E R 0 E S E

FED. ROAD DIST. NO. FISCAL YEAR PROJ. NO. HWY-H-03-02M 2003 HAW. HAWAII

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
- 2. 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.
- 3. 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.
- 5. All details designated as typical shall occur in addition to any other specific detail called out.
- 6. 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:

- 1. Lateral loads
- A. Earthquake Seismic Zone 4 B. Wind 80 mph, Exposure C
- 2. Live loads

SURVEY PLOTTE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

ORIGINAL PLAN NOTE BOOK

Earthwork and Foundation:

- The foundation design is based on a bearing capacity of 2500 psf and all footings shall be founded on existing subgrade.
- 2. All footings shall be founded at least 24 inches below lowest adjacent grade or finish floor, whichever is lower.
- 3. 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.
- 4. Clean and moisten footing trenches prior to pouring concrete.
- 5. Do not place conduits and utility lines in footing trenches.

Reinforcing steel:

- 1. All reinforcing bars shall conform to ASTM A615, grade 60, unless noted otherwise. Ties and stirrups shall be grade 40.
- 2. Welded wire fabric shall conform to ASTM A82 and A185.
- 3. Minimum concrete clear cover:
 - B. Concrete exposed to earth or weather
 - - 2. #6 bar and larger. 2"
- 4. 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.
- - A. 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.

<u>Concrete:</u>

- All concrete work shall conform to ACI 301.
- 2. Aggregates shall conform to ASTM C33.
- 3. Cement shall conform to ASTM C150, type / or //.
- 4. 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.)

<i>Item</i>	Concrete Class	Aggregate Size (in)	
Footings	A	1"	
Slabs-on-grade	А	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.
- 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
- 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.
- 2. Mortar shall conform to ASTM C270, type S, with a minimum 28day compressive strength of 1,800 psi.
- 3. Grout shall conform to ASTM C476, with a minimum 28-day compressive strength of 2,500 psi.
- 4. Reinforcing steel in masonry shall be lapped 40 diameters
- 5. Horizontal joint reinforcing shall conform to ASTM A82. Provide reinforcing at 24" o.c., lap 8" minimum at all splices, intersections, and corners.
- 6. All walls shall be constructed in conventional running bond unless noted otherwise.
- 7. All cells shall be grouted solid. Grout masonry in 8'-0" maximum lifts.
- 8. The minimum spacing between masonry units and reinforcing steel shall be 1/2", and between parallel reinforcing bars,
- 9. 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.
- 10. Special inspection of concrete masonry work is not required. Masonry has been designed at half stress.

Framing Lumber:

1. Framing lumber shall be Douglas Fir/Larch meeting the following minimum grades per WCLB specifications:

2x4 studs, plates, blocking. Construction

4x4 posts, bracing Construction

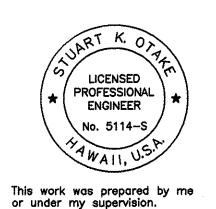
2x rafters, plates, blocking No. 1 / 2

4x rafters, beams. No. 1 / 2

- 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.:
 - A. 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

- 3. Maximum moisture content shall not exceed 19 percent for all structural members.
- 4. All lumber shall be pressure treated with an approved process to protect against rot and insect damage.
- 5. Minimum nailing shall comply with table 23-11-B-1 of the Uniform Building Code, unless noted otherwise.
- 6. 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.
- 7. Provide 30# felt below all plates resting on concrete or masonry.
- 8. 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.
- 9. Provide continuous 2x structural fascia at all eaves. Do not splice fascia within 12'-0" of corners.
- 10. All pre-fabricated metal connectors shall be "Simpson Strongtie" connectors with "ZMAX" galvanizing or approved equal. Follow the nailing schedule as specified by the manufacturer.



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

GENERAL NOTES

NAALEHU BASEYARD RENOVATIONS Project No. HWY-H-03-02M

Scale: As Noted MITSUNAGA & ASSOCIATES, INC.

Date: April 2003

SHEET No. S-1 OF S-13 SHEETS

0 E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-02M	2003	25	53

Prefabricated Wood Trusses:

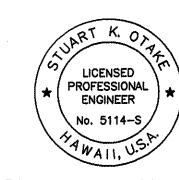
- 1. Prefabricated wood trusses shall conform to the "Design Specification for Light Metal Plate Connected Wood Trusses" as adopted by the Truss Plate Institute.
- 2. All truss members shall be Douglas Fir No. 2 or better.
- 3. Connector plates shall be prime quality galvanized steel sheets no less than 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 ps
2.	Nailers	0 ps

- 3. Plywood sheathing 2.5 psf
- B. Live loads:
- 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.
- 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.
- Web configuration shown on the schematic elevations are for illustration only. Truss manufacturer shall determine actual web configuration.
- 10. All lumber shall be pressure treated with an approved process to protect against rot and insect damage.

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
- 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.
- 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.



This work was prepared by me or under my supervision.

MITSUNAGA & ASSOCIATES, INC.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

