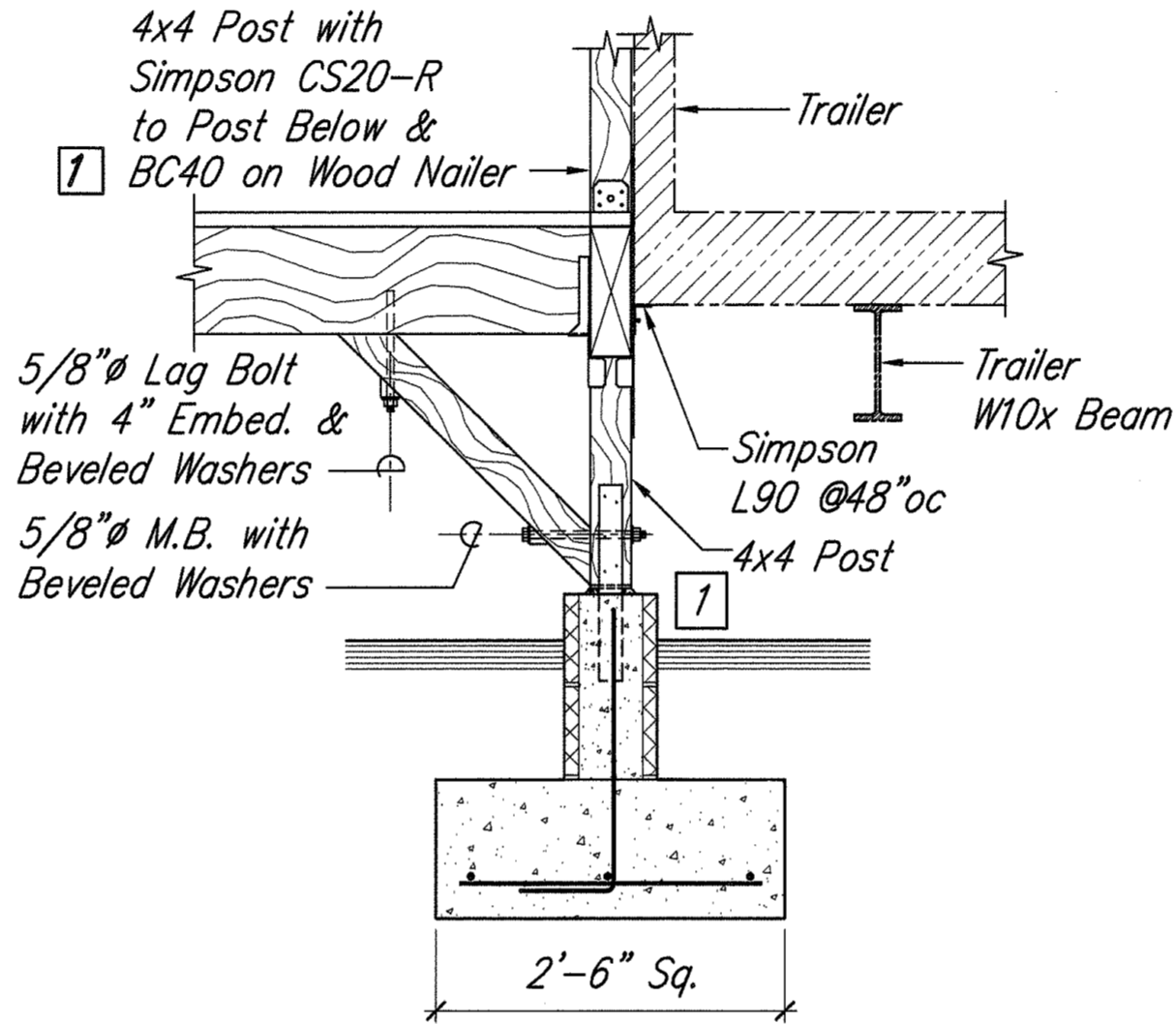
- NOTES
- Spacing of Control Joints Shall Not Exceed 20'-0" In Either Direction.
  - Sawcut Shall Be Made As Soon As Concrete Can Be Cut Without Raveling Slab. Saw Joints Before Shrinkage Cracks Occur.
  - Provide Elastometric Sealant at Sawed Joints.



