

ABBREVIATIONS

ABBR	ABBREVIATION	OB	OUTBOUND
ABV	ABOVE	OC	ON CENTER
ASSY	ASSEMBLY	PDI	PLUMBING DRAINAGE INSTITUTE
ARCH	ARCHITECTURAL	PL	PLATE
BHP	BRAKE HORSE POWER	POC	POINT OF CONNECTION
BOP	BOTTOM OF PIPE	PSI	POUNDS PER SQUARE INCH
CI	CAST IRON	PVC	POLYVINYL CHLORIDE
CLG	CEILING	REQ'D	REQUIRED
CL	CENTERLINE	RM	ROOM
CONN	CONNECTION/CONNECT	RPM	REVOLUTIONS PER MINUTE
CONT	CONTINUATION	SPEC	SPECIFICATION
DET	DETAIL	STD	STANDARD
DIA	DIAMETER	STRUCT	STRUCTURAL
DN	DOWN	STL	STEEL
DWG	DRAWING	TEMP	TEMPERATURE
ELEC	ELECTRICAL	TP	TRAP PRIMER
ELEV	ELEVATOR	TYP	TYPICAL
F	DEGREES FAHRENHEIT	VB	VALVE BOX
FHC	FIRE HOSE CABINET	VS	VALVE STATION
FLEX	FLEXIBLE	VT	VENT TERMINATION
FLR	FLOOR	WH	WATER HEATER
FIN	FINISHED	FW	FIRE WATER
FP	FIRE PROTECTION	WSP	WET STAND PIPE
FT	FEET	FH	FIRE HYDRANT
GALV	GALVANIZED	CP	CROSSPASSAGE
GPM	GALLONS PER MINUTE	D.I.	DUCTILE IRON
HP	HORSE POWER	V	VENT (SANITARY)
HZ	HERTZ	VTR	VENT THRU ROOF
IB	INBOUND		
IE	INVERT ELEVATION		
IN	INCHES		
KW	KILOWATT		
MAX	MAXIMUM		
MECH	MECHANICAL		
MIN	MINIMUM		
NC	NORMALLY CLOSED		
NIC	NOT IN CONTRACT		
NO	NORMALLY OPEN		
NPT	NATIONAL PIPE THREAD		
NTS	NOT TO SCALE		

PIPING

FIRE PROTECTION AND DOMESTIC WATER

— CW —	DOMESTIC COLD WATER	— SD —	STORM DRAIN
— FW —	FIRE WATER	— V —	VENT
— WSP —	WET STANDPIPE	— S —	SANITARY SEWER
— TW —	TUNNEL WASH	— DD —	DUCT DRAIN
— D —	DRAINAGE	— OD —	OVERFLOW DRAIN

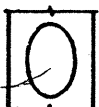
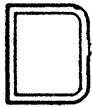
FITTINGS

PLAN	PIPE UP	PIPE DOWN	
			ELBOW - 90° SHORT RADIUS
			ELBOW - 90° LONG RADIUS
			ELBOW - 45°
			TEE

SYMBOLS

SYMBOL	ABBR.	DESCRIPTION
		UNION
		FLANGED JOINT
	EJ	EXPANSION JOINT
		CAP ON END OF PIPE
		DIRECTION OF SLOPE
		THERMOMETER w/SEP. SOCKET WELL
		PRESSURE GAUGE w/PET COCK
		PUMP
		STRAINER
		REDUCER - ECCENTRIC DOWN
		REDUCER - CONCENTRIC
		REDUCER - ECCENTRIC UP
	FD	FLOOR DRAIN
	FS	FLOOR SINK
	RD	ROOF DRAIN
	OD	OVERFLOW DRAIN
	AD	AREA DRAIN
	FCO	FLOOR CLEANOUT
	GCO	GRADE CLEANOUT
	PLD	PLANTER DRAIN
	WCO	WALL CLEANOUT
	BFP	BACKFLOW PREVENTOR (INDICATE TYPE)
	AVB	ATMOSPHERIC VACUUM BREAKER
	GV	GATE VALVE
	GLV	GLOBE VALVE
	CV	CHECK VALVE
	HB	HOSE BIBB
	PSV	PRESSURE SAFETY VALVE
	BV	BUTTERFLY VALVE
		AIR RELIEF AND VACUUM RELIEF VALVE
	PRV	PRESSURE REGULATOR VALVE
	TPV	TRAP PRIMER VALVE
	WHA	WATER HAMMER ARRESTER, PDI AS SHOWN
		EQUIPMENT IDENTIFICATION TAG
	FDC	ROOF FIRE DEPARTMENT OUTLET CONNECTION
	FH	FIRE HYDRANT
	AV	AIR/VACUUM VALVE
		FLEXIBLE COUPLING FOR GROOVED-END PIPE

PLUMBING FIXTURES

<u>SYMBOL</u>	<u>ABBR.</u>	
	WC	WATER CLOSET
	UR	URINAL
	LAV	LAVATORY
	SS	SERVICE SINK
	BS	BATTERY SINK
	KS	KITCHEN SINK
	EWC	ELECTRIC WATER COOLER
	ES	EMERGENCY SHOWER & EYE-WASH

FIRE PROTECTION EQUIPMENT

	FIRE EXTINGUISHER - ABC
	FIRE EXTINGUISHER - HALON
	FIRE HOSE CABINET - SURFACE MOUNTED
	FIRE HOSE CABINET - RECESSED
	FIRE HOSE VALVE
COMB. FHC	COMBINATION FIRE HOSE CABINET

CONTROLS AND INSTRUMENTATION

(FS)	FLOW SWITCH
(FE)	FLOW ELEMENT
(FQI)	FLOW INDICATOR (TOTALIZER)
(ZS)	POSITION SWITCH
(PSV)	PRESSURE SAFETY VALVE
(PS)	PRESSURE SWITCH
(HS)	HAND SWITCH—HAND/OFF/AUTO
(PI)	PRESSURE INDICATOR
(LALL)	LEVEL ALARM—LOW LOW
(LSL)	LEVEL SWITCH—LOW
(LSH)	LEVEL SWITCH—HIGH
(LAH)	LEVEL ALARM—HIGH
IV	ISOLATION VALVE
LCP	LOCAL CONTROL PANEL
(LAL)	LEVEL ALARM—LOW

GENERAL NOTES

1. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE ITEMS WHICH MAY NOT BE PRESENTLY PART OF THIS CONTRACT.
2. ALL DRAINAGE LINES SHALL BE AT 1% MINIMUM SLOPE UNLESS OTHERWISE NOTED
3. ALL SANITARY LINES SHALL BE AT 2% MINIMUM SLOPE UNLESS OTHERWISE NOTED.
4. FOR BACKGROUND INFORMATION SEE ARCHITECTURAL AND STRUCTURAL PLANS.
5. ALL PIPING, SLEEVES AND ATTACHMENTS SHOWN ARE EMBEDDED IN THE CONCRETE FLOORS AND WALLS OF THE STRUCTURE UNLESS OTHERWISE NOTED.
6. CARE SHALL BE TAKEN TO AVOID ANY CONTACT BETWEEN EMBEDMENTS AND STRUCTURAL REINFORCING STEEL.

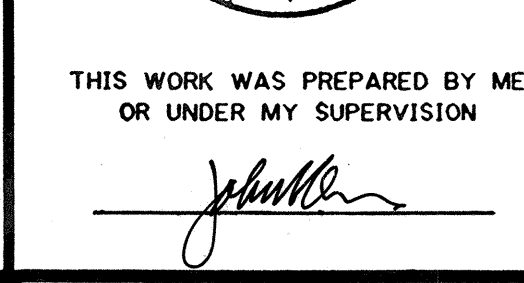
GENERAL NOTES

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

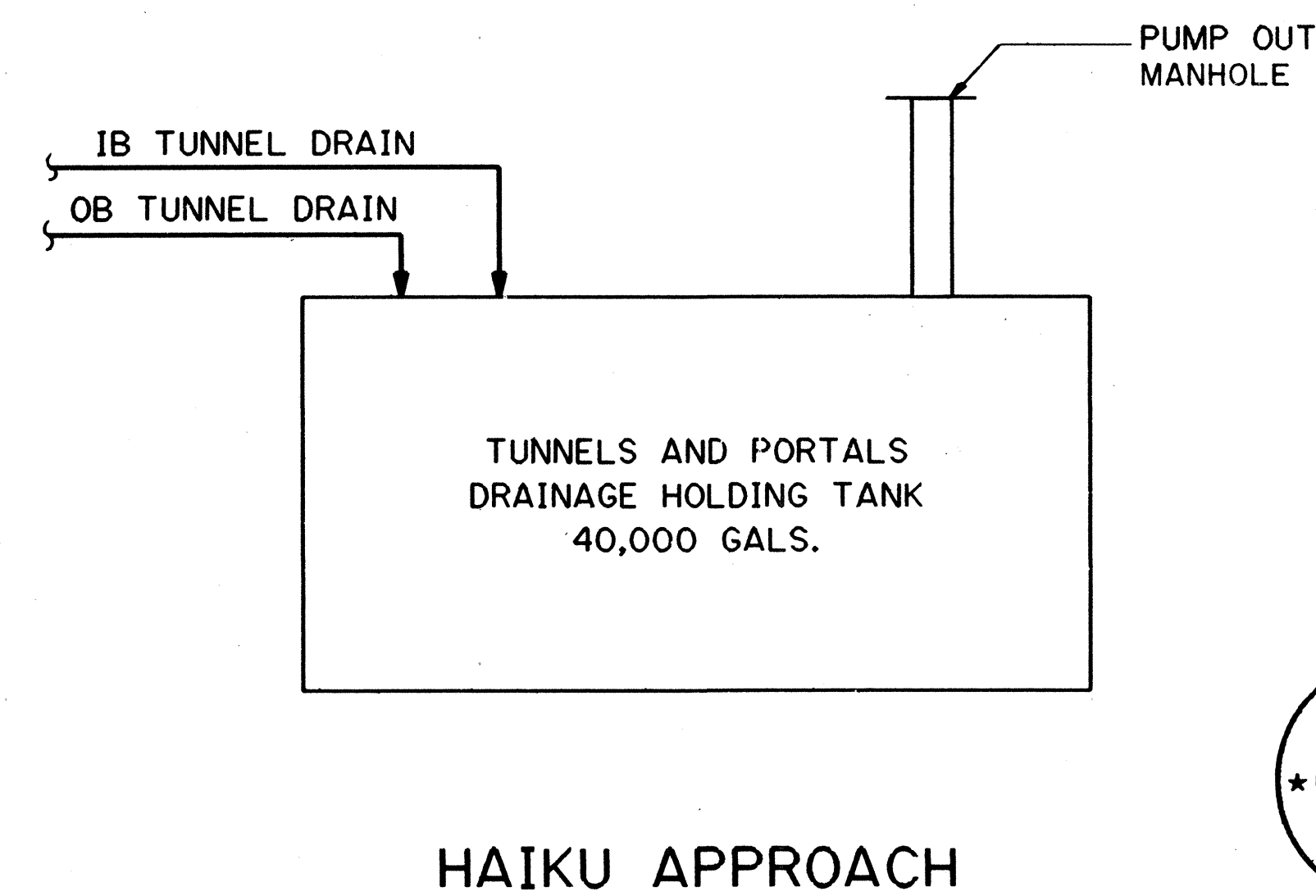
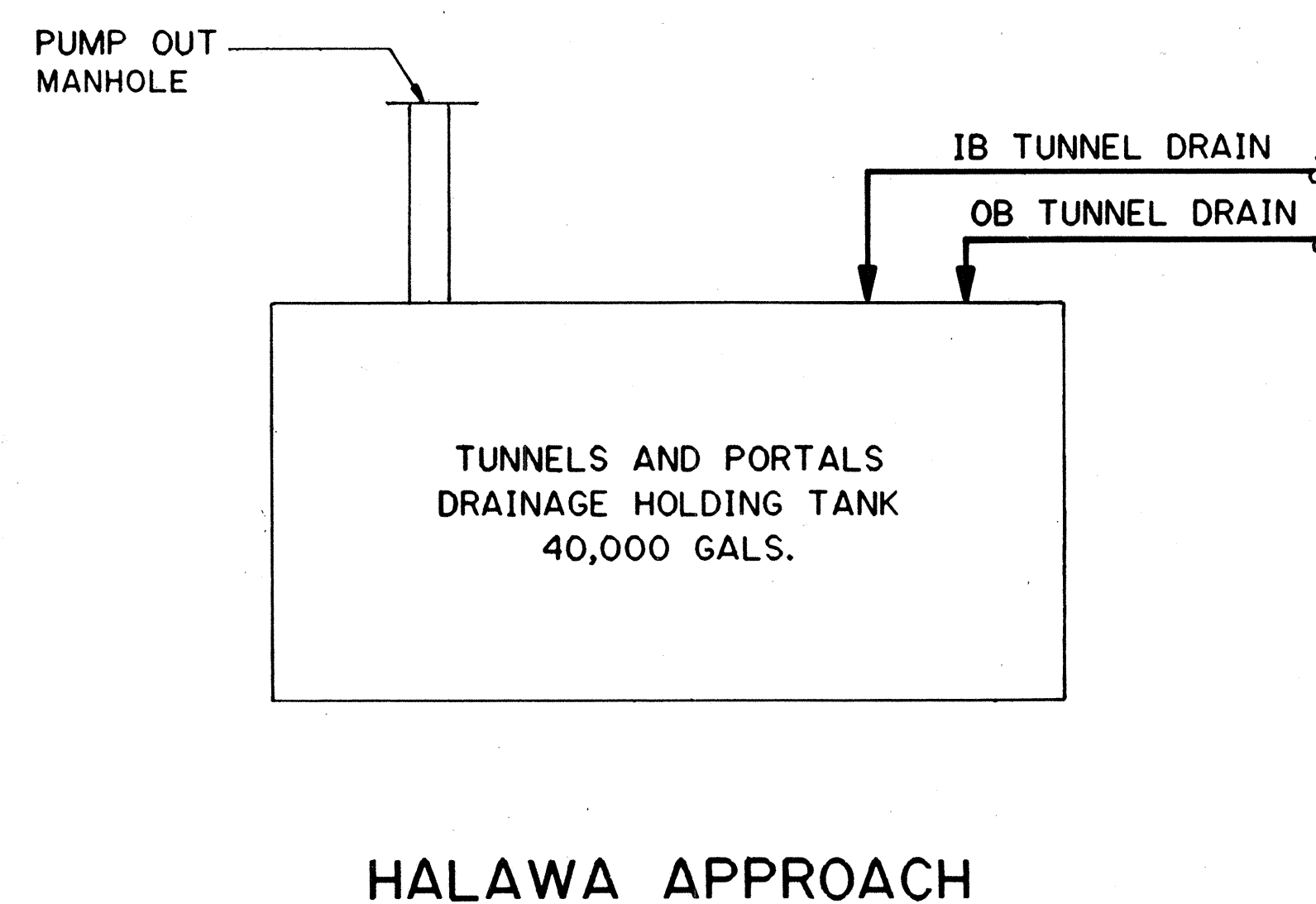
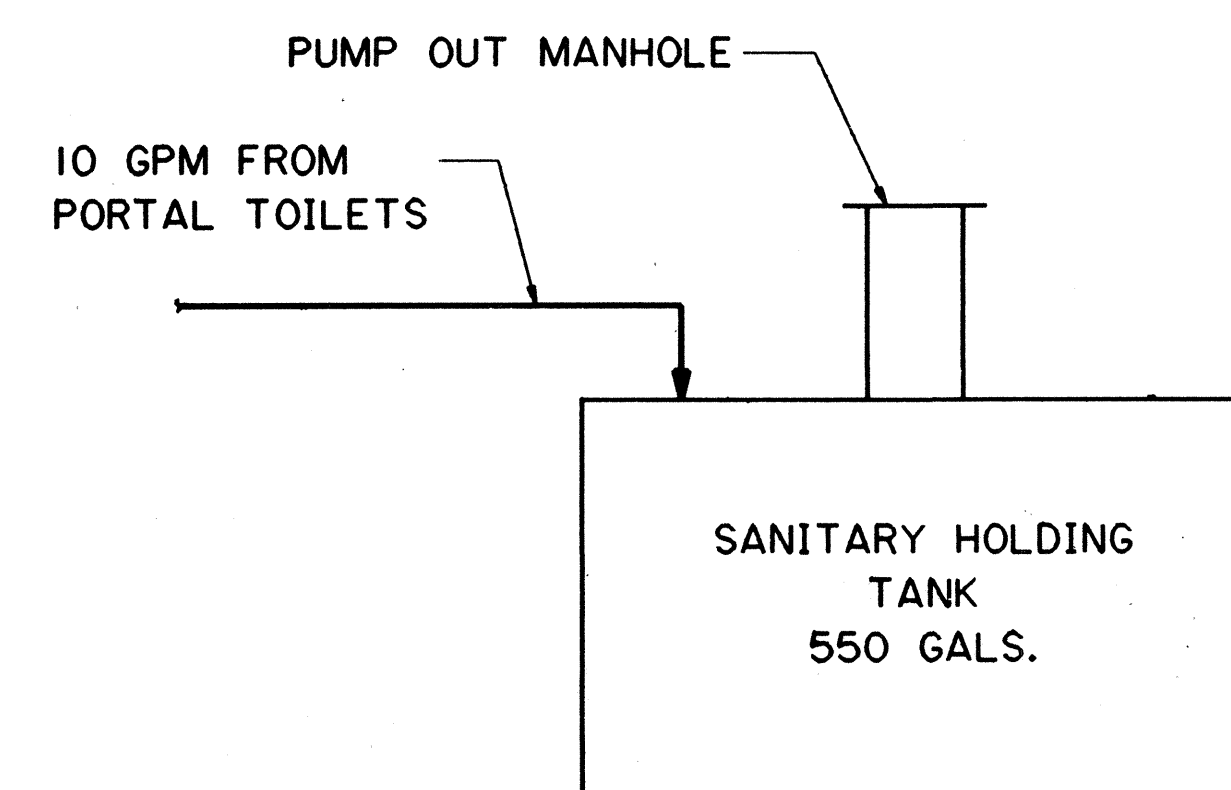
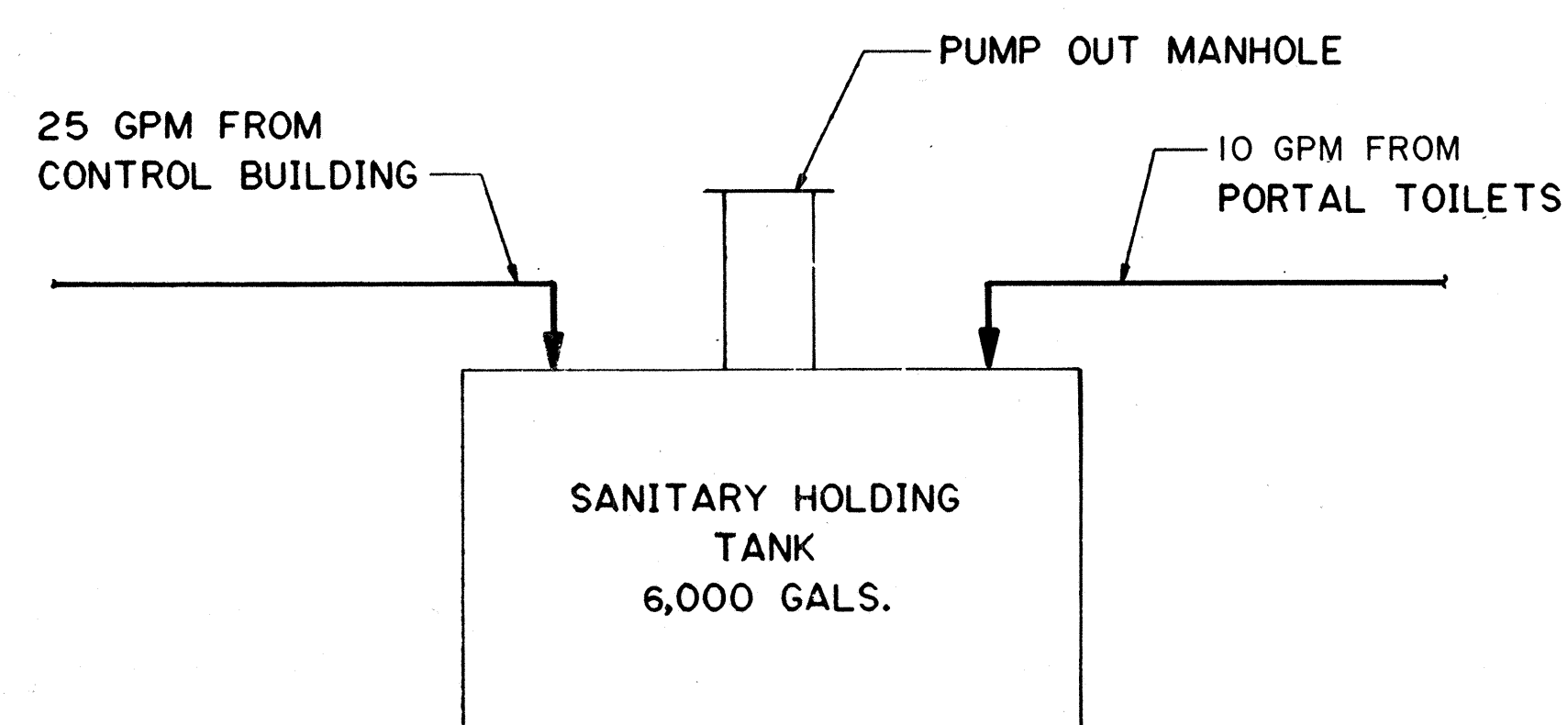
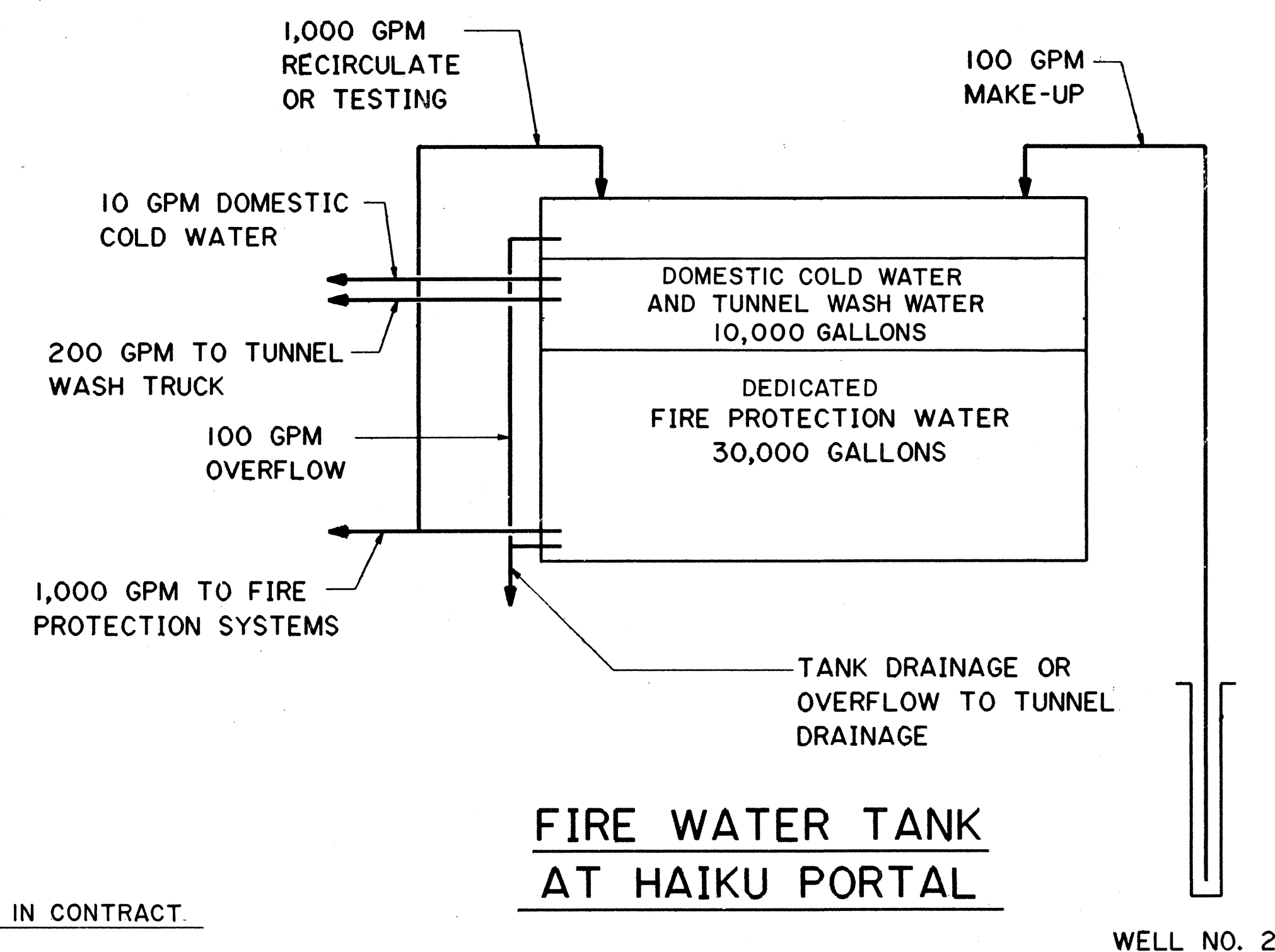
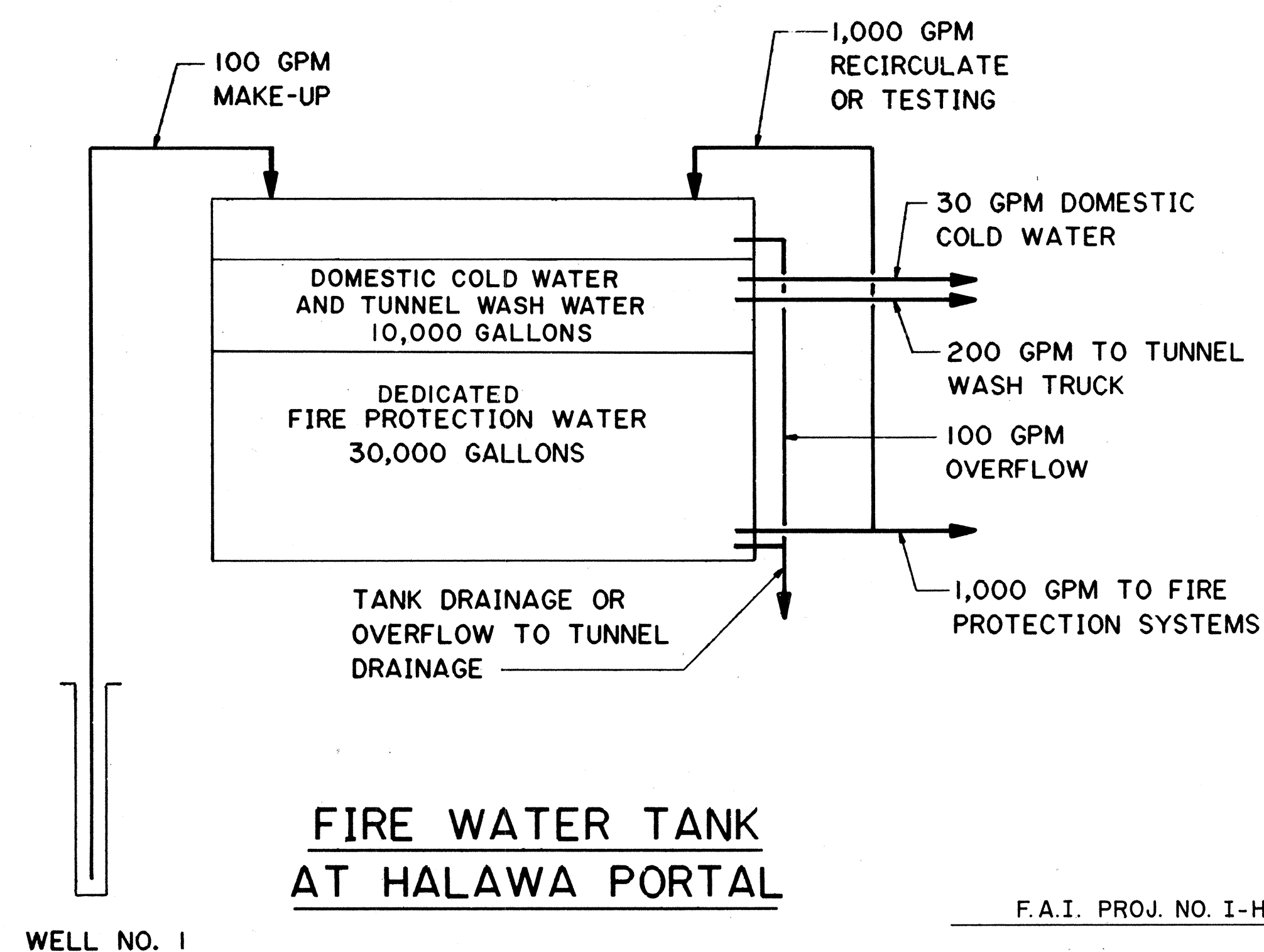
PLUMBING-LEGEND. SYMB.,
ABBR. & GEN. NOTES
STANDARDS
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-I(64)