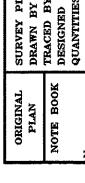
GENERAL NOTES

NAALEHU BASEYARD RENOVATIONS Project No. HWY-H-03-02M

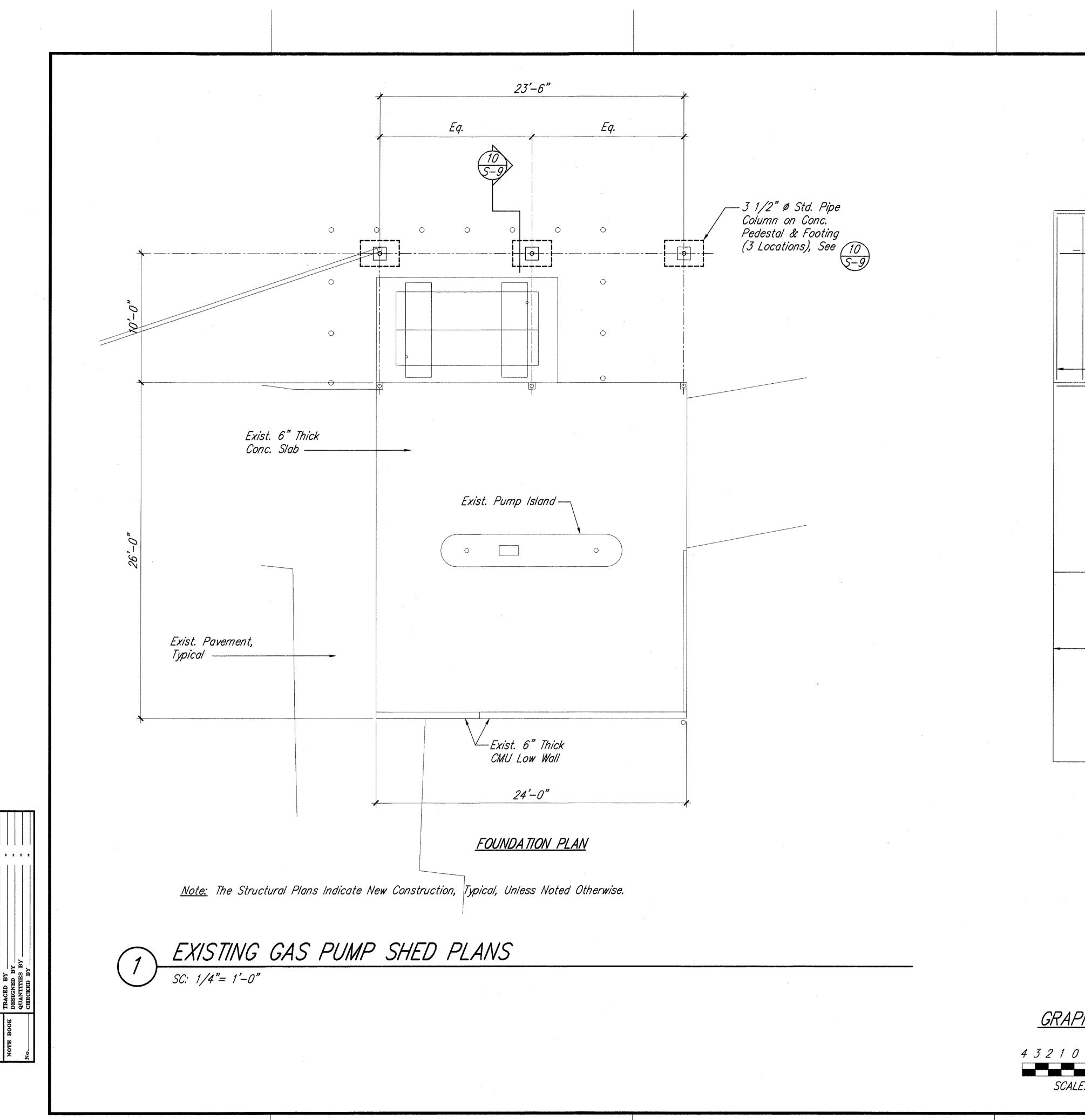
Scale: As Noted

Date: April 2003

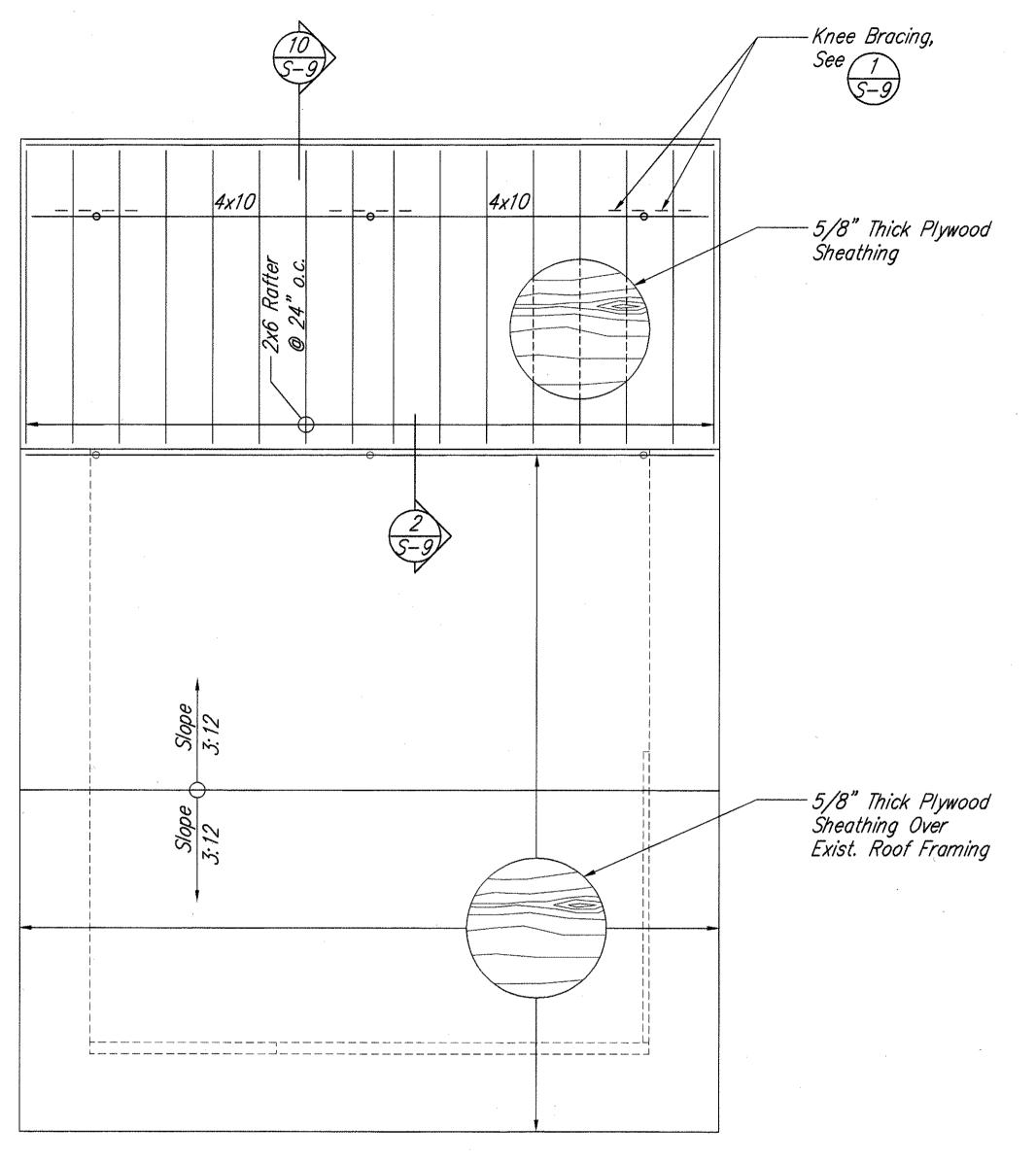
SHEET No. S-2 OF S-13 SHEETS 25



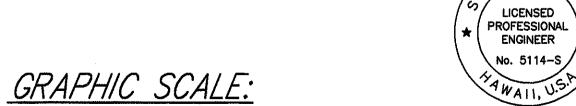
Ĕ



FED. ROAD DIST. NO. FISCAL YEAR PROJ. NO. HWY-H-03-02M 2003



<u>ROOF FRAMING PLAN</u>



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

HIGHWAYS DIVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

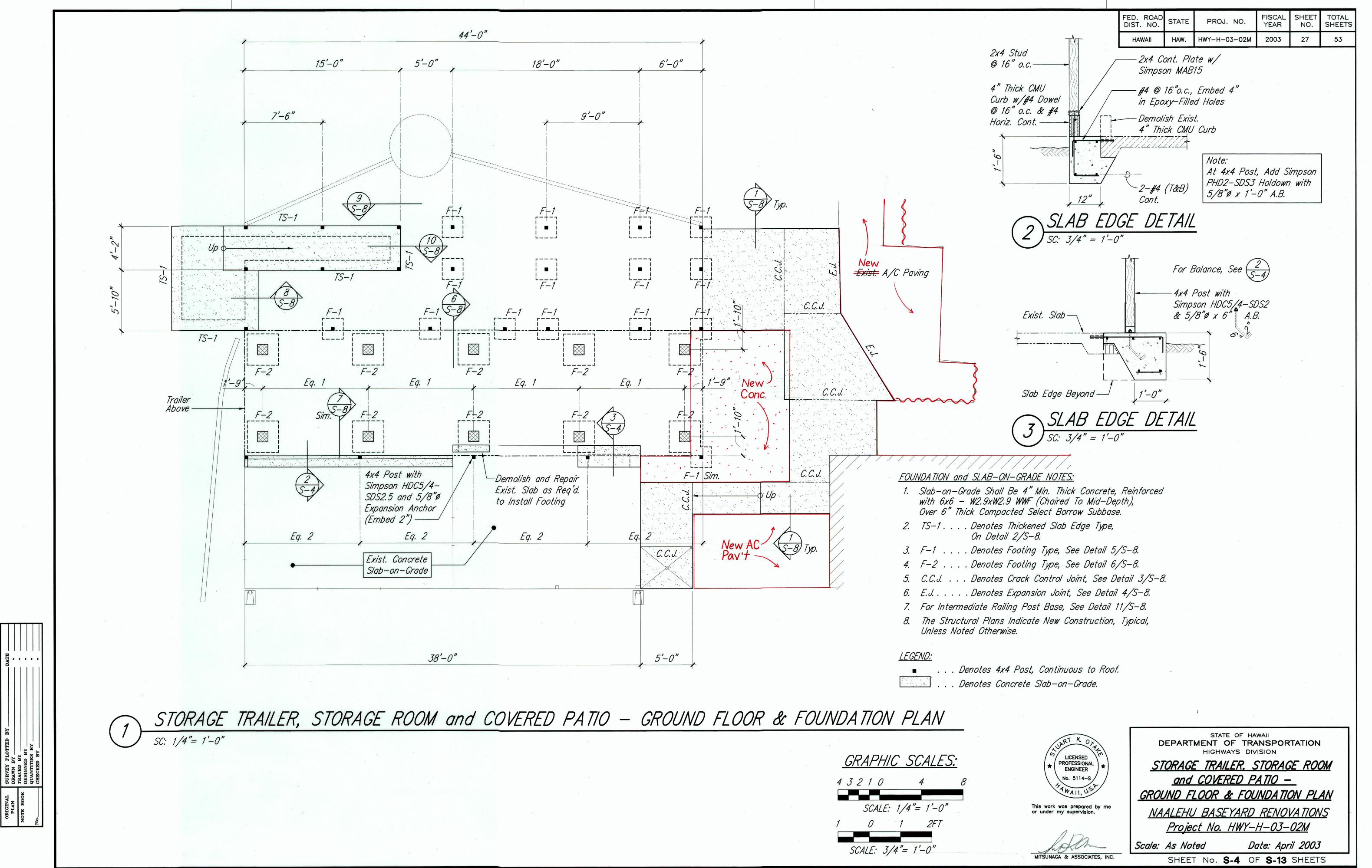
EXISTING GAS PUMP SHED PLANS

NAALEHU BASEYARD RENOVATIONS Project No. HWY-H-03-02M

