

SHT. NO.	DWG. NO.	TITLE
● INFORMATION		
1	X-1	TITLE SHEET
2	X-2	LIST OF DRAWINGS
3	X-3	VICINITY MAP
4	X-4	PROJECT LOCATION & LIMITS OF WORK
5	X-5	TRIANGULATION
6	X-6	SOIL INVESTIGATION DATA
7	X-7	CURVE DATA, KALIHU END OF TUNNEL
8	X-8	CURVE DATA, KANEHOE END OF TUNNEL
9	X-9	GENERAL LIMITS OF TUNNEL & PORTAL WORK

● KALIHU APPROACH ROAD		
10	R-1	TYPICAL SECTION
11	R-2	PLAN & PROFILE
12	R-3	PLAN & PROFILE
13	R-4	PORTAL VICINITY DETAILS
14	R-5	STANDARD DETAILS
15	R-6	STANDARD DETAILS
16	R-7	STANDARD DETAILS
17	R-8	STANDARD DETAILS - OMITTED
18	R-9	CULVERT DETAILS
19	R-10	CULVERT DETAILS
20	R-11	CULVERT DETAILS
21	R-12	CROSS SECTIONS
22	R-13	CROSS SECTIONS
23	R-14	CROSS SECTIONS
24	R-15	CROSS SECTIONS
25	R-16	CROSS SECTIONS
26	R-17	CROSS SECTIONS
27	R-18	CROSS SECTIONS
28	R-19	CROSS SECTIONS
29	R-20	CROSS SECTIONS
30	R-21	CROSS SECTIONS
31	R-22	CROSS SECTIONS
32	R-23	CROSS SECTIONS
33	R-24	CROSS SECTIONS
34	R-25	CROSS SECTIONS
35	R-26	LIGHTING & SIGNAL LAYOUT
36	R-27	ROADWAY LIGHTING DETAILS
37	R-28	REGULATORY & WARNING SIGNS

● KANEHOE APPROACH ROAD		
38	R-29	PLAN & PROFILE
39	R-30	PORTAL VICINITY DETAILS
40	R-31	CROSS SECTIONS
41	R-32	CROSS SECTIONS
42	R-33	CROSS SECTIONS
43	R-34	CROSS SECTIONS
44	R-35	CROSS SECTIONS
45	R-36	LIGHTING & SIGNAL LAYOUT

● VENTILATION BLDG. ACCESS ROAD		
46	A-1	PLAN & PROFILE
47	A-2	PLAN & PROFILE
48	A-3	CULVERT DETAILS
49	A-4	CULVERT DETAILS
50	A-5	CULVERT DETAILS
51	A-6	CROSS SECTIONS
52	A-7	CROSS SECTIONS
53	A-8	CROSS SECTIONS
54	A-9	CROSS SECTIONS
55	A-10	CROSS SECTIONS
56	A-11	CROSS SECTIONS
57	A-12	CROSS SECTIONS

● STREAM DIVERSION		
58	S-1	TYPICAL SECTIONS
59	S-2	PLAN & PROFILE
60	S-3	PLAN & PROFILE
61	S-4	PLAN & PROFILE
62	S-5	INTERSECTION DETAILS
63	S-6	TRANSITION DETAILS
64	S-7	CROSS SECTIONS
65	S-8	CROSS SECTIONS
66	S-9	CROSS SECTIONS
67	S-10	CROSS SECTIONS
68	S-11	CROSS SECTIONS
69	S-12	CROSS SECTIONS
70	S-13	CROSS SECTIONS
71	S-14	CROSS SECTIONS

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72	S-15	CROSS SECTIONS
73	S-16	CROSS SECTIONS
74	S-17	CROSS SECTIONS
● LANDSCAPING		
75	L-1	KALIHU APPROACH ROAD
76	L-2	KALIHU PORTAL
77	L-3	ACCESS ROAD, VENT. BLDG., & STREAM DIVERSION CHANNELS
78	L-4	KANEHOE PORTAL