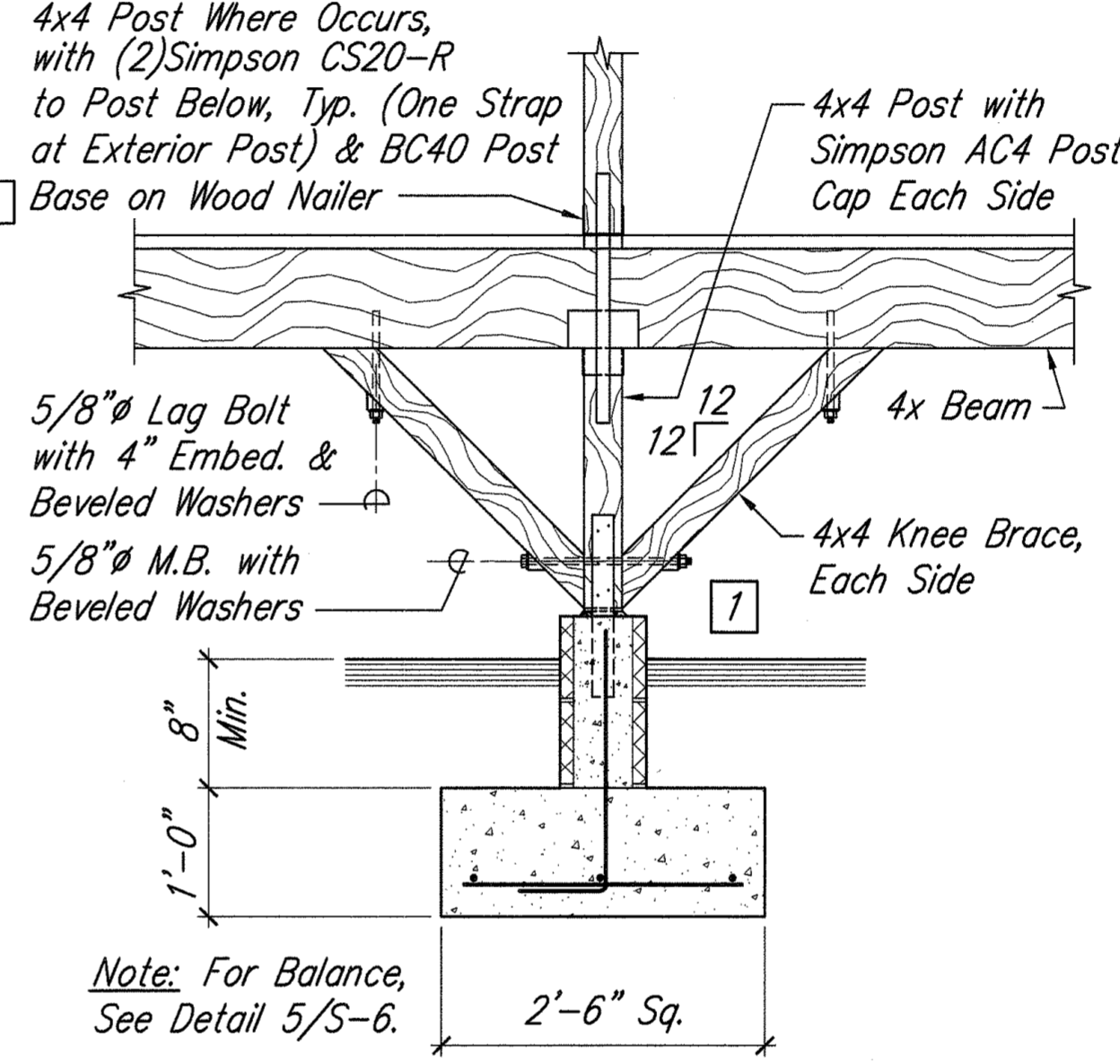
5 F-1 FOOTING DETAIL  
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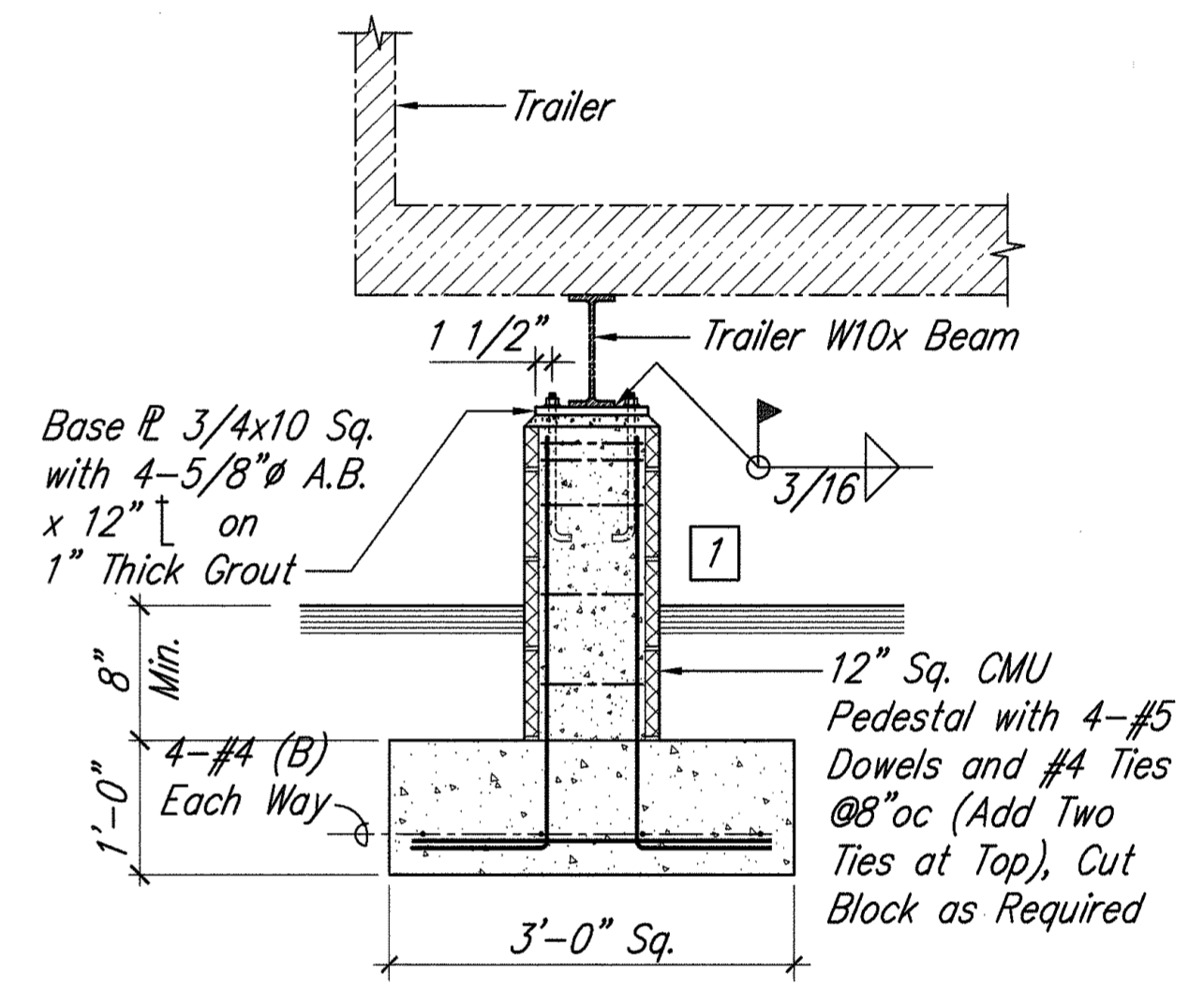
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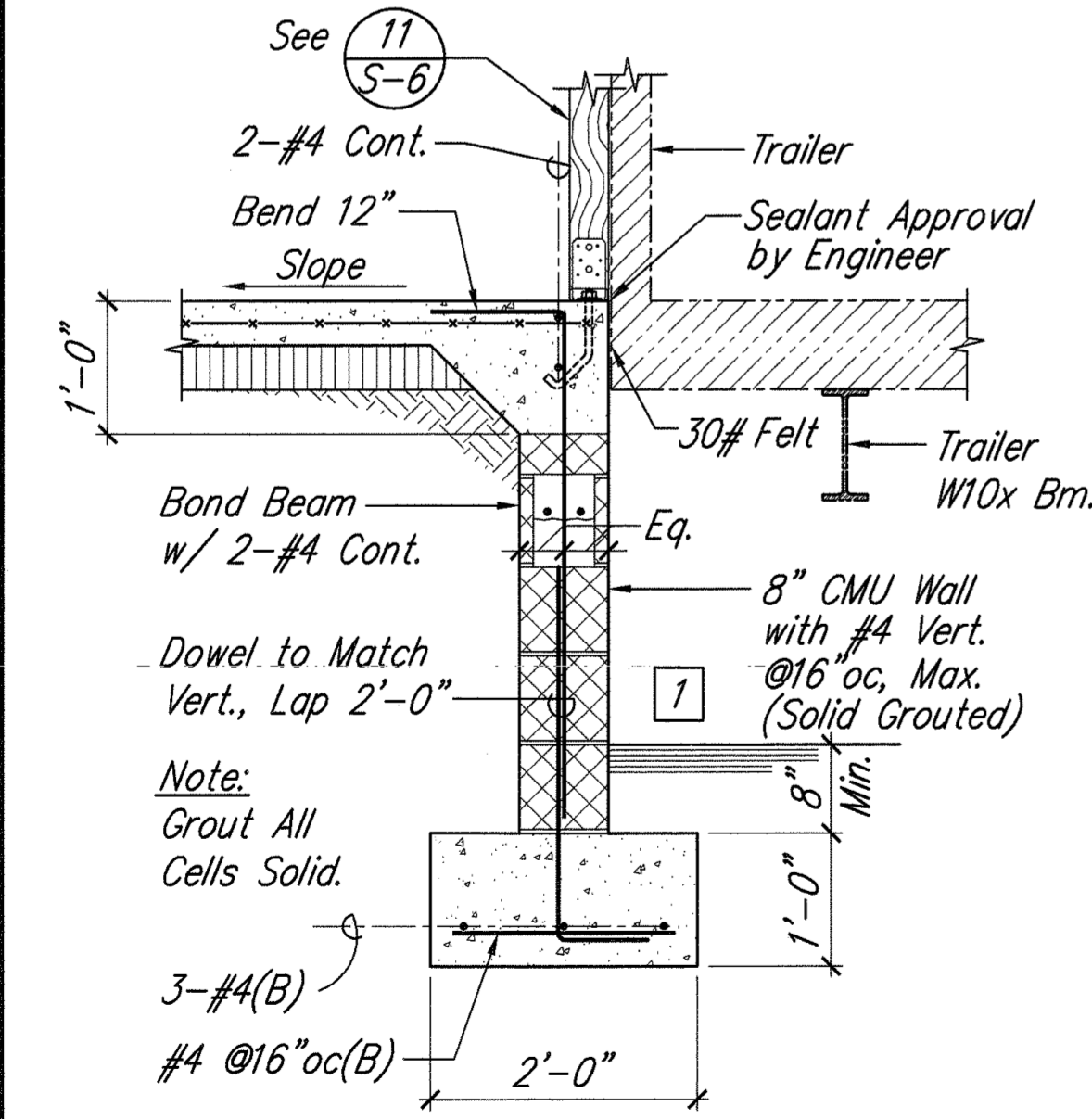
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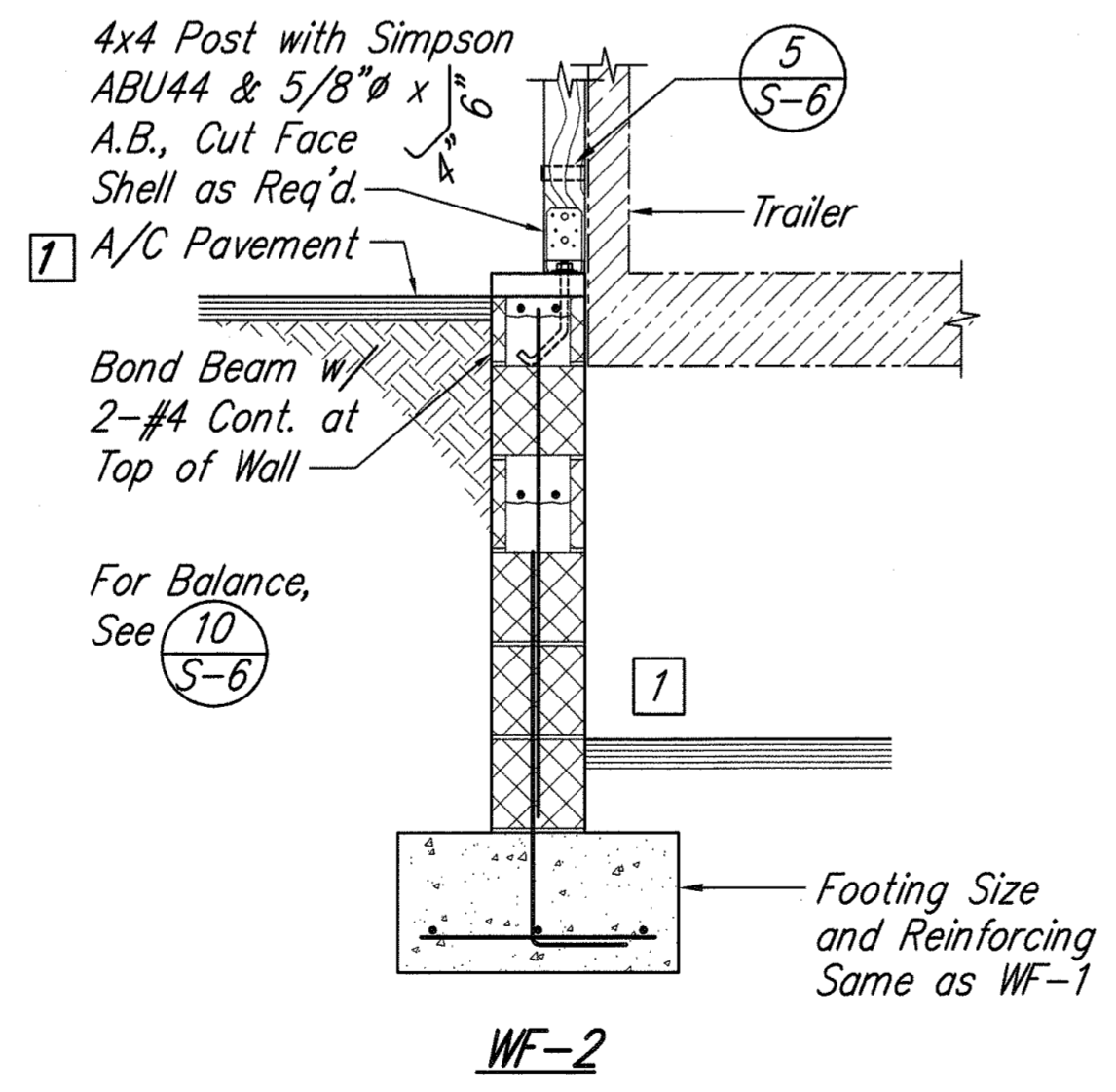
