INDEX TO DRAWINGS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STANDARD PLANS SUMMARY
3	LEGEND & ABBREVIATIONS
4–8	NOTES
9–35	CIVIL DRAWINGS
36–39	(NOT USED)
40–62	ELECTRICAL DRAWINGS
63–75	(NOT USED)
76–86	ARCHITECTURAL DRAWINGS
87–90	(NOT USED)
91–103	STRUCTURAL DRAWINGS
104–110	(NOT USED)
111–115	MECHANICAL/PLUMBING DRAWINGS
116–120	(NOT USED)

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	1	120

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

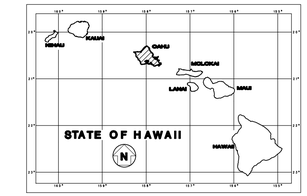
HIGHWAYS DIVISION

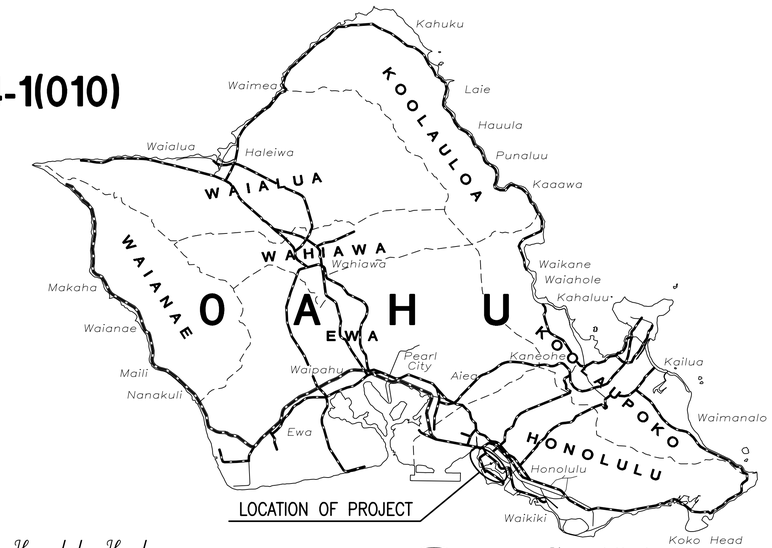
HONOLULU, HAWAII

PLANS FOR

SAND ISLAND ACCESS ROAD
TRUCK WEIGH STATION
FEDERAL AID PROJECT NO. NH-064-1(010)

DISTRICT OF HONOLULU
ISLAND OF OAHU
TMK: (1) 1–2–025: 002

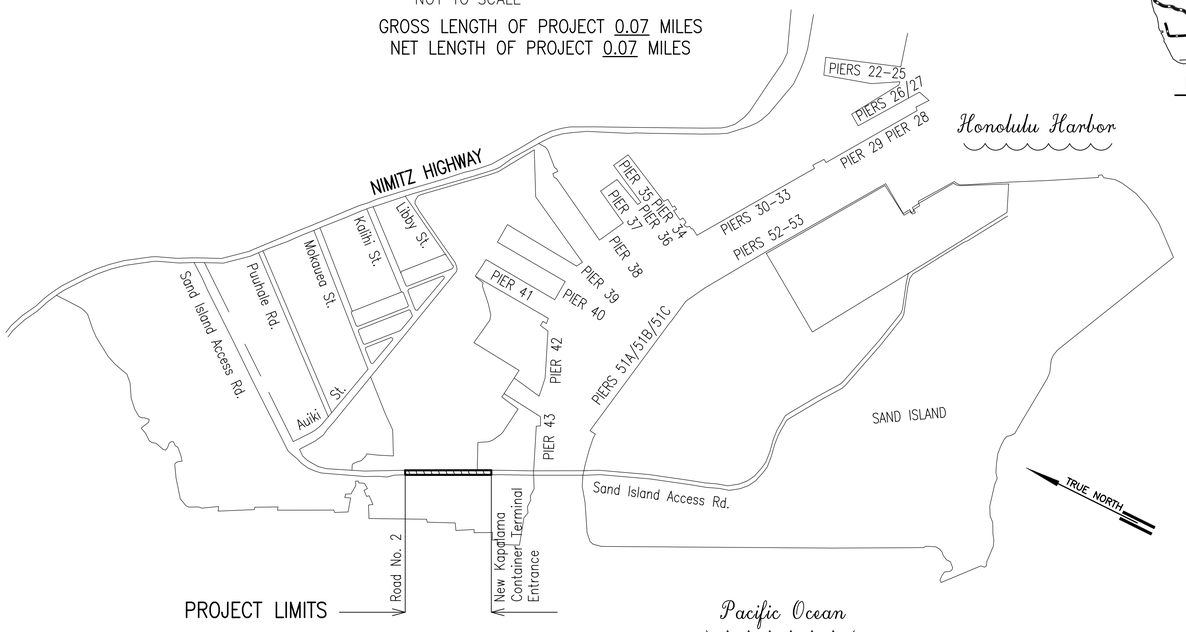




LAYOUT PLAN

NOT TO SCALE

GROSS LENGTH OF PROJECT 0.07 MILES
NET LENGTH OF PROJECT 0.07 MILES



FEDERAL AID PROJECTS PREVIOUSLY CONSTRUCTED OR UNDER CONSTRUCTION

MILE POST 1.64 TO MILE POST 1.86

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	
APPROVED:	
DIR. OF TRANSPORTATION	Mar 4, 2021 DATE

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY WK/JS	
NOTE BOOK	TRACED BY	
	DESIGNED BY CWL	
No.	QUANTITIES BY	
	CHECKED BY	

R.M. TOWILL CORP. — DESIGNED BY
HWY-DD — MANAGED BY
692-7575 — PHONE
FEBRUARY 2021 — DATE

RMTC JOB NO. : 1-19548-0E

STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	2	120

STANDARD PLAN NO.	TITLE	DATE
B-01	Notes & Miscellaneous Details	05/31/07
B-03	Backfill Details At Earth Retaining Structures	05/31/07
B-12	Prestressed Concrete Piles & Compression Splice	05/31/07
	Can Details	
B-12A	Prestressed Concrete Piles, Pile & Compression	05/31/07
	Splice Can Details & Notes	
B-12B	Pile Interaction Diagram	05/31/07
B-13	Prestressed Concrete Pile Build-up Details	05/31/07
D-01	Cattle Gate	05/31/07
D-02 ●	Chain Link Fence With Toprail	05/31/07
D-03	Chain Link Fence Without Toprail	05/31/07
D-04	Wire Fence With Metal Posts	05/31/07
D-05 ●	Typical Details of Curbs and/or Gutters	05/31/07
D-06	Typical Detail of Reinforced Concrete Drop Driveway	05/31/07
D-07	Centerline and Reference Survey Monuments	05/31/07
D-08	Street Survey Monument	05/31/07
D-15	Concrete Sidewalk	05/31/07
D-16	P.C.C. Bus Pad	05/31/07
D-17	P.C.C. Bus Pad	05/31/07
D-18	P.C.C. Pavement Layout	05/31/07
D-19	P.C.C. Pavement w/ Permeable Base Joint Details	05/31/07
D-20	P.C.C. Pavement w/ Permeable Base Joint Details	05/31/07
D-21	P.C.C. Longitudinal Joint Details	05/31/07
D-22	P.C.C. Connection to Curbs and Gutters	05/31/07
D-23	Joints	05/31/07
L-01	Tree Planting	08/16/06
L-02	Tree Planting	08/16/06
L-03	Tree Transplanting	08/16/06
L-04	Palm Planting	08/16/06
L-05	Shrub Planting	08/16/06
L-06	Landscape Details	08/16/06
L-07	Landscape Details	08/16/06
L-08	Landscape Details	08/16/06
L-09	Landscape Details	08/16/06
L-10	Landscape Details	08/16/06
L-11	Planting Notes	08/16/06
L-12	Irrigation Details	08/16/06
L-13	Irrigation Details	08/16/06
L-14	Irrigation Details	08/16/06
L-15	Irrigation Details	08/16/06
L-16	Irrigation Details	08/16/06
L-17	Irrigation Details	08/16/06
L-18	Irrigation Details	08/16/06
L-19	Irrigation Details	08/16/06
L-20	Irrigation Details	08/16/06
L-21	Irrigation Details	08/16/06
L-22	Irrigation Details	08/16/06
L-23	Irrigation Details	08/16/06
L-24	Irrigation Notes	08/16/06

STANDARD PLAN NO.	TITLE	DATE
H-01A	Type A Catch Basin	05/31/07
H-01B	Type B Catch Basin	05/31/07
H-01C	Type C Catch Basin	05/31/07
H-01D	Type D Catch Basin	05/31/07
H-01E	Catch Basin Sections	05/31/07
H-02A	Type A1 Catch Basin	05/31/07
H-02B	Type B2 Catch Basin	05/31/07
H-02C	Type C1 Catch Basin	05/31/07
H-02D	Type D1 Catch Basin	05/31/07
H-02E	Catch Basin Section	05/31/07
H-03	Type A, B, and C Storm Drain Manhole	05/31/07
H-04	Type D Storm Drain Manhole	05/31/07
H-05	Typical Reinforcing Details for Drainage Structures	05/31/07
H-06	Typical Reinforcing Details for Drainage Structures	05/31/07
H-07	Catch Basin and Manhole Castings	05/31/07
H-08	Type 1A-9 and 1A-9P Grated Drop Inlet	05/31/07
H-09	Type 2A-9 and 2A-9P Grated Drop Inlet	05/31/07
H-10	Type A-9 or A-9P Steel Frames	05/31/07
H-11	Type A-9 and A-9P Steel Grates	05/31/07
H-12 ●	Type 61614P and 1211214P Grated Drop Inlet	05/31/07
H-13	Type 61616P and 1211216P Grated Drop Inlet	05/31/07
H-14	Type 61214P Grated Drop Inlet	05/31/07
H-15 ●	Type 1211214, 1211214P, 1211216, 1211216P Steel	05/31/07
	Frame and Grates	
H-16	Type 61614, 61614P, 61616, 61616P Steel Frame	05/31/07
	and Grates	
H-17	Type 61214 Steel Frames and Grates	05/31/07
H-18	Type 61214P Steel Grates	05/31/07
H-19	Type 61614B Steel Frame and Grates	05/31/07
H-20	Cement Rubble Masonry Structures	05/31/07
H-21	Concrete and Cement Rubble Masonry Structures	05/31/07
H-22	Inlet/Outlet Structure	05/31/07
H-23	Inlet/Outlet Structure	05/31/07
H-24	Flared End Section for Culverts	05/31/07
H-25	Flared End Section for Culverts	05/31/07
H-26	Concrete Spillway Inlet	05/31/07
H-27	Cap Coupling Details Standard Joint	05/31/07
H-28	Reinforced Concrete Collar & Jacket	05/31/07
H-29	Underdrain Cleanout Steel Frame and Cover	05/31/07
H-30	Underdrain Connection to Drainage Structure	05/31/07
TE-01 ●	Sign Height and Location	07/11/08
TE-1A ●	Sign Installation	07/11/08
TE-02A	Galvanized Flanged Channel Sign Post Mounting	05/31/07
TE-02B	Galvanized Flanged Channel Sign Post Mounting	05/31/07
TE-02C	Galvanized Flanged Channel Sign Post Mounting	05/31/07
TE-03A	Galvanized Square Tube Sign Post Mounting	05/31/07
TE-03B	Galvanized Square Tube Sign Post Mounting	05/31/07
TE-04	Regulatory Signs	07/11/08
TE-05	Warning Signs	07/11/08
TE-06 ●	Miscellaneous Signs	07/11/08
TE-07 ●	Construction Signs	07/11/08
TE-08	Miscellaneous Intersection Signs	07/11/08

STANDARD PLAN NO.	TITLE	DATE
TE-09	Bike Route Sign & Supplementary Plates	07/11/08
TE-10	Interstate Route Marker	07/11/08
TE-11	State Route Marker and Auxiliary Markers	07/11/08
TE-12	State Route Marker and Border Detail for	07/11/08
	Guide Signs	
TE-12A	Route Sign Assemblies	07/11/08
TE-13	Street Name Sign On Mast Arm	07/11/08
TE-14	Miscellaneous Reflector Markers	07/11/08
TE-15 ●	Object Markers	07/11/08
TE-16	Mile Posts	07/11/08
TE-17A	Cantilever Overhead Sign Elevation & Details	05/31/07
TE-17B	Centilever Sign Frame Detail and Section	05/31/07
TE-17C	Cantilever Sign Frame Detail	05/31/07
TE-17D	Centilever Sign Frame Section	05/31/07
TE-17E	Centilever Sign Frame Details	05/31/07
TE-18A	Two Post Overhead Sign Frame Elevations	05/31/07
TE-18B	Two Post Sign Framing Plan Section	05/31/07
TE-18C	Two Post Sign Framing Sections and Details	05/31/07
TE-18D	Two Post Sign Frame Details	05/31/07
TE-18E	Two Post Sign Frame Details	05/31/07
TE-19A	Overhead Sign Framing Schedule	05/31/07
TE-19B	Sign Post Drilled Shaft Foundation	05/31/07
TE-19C	Spread Footing	05/31/07
TE-19D	Sign Frame Foundation Schedule	05/31/07
TE-19D.1	Sign Frame Foundation Schedule	05/31/07
TE-19D.2	Sign Frame Foundation Schedule	05/31/07
TE-19D.3	Sign Frame Foundation Schedule	05/31/07
TE-19D.4	Sign Frame Foundation Schedule	05/31/07
TE-19D.5	Sign Frame Foundation Schedule	05/31/07
TE-19E	Anchorage Details	05/31/07
TE-19F	Anchorage Details	05/31/07
TE-19G	Miscellaneous Sign Frame Details	05/31/07
TE-19H	Luminaire Walkway Support	05/31/07
TE-19J	Fixed Message Luminaire Support	05/31/07
TE-19K	Miscellaneous Sign Details	05/31/07
TE-19L	Miscellaneous Sign Details	05/31/07
TE-19M	Miscellaneous Sign Frame Details	05/31/07
TE-20	Supports for Ground Mounted Guide Sign	05/31/07
TE-20A	Supports for Ground Mounted Guide Sign	05/31/07
TE-20B	Supports for Ground Mounted Guide Sign	05/31/07
TE-20C	Supports for Ground Mounted Guide Sign	05/31/07
TE-21A	Sign Breakaway Mounts	05/31/07
TE-21B	Sign Breakaway Mounts	05/31/07
TE-22	Laminated Aluminum Sign Panels (Overhead)	05/31/07
TE-23	Laminated Aluminum Sign Panels (Ground Mounted)	07/11/08
TE-24	Solid Aluminum Extruded Sign Panel and	05/31/07
	Accessory Details	
TE-25	Guide Signs Luminaire Mountings	05/31/07
TE-26	Raised Pavement Markers and Striping	07/11/08
TE-27 ●	Raised Pavement Markers and Striping	07/11/08
TE-28	Entrance and Exit Pavement Markings	07/11/08
TE-28A	Miscellaneous Pavement Markings	07/11/08
TE-29 ●	Pavement Arrows and Symbols	07/11/08
TE-30	Pavement Alphabets, Numbers & Symbols	07/11/08
TE-31	Pavement Alphabets, Numbers & Symbols	07/11/08

STANDARD PLAN NO.	TITLE	DATE
TE-32 ●	Type I & II Traffic Signal System Misc. Details	05/31/07
TE-33 ●	Type II Traffic Signal System	08/16/06
TE-33A.1 ●	Type II Traffic Signal Standard	05/31/07
TE-33A.2 ●	Type II Traffic Signal Standard	05/31/07
TE-34 ●	Loop Detector Details	07/11/08
TE-35 ●	Loop Detectors & Duct Details	07/11/08
TE-36	Traffic Signal Details	07/11/08
TE-37	Pullbox & Cover Details	07/11/08
TE-37A	Type "A" Traffic Pullbox	05/31/07
TE-37B	Type "A" Traffic Pullbox Reinforcing	05/31/07
TE-37C ●	Type "B" Traffic Pullbox	05/31/07
TE-37D ●	Type "B" Traffic Pullbox Reinforcing	05/31/07
TE-37E ●	Type "B" Traffic Pullbox Foundation	05/31/07
TE-37F	Type "C" Traffic Pullbox	05/31/07
TE-37G	Type "C" Traffic Pullbox Reinforcing	05/31/07
TE-37H	Type "C" Traffic Pullbox Foundation	05/31/07
TE-37J ●	Traffic Pullbox Cover and Details	05/31/07
TE-38	Type III Traffic Signal Standard	05/31/07
TE-38A.1	Type III Traffic Signal Standard	05/31/07
TE-38A.2	Type III Traffic Signal Standard	05/31/07
TE-39	Metal Guardrail Connection to Concrete Barrier	07/11/08
TE-40	Concrete Barrier Transition	05/31/07
TE-40A	Concrete Barrier Transition Sections	05/31/07
TE-41	Guardrail Type 4 (Rigid Barrier)	05/31/07
TE-42	Portable Concrete Barrier	05/31/07
TE-43	Portable Concrete Barrier	05/31/07
TE-44	Guardrail Type 4 Miscellaneous Details	07/11/08
TE-45	Barricades	07/11/08
TE-46	Delineation & Pavement Markings At Narrow Bridges	07/11/08
TE-47	Highway Light Standard	05/31/07

Note:
Standard Plans applicable to this project are indicated by a " ● " next to the Standard Plan No. (D-07 ●)

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

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

4/30/22
SIGNATURE — LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. G-2 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	3	120

LEGEND

- Existing Overhead Utility Line (Primary)
- Existing Overhead Utility Line (Secondary)
- Existing Overhead Utility Line (Television)
- Existing Overhead Utility Line (Telephone)
- New Overhead Utility Line (Primary)
- New Overhead Utility Line (Secondary)
- New Overhead Utility Line (Television)
- New Overhead Utility Line (Telephone)
- Existing Utility Pole & Pole No.
- New Utility Pole & Pole No.
- Existing Guy Pole
- Existing Guy Wire
- New Guy Wire
- Existing Electrical Manhole
- Existing Street Light Box
- Existing HECo Handhole
- New HECo Handhole
- Existing Signal Corps Line
- New Signal Corps Line
- New Signal Corps Manhole
- Existing Street Light
- New Street Light

- Existing 8" Water Line
- New 8" Water Line
- Existing 12" Water Line
- New 12" Water Line
- Existing 16" Water Line
- New 16" Water Line
- Existing Water Manhole
- Existing Water Air Valve
- New Water Air Valve
- Existing Water Valve in Box
- New Water Valve in Box
- Existing Water Meter
- New Water Meter
- Existing Fire Hydrant & No.
- New Fire Hydrant
- Existing Irrigation Control Valve in Box
- Existing 24" Drain Line

- Existing Street Monument
- Adjusted Street Monument
- Existing Traffic Sign
- New Traffic Sign
- Existing Guardrail
- New Guardrail
- Existing Chain Link Fence
- New Chain Link Fence
- Existing Plastic Fence
- Existing Gate
- Existing Mailbox
- Existing Coconut Tree
- Existing Tree
- Existing Shrub or Bush
- New AC Pavement
- New PCC Pavement or Shotcrete Lining
- New Dumped Riprap
- Existing Ground Elevation
- Finished Grade Elevation
- Existing Ground Contour
- Finished Grade Contour
- Limit of Grading
- Top of Bank (Fill Condition)
- Bottom of Bank
- Top of Bank (Cut Condition)
- Bottom of Bank
- Drainage Flow or Stream Flow Direction

ABBREVIATIONS

AC	Asphaltic Concrete
approx.	approximate
℄	Baseline
B.V.C.	Begin Vertical Curve
BW	Bottom of Wall
C	Length of Chord
℄	Centerline
CB	Catch Basin
Clr.	Clearance
C.O.	Cleanout
CMU	Concrete Masonry Unit
Conc.	Concrete
Conn.	Connection
C.Y.	Cubic Yards
Dim.	Dimension
Det.	Details
Dia.	Diameter
Dwgs.	Drawings
ep	Existing Edge of Pavement
EP	New Edge of Pavement
ℙ	existing property line
es	Existing Edge of Shoulder
ES	New Edge pf Shoulder
ex.	existing
exist.	existing
E.V.C.	End Vertical Curve
FT	Feet
FUT.	Future
GRP	Grouted Rubble Paving
HGL	Hydraulic Grade Line
Hwy.	Highway
Inv.	Invert
lbs.	Pounds
Lc	Length of Curve
LF	Linear Feet
Lt.	Left
Max.	Maximum
Min.	Minimum
NB	North Bound
NO.	Number
O.C.	on center
O/S	Offset
Pavt.	Pavement
PC	Point of Curvature
PCC	Portland Cement Concrete
P.I.	Point of Intersection
V.C.	Vertical Curve
ℙ	Property Line
PT	Point of Tangent
R	Radius
r/w	Existing RIght-of-Way
R/W	New Right-of-Way
RC	Reinforced Concrete
RCP	Reinforced Concrete Pipe
Rd.	Road
Refl.	Reflector
Rt.	Right
S	Slope
SB	South Bound
SE	Superelevation
S/W	Sidewalk
Shldr.	Shoulder
Sht.	Sheet
Shts.	Sheets
SF	square feet
Sta.	Station
Struct.	Structural
T	Tangent
Temp.	Temporary
Thk.	Thick
TMK	Tax Map Key
TW	Top of Wall
Typ.	Typical
VC	Vertical Curve
w8	Existing 8" Water Line
W8	New 8" Water Line
w12	Existing 12" Water Line
W12	New 12" Water Line
w16	Existing 16" Water Line
W16	New 16" Water Line
ø	Diameter
△	Delta
½	Half Delta

ORIGINAL PLAN

NOTE BOOK No.

SURVEY PLOTTED BY WM/JS DATE
DRAWN BY
TRACED BY
DESIGNED BY CWL
QUANTITIES BY
CHECKED BY

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LEGEND & ABBREVIATIONS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. G-3 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	4	120

GENERAL NOTES

1. The scope of work for this project includes constructing a new weigh station facility consisting of a weigh station building, static scale, weigh–in–motion scale, travel lane, inspection area, and supporting infrastructure.

2. The Contractor is reminded of the requirements of Subsection 105.16 – Subcontracts, which requires him to perform work amounting to not less than 30 percent of the total contract cost less deductible items. Noncompliance with this Subsection may be grounds for rejection of bid.

3. The Contractor's attention is directed to the following sections of the Special Provisions: Subsection 104.09 – Maintenance of Traffic; Subsection 104.11 – Utilities and Services; Subsection 107.06 – Contractor Duty Regarding Public Convenience; and Subsection 645 – Work Zone Traffic Control.

4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions and provide signage to permit free and safe passage of public traffic.

5. The existence and location of underground utilities, manholes, monuments, buried railroad tracks and concrete pavements, and other structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall make an independent check on the ground by probing and/or with the various utility companies and governmental agencies to verify the exact locations and depths of the existing utilities and obstructions. The Contractor shall exercise proper care in excavating and cold planing in the area. Whenever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavating for the new lines. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of their operations.

6. The Contractor shall notify the Engineer in writing, at least three (3) weeks prior to starting operations.

7. Existing drainage system will be functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to maintain drainage flow. This includes all drainage runoff entering and leaving the project. This work shall be considered incidental to various contract items.

8. The contractor shall provide vehicular access to and from all existing side streets and driveway at all times.

9. Contractor shall dispose of all construction debris at a state approved dump site.

10. The Contractor shall be held liable for any damages incurred to the existing landscaping as a result of their operations.

11. After the project is completed, the Contractor shall restore landscaping in the project limits to pre–construction condition or better.

12. All existing utilities, whether or not shown on the plans, shall be protected at all times by the Contractor during construction unless specified on the plans as abandoned. Any damage to the existing utilities shall be repaired and paid for by the Contractor.

13. The contractor shall coordinate and phase work with construction of the 18" fuel line by Hawaii Fueling Facilities Corporation (HFFC) (Mr. Brian Seabaugh, phone number: (808) 954–6881). No additional costs will be paid for coordination and phasing work. Coordination and phasing costs shall be considered incidental to the various items of work.

14. The contractor shall coordinate and phase work in the vicinity of the existing fuel lines with Island Energy Services. The contact person for Island Energy Services is Mr. Wilson Rivera, phone number: (808) 682–2259.

15. Unless relocation is called for on the plans, existing utilities shall remain in service and in place at all times. If relocation of the existing utilities is required for the Contractor's convenience, interruption of service shall be kept to a minimum and shall be done at the Contractor's expense only with the prior written approval of the affected utility company and Engineer.

16. The Contractor shall field verify the operational status of all existing utilities to be removed or abandoned in place. Any discrepancy shall be brought to the attention of the Engineer.

17. The Contractor shall verify all dimensions and details shown on the drawings prior to the start of construction. Any discrepancy shall be immediately brought to the attention of the Engineer.

18. Construction outside the Hawaii Department of Transportation (HDOT) right–of–way is subject to permission of the affected owner as verified by HDOT.

19. For structures to be abandoned in place, the top 4' below finish grade shall be removed and backfilled with approved material.

20. All construction work shall be done in accordance with the standards and specifications of the State Department of Transportation as amended, unless otherwise specified by the contract plans and specifications.

21. The Contractor shall notify the Engineer and contact the State Historic Preservation Division upon uncovering any potential historical artifacts or items of archaeological significance. See Section 107.13 in the 2005 State Standard Specifications.

22. The existing improvements on the premises and in adjacent area that are not to be removed shall be preserved and protected. Any and all damages resulting from the Contractor's construction operations shall be replaced and repaired to original condition, to the satisfaction of the owner at no cost to the State.

23. For benchmark, see sheet C–1.

24. All drainage shall be marked as directed by the Engineer.

25. Azimuths and coordinates are referred to State Plane. Topographic survey done by R.M. Towill Corp. on 4/29/2016, 5/4/2016 – 5/5/2016, 5/13/2016, 5/17/2016, and 6/1/2016. Topographic survey done to National Mapping Standards.

