## **GENERAL NOTES:**

- CONSTRUCTION DOCUMENTS CONSIST OF DESIGN DRAWINGS (DWG) AND WRITTEN SPECIFICATIONS (SPEC). WHEREVER DISCREPANCIES OR CONFLICTS ARE FOUND BETWEEN DWG AND SPEC, THE MORE STRINGENT REQUIREMENTS/CRITERIA SHALL GOVERN.
- 2. ALL WORK SHOWN ON THESE DRAWINGS ARE NEW UNLESS OTHERWISE NOTED.
- EXISTING CONDITIONS AND DIMENSIONS SHOWN ON THESE DRAWINGS ARE APPROXIMATE, BIDDERS SHALL VISIT THE PREMISES AND THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL DETAILS OF WORK AND WORKING CONDITIONS BEFORE SUBMITTING THEIR BID. REASONABLE MODIFICATIONS IN LOCATION AND ARRANGEMENTS TO SUIT JOB CONDITIONS SHALL NOT CONSTITUTE BASIS FOR REQUESTING OF ADDITIONAL FUNDS FROM THE STATE.
- 4. PRIOR TO ORDERING MATERIALS AND PROCURING EQUIPMENT, SUCCESSFUL BIDDER (CONTRACTOR) SHALL BE REQUIRED TO VERIFY ALL EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO EQUIPMENT, MATERIALS, SIZES, DIMENSIONS, INVERTS, AND VOLTAGES THAT AFFECT HIS WORK. SUBMIT A LETTER TO THE ENGINEER CONFIRMING THAT THIS WAS DONE. IF WRITTEN CONFIRMATION IS NOT RECEIVED BY THE ENGINEER, SHOP DRAWINGS AND OTHER SUBMITTALS WILL BE RETURNED WITHOUT REVIEW. SHOW ALL DISCREPANCIES ON SHOP DRAWINGS AND NOTIFY THE ENGINEER IN WRITING OF SUCH DISCREPANCIES PRIOR TO PROCUREMENT.
- 5. EXISTING UTILITY LATERAL LOCATIONS ARE CRITICAL WHERE BUILDING UTILITIES CONNECT TO EXISTING, CONTRACTOR SHALL VERIFY THE EXACT LOCATION (BY TONING) AND INVERTS (BY EXCAVATION), BEFORE ORDERING MATERIALS.
- 6. ALL UTILITIES AND APPURTENANCES SHALL BE PROTECTED AT ALL TIMES DURING CONSTRUCTION, AND IF DAMAGED, SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE STATE.
- REMOVE ALL UNUSED PIPING UNLESS SPECIFICALLY INDICATED AS "ABANDON IN PLACE". ALL ABANDONED PIPES SHALL BE CAPPED AT BOTH ENDS.
- THIS CONTRACT REQUIRES THE PLUMBING, AND MECHANICAL SUBCONTRACTORS TO CAREFULLY COORDINATE THEIR WORK WITH EACH OTHER. THE GENERAL CONTRACTOR AND OTHER TRADES. PRIORITY SHALL BE GIVEN IN THE FOLLOWING ORDER:
  - A. GRAVITY FLOW: SEWER. STORM DRAIN. DOWNSPOUT AND CONDENSATE PIPING.
  - B. EQUIPMENT AND DUCTWORK.
  - C. FORCED AND PRESSURE PIPING SUCH AS WATER PIPING.
- 9. ALL UNDERGROUND PRESSURE PIPING WITH MECHANICAL JOINTS SHALL HAVE CONCRETE REACTION BLOCKS AT ALL ELBOWS, TEES AND DEAD END PLUGS.
- 10. CONTRACTOR SHALL PROVIDE DIELECTRIC UNIONS AT CONNECTION POINTS FOR PIPING OF DISSIMILAR METALS.
- 11. FOR ALL FLOOR, WALL PARTITION, CEILING AND ROOF PENETRATIONS. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DETAILS.
- 12. ALL PENETRATIONS OF REQUIRED FIRE RATED WALLS, PARTITIONS AND FLOORS SHALL BE PROVIDED WITH FIRE STOPPING MATERIAL PER IBC.
- 13. NO CUTTING OR DRILLING OF ANY STRUCTURAL MEMBERS WILL BE PERMITTED WITHOUT THE APPROVAL OF THE ARCHITECT.
- 14. ALL FASTENERS, SUPPORTS, PIPE HANGERS, SPRING ISOLATORS, AND MISCELLANEOUS STEEL ITEMS INCLUDING BUT NOT LIMITED TO BOLTS, NUTS, SCREWS, RODS, PLATES, AND ANGLES, ETC. SHALL BE GALVANIZED UNLESS OTHERWISE NOTED OR SPECIFIED.
- 15. DEVICES THAT REQUIRE SERVICE CLEARANCE INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING: FAN COIL