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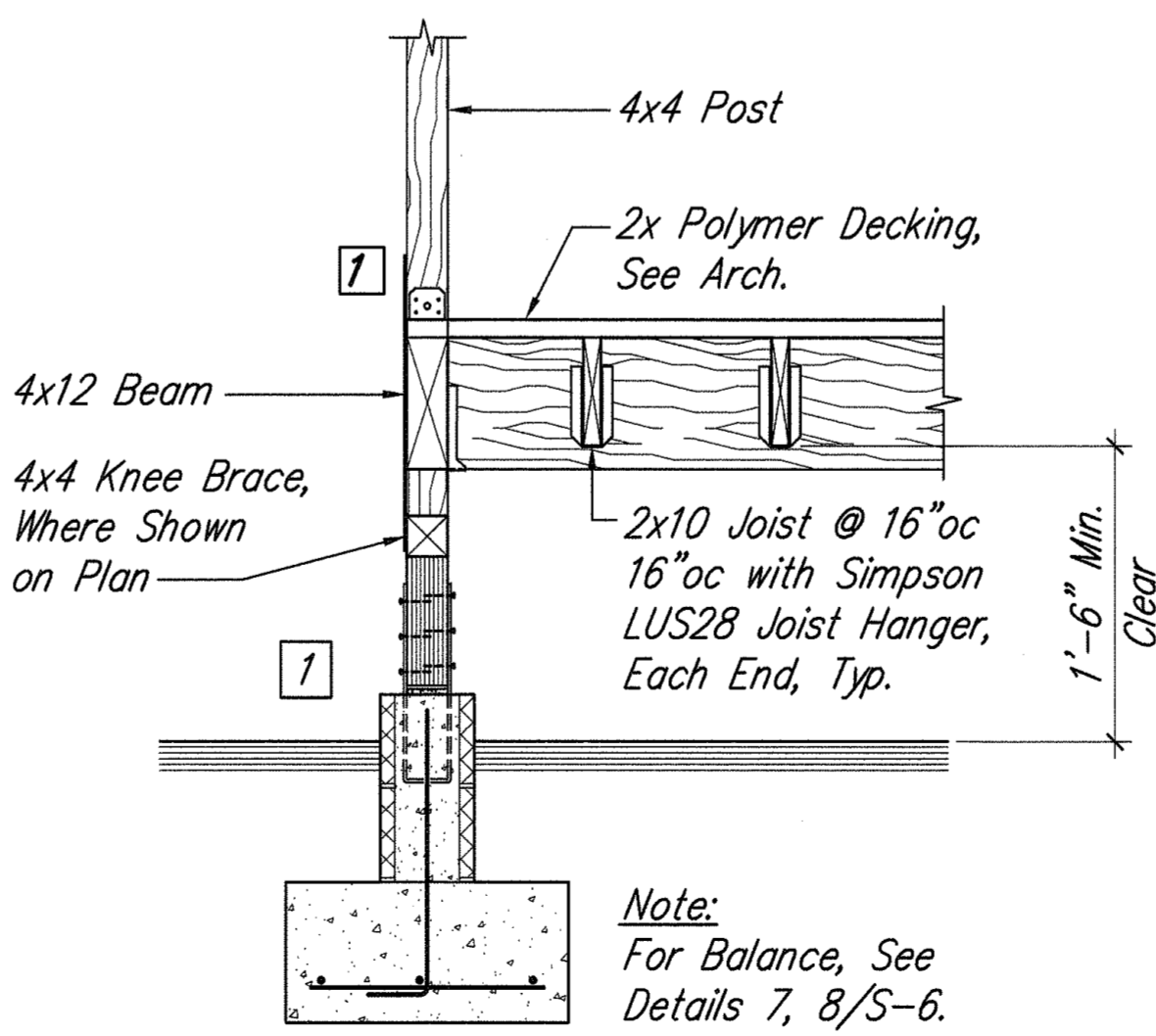
9 F-2 FOOTING DETAIL  
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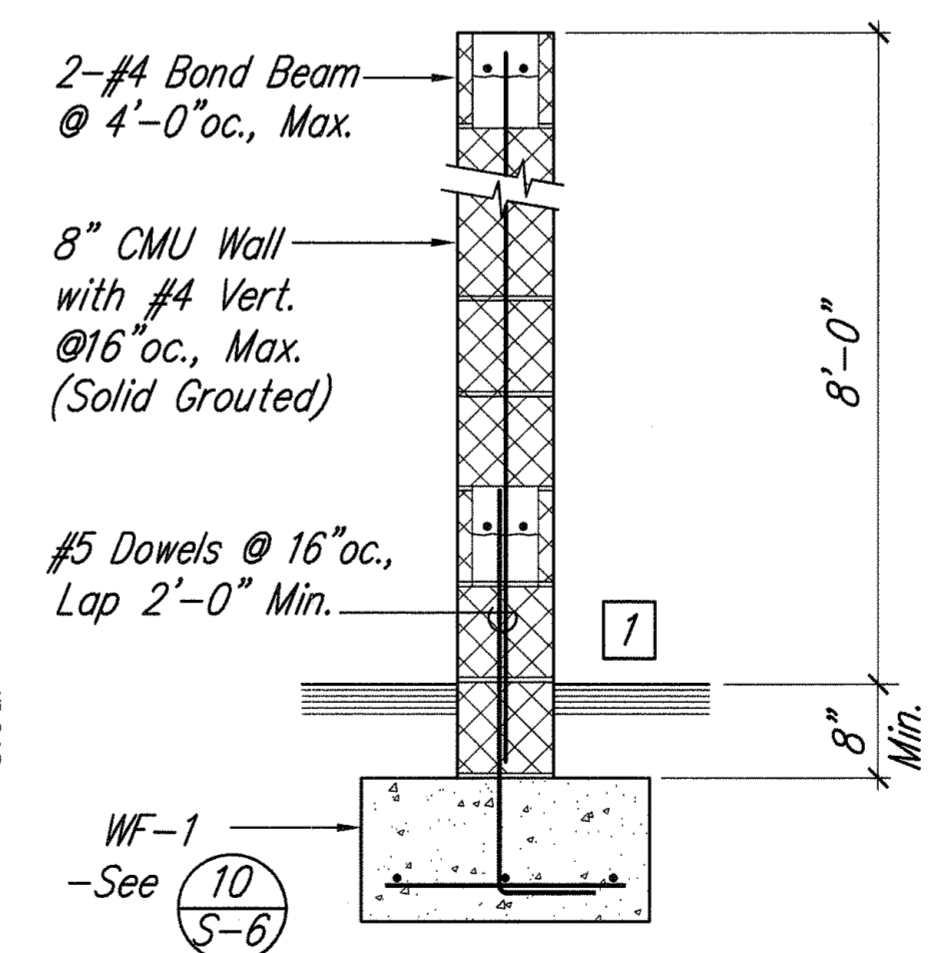
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11 WF-2 FOOTING DETAIL  
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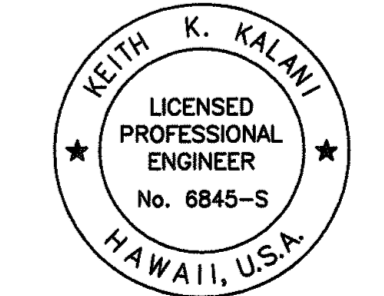