26. Elevations shown on these plans are referenced to Mean Lower Low Water (MLLW).

27. Existing survey control markers published by NGS/NOAA and/or belonging to the City and County of Honolulu and the State of Hawaii that may be disturbed or destroyed shall be referenced by or under the direct supervision of a professional land surveyor licensed in the State of Hawaii prior to any construction activity. The Contractor shall notify the Engineer prior to any action and the marker name and type shall be reported to the Engineer. It is the responsibility of the Contractor to obtain the appropriate referencing procedure from the various agencies. Replacement markers shall be installed according to the various agency standards and procedures and copies of field notes, sketches, descriptions, and values of the replaced markers shall be sent to the various agencies for review and approval prior to final acceptance of the project. Payment items shall be considered incidental to the various contract items.

28. All steel plates shall be flat and have a non–skid surface and shall emit no objectionable noise when crossed. The contractor shall safely maintain non–skid surface plate at all times. The work material shall be considered incidental to Traffic Control.

29. The Contractor shall coordinate, if applicable, construction of electrical, telephone, cable television, water, and sewer relocation work with Hawaiian Electric Company, Hawaiian Tel Com, Spectrum Cable, Board of Water Supply, and Department of Environmental Services, respectively. Coordination shall be considered incidental to roadway excavation work.

30. The Contractor shall notify Matson Navigation and Pasha Hawaii prior to the commencement of any lane closures on Sand Island Access Road. The contract person for Matson Navigation is Ms. Enriqueta Tanaka, phone number: (808) 848–1241. The contact person for Pasha Hawaii is Mr. Todd Iida, phone number: (808) 842–5379.

31. The Contractor shall coordinate all training and testing requirements with the HDOT Motor Vehicle Safety Office. The contact person for the HDOT Motor Vehicle Safety Office is Mr. Scott Haneberg, phone number: (808) 692–7650

ORIGINAL PLAN	SURVEY PLOTTED BY WB/JS DATE
NOTE BOOK	DRAWN BY
No.	TRACED BY
	DESIGNED BY CWL
	QUANTITIES BY
	CHECKED BY

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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4/30/22
SIGNATURE DATE
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH–064–1(010)
TMK: (1) 1–2–025: 002

Scale: As Noted Date: February 2021

SHEET No. G-4 OF 120 SHEETS

RMTC JOB NO. : 1–19548–0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	5	120

WATER POLLUTION AND EROSION CONTROL NOTES

A. GENERAL:

1. See Special Provisions Section 209 – Water Pollution and Erosion Control. Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment. In addition, Appendix A lists potential pollutant sources and corresponding BMPs used to mitigate the pollutants.

2. Follow the guidelines in the current HDOT Construction Best Management Practices Field Manual in developing, installing and maintaining the Best Management Practices (BMP) for the project. For any conflicting requirements between the Manual and applicable bid documents, the applicable bid documents will govern. Should a requirement not be clearly described within the applicable bid documents, the Contractor shall notify the Engineer immediately for interpretation. For the purposes of clarification under Note A.2, "applicable bid documents" include the construction plans, standard specifications, Special Provisions, Permits, and the Storm Water Pollution Prevention Plan (SWPPP) when applicable.

3. Follow the guidelines in the Honolulu's City & County "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Maui, Molokai, Kauai, and Hawaii.

4. The Engineer may assess liquidated damages of up to $TBD for non–compliance of each BMP requirement and each requirement stated in Section 209 and special provisions, for every day of non–compliance. There is no maximum limit on the amount assessed per day.

5. The Engineer will deduct the cost from the progress payment for all citations received by the Department for non–compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.

6. If necessary, install a rain gage prior to any field work including the installation of any site–specific best management practices. The rain gage shall have a tolerance of at least 0.05 inches of rainfall. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. Do not install in a location where rain water may splash into rain gage. The rain gage installation shall be stable and plumbed. Do not begin field work until the rain gage is installed and site–specific best management practices are in–place.

7. Submit Site–Specific BMP Plan to the Engineer along with a completed Site–Specific BMP Review Checklist within 30 calendar days of contract execution. The Site–Specific BMP Review Checklist may be obtained from http://www.stormwaterhawaii.com/swmp_wp/wp–content/uploads/2014/10/D.2_SSBMP–Plan–SWPPP–Review–Checklist.pdf.

B. WASTE DISPOSAL:

1. Waste Materials: Collect and store all waste materials in a securely lidded metal dumpster or roll off container with cover to keep rain out or loss of waste during windy conditions. The dumpster shall meet all local and State solid waste management regulations. Deposit all trash and construction debris from the site in the dumpster. Empty the dumpster weekly or when the container is two–thirds full, whichever is sooner. Do not bury construction waste materials onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Post notices stating these practices in the office trailer, on a weatherproof bulletin board, or other accessible location acceptable to the Engineer. The Contractor shall be responsible for seeing that these procedures are followed. Submit the Solid Waste Disclosure Form for Construction Sites to the Engineer within 30 calendar days of contract execution. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly. This should also include documentation from any intermediary facility where solid waste is handled or processed.

2. Hazardous Waste: Dispose all hazardous waste materials in the manner specified by local or State regulations and by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.

WATER POLLUTION AND EROSION CONTROL NOTES (CONT.)

3. Sanitary Waste: Collect all sanitary waste from the portable units a minimum of once per week, or as required. Position sanitary facilities where they are secure and will not be tipped over or knocked down.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

1. For projects with an NPDES Permit for Construction Activities, inspect at the following intervals. For construction areas discharging to nutrient or sediment impaired waters, inspect all control measures at least once each week and within 24 hours of any rainfall event of 0.25 inches or greater within a 24 hour period. For construction areas discharging to waters not impaired for nutrient or sediments, inspect all control measures weekly. Inspections are only required during the project's normal working hours. The discharge point water classification may be found in the SWPPP.

2. For projects without an NPDES Permit for Construction Activities, inspect all control measures weekly.

3. Maintain all erosion and sediment control measures in good working order. If repair is necessary, initiate repair immediately and complete by the close of the next work day if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. When installation of a new erosion or sediment control or a significant repair is needed, install the new or modified control or complete the repair no later than 7 calendar days from the time of discovery. "Immediately" means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed and made operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following work day.

4. Remove built–up sediment from silt fence when it has reached one–third the height of the fence. Remove sediment from other perimeter sediment control devices when it has reached one–half the height of the device.

5. Inspect silt screen or fence for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. Inspect and verify the bottom of the silt screen is buried a minimum of 6 inches below the existing ground.

6. Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.

7. Complete and submit to the Engineer a maintenance inspection report within 24 hours after each inspection.

8. Provide a stabilized construction entrance at all points of exit onto paved roads to reduce vehicle tracking of sediments. Include stabilized construction entrance in the Water Pollution, Dust, and Erosion Control submittals. Minimum length should be 50 feet. Minimum width should be 30 feet. Minimum depth should be 12 inches or as recommended by the soils engineer and underlain with geo–textile fabric. If minimum dimensions cannot be met, provide other stabilization techniques that remove sediment prior to exit. Clean the paved street adjacent to the site entrance daily or as required to remove any excess mud, cold–planed materials, dirt or rock tracked from the site. Do not hose down the street without containing or vacuuming wash water. Cover dump trucks hauling material from the construction site with a tarpaulin. Remove sediment tracked onto the street, sidewalk, or other paved area by the end of the day in which the track–out occurs.

9. Include designated Concrete Washout Area(s) in the Water Pollution, Dust, and Erosion Control submittals.

10. Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.

11. Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

WATER POLLUTION AND EROSION CONTROL NOTES (CONT.)

12. Contain, remove, and dispose slurry generated from saw cutting of pavement in accordance with approved BMP practices. Do not allow discharge into the drainage system or State waters.

13. For projects with an NPDES Permit for Construction Activities, immediately initiate stabilizing exposed soil areas upon completion of earth–disturbing activities for areas where earth–disturbing activities have permanently or temporarily ceased. Earth–disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Earth–disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of the site that will not include permanent structures will not resume (i.e., the land will be idle) for a period of 14 or more calendar days, but such activities will resume in the future. For construction areas discharging into waters not impaired for nutrients sediments, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth–disturbing activities. For construction areas discharging into nutrient or sediment impaired waters, complete initial stabilization within 7 calendar days after the temporary or permanent cessation of earth–disturbing activities. Classification of water at the discharge point may be found in the SWPPP.

14. For projects without an NPDES Permit for Construction Activities, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth–disturbing activities.

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

1. Materials Pollution Prevention Plan
   a. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.

Concrete	Cleaning Solvents
Detergents	Wood
Paints (enamel and latex)	Masonry Block
Metal Studs	Herbicides and Pesticides
Tar	Curing Compounds
Fertilizers	Adhesives
Petroleum Based Products	

   b. Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. Make an effort to store only enough product as is required to do the job.

   c. Store all materials stored onsite in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.

   d. Keep products in their original containers with the original manufacturer's label.

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SIGNATURE 4/30/22 LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES – 1

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH–064–1(010)
TMK: (1) 1–2–025: 002
Scale: As Noted Date: February 2021

SHEET No. G-5 OF 120 SHEETS

ORIGINAL PLAN / NOTE BOOK / No.
SURVEY PLOTTED BY WM/JS
DRAWN BY
TRACED BY
DESIGNED BY CWL
QUANTITIES BY
CHECKED BY
DATE

RMTC JOB NO. : 1–19548–0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	6	120

WATER POLLUTION AND EROSION CONTROL NOTES

e. Do not mix substances with one another unless recommended by the manufacturer.

f. Whenever possible, use a product up completely before disposing of the container.

g. Follow manufacturer's recommendations for proper use and disposal.

h. Conduct a daily inspection to ensure proper use and disposal of materials onsite.

2. Hazardous Material Pollution Prevention Plan
   a. Keep products in original containers unless they are not resealable.

   b. Retain original labels and Safety Data Sheets (SDS), formerly Material Safety Data Sheets (MSDS).

   c. Dispose of surplus products according to manufacturers' instructions and local and State regulations.

3. Onsite and Offsite Product Specific Plan
   The following product specific practices shall be followed onsite:
   a. Petroleum Based Products: Monitor all onsite vehicles for leaks and perform regular preventive maintenance to reduce the chance of leakage. Store petroleum products in tightly sealed containers which are clearly labeled. Apply asphalt substances used onsite according to the manufacturer's recommendation.

   b. Fertilizers: Apply fertilizers used only in the minimum amounts recommended by the manufacturer and federal, state, and local requirements. Avoid applying just before a heavy rain event. Apply at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth. Once applied, work fertilizer into the soil to limit exposure to storm water. Do not apply to storm conveyance channels with flowing water. Storage shall be in a covered shed or in an area where fertilizer will not come into contact with precipitation o stormwater. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

   c. Paints: Seal and store all containers when not required for use. Do not discharge excess paint to the drainage system, sanitary sewer system, or State waters. Dispose properly according to manufacturers' instructions and State and local regulations.

   d. Concrete Trucks: Washout or discharge concrete truck drum wash water only at a designated site as far as practicable from storm drain inlets or State waters. Do not discharge water in the drainage system or State waters. Disposal by percolation is prohibited. Clean disposal site as required or as requested by the Engineer.

4. Spill Control Plan
   a. Post a spill prevention plan to include measures to prevent and clean up each spill.

   b. The Contractor shall be the spill prevention and cleanup coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area on a weatherproof bulletin board or other accessible location acceptable to the Engineer and in the office trailer onsite.

   c. Clearly post manufacturers' recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of the information and cleanup supplies.

WATER POLLUTION AND EROSION CONTROL NOTES (CONT.)

d. Keep ample materials and equipment necessary for spill cleanup in the material storage area onsite.

e. Clean up all spills immediately after discovery.

f. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

g. Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, the Contractor shall notify the Engineer as soon as the Contractor has knowledge of the discharge. The Engineer will notify the National Response Center (NRC) at (800) 424-8802, the Clean Water Branch during regular business hours at 586-4309, and the Hawaii State Hospital Operator at 247-2191 and the Clean Water Branch (DOH-CWB) via email at cleanwaterbranch@doh.hawaii.gov during non-business hours immediately. The Contractor shall also provide to the Engineer, within 7 calendar days of knowledge of the release, a description of the release, the circumstances leading to the release, and the date of the release. The Engineer will provide this information to the DOH-CWB. The Engineer will provide information to the NRC if requested.

E. PERMIT REQUIREMENTS:
1. A National Pollutant Discharge Elimination System (NPDES) Permit for Construction Activities of one acre or more of disturbed area is required for this project. If the Contractor requires extra land disturbance, including staging and storage areas, that is not covered by the NPDES Permit obtained by the State, the Contractor shall be responsible for obtaining the required NPDES Construction Activities Permit to cover this additional disturbed area. See Hawaii Administrative Rules Chapter 11-55, Appendix C for definition of land disturbance. The Contractor's attention is directed to the applicable NPDES Permit documents on the bid package compact disc.

2. Comply with all applicable State and Federal Permit conditions. Permits may include, but not limited to the following:
   a. NPDES Permit for Construction Activities

   b. NPDES Permit for Construction Dewatering

   c. NPDES Permit for Hydrotesting Waters

   d. Water Quality Certification

   e. Stream Channel Alteration Permit

   f. Section 404 Army Corps of Engineer Permit

F. SITE-SPECIFIC BMP REQUIREMENTS:
Each BMP below is referenced to the corresponding section of the current HDOT Construction Best Management Practices Field Manual and appropriate Supplemental Sheets. The Manual may be obtained from the HDOT Statewide Stormwater Management Program Website at http://www.stormwaterhawaii.com/resources/contractor-and-consultants/ under Construction Best Management Practices Field Manual. Supplemental BMP sheets are located at http://stormwaterhawaii.com/resources/contractors-and-consultants/storm-water-pollution-prevention-plan-swpp/ under Concrete Curing and Irrigation Water.

The requirements for Water Pollution, Dust, and Erosion Control submittals are included in Section 209 of the Hawaii Standard Specifications for Road and Bridge Construction dated 2005 and applicable Special Provisions. A list of pollutant sources and corresponding BMP used to mitigate the pollutants are included in Section 209 of the Special Provisions under Appendix A.

WATER POLLUTION AND EROSION CONTROL NOTES (CONT.)

F. (Continued)
Follow the requirements below:

1. Protect all Drainage Inlets receiving runoff from disturbed areas (SC-2).

2. Contain on-site runoff using Perimeter Sediment Controls
   a. SC-1 Silt Fence
   b. SC-5 Vegetated Filter Strips and Buffers
   c. SC-8 Compost Filter Berm
   d. SC-13 Sandbag Barrier
   e. SC-14 Brush or Rock Filter

3. Control offsite runoff from entering construction area
   a. EC-8 Run-On Diversion
   b. SC-6 Earth Dike
   c. SC-7 Temporary Drains and Swales

4. Incorporate applicable Site Management BMP
   a. SM-1 Employee Training
   b. SM-2 Material Delivery and Storage
   c. SM-3 Material Use
   d. SM-4 Protection of Stockpiles
   e. SM-6 Solid Waste Management
   f. SM-7 Sanitary/Septic Waste Management
   g. SM-9 Hazardous Waste Management
   h. SM-10 Spill Prevention and Control
   i. SM-11 Vehicle and Equipment Cleaning
   j. SM-12 Vehicle and Equipment Maintenance
   k. SM-13 Vehicle and Equipment Refueling
   l. SM-14 Scheduling
   m. SM-15 Location of Potential Sources of Sediment
   n. SM-16 Preservation of Existing Vegetation
   o. SM-18 Dust Control

5. Contain pollutants within the Construction Staging/Storage Area BMP with applicable Perimeter Sediment Controls and Site Management BMP. Include a Stabilized Construction Entrance/Exit (EC-2) for all areas which exit onto a paved street. Restrict vehicle access to these points.

6. Manage Concrete Waste including installing a Concrete Washout Area (SM-5) and properly disposing of Concrete Curing Water (California Stormwater BMP Handbook NS-12 Concrete Curing).

7. Remove saw cut slurry and hydrodemolition water from the site by vacuuming. Provide storm drain protection and/or perimeter sediment controls during saw cutting and hydrodemolition work.

NPDES NOTES

1. Contractor shall obtain NPDES permit for off-site staging area to assemble post-tensioned sections.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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NOTE BOOK	DESIGNED BY CWL	
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SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER POLLUTION & EROSION CONTROL NOTES – 2

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. G-6 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	7	120

BOARD OF WATER SUPPLY NOTES

1. Unless otherwise specified, all construction activities affecting Board of Water Supply (BWS) facilities in this project shall be in accordance with the "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", dated 1994, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", dated 2002, the "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS, VOLUME 3", dated 1991, and all subsequent amendments and additions.

2. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply. All other features of the water system, such as lines, grades, fittings, drainage, etc., and other features of improvements shall not be the responsibility of the Board of Water Supply.

3. Test pressure shall be 150 psi. During the 30-minute pressure test, the pressure shall not drop more than 10 psi.

4. The Contractor shall notify BWS Capital Projects Division, Construction Section in writing and submit six (6) sets of approved construction plans one week prior to commencing work on the water system.

5. After installation of tapping sleeve and valve prior to actual tapping operations, the assembly shall be tested at 150 psi. on both sides of the valve.

6. The Contractor shall chlorinate the entire inside surface of each pipe and fitting with disinfection solution of 5 ounces of sodium hypochlorite mixed with 10 gallons of water. (for connection only)

7. The Contractor shall be responsible for the protection of all water lines during construction. The Contractor shall be especially careful when excavating behind water lines, tees, and bends wherever there is a possibility of water line movement due to the removal of the supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measures necessary to protect the water lines, such as constructing special reaction blocks (with BWS approval) and/or modifying his construction method.

8. The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy or the encountering of other obstacles during the course of work. The Contractor shall be responsible and shall pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.

9. Prior to installation, the Contractor shall submit for approval by Board of Water Supply, the manufacturer's certification that all cast iron (gray or ductile) fittings for the project conform in all respects to the Water System Standards, dated 2002.

10. Polygon shape for mechanical joint glands as described in AWWA Standard C111 shall be "straight-sided" or an approved equal on a job-to-job basis.

11. Re-approval shall be required if this project is not under construction within a period of two (2) years.

12. Contractor shall cut and plug all existing unused laterals at the main whether or not shown on the plans. The damaged area shall be repaired to an equal or better condition than the immediate area. All work shall be done at the expense of the Contractor.

13. The Contractor/developer shall obtain a NPDES permit prior to chlorination and/or dewatering. A copy of the permit shall be submitted to the Board of Water Supply, Capital Projects Division, Construction Section.

14. Pipe cushion shall be of high resistivity material. The Contractor shall submit a soil certification that high resistant cushion material has a resistivity greater than 5,000 ohm-cm. Remainder of the backfill material shall be as specified in the water system standards. Pipe cushion and backfill material shall contain no hazardous substances above regulatory action levels including but not limited to lead, asbestos, mercury, chromium, cadmium, zinc, strontium, and polychlorinated biphenyls (pcb).

BOARD OF WATER SUPPLY NOTES (CONT.)

15. Cleaning shall be by the use of "pigs" introduced into the pipeline and run completely through all installed pipelines and all branch lines for fire hydrants. "Pigging" of service laterals is not required. Bare foam "pigs" shall be used to swab piping clean as each length of the pipeline is installed. Each "pig" shall consist of a cylindrical piece of polyurethane foam with a density of 3-7 pounds per cubic foot and a vinyl-coated nose. Outside diameter of the "pig" shall be equal to 1-1/4 to 1-1/2 times the inside diameter of the pipe being installed. The length of the "pig" shall be 1-1/2 to 2 times its diameter. Prior to use, the "pig" shall be submerged in a chlorine solution of 1 oz. of 5% chlorine bleach in 5 gallons of water. "Pigging" of the pipeline shall be considered incidental to the installation of the new pipeline.

16. Ball corp and ball stop shall be used in lieu of a corporation stop and stopcock, respectively.

17. Install 4 mil thick, non-metallic, blue colored, 6 inches wide warning tape over centerline of the pipe and below the base course along the entire length of trench. Tape should be marked with "caution water line buried below".

18. The Contractor shall install electronic markers to all mains and test the electronic markers prior to installations to verify proper operation. BWS personnel shall verify the number and locations of placed electronic markers before final paving of the project.

19. For ductlines crossing existing or new waterline:
A the electrical/signal ductline water crossings, adjust all electrical/signal ductline elevations to maintain 12" vertical clear separation from all waterlines at no cost to the board of water supply.

    Maintain 3'-0" min. horizontal clear separation between all waterline systems and nearest electrical/signal ductlines paralleling the water system at no cost to the board of water supply.

    Maintain 3'-0" min. horizontal clear separation between street light/traffic signal, standards (including any modular units) and the nearest water system. Contractor shall field verify for any conflicts at each street light/traffic signal standard location. Where conflicts occur, the contractor shall coordinate with the project engineer to revise the street light/traffic signal standard to provide the required clearances at no cost to the BWS.

20. For cut-in connection to existing:
All waterline construction requiring shutdown connection shall be scheduled for after working hours at six (6) hours maximum downtime.

ORIGINAL PLAN	SURVEY PLOTTED BY	WH/JS	DATE
	DRAWN BY		
NOTE BOOK	TRACED BY	CWL	
	DESIGNED BY		
No.	QUANTITIES BY		
	CHECKED BY		

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) — DATE

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER NOTES - 1

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. G-7 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	8	120

BOARD OF WATER SUPPLY NOTES (CONT.)

21. *Board of Water Supply approval of these plans does not constitute a water commitment. Availability of water will be determined when building permit is presented to the department. Water commitment will depend upon the status of the water system at that time. Should water service be made available, the water commitment will be effective when the project receives an approved building permit from the building department. All water commitments will be canceled in the event the building permit is canceled.*

22. *Prior to any excavating, the Contractor shall verify in the field, the location of existing waterlines and appurtenances.*

23. *Any adjustments to the existing water system required during construction, to meet the requirements of the BWS Standards, whether shown on the plans or not, shall be done by the Contractor at no cost to the Board.*

24. *The project shall pay the applicable water system facilities and/or one-time service charge and for the meter which will be furnished by BWS and installed by the Contractor when the lateral is installed.*

25. *The project shall be subject to the Board of Water Supply's Cross-Connection Control requirements prior to issuance of the building permit.*

26. *The installation, chlorination, and testing of the water main and facilities after the meter shall not be the responsibility of the Board of Water Supply.*

27. *The backflow preventer device must be installed before the meter is issued.*

28. *The Contractor shall furnish and install polyethylene wrap, 3 feet minimum at all taps (for DI pipe and copper lateral combination only).*

29. *All ductile iron pipe, fittings, and valves shall be wrapped with two layers of 8 mil. polyethylene wrap. The inside surface of the polyethylene wrap to be in contact with the pipe exterior shall be infused with a blend of an antimicrobial to mitigate microbiologically influenced corrosion and a volatile corrosion inhibitor to control galvanic corrosion.*

30. *All ductile iron pipe and fittings, including sections requiring reinforced concrete jacketing, shall be ductile iron class 53, and coated as per the BWS Water System Standards.*

31. *All fire hydrants to be adjusted and/or relocated shall be replaced with new fire hydrants, unless otherwise directed by BWS.*

32. *Two-way blue reflective hydrant markers Type DB shall be installed at all new fire hydrant installations. Contractor shall very the exact locations of hydrant markers with the nearest Honolulu Fire Department Battalion Chief.*

33. *The Contractor shall furnish and install polyethylene wrap, 3 feet minimum at all taps (for DI pipe and copper lateral combination only).*

PROJECTS IN CONFLICT WITH BWS PROJECTS

1. *The contractor shall notify BWS Capital Projects Division, Construction Section (748-5730) sixty (60) days prior to construction at or near areas in conflict with the BWS project, "Sand Island Water System Improvements", to avoid delays and conflict during construction. The Contractor shall allow BWS's contractor to install new water mains prior to any resurfacing work at areas in conflict. BWS shall not be liable for any delays due to the contractor's failure to coordinate the construction schedule for this project.*

ORIGINAL PLAN
SURVEY PLOTTED BY WM/JS DATE
TRACED BY
NOTE BOOK
DESIGNED BY CWL
QUANTITIES BY
No. CHECKED BY

APPROVED:

Manager and Chief Engineer, BWS DATE
(for work affecting BWS facilities
State R/W & BWS easements only)

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 9925-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME, OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE 4/30/22 LIC. EXPIRATION
M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER NOTES - 2

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. G-8 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	9	120

GENERAL NOTES FOR TRAFFIC CONTROL PLAN

1. The permittee shall make minor adjustments at intersections, driveways, structures, etc., to fit field conditions.
2. Cones or delineators shall be extended to a point where they are visible to approaching traffic.
3. Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
4. Regulatory and warning signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered. All signs shall be restored upon completion of the work.
5. When required by the issuing office, the permittee shall install a flashing arrow signal as shown on the traffic control plans.
6. All traffic lanes shall be a minimum of ten (10) feet wide.
7. All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
8. The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces).
9. At the end of each day's work or as soon as the work is completed, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation.
10. Sign spacing (D), taper lengths (T) and spacing of cones or delineators shall be as shown in Table 645-1, unless otherwise noted on the Traffic Control Plans.

Table 645-1 For Traffic Control Plan

Posted Speed Limit (M.P.H.)	Sign Spacing (D) (Feet)	Taper Length (T) (Feet)		Longitudinal Buffer Space (B) (Feet)	Spacing of Cones or Delineators (Feet)		
		W = 12' Or Less	W > 12'		Taper	Tangent	Work Area
35	250	250	W X 20	120	35	35	10

W = Width of Lane, Shoulder, or Offset

11. Contractor to provide access and/or directional signs to reroute pedestrian traffic.
12. All workers who are exposed to either vehicles using the roadway or to construction equipment shall wear high visibility safety apparel that meets the performance class 3 requirements of "ANSI/ISEA 107-2004". "Workers" is defined as people on foot whose duties place them within the State Right-of-Way, such as but not limited to construction and maintenance forces, equipment operators, survey crew, utility crews, responders to incidents (E.G., EMT and firemen), and law enforcement personnel directing traffic, investigating accidents, handling lane closures and constructed roadways.
13. Flaggers and/or police officers shall be insight of each other or in direct communications at all times.