● TUNNEL & SHAFT		
79	T-1	PLAN & PROFILE
80	T-2	SECTIONAL PLAN & PROFILE
81	T-3	KEY PLAN - ELECTRICAL
82	T-4	KEY PLAN - C.O. SAMPLING INLET BOXES
83	T-5	TUNNEL SECTIONS - KALIHU SIDE
84	T-6	TUNNEL SECTIONS - KANEHOE SIDE
85	T-7	TYPICAL MODULE - CEILING
86	T-8	ENTRANCE LIGHTING FRAME LAYOUT - KALIHU SIDE
87	T-9	ENTRANCE LIGHTING FRAME LAYOUT - KANEHOE SIDE
88	T-10	TYPICAL MODULE - INSERTS & CONDUIT
89	T-11	MISCELLANEOUS DETAILS
90	T-12	ROADWAY & DRAINAGE, TYPICAL MODULES
91	T-13	ROADWAY & DRAINAGE, DETAILS
92	T-14	ROADWAY & DRAINAGE, DUCT DETAILS
93	T-15	ROADWAY & DRAINAGE, HANDHOLE DETAILS
94	T-16	GLAZED TILE LINING - RIGHT WALL
95	T-17	GLAZED TILE LINING - LEFT WALL
96	T-18	GLAZED TILE LINING DETAILS
97	T-19	TUNNEL INTERIOR LIGHTING BOX
98	T-20	COMMUNICATION STATION BOX
99	T-21	FIRE EXTINGUISHER BOX
100	T-22	C.O. SAMPLING INLET BOX
101	T-23	CABLE SUPPORT BOX
102	T-24	VENTILATION SLOT DETAILS
103	T-25	TUNNEL ENTRANCE LIGHTING BOX FRAME
104	T-26	CEILING HATCH DETAILS
105	T-27	AIRTIGHT DOOR - ASSEMBLY
106	T-28	AIRTIGHT DOOR - WELDMENTS
107	T-29	AIRTIGHT DOOR - DETAILS
108	T-30	AIRTIGHT DOOR - DETAILS

● TRANSITION		
109	T-31	PLAN & SECTIONS
110	T-32	PLAN ABOVE TUNNEL CEILING & ELEVATION
111	T-33	PLANS ABOVE TUNNEL & SECTION
112	T-34	STRUCTURAL - LONGITUDINAL & CROSS SECTIONS
113	T-35	STRUCTURAL - FIN - 1 & DETAILS
114	T-36	STRUCTURAL - FINS - 2,3,4 & DETAILS
115	T-37	STRUCTURAL - SHAFT & PASSAGE DETAILS
116	T-38	STRUCTURAL - STAIRS & MISC. DETAILS
117	T-39	UTILITY HOIST ROOM
118	T-40	UTILITY HOIST, SHAFT & STAGING
119	T-41	TUNNEL WALL, CEILING & MISC. DETAILS
120	T-42	CONDUIT LAYOUT & DETAILS
121	T-43	ROADWAY AND DRAINAGE DETAILS
122	T-44	TUNNEL & PORTAL SIGNS

● KALIHU PORTAL		
123	P-1	SITE PLAN
124	P-2	PLAN
125	P-3	PLAN ABOVE TUNNEL CEILING
126	P-4	ELEVATION
127	P-5	SECTION THRU PORTAL, RIGHT
128	P-6	SECTION THRU PORTAL, LEFT
129	P-7	CROSS SECTIONS
130	P-8	STAIR DETAILS
131	P-9	OFFICE & VAULT, ELEVATIONS, SECTIONS & DETAILS
132	P-10	OFFICE & VAULT, WINDOW, DOOR & LOUVER DETAILS
133	P-11	STRUCTURAL, LAYOUT PLAN
134	P-12	STRUCTURAL, FOUNDATION PLAN
135	P-13	STRUCTURAL, FOUNDATION PLAN
136	P-14	STRUCTURAL, TUNNEL ENTRANCE, PLAN & ELEVATION
137	P-15	STRUCTURAL, TUNNEL ENTRANCE, PLAN SECTIONS & DETAILS
138	P-16	STRUCTURAL, TUNNEL ENTRANCE, ROOF PLAN & STAIRS
139	P-17	STRUCTURAL, TUNNEL ENTRANCE, SECTIONS & DETAILS
140	P-18	STRUCTURAL, TUNNEL ENTRANCE, SECTIONS & DETAILS
141	P-19	STRUCTURAL, PORTAL WALL, PLAN, ELEVATION & DETAILS
142	P-20	STRUCTURAL, PORTAL WALL, SECTIONS & DETAILS