12 TYPICAL FLOOR SECTION  
SC: 3/4" = 1'-0"



13 FIREWALL DETAIL  
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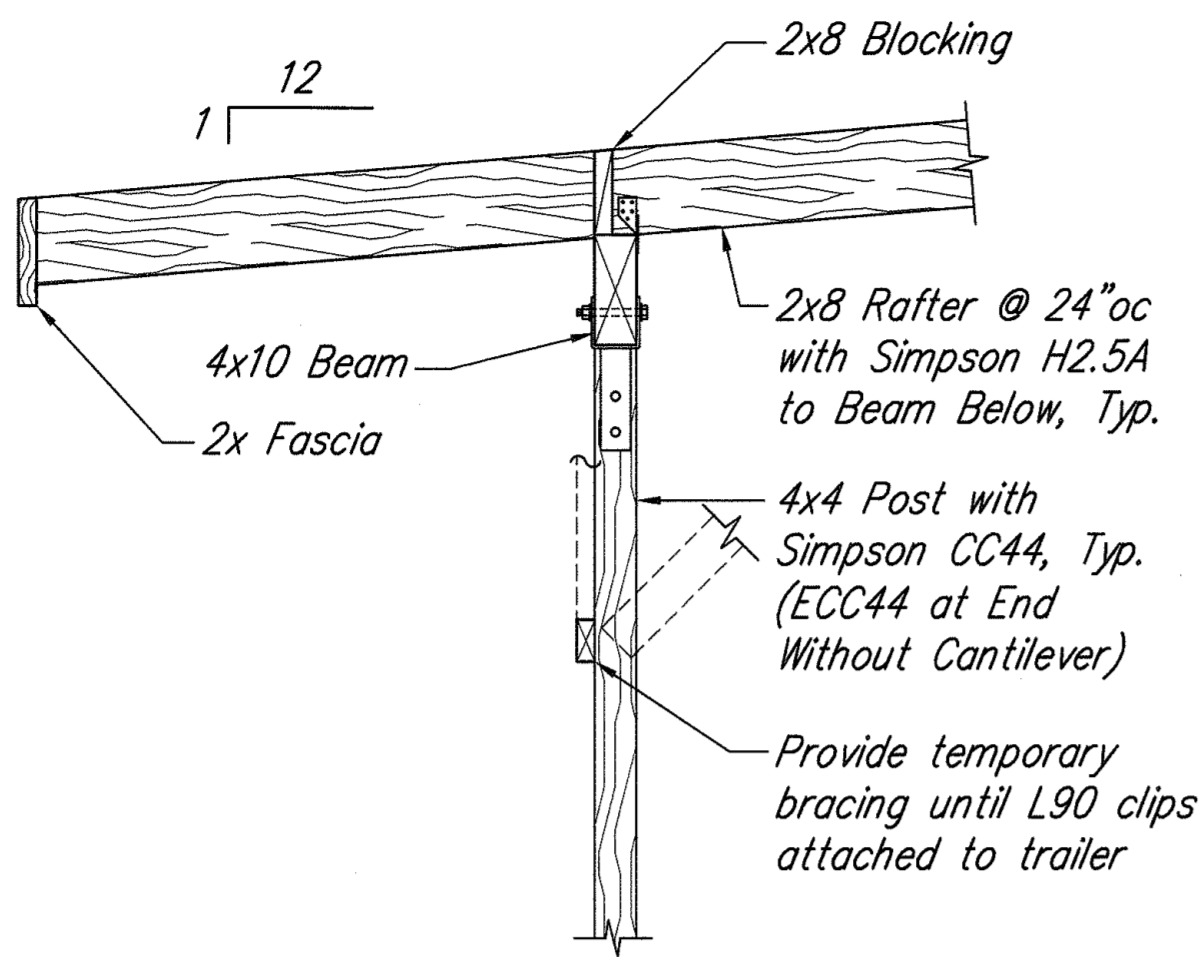
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SCALE: 3/4" = 1'-0"