WORK ZONE NOTES

1. This Work Zone Sign Plan is intended for use on long-term stationary work zones/construction phases (3 days or more). All work zones or construction phases less than 3 days duration will use Traffic Control Plans shown in Section 645 of the Special Provisions. See sheet C-16 to C-23 for Work Zone Signing and temporary traffic control measures.
2. All existing regulatory speed limit signs with posts within the work zone/project limits shall be removed and replaced with work zone speed limit sign assemblies (R2-1(XX) and R2-5b(XX) with "CONSTRUCTION AREA" AND "$250 FINE HRS 291C-104" Supplemental Signs).
3. Construction sign assemblies shall be installed on both the approaching and trailing ends of each work zone as shown on this plan.
4. Each construction warning sign shall have a minimum of two (2) Type II OM. Each work zone speed limit assembly shall have a minimum of one (1) Type II OM. Installation of each Type II OM shall be considered incidental to Item No. 645.1000, Traffic Control.

WORK ZONE NOTES (CONTINUED)

5. Upon the completion of all physical work or as directed by the Engineer, all construction signs and work zone speed limit assemblies shall be removed. All speed limit signs and posts that were existing at the start of the project within the work zone/project limits shall be restored back to their original locations and configurations.
6. Placement of construction signs shall not obstruct the path of pedestrians and bicyclists.
7. The removal and restoration of existing regulatory speed limit signs with new posts along with the installation, maintenance and removal of work zone speed limit sign assemblies shall be considered incidental to Item No. 645.1000, Traffic Control.

TEMPORARY STEEL PLATE BRIDGING NOTES

1. Provide temporary steel plates only when an excavation in or near the roadway needs to be covered for temporary traffic operation or pedestrian use until the excavation can be properly backfilled. Payment for temporary steel plate bridging will be considered incidental to the item being constructed.
2. Ensure that in all cases the top steel plates are skid resistant by providing 1/8 inch high by 1 inch long bead wells approximately 2 inch center to center each way over the entire riding surface. Conform steels plats to be fabricated from ASTM A36 steel (minimum).
3. Temporary steel plates to be used shall be structurally designed by a Structural Engineer licensed in the State of Hawaii to withstand HS20-44 loading with vehicular speeds of 35 miles per hour (minimum).
4. Provide asphalt ramp with a minimum slope of 18 inches of horizontal taper length per 1 inch of plate thickness to cover all edges of the steel plates or embed steel plate flush with existing pavement surface.
5. Steel plate anchorage shall be structurally design by a Structural Engineer licensed in the State of Hawaii of to withstand HS20-44 loading with vehicular speeds of 35 miles per hour (minimum). Anchorage system will be drilled out when steel plates are removed. Reconstruction of pavement that is damaged by the anchorage system will be considered incidental to the item being constructed.
6. Secure steel plates from lateral movement and vertical vibration (to minimize noise) while in use.
7. The Contractor is responsible for inspection and maintenance of steel plates, shoring, and hot mix asphalt ramps as necessary to ensure safe, continuous operation.
8. Ensure that all steel plates used are without deformation.

ORIGINAL PLAN | NOTE BOOK No. | SURVEY PLOTTED BY WH/JS | DRAWN BY | TRACED BY | DESIGNED BY CWL | QUANTITIES BY | CHECKED BY | DATE

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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4/30/22
SIGNATURE | LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL & WORK ZONE NOTES

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. G-9 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	10	120

GUIDELINES FOR WORK NEAR IES PIPELINES

Island Energy Services (IES) Refinery has one or more petroleum product pipelines in an easement that runs through or immediately adjacent to Contractor's proposed project. These pipelines are used for the transmission of petroleum products at high pressure. The pipelines are coated and cathodically protected. They require frequent inspection and maintenance.

It is absolutely necessary that IES be provided access to these buried pipelines at all times, 24 hours a day, seven days a week. Therefore, Contractor's proposed project must adhere to the following guidelines:

1. *If the easement area if fenced or walled in, IES must have a gate key unless the area is attended on a 24-hour basis.*
2. *Storage of material on the easement shall be avoided. This includes parking lots.*
3. *A minimum overhead clearance of 15 feet must be maintained within the easement.*
4. *Heavy landscaping (trees, shrubs, sprinklers, etc.) should be kept off the easement.*
5. *Heavy obstructions should be kept off the easement (e.g., buildings, walls, equipment pad, etc.).*
6. *No top-to-bottom obstructions will be permitted in the easement (e.g. power poles, sewer manholes, sewer clean-outs, bridge abutments, etc.).*
7. *Light obstructions (e.g. grass, paving (asphaltic concrete), curb crossings, etc.) are considered reasonable. Grassed areas must be suitable for all-weather vehicular travel.*
8. *IES's Company Representative will stake the pipelines at Contractor's request. Determination of pipeline elevations shall be Contractor's responsibility and at Contractor's expense.*
9. *The pipeline easement access road must be kept open at all times. Authorization to block access roads at any time during your construction period must be obtained from IES.*
10. *Avoid running any sewers, fences, sprinkler lines, pipelines, cables, curbs, etc., within the easement in a parallel orientation to the easement centerline. Crossings are permitted but must be held to a minimum of 45 degrees to easement centerline.*
11. *Sewer and electrical conduit crossings should be kept a minimum of four feet clear below IES's pipelines for the full easement width. If this condition cannot be met, the crossings should be encased in six inches of concrete, with a minimum two feet clear below IES's pipelines.*
12. *Except for Item 11 above, all crossing facilities should be at least 24 inches clear below and around IES's pipelines for the full easement width. Crossings above IES's pipelines are not permitted.*
13. *Removal of fill from the easement should not result in there being less than three feet minimum cover over the lines.*
14. *Trenches across the pipelines shall be limited to a maximum width of five feet unless the lines are supported in a manner accepted in advance by IES Products Company.*
15. *All excavations and backfilling operations in IES's easement must be witnessed by an IES Company Representative. Contractor shall provide IES with 48 hours notice prior to beginning work within IES's easement. All backfill material within six inches of our pipeline must be of finely graded dirt or sand. All excavations within two feet of our pipelines must be accomplished by hand digging. Work shall be handled in an expeditious manner in order to keep IES's pipelines uncovered for as short a period as possible.*
16. *Fill in IES's easement should be limited to four feet maximum cover over IES's pipelines. IES will stake the pipelines upon request so that Contractor can excavate to determine the depth of the pipelines.*
17. *Regarding of adjacent property should not adversely affect drainage of the easement area or pose a hazard to the easement such as landslides or erosion.*
18. *The slope must be kept reasonably level across the easement. maximum should be 5:1 to provide for backhoe operation.*
19. *All costs pertaining to damage of IES's pipelines, their coatings, or the cathodic protection devices, or damage of property and injury to persons caused directly or indirectly by this work, will be to Contractor's account. Any repair work on the lines resulting from Contractor's project shall be performed by IES and billed to Contractor.*

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY WK/JS	
No.	TRACED BY	
	DESIGNED BY CRL	
	QUANTITIES BY	
	CHECKED BY	

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ISLAND ENERGY SERVICES (IES) NOTES

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. G-10 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	11	120

Par Hawaii Refining Construction Notes And Guidelines

1. All work shall be in accordance with "Design and construction guidelines for projects near Par Hawaii refining pipelines and fuel storage facilities." These guidelines can be obtained from:

   Wilson P. Rivera, Pipeline/Mooring Analyst
   wriv@islandenergyservices.com
   IES Downstream, LLC

2. Par Hawaii refining will be provided access to the pipelines and facilities at all times, twenty four (24) hours a day, 7 days a week. If the easement area is to be fenced or walled in, Par Hawaii refining will be provided with a gate key unless the area is attended on a twenty four hour basis.

3. Storage of material or equipment on the easement should be avoided. This includes parking lots for long term storage of materials and vehicles.

4. A minimum overhead clearance of fifteen (15) feet must be maintained within the easement.

5. Extensive landscaping (trees, shrubs, sprinklers, etc.) should be kept off of the easement.

6. Large structures and obstructions (buildings, walls, equipment pads, etc.) should be kept off of the easement.

7. Top to bottom obstructions (power poles, sewer manholes, sewer cleanouts, bridge abutments, etc.) will not be permitted on the easement.

8. Light landscaping and structures (grass, paving, curb crossings, etc.) are considered reasonable. Grassed areas must be suitable for all weather vehicular traffic.

9. A Par Hawaii refining representative will stake the pipelines at contractor's request. The Par Hawaii inspector shall be notified at least five (5) working days prior to excavations in order that the representative can locate the Par Hawaii pipeline. Note: excavations include grading and grubbing of the project area above the Par Hawaii pipeline or in the vicinity of the Par Hawaii surface structures such as valve vaults, valve cages, and control devices. Determination of the pipeline elevations and locations shall be the contractor's responsibility and at the contractor's expense. All maps and drawings provided by Par Hawaii refining of its pipelines and pipeline facilities are approximations and the contractor shall be responsible to verify precise location all underground facilities prior to start of construction.

10. The pipeline easement access road must be kept open at all times. Authorization to block access roads at any time during contractor's construction period must be obtained from Par Hawaii refining pipeline operations manager.

11. Avoid installing sewers, fences, sprinkler lines, pipelines, cables, curbs, etc. In the easement in a parallel or near parallel orientation to the easement centerline. Crossings are permitted but must be held to a minimum of forty five degrees (45) to easement centerline.

12. Sewer and electrical conduits crossings should be held to a minimum clearance of two feet below Par Hawaii refining pipelines for the full easement width. If this condition cannot be met, the crossings should be encased in six (6) inches of concrete.

13. Except for item 12 above, all crossings should be at least twenty four inches clear below pipelines for the full easement width. Crossings above the pipelines are generally not accepted.

Par Hawaii Refining Construction Notes And Guidelines (Cont'd)

14. Removal of fill from the easement shall be limited to not less than 3 feet minimum cover over the lines. If residential or business buildings are within fifty (50) feet of the pipeline, four (4) feet of cover is required.

15. Trenches across the pipelines shall be limited to a maximum width of ten (10) feet unless the lines are supported in a manner acceptable to par hawaii refining.

16. If the pipeline is to be exposed during construction, adequate protection and support shall be provided during construction activities and after hours to prevent damage to or destruction of the fuel pipeline.

17. All excavation and backfilling operations within 15 feet of the pipeline in par hawaii refining easement must be witnessed by a par hawaii representative. All backfill within twelve (12) inches of pipelines shall be finely sifted man made sand (grade c–33). All excavation within 3 feet of pipelines must be accomplished by hand digging. Work shall be handled in an expeditious manner in order to keep pipelines uncovered as briefly as possible.

18. Grading of abutting property should not adversely affect drainage of the easement area or pose a hazard to the easement such as slides or erosion.

19. The slope of the final grade must be kept reasonably level across the easement. Maximum should be 5:1 to provide for backhoe operation and repair vehicles.

20. All crossing metallic facilities with potentials that could interfere with par hawaii refining cathodic protection current shall place a neoprene dielectric blanket between the crossing facility and the par hawaii refining facility for the full length of the easement. In addition, a cathodic protection survey report shall be submitted and approved by par hawaii refining stating the proposed crossing facility will not, in any way, adversely affect par hawaii refining facilities.

21. All costs pertaining to damage of the pipelines, their cathodic protection devices, or damage of property and injury to persons caused directly or indirectly by this work, shall be charged to the contractor. Any repair work on the pipelines resulting from the contractor's project shall be performed by the contractor with authorization or par hawaii refining or par hawaii refining personnel and billed to the contractor.

22. The contractor shall be responsible for traffic conditions over any par hawaii refining pipeline or pipeline facility relating to construction activities. The contractor shall provide steel plates or non–compacted soil berms in areas of equipment traffic and limit traffic to these access ways.

ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY WK/JS DATE
DRAWN BY
TRACED BY CML
DESIGNED BY
QUANTITIES BY
CHECKED BY

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 0935-C
HAWAII, U.S.A.

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4/30/22
SIGNATURE LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAR HAWAII NOTES

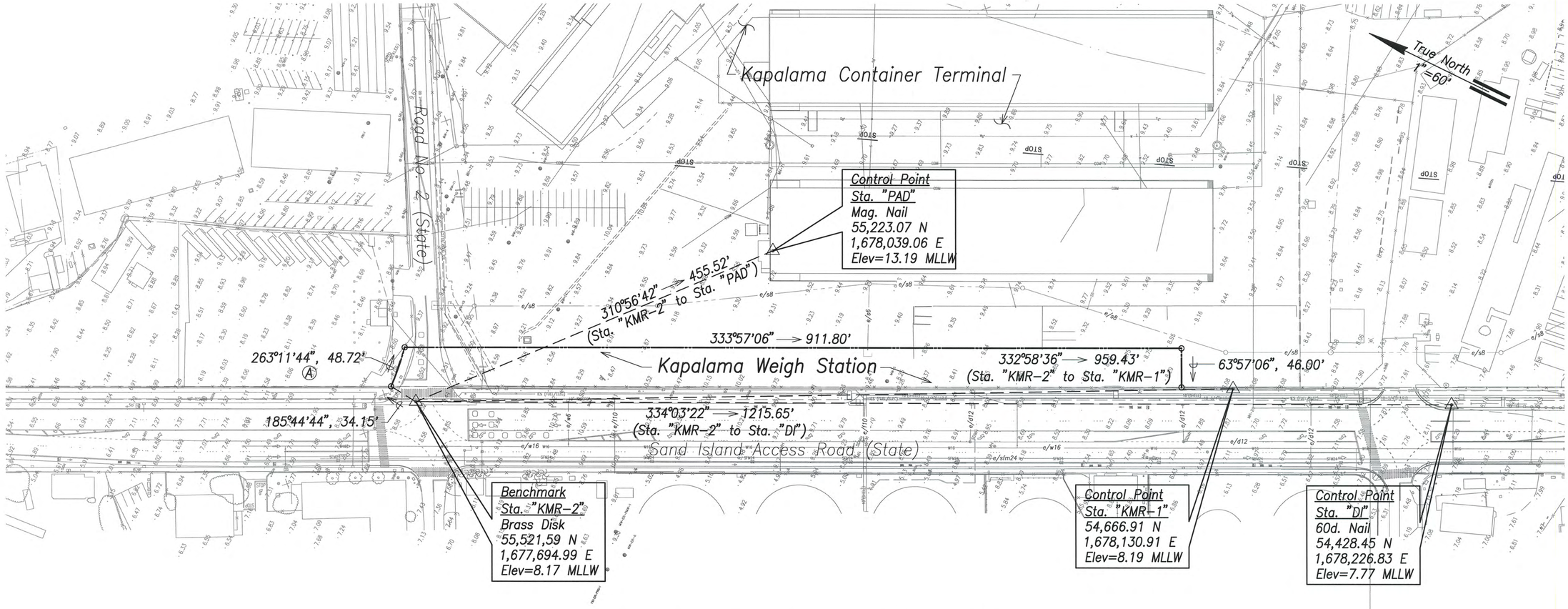
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. G-11 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	12	120



EXISTING CONDITION & SURVEY CONTROL PLAN

Scale: 1"=60'

Phasing Note:

Contractor shall submit a phasing plan and schedule for demolition work to the State Engineer for review and approval. Contractor shall be responsible for providing temporary traffic controls, temporary pavement transitions, notifying affected business of the work schedule and providing safe temporary access at all times to driveways and streets. Continuous traffic shall be maintained at all times. Work shall be considered incidental to various items of work.

℄ Curve Data

Ⓐ

△ = 8°05'54"
△/2 = 4°02'57"
R = 345.00'
T = 24.42'
C = 48.72'
Lc = 48.76'

Graphic Scale:

1" = 60' 60' 30' 0 60' 120'

ORIGINAL PLAN	SURVEY PLOTTED BY	WK/JS	DATE
	TRACED BY		
	DESIGNED BY	CRL	
NOTE BOOK	QUANTITIES BY		
No.	CHECKED BY		

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 0935-C
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITION & SURVEY CONTROL PLAN

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

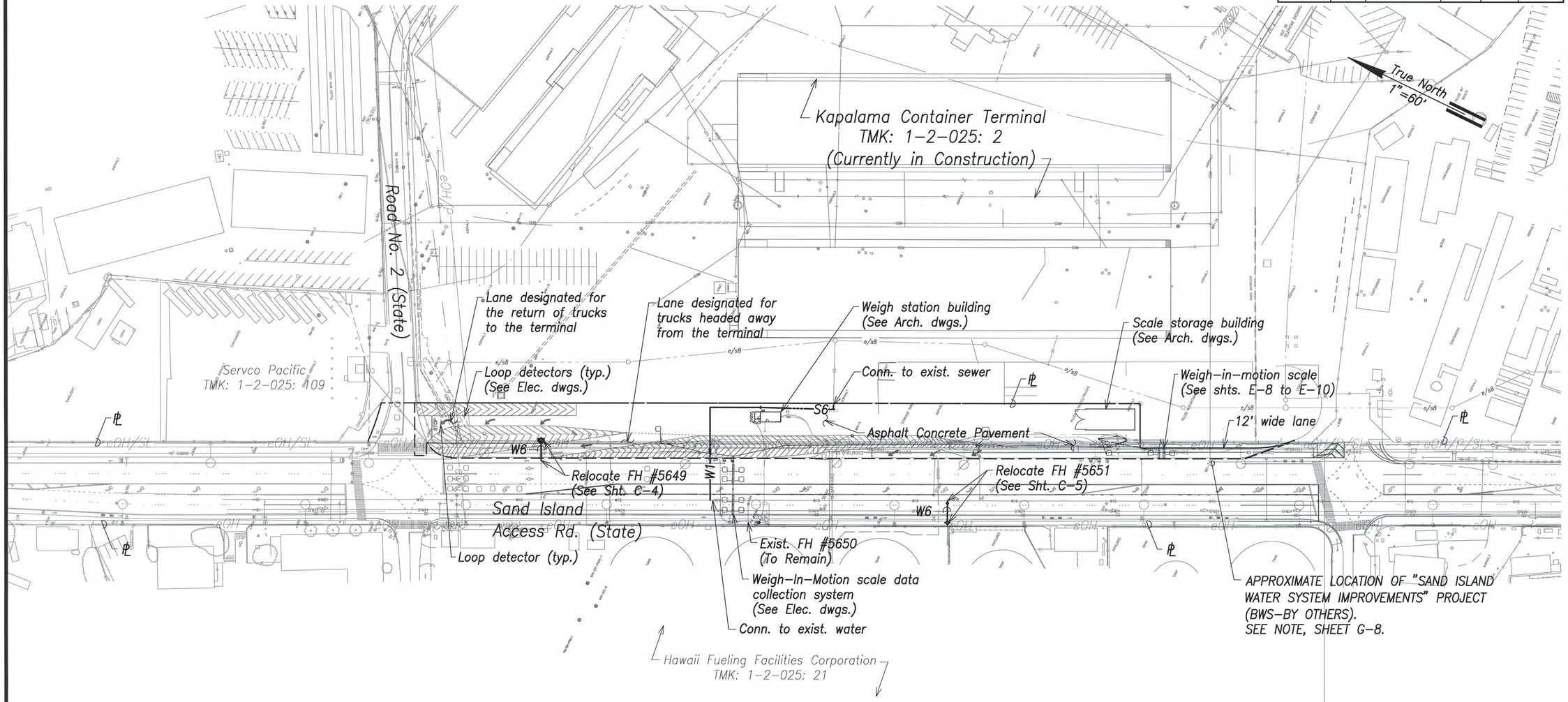
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-1 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	13	120



GENERAL SITE PLAN
Scale: 1"=60'

ORIGINAL PLAN	SURVEY PLOTTED BY	WH/JS	DATE
	DRAWN BY		
	TRACED BY		
NOTE BOOK	DESIGNED BY	CWL	
	QUANTITIES BY		
No.	CHECKED BY		

Graphic Scale:

1" = 60' 60' 30' 0 60' 120'

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) — DATE

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL SITE PLAN

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

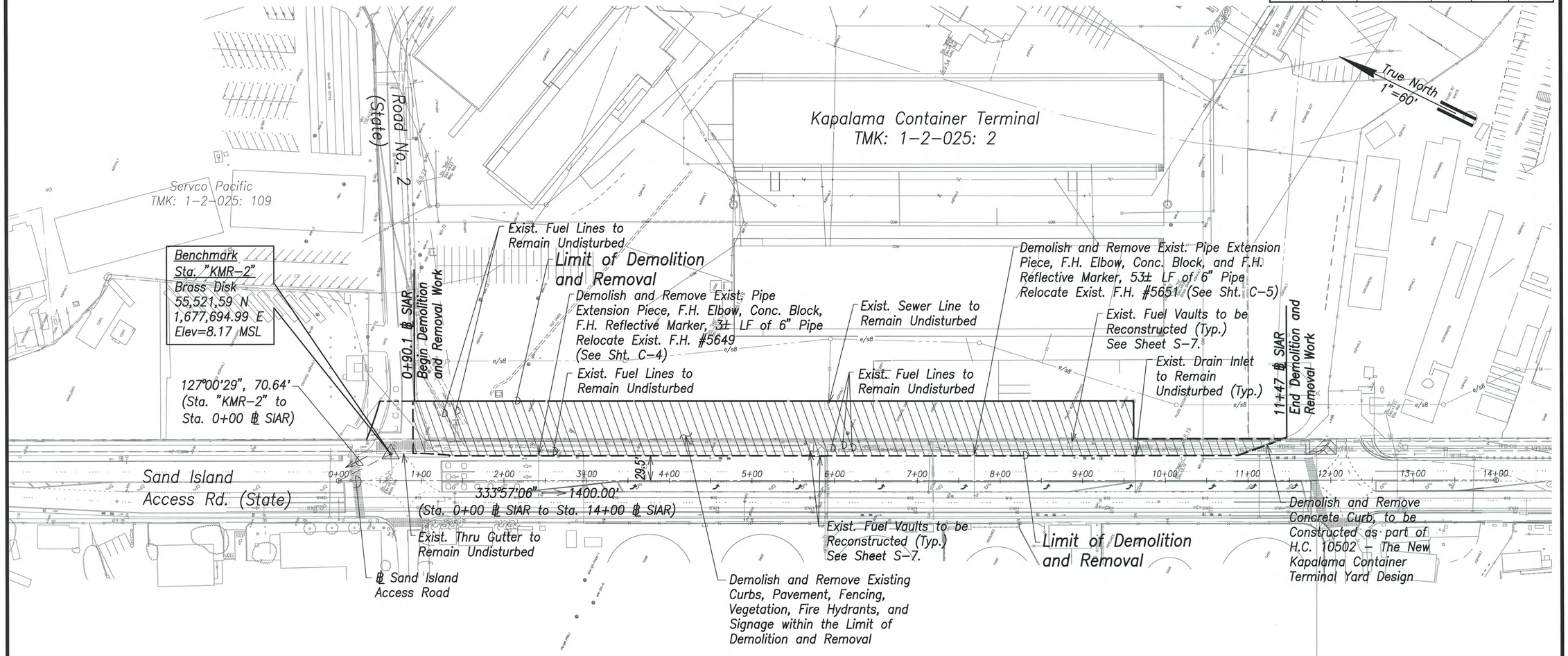
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-2 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	14	120



DEMOLITION PLAN

Scale: 1"=60'

Note:
See Electrical Plans for Electrical Demolition Work

Graphic Scale:

1" = 60' 60' 30' 0 60' 120'

APPROVED:

Manager and Chief Engineer, BWS _____ DATE
(for work affecting BWS facilities
State R/W & BWS easements only)

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DEMOLITION PLAN

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-3 OF 120 SHEETS

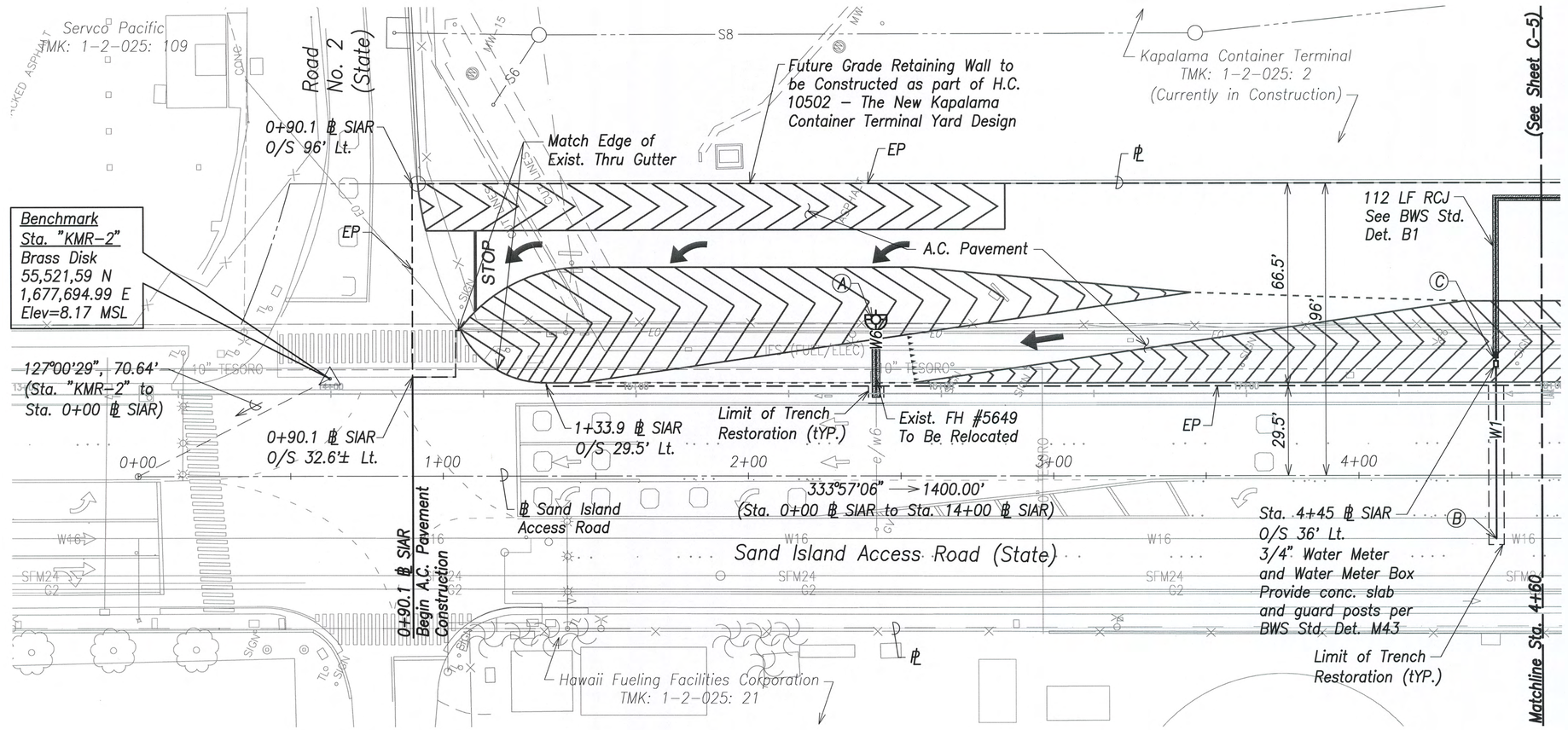
ORIGINAL PLAN

SURVEY PLOTTED BY _____ DATE
DRAWN BY _____
TRACED BY _____
DESIGNED BY _____
NOTE BOOK _____ CHK.
QUANTITIES BY _____
CHECKED BY _____
No. _____

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	15	120

True North
1"=20'



Ⓐ

FH #5649
Sta. 2+42 ℄ SIAR, O/S 51' Lt.
Materials for Connection:
1 – 6" Sleeve, 12" Long
1 – FH Assembly
1 – FH Extension Piece
1 – FH Elbow
1 – Conc. Block
1 – Hydrant Curb Guard per BWS Std. Det. FH1
23± LF 6" Pipe, D.I.P., Cl. 53
17 LF RCJ per BWS Std. Det. B1
Temp. for Testing:
1 – 6" Cap Tapped for 2–1/2" I.P.T.
1 – 2–1/2" C.O.
1 – Conc. Block
See BWS Std. Det. FH4
For Profile, see Sht. C–14.