SCALE: NONE DATE: JUN 1990

SHEET NO. M1 OF 8 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(64)	1990	388	531

A circular professional engineer seal for John N. Que. The outer ring contains the name "JOHN N. QUE" at the top and "HAWAII, U.S.A." at the bottom. The inner circle contains the text "REGISTERED PROFESSIONAL ENGINEER" and the license number "No. 6503-M". A small star is located on the left side of the inner circle.

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OR UNDER MY SUPERVISION

DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER BALANCE

DIAGRAM

STANDARDS

INTERSTATE ROUTE H-3

F.A.I. PROJ. NO. I-H3-I(64)

SCALE: NONE
DATE: JUN 1990

SHEET NO.
M2
OF
8
SHEETS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLUMBING -
PIPING DIAGRAM
STANDARDS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-I (64)

SCALE : NONE DATE : JUN 1990

SHEET NO. M3 OF 8 SHEETS

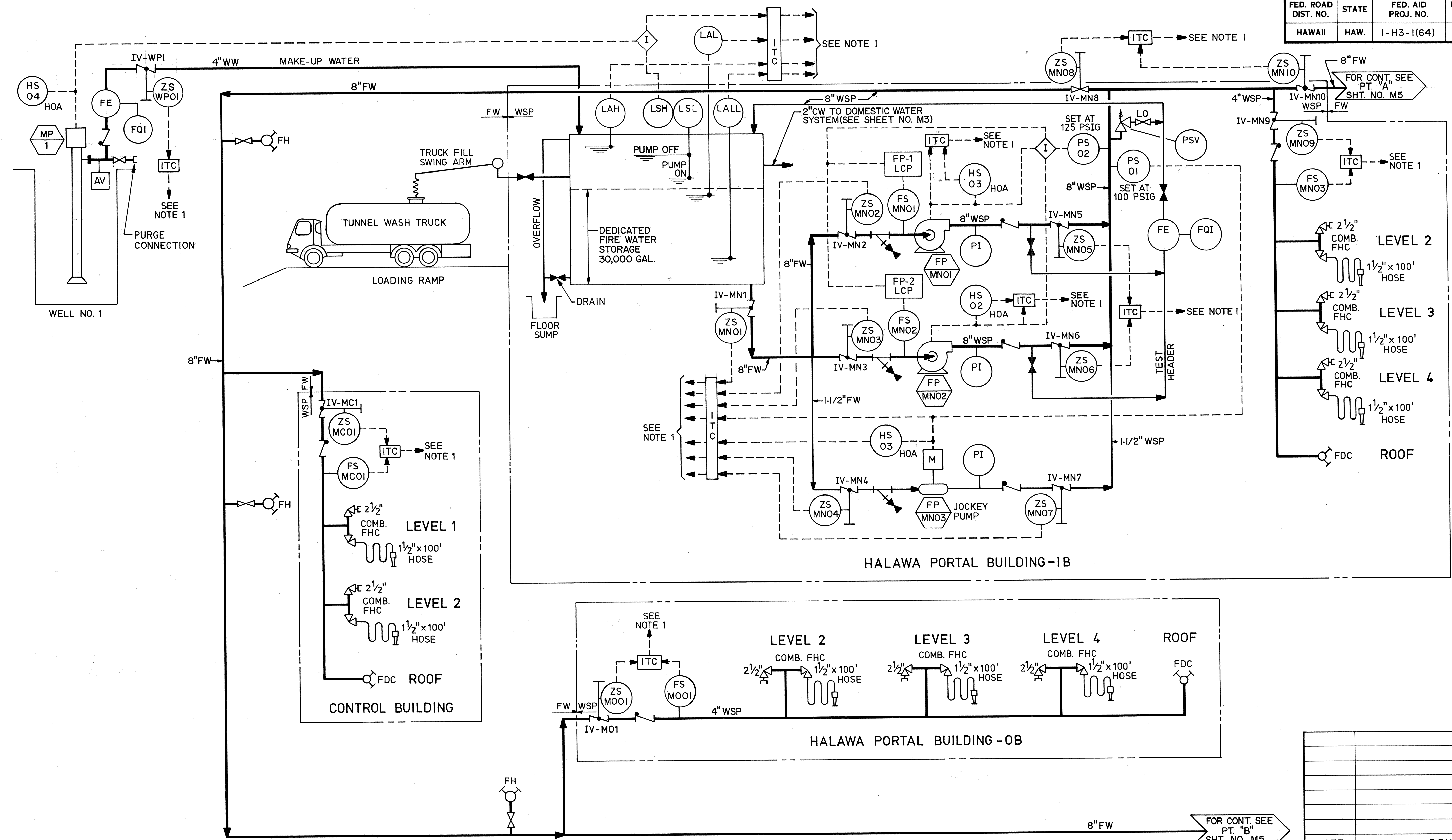
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John A. ...

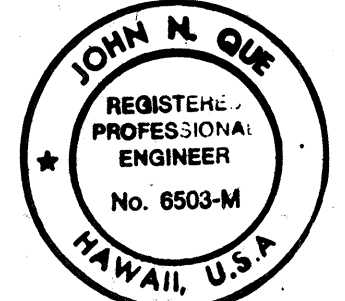
HAIKU PORTALS

NOT IN CONTRACT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(64)	1990	390	531



- NOTES:**
1. CONTROL TRANSMISSION TO TUNNEL FIRE PROTECTION SYSTEM DISPLAY.
 2. DIAGRAM SHOWN ON THIS PLAN SERVES AS OVERALL SCHEMATIC REPRESENTATION OF THE FIRE WATER SYSTEM AT HALAWA PORTAL AREA.
 3. ITC INTERFACE TERMINAL CABINET



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DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FIRE PROTECTION- P&ID 1

STANDARDS
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(64)

SCALE: NONE DATE: JUN 1990

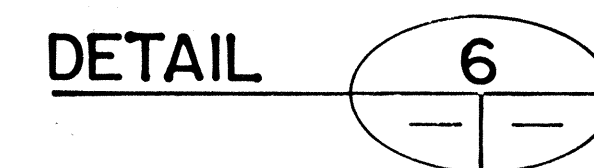
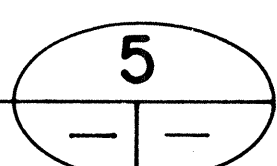
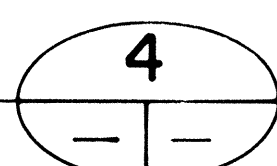
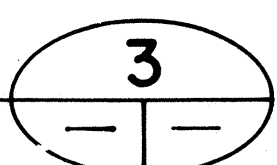
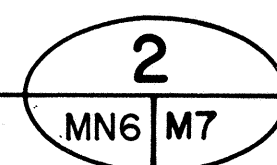
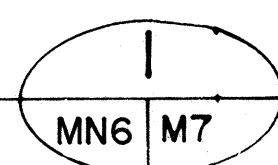
SHEET NO. M4 OF 8 SHEETS

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	07/16/89
DRAWN BY	D.E. DRYDEN
DESIGNED BY	07/13/89
CHECKED BY	J.N. QUE
	05/28/90

DATE	REVISION
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ORIGINAL PLAN	SURVEY PLOTTED BY B. F. BUNYI	DATE 5/22/89
NOTE BOOK	TRACED BY DESIGNED BY P. L. LAQUE	3/15/89
NO	QUANTITIES BY CHECKED BY J. N. QUE	05/28/90

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STATE OF MAHARASHTRA
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLUMBING DETAILS-2

STANDARDS

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-I(64)

SCALE: NONE DATE: JUN 1990

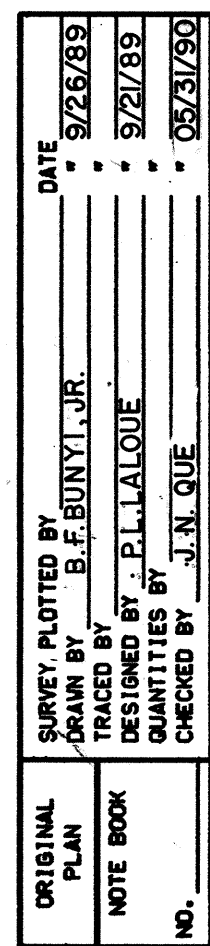
SHEET NO. **M7** OF 8 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY B. F. BUNY	DATE 5/28/89
NOTE BOOK	TRACED BY P. L. LALOUE	DATE 5/3/89
No.	QUANTITIES BY J. N. QUE	DATE 05/28/90

N



DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>PLUMBING -</u> <u>LEVEL 1 PLAN</u> <u>HALAWA PORTAL BUILDING - IB</u> <u>INTERSTATE ROUTE H-3</u> <u>F.A.I. PROJ. NO. I-H3-1(64)</u>	
SCALE: AS NOTED	DATE: JUN 1990
SHEET NO. MNI OF 10 SHEETS	



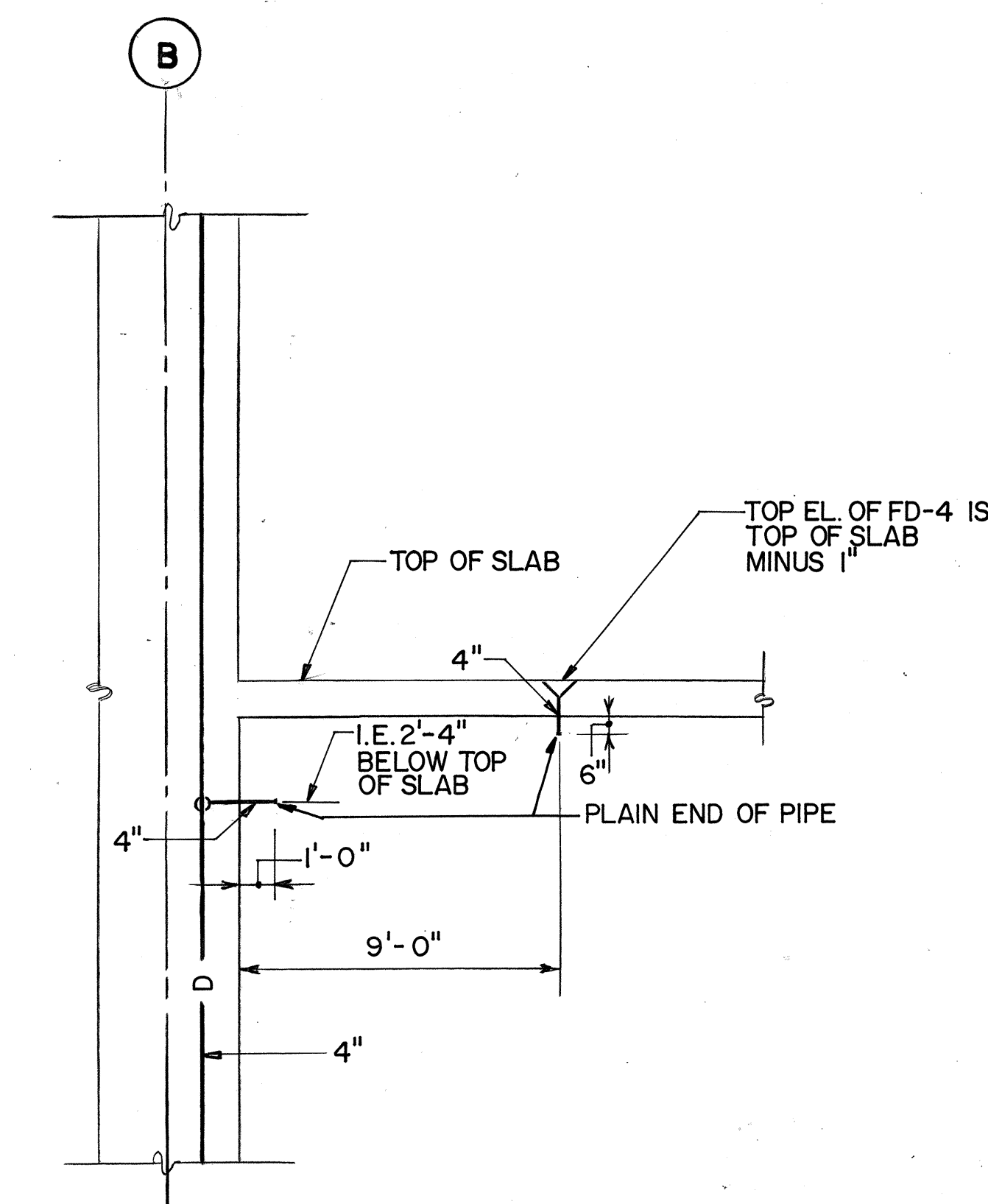
GRAPHIC SCALE

8' 0' 8' 16'

$1/8" = 1'-0"$

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396



A

MN3	MN3
MN4	
MO3	
MO4	

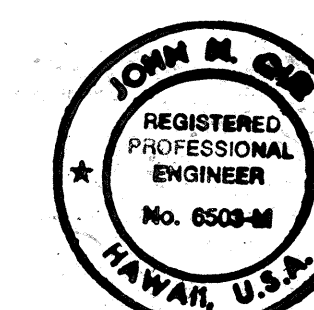
GRAPHIC SCALES

4' 0' 4' 8'

1/4" = 1'-0"

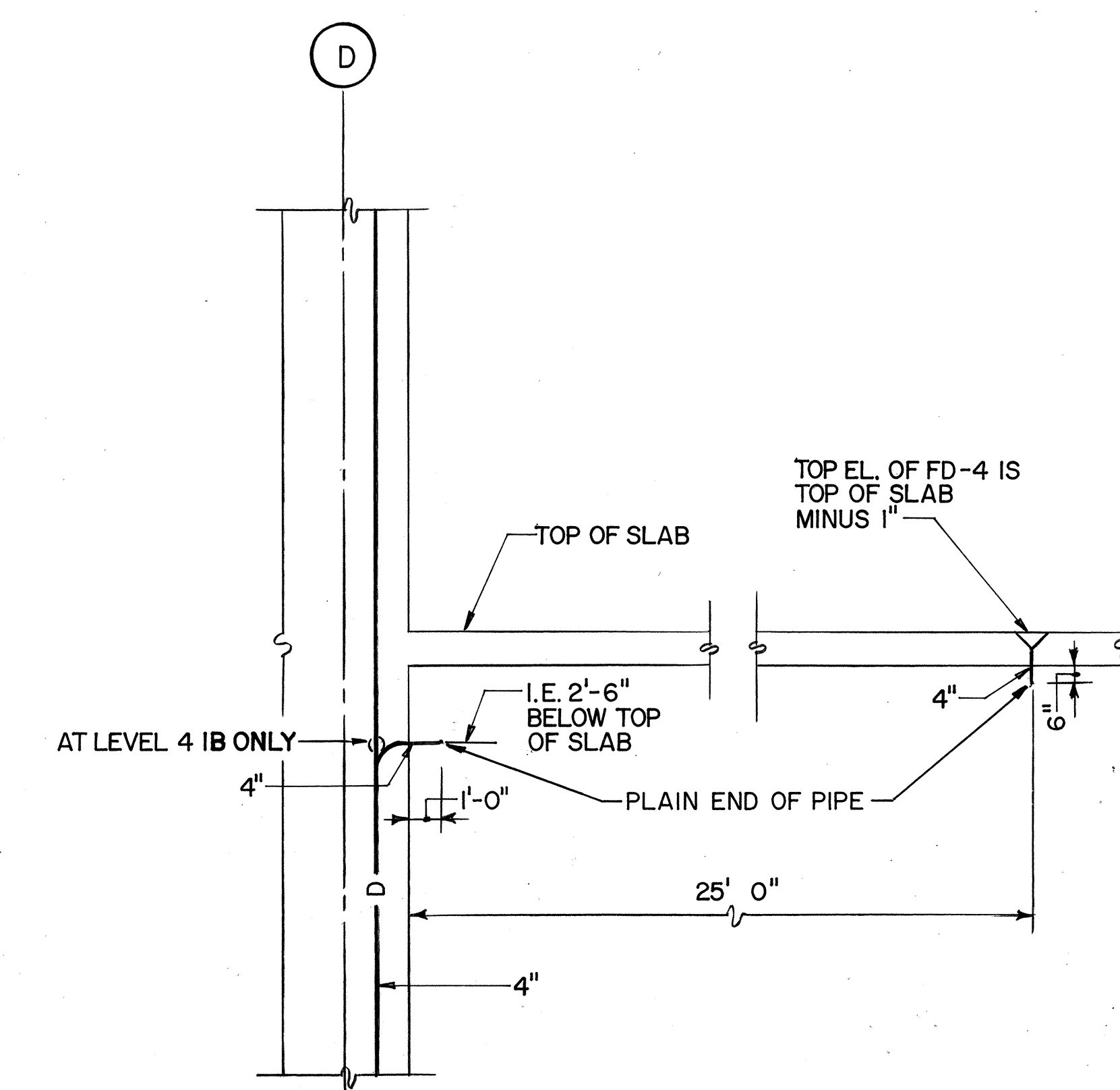
8' 0' 8' 16'

1/8" = 1'-0"



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OR UNDER MY SUPERVISION _____

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>PLUMBING -</u> <u>LEVEL 3 PLAN & SECTION</u> <u>HALAWA PORTAL BUILDING - IB</u> <u>INTERSTATE ROUTE H-3</u> <u>F.A.I. PROJ. NO. I-H3-I(64)</u>	
SCALE: AS NOTED	DATE: JUN 1991
SHEET MN3	OF 10 SHEETS



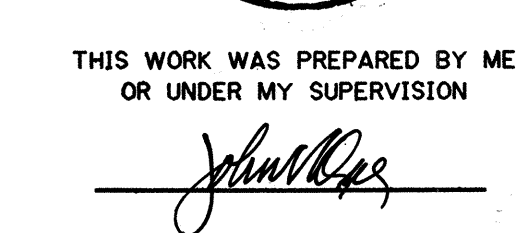
GRAPHIC SCALES

4' 0' 4' 8'

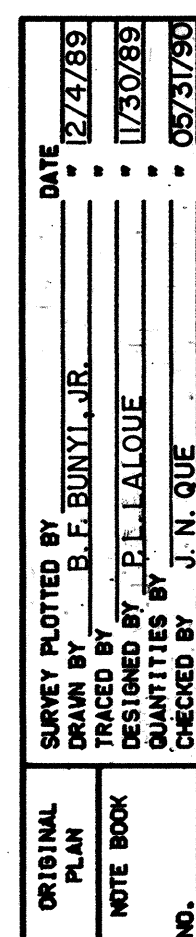
$1/4" = 1' - 0"$

8' 0' 8' 16'