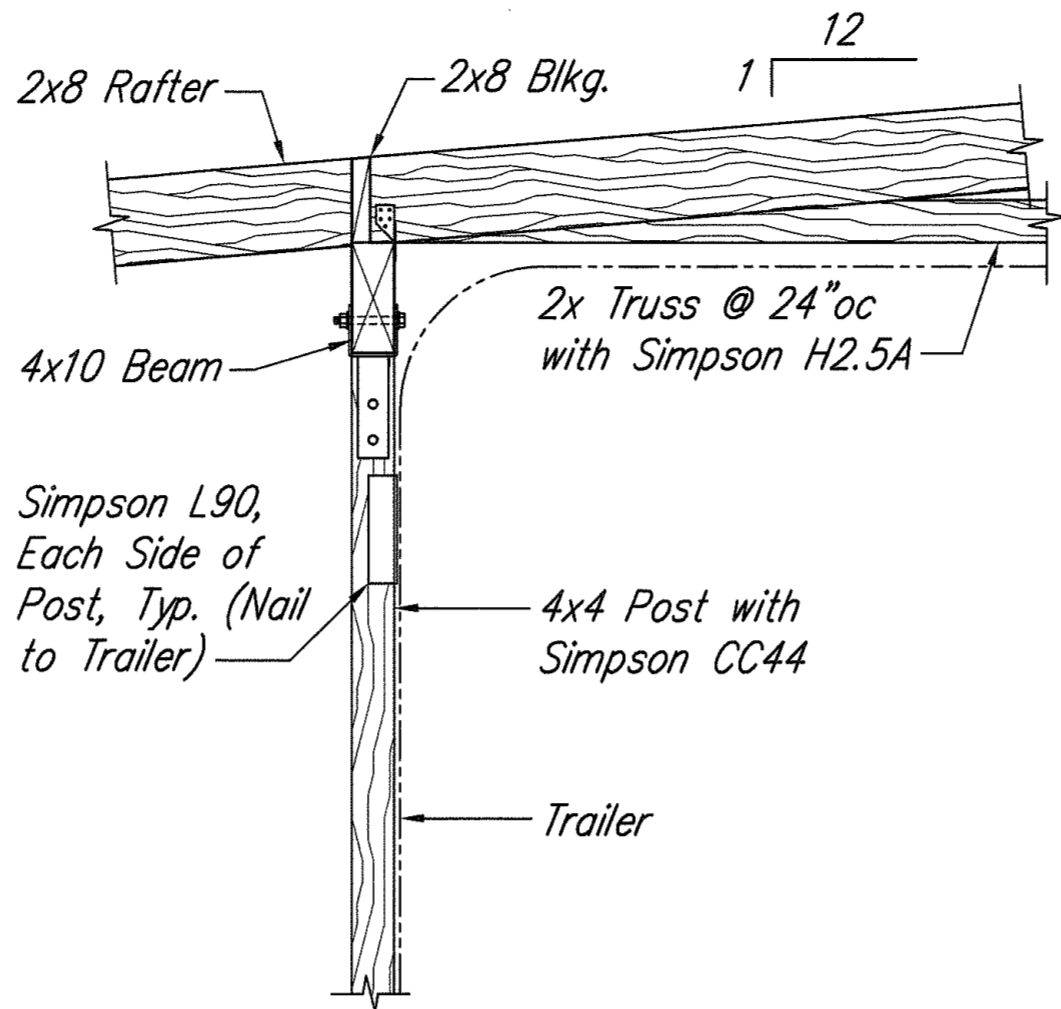
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6/07/05	1 Revised Post Base, Added A/C Pavement and Wall Cap
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>SLAB-ON-GRADE and FOUNDATION DETAILS</b> <b>NORTH KONA BASEYARD RENOVATIONS</b> <b>REMOVE LEAD PAINT AND UPGRADE ELECTRICAL</b> <b>Project No. HWY-H-03-04M</b> Scale: As Noted Date: April 2005 SHEET No. S-6 OF S-7 SHEETS	

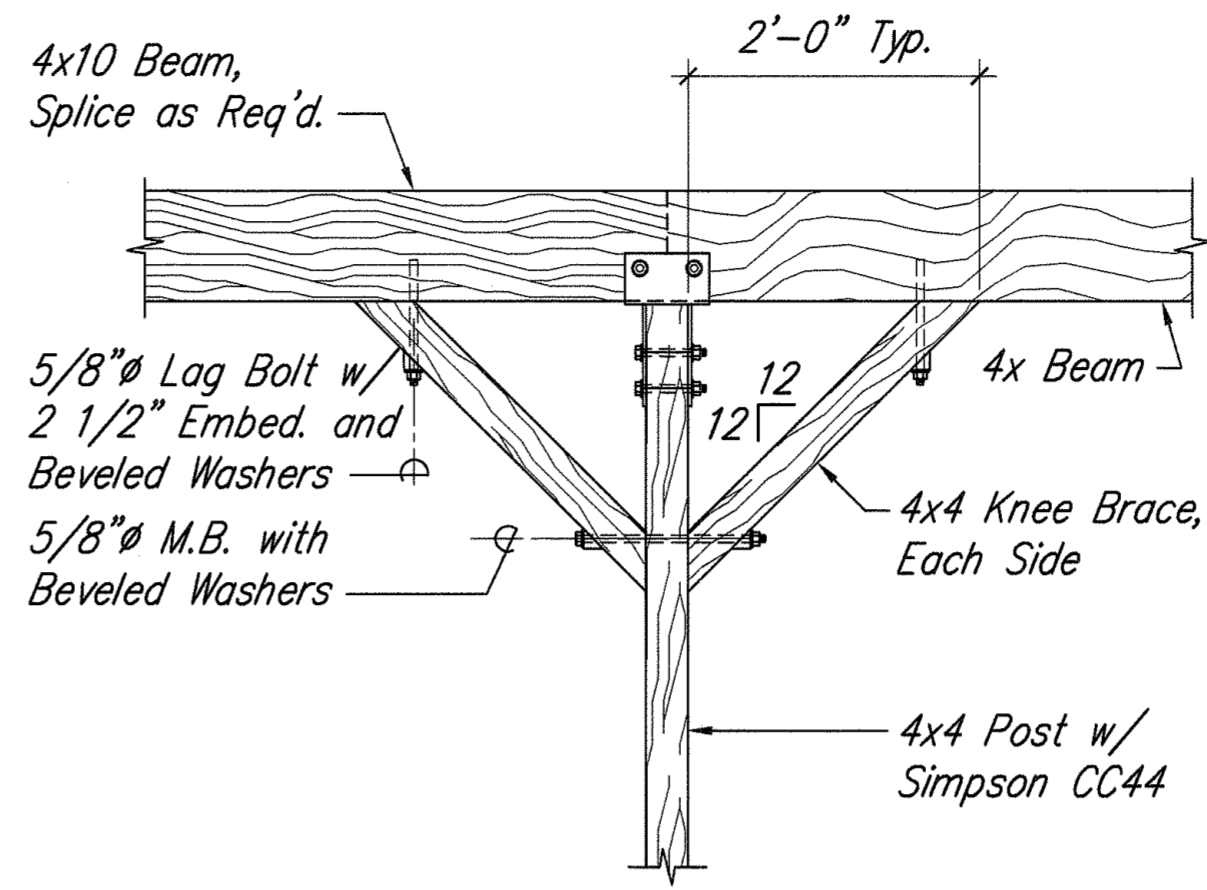
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-04M	2005	24	32