Ⓑ

Sta. 4+45 ℄ SIAR
O/S 20.7' Rt.
Water Lateral (Type "A")
See City & County of Honolulu
BWS Std. Det. L13
1 – 1–1/2"x1" Reducer
Contractor to install Type "A" lateral, blind meter splice length to accommodate a 3/4" meter and all appurtenances in accordance with BWS standards. BWS to remove splice and install meter after water service is applied and paid for.

SITE LAYOUT & UTILITY PLAN – 1

SCALE: 1"=20'

Ⓒ

Board of Water Supply approved reduced pressure principle backflow prevention assembly after the water meter prior to any tees or branches per BWS Standard Detail V9

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) DATE

Graphic Scale:
1" = 20' 20' 10' 0 20' 40'

ORIGINAL PLAN	SURVEY PLOTTED BY	WB/JS	DATE
	DRAWN BY		
NOTE BOOK	TRACED BY	CWL	
	DESIGNED BY		
No.	QUANTITIES BY		
	CHECKED BY		

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

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4/30/22
LIC. EXPIRATION
SIGNATURE
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE LAYOUT PLAN & UTILITY PLAN – 1

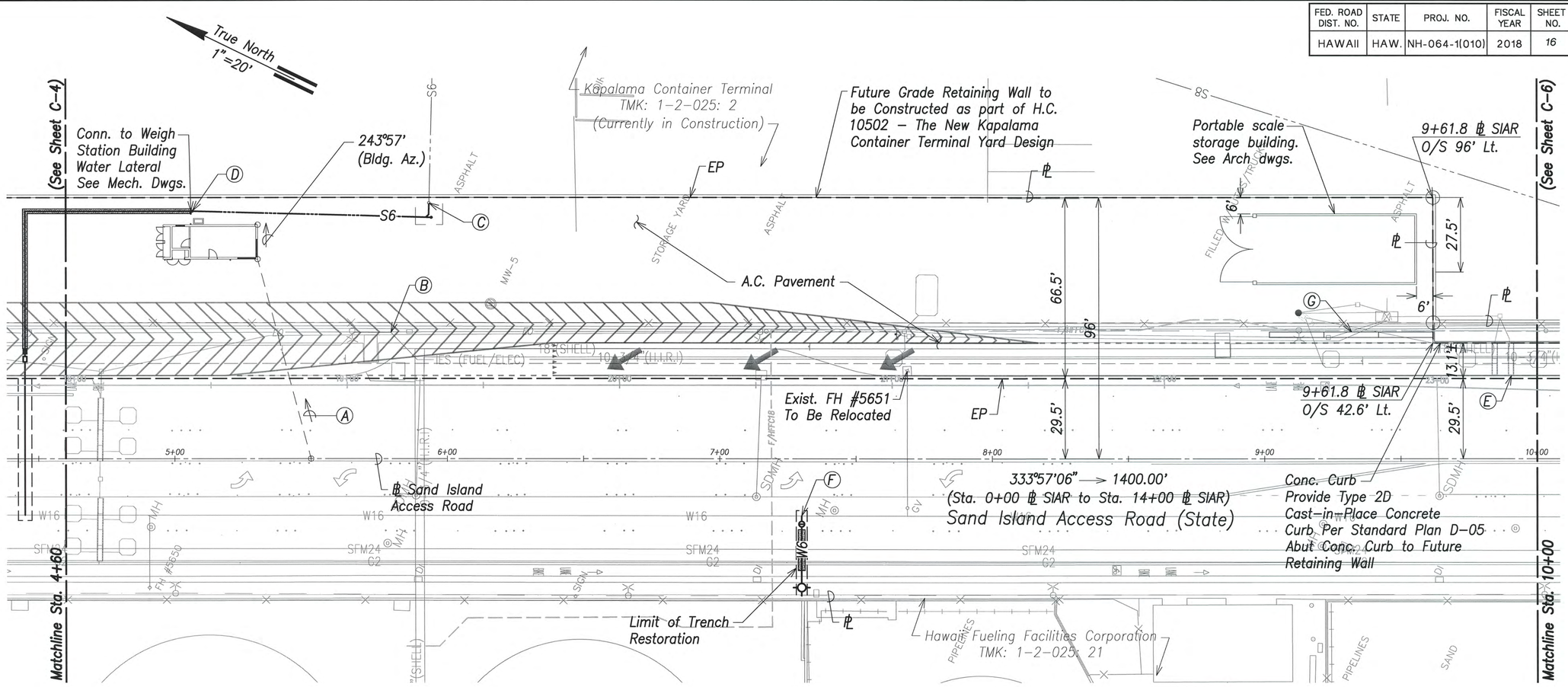
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-4 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	16	120



SITE LAYOUT & UTILITY PLAN – 2

SCALE 1"=20'

Ⓐ

228°58'34", 88.6'
(Sta. 5+50 ℄ SIAR to Building Corner)

Ⓑ

Contractor shall locate and mark the existing IES fuel line and fiber optic cable. The Contractor shall be responsible for protecting the IES fuel line and fiber optic cable throughout construction.

Ⓒ

Conn. to e/s6
Contractor to Verify Invert and Location prior to Construction of s6
5+93 ℄ SIAR, O/S 94' Lt.
Inv.=2.76±

Ⓓ

C.O.T.G.
5+06 ℄ SIAR, O/S 91' Lt.
1 – 6"x4" Reducer
1 – 6" Wye
1 – 4" Cap
Inv.=4.69 (S4)
See C&C of Honolulu DPW Std. Det. S-7 (Similar)
Provide Brass Cleanout Plug
For Profile, see Sht. C-14.

Ⓔ

Provide International Road Dynamics, or Approved Equal, Weigh-in-Motion Scale System Contractor shall Coordinate all Work with Scale Manufacturer for the Design and Construction of the Weigh-in-Motion Scale System.

Ⓕ

FH #5651
Sta. 7+30 ℄ SIAR, O/S 21' Rt.
Materials for Conn.:
1 – 16"x6" Tapping Tee
1 – 6" G.V. 150#
1 – Valve Box & Cover
1 – 6" Sleeve, 12" Long
1 – FH Assembly
1 – FH Extension Piece
1 – FH Elbow
1 – Conc. Block
1 – Conc. Block w/ Struct. Struts
25± LF 6" Pipe, D.I.P., Cl. 53
16 LF RCJ per BWS Std. Det. B1
Temp. for Testing:
1 – 6" Cap Tapped for 2-1/2" I.P.T.
1 – 2-1/2" C.O.
1 – Conc. Block
See BWS Std. Det. FH 4
For Profile, see Sht. C-14.

Ⓖ

Provide MASH Compliant Portable Concrete Barriers with Stabilization Pins at WIM Equipment per Standard Plan TE-42 and TE-43 (Similar)

Graphic Scale:
1" = 20' (20' 10' 0 20' 40')

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) DATE

ORIGINAL PLAN
SURVEY PLOTTED BY RW/JS DATE
DRAWN BY
TRACED BY
DESIGNED BY CWL
NOTE BOOK
QUANTITIES BY
CHECKED BY
No.

RMTC JOB NO. : 1-19548-0E

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SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

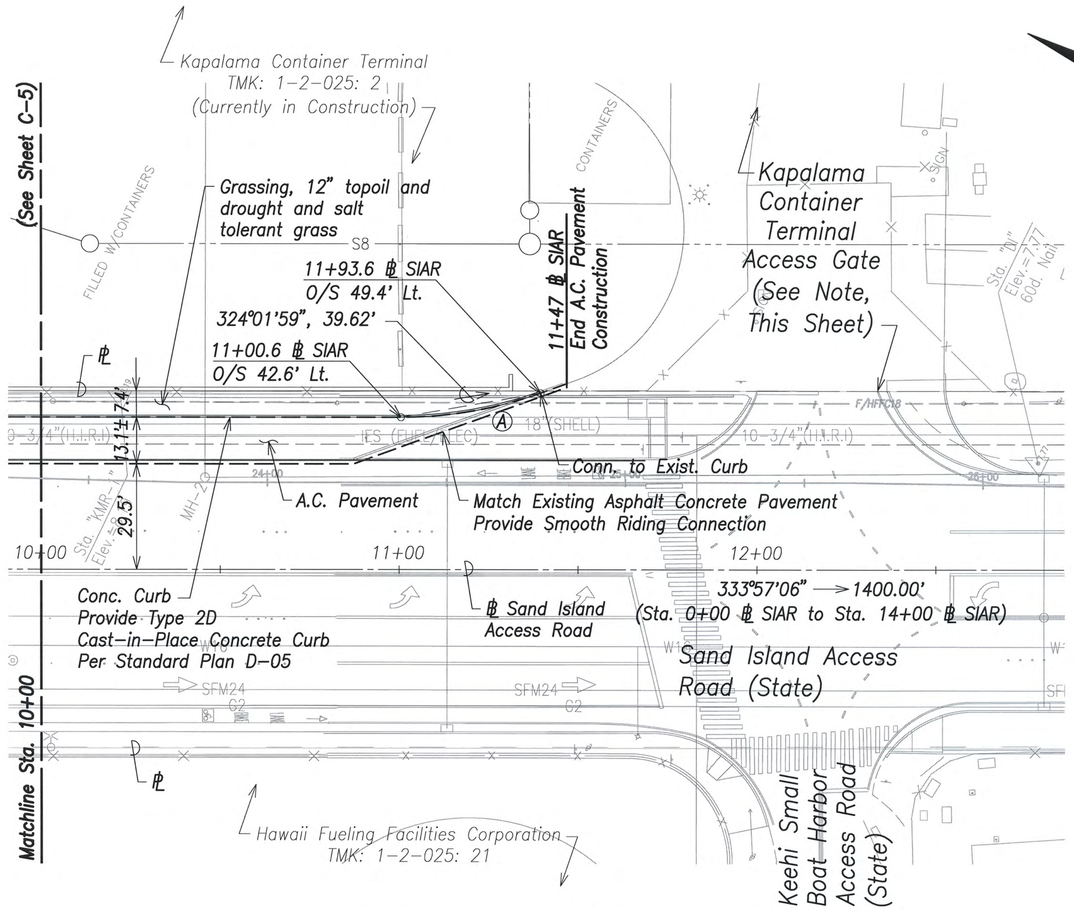
SITE LAYOUT PLAN & UTILITY PLAN – 2

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-5 OF 120 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	17	120



Curb Curve Data

Ⓐ

△ = 19°50'13"
△/2 = 9°55'07"
R = 115.00'
T = 20.11'
C = 39.62'
Lc = 39.82'

SITE LAYOUT & UTILITY PLAN – 3

SCALE 1"=20'

Note:
The Contractor shall coordinate all work with the Kapalama Container Terminal and Wharf Contractors.

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

ORIGINAL PLAN	SURVEY PLOTTED BY WM/JS DATE
	DRAWN BY
NOTE BOOK	TRACED BY CWL
	DESIGNED BY
No.	QUANTITIES BY
	CHECKED BY

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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SIGNATURE 6/30/22 LIC. EXPIRATION

G. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE LAYOUT PLAN & UTILITY PLAN – 3

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

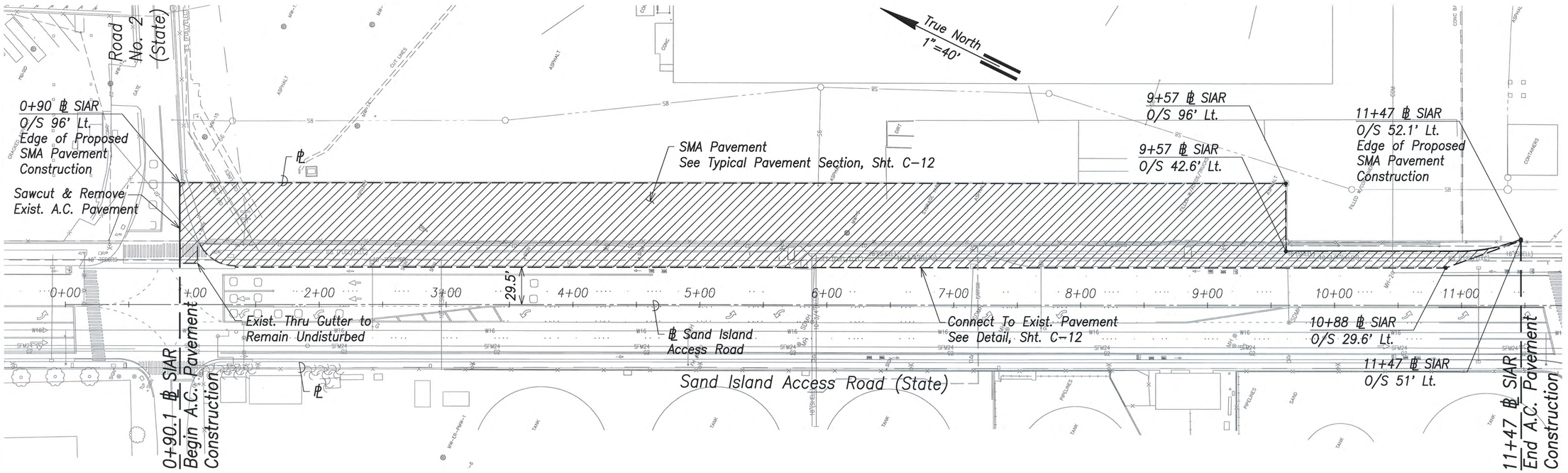
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-6 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	18	120



PAVEMENT LAYOUT PLAN
SCALE: 1"=40'

Graphic Scale:
1" = 40' 40' 20' 0 40' 80'

ORIGINAL PLAN	SURVEY PLOTTED BY	WM/JS	DATE
	DRAWN BY		
NOTE BOOK	TRACED BY		
	DESIGNED BY	CHL	
	QUANTITIES BY		
No.	CHECKED BY		

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CRAIG W. L. LUKE
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No. 6935-C
HAWAII, U.S.A.

4/30/22
SIGNATURE LIC. EXPIRATION
M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT LAYOUT PLAN

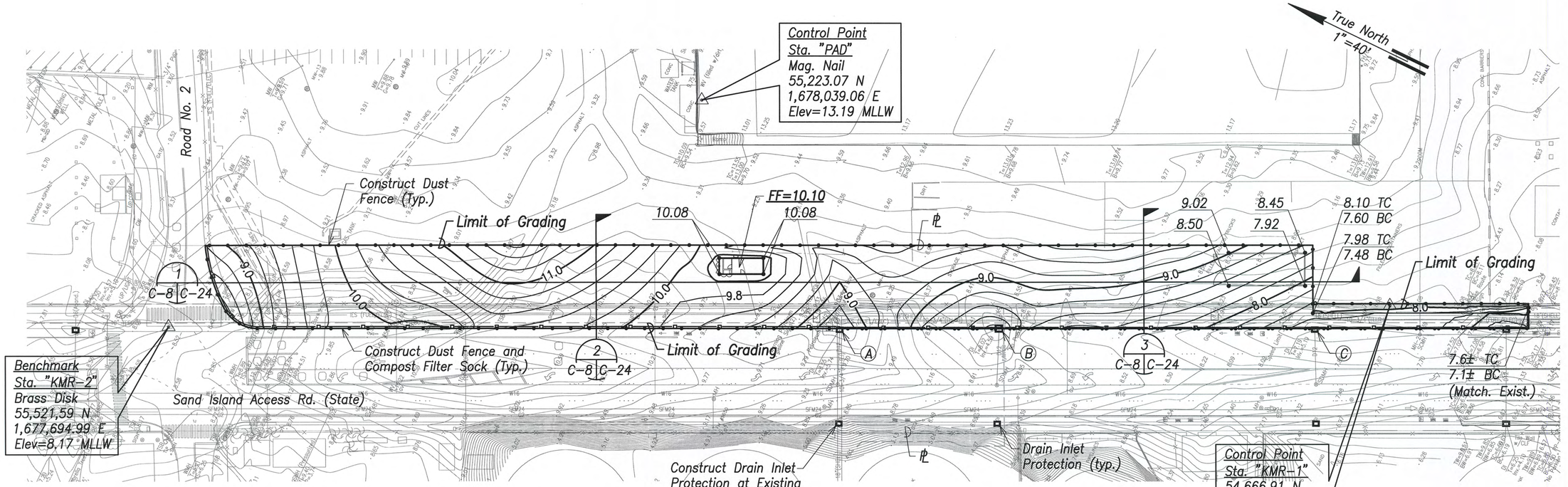
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-7 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	19	120



Note:

Sediment and Erosion Control BMP measures shown in the Contract Documents are minimum BMPs requirements and do not constitute an acceptable and/or complete Sediment and Erosion Control Plan. The Contractor shall incorporate additional BMPs based upon their means and methods considering site conditions and construction sequence in accordance with the Contract Documents including applicable permit document requirements. Cost shall be included in Pay Item 209.1000, Installation, Maintenance, Monitoring, and Removal of BMP.

Legend:

FF=10.10	Finished Floor Elevation
FP=10.05	Finished Pad Elevation
10	Exist. Ground Contour
10	Finished Grade Contour
	Limit of Grading
	Dust Fence
	Compost Filter Sock
	Drain Inlet Protection
10.08	Finished Elevation and Location

Ⓐ
Demolish and Remove Exist. Drain Inlet
Top = 8.6±
Inv. = 5.7±
Provide Type 1211214P Grated Drop Inlet and 1211214P Steel Grate and Frame per Standard Plan H-12 and H-15.
Provide Smooth Riding Connection.

Ⓑ
Demolish and Remove Exist. Drain Inlet
Top = 8.0±
Inv. = 4.6±
Provide Type 1211214P Grated Drop Inlet and 1211214P Steel Grate and Frame per Standard Plan H-12 and H-15.
Provide Smooth Riding Connection.

Ⓒ
Demolish and Remove Exist. Drain Inlet
Top = 7.2±
Inv. = 5.2±
Provide Type 1211214P Grated Drop Inlet and 1211214P Steel Grate and Frame per Standard Plan H-12 and H-15.
Provide Smooth Riding Connection.

ROADWAY GRADING, EROSION & SEDIMENT CONTROL PLAN

Scale: 1"=40'

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

ORIGINAL PLAN	SURVEY PLOTTED BY	WK/JS	DATE
	DRAWN BY		
NOTE BOOK	TRACED BY	CWL	
	DESIGNED BY		
No.	QUANTITIES BY		
	CHECKED BY		

CRAIG W. L. LUKE
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No. 6935-C
HAWAII, U.S.A.

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4/30/22
SIGNATURE — LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY GRADING, EROSION & SEDIMENT CONTROL PLAN

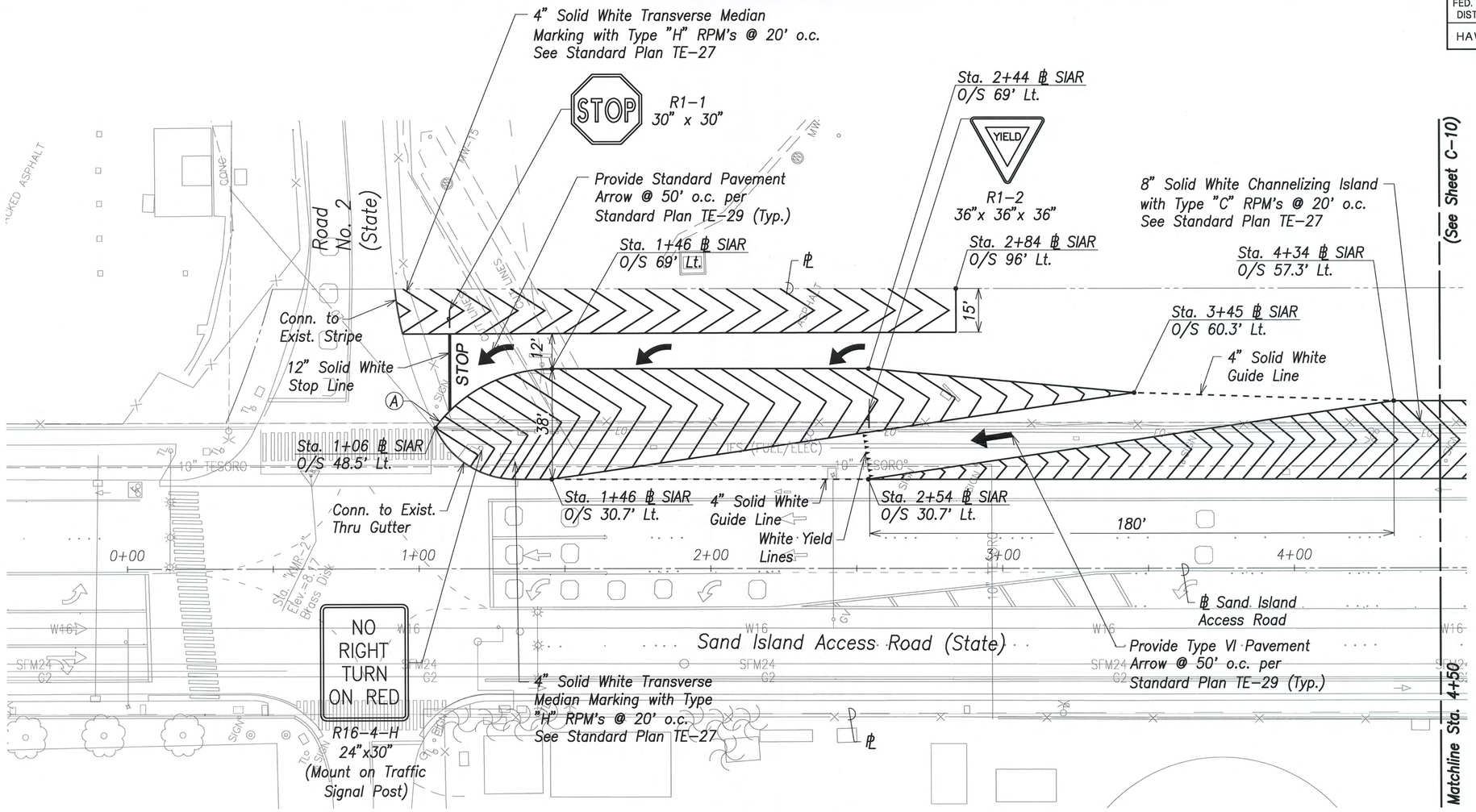
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-8 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	20	120



SIGNING & STRIPING PLAN – 1

SCALE 1"=20'

Striping Curve Data

Ⓐ

△	=	53°18'23"
△/2	=	26°39'12"
R	=	50.00'
T	=	25.10'
C	=	44.86'
Lc	=	46.52'

Graphic Scale:

1" = 20' 20' 10' 0 20' 40'

ORIGINAL PLAN	SURVEY PLOTTED BY	WA/JS	DATE
	DRAWN BY		
NOTE BOOK	TRACED BY	CWL	
	DESIGNED BY		
No.	QUANTITIES BY		
	CHECKED BY		

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SIGNATURE LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & STRIPING PLAN – 1