Scale: As Noted Date: April 2003

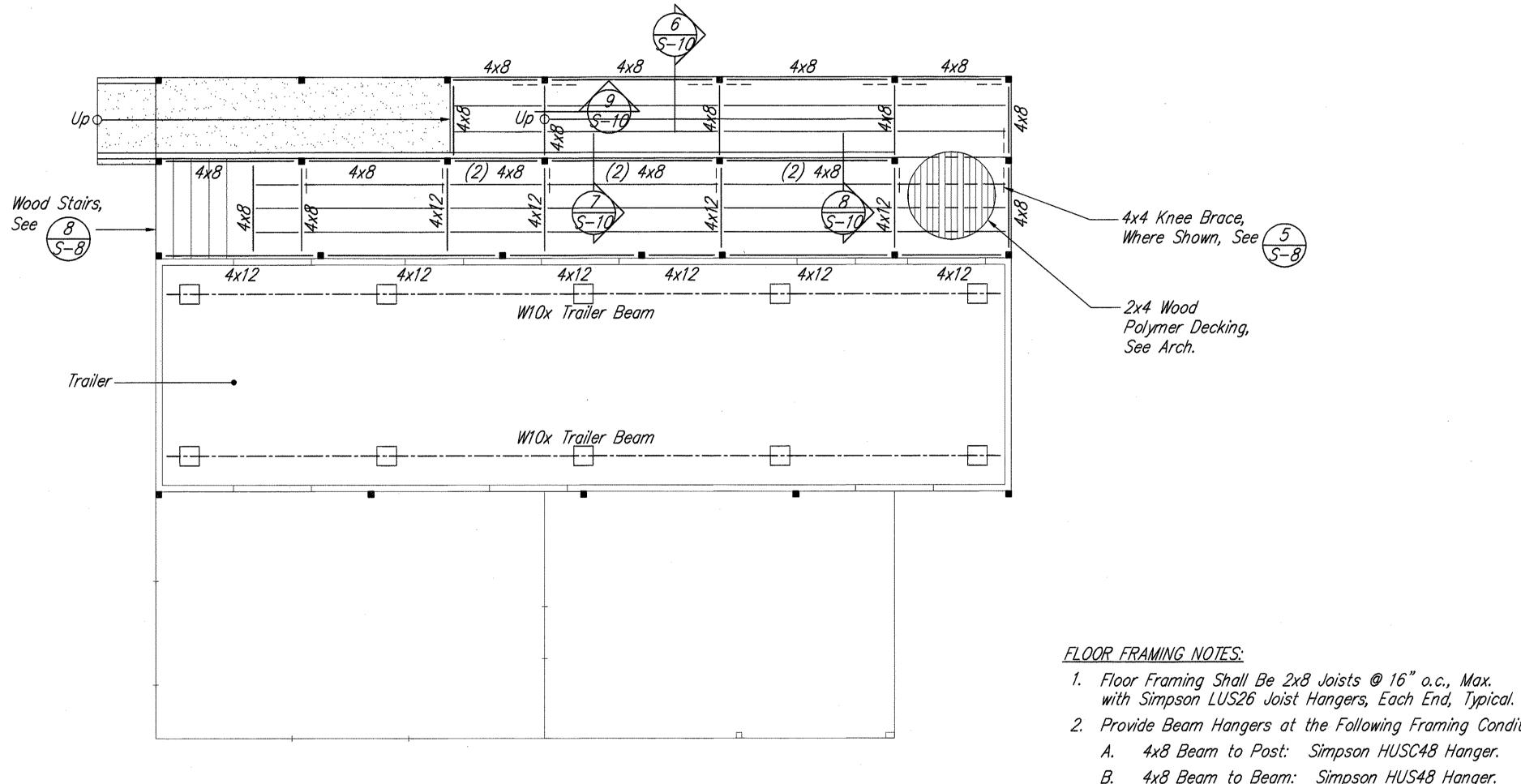
SHEET No. S-3 OF S-13 SHEETS

FINAL SUBMITTAL



"AS-BUILT"

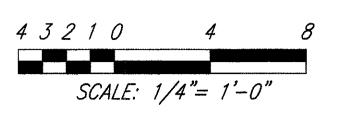
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-02M	2003	28	53

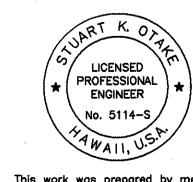


- 2. Provide Beam Hangers at the Following Framing Conditions:
 - A. 4x8 Beam to Post: Simpson HUSC48 Hanger.
 - B. 4x8 Beam to Beam: Simpson HUS48 Hanger.
 - C. 4x12 Beam to Post: Simpson HUC412 Max Hanger.
- D. 4x12 Beam to Beam: Simpson HU412 Max Hanger. 3. For Railing to Post Connection, See Detail 10/S-10.
- 4. For Balance of Notes, See Foundation Plan.