UNITS, VOLUME DAMPERS, PRESSURE SENSORS, VALVES, ETC. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO CAREFULLY PLAN AND COORDINATE THE WORK OF ALL TRADES TO PROVIDE THE REQUIRED SERVICE CLEARANCES FOR THESE DEVICES. PROVIDE ACCESS PANELS TO CONCEALED SPACES (WHETHER SHOWN ON THE PLANS OR NOT) TO ALLOW ACCESS. PROVIDE FIRE RATED ACCESS PANELS AS REQUIRED. COORDINATE TYPE OF ACCESS PANEL WITH WALL OR CEILING CONTRACTOR. DO NOT BLOCK ACCESS BY INSTALLING EQUIPMENT, DUCTWORK, PIPING, CABLE TRAYS, CONDUITS, ETC., DIRECTLY BELOW SUCH DEVICES OR DIRECTLY ABOVE ACCESS PANELS. INSTALLATION SHALL PROVIDE SERVICE CLEARANCE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (BUT NOT LESS THAN 24") IN FRONT OF SUCH DEVICES. ACCESS PANELS SHALL BE 24"x24" MINIMUM UNLESS OTHERWISE NOTED.

# **PLUMBING NOTES:**

- 1. CONSTRUCTION DOCUMENTS CONSIST OF DESIGN DRAWINGS (DWG) AND WRITTEN SPECIFICATIONS (SPEC). WHEREVER DISCREPANCIES OR CONFLICTS ARE FOUND BETWEEN DWG AND SPEC. THE MORE STRINGENT REQUIREMENTS/CRITERIA SHALL GOVERN.
- 2. PLUMBING CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR AND OFFSET PIPING TO FIT WORK FROM ALL DISCIPLINES IN SPACE AVAILABLE.
- 3. ALL HORIZONTAL SOIL, WASTE AND STORM DRAIN PIPING SHALL BE SLOPED AT 1/4" PER FOOT UNLESS OTHERWISE NOTED.
- 4. ALL DOMESTIC COLD WATER PIPES LOCATED ON THE ROOF OR OTHER LOCATIONS EXPOSED TO DIRECT SUNLIGHT SHALL BE INSULATED.
- 5. ALL PIPE INSULATION EXPOSED TO WEATHER OR EXPOSED WITHIN 7'-0" ABOVE FINISHED FLOOR SHALL BE PROVIDED WITH 0.016" THICK ALUMINUM JACKET.
- 6. ALL SOIL OR WASTE PIPING RECEIVING AIR CONDITIONING CONDENSATE DRAINS SHALL BE INSULATED FROM POINT OF CONNECTION TO TOP OF CONCRETE SLAB ON GRADE. INSULATE FLOOR DRAIN AND FLOOR SINK DRAIN BODIES EXPOSED TO AIR BELOW THE FLOOR.
- WHEN VALVES ARE INSTALLED IN HORIZONTAL POSITION, VALVE STEM SHALL BE INSTALLED IN AN UPRIGHT POSITION. IF THIS IS NOT POSSIBLE BECAUSE OF SPACE AND HEADROOM CONSTRAINTS, VALVE STEM SHALL BE INSTALLED IN AN INCLINED POSITION ABOVE THE HORIZONTAL CENTERLINE OF THE
- 8. CONTRACTOR SHALL PROVIDE DIELECTRIC UNIONS AT CONNECTION POINTS FOR ALL DISSIMILAR PIPING.
- 9. ALL COPPER PIPES SHALL USE NON-CORROSIVE FLUX, NON-LEAD SOLDER.
- 10. ALL PENETRATIONS OF REQUIRED FIRE RATED WALLS, PARTITIONS AND FLOORS SHALL BE PROVIDED WITH FIRE STOPPING MATERIAL PER UBC.
- 11. SUPPORT HORIZONTAL LINES OF COPPER TUBING AND PLASTIC DWV WITH HANGERS SPACED NOT MORE THAN 6 FEET, CENTER TO CENTER FOR ALL PIPE SIZES. ALL PIPES SHALL BE SUPPORTED AT ELBOWS, BRANCHES AND RISERS.
- 12. SUPPORT HORIZONTAL CAST IRON SOIL PIPE WITH HANGER, OR PIER, TWO FOR EACH 5 FOOT PIPE LENGTH; LOCATE SUPPORT CLOSE TO JOINTS EXCEPT, PIPE EXCEEDING 5 FEET IN LENGTH SHALL BE SUPPORTED AT NO MORE THAN 5 FOOT INTERVALS. SUPPORTS SHALL BE LOCATED ON BOTH SIDES OF ALL JOINTS AND WITHIN 6" OF THE JOINT.