$1/8" = 1' - 0"$



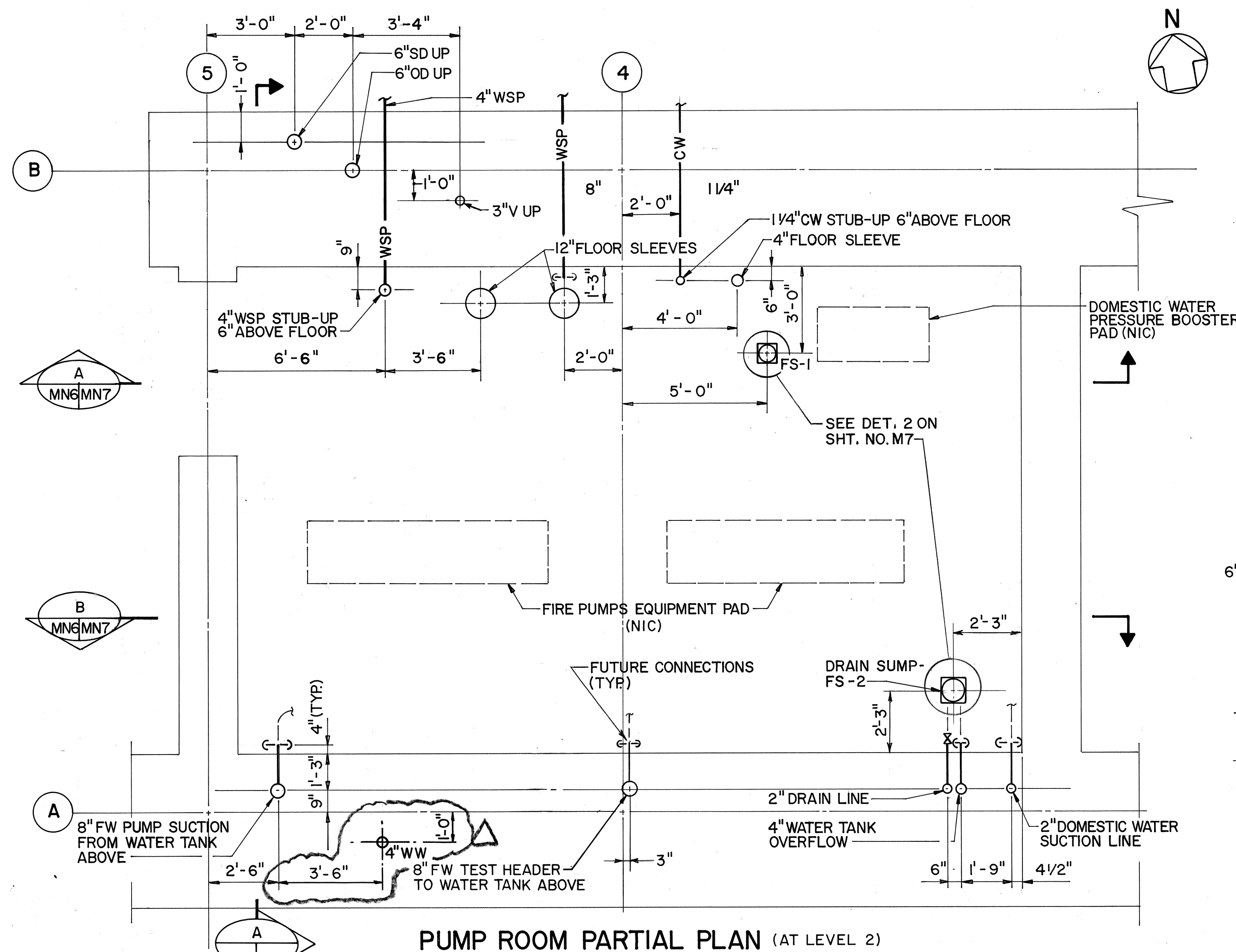
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	9/29/89
	DESIGNED BY	
	QUANTITIES BY	9/24/89
	CHECKED BY	
NO.	J. N. QUE	05/31/90



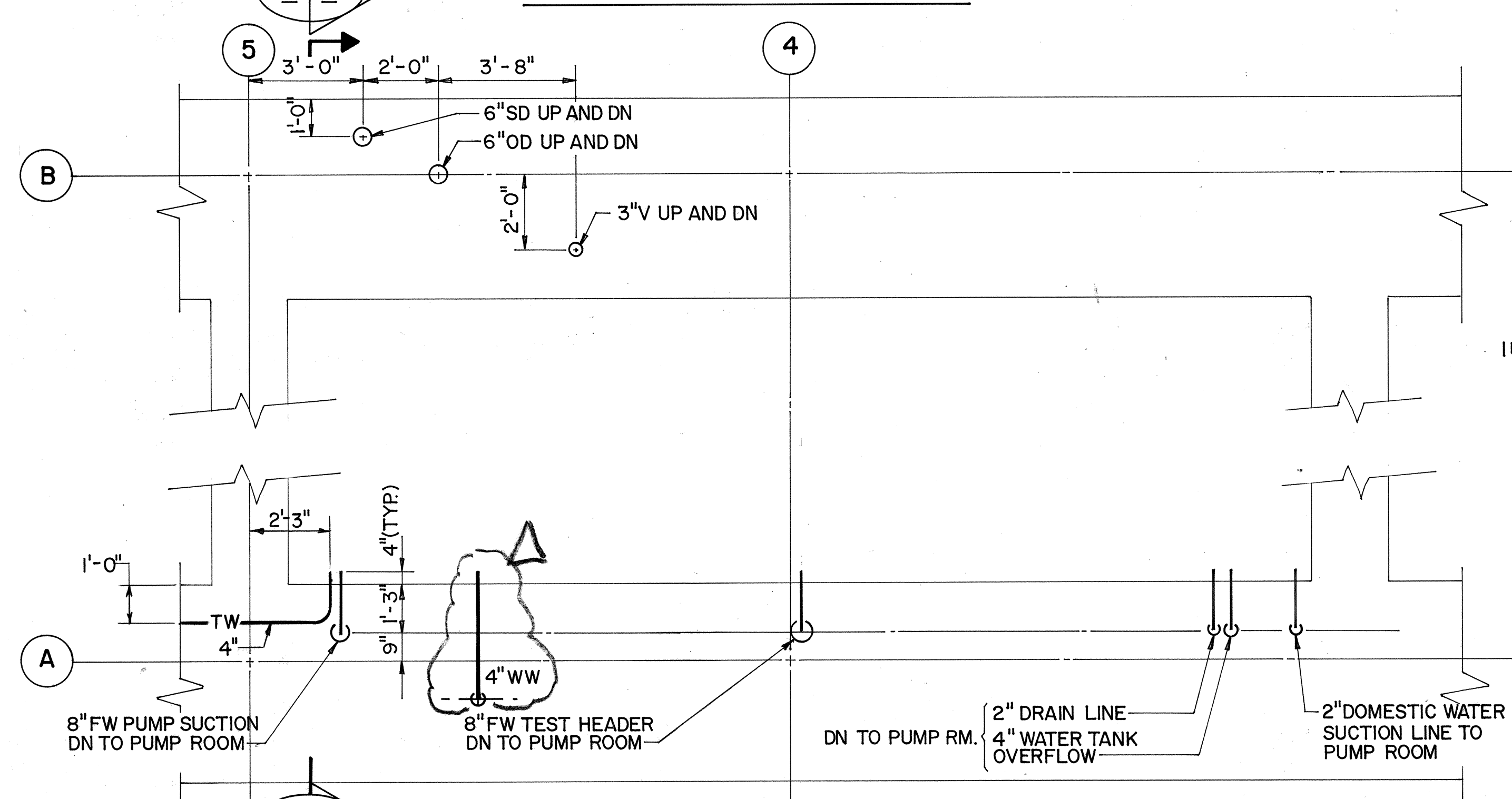
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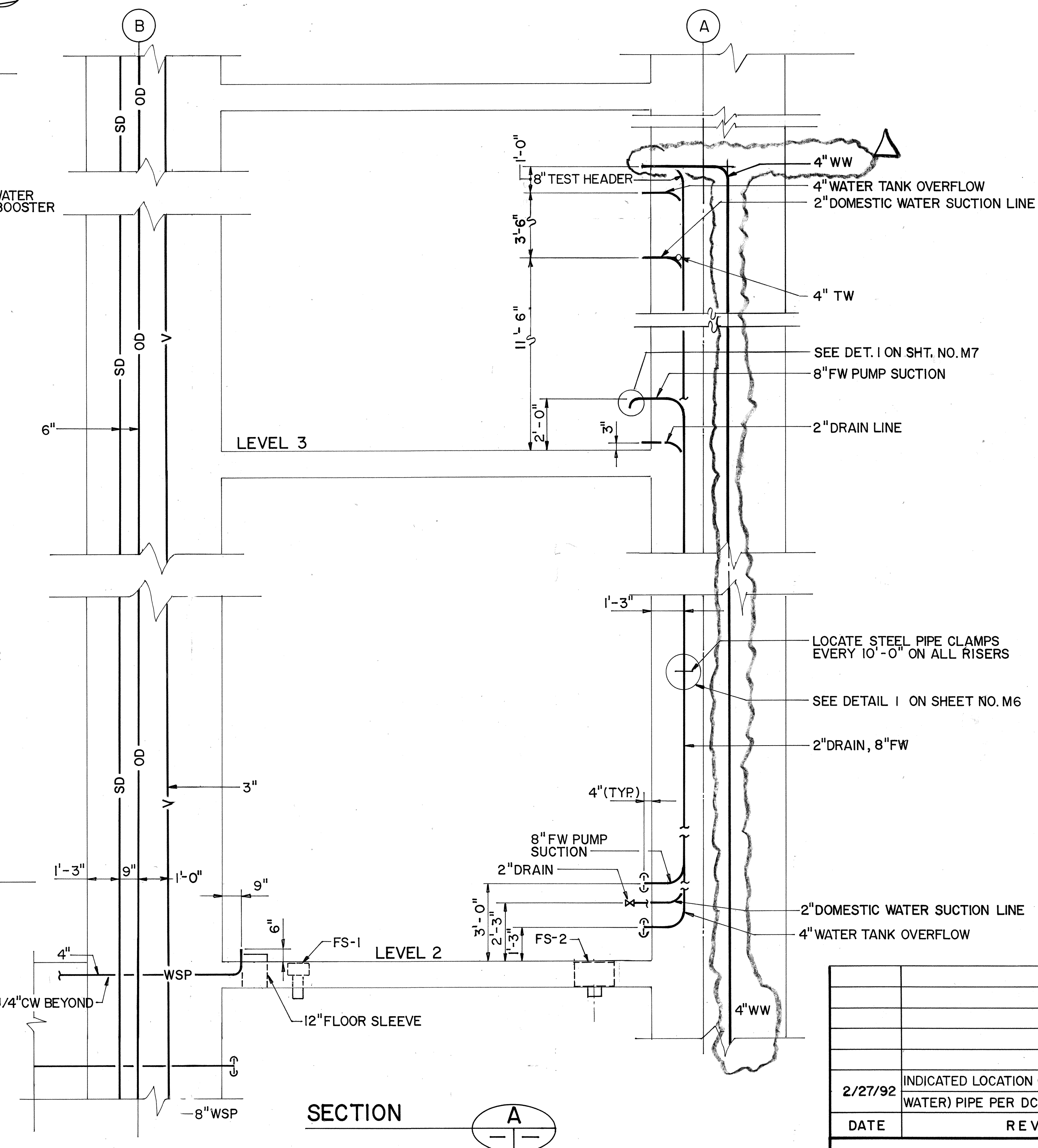
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I - H3 - 1(64)	1990	400	531



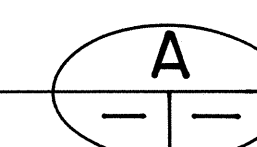
PUMP ROOM PARTIAL PLAN (AT LEVEL 2)



WATER TANK PARTIAL PLAN (AT LEVEL 3)



SECTION



GRAPHIC SCALE
1' 0' 1' 2' 3' 4' 5' 6' 7'
 $\frac{3}{8}" = 1' - 0"$

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2/27/92	INDICATED LOCATION OF 4" WW (WELL
	WATER) PIPE PER DCN 64-026
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER TANK & PUMP RM.
PARTIAL PLANS & SECTION
HALAWA PORTAL BUILDING - IB

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. 1-H3-1 (64)

SCALE: 3/8" = 1' - 0" DATE: JUN 1990
SHEET NO. MN6 OF 10 SHEETS

5

4

6'-6"

3'-6"

2'-0"

2'-0"

2'-0"

1'-0"

1 1/4" CW STUB-UP 6" ABOVE FLOOR

4" FLOOR SLEEVE

4" WSP STUB-UP 6" ABOVE FLOOR

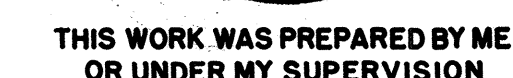
12" FLOOR SLEEVES

FS-1

The diagram illustrates a water system layout with the following components and dimensions:

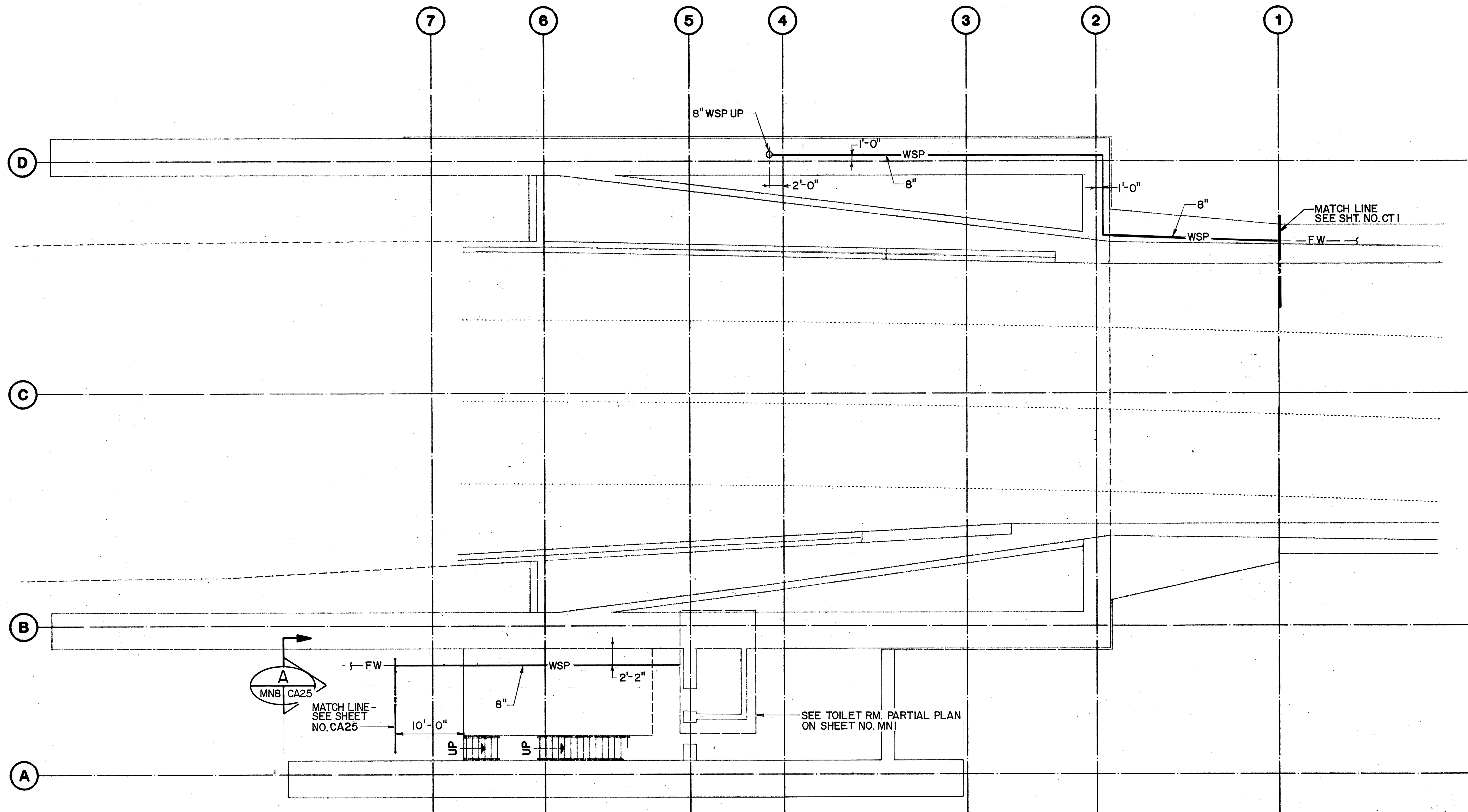
- 2" DOMESTIC WATER SUCTION LINE**: A vertical pipe on the left side.
- 4" WATER TANK OVERFLOW**: A vertical pipe on the left side, above the domestic water suction line.
- UP TO WATER TANK**: A horizontal pipe connecting the overflow line to the water tank.
- 4 1/2"**, **1' 9"**, **6"**: Horizontal dimensions for the left side of the system.
- 1' 3"**, **2' 3"**: Vertical dimensions for the left side of the system.
- FS-2**: A valve or fitting located on the horizontal pipe.
- 2' 3"**: Horizontal dimension for the left side of the system.
- 2" DRAIN LINE**: A horizontal pipe at the bottom left.
- 3"**: Horizontal dimension for the left side of the system.
- 8" FW TEST HEADER UP TO WATER TANK**: A horizontal pipe at the top center.
- 11' 3"**: Vertical dimension for the center of the system.
- 8" FW PUMP SECTION UP TO WATER TANK**: A horizontal pipe on the right side.
- 3' 0"**, **2' 6"**: Vertical dimensions for the right side of the system.
- 4** and **5**: Circled numbers indicating specific points or valves in the system.

ORIGINAL PLAN	SURVEY PLOTTED BY DRAWN BY <u>B. F. BUNYI, JR.</u> DATE <u>12/5/89</u>
NOTE BOOK	DESIGNED BY <u>P. L. LA LOUE</u> * <u>11/22/89</u>
	QUANTITIES BY * _____
No. _____	CHECKED BY <u>J. N. QUE</u> * <u>05/31/90</u>



DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>PUMP ROOM SECTIONS</u>	
<u>HALAWA PORTAL BUILDING — IB</u> <u>INTERSTATE ROUTE H-3</u> <u>F.A.I. PROJ. NO. I-H3-1 (64)</u>	
SCALE: 3/8"=1'-0" DATE: JUN 1990	
SHEET NO. MN7 OF 10 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(64)	1990	402	531



LEVEL I PLAN

FOR DETAIL AS-BUILT INFORMATION
REFER TO CONSTRUCTION SUBMITTALS

DATE	REVISION
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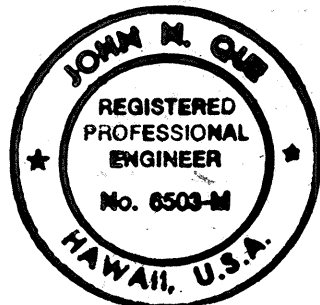
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FIRE PROTECTION -
LEVEL I PLAN

HALAWA PORTAL BUILDING - 1B
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(64)

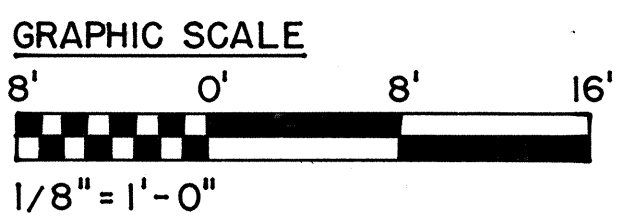
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SHEET NO. MN8 OF 10 SHEETS

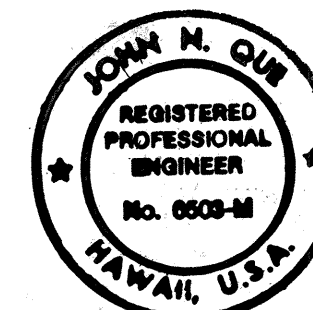
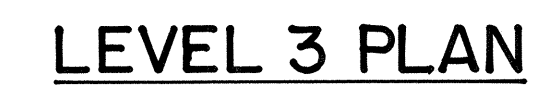
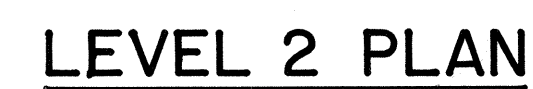


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OR UNDER MY SUPERVISION

John M. Ohi



DESIGNED BY	DATE
TRACED BY	07/19/90
DESIGNED BY	07/27/90
QUANTITIES BY	05/31/90
CHECKED BY	J.N. OUE
NO.	

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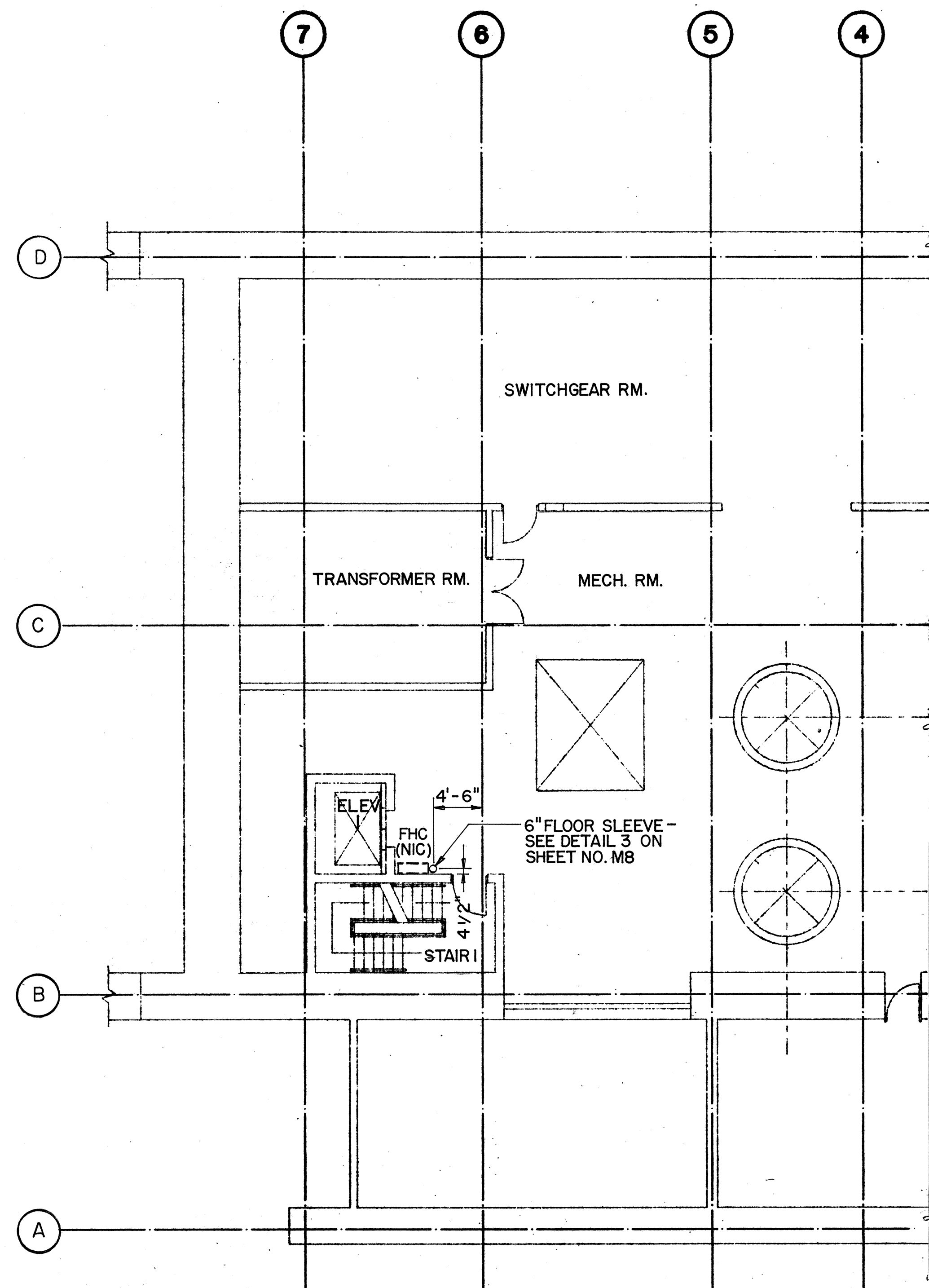
James