STORAGE TRAILER, STORAGE ROOM and COVERED PATIO - FLOOR FRAMING PLAN

GRAPHIC SCALE:







STORAGE TRAILER, STORAGE ROOM and COVERED PATIO -FLOOR FRAMING PLAN

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

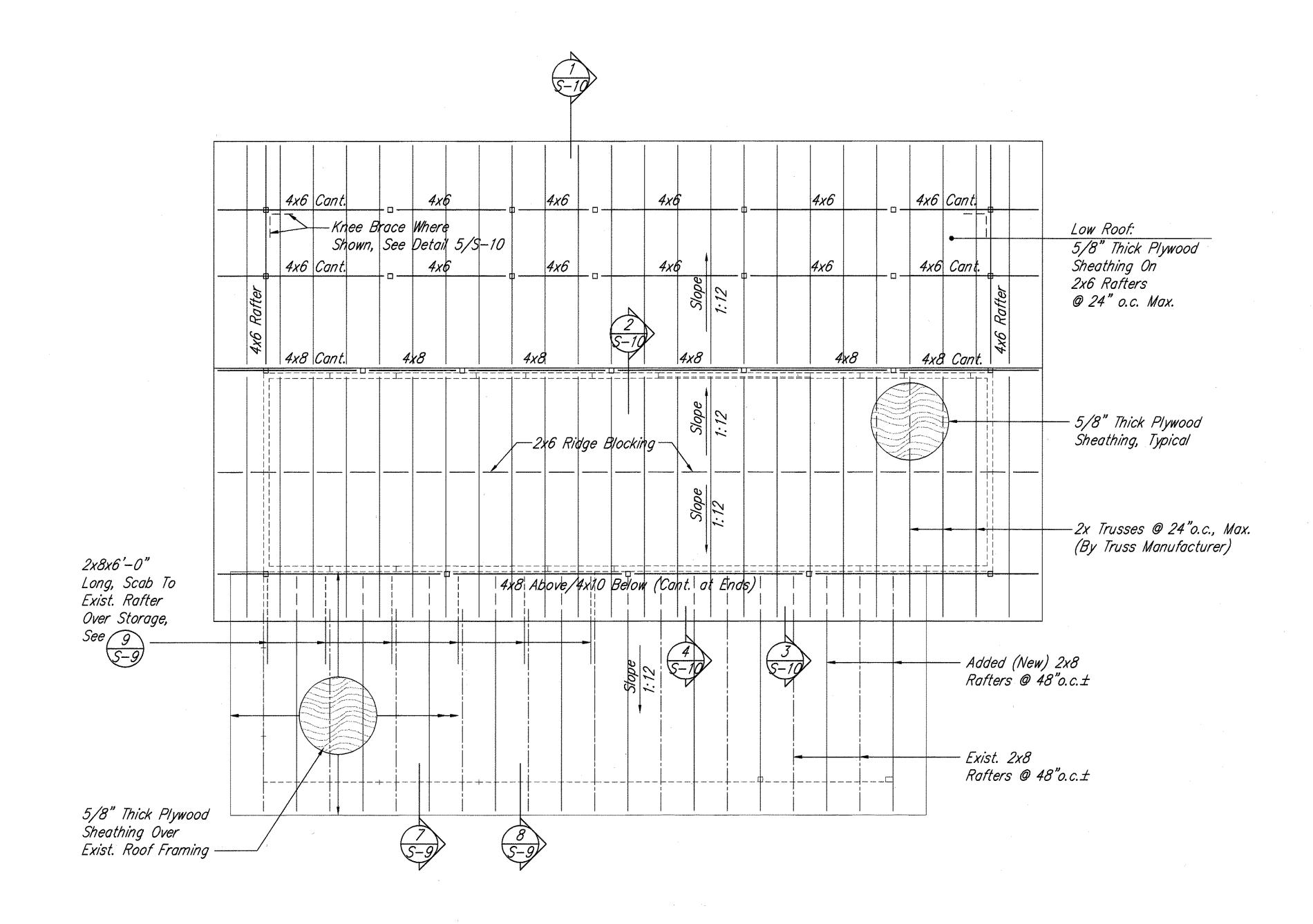
NAALEHU BASEYARD RENOVATIONS Project No. HWY-H-03-02M

Scale: As Noted

Date: April 2003

SHEET No. S-5 OF S-13 SHEETS

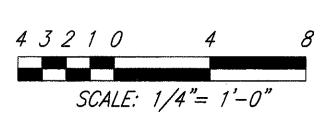
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-02M	2003	29	53

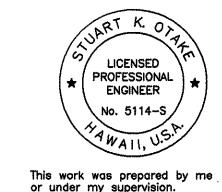


STORAGE TRAILER, STORAGE ROOM and COVERED PATIO - ROOF FRAMING PLAN

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

GRAPHIC SCALE:





STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

STORAGE TRAILER, STORAGE ROOM and COVERED PATIO -

ROOF FRAMING PLAN NAALEHU BASEYARD RENOVATIONS

Project No. HWY-H-03-02M Scale: As Noted Date: April 2003 SHEET No. S-6 OF S-13 SHEETS