### FIRE PROTECTION NOTES:

1. BOTTOM OF FIRE EXTINGUISHER CABINETS SHALL BE INSTALLED AT 3'-6" FROM FINISHED FLOOR; SEE PLANS FOR LOCATIONS.

# <u>WATER FLOW REQUIREMENTS - NEW BLDG</u>

	PREMISE ID#:	3800 658474		
	METER NUMBER (M/N):	1843 3213		
	DESCRIPTION	FU	GPM	GPD
A.	PROPOSED DOMESTIC: [ALL FIXTURES BEING INSTALLED]	26.6	39.3	380
В.	PROPOSED IRRIGATION:	0	0	0
C.	OTHER:	0	0	0
D.	TOTAL PROPOSED:  [DO NOT INCLUDE IRRIGATION GPM  IF LESS THAN DOMESTIC AND DONE  DURING OFF—PEAK HOURS]	26.6	39.3	380
E.	DEMOLITION: [ALL FIXTURES BEING REMOVED]	0	0	0
	DEMO PERMIT # DATE:	<u>-</u>		
F.	NET CHANGE: [SUBTRACT "E" FROM "D" ABOVE]	26.6	39.3	380
G.	EXISTING TO REMAIN:  [OTHER FIXTURES SERVICED BY THIS METER BUT NOT AFFECTED BY PROJECT]	0	0	
Н.	GRAND TOTAL [ADD "D" AND "G" ABOVE]	26.6	39.3	380
NOTE	<u> </u>			

DESCRIPTION

A. PROPOSED DOMESTIC:

B. PROPOSED IRRIGATION:

TOTAL PROPOSED:

C. OTHER:

E. DEMOLITION:

F. NET CHANGE:

NOTES:

D.

[ALL FIXTURES BEING INSTALLED]

DO NOT INCLUDE IRRIGATION GPM

DURING OFF-PEAK HOURS

[ALL FIXTURES BEING REMOVED]

[SUBTRACT "E" FROM "D" ABOVE]

DONE DURING OFF-PEAK HOURS.

OTHER FIXTURES SERVICED BY THIS

METER BUT NOT AFFECTED BY PROJECT]

EXISTING TO REMAIN:

F LESS THAN DOMESTIC AND DONE

DEMO PERMIT # \_\_\_\_\_ DATE: \_\_\_\_

1. AIR CONDITIONING WORK WILL NOT AFFECT WATER DEMAND.

THE EXISTING IRRIGATION WATER DEMAND IS LESS THAN DOMESTIC WATER DEMAND AND IS

- AIR CONDITIONING WORK WILL NOT AFFECT WATER DEMAND.
- 2. THE EXISTING IRRIGATION WATER DEMAND IS LESS THAN DOMESTIC WATER DEMAND AND IS DONE DURING OFF-PEAK HOURS.