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143	P-21	STRUCTURAL, PORTAL WALL, SECTIONS & DETAILS
144	P-22	STRUCTURAL, OFFICE & VAULT, PLANS, SECTIONS, & DETAILS
145	P-23	STRUCTURAL, OFFICE & VAULT, DETAILS
146	P-24	DRAINAGE & DUCT LAYOUTS
147	P-25	CONDUIT LAYOUT & OFFICE WIRING
148	P-26	ELECTRICAL MANHOLE DETAILS
149	P-27	ELECTRICAL DUCTS & SIGNAL DETAILS
150	P-28	WATERTIGHT SEWAGE TANK
● KANEHOE PORTAL		
151	P-29	SITE PLAN
152	P-30	PLAN OF EXCAVATION WORK ACCOMPLISHED BY OTHERS
153	P-31	PLAN
154	P-32	PLAN ABOVE TUNNEL CEILING
155	P-33	ELEVATION
156	P-34	SECTION THRU PORTAL, RIGHT
157	P-35	SECTION THRU PORTAL, LEFT
158	P-36	CROSS SECTIONS
159	P-37	STAIR DETAILS
160	P-38	OFFICE & VAULT, ELEVATIONS, SECTIONS & DETAILS
161	P-39	STRUCTURAL, LAYOUT PLAN, ELEVATION & DETAILS
162	P-40	STRUCTURAL, FOUNDATION PLAN
163	P-41	STRUCTURAL, FOOTING PLAN
164	P-42	STRUCTURAL, PLAN AT ROADWAY
165	P-43	STRUCTURAL, TUNNEL ENTRANCE, PLAN & SECTIONS
166	P-44	STRUCTURAL, TUNNEL ENTRANCE, FOUNDATION PLAN & STAIR DETAILS
167	P-45	STRUCTURAL, TUNNEL ENTRANCE, PLANS ABOVE CEILING
168	P-46	STRUCTURAL, TUNNEL ENTRANCE, PLAN AT ROOF & CROSS SECTIONS
169	P-47	STRUCTURAL, TUNNEL ENTRANCE, SECTIONS
170	P-48	STRUCTURAL, PORTAL WALL ELEVATION
171	P-49	STRUCTURAL, PORTAL WALL SECTIONS & DETAILS
172	P-50	STRUCTURAL, OFFICE & VAULT PLANS & DETAILS
173	P-51	STRUCTURAL, OFFICE & VAULT SECTIONS & DETAILS
174	P-52	DRAINS ABOVE PORTAL WALL
175	P-53	DRAINAGE & DUCT LAYOUTS
176	P-54	CONDUIT LAYOUT & OFFICE WIRING

● VENTILATION BLDG.		
177	VB-1	SITE PLAN
178	VB-2	GROUND FLOOR PLAN
179	VB-3	MEZZANINE FLOOR PLAN
180	VB-4	SECOND FLOOR PLAN
181	VB-5	MOTOR DECK FLOOR PLAN
182	VB-6	ELEVATIONS
183	VB-7	ELEVATIONS
184	VB-8	SECTION - TRANSVERSE
185	VB-9	SECTION - LONGITUDINAL
186	VB-10	GROUND FLOOR PLAN
187	VB-11	SECOND FLOOR PLAN
188	VB-12	MOTOR DECK FLOOR PLAN
189	VB-13	WALL SECTIONS & DETAILS
190	VB-14	GIRT FRAMING & DETAILS
191	VB-15	WINDOW & LOUVER DETAILS
192	VB-16	DOOR & WINDOW SCHEDULE & DETAILS
193	VB-17	CONTROL ROOM & TOILET ROOM DETAILS
194	VB-18	MISC. DETAILS
195	VB-19	MISC. DETAILS
196	VB-20	STAIR DETAILS
197	VB-21	FAN DUCT DETAILS
198	VB-22	FAN DISCHARGE DUCT DETAILS
199	VB-23	STRUCTURAL, VENT FLARE, PLANS
200	VB-24	STRUCTURAL, VENT FLARE, SECTIONS
201	VB-25	STRUCTURAL, VENT FLARE, DETAILS
202	VB-26	STRUCTURAL, FOUNDATION PLAN
203	VB-27	STRUCTURAL, GROUND FLOOR & MEZZANINE FLOOR PLANS
204	VB-28	STRUCTURAL, FOUNDATION & GROUND FLOOR DETAILS
205	VB-29	STRUCTURAL, 2ND FLOOR FRAMING PLAN & DETAILS
206	VB-30	STRUCTURAL, MEZZANINE & 2ND FLOOR DETAILS
207	VB-31	STRUCTURAL, RIGID FRAME DETAILS
208	VB-32	STRUCTURAL, MOTOR DECK FRAMING PLAN & DETAILS
209	VB-33	STRUCTURAL, TYPICAL DETAILS
210	VB-34	STRUCTURAL, TYPICAL DETAILS
211	VB-35	STRUCTURAL, FRONT WALL ELEVATION & DETAILS
212	VB-36	STRUCTURAL, EXTERIOR RET. WALL - RIGHT & TYPICAL INTERIOR WALL
213	VB-37	STRUCTURAL, EXTERIOR RET. WALL - LEFT
214	VB-38	STRUCTURAL, TYPICAL RET. WALL SECTIONS
215	VB-39	STRUCTURAL, ROOF FRAMING PLAN & DETAILS
216	VB-40	STRUCTURAL, TRUSS DETAILS