SCALE: $1/8" = 1'-0"$ DATE: JUN 1990

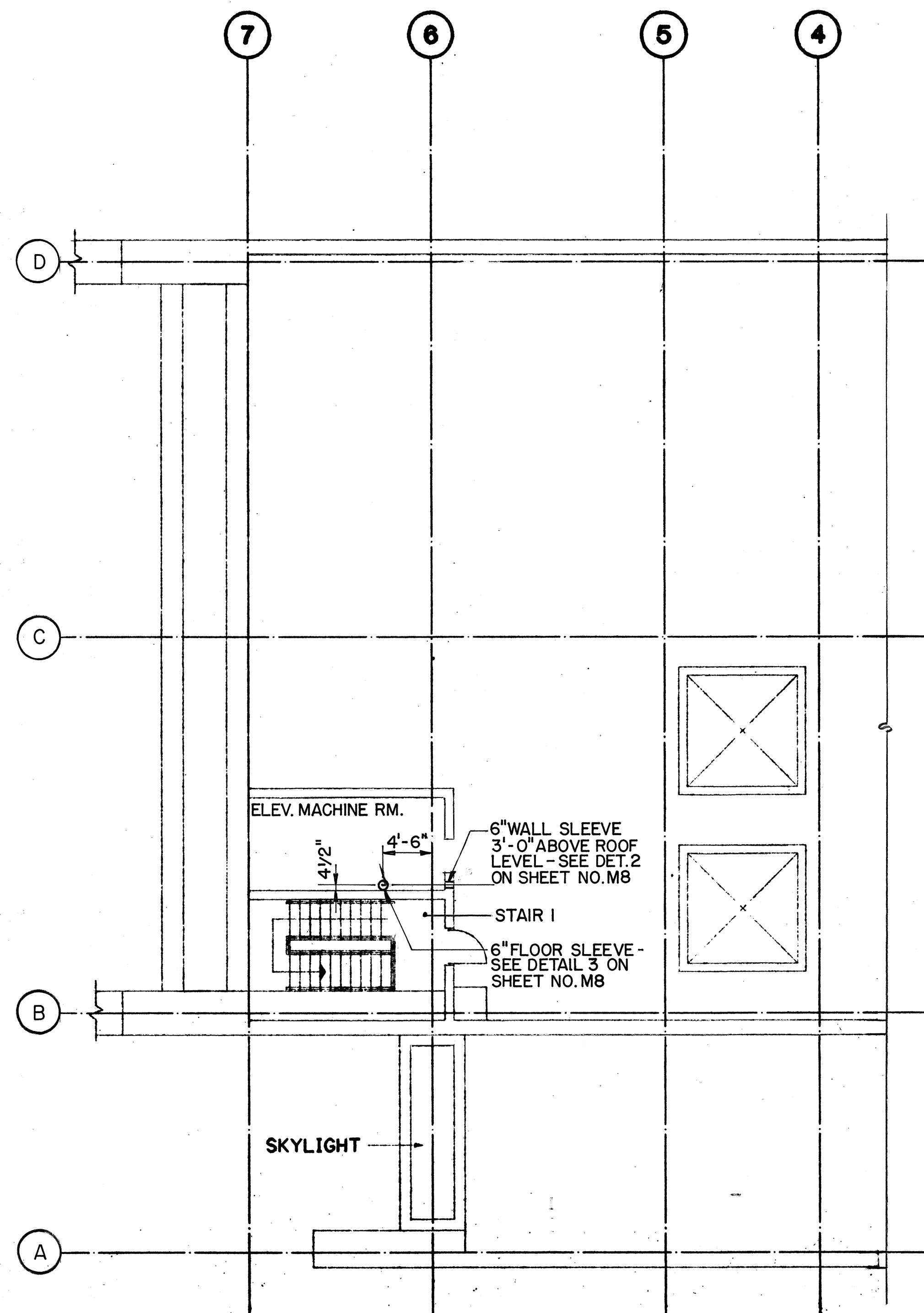
SHEET NO. MN9 OF 10 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY <u>B. F. BUNY, JR.</u>	<u>12/27/89</u>
NOTE BOOK	TRACED BY _____	*
	DESIGNED BY <u>P. L. LALOUE</u>	<u>12/20/89</u>
	QUANTITIES BY _____	*
No. _____	CHECKED BY <u>J. N. QUE</u>	<u>05/31/90</u>

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I - H3 - I (64)	1990	404	531

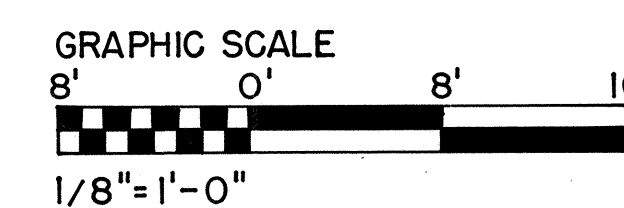


LEVEL 4 PLAN



ROOF LEVEL PLAN

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY <u>P. L. ALLOUE</u>	<u>12/26/89</u>
	TRACED BY <u>P. L. ALLOUE</u>	<u>12/21/89</u>
	DESIGNED BY <u>P. L. ALLOUE</u>	<u>12/21/89</u>
	QUANTITIES BY <u>P. L. ALLOUE</u>	<u>12/21/89</u>
	CHECKED BY <u>J. N. QUE</u>	<u>05/31/90</u>
No. _____		



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FIRE PROTECTION-LEVEL 4 &
ROOF PARTIAL PLANS
HALAWA PORTAL BUILDING - 1B

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1 (64)

SCALE: 1/8"=1'-0"
DATE: JUN 1990

SHEET NO. MNIO OF 10 SHEETS

DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLUMBING -
LEVEL 1 PLAN

HALAWA PORTAL BUILDING - OB

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(64)

SCALE: 1/8" = 1'-0"
DATE: JUN 1960

SHEET NO. MOI OF 8 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	12/8/89
	DESIGNED BY	17/28/89
	QUANTITIES BY	
NO.	CHECKED BY	05/29/90

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

GRAPHIC SCALE
8' 0' 8'

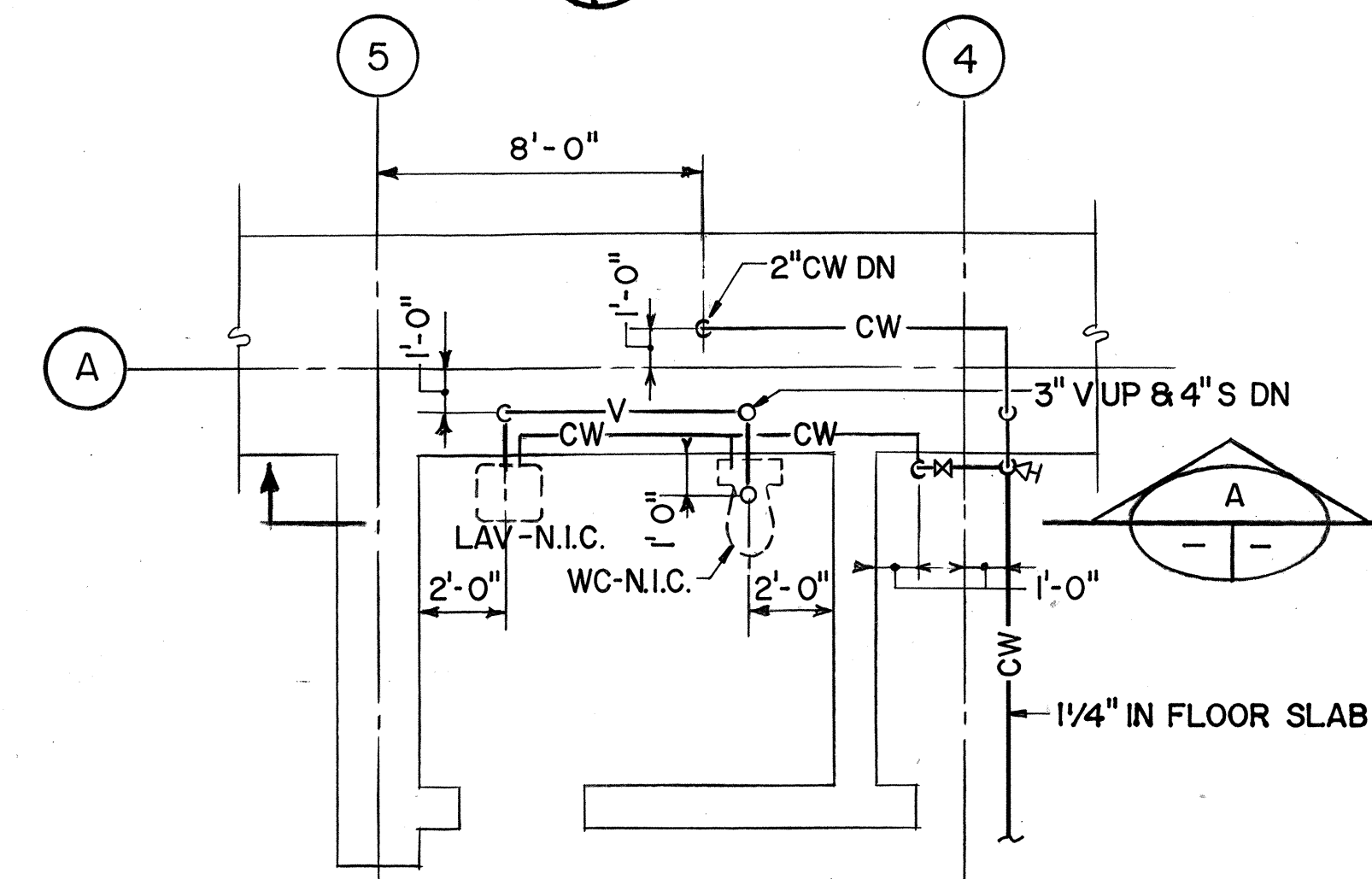
$1/8" = 1'-0"$



THIS WORK WAS PREPARED BY M
OR UNDER MY SUPERVISION

2410Y162 2410: V162 MS0068.FGB;1 29NOV89-13.04.30

N

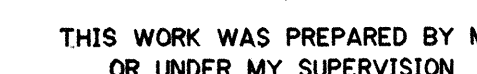
A simple compass rose with a circle in the center. The letter 'N' is at the top, and the letter 'S' is at the bottom. The circle is divided into four quadrants by a vertical line and a horizontal line.

SECTION
SCALE: 1/4"=1'-

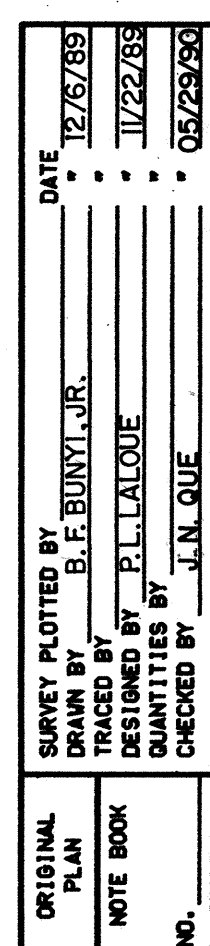
LEVEL 2 PLAN
SCALE: 1/8" = 1'-0"

8' 0' 8' 1'

1/8" = 1'-0"



SCALE: AS NOTED DATE: JUN 1990
SHEET NO. M02 OF 8 SHEETS

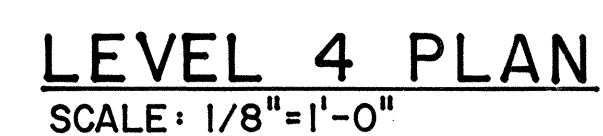


GRAPHIC SCALE
8' 0' 8' 16'
1/8" = 1'-0"

THIS WORK WAS PREPARED BY M
OR UNDER MY SUPERVISION



40

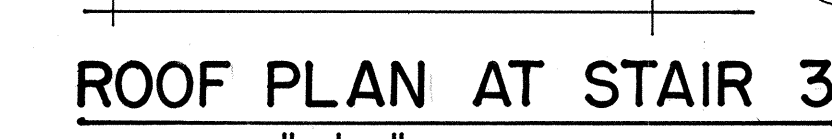


John Doe

408



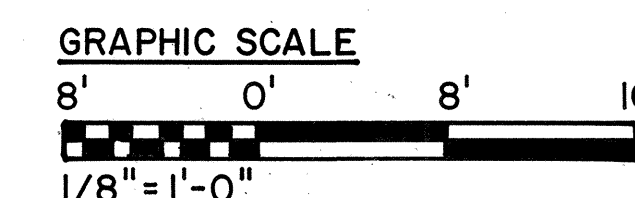
SCALE : $1/8'' = 1'-0''$



ROOF PLAN AT STAIR 3
SCALE: 1/8" = 1'-0"

ROOF LEVEL PLAN

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



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OR UNDER MY SUPERVISION



DATE	REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PLUMBING —
ROOF LEVEL PLAN

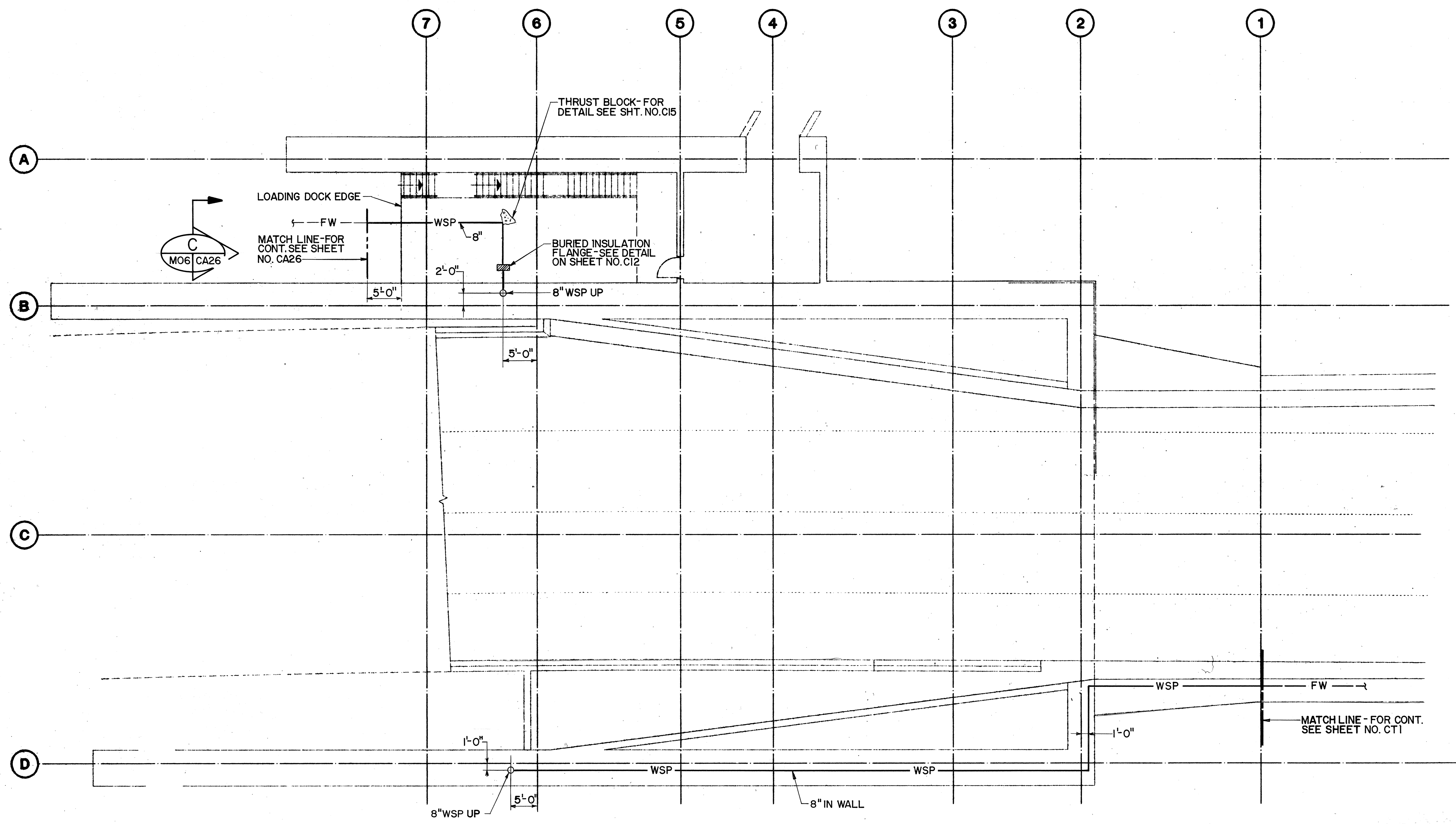
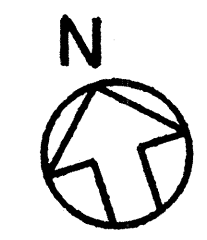
HALAWA PORTAL BUILDING — OB

INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-I(64)

SCALE: 1/8" = 1' - 0"
DATE: JUN 1991

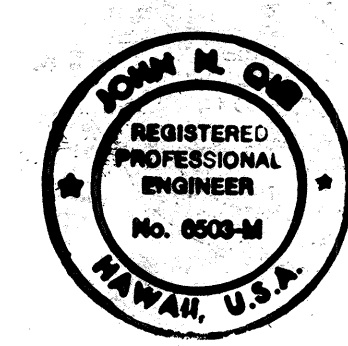
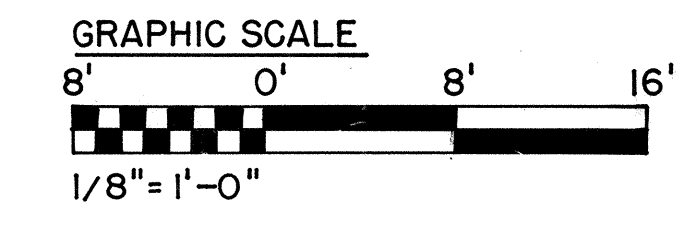
SHEET NO. M05 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(64)	1990	410	531



FOR DETAIL AS-BUILT INFORMATION
REFER TO CONSTRUCTION SUBMITTALS

DESIGNED BY	DATE
DRAWN BY	1/7/89
CHECKED BY	1/19/89
IN CHARGE	1/19/89
NO.	



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OR UNDER MY SUPERVISION

DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

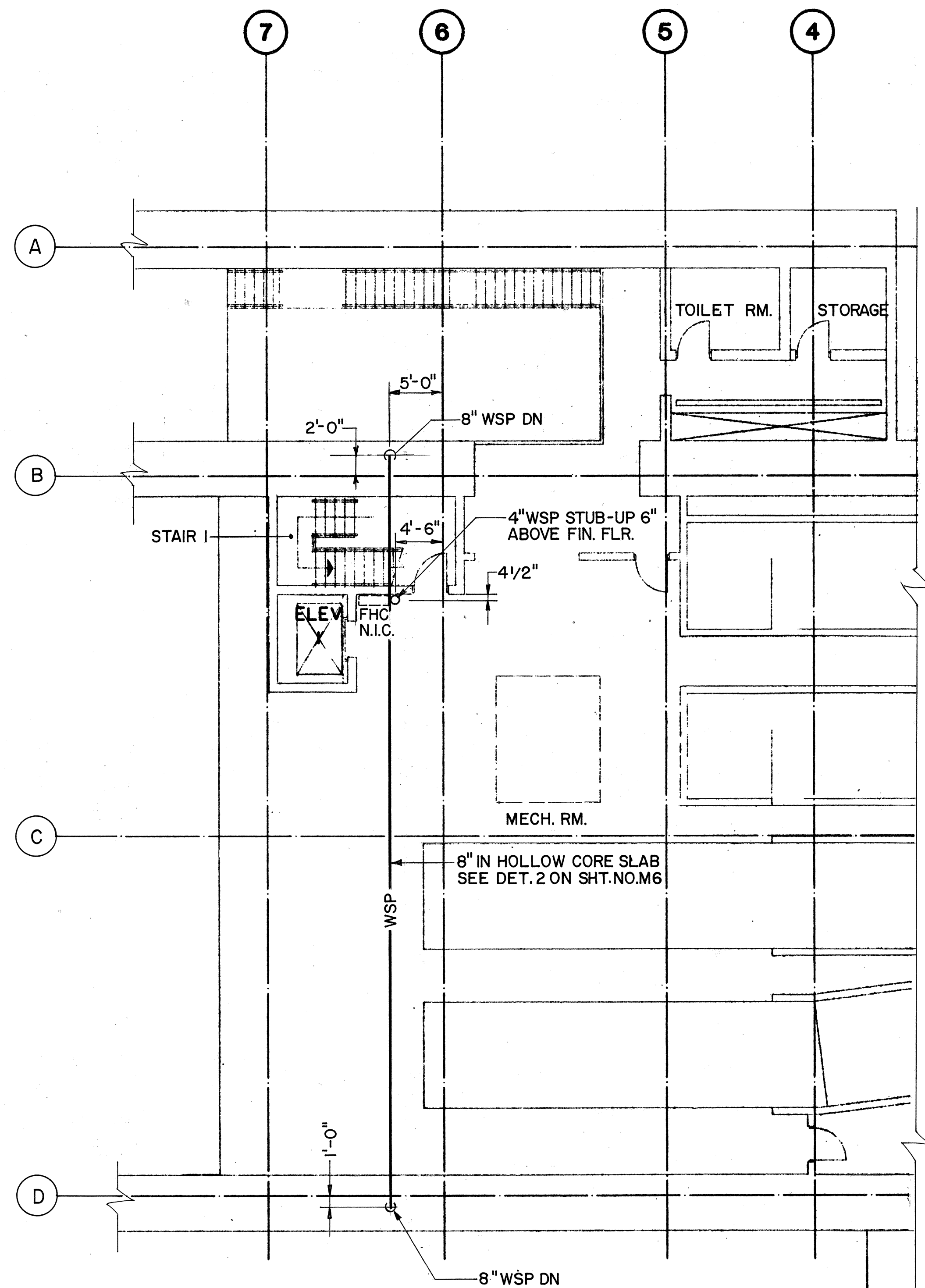
**FIRE PROTECTION -
LEVEL 1 PARTIAL PLAN**

HALAWA PORTAL BUILDING - OB
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(64)

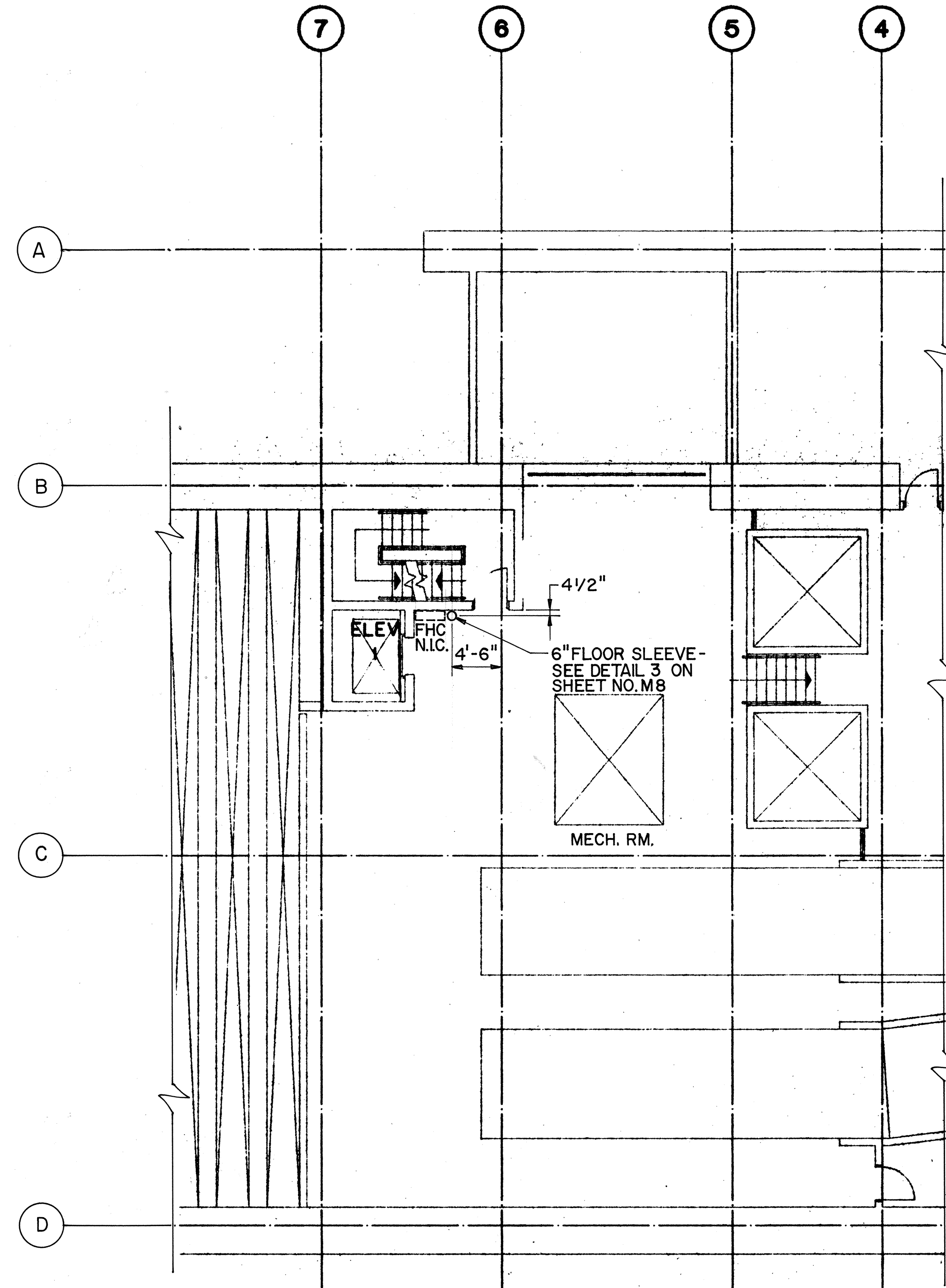
SCALE: 1/8" = 1'-0" DATE: JUN 1990

SHEET NO. M06 OF 8 SHEETS

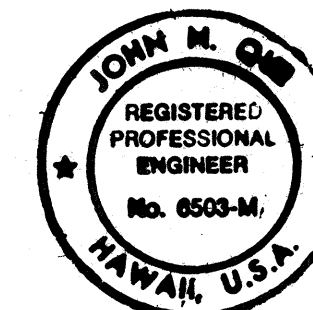
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I - H3 - 1(64)	1990	411	531