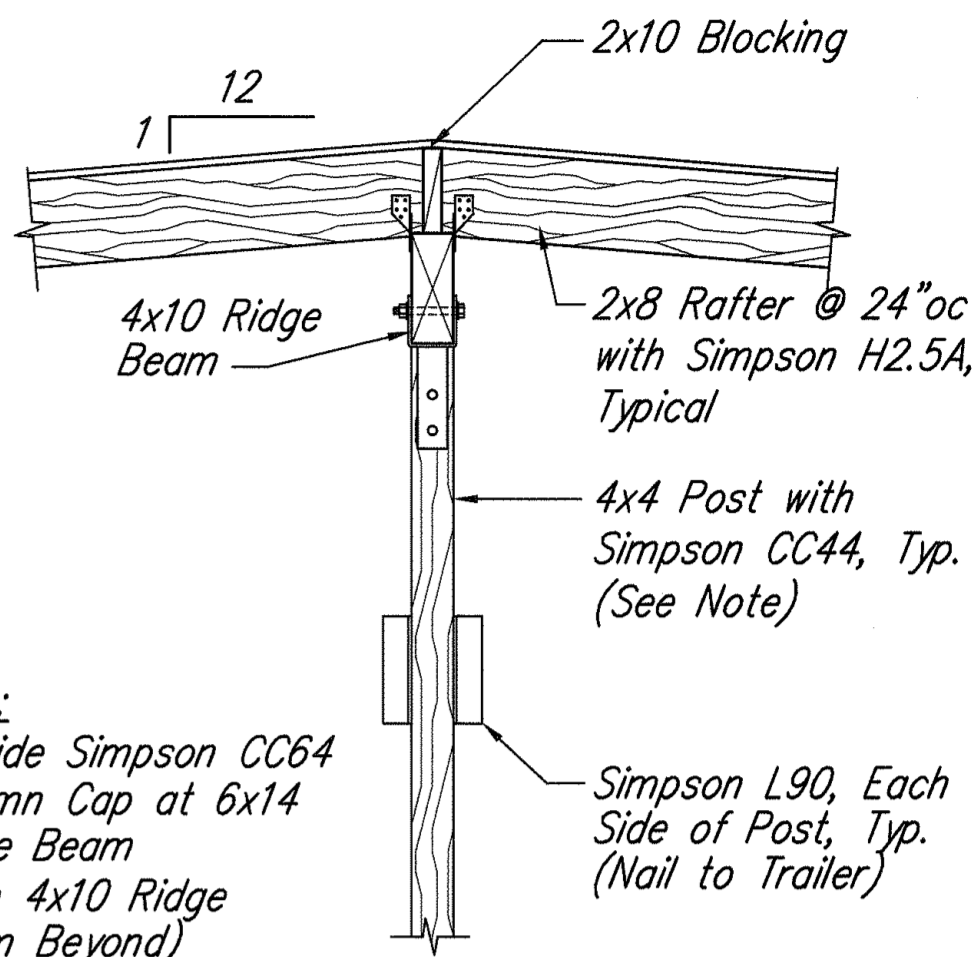
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SC: 3/4"=1'-0"



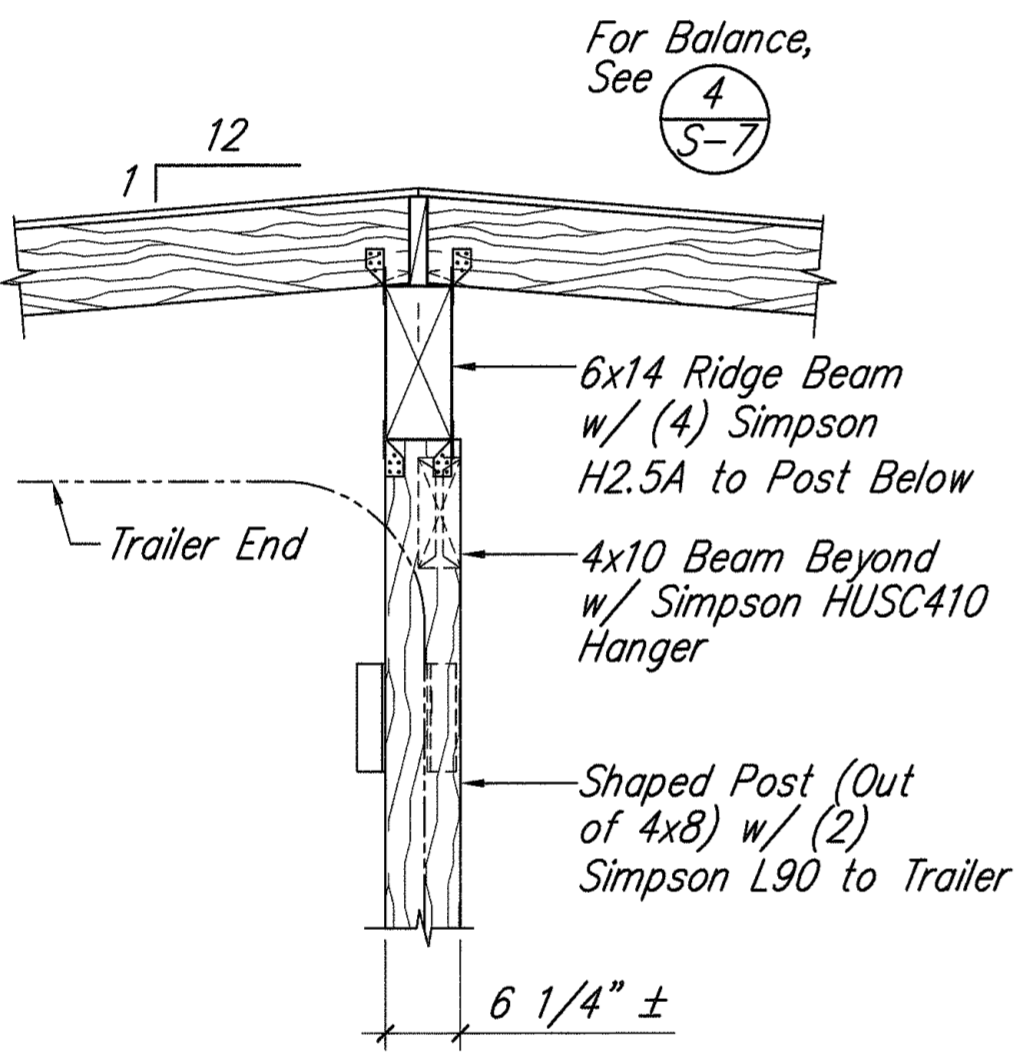
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SC: 3/4"=1'-0"