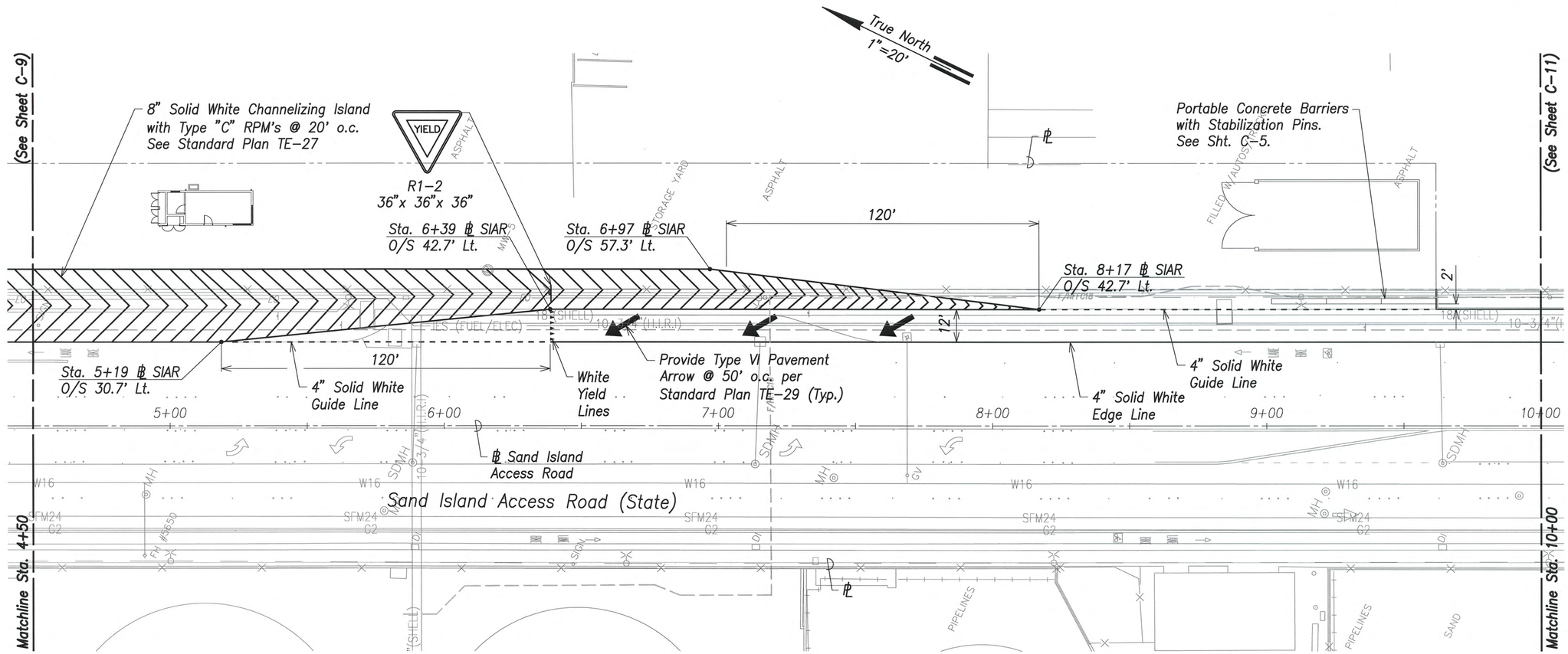
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-9 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	21	120



SIGNING & STRIPING PLAN – 2

SCALE 1"=20'

ORIGINAL PLAN	SURVEY PLOTTED BY WH/JS DATE
NOTE BOOK	DRAWN BY DATE
No.	TRACED BY CHK.
	DESIGNED BY QUANTITIES BY
	CHECKED BY

Graphic Scale:

1" = 20' 20' 10' 0 20' 40'

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SIGNATURE 4/30/22 LIC. EXPIRATION

A. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & STRIPING PLAN – 2

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

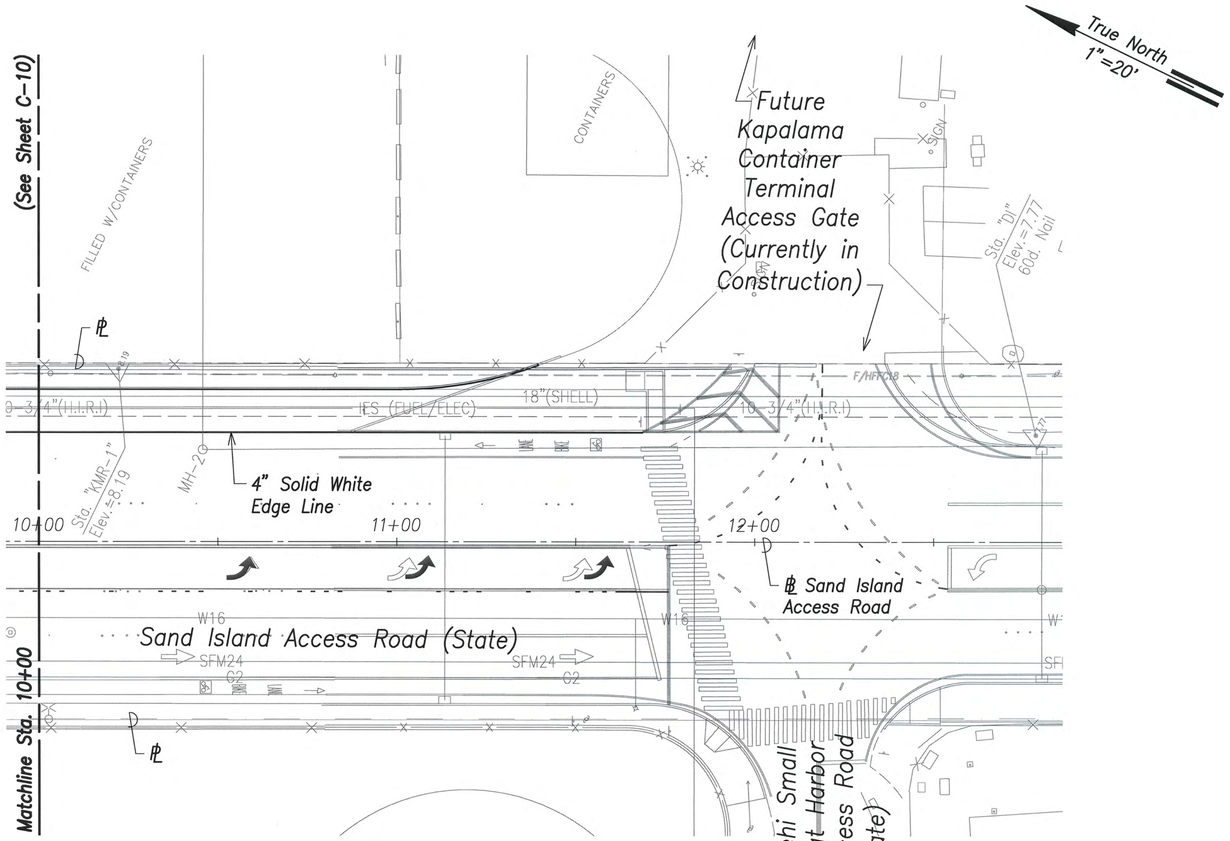
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-10 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	22	120



SIGNING & STRIPING PLAN – 3
SCALE 1"=20'

Graphic Scale:

1" = 20' 20' 10' 0 20' 40'

ORIGINAL PLAN	SURVEY PLOTTED BY ____ WM/SS DATE
	DRAWN BY ____ DATE
	TRACED BY ____
NOTE BOOK	DESIGNED BY ____ CWL
No.____	QUANTITIES BY ____
	CHECKED BY ____

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4/30/22
SIGNATURE DT. EXPIRATION
K. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & STRIPING PLAN – 3

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

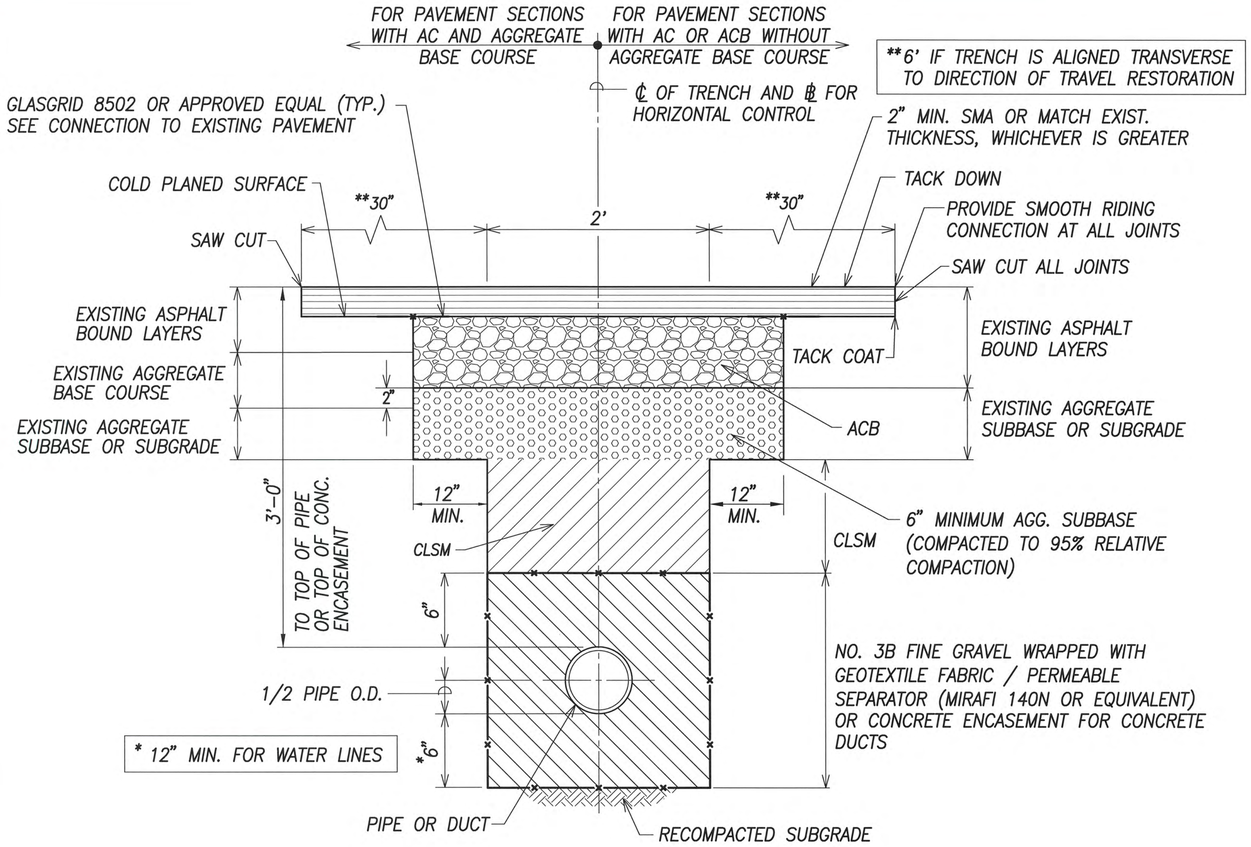
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-11 OF 120 SHEETS

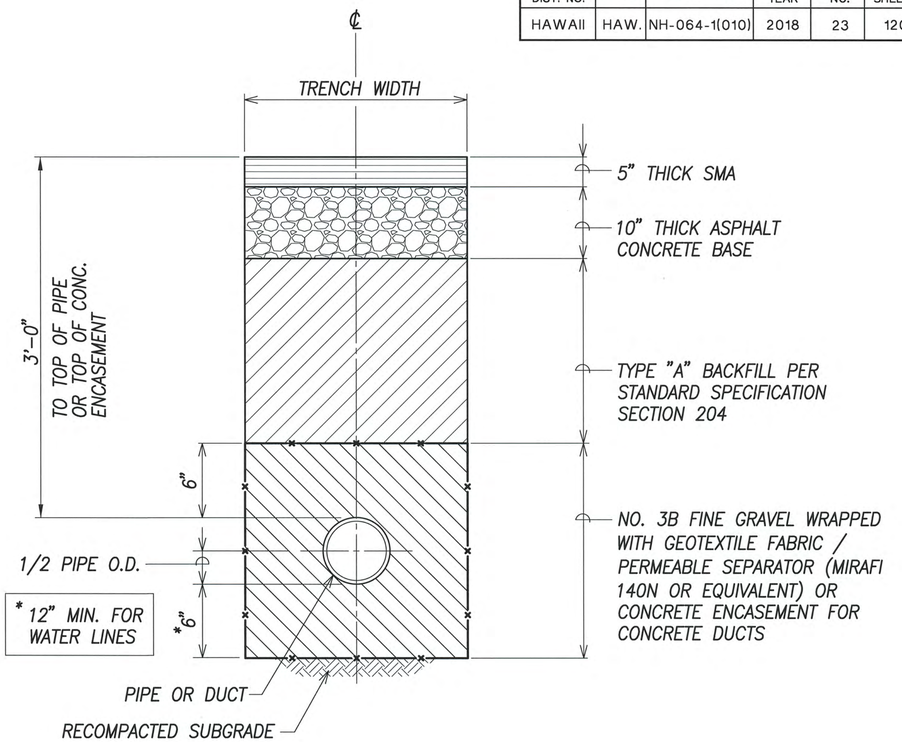
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	23	120



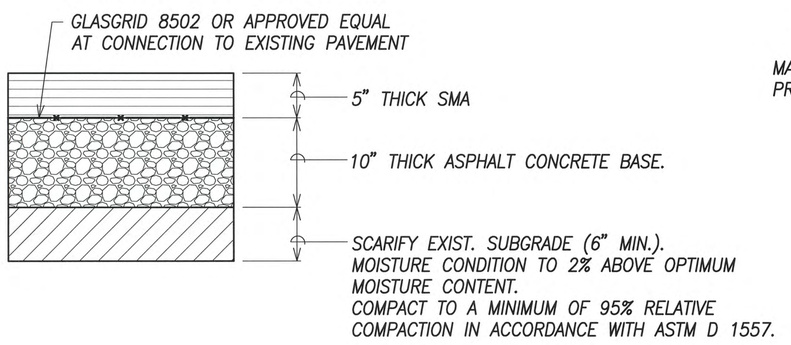
NOTES:
1. OVER TRENCH EXCAVATIONS FOR EXISTING PAVEMENTS WITHOUT PERMEABLE BASE
2. FOR DUCT SECTIONS, SEE SHEET E-11.

TYPICAL SECTION – UTILITY TRENCH WITH PAVEMENT RESTORATION
NOT TO SCALE

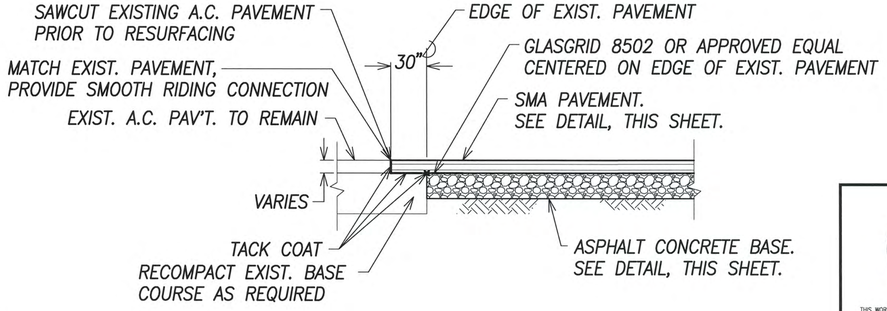


NOTE:
1. FOR DUCT SECTIONS, SEE SHEET E-11.

TYPICAL SECTION – UTILITY TRENCH
NOT TO SCALE



TYPICAL PAVEMENT SECTION
NOT TO SCALE



CONNECTION TO EXISTING PAVEMENT
NOT TO SCALE

NOTE:
PAVEMENT SMOOTHNESS SHALL BE DETERMINED VIA STRAIGHTEDGE TESTING.

ORIGINAL PLAN	SURVEY PLOTTED BY		DATE
	DRAWN BY	WM/SS	
NOTE BOOK	TRACED BY		
	DESIGNED BY	CWL	
	QUANTITIES BY		
No.	CHECKED BY		

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HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS – 1

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

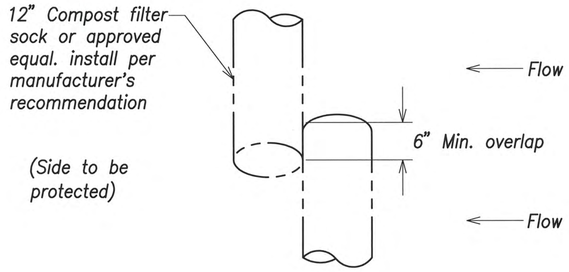
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

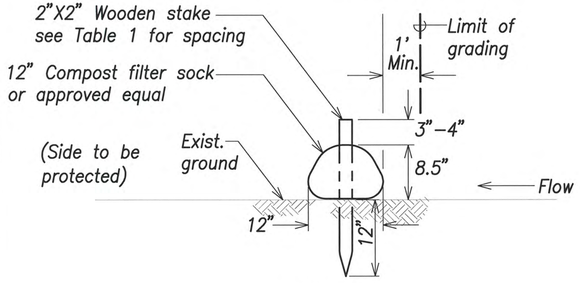
SHEET No. C-12 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	24	120



PLAN



SECTION

Table 1: Wooden stake anchor spacing

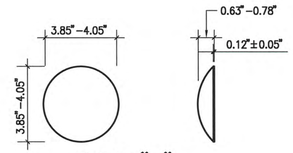
Slope	Anchor spacing
< 4:1	Not required
4:1 to 3:1	10' O.C.
> 3:1 to 2:1	5' to 10' O.C.
> 2:1	5' O.C.

Notes:

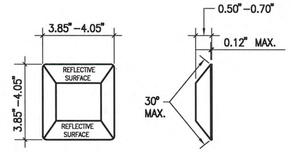
1. Compost shall not contain biosolids and should be consistent with EPA guidelines as well as meet all local, state and federal quality requirements.
2. Contractor shall inspect compost filter socks and repair/replace as necessary.

COMPOST FILTER SOCK DETAIL

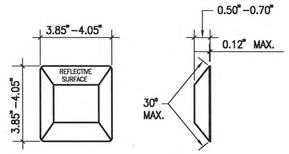
Not to Scale



TYPE "A"
NON-REFLECTIVE WHITE MARKER



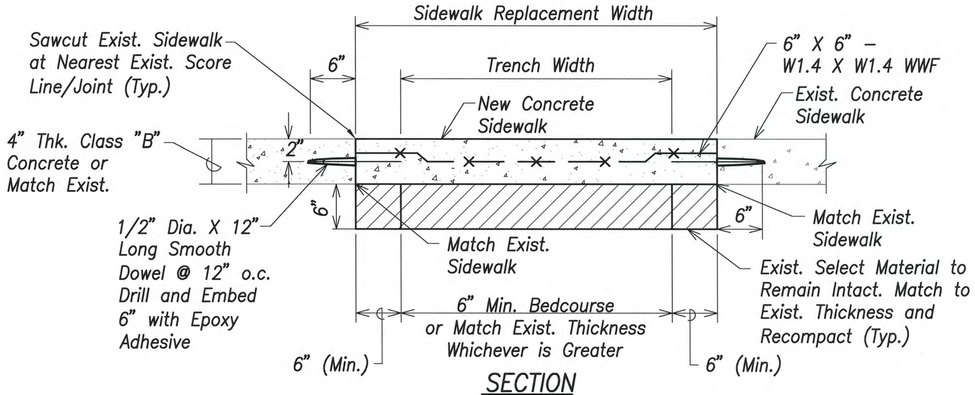
TYPE "C"
RED-CLEAR REFLECTIVE MARKER



TYPE "H"
ONE-WAY YELLOW REFLECTIVE MARKER

STANDARD RAISED PAVEMENT MARKERS

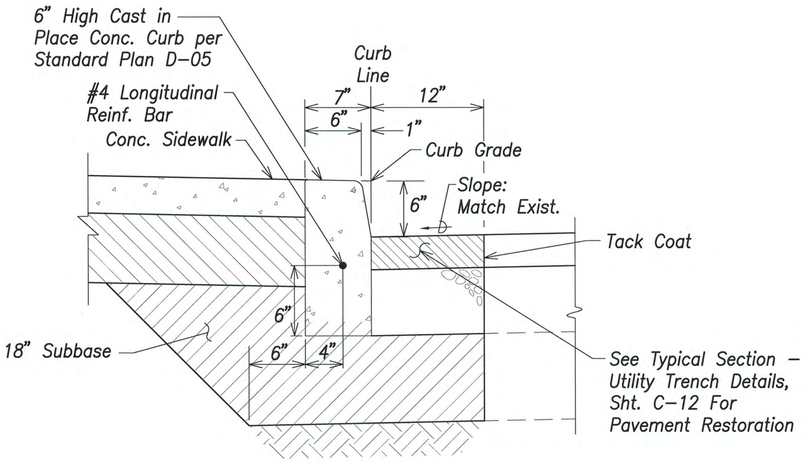
Not to Scale



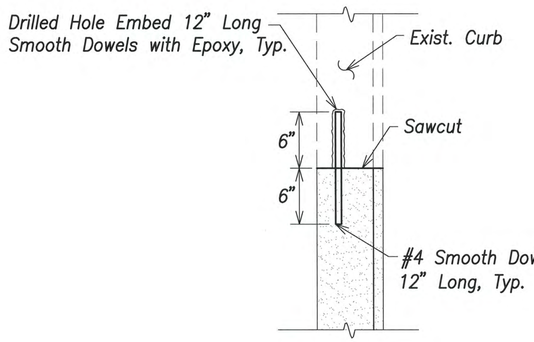
SECTION

RESTORATION OF CONCRETE SIDEWALK

Not to Scale



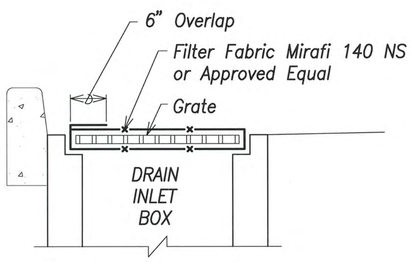
SECTION



PLAN VIEW

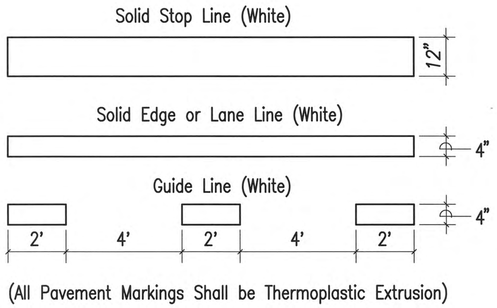
CONCRETE CURB RESTORATION DETAILS

NOT TO SCALE



GRATE INLET PROTECTION

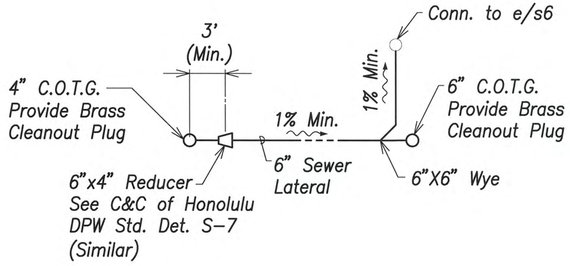
Not to Scale



(All Pavement Markings Shall be Thermoplastic Extrusion)

TYPES OF LONGITUDINAL LINES

Not to Scale



TYPICAL SEWER LATERAL CONNECTION

Not to Scale

SURVEY PLOTTED BY — DATE
DRAWN BY — WH/JS
TRACED BY
DESIGNED BY — CHK.
QUANTITIES BY
CHECKED BY
ORIGINAL PLAN
NOTE BOOK — No.

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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4/30/22
SIGNATURE — LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS - 2

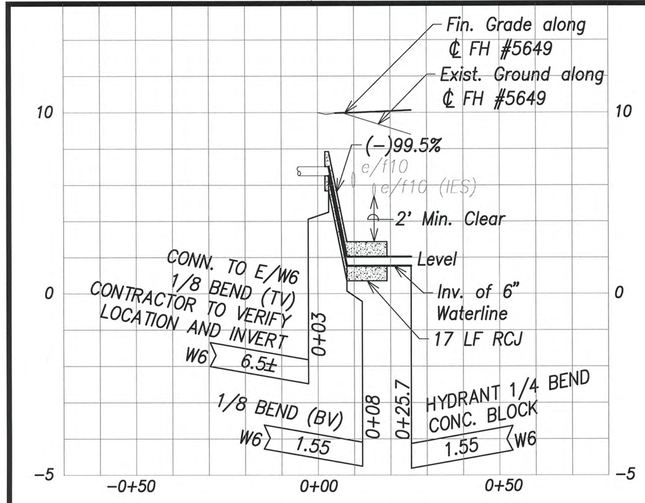
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted — Date: February 2021

SHEET No. C-13 OF 120 SHEETS

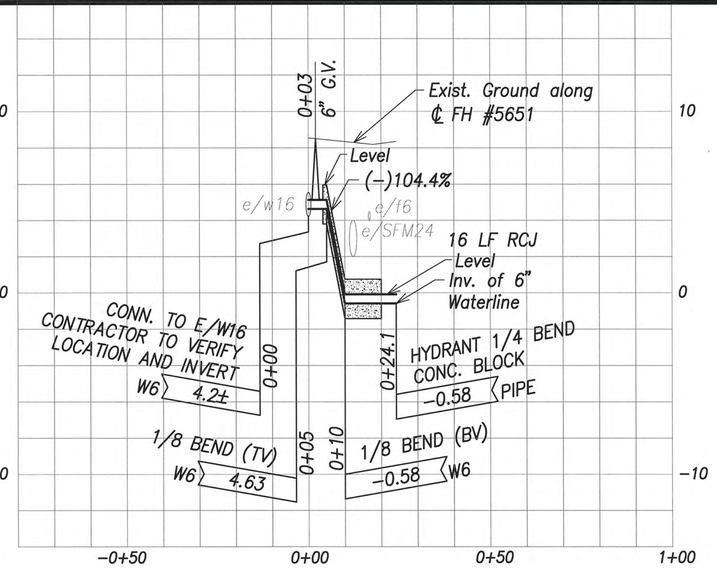
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	25	120



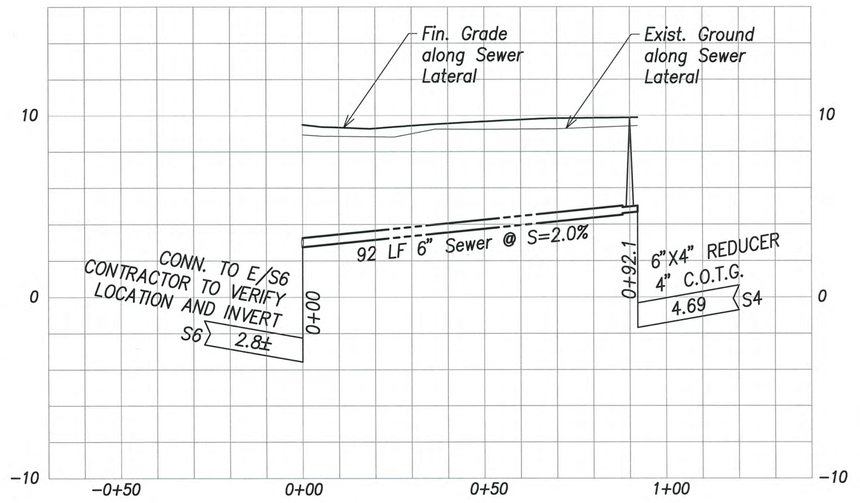
PROFILE – FH #5649

Scales: 1"=20' Horiz.
1"=4' Vert.