LEVEL 2 PLAN



LEVEL 3 PLAN



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OR UNDER MY SUPERVISION**

DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**FIRE PROTECTION - LEVEL 2 &
LEVEL 3 PARTIAL PLANS**

HALAWA PORTAL BUILDING - OB

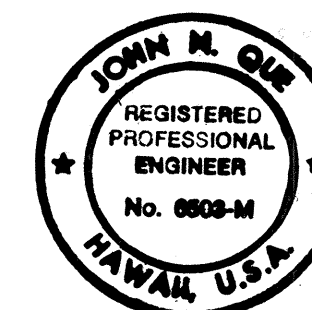
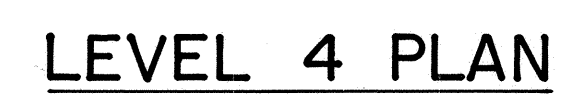
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1 (64)

SCALE: 1/8"=1'-0" DATE: JUN 1990

SHEET NO. M07 OF 8 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY <u>B. F. BUNY, JR.</u>	<u>12/7/89</u>
NOTE BOOK	TRACED BY _____	*
	DESIGNED BY <u>P. LALOUÉ</u>	<u>12/5/89</u>
	QUANTITIES BY _____	*
No. _____	CHECKED BY <u>J. N. QUE</u>	<u>05/29/90</u>

10/6/92	CHANGED 4" FLOOR SLEEVE TO 6" IN ELEV. MACH. RM. ROOF LEVEL PER DCN 64-044
DATE	REVISION

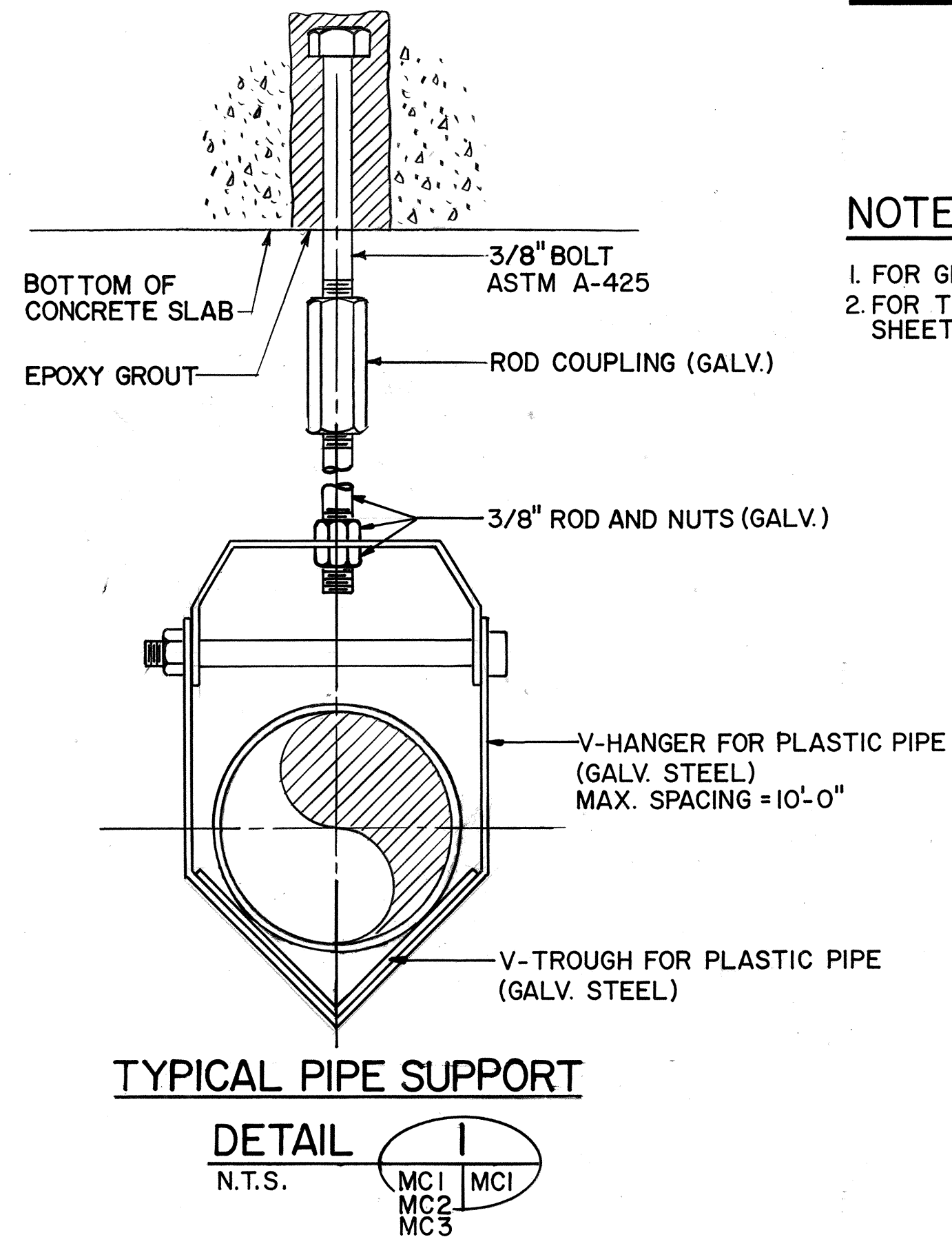
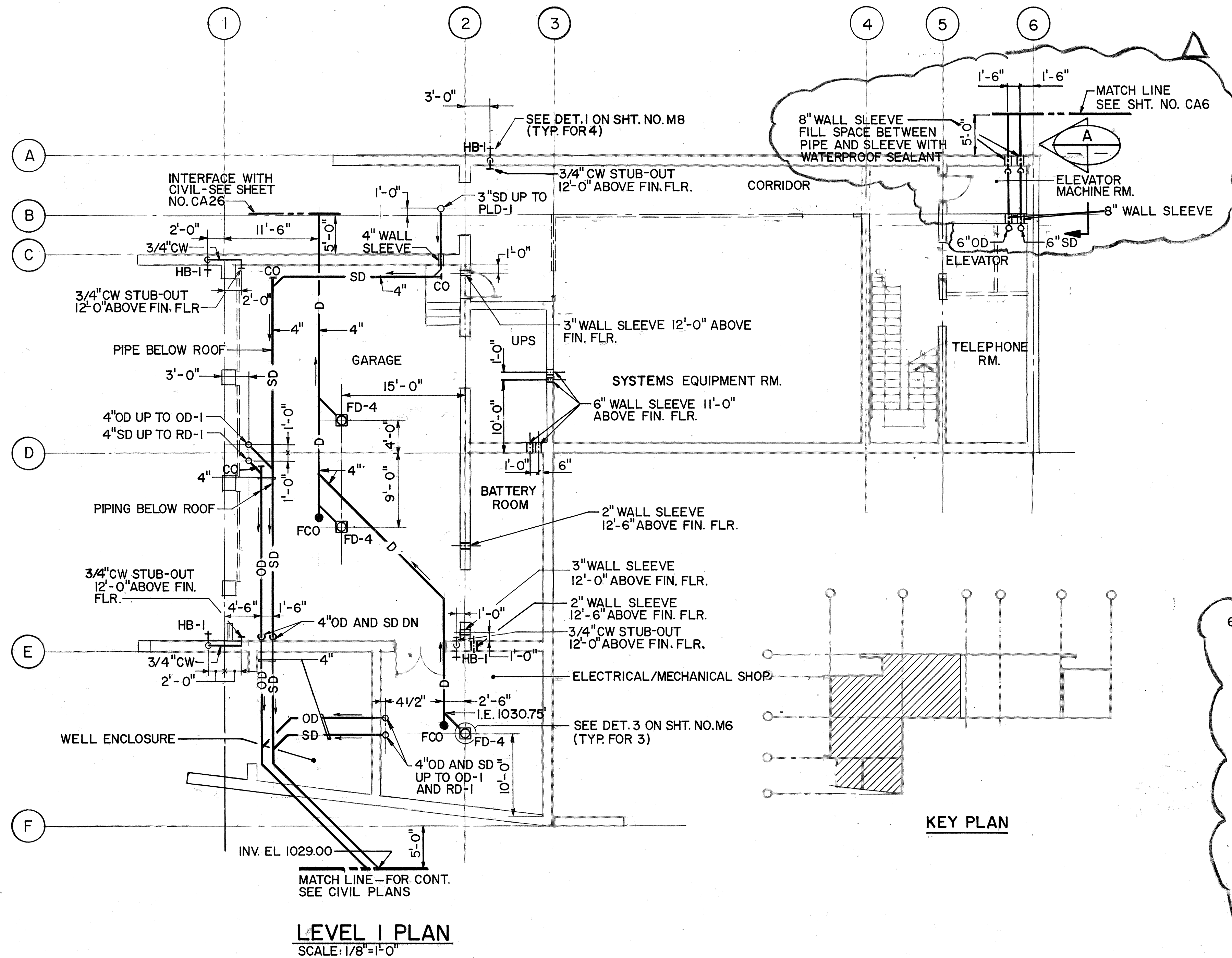


John R. ...

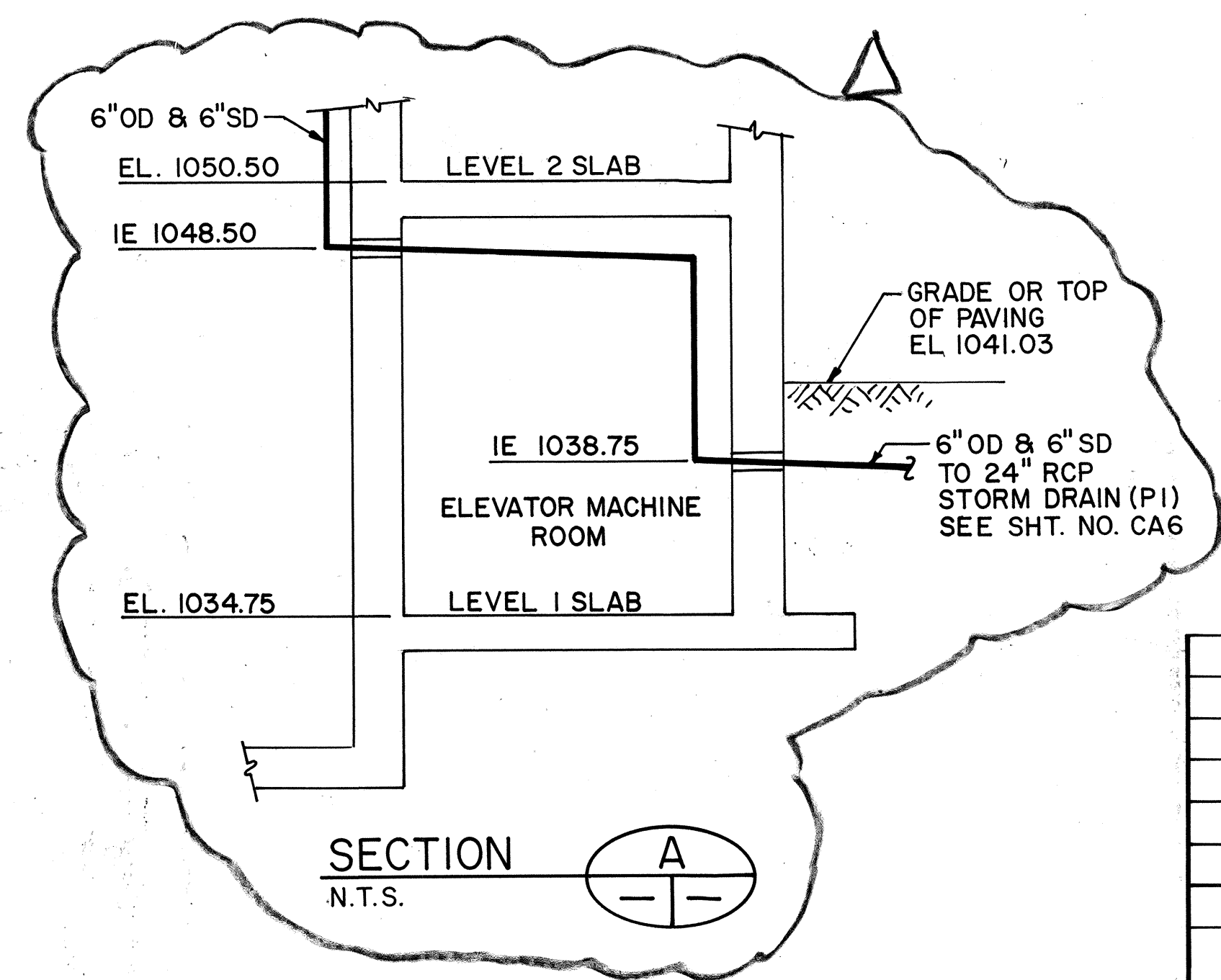
SCALE : 1/8" = 1' - 0" DATE: JUN 1990
SHEET NO. M08 OF 8 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	
No.		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(64)	1990	413	531

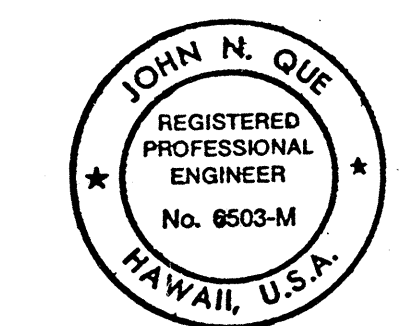
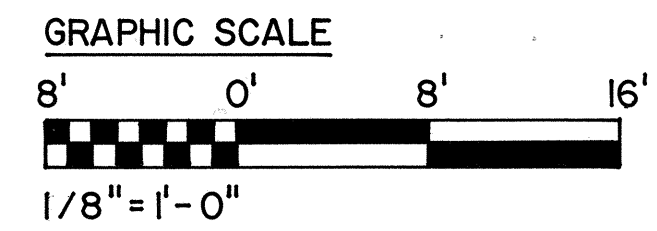


NOTES:
 1. FOR GENERAL NOTES REFER TO SHEET NO. M1
 2. FOR TYPICAL WALL SLEEVE SEE DETAIL 2 ON SHEET NO. M8.



FOR DETAIL AS-BUILT INFORMATION
 REFER TO CONSTRUCTION SUBMITTALS

ORIGINAL PLAN	DATE 07/25/89
DRAWN BY B. BUNYI, JR.	DESIGNED BY R. L. LAJOE
NOTE BOOK	QUANTITIES BY J. N. QUE
CHECKED BY	DATE 05/23/90

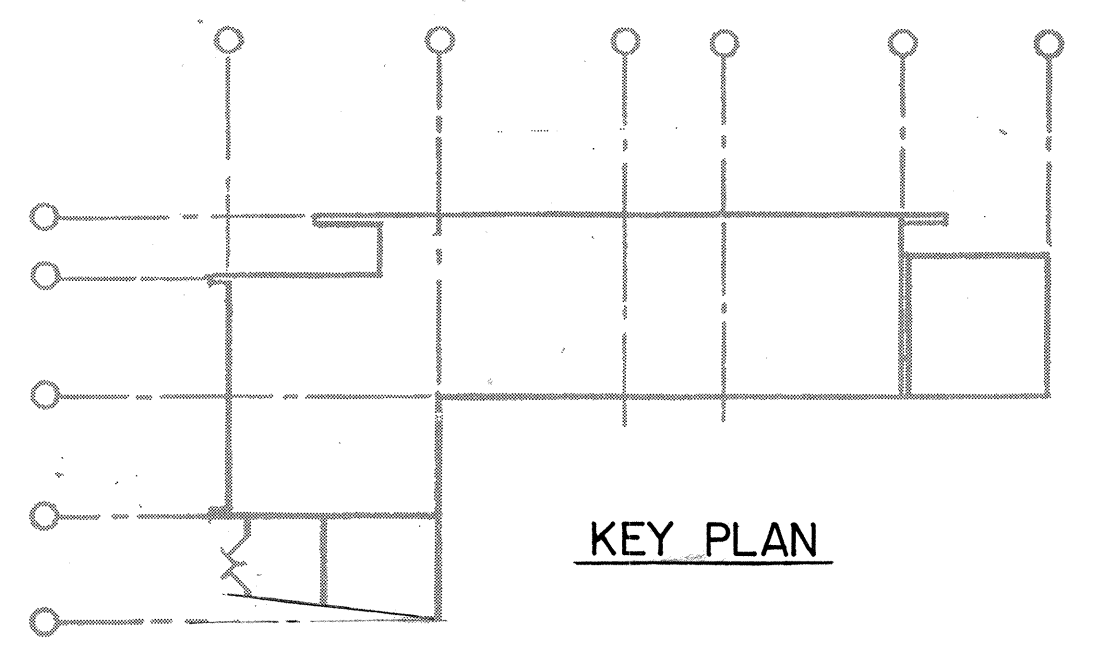
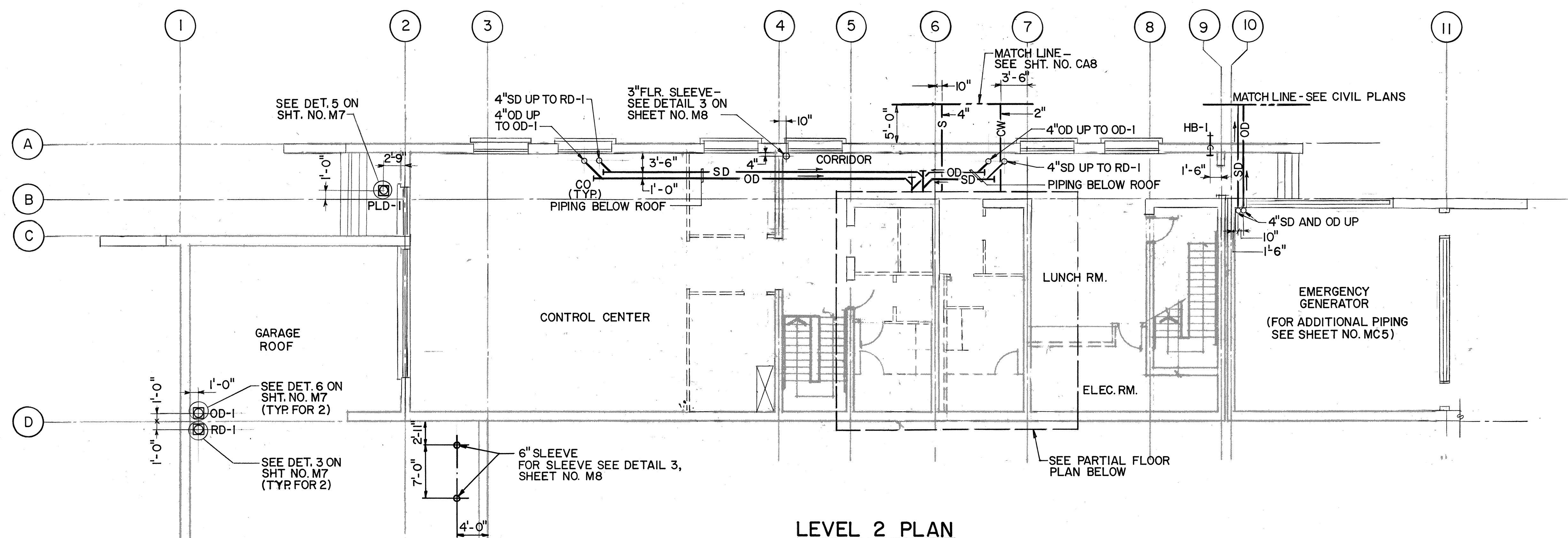