WATER FLOW REQUIREMENTS — EXST BLDG

METER NUMBER (M/N): 1843 3213

PREMISE ID#: <u>3800 658474</u>

GPM

<u> 29.5</u>

\_\_\_29.5\_\_\_

<u>17.5</u> <u>33.75</u> \_\_\_

<u>22.5</u> <u>37.5</u>

GPD

\_\_\_600

\_\_\_600

PLUMBING FIXTURE SUMMARY

(NEW BLDG)

<u>FU EACH<sup>2</sup></u>

1.7

0.6

1.6

1.6

0.6

2.5

TOTAL FU

3.4

2.4

1.6

1.6

0.6

2.5

4

26.6 FU

OFD

PROPOSED:

WATER CLOSET (FLUSH TANK)

<u>FIXTURE</u>

LAVATORY

**SHOWER** 

MOP SINK

DRINKING FOUNTAIN

ADDITIONAL HOSE BIBB

1. NEW FIXTURE COLD WATER UNITS PER 2012 UPC.

FIRST HOSE BIBB

TOTAL PROPOSED:

HAWAII	HAW.	HWY-M-ART18-01	2022	50	79
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOT SHE

AUTOMATIC AIR VENT

OR CONNECTION

MOP SINK

OVERFLOW DRAIN

SOIL OR WASTE

WATER CLOSET

SHOWER

SWITCH

URINAL

TERMINAL

POINT OF CONNECTION

MOTORIZED VOLUME DAMPER

# PLUMBING LEGEND:

AAV	AUTUMATIC AIR VENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AP	ACCESS PANEL
AUX	AUXILIARY
BV	BUTTERFLY VALVE
CO	CLEANOUT
CONN	CONNECT OR CONNECTION
CONT	CONTINUATION
COTG	CLEANOUT TO GRADE
CV	CHECK VALVE
CW	COLD WATER
DCV	DOUBLE CHECK VALVE
DD	DECK DRAIN
DI	DRAIN INLET
DISP	DISPOSAL (GARBAGE)
DN	DOWN
DS	DOWNSPOUT
ER	EXHAUST REGISTER
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXST	EXISTING
FE	FIRE EXTINGUISHER
FD	FLOOR DRAIN
FU	FIXTURE UNIT
GC	GENERAL CONTRACTOR
HB	HOSE BIBB
LAV	LAVATORY
MGV	MOTORIZED GATE VALVE

POC

TERM

S OR W

PLUMBING FIXTURE SUMMARY

(EXST_BLDG)				
EXISTING: TOTAL EXISTING:			27.5 FU	
DEMOLITION: TOTAL DEMOLITION:			17.5 FU	
PROPOSED:				
<u>FIXTURE</u>	QUANTITY	FU EACH	TOTAL FU	
WATER CLOSET (FLUSH TANK) URINAL LAVATORY SHOWER	4 1 4 1	1.7 1.7 0.6 1.6	6.8 1.7 2.4 1.6	
TOTAL PROPOSED:			12.5 FU	

NEW FIXTURE COLD WATER UNITS PER 2012 UPC.

LICENSED PROFESSIONAL ENGINEER \No. 13747-M/ mally

This work was prepared by me or under my supervision and construction of the project will be under my observation. Expiration date 04/30/24.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

PLUMBING NOTES, LEGEND, PLUMBING FIXTURE SCHEDULES, AND WATER FLOW REQUIREMENTS TABLE

MAUI DISTRICT BASEYARD Project No. HWY-M-ART18.01

Scale: NONE Date: MAY 2022

SHEET No. PO OF 79 SHEETS

SURVEY PLOTT
DRAWN BY\_\_\_\_\_\_
TRACED BY\_\_\_
DESIGNED BY\_\_
QUANTITIES BY\_
CHECKED BY\_\_