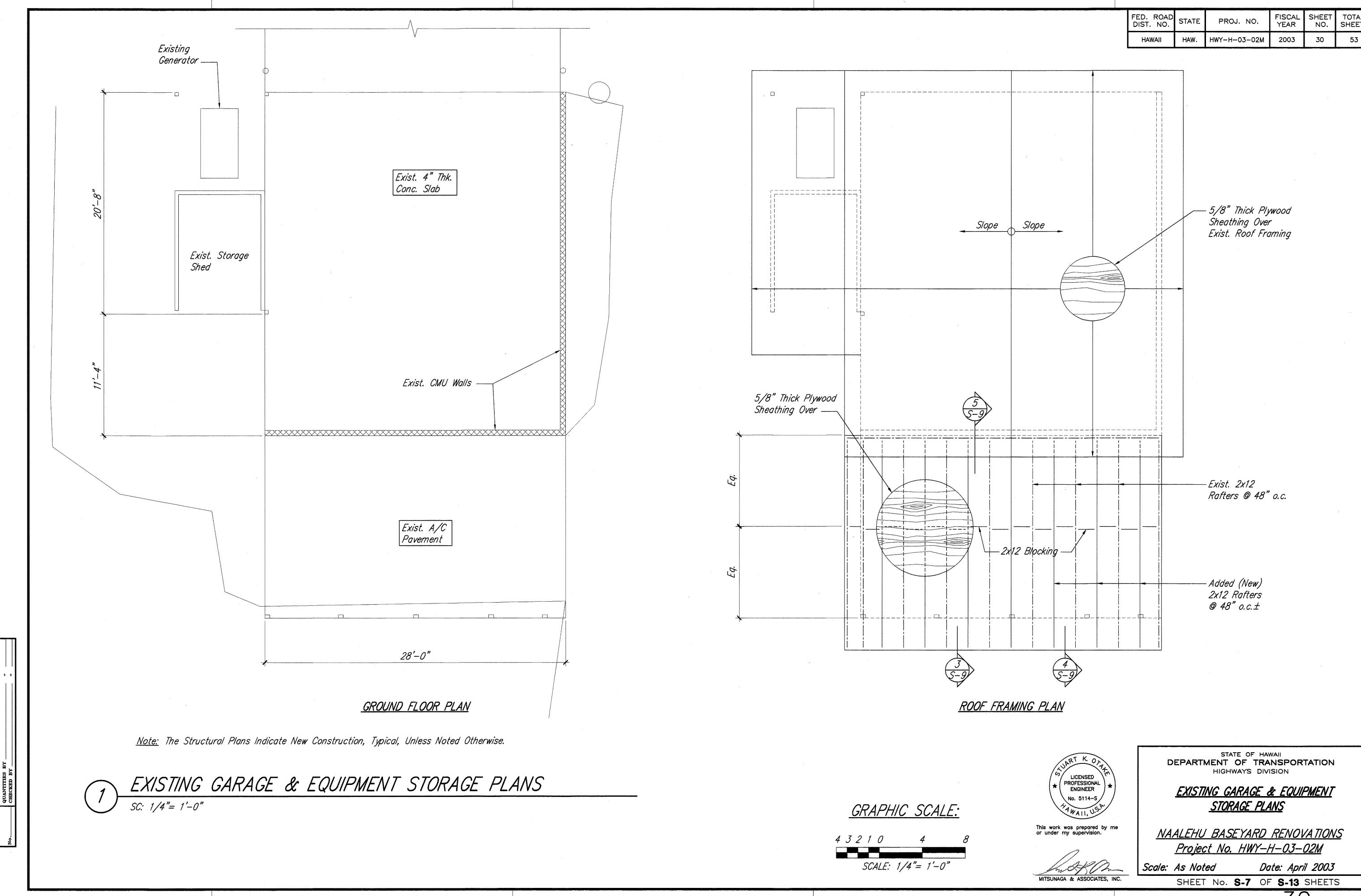
29

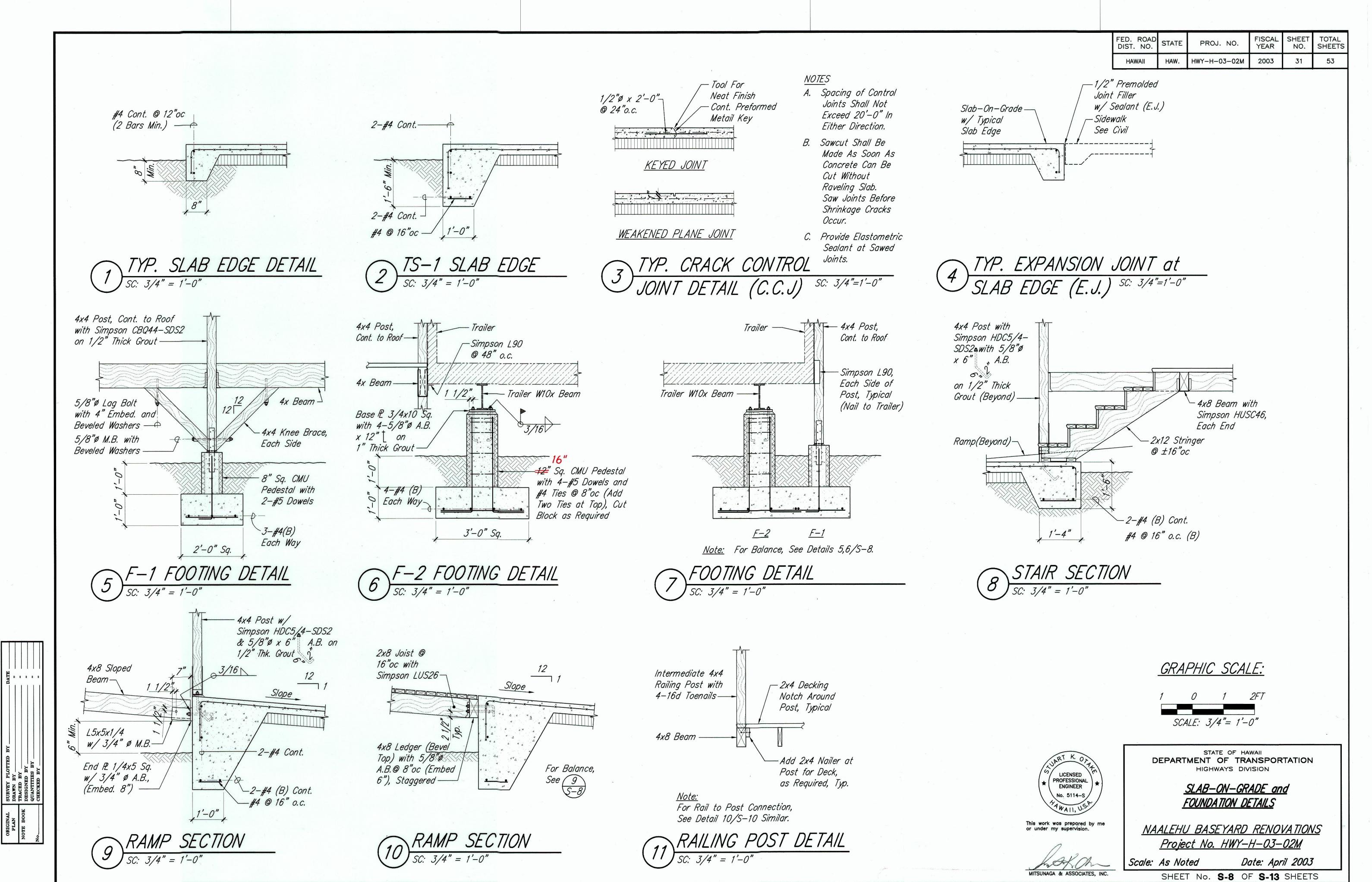
FINAL SUBMITTAL

SURVEY PLOTTED DRAWN BY TRACED BY DESIGNED BY QUANTITIES BY CHECKED BY

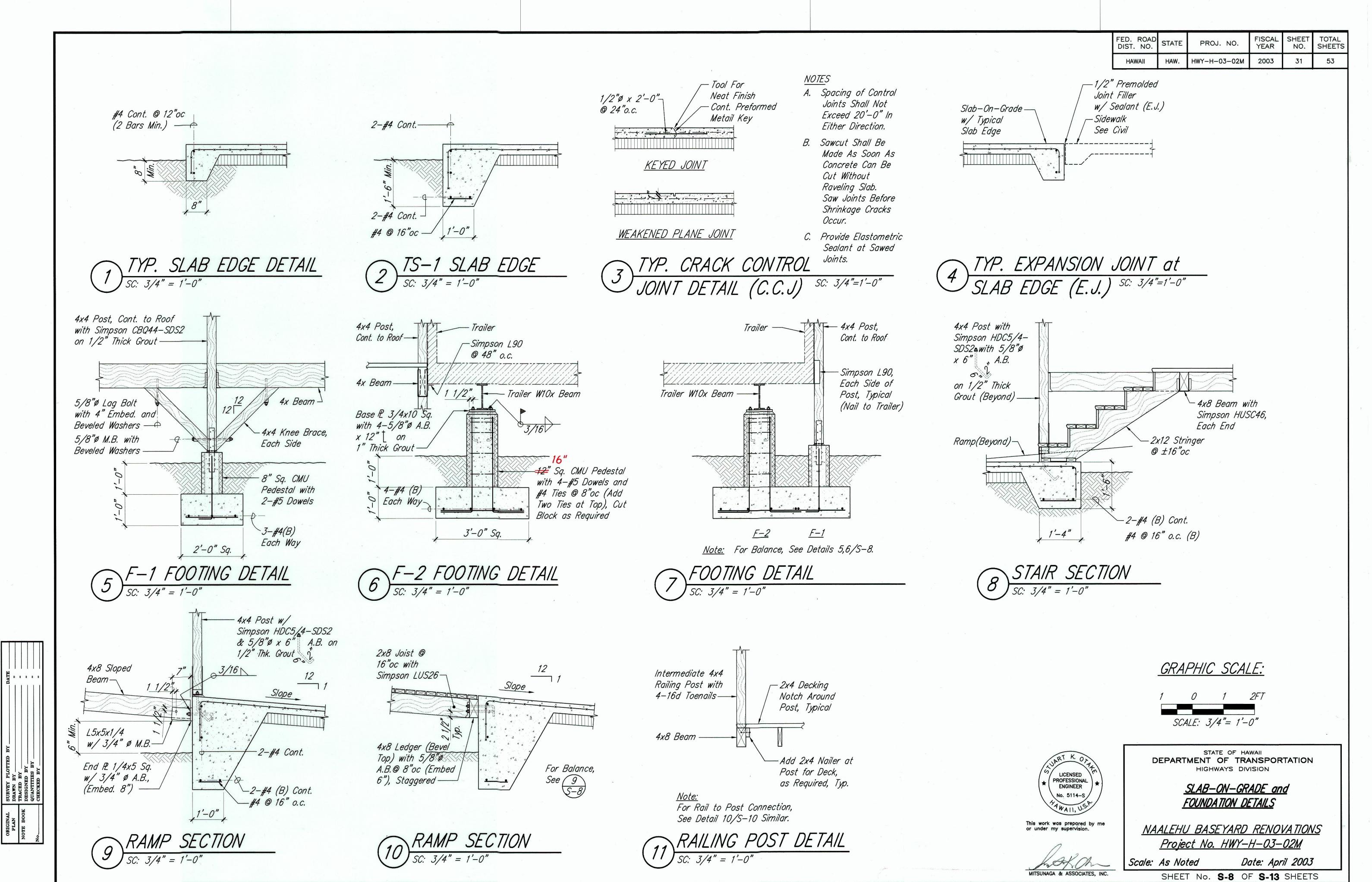
ATE
"
"

MITSUNAGA & ASSOCIATES, INC.