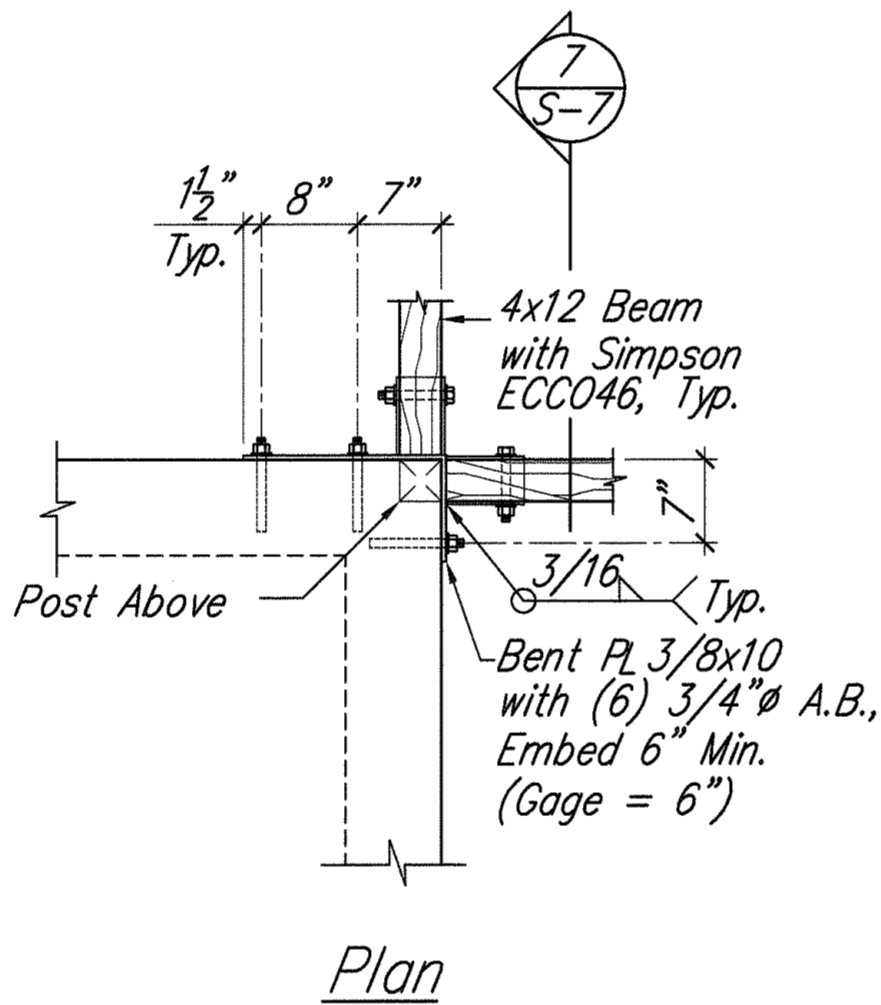
3 TYPICAL ROOF KNEE BRACE DETAIL  
SC: 3/4"=1'-0"



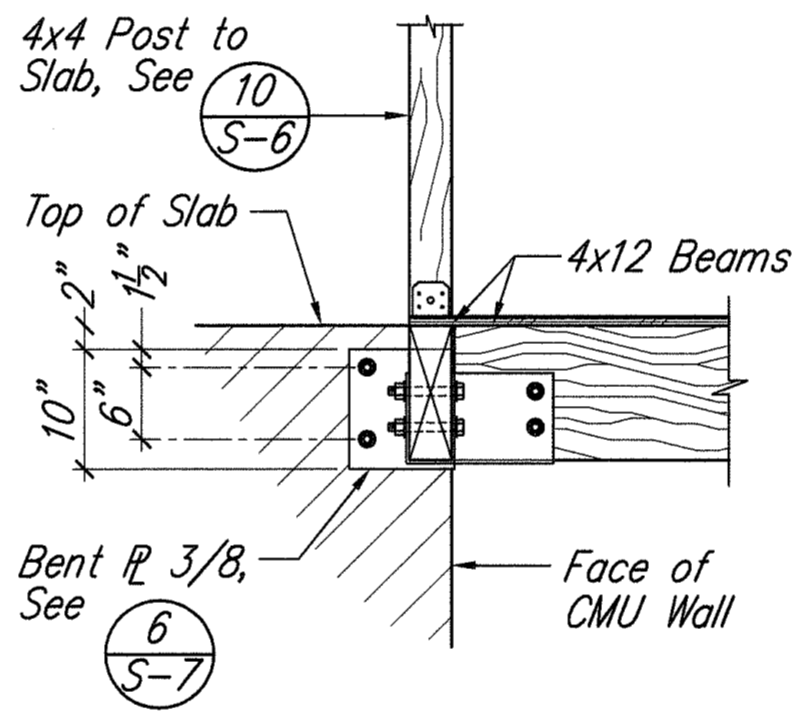
4 TYP. RIDGE BEAM DET.  
SC: 3/4"=1'-0"



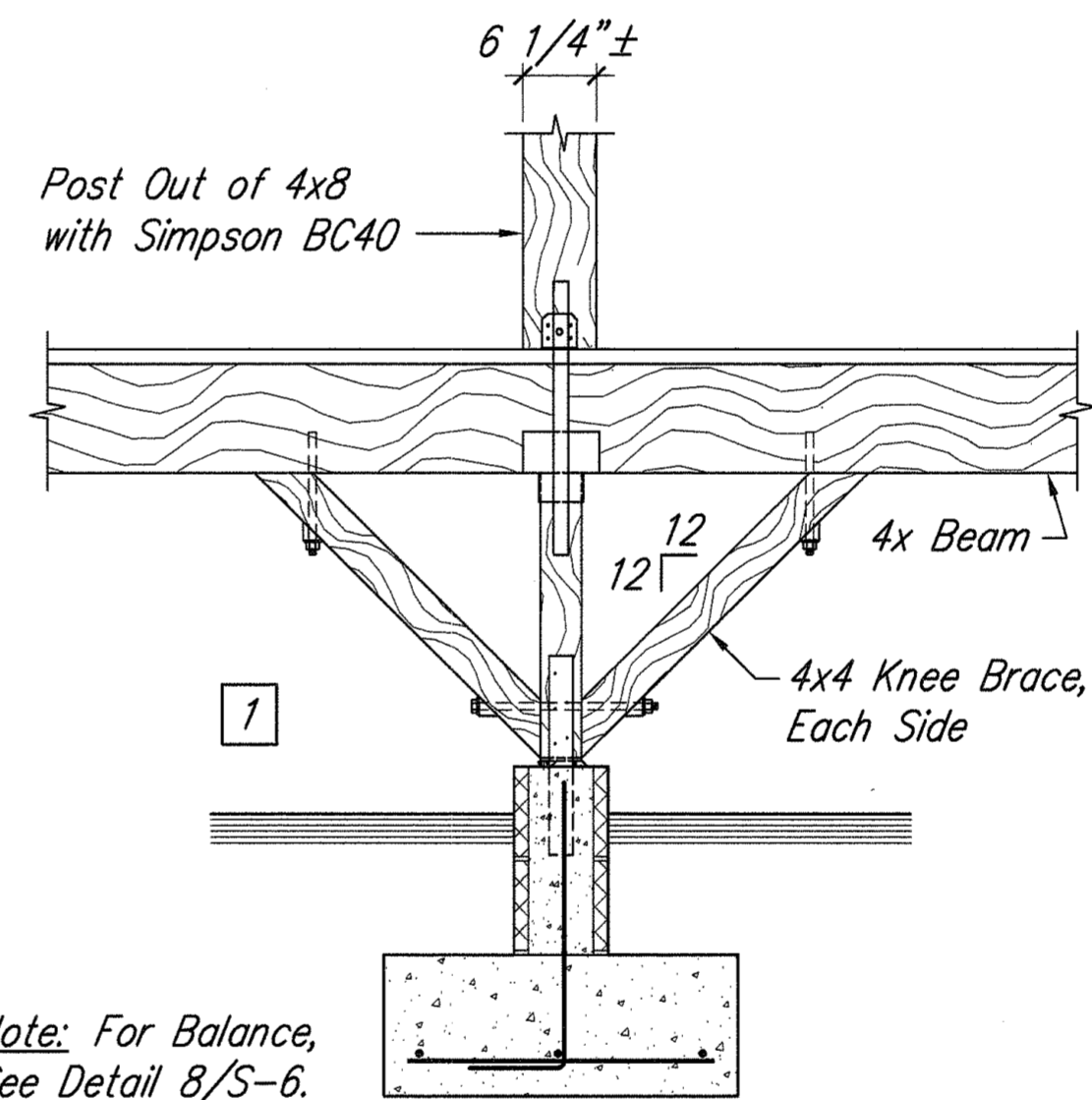
5 ROOF DETAIL  
SC: 3/4"=1'-0"