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217	VB-41	STRUCTURAL, TRUSS & COLUMN DETAILS
218	VB-42	PLUMBING - GROUND FLOOR PLAN & DETAILS
219	VB-43	PLUMBING - 2ND FLOOR PLAN & DETAILS
220	VB-44	WATER STORAGE TANK
221	VB-45	WATERTIGHT SEWAGE TANK
222	VB-46	ELECTRIC LIGHTING REFLECTED CEILING PLANS
223	VB-47	ELECTRIC LIGHTING REFLECTED ROOF PLAN
224	VB-48	ELEVATION OF VENTILATION FANS
● VENTILATION		
225	V-1	C.O. SAMPLING SYSTEM
226	V-2	TUNNEL SECTION
227	V-3	C.O. ANALYZER EQUIPMENT - SCHEMATIC
228	V-4	C.O. SAMPLING INLET DETAIL
● ELECTRICAL		
229	E-1	ONE LINE DIAGRAM
230	E-2	TUNNEL INTERIOR LIGHTING WIRING DIAGRAM
231	E-3	TUNNEL INTERIOR LIGHTING LUMINAIRE DETAILS
232	E-4	TUNNEL INTERIOR LIGHTING BOX EQUIPMENT ASSEMBLY
233	E-5	TUNNEL ENTRANCE LIGHTING WIRING DIAG. & LUMINAIRE DETAILS
234	E-6	TUNNEL ENTRANCE LIGHTING INSTALLATION DETAILS
235	E-7	TUNNEL EMERGENCY LIGHTING & AIR DUCT LIGHTING
236	E-8	TUNNEL COMMUNICATION STATION DETAILS
237	E-9	TUNNEL COMMUNICATION STATION BOX ASSEMBLY & WIRING DIAG.
238	E-10	TUNNEL TRAFFIC SIGNAL SYSTEM WIRING DIAGRAM
239	E-11	TUNNEL TRAFFIC SIGNAL SYSTEM CONTROL PANELS
240	E-12	TRANSITION & SHAFT LIGHTING & WIRING DETAILS
241	E-13	KALIHU PORTAL VAULT WIRING DIAGRAM & DETAILS
242	E-14	KALIHU PORTAL VAULT EQUIPMENT LAYOUT
243	E-15	KANEHOE PORTAL VAULT EQUIPMENT LAYOUT
244	E-16	VENTILATION BLDG. H.E. CO. TRANSFORMER STATION
245	E-17	VENTILATION BLDG. EQUIPMENT & GROUND FLOOR CONDUIT ROUTING
246	E-18	VENTILATION BLDG. MOTOR BRANCH CIRCUIT CONDUIT ROUTING
247	E-19	VENTILATION BLDG. LUMINAIRE LOCATION & CONDUIT ROUTING - LONGIT. SECT.
248	E-20	VENTILATION BLDG. LUMINAIRE LOCATION & CONDUIT ROUTING TRANS. SECT.
249	E-21	VENTILATION BLDG. TRANSFORMER VAULT DETAILS
250	E-22	VENTILATION BLDG. MISC. EQUIPMENT INSTALLATION DETAILS
251	E-23	VENTILATION BLDG. MOTOR CONTROL DETAILS
252	E-24	VENTILATION BLDG. MAIN CONTROL SWITCHBOARD

NOTE: DRAWINGS ARE BOUND IN 3 SETS AS FOLLOWS:
ROAD DWGS..... SHEET NOS. 1 TO 78 INCL.
TUNNEL DWGS..... SHEET NOS. 79 TO 176 INCL.
VENTILATION & ELECTRICAL DWGS. } ... SHEET NOS. 177 TO 252 INCL.

LAW & WILSON ARCHITECTS & ENGINEERS			
DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU BUREAU OF PLANS			
KALIHU TUNNEL LIST OF DRAWINGS			
ENGINEER: L.S.W., M.E., S.O.C.	DATE: JULY 15, 1953	CHECKED BY: W.S.	
DRAFTSMAN: K.A.		TRACER: J.W.	
APPROVED: [Signature]		APPROVED: [Signature]	
CHIEF ENGINEER		BUREAU ENGINEER	
W.S.	PROFILE	C.B.	
CH. SEC.	F.B.	CH. SEC.	
WAL. BY:	F.W. BY:	S. BY:	
SECTION C JOB NO. 26-53 DWG. X-2			