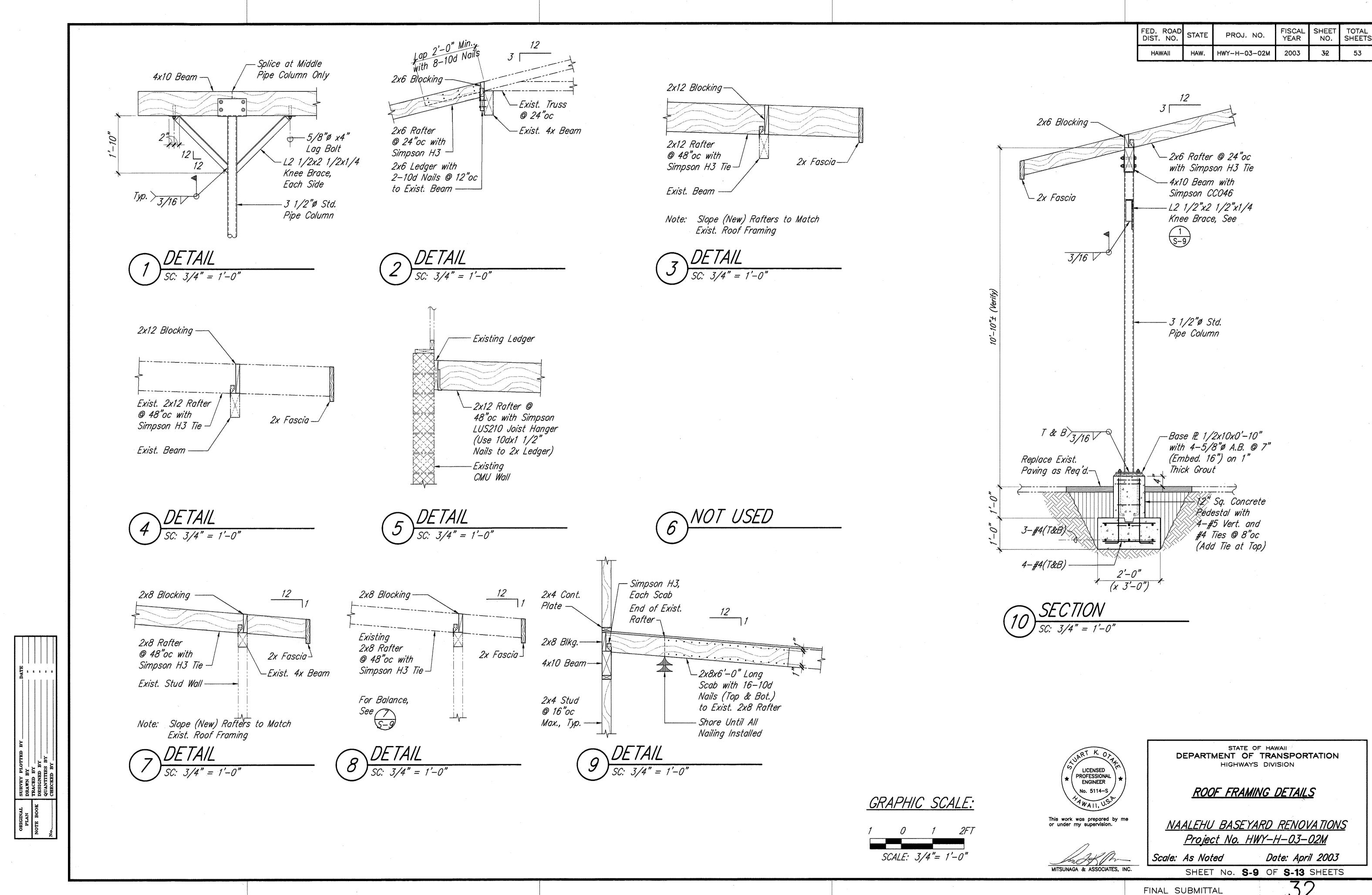


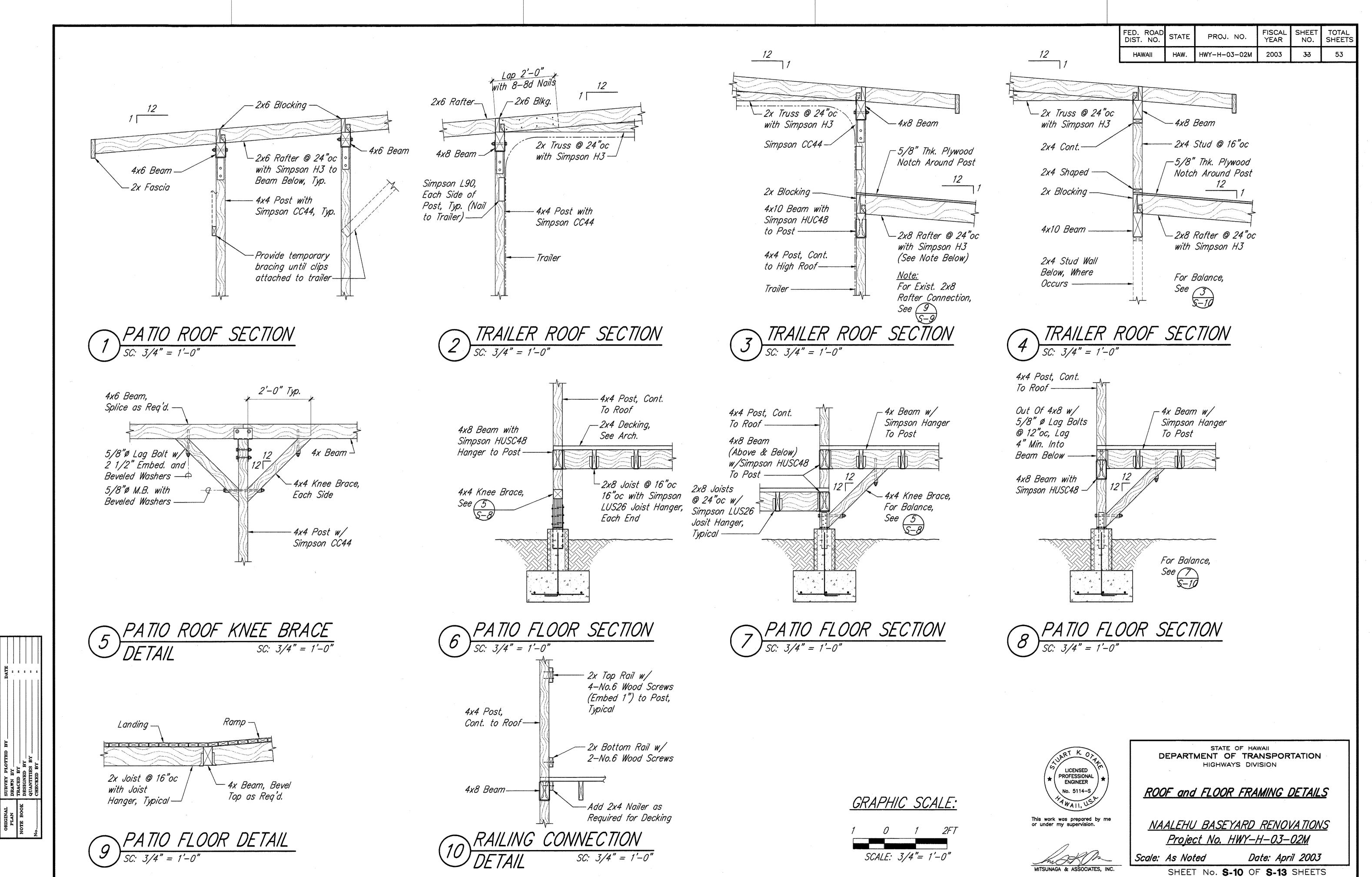


"AS-BUILT"