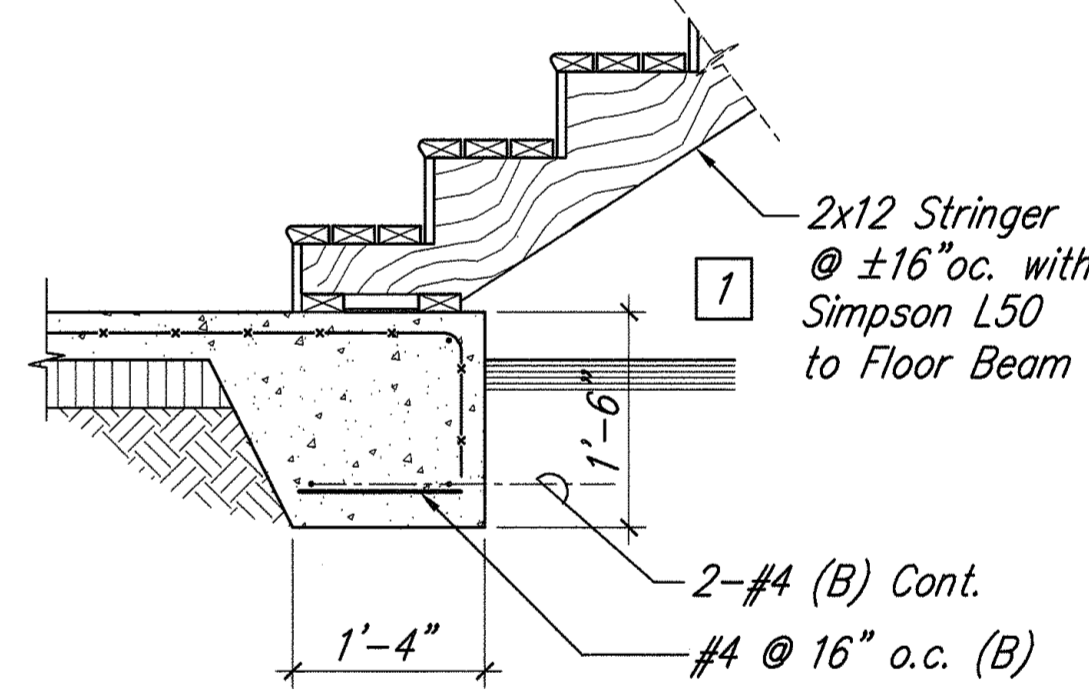
6 DETAIL  
SC: 3/4"=1'-0"



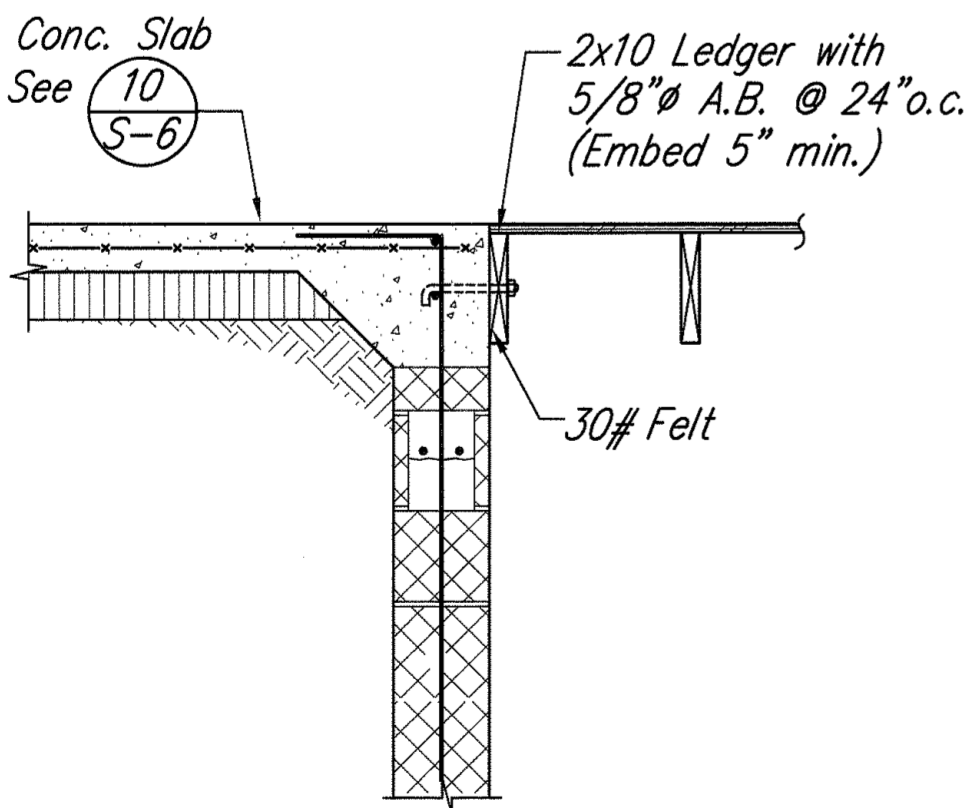
7 DETAIL  
SC: 3/4"=1'-0"



8 FOOTING at 4x8 POST DETAIL  
SC: 3/4"=1'-0"

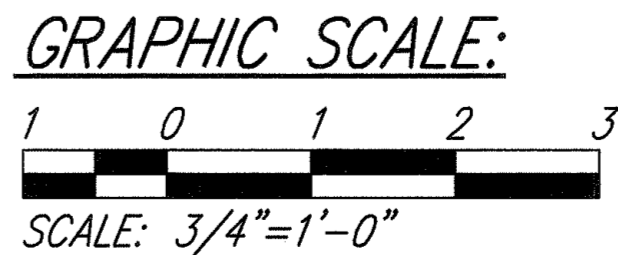


9 STAIR SECTION  
SC: 3/4"=1'-0"



10 LEDGER DETAIL  
SC: 3/4"=1'-0"

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION  
Mitsunaga & Associates, Inc.  
Expiration Date of License

6/07/05	1 Added Detail 10 and A/C Pavement
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ROOF and FLOOR FRAMING DETAILS	
NORTH KONA BASEYARD RENOVATIONS	
REMOVE LEAD PAINT AND	
UPGRADE ELECTRICAL	
Project No. HWY-H-03-04M	
Scale: As Noted	Date: April 2005
SHEET No. S-7 OF S-7 SHEETS	