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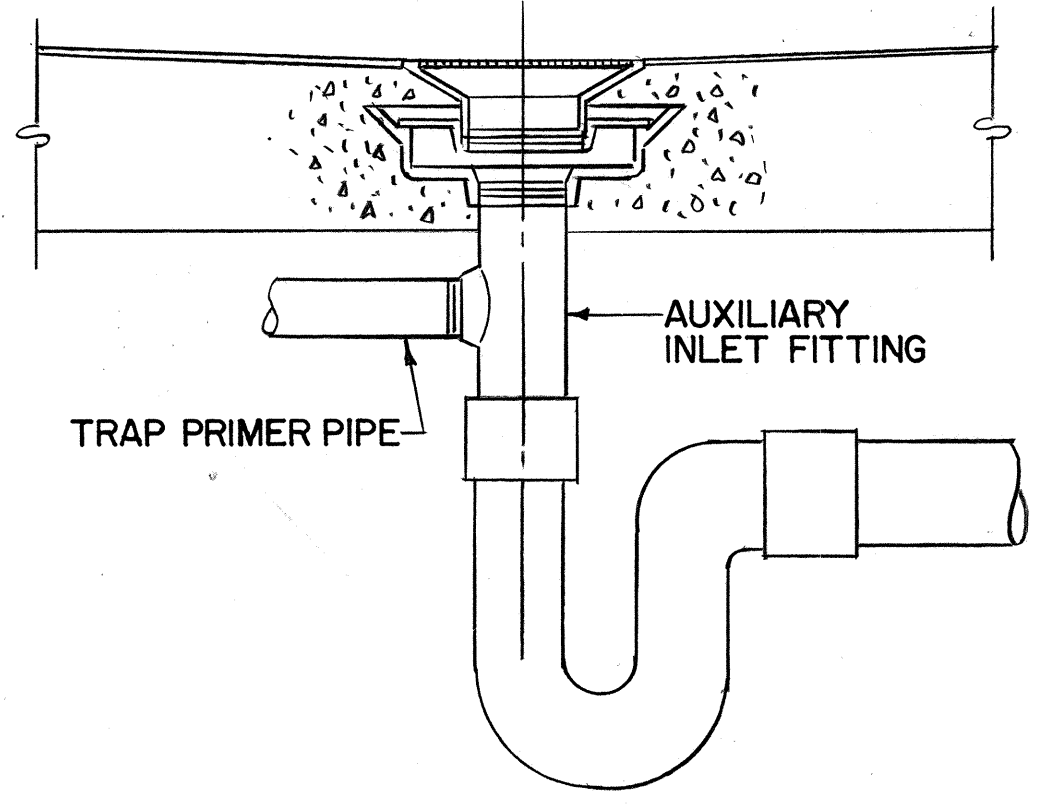
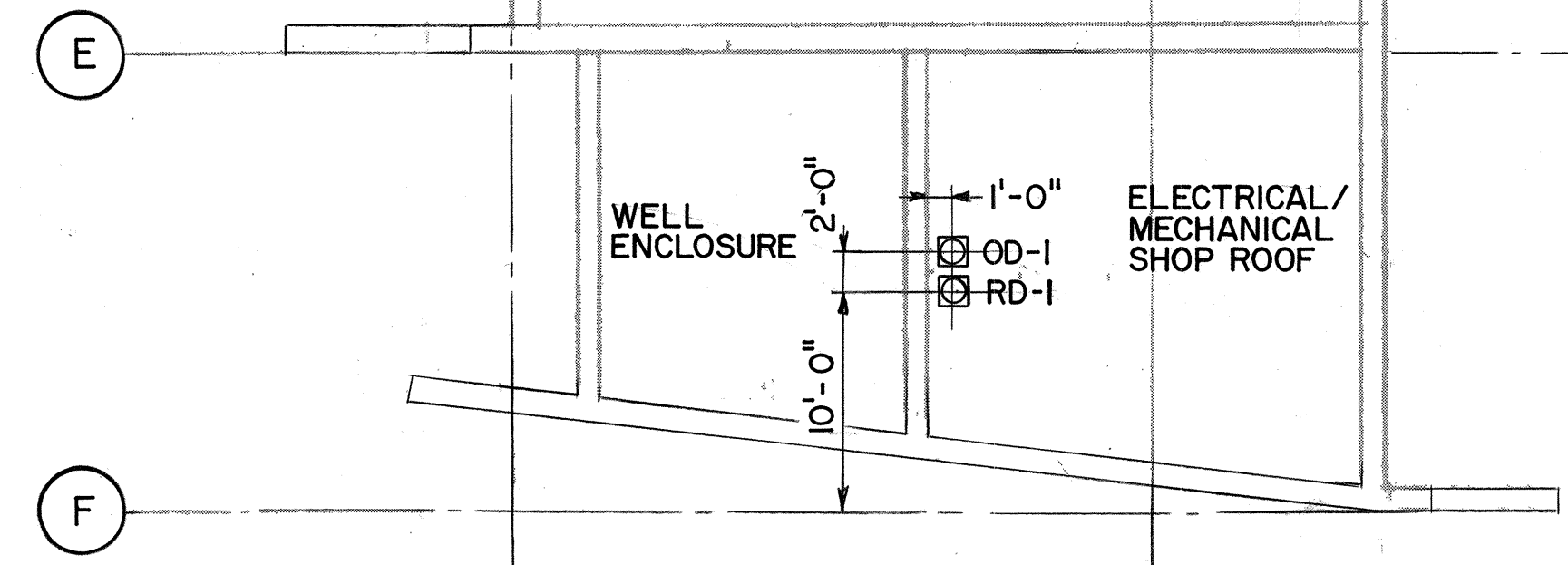
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**PLUMBING -
 LEVEL 1 PLAN & DETAIL**
 CONTROL BUILDING
 INTERSTATE ROUTE H-3
 F.A.I. PROJ. NO. I-H3-1(64)

SCALE: AS NOTED DATE: JUN 1990
 SHEET NO. MCI OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(64)	1990	414	531



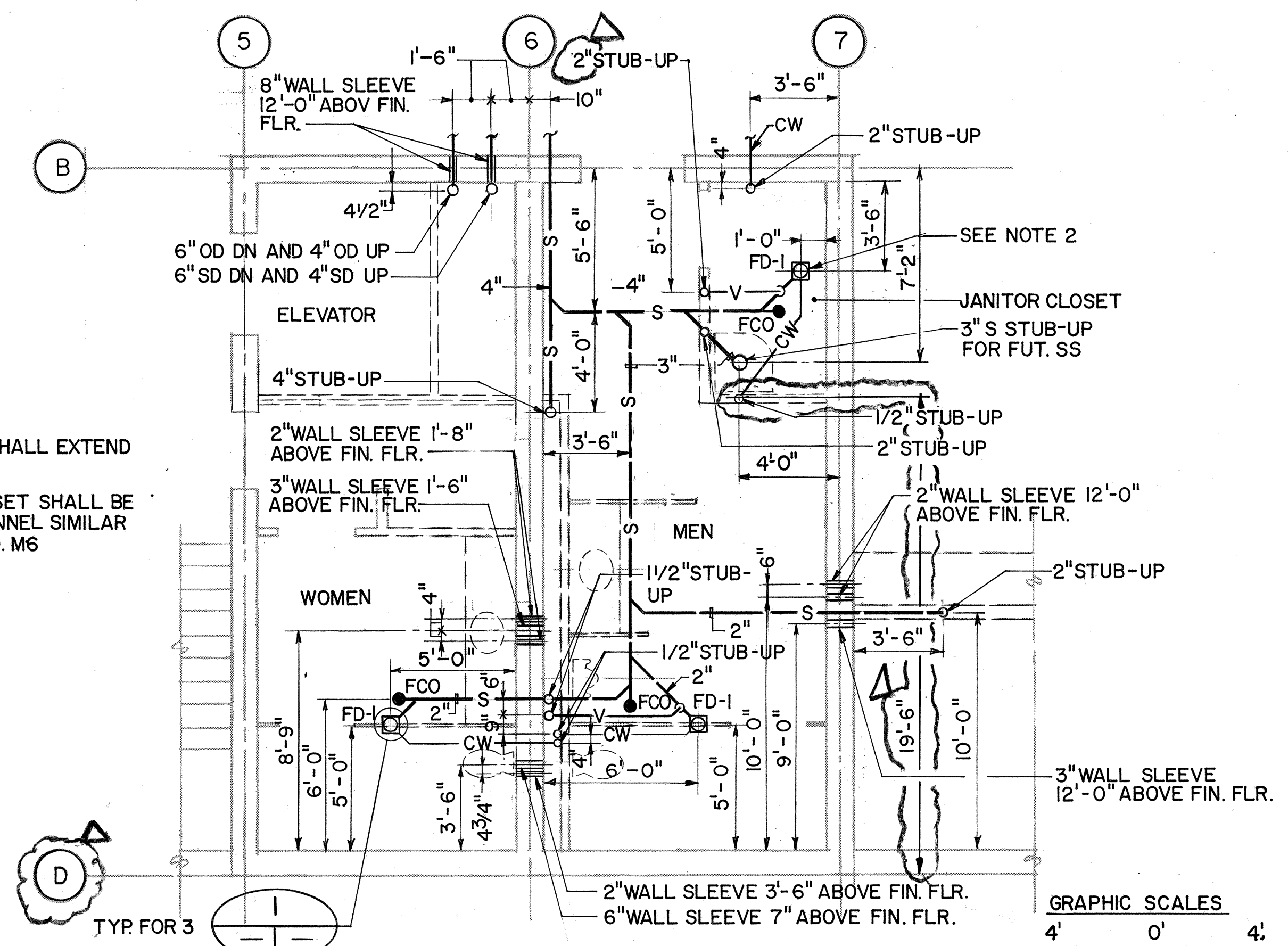
LEVEL 2 PLAN
SCALE: 1/8" = 1'-0"



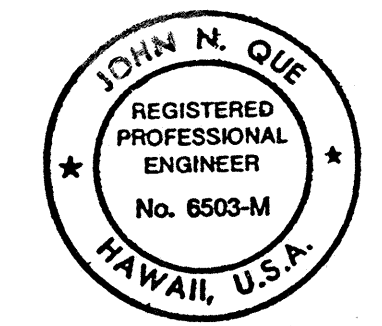
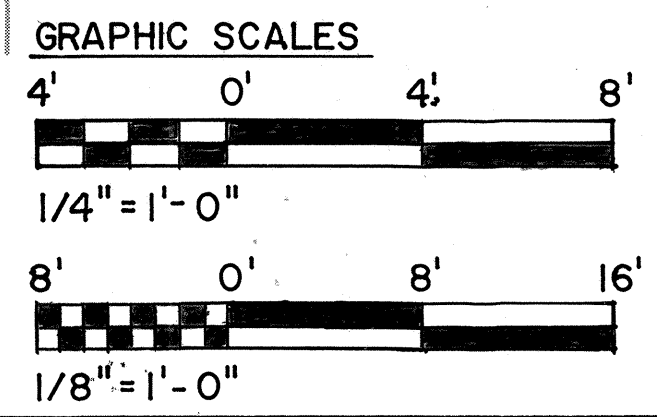
FD-1 FLOOR DRAIN INSTALLATION

DETAIL
N.T.S.

- NOTES:**
1. ALL STUB-UP PIPES SHALL EXTEND 6" ABOVE FIN. FLR.
 2. FD-1 IN JANITOR CLOSET SHALL BE EQUIPPED WITH A FUNNEL SIMILAR TO DET. 3 ON SHT. NO. M6



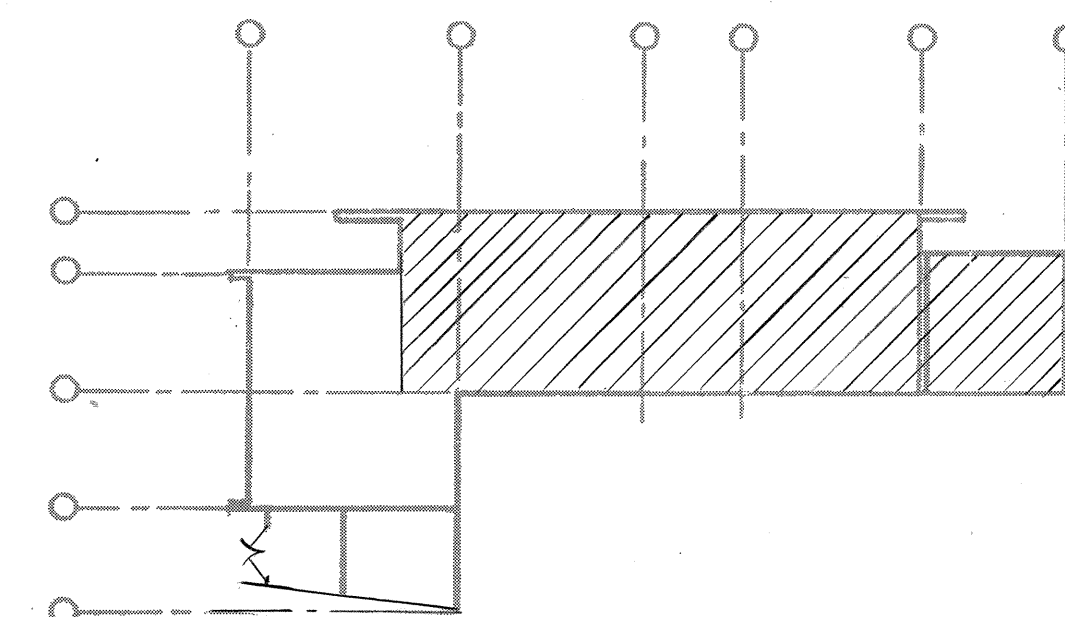
LEVEL 2 PARTIAL PLAN
SCALE: 1/4" = 1'-0"



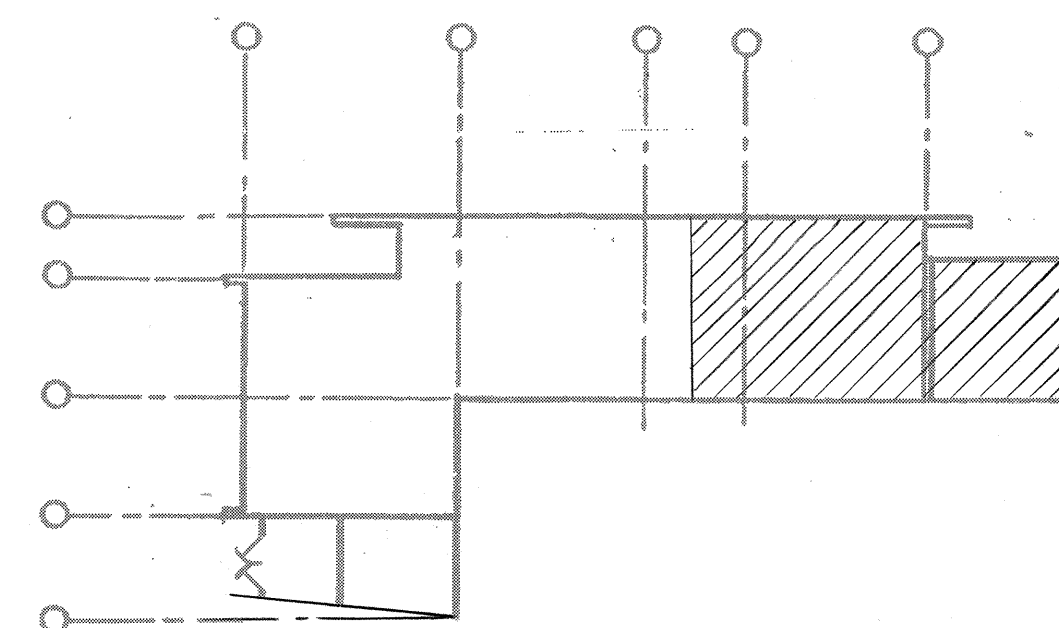
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

9/2/92	REV. PER DCN 64-038
5/5/92	REV. PER DCN 64-031
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION PLUMBING - LEVEL 2 PLANS CONTROL BUILDING INTERSTATE ROUTE H-3 F.A.I. PROJ. NO. I-H3-1(64) SCALE: AS NOTED DATE: JUN 1990 SHEET NO. MC2 OF 5 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3 - I (64)	1990	415	531



LEVEL 3 PLAN



ROOF PARTIAL PLAN



John M. Gue

[illegible]

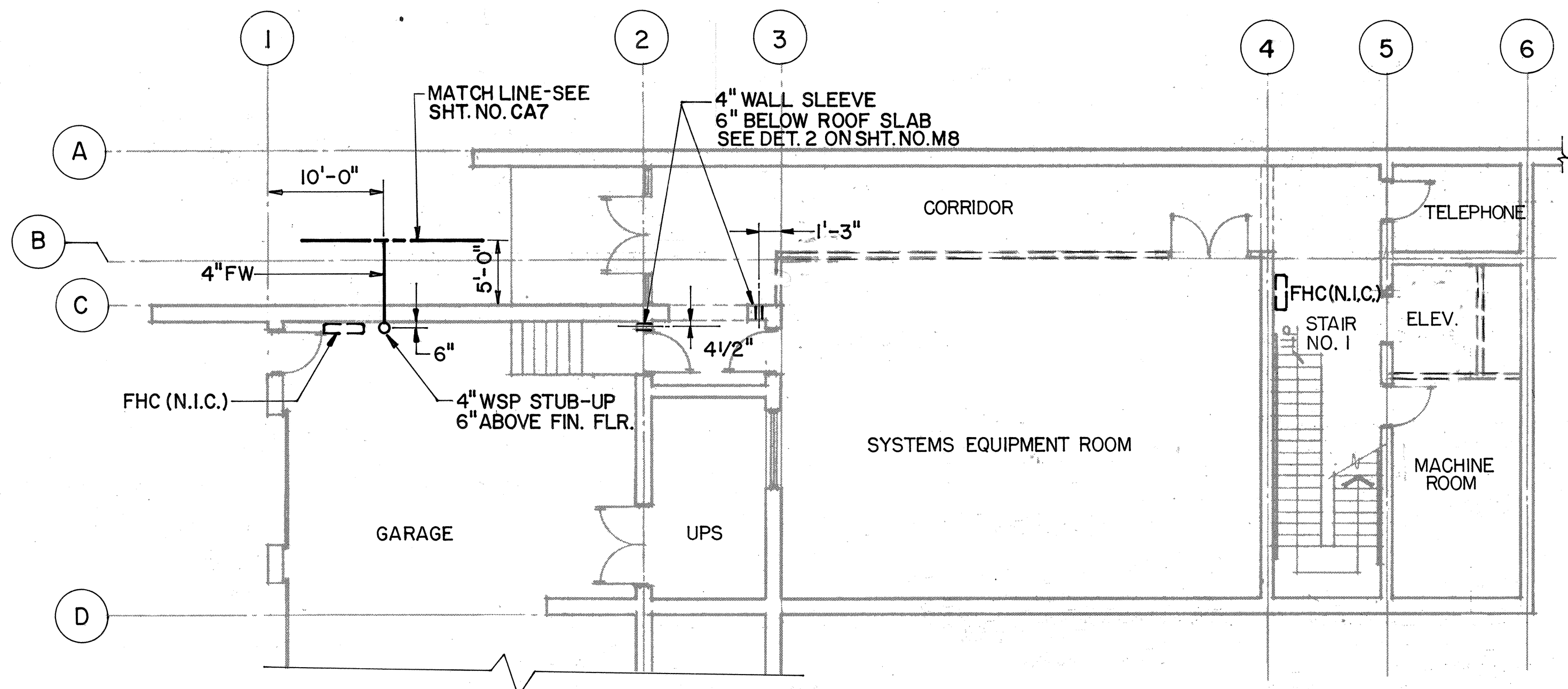
PLUMBING - LEVEL 3 & ROOF PARTIAL PLANS

SCALE: 1/8"=1'-0" DATE: JUN 1990
SHEET NO. MC3 OF 5 SHEETS

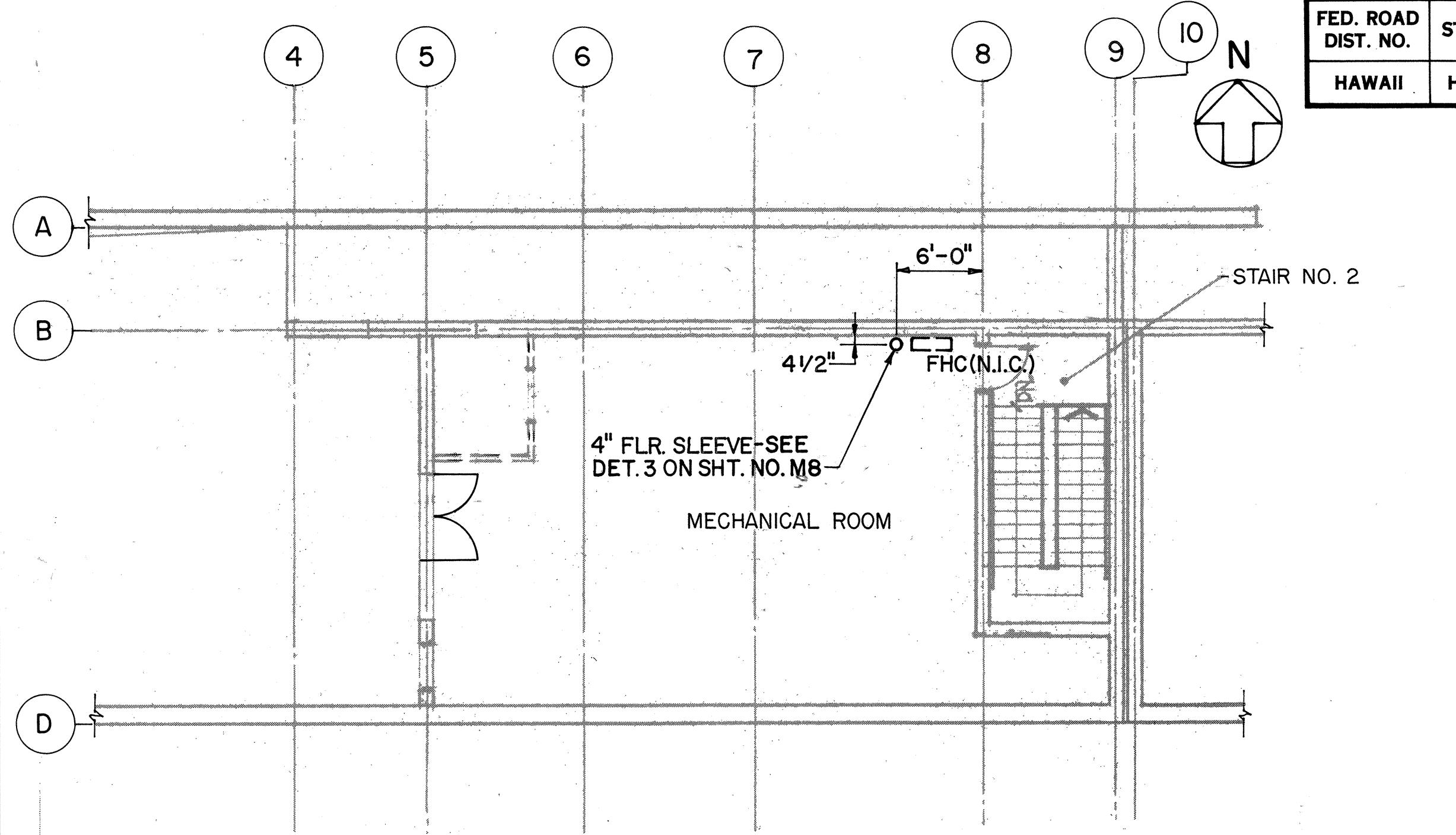
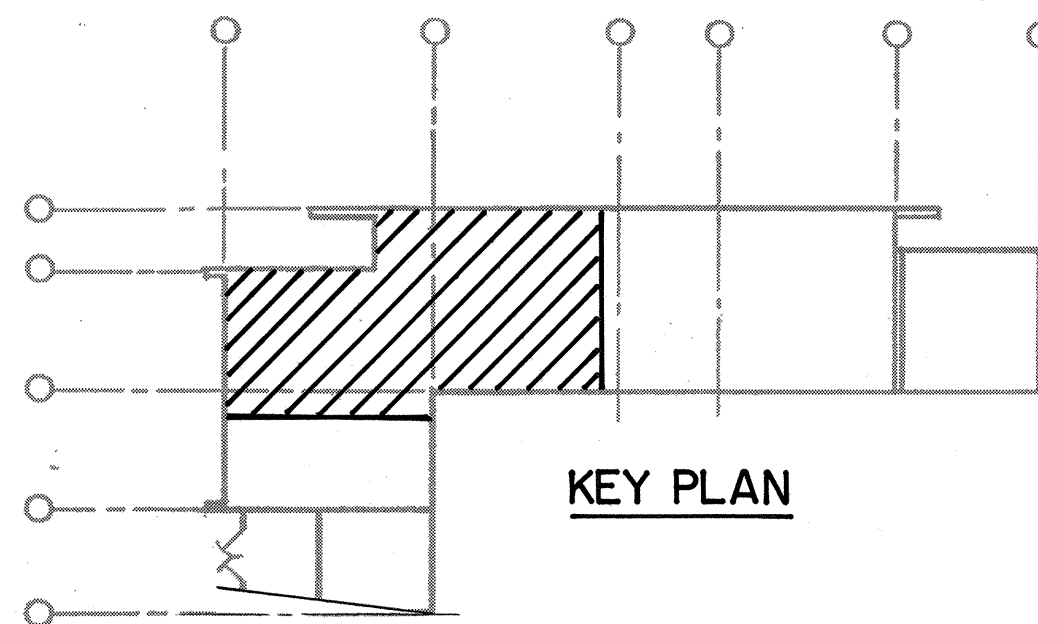
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY B. FBUNYI, JR.	10/12/89
NOTE BOOK	TRACED BY	
	DESIGNED BY P. L. LA LOUE	10/5/89
	QUANTITIES BY	
No.	CHECKED BY J. N. QUE	05/29/90