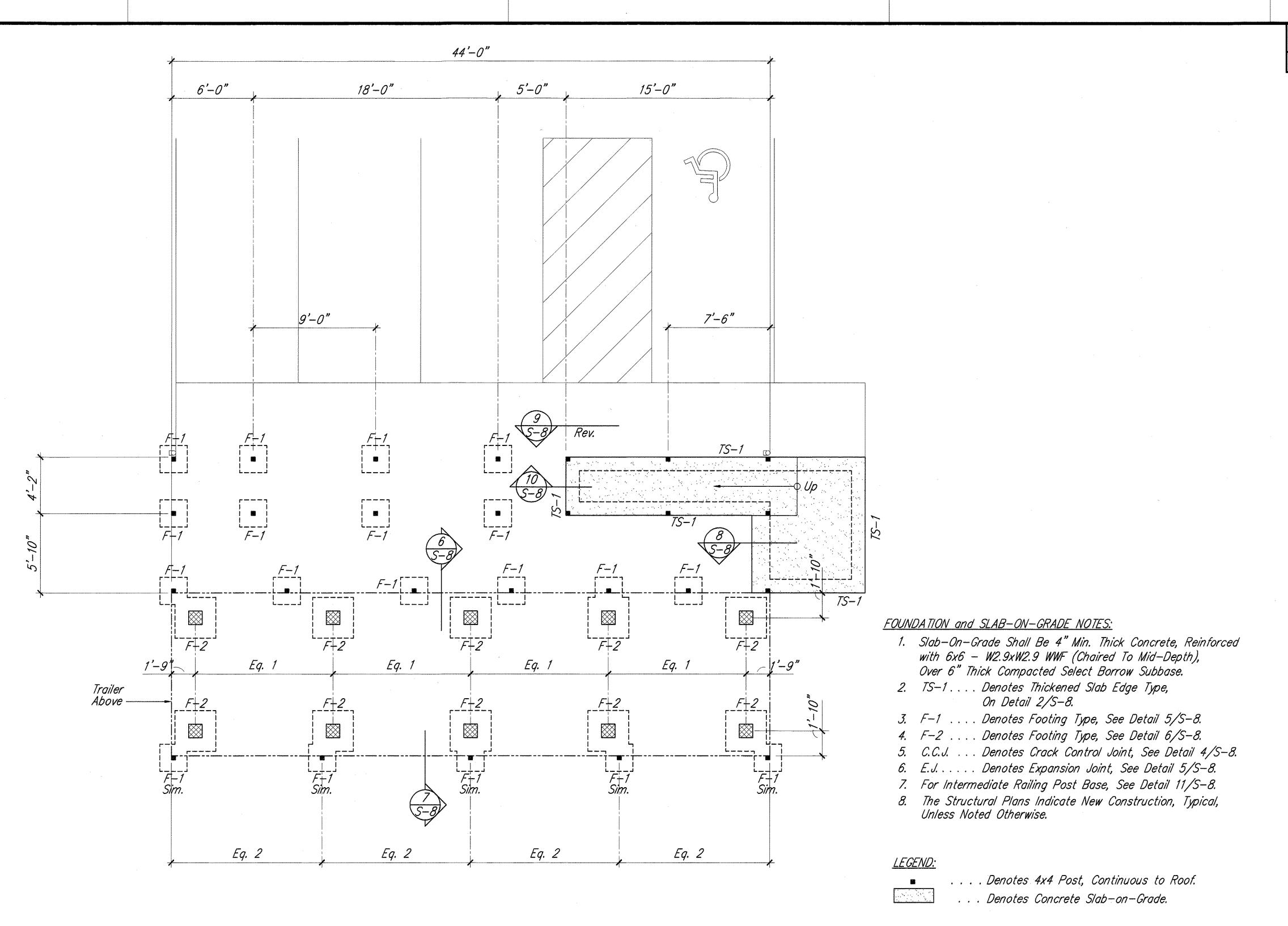


"AS-BUILT"



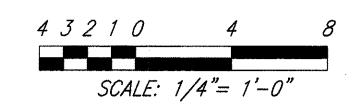


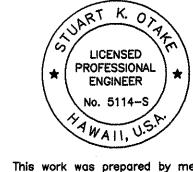
3.3



NEW OFFICE TRAILER and COVERED PATIO (DEDUCTIVE BID ALTERNATE) — FOUNDATION PLAN

GRAPHIC SCALE:





MITSUNAGA & ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

NEW OFFICE TRAILER and COVERED PATIO (DEDUCTIVE BID ALTERNATE) -FOUNDATION PLAN

NAALEHU BASEYARD RENOVATIONS Project No. HWY-H-03-02M

Scale: As Noted

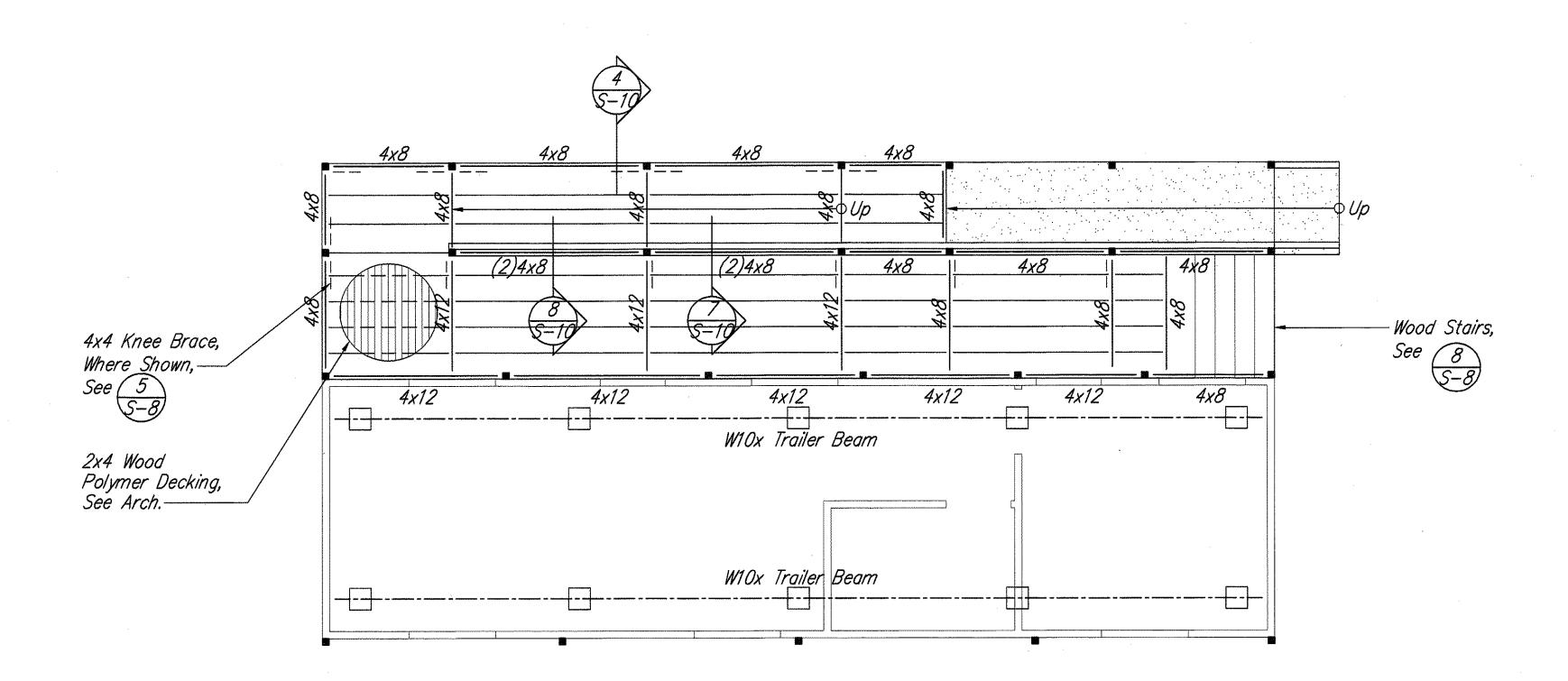
Date: April 2003

2003

SHEET No. S-11 OF S-13 SHEETS

FINAL SUBMITTAL

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-02M	2003	35	53

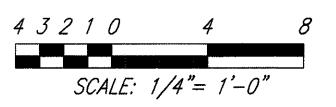


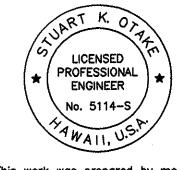
FLOOR FRAMING NOTES:

- 1. Floor Framing Shall Be 2x8 Joists @ 16" o.c., Max. with Simpson LUS26 Joist Hangers, Each End, Typical.
- 2. Provide Beam Hangers at the Following Framing Conditions:
 - A. 4x8 Beam to Post: Simpson HUSC48 Hanger.
 - B. 4x8 Beam to Beam: Simpson HUS48 Hanger.
 - C. 4x12 Beam to Post: Simpson HUC412 Max Hanger.
 - D. 4x12 Beam to Beam: Simpson HU412 Max Hanger.
- 3. For Railing to Post Connection, See Detail 10/S-10.
- 4. For Balance of Notes, See Foundation Plan.



GRAPHIC SCALE:





STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

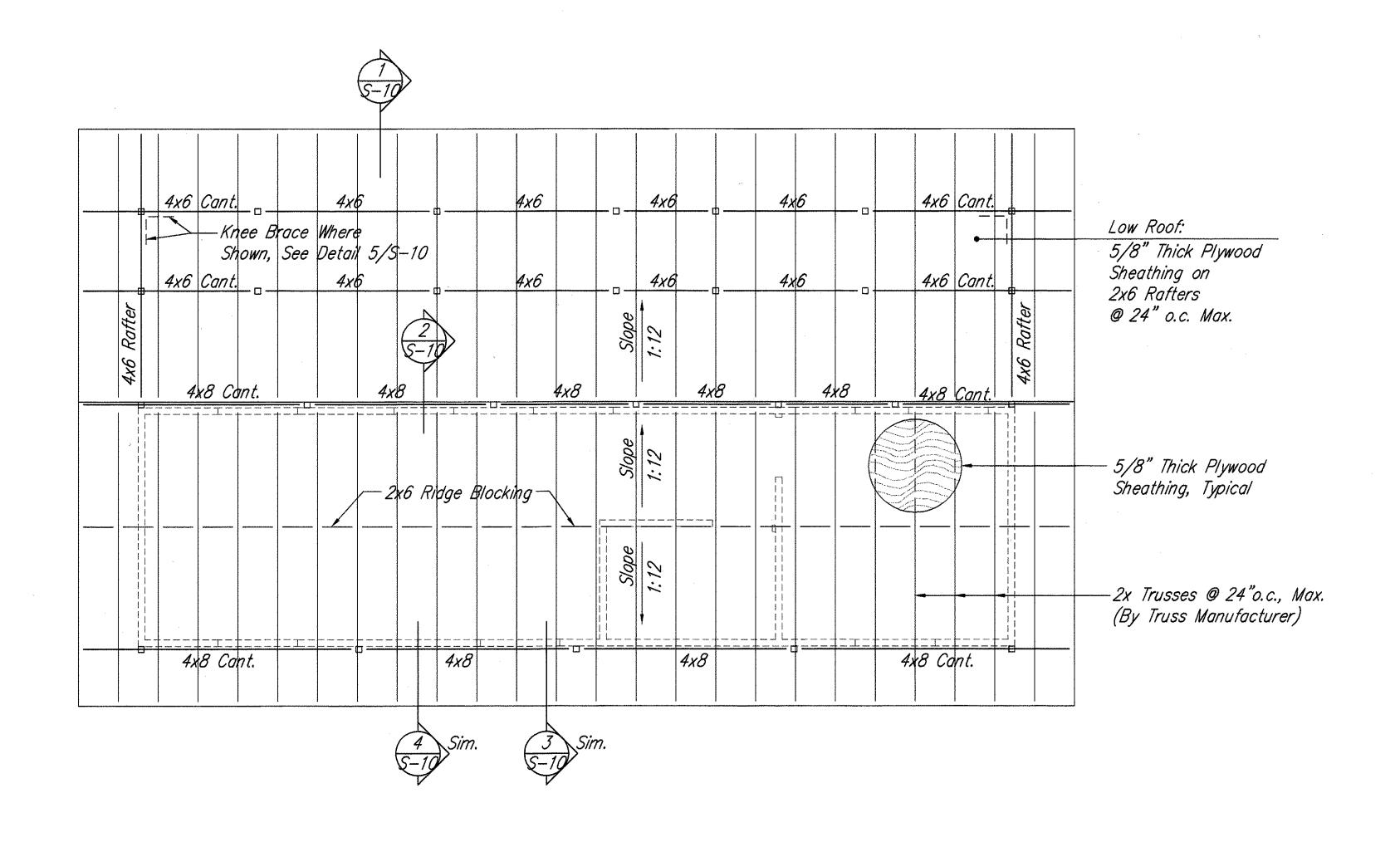
NEW OFFICE TRAILER and COVERED PATIO (DEDUCTIVE BID ALTERNATE) -FLOOR FRAMING PLAN

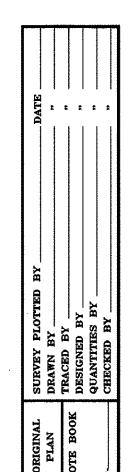
NAALEHU BASEYARD RENOVATIONS Project No. HWY-H-03-02M

Scale: As Noted

Date: April 2003 SHEET No. S-12 OF S-13 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-03-02M	2003	36	53

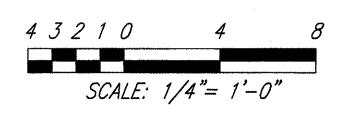




NEW OFFICE TRAILER and COVERED PATIO (DEDUCTIVE BID ALTERNATE) — ROOF FRAMING PLAN

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

GRAPHIC SCALE:





STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

NEW OFFICE TRAILER and COVERED PATIO (DEDUCTIVE BID ALTERNATE) -ROOF FRAMING PLAN

NAALEHU BASEYARD RENOVATIONS Project No. HWY-H-03-02M

Scale: As Noted Date: April 2003 SHEET No. S-13 OF S-13 SHEETS