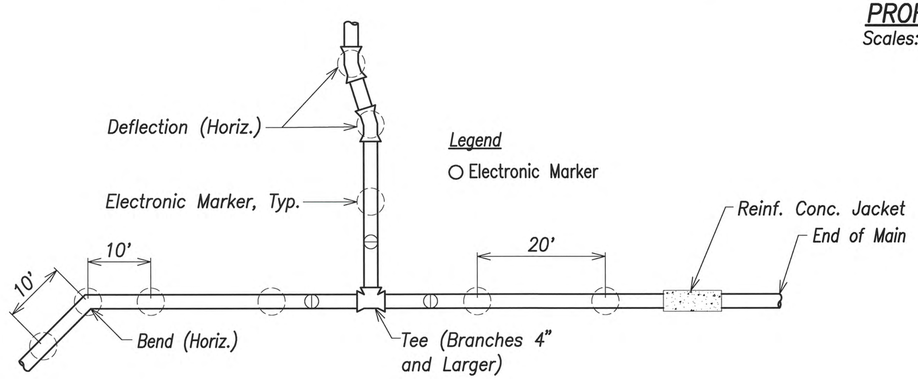
PROFILE – FH #5651

Scales: 1"=20' Horiz.
1"=4' Vert.

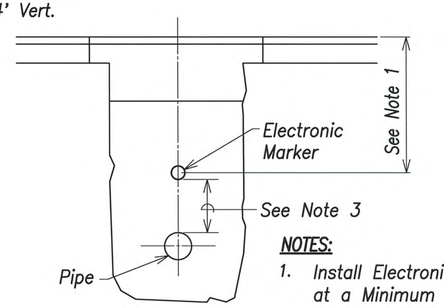


PROFILE – SEWER LATERAL

Scales: 1"=20' Horiz.
1"=4' Vert.



PLAN VIEW



SECTION

NOTES:

1. Install Electronic Marker over Center Line of Pipe at a Minimum Depth of 2 Feet and a Maximum Depth of 3 Feet from Finish Grade.
2. Install Trench Backfill and Pipe Cushion Material in Accordance to the Plans and Specifications.
3. Install Electronic Marker at a Minimum Clearance of 6–Inches above the Pipe or Concrete Jacket.

TYPICAL ELECTRONIC MARKER INSTALLATION

Not to Scale

BWS WATER FLOW REQUIREMENTS	DOMESTIC – COMMERCIAL (COMM)		
A. PROPOSED DOMESTIC (COMM) (ALL FIXTURES INSTALLED)	8.6 F.U.'S	25 G.P.M.'S	750 G.P.D.
B. PROPOSED IRRIGATION (DURING OFF–PEAK HOURS)	--- F.U.'S	--- G.P.M.'S	--- G.P.D.
C. TOTAL PROPOSED (ADD A. AND B. ABOVE)	8.6 F.U.'S	25 G.P.M.'S	750 G.P.D.
D. DEMOLITION (ALL FIXTURES BEING REMOVED) DEMO PERMIT # DATE:	0 F.U.'S	0 G.P.M.'S	0 G.P.D.
E. NET CHANGE (SUBTRACT D. FROM C. ABOVE)	8.6 F.U.'S	25 G.P.M.'S	750 G.P.D.
F. EXISTING TO REMAIN (ALL OTHER FIXTURES SERVICED BY THIS METER BUT NOT AFFECTED BY THIS PROJECT)	--- F.U.'S	--- G.P.M.'S	--- G.P.D.
I. GRAND TOTAL (ADD C. AND F. ABOVE)	8.6 F.U.'S	25 G.P.M.'S	750 G.P.D.

NOTES:
1. GPM FLOW RATES ARE FROM THE MECHANICAL DRAWINGS.
2. GPD FLOW RATES ARE FROM THE MECHANICAL DRAWINGS.

DESCRIPTION OF WORK		ESTIMATE
1" DOMESTIC SERVICE		
3/4" METER	$87	$267.00
INSTALLATION CHARGE	$180	
WATER SYSTEMS FACILITIES CHARGES: (20 MINIMUM F.U. X $620.85/F.U.) (3 COMPONENTS)		$12,417.00
*CREDIT		
P/D		
P/D		
---FIRE SERVICE		
METER	N/A	N/A
INSTALLATION CHARGE	N/A	
ONE–TIME CHARGE	N/A	N/A
TOTAL.....		$12,684.00

*CREDITS WILL BE DETERMINED WHEN THE BUILDING PERMIT APPLICATION IS SUBMITTED FOR BWS REVIEW AND APPROVAL.

THIS ESTIMATE IS SUBJECT TO CHANGE. A FORMAL WRITTEN QUOTATION MAY BE OBTAINED AND ALL PAYMENTS FOR THE CHARGES SHOWN ON THE QUOTATION MADE WITHIN 30 DAYS AFTER THE CONSTRUCTION PLAN IS APPROVED BY BWS. IF PAYMENTS ARE NOT RECEIVED WITHIN THE 30 DAY PERIOD, THE PROJECT WILL BE SUBJECT TO THE PREVAILING RATES.

Graphic Scales:

1" = 4' 4' 2' 0 4' 8'

1" = 20' 20' 10' 0 20' 40'

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) DATE

ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY WH/JS DATE
TRACED BY
DESIGNED BY CWL
NOTE BOOK
QUANTITIES BY
No. CHECKED BY

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS – 3

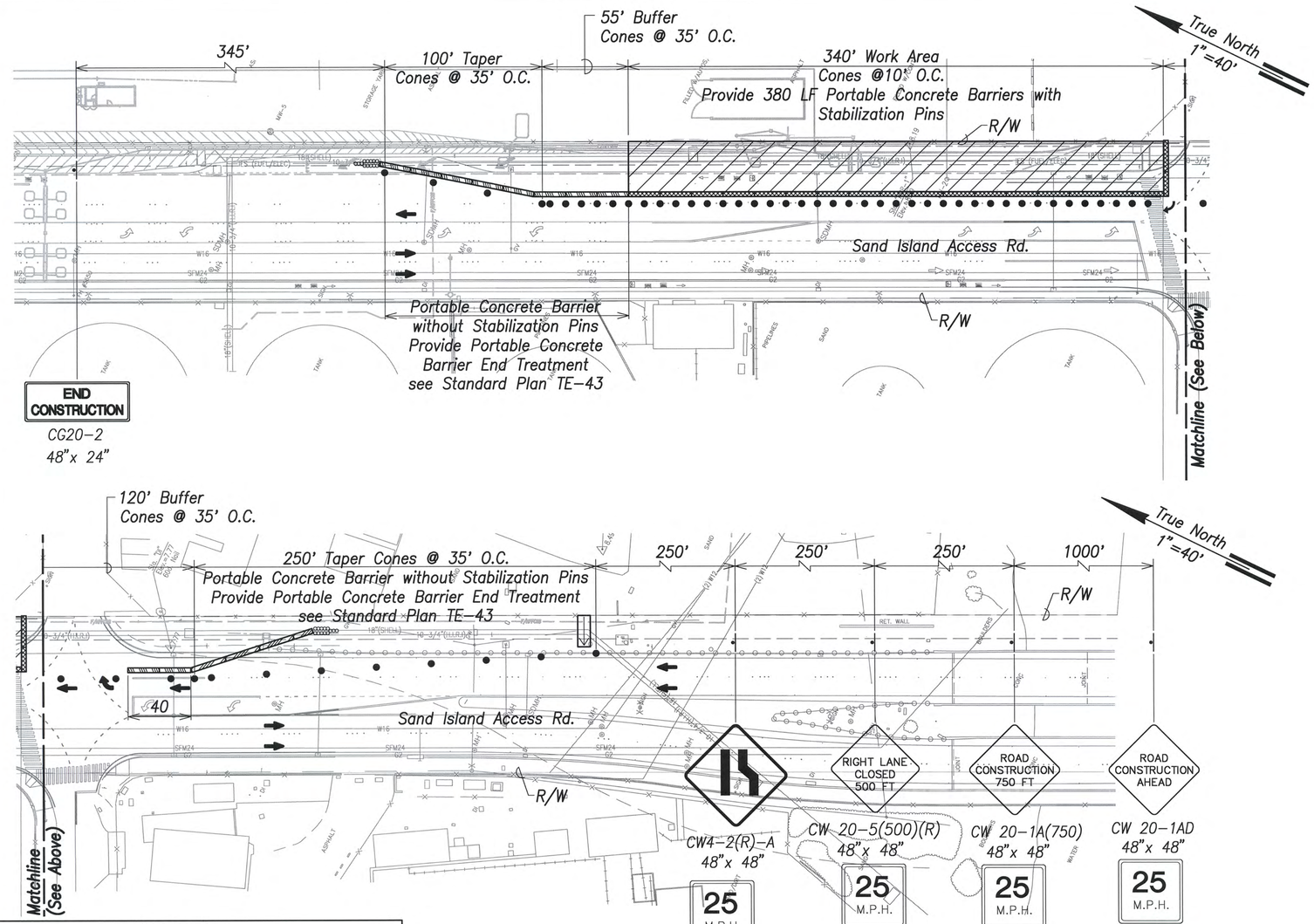
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH–064–1(010)
TMK: (1) 1–2–025: 002

Scale: As Noted Date: February 2021

SHEET No. C-14 OF 120 SHEETS

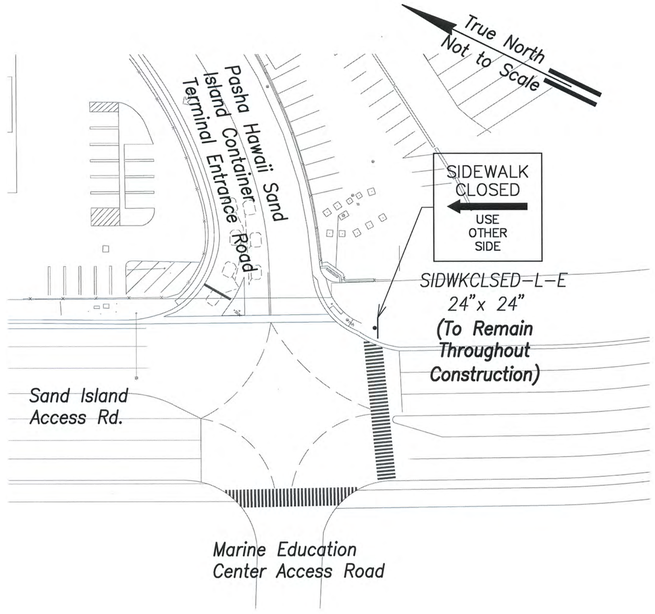
RMTC JOB NO. : 1–19548–0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	26	120



TRAFFIC CONTROL PLAN – PHASE 1

Scale: 1"=40'



SIDEWALK CLOSURE AT SAND ISLAND

Not to Scale

Legend:

- MASH Compliant Portable Concrete Barrier with Stabilization Pins. See Standard Plan TE-42 and TE-43 (Similar)
- MASH Compliant Portable Concrete Barrier without Stabilization Pins. See Standard Plan TE-42 and TE-43 (Similar)
- Cones at spacing shown on plan
- Arrow Board
- Sign
- Work Area
- Direction of Traffic Flow
- Flagger
- Police Officer

Notes:

1. Provide Temporary White Edge Line, Offset 6 Inches, along Channelized Areas.
2. Eradicate Exist. Temporary Striping upon Completion of Work.
3. Repair Holes in Pavement due to the Portable Concrete Barriers with Stabilization Pins.
4. See Temporary Steel Plate Bridging Notes, sheet G-9.

Graphic Scale:

40' 20' 0 40' 80'

1" = 40'

ORIGINAL PLAN	SURVEY PLOTTED BY:	DATE
NOTE BOOK	DRAWN BY: WK/JS	
No.	TRACED BY: CWL	
	DESIGNED BY:	
	QUANTITIES BY:	
	CHECKED BY:	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN – PHASE 1

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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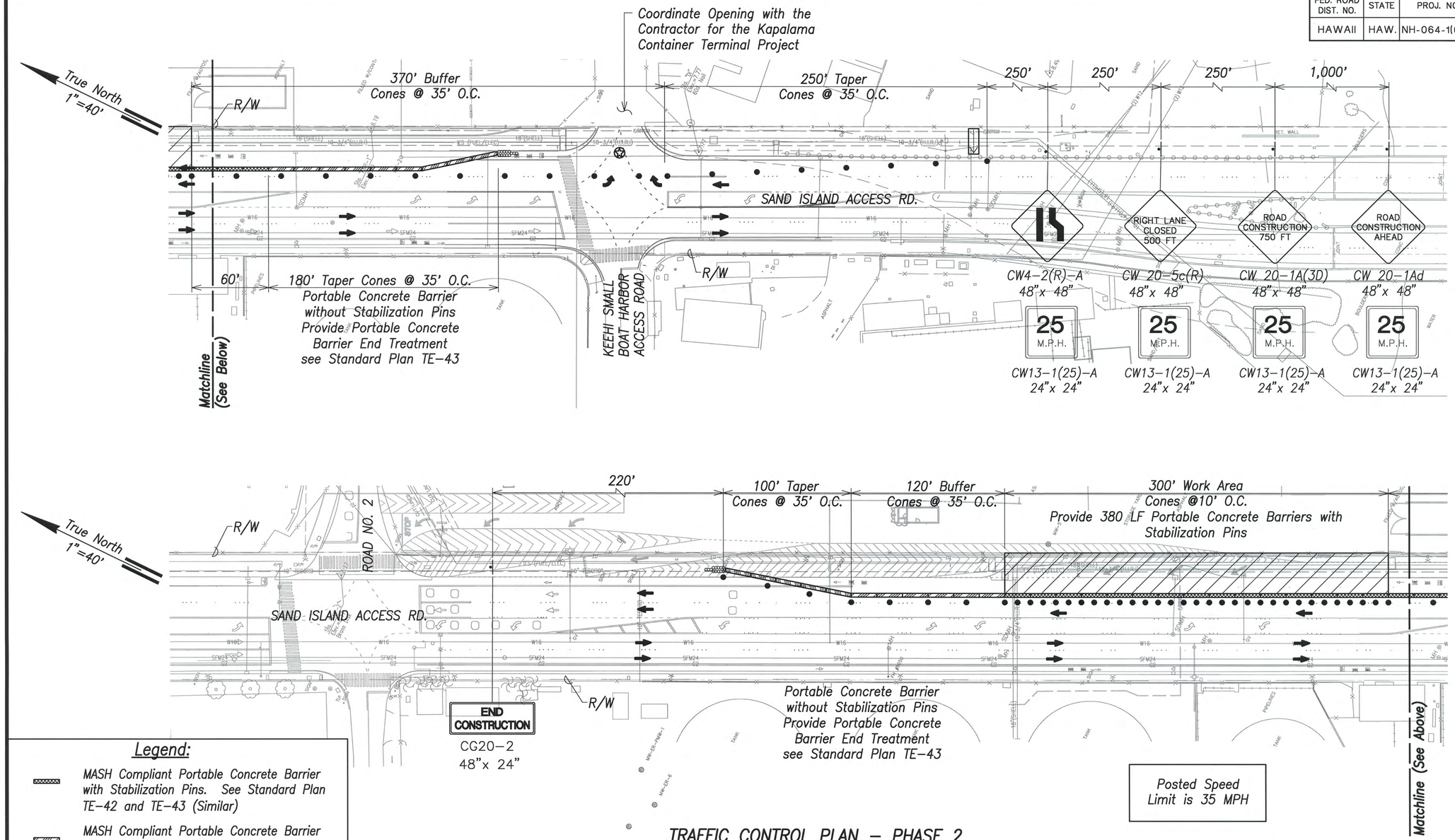
SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

SHEET No. C-15 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	27	120



TRAFFIC CONTROL PLAN – PHASE 2

Scale: 1"=40'

Legend:

- MASH Compliant Portable Concrete Barrier with Stabilization Pins. See Standard Plan TE-42 and TE-43 (Similar)
- MASH Compliant Portable Concrete Barrier without Stabilization Pins. See Standard Plan TE-42 and TE-43 (Similar)
- Cones at spacing shown on plan
- Arrow Board
- Sign
- Work Area
- Direction of Traffic Flow
- Flagger
- Police Officer

Notes:

1. Provide Temporary White Edge Line, Offset 6 Inches, along Channelized Areas.
2. Eradicate Exist. Temporary Striping upon Completion of Work.
3. Repair Holes in Pavement due to the Portable Concrete Barriers with Stabilization Pins.
4. See Temporary Steel Plate Bridging Notes, sheet G-9.

Graphic Scale:

40' 20' 0 40' 80'

1" = 40'

ORIGINAL PLANS — SURVEY PLOTTED BY: WK/JS — DRAWN BY: — TRACED BY: CWL — DESIGNED BY: — QUANTITIES BY: — CHECKED BY: — DATE: — NOTE BOOK — No.

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 9335-C HAWAII, U.S.A.

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SIGNATURE 4/26/22

I.C. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN – PHASE 2

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

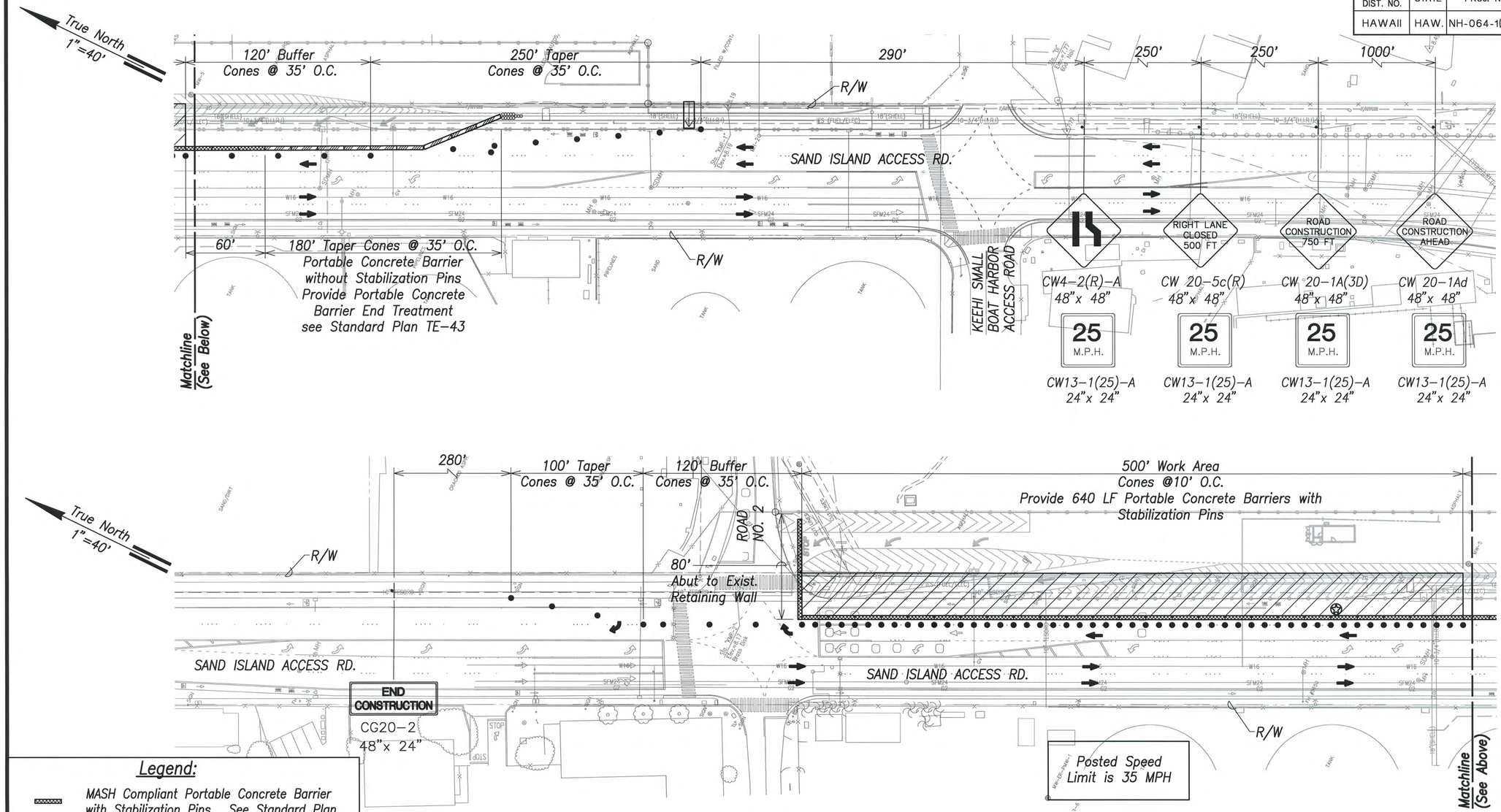
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-16 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	28	120



TRAFFIC CONTROL PLAN – PHASE 3

Scale: 1"=40'

Legend:

- MASH Compliant Portable Concrete Barrier with Stabilization Pins. See Standard Plan TE-42 and TE-43 (Similar)
- MASH Compliant Portable Concrete Barrier without Stabilization Pins. See Standard Plan TE-42 and TE-43 (Similar)
- Cones at spacing shown on plan
- Arrow Board
- Sign
- Work Area
- Direction of Traffic Flow
- Flagger
- Police Officer

Notes:

1. Provide Temporary White Edge Line, Offset 6 Inches, along Channelized Areas.
2. Eradicate Exist. Temporary Striping upon Completion of Work.
3. Repair Holes in Pavement due to the Portable Concrete Barriers with Stabilization Pins.
4. See Temporary Steel Plate Bridging Notes, sheet G-9.

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

ORIGINAL PLAN	SURVEY PLOTTED BY	WH/JS	DATE
	DRAWN BY		
NOTE BOOK	TRACED BY	CWL	
	DESIGNED BY		
No.	QUANTITIES BY		
	CHECKED BY		

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No. 6935-C
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN – PHASE 3

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

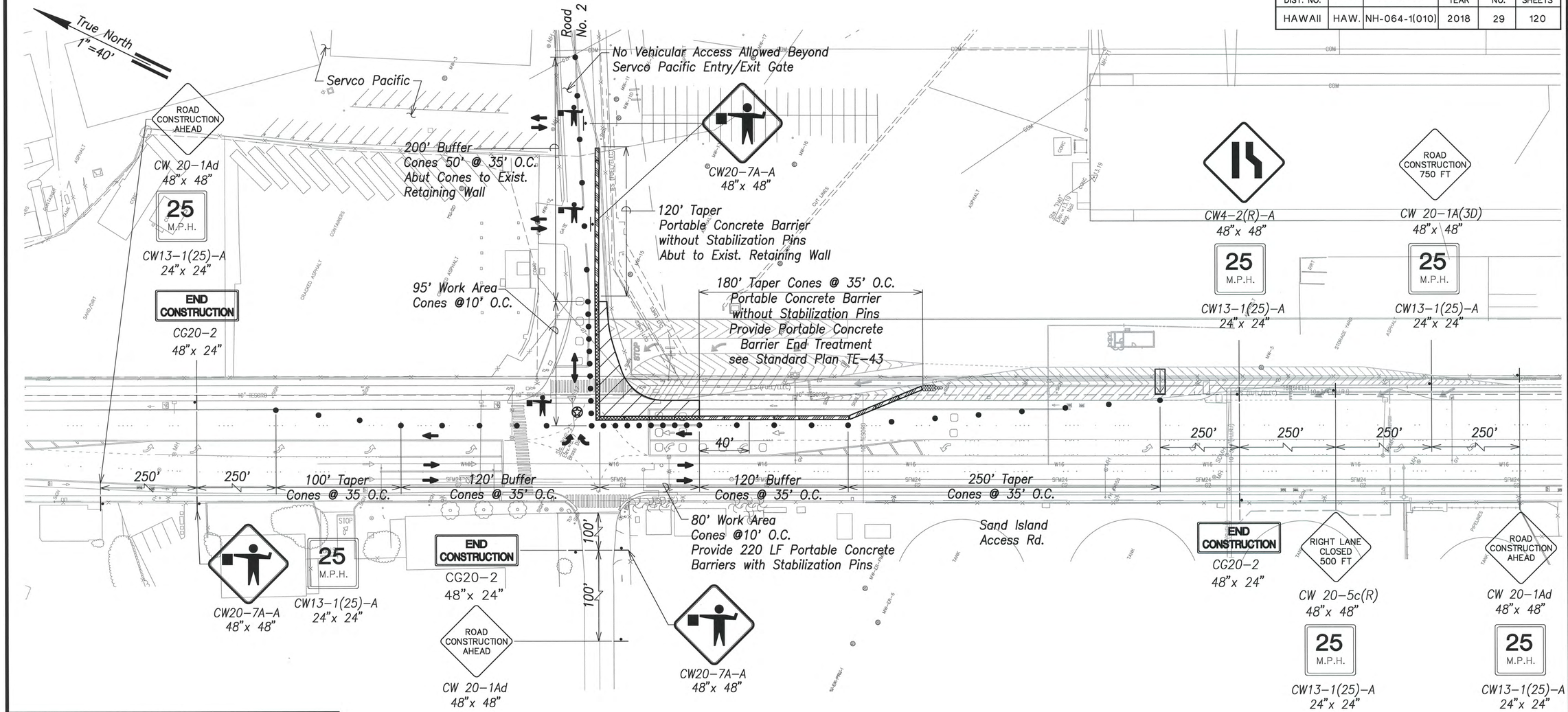
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-17 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	29	120



TRAFFIC CONTROL PLAN – PHASE 4

Scale: 1"=40'

Legend:

- MASH Compliant Portable Concrete Barrier with Stabilization Pins. See Standard Plan TE-42 and TE-43 (Similar)
- MASH Compliant Portable Concrete Barrier without Stabilization Pins. See Standard Plan TE-42 and TE-43 (Similar)
- Cones at spacing shown on plan
- Arrow Board
- Sign
- Work Area
- Direction of Traffic Flow
- Flagger
- Police Officer

Notes:

1. Provide Temporary White Edge Line, Offset 6 Inches, along Channelized Areas.
2. Eradicate Exist. Temporary Striping upon Completion of Work.
3. Repair Holes in Pavement due to the Portable Concrete Barriers with Stabilization Pins.
4. See Temporary Steel Plate Bridging Notes, sheet G-9.