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(64)	1990	416	531

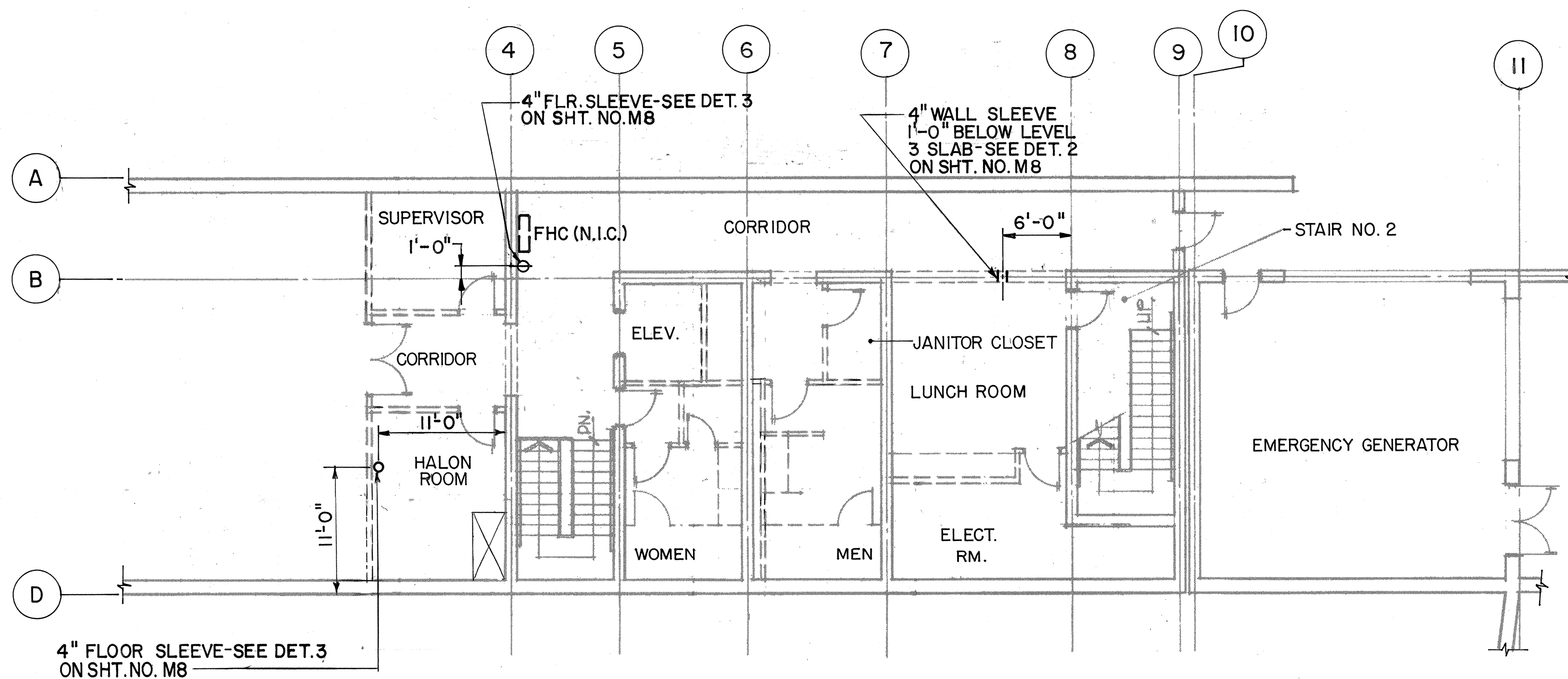
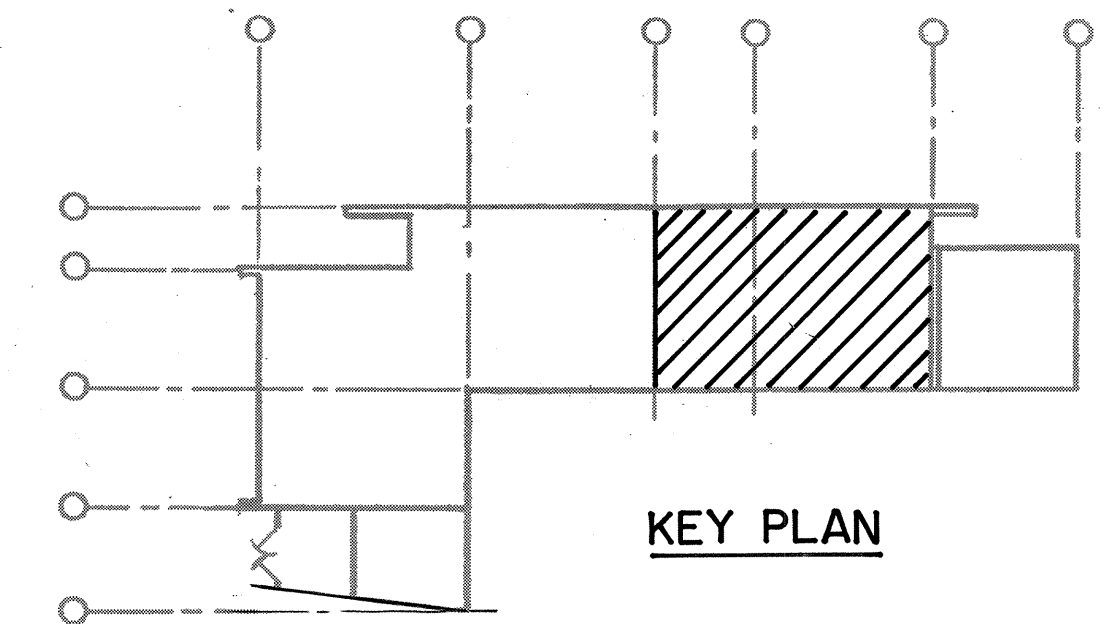
NOTE:
STUB-UP PIPES SHALL BE GROOVED FOR FUTURE CONNECTION WITH GROOVED COUPLING.



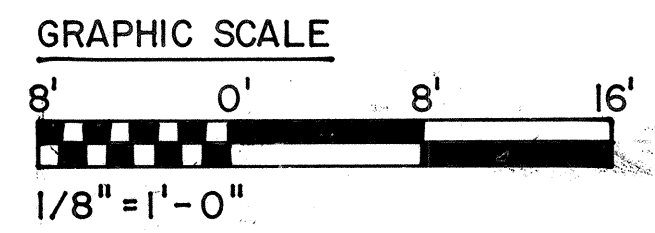
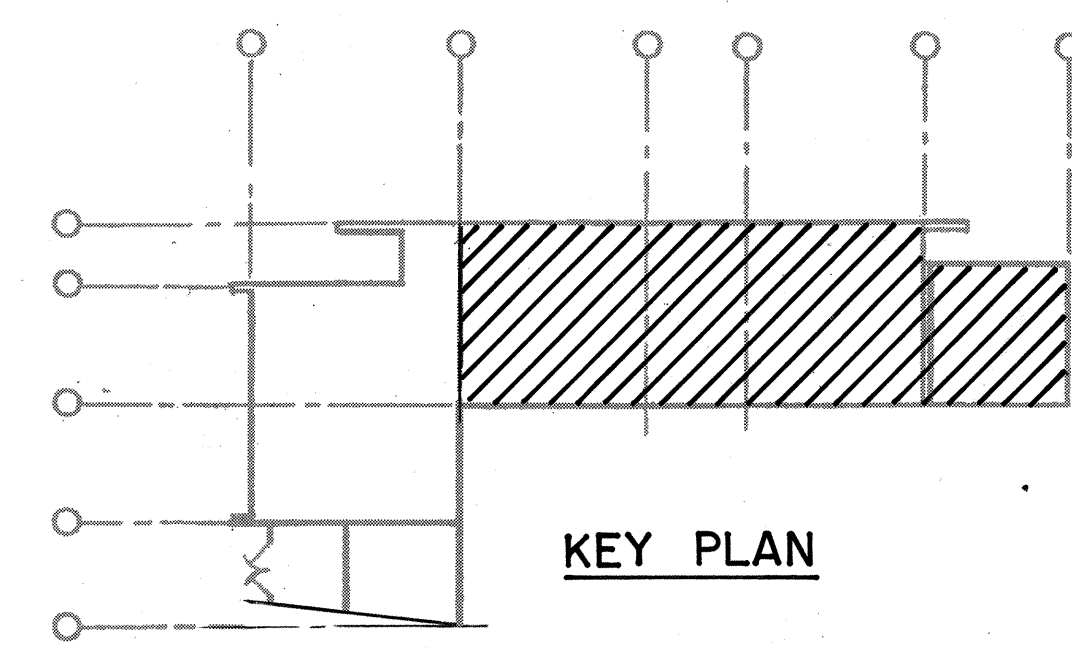
LEVEL 1 PARTIAL PLAN



LEVEL 3 PLAN



LEVEL 2 PLAN



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FOR DETAIL AS-BUILT INFORMATION REFER TO CONSTRUCTION SUBMITTALS

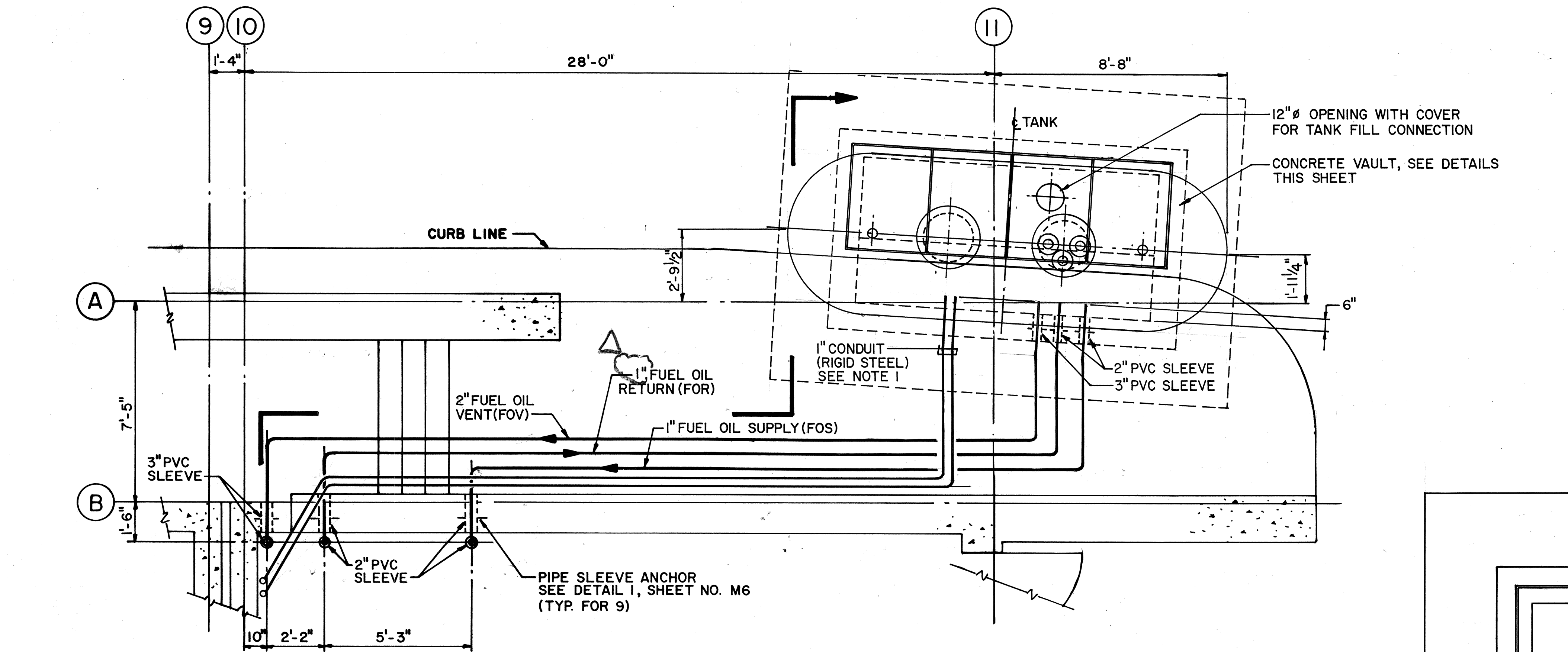
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
FIRE PROTECTION - PARTIAL PLANS
CONTROL BUILDING
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(64)
SCALE: 1/8" = 1'-0" DATE: JUN 1990
SHEET NO. MC4 OF 5 SHEETS

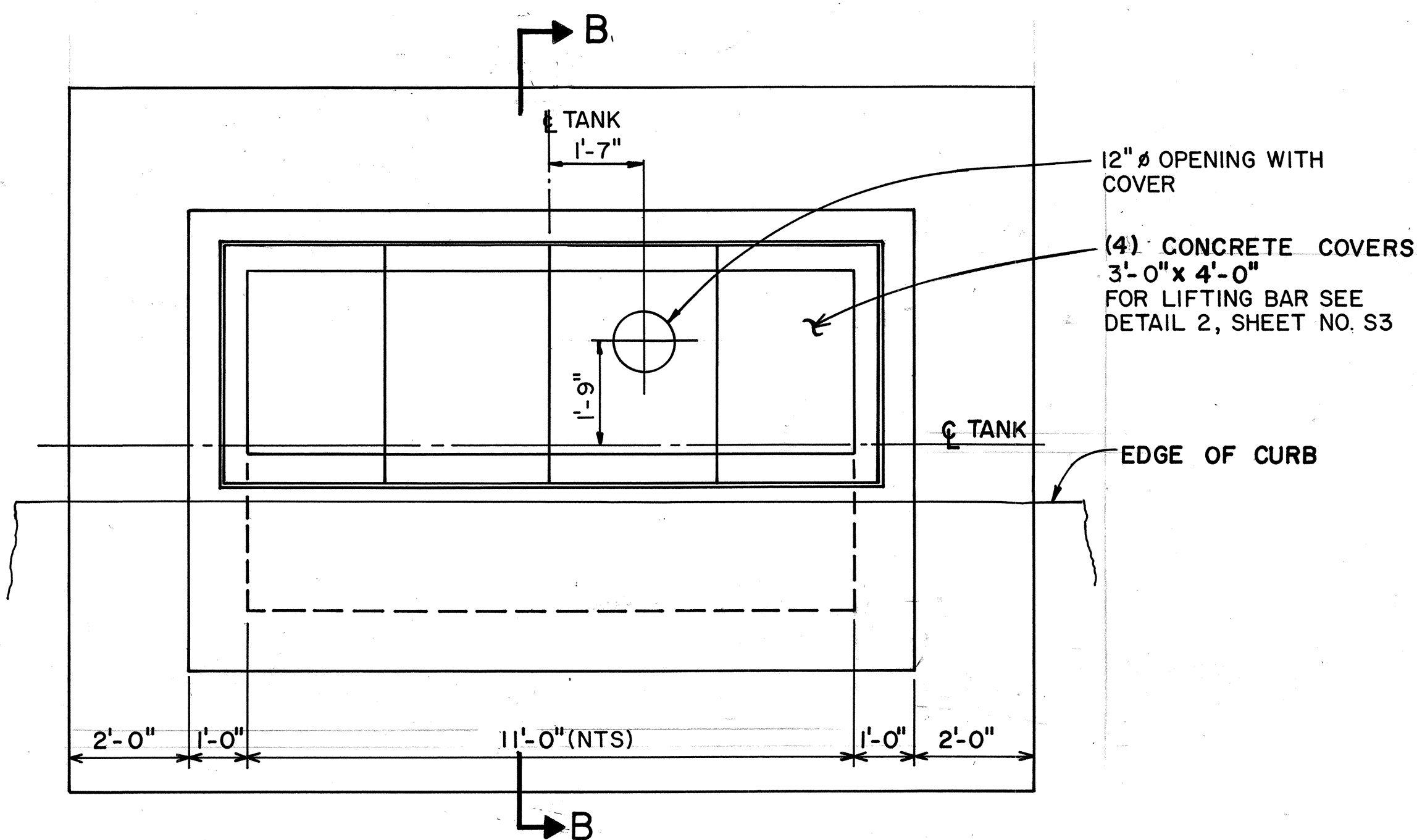
SURVEY PLOTTED BY: B. BUNYI, JR.	DATE: 07/16/89
DRAWN BY: E. L. ALLOUE	DESIGNED BY: E. L. ALLOUE
QUANTITIES BY: J. N. QIN	CHECKED BY: J. N. QIN
ORIGINAL PLAN	NOTE BOOK
No.	No.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(64)	1990	417	531

I. WHERE CONDUIT PASSES THROUGH CONCRETE, THE EMBEDDED SECTION PLUS 6" ON EACH SIDE OF CONCRETE EMBEDMENT, CONDUIT MATERIAL SHALL BE TYPE 317 STAINLESS STEEL.

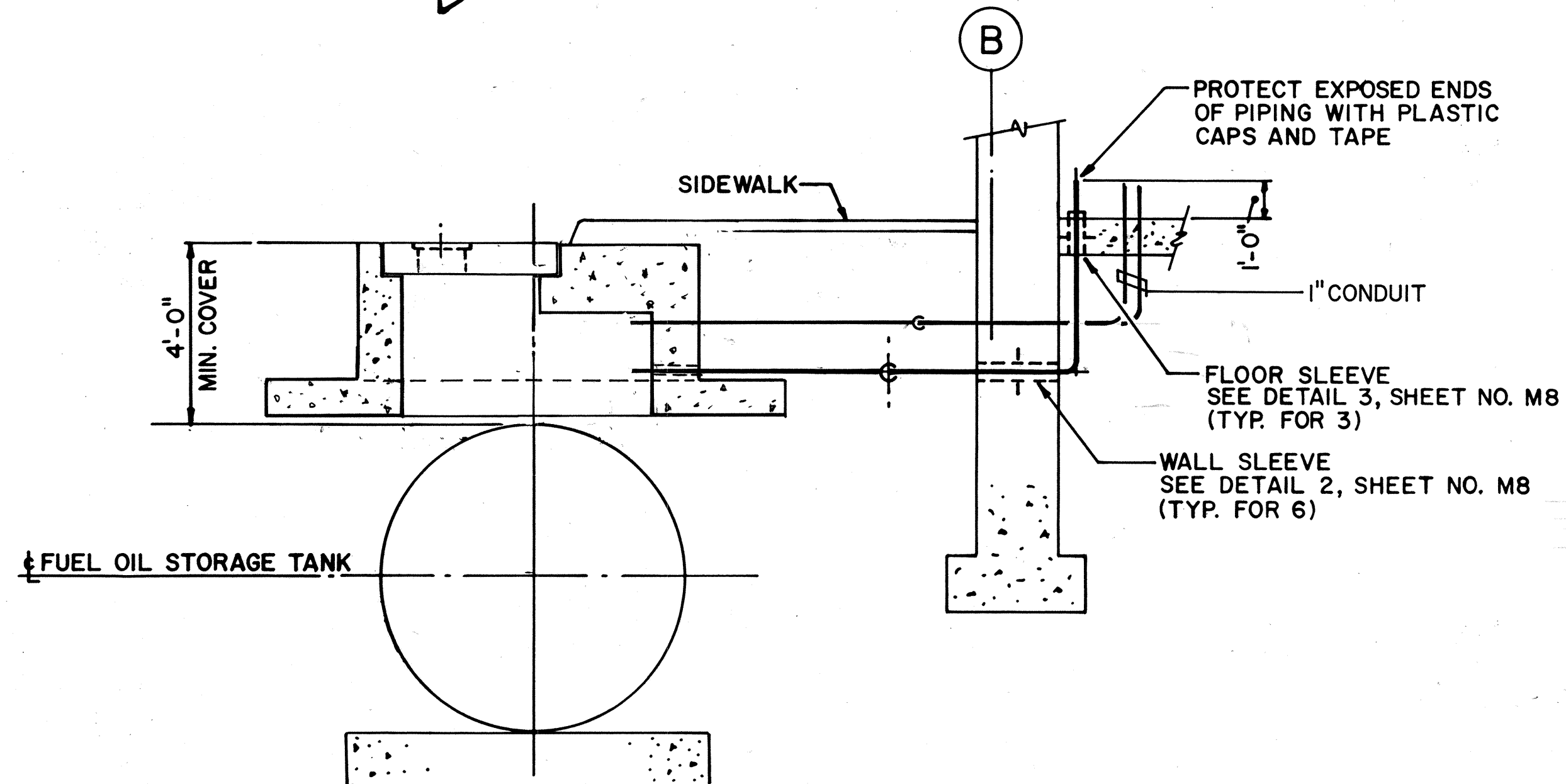


PARTIAL PLAN
3/8" = 1'-0"

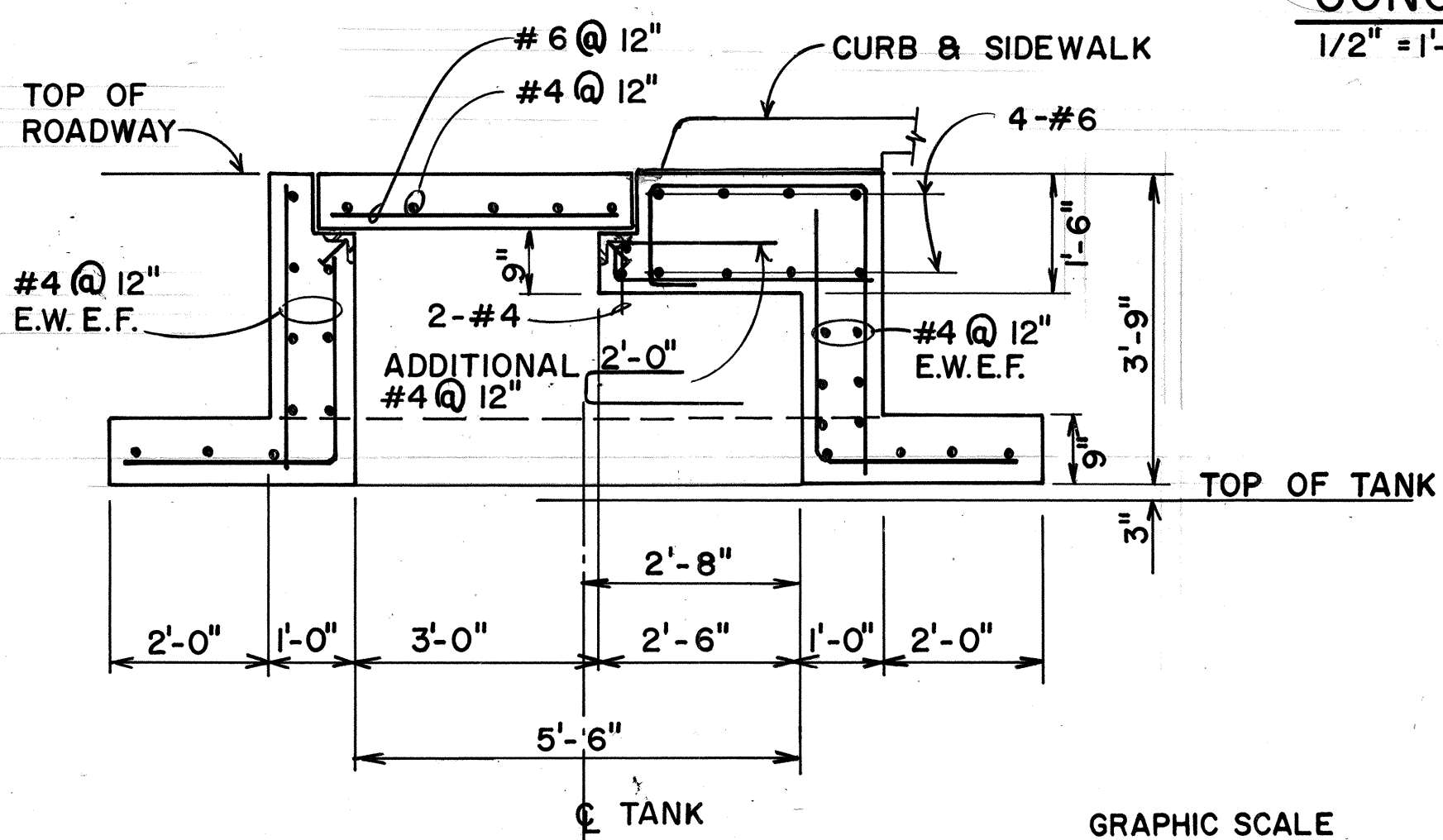


CONCRETE VAULT PLAN
1/2" = 1'-0"

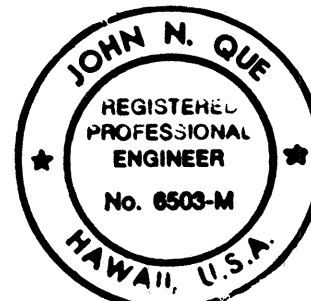
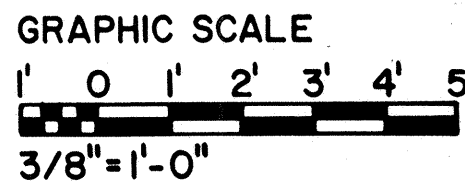
FOR DETAIL AS-BUILT INFORMATION
REFER TO CONSTRUCTION SUBMITTALS



SECTION A
3/8" = 1'-0"



SECTION B
1/2" = 1'-0"

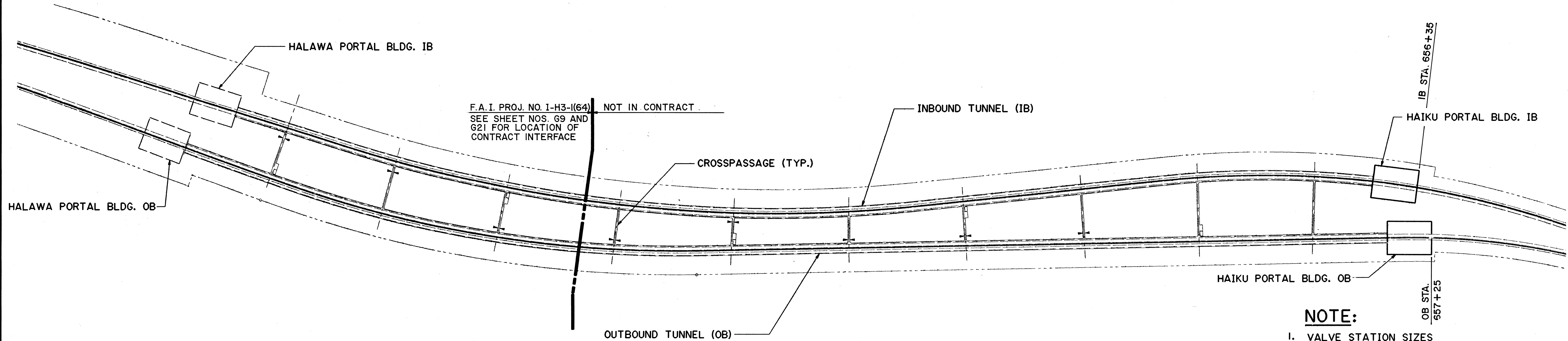


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OR UNDER MY SUPERVISION

DATE	REVISION
11/3/92	REV. FOR FROM 3/4" TO 1" PER DCN 64-050
9/14/92	ADDED VAULT DETAILS & REV. TANK LOC. TO SHOW AS-BUILT INFO PER DCN 64-040
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION FUEL OIL STORAGE TANK PLAN & SECTION CONTROL BUILDING INTERSTATE ROUTE H-3 F.A.I. PROJ. NO. I-H3-1(64) SCALE: 3/8" = 1'-0" DATE: JUN 1990 SHEET NO. MC5 OF 5 SHEETS	

SURVEY PLOTTED BY	DATE
DRAWN BY	07/18/90
DESIGNED BY	07/17/90
QUANTITIES BY	
CHECKED BY	08/24/90
ORIGINAL PLAN	
NOTE BOOK	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-I(64)	1990	418	531



NOTE:

1. VALVE STATION SIZES
A = 4'-9" X 3'-3" HIGH
B = 3'-9" X 3'-3" HIGH
2. SEE DETAIL 1, SHT. NO. MT3 FOR VALVE STATION DETAIL.
3. SEE DETAIL 2, SHT. NO MT3 FOR VALVE BOX DETAIL

IB TUNNEL				
VS NO.	VS LOCATION	VS SIZE	VB LOCATION	VB NO.
1	606+17	B	-	
2	607+20	B	-	
3	608+45	A	608+44.25	1
4	609+70	B	-	
5	610+95	B	-	
6	612+03.708	B	-	
7	613+30	A	613+29.25	2
8	614+55	B	-	
9	615+80	B	-	
10	616.88.708	B	-	
11	618+15	A	618+14.25	3
12	619+40	B	-	
13	620+65	B	-	
14	621+73.708	B	-	
15	623+00	A	622+99.25	4
16	624+25	B	-	
17	625+50	B	-	
18	62+58.708	B	-	
19	627+85	A	627+84.25	5
20	629+10	B	-	
21	630+35	B	-	
22	631+48.708	B	-	
23	632+75	A	632+74.25	6
24	634+00	B	-	
25	635+25	B	-	

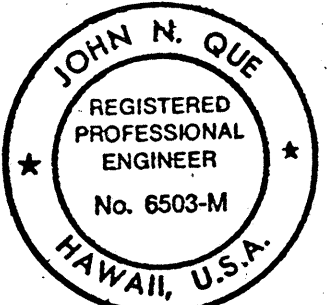
IB TUNNEL				
VS NO.	VS LOCATION	VS SIZE	VB LOCATION	VB NO.
26	636+38.708	B	-	
27	637+65	A	637+64.25	7
28	638+90	B	-	
29	640+15	B	-	
30	641+38.708	B	-	
31	642+65	A	642+64.25	8
32	643+90	B	-	
33	645+15	B	-	
34	646+38.708	B	-	
35	647+65	A	647+64.25	9
36	648+90	B	-	
37	650+15	B	-	
38	651+38.708	B	-	
39	652+65	A	652+64.25	10
40	653+90	B	-	
41	655+13	B	-	

OB TUNNEL				
VS NO.	VS LOCATION	VS SIZE	VB LOCATION	VB NO.
1	604+32	B	-	
2	605+60	B	-	
3	606+85	B	-	
4	608+10	A	608+09.25	1
5	609+35	B	-	
6	610+60	B	-	
7	611+83.708	B	-	
8	613+10	A	613+09.25	2
9	614+35	B	-	
10	615+60	B	-	
11	616+83.708	B	-	
12	618+10	A	618+09.25	3
13	619+35	B	-	
14	620+60	B	-	
15	621+83.708	B	-	
16	623+10	A	623+09.25	4
17	624+35	B	-	
18	625+60	B	-	
19	626+83.708	B	-	
20	628+10	A	628+09.25	5
21	629+35	B	-	
22	630+60	B	-	
23	631+83.708	B	-	
24	633+10	A	633+09.25	6
25	634+35	B	-	

OB TUNNEL				
VS NO.	VS LOCATION	VS SIZE	VB LOCATION	VB NO.
26	635+60	B	-	
27	636+83.708	B	-	
28	638+10	A	638+09.25	7
29	639+35	B	-	
30	640+60	B	-	
31	641+83.708	B	-	
32	643+10	A	643+09.25	8
33	644+35	B	-	
34	645+60	B	-	
35	646+73.708	B	-	
36	648+00	A	647+99.25	9
37	649+25	B	-	
38	650+50	B	-	
39	651+58.708	B	-	
40	652+85	A	652+84.25	10
41	654+10	B	-	
42	655+35	B	-	
43	656+03	B	-	

FOR DETAIL AS-BUILT INFORMATION
REFER TO CONSTRUCTION SUBMITTALS

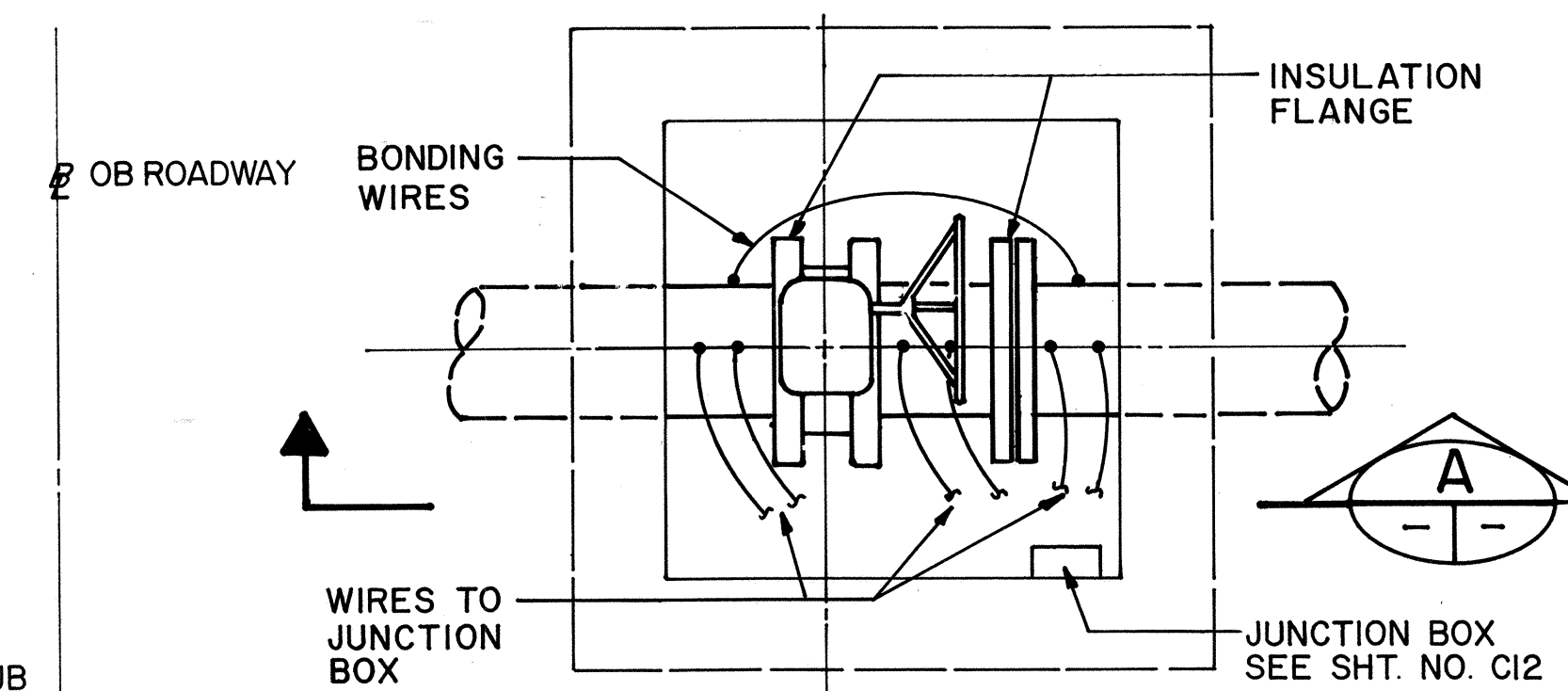
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
VALVE STATION LOCATION PLAN	
HALAWA TUNNELS	
INTERSTATE ROUTE H-3	
F.A.I. PROJ. NO. I-H3-I(64)	
SCALE: NONE	DATE: JUN 1990
SHEET NO. MT1 OF 3 SHEETS	



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

John N. Que

DATE	4/13/89
SURVEY PLOTTED BY	B. E. HUNY JR.
DESIGNED BY	P. L. ALLOUE
CHECKED BY	J. N. QUE
NO.	05/25/90

[illegible]

GRAPHIC SCALES:

1' 0' 5' 10' 15' 20' 30'

1/8" = 1'-0"

1' 0' 1' 2' 3'

1" = 1'-0"



THIS WORK WAS PREPARED BY M
ON UNDER MY SUPERVISION

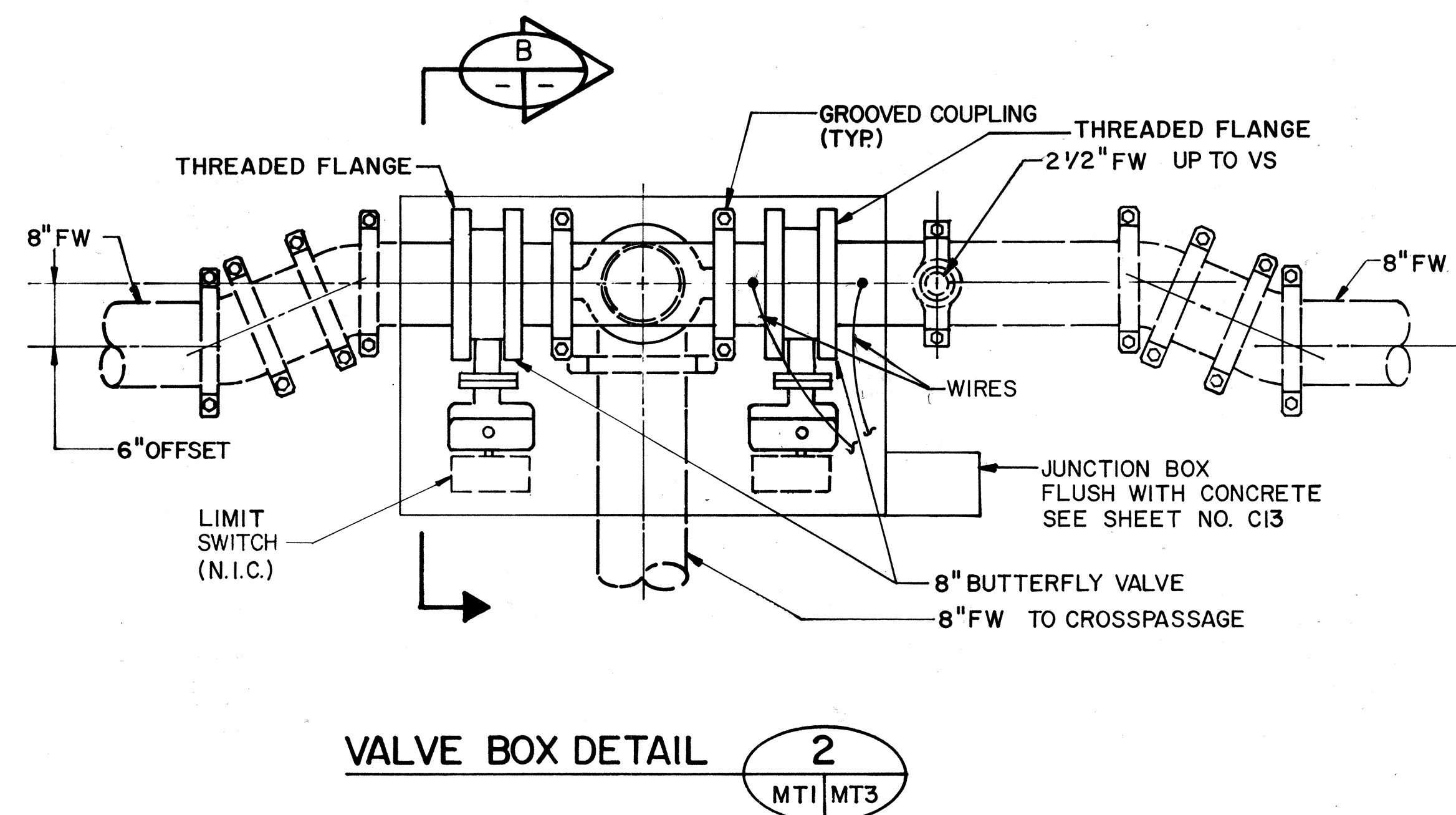
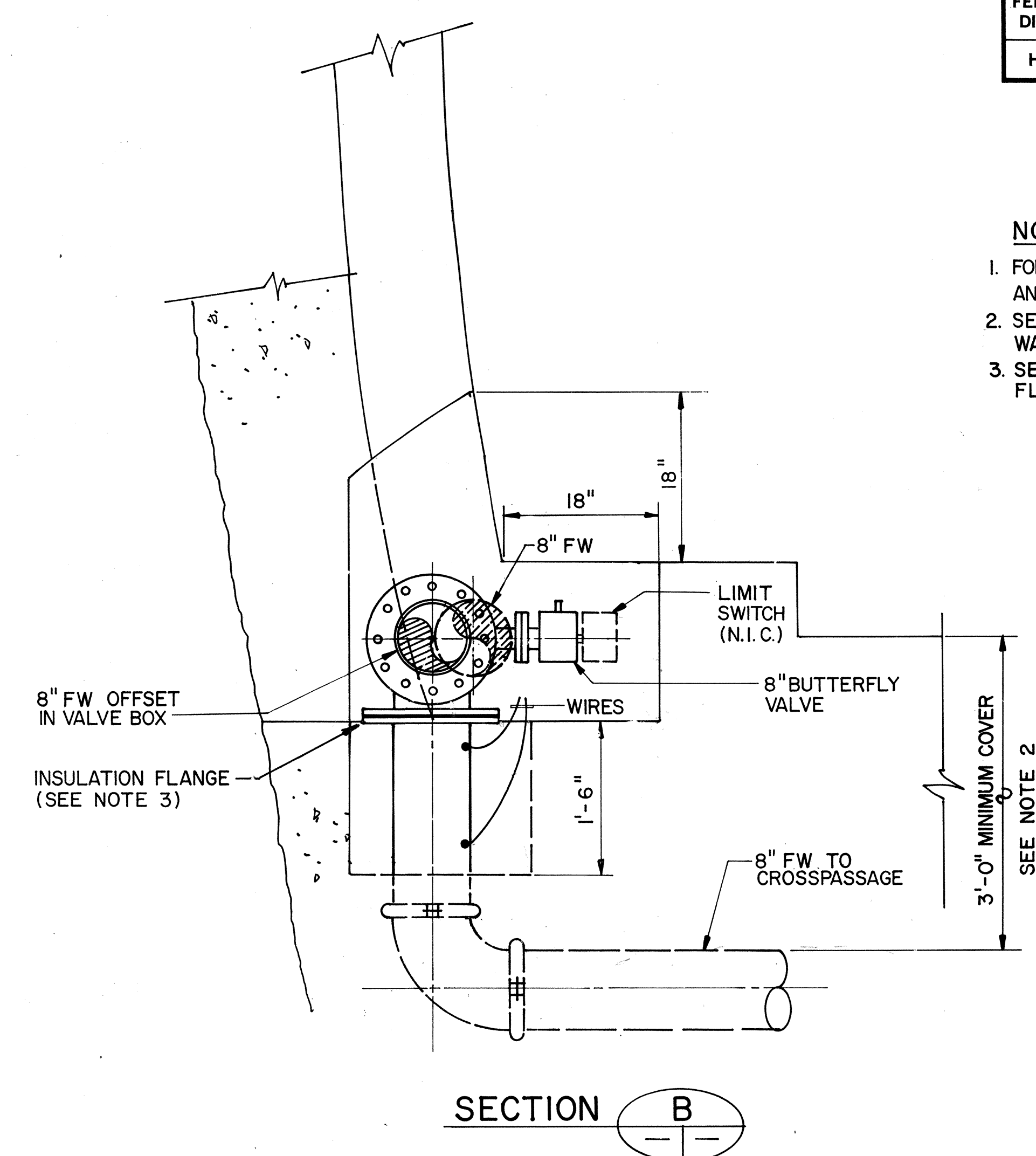
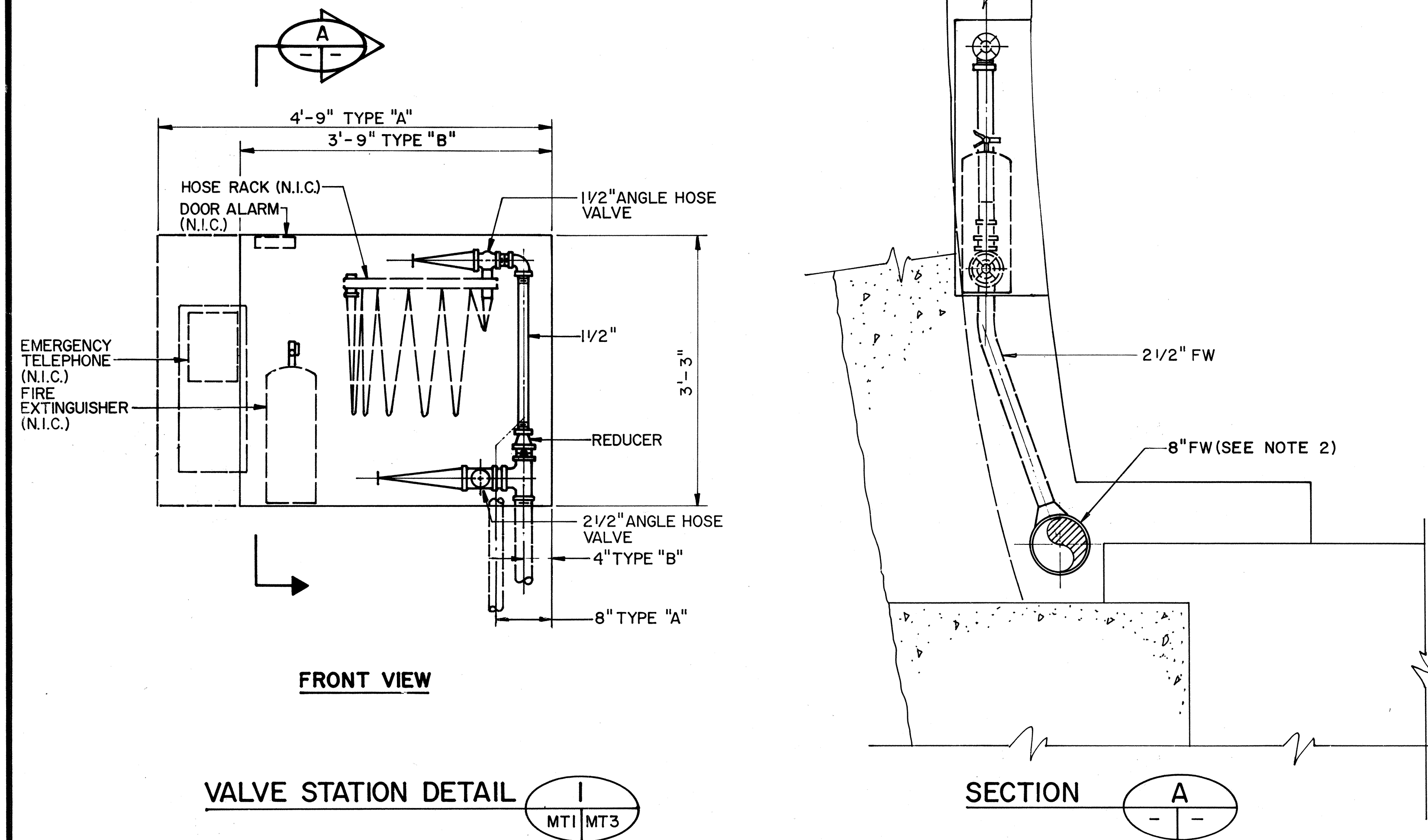
SCALE: AS NOTED DATE: JUN 1990
SHEET MT2 OF 3 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE: <u>5/8/93</u>
	DRAWN BY <u>B. F. BUNYI</u>	
	TRACED BY _____	
NOTE BOOK	DESIGNED BY <u>P. L. LALOUE</u>	<u>5/3/89</u>
	QUANTITIES BY _____	
No. _____	CHECKED BY <u>J. N. QUE</u>	<u>05/30/90</u>

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (64)	1990	420	531

NOTE :

1. FOR STRUCTURAL DETAILS OF VALVE STATION AND VALVE BOX SEE SHEET NO. ST9.
2. SEE SHEET NO. C6 FOR LOCATION OF FIRE WATER LINE.
3. SEE SHEET NO. C12 FOR DETAILS OF INSULATION FLANGE.



DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FIRE PROTECTION - SECTIONS AND DETAIL HALAWA TUNNELS

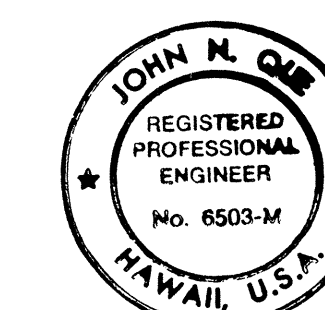
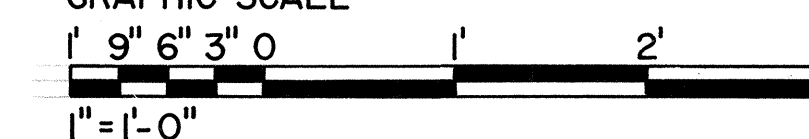
INTERSTATE ROUTE H-3
F.A.I. PROJ. NO. I-H3-1(64)

SCALE: 1"=1'-0" DATE: JUN 1990
SHEET NO. **MT3** OF 3 SHEETS

420

ORIGINAL PLAN	SURVEY PLOTTED BY B. F. BUNY, JR.	DATE 5/11/89
NOTE BOOK	DRAWN BY _____	_____
	DESIGNED BY _____	_____
	QUANTITIES BY P. L. LALOU	5/8/89
	CHECKED BY J. N. QUE	05/30/90
No. _____		

GRAPHIC SCALE



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

John R. Burr