Graphic Scale:

40' 20' 0 40' 80'

1" = 40'

ORIGINAL PLAN	SURVEY PLOTTED BY	WK/JS	DATE
	DRAWN BY		
	TRACED BY		
NOTE BOOK	DESIGNED BY	CWL	
	QUANTITIES BY		
No.	CHECKED BY		

RMTC JOB NO. : 1-19548-0E

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6936-C
HAWAII, U.S.A.

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4/30/22
SIGNATURE LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN – PHASE 4

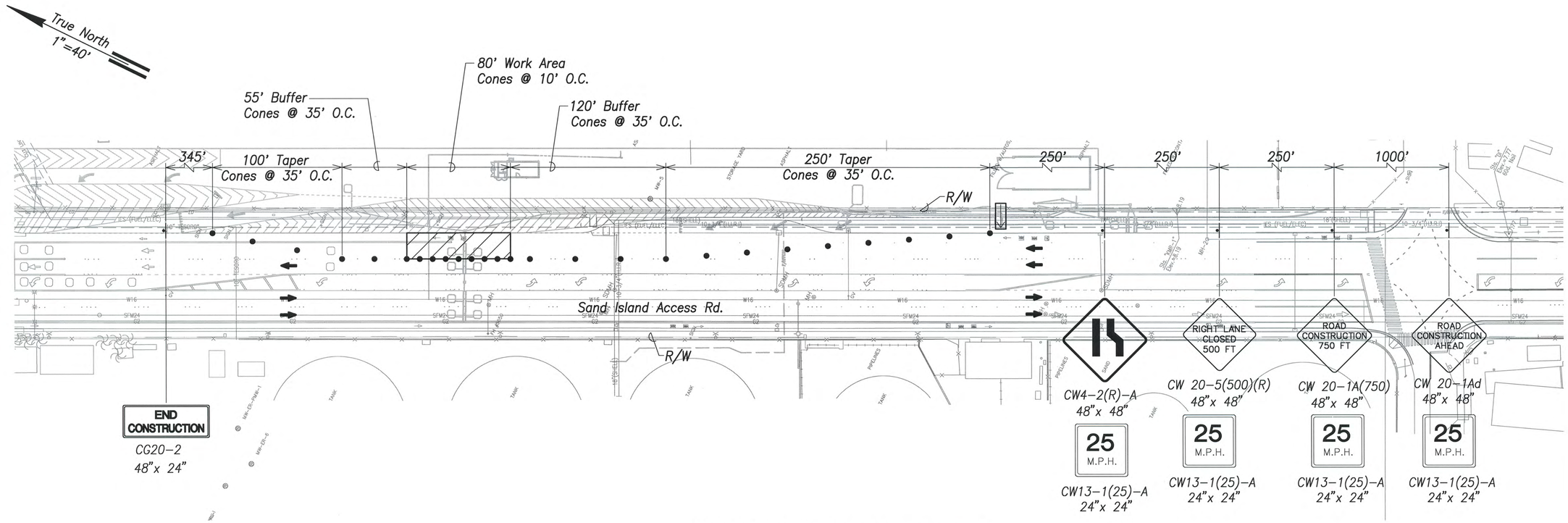
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-18 OF 120 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	30	120



TRAFFIC CONTROL PLAN – PHASE 5
Scale: 1"=40'

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

Legend:
- • • • Cones at spacing shown on plan
- Arrow Board
- Sign
- Work Area
- Direction of Traffic Flow
- Police Officer

Notes:
1. Provide Temporary White Edge Line, Offset 6 Inches, along Channelized Areas.
2. Eradicate Exist. Temporary Striping upon Completion of Work.
3. Repair Holes in Pavement due to the Portable Concrete Barriers with Stabilization Pins.
4. See Temporary Steel Plate Bridging Notes, sheet G-9.

Graphic Scale:
1" = 40' 40' 20' 0 40' 80'

Chad W. L. Luke
LICENSED PROFESSIONAL ENGINEER
No. 9935-C
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN – PHASE 5

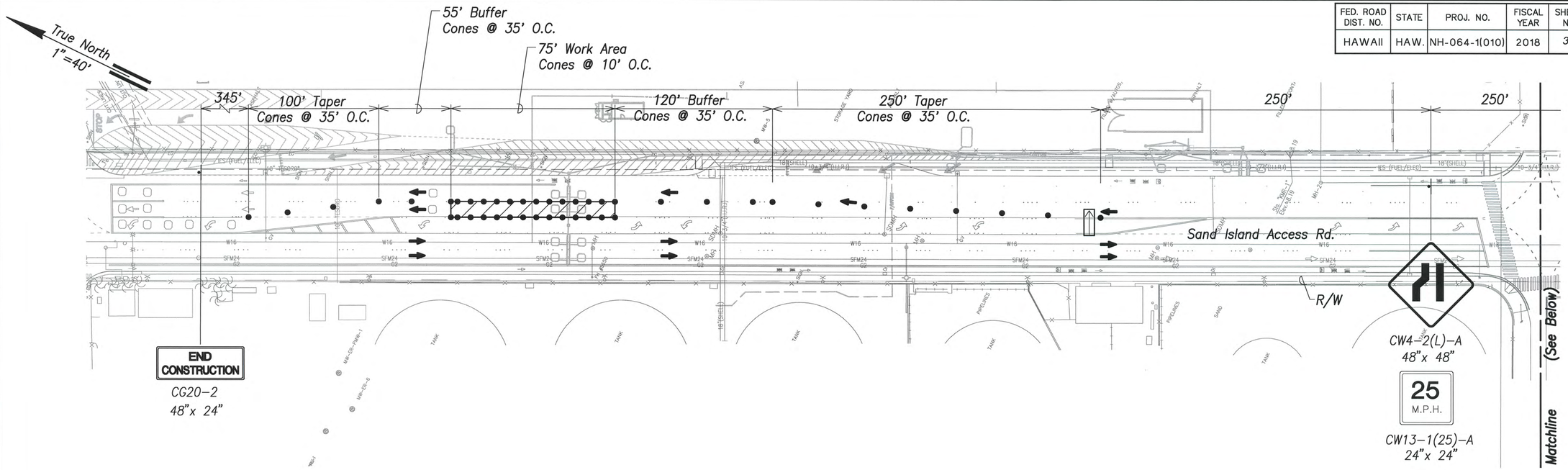
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

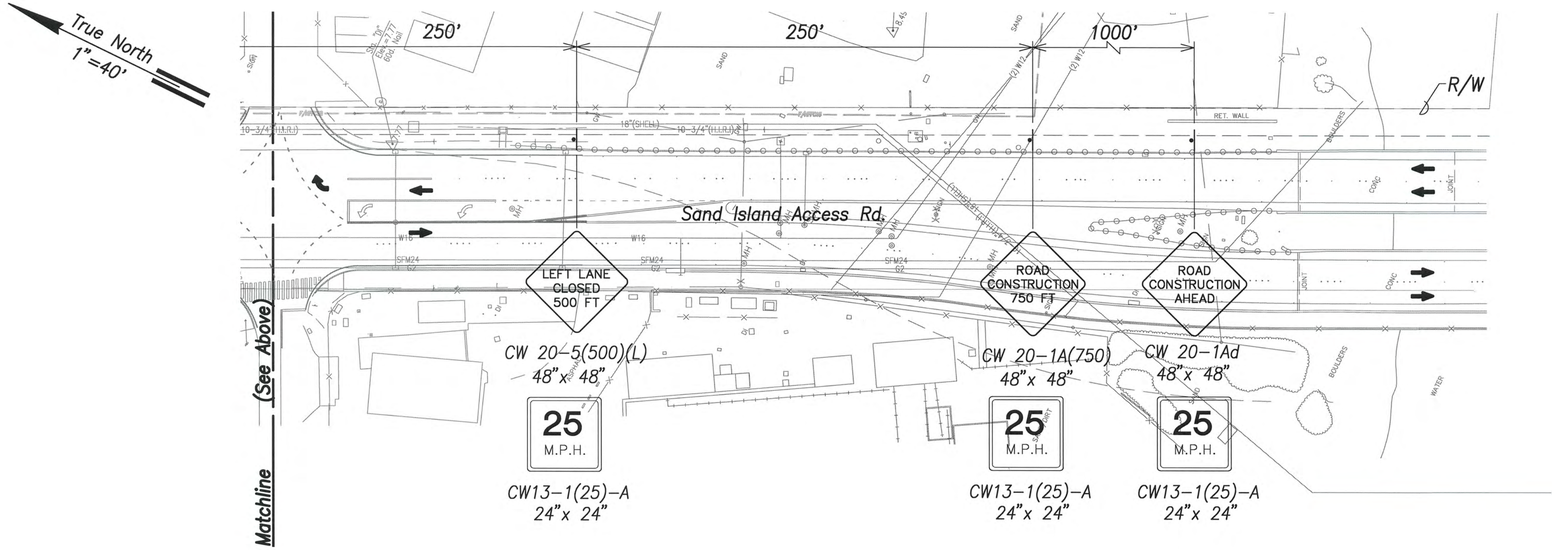
Scale: As Noted Date: February 2021

SHEET No. C-19 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	31	120





Notes:

1. Provide Temporary White Edge Line, Offset 6 Inches, along Channelized Areas.
2. Eradicate Exist. Temporary Striping upon Completion of Work.
3. Repair Holes in Pavement due to the Portable Concrete Barriers with Stabilization Pins.
4. See Temporary Steel Plate Bridging Notes, sheet G-9.

Legend:

- Cones at spacing shown on plan
- Arrow Board
- Sign
- Work Area
- Direction of Traffic Flow
- Police Officer

TRAFFIC CONTROL PLAN – PHASE 6

Scale: 1"=40'

Graphic Scale:

40' 20' 0 40' 80'

1" = 40'

ORIGINAL PLAN	SURVEY PLOTTED BY	WA/SS	DATE
	DRAWN BY		
NOTE BOOK	TRACED BY		
	DESIGNED BY	CHL	
No.	QUANTITIES BY		
	CHECKED BY		

RMTC JOB NO. : 1-19548-0E

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 9936-C
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN – PHASE 6

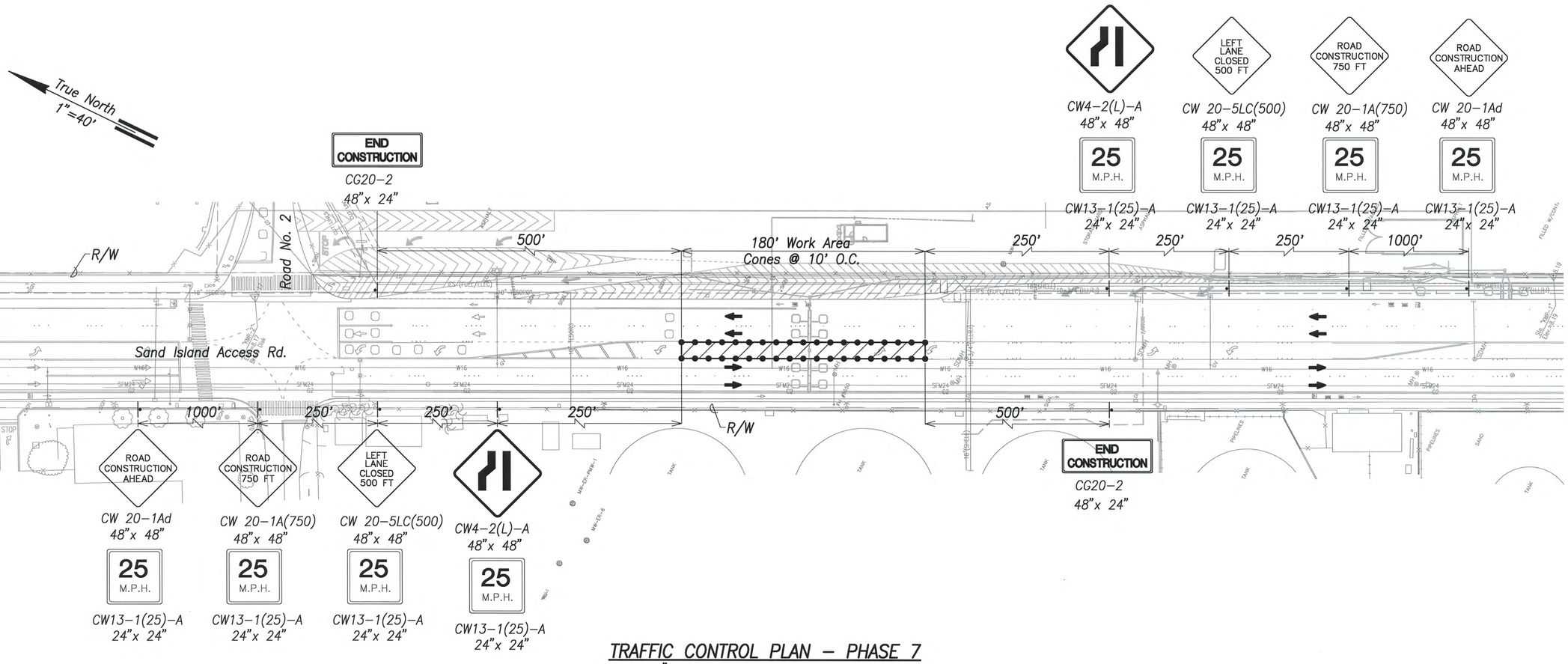
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-20 OF 120 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	32	120



TRAFFIC CONTROL PLAN – PHASE 7

Scale: 1"=40'

Legend:

- • • • Cones at spacing shown on plan
- Sign
- Work Area
- Direction of Traffic Flow
- Police Officer

Notes:

1. Provide Temporary White Edge Line, Offset 6 Inches, along Channelized Areas.
2. Eradicate Exist. Temporary Striping upon Completion of Work.
3. Repair Holes in Pavement due to the Portable Concrete Barriers with Stabilization Pins.
4. See Temporary Steel Plate Bridging Notes, sheet G-9.

Graphic Scale:

40' 20' 0 40' 80'

1" = 40'

ORIGINAL PLAN	SURVEY PLOTTED BY	WM/SS	DATE
	DRAWN BY		
NOTE BOOK	TRACED BY	CWL	
	DESIGNED BY		
	QUANTITIES BY		
No.	CHECKED BY		

CRAIG W. L. LUKE
LICENSED PROFESSIONAL ENGINEER
No. 6935-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN – PHASE 7

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

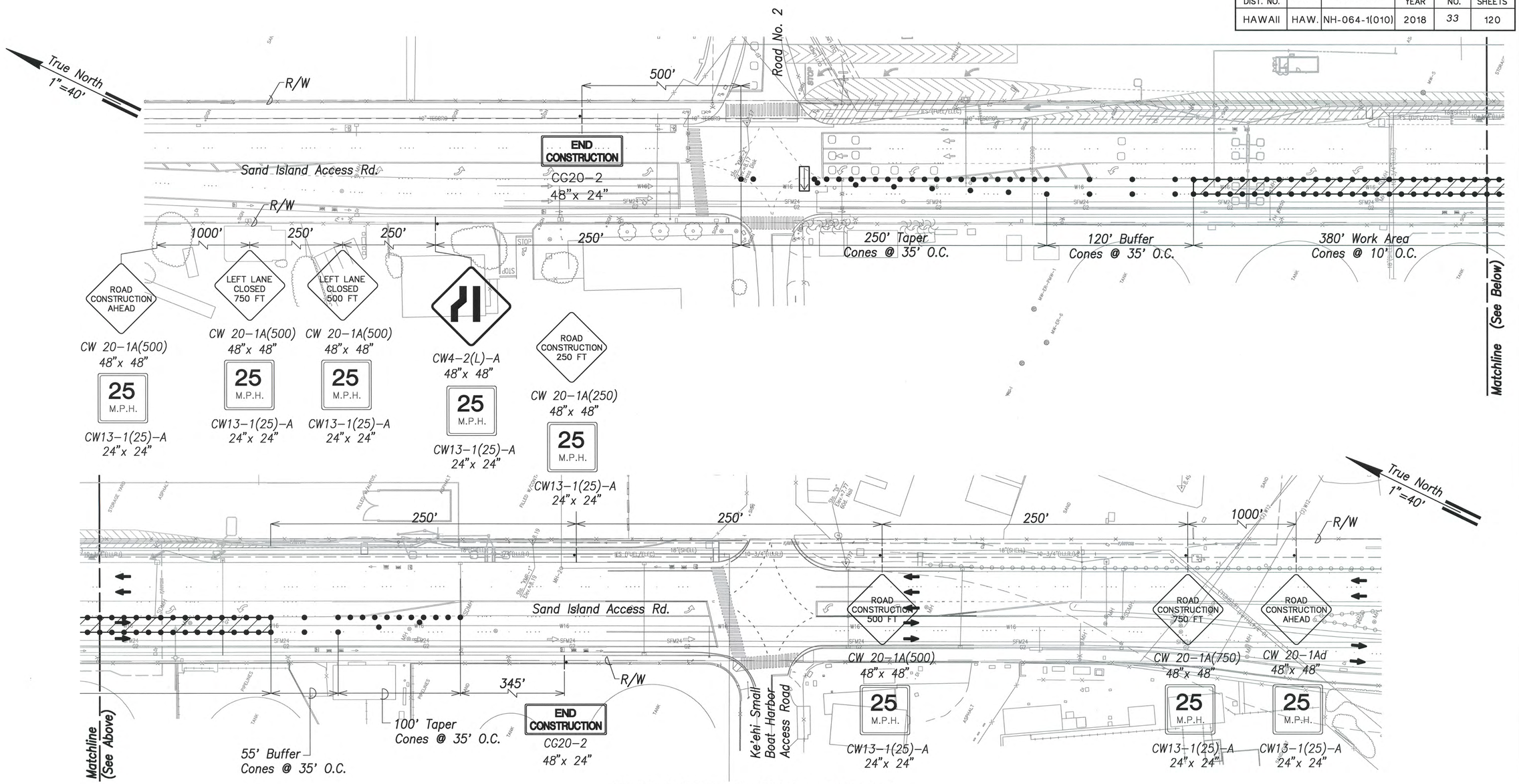
TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-21 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	33	120



TRAFFIC CONTROL PLAN – PHASE 8

Scale: 1"=40'

Legend:

- • • • Cones at spacing shown on plan
- Arrow Board
- Sign
- Work Area
- Direction of Traffic Flow
- Police Officer

Notes:

1. Provide Temporary White Edge Line, Offset 6 Inches, along Channelized Areas.
2. Eradicate Exist. Temporary Striping upon Completion of Work.
3. Repair Holes in Pavement due to the Portable Concrete Barriers with Stabilization Pins.
4. See Temporary Steel Plate Bridging Notes, sheet G-9.

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

ORIGINAL PLAN
SURVEY PLOTTED BY WH/JS DATE
DRAWN BY
TRACED BY
DESIGNED BY CWL
QUANTITIES BY
CHECKED BY
NOTE BOOK
No.

CRAIG W. L. LUKE
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No. 6535-C
HAWAII, U.S.A.

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SIGNATURE 6/30/22 LIC. EXPIRATION
R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN – PHASE 8

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

TMK: (1) 1-2-025: 002

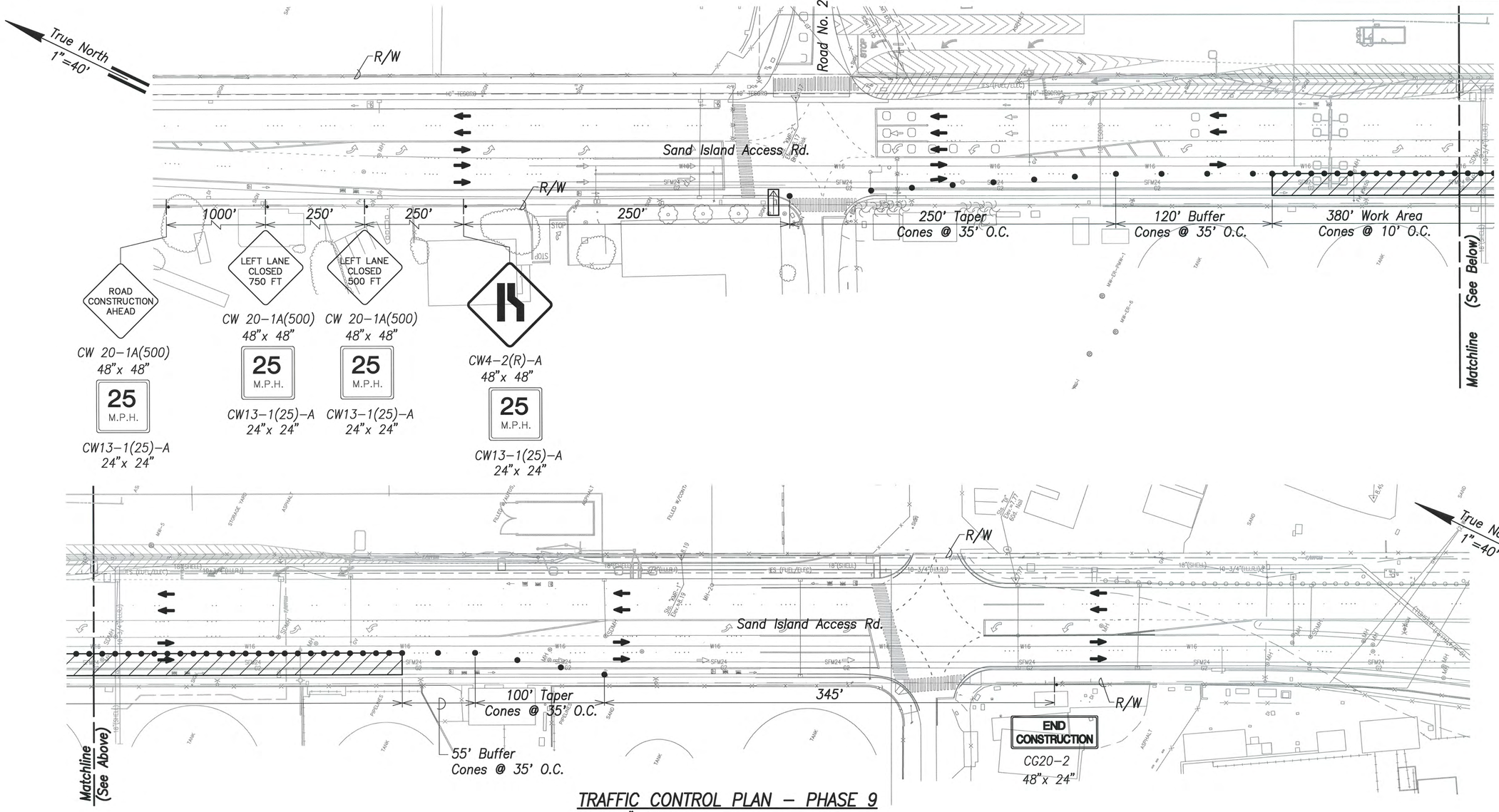
Scale: As Noted Date: February 2021

SHEET No. C-22 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

33

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	34	120



TRAFFIC CONTROL PLAN – PHASE 9

Scale: 1"=40'

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY WM/JS	
NOTE BOOK	TRACED BY	CHK.
No.	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

Legend:

- Cones at spacing shown on plan
- Arrow Board
- Sign
- Work Area
- Direction of Traffic Flow
- Police Officer

Notes:

1. Provide Temporary White Edge Line, Offset 6 Inches, along Channelized Areas.
2. Eradicate Exist. Temporary Striping upon Completion of Work.
3. Repair Holes in Pavement due to the Portable Concrete Barriers with Stabilization Pins.
4. See Temporary Steel Plate Bridging Notes, sheet G-9.

Graphic Scale:

1" = 40' 40' 20' 0 40' 80'

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 9936-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE 4/30/22 LIC. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN – PHASE 9

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

TMK: (1) 1-2-025: 002

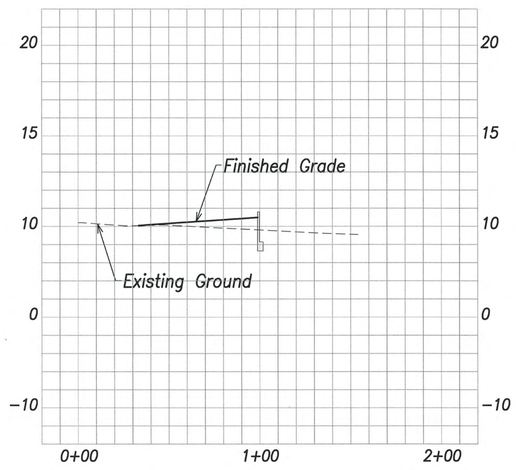
Scale: As Noted Date: February 2021

SHEET No. C-23 OF 120 SHEETS

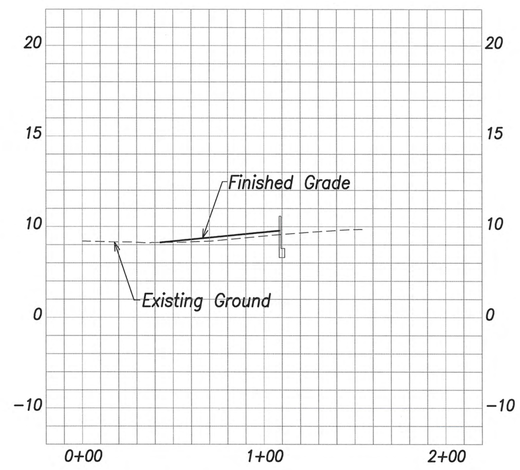
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	35	120

1 Section
C-8 C-24 Scales: 1"=40' Horiz.
1"=8' Vert.



2 Section
C-8 C-24 Scales: 1"=40' Horiz.
1"=8' Vert.



3 Section
C-8 C-24 Scales: 1"=40' Horiz.
1"=8' Vert.

Graphic Scales:

1" = 8' 8' 4' 0 8' 16'

1" = 40' 40' 20' 0 40' 80'

ORIGINAL PLAN	SURVEY PLOTTED BY	WM/JS	DATE
	DRAWN BY		
	TRACED BY		
	NOTE BOOK	DESIGNED BY	CWL
		QUANTITIES BY	
No.		CHECKED BY	

CRAIG W. L. LUKE LICENSED PROFESSIONAL ENGINEER No. 6935-C HAWAII, U.S.A.

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SIGNATURE 4/30/22 I.C. EXPIRATION

R. M. TOWILL CORPORATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE SECTIONS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

TMK: (1) 1-2-025: 002

Scale: As Noted Date: February 2021

SHEET No. C-24 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	40	120

ELECTRICAL SYMBOL LIST / MOUNTING HEIGHT SCHEDULE

Mounting Height From Floor To		(Special Mounting Heights Indicated On Plan)		
		Symbol		Description
Top	℄	Existing	New	
			(1)	Luminaire, Ceiling Mounted (Numeral In Circle Corresponds To Luminaire Schedule)
			(1)	Luminaire, Ceiling Mounted (Numeral In Circle Corresponds To Luminaire Schedule)
			(1)H	Luminaire, Wall Mounted (Numeral In Circle Corresponds To Luminaire Schedule)
	46"		$a	Light Switch, Flush Wall Mounted, 1P20A, 120/277V, 1HP Max. (Letter Indicates Luminaires Controlled)
	18"		$3	3-Way Switch, Wall Mounted, 20A, 120/277V
	18"			Receptacle, Duplex, Grounding Type, 125V, NEMA Type 5-20R
	18"			Receptacle, Duplex, GFCI Type, 125V, NEMA Type 5-20R
				Roadway Lighting Luminaire and Bracket Arm Mounted To Wood Pole
				Highway Lighting Standard, See 1/E-15
5'-0"				Non-Fused Disconnect Switch, 3P30A Unless Otherwise Noted, Voltage To Match Circuiting
			WP	Weatherproof
			GFCI	Ground Fault Circuit Interrupter
			NL	Night Light Circuit
			HECo	Hawaiian Electric Company
			HT	Hawaiian Telcom
			GND	Ground
	46"			Wall Switch/Occupancy Sensor, Dual Technology Type, Single Relay
			P	Occupancy Sensor Power Pack, 120/277V
				Ceiling Mounted Occupancy Sensor, Dual Technology Type
			J	Junction Box, Horizontally Mounted
	18"		JH	Junction Box, Wall Mounted

Mounting Height From Floor To		(Special Mounting Heights Indicated On Plan)		
		Symbol		Description
Top	℄	Existing	New	
				Equipment Termination With Flexible Conduit Whip
6'-0"				Panelboard
				Electrical Equipment
6'-0"				Signal Cabinet For System Noted
		—e—		Underground Ductline
				Concealed Conduit In Ceiling Or Walls (Hashmarks Indicate Quantity of Current Carrying Wires Within, No Hashmarks Indicate 2 Current Carrying Wires Within
				Exposed Raceway, Provide Strap 8'-0" On Center Maximum
			A-1,3	Homerun Arrow To Panelboard. Letter Indicates Panelboard, Numbers Indicates Circuits.
				Liquid-Tight Flexible Conduit
		—eOH/_—		Overhead Lines (P/S/Y/V/SL) P=Primary S=Secondary T=Telephone V=CATV SL=Street Lighting
			E	Conduit Stub, 1" Minimum Conduit Unless Otherwise Noted
	10'-0"		PEH	Photoelectric Cell
	18"			Tel/Data Outlet Box, Wall Mounted With Blank Device Plate
				Denotes Demolition/removal
			1	Duct Section Indicator
			(1)	Note Indicator
			1/E-2	Detail Indicator: Top Half Denotes Detail Number, Bottom Half Denotes Sheet Number

2/3/21-15:13 Y:\060\060.203\060.203 E-1.001.dwg

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

RMTC JOB NO. : 1-19548-0E

MICHELE N. ADOLPHO
LICENSED PROFESSIONAL ENGINEER
No. 10017-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

4/30/22
SIGNATURE LIC. EXPIRATION
ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELECTRICAL SYMBOL LIST

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. E-1 OF 120 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	41	120

GENERAL ELECTRICAL NOTES:

1. All Work Shall Comply With The National Electrical Code (NEC), National Electrical Safety Code And Building Ordinances Of The City And County Of Honolulu. Construction Practices Shall Conform To The Latest Edition Of American Electricians' Handbook By Croft, And Applicable Instructions Of Manufacturers Of Equipment And Material Supplied For This Project.

2. The Drawings Do Not Reflect All The Existing Conditions That May Be Encountered During Construction. Visit The Project Site And Become Familiar With The Existing Conditions, The Extent Of Any Demolition, Relocation, Reconnection, And The New Work Prior To The Start Of On-Site Construction Activities. Report Any Discrepancies And/Or Differences Between The Existing Conditions And The Construction Documents To The State. Resolve All Discrepancies And Questions Prior To The Start Of Work. Bid Submission Shall Be Considered As Evidence That The Contractor Has Visited The Site And Resolved All Discrepancies And Questions And No Extra Payment Will Be Authorized For Work Required By The Contractor's Failure To Do So.

3. Existing Device Locations, Circuit Assignments, Wiring Connections, And Conduit Runs Indicated Were Derived From Available Reference Documents And Limited Field Investigation. Field Verify All Existing Conditions And Make Any Necessary Adjustments To Satisfy The Intent Of The Drawings And Specifications.

4. The Contractor Agrees That He Shall Assume Sole And Complete Responsibility For The Job Site Conditions During The Course Of Construction Of This Project, Including The Safety Of All Persons And Property; That This Requirement Shall Apply Continuosly And Not Be Limited To Normal Working Hours.

5. Work Incidental To The Contract And Necessary To Complete The Project, Although Not Specifically Referred To In The Contract Documents, Shall Be Furnished And Performed By The Contractor At No Additional Cost To The Project.

6. The Location Of All Electrical Apparatus And Devices Are Approximate And Before Installing, Study The Architectural, Structural, And Mechanical Details And Make Installation In The Most Logical Manner. Any Piece Of Equipment/Device May Be Relocated Within 10' Before Installation At The Direction Of The State Without Additional Charge To The Project.

7. Should Project Conditions Require Rearrangement Of The Project's Work, The Contractor Shall Mark Such Changes On The As-Built Drawings. If These Changes Require An Alternate Method To Those Specified In The Contract Documents, The Contractor Shall Submit Drawings To Reflect The Proposed Alternate Methods To The State For Review And Approval. The Contractor Shall Not Proceed Until Approval Is Obtained. Rearrangement Of Work For The Purpose Of Coordination Shall Not Be Considered An Item For Extra Cost.

8. Maintain Continuity Of All Circuits That Pass Through The Project Limits And Serve Other Areas Or Equipment Indicated To Remain. Provide New Junction Boxes, Conduits & Wiring, And The Labor Required To Facilitate Said Continuity. Boxes, Conduits And Wiring Shall Be In Accordance With The NEC.

9. Verify All System Requirements (Electrical, Mechanical, Specialty Systems, Etc.) With The Selected System's Manufacturer Or Authorized Representative Prior To Commencing With Any Work. Coordinate Ratings Of Overcurrent Protection Devices, Disconnect Switches, Conduit And Wiring To Match The Actual Equipment Supplied For The Project. Verify And Check All Dimensions And Details Shown On The Drawings Prior To The Start Of Construction. Correct All Discrepancies So As To Provide A Complete And Operational System. Record Changes On The As-Built Drawings.

10. Conceal All Conduit Wherever Reasonable; Exposed Conduits Are Permitted Only Where Specifically Shown On The Drawings. All Exposed Conduits In Finished Areas Shall Be Installed In The Least Visible Locations. Care Shall Be Taken To Install Conduit In The Most Aesthetically Pleasing Manner.

11. Wiring Devices And Conduits Shall Be Flush Mounted, Wherever Reasonably Possible. Where New Devices Are Indicated To Be Installed In Existing Walls, Fish The Conduit Down Into The Existing Wall Cavity And Keep Disturbances To The Existng Walls To A Minimum. Where Obstructions Are Encountered Or Cutting Of The Wall To Accomplish The Wiring Device And Conduit Installation Is Unavoidable, Consult With The State Prior To Commencing Any Work.

12. An Adhesive Vinyl Nameplate Shall Be Provided For All Switches, Receptacles, And Miscellaneous Devices Requiring Power. The Nameplate Shall Indicate The Panelboard Serving The Device And The Corresponding Circuit Assignment. Lettering Shall Be A Minimum Of 1/4" High. Utilize Brother "P-Touch" Label Maker Or Approved Substitute.

13. A Green, Equipment Ground Conductor Sized In Accordance With The NEC Article 250 Shall Be Installed In All Feeder And Branch Circuits Whether Indicated On Contract Drawings Or Not.

14. Do Not Use A Common Neutral For Multiple Branch Circuits Installed In A Common Conduit. Provide A Dedicated Neutral For Each Individual Circuit. Where Multiple Dedicated Neutrals Are Installed In A Common Conduit, Provide Color Coding Of The Different Neutral Conductors In Accordance With NEC 2014 Article 200.6 (White, Gray, Three Continuous White Or Gray Stripes, Etc.).

15. Provide Nylon Pullstrings In All Empty Conduits Unless Otherwise Indicated.

16. The Telecommunications Raceway System Installation Shall Comply With TIA/EIA-569-A Unless Otherwise Noted.

17. Conduit Bodies (e.g. LB, LR, Etc.) Shall Not Be Permitted In The Telecommunications Raceway Systems Unless Specifically Indicated To Be Utilized And Listed For Telecommunications System Use.

18. Provide Insulated Bushings At All Telecommunications Conduit Terminations At All Boxes, Backboards, And Conduit Stubs.

19. All Surface Mounted Devices Shall Be Installed Utilizing Factory Painted Surface Mounting Accessories And Matching Device Boxes For The Most Aesthetically Pleasing Installation.

20. Provide Knock-Out Plugs For All Unused Conduit Penetrations In Boxes And Enclosures Due To Conduit Removal.

21. Painting Of Electrical Equipment:
    A. Interior Locations - Prime And Paint All Exposed Conduits, Boxes, Fittings, Support Channels, Mounting Hardware And Accessories With Two Finish Coats To Match The Surface On Which They Are Mounted Or To Match The Finish Of The Adjacent Surfaces. Equipment Surfaces/Components With A Factory-Applied Paint Finish Need Not Be Painted.

    B. Exterior Locations - Prime All Exposed Conduits, Boxes, Fittings, Support Channels, Mounting Hardware And Accessories With A 2-Part Epoxy Primer And Finish With 2 Coats Of An Aliphatic Acrylic Urethane Paint. Paint Finish To Match The Surface On Which They Are Mounted Or To Match The Finish Of The Adjacent Surfaces. Stainless Steel Materials Need Not Be Painted.

22. Installation Of New Devices And Conduits Shall Not Interfere With The Opening Of Doors And/Or Windows.

STATE OF HAWAII
ADMINISTRATIVE RULES CHAPTER 3-181.1,
"STATE ENERGY CONSERVATION CODE"
(IECC 2015, AS AMENDED)

To the best of my knowledge, this project's design substantially conforms to the State Energy Conservation Code for:

- ☐ Building Component Systems
- ☒ Electrical Component Systems
- ☐ Mechanical Component Systems

Signature: _____ Date: 05/08/2020

Name: MICHELE N. ADOLPHO

Title: PROJECT ENGINEER

License No: 10017-E

ORIGINAL DRAWN BY	SURVEY PLOTTED BY	DATE
	DRAWN BY	RSY
NOTE BOOK	TRACED BY	
	DESIGNED BY	WC
	QUANTITIES BY	
No.	CHECKED BY	

MICHELE N. ADOLPHO
LICENSED PROFESSIONAL ENGINEER
No. 10017-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

4/30/22
SIGNATURE LIC. EXPIRATION
ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL ELECTRICAL NOTES

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. E-2 OF 120 SHEETS

2/3/21-15:13 Y:\060\060.203\060.203 E-2.002.dwg

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	42	120

HIGHWAY LIGHTING NOTES:

1. The Contractor shall notify the State Highways, Highway Lighting and Traffic Supervisor 72 hours in advance before commencing work on the highway lighting system. Phone: 837-8056.

2. All luminaires shall be LED type with wattage and I.E.S. type light distribution as shown on the approved plans.

3. The Contractor shall have one set of approved plans at job site at all times during the construction work and record all changes which occur during construction of the highway lighting system.

5. Final acceptance and inspection will be undertaken only after all work has been completed.

6. Temporary Lighting: The Contractor shall schedule the construction work in such a manner that highway lighting is provided during all hours of darkness either with new, temporary or existing luminaires or a combination thereof. Temporary pole assemblies, wiring and connections may need to be utilized. Temporary wiring may be installed in exposed conduit, where not subject to vehicular damage, or with overhead wiring. Overhead wiring shall be a minimum of 20 feet above roadways at its lowest measured point, unless approved by the Engineer.

   Contractor shall maintain existing circuiting or provide temporary connections to existing highway lights through construction of the new highway lighting system. Existing highway lights scheduled for demolition shall remain in operation to maintain existing illumination levels utilizing either existing or temporary pole assemblies, luminaires, wiring and connections until new highway lights can be energized and are approved by the Engineer. New highway lights shall be energized by either permanent or temporary wiring and connections prior to demolition of the existing highway lighting system.

   Submit all proposed temporary lighting plans to the Engineer for review and acceptance. Temporary lighting standard assemblies, if required, and associated structural support design shall be stamped by a registered structural engineer and submitted to the Engineer for acceptance.

7. All temporary pole locations shall be staked, and approval of locations shall be obtained from the Engineer before installation. Pole locations in the field will be required to clear underground and aerial utility lines. New pole locations shall not conflict with any existing or proposed utility and shall not obstruct any roadway sign. The Contractor shall be responsible for costs incurred by conflicting utilities.

8. The Contractor shall at his expense, keep the project and surrounding area free from dust nuisance and shall be responsible for cleaning and removal of all silt and debris generated by the excavation work and deposited and accumulated within downstream waterways, ditches, drain pipes and on public roadways. Any citations (fines) received by the State for the Contractor's noncompliance of any Department of Health regulations shall be deducted from the progress payment.

9. The Contractor shall locate existing buried utility lines in the vicinity of the excavation work prior to commencing excavation. As a minimum, an electronic magnetic device for detection of buried lines shall be utilized prior to excavation. Trenches shall be excavated with care. The Contractor shall be responsible for damages to existing utilities resulting from his negligence and shall bear cost of repairs to the utilities. Method of repair shall be approved by the State.

10. The Electrical Contractor shall have personnel on the project that comply with the following qualifications:

    a. One (1) registered master electrician in the company.

    b. Certified journeyman electrician at each construction location to perform splicing of cables and all required wiring work.

11. Submit lighting calculations using the proposed luminaire for acceptance by the Engineer. Lighting criteria shall be as follows:

    Design Illumination Level = 1.0 footcandle average maintained.

    Design Uniformity Ratio (Average:Minimum) = 3:1 maximum.

    Design Maintenance Factor = 0.85

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

2/3/21-15:13 Y:\060\060.203\060.203 E-3.003.dwg

RMTC JOB NO. : 1-19548-0E

MICHELE N. ADOLPHO
LICENSED PROFESSIONAL ENGINEER
No. 10017-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

4/30/22
SIGNATURE LIC. EXPIRATION

ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING NOTES

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. E-3 OF 120 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	43	120

HAWAIIAN ELECTRIC COMPANY NOTES:

1. *Location Of Hawaiian Electric Facilities*

   The location of Hawaiian Electric's overhead and underground facilities shown on the plans are from existing records with varying degrees of accuracy and are not guaranteed as shown. The Contractor shall verify in the field the locations of the facilities and shall exercise proper care in excavating and working in the area. Wherever connections of new utilities to existing utilities and utility crossings are shown, the Contractor shall expose the existing lines at the proposed connections and crossings to verify the depths prior to excavation for the new lines. The Contractor shall be responsible for any damages to Hawaiian Electric's Facilities whether shown or not shown on the plans.

2. *Compliance with Hawaii Occupational Safety and Health Laws*

   The Contractor shall comply with the state of Hawaii's Occupational Safety and Health Laws and Regulations, including without limitation, those related to working on or near exposed or energized electrical lines and equipment.

3. *Excavation Clearance*

   The Contractor shall obtain an excavation clearance from Hawaiian Electric's Planning and Design Section of the Customer Installations Division (543-5654) located at 820 Ward Avenue, 4th floor, a minimum of ten (10) working days prior to starting construction.

4. *Caution!!! Electrical Hazard!!!*

   Existing Hawaiian Electric overhead and underground lines are energized and will remain energized during construction unless prior special arrangements have been made with Hawaiian Electric. Only Hawaiian Electric Personnel are to handle these energized lines and erect temporary guards to protect these lines from damage. The Contractor shall work cautiously at all times to avoid accidents and damage to existing Hawaiian Electric Facilities, which can result in electrocution.

5. *Overhead Lines*

   State Law (OSHA) requires that a worker and the longest object he or she may contact cannot come closer than a specified minimum radial clearance when working close to or under any overhead lines. It is the Contractor's responsibility to be informed of and comply with the law.

   At any time should the Contractor anticipate that his work will result in the need to encroach within the minimum required clearance as stated in the law, the Contractor shall notify Hawaiian Electric at least three (3) months prior to the planned encroachment so that, if feasible, the necessary protections (e.G. Relocate or de-energize Hawaiian Electric lines) can be investigated. Hawaiian Electric may also be able to blanket its distribution (12kV and below) lines to provide a visual aid in preventing accidental contact. Hawaiian Electric's cost of safeguarding or identifying its lines will be charged to the Contractor.

   Contact Hawaiian Electric's Customer Installations Division at 543-7070 for assistance in identifying and safeguarding overhead power lines.

6. *Pole Bracing*

   Contractor shall not excavate within 10 feet of Hawaiian Electric's utility poles or any anchor system supporting the utility pole. If Contractor must excavate an area more than 12 inches deep by 12 inches wide, and closer than 10 feet from a utility pole or its anchor system, Contractor will be responsible for protecting, supporting, securing and taking all precautions to prevent damage to or leaning of existing poles. Before commencing such excavation, Contractor must notify Hawaiian Electric which may lead to implementing pole bracing requirements. Hawaiian Electric requires a minimum of ten (10) working days to conduct the review of Contractor's Submittal.

   Contractor shall submit its bracing calculations and drawings, prepared and stamped by a licensed structural engineer, to Hawaiian Electric's Customer Installations Division (543-7070) for review. Contractor shall be responsible for the design, installation, and removal of the temporary pole bracing system, as well as all costs incurred by Hawaiian Electric to review Contractor's drawings and to repair or straighten poles impacted by Contractor's activities, including response and restoration costs incurred by Hawaiian Electric arising out of or related to outages caused by Contractor's failure to meet the foregoing requirements. Hawaiian Electric's receipt of pole bracing calculation or drawing submittals of any Contractor, including work procedure, shall not relieve Contractor from any liability resulting from Contractor's excavation near or around Hawaiian Electric's utility poles.

7. *Underground Lines*

   The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines. Hawaiian Electric's existing electrical cables are energized and will remain energized during construction. Only Hawaiian Electric Personnel are to break into existing Hawaiian Electric Facilities, handle these cables, and erect temporary guards to protect these cables from damage. The cost of Hawaiian Electric's assistance in providing proper support and protection of its underground lines will be charged to the Contractor. For assistance/coordination in providing proper support and protection of these lines, the Contractor shall call Hawaiian Electric's Customer Installations Division at 543-7070 a minimum of ten (10) working days in advance.

   Special precautions are required when excavating near Hawaiian Electric's 138kV or 46kV underground lines (see Hawaiian Electric Instructions to Consultants/Contractors on "Excavation Near Hawaiian Electric's Underground 138kV and/or 46kV lines" for Detailed Requirements).

   For verification of underground lines, the Contractor shall call the Hawaii One Call Center at 866-423-7287 minimum of five (5) working days in advance.

8. *Underground Fuel Pipelines*

   The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of Hawaiian Electric's underground fuel oil pipelines. Special precautions are required when excavating near Hawaiian Electric's underground fuel oil pipelines (see Hawaiian Electric's Specific Fuel Pipeline "Guidelines" to consultants/Contractors on excavation near Hawaiian Electric's Underground Fuel Pipelines for Detailed Requirements).

9. *Excavations*

   When trench excavation is adjacent to or beneath Hawaiian Electric's existing structures or facilities, the Contractor is responsible for:

   a) *Arranging for Hawaiian Electric Standby Personnel to observe work at Contractor's cost.*

   b) *Sheeting, bracing, or otherwise supporting the excavation and stabilizing the existing ground to render it safe and secure and to prevent possible slides, cave-ins, and settlements.*

   c) *Properly supporting existing structures or facilities with beams, struts, under-pinnings, or other necessary methods to fully protect it from damage.*

   d) *Backfilling with proper backfill material including special thermal backfill where existing (refer to Engineering Division for Thermal Backfill Specifications).*

10. *Relocation of Hawaiian Electric Facilities*

    Any work required to relocate or modify Hawaiian Electric Facilities shall be done by Hawaiian Electric, or by the Contractor under Hawaiian Electric's supervision. The Contractor shall be responsible for all coordination, and shall provide necessary support for Hawaiian Electric's work, which may include, but not be limited to, staking of pole/anchor locations, identifying right of way and property lines, excavation and backfill, permits and traffic control, barricading, and restoration of pavement, sidewalks, and other facilities.

    All costs associated with any relocation or modification (either temporary or permanent) for the convenience of the Contractor, or to enable the Contractor to perform his work in a safe and expeditious manner in fulfilling his contract obligations shall be borne by the Contractor.

11. *Conflicts*

    Any redesign or relocation of Hawaiian Electric's Facilities not shown on the plans may be cause for lengthy delays. The Contractor acknowledges that Hawaiian Electric is not responsible for any delay or damage that may arise as a result of any conflicts discovered or identified with respect to the location or construction of Hawaiian Electric's electrical facilities in the field, regardless of whether the Contractor has met the requested minimum advance notices. In order to minimize any delay or impact arising from such conflicts, Hawaiian Electric should be notified immediately upon discovery or identification of such conflict.

12. *Damage to Hawaiian Electric Facilities*

    The Contractor shall be responsible for the protection of all Hawaiian Electric surface and subsurface utilities and shall be responsible for any damages to Hawaiian Electric's Facilities as a result of his operations. The Contractor shall immediately report such damages or any hazardous conditions related to Hawaiian Electric's lines to Hawaiian Electric's Trouble Dispatcher at 548-7961. Repair work shall be done by Hawaiian Electric or by the Contractor under Hawaiian Electric's supervision. Costs for damages to Hawaiian Electric's Facilities shall be borne by the Contractor in case of damage or suspected damage to Hawaiian Electric's fuel pipeline, the Contractor shall immediately notify Hawaiian Electric's Security Command Center at 543-7685 (a 24-hour number) so Hawaiian Electric Personnel can secure the damaged section and report any oil spills to the proper authorities. All costs associated with the damage, repair, and oil spill cleanup shall be borne by the Contractor.

13. *Hawaiian Electric Stand-by Personnel*

    The Contractor may request Hawaiian Electric to provide an Inspector to stand-by during construction near Hawaiian Electric's Facilities. The cost of such inspection will be charged to the Contractor.

    The Contractor shall call Hawaiian Electric's Customer Installations Division at 543-7070 a minimum of three (3) months in advance to arrange for Hawaiian Electric Stand-by Personnel.

14. *Clearances*

    The following clearances shall be maintained between Hawaiian Electric's ductline and all adjacent structures (charted and uncharted) in the trench: (See Table 1 & 2 on sheet E-5) The Contractor shall notify the Construction Manager & Hawaiian Electric of any heat sources (power cable duct bank, steamline, etc.) encountered that are not properly identified on the drawing.

15. *Indemnity*

    The Contractor shall indemnify, defend and hold harmless Hawaiian Electric from and against all losses, damages, claims, and actions, including but not limited to reasonable attorney's fees and costs based upon or arising out of damage to property or injuries to persons, or other tortious acts caused or contributed to by Contractor or anyone acting under its direction or control or on its behalf; provided Contractor's indemnity shall not be applicable to any liability based upon the sole negligence of Hawaiian Electric.

16. *Schedule*

    Contractor shall furnish his construction schedule six (6) months prior to starting work on Hawaiian Electric Facilities. Contractor shall give Hawaiian Electric, in writing, three (3) months notice to proceed with Hawaiian Electric's portion of work.

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

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No. 10017-E
HAWAII, U.S.A.

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4/30/22
SIGNATURE LIC. EXPIRATION

ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HAWAIIAN ELECTRIC
COMPANY NOTES – 1
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. E-4 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	44	120

Table 1: Guidelines For Minimum Horizontal (Parallel) Clearances Between Hawaiian Electric And Other Underground Utilities

Underground Utility	Hawaiian Electric Direct Buried Cable	Hawaiian Electric Direct Buried In Conduit (No Concrete Encasement)	Hawaiian Electric 3" (Minimum) Concrete Encasement	Applicable Notes:
Hawaiian Electric DB Conduits	12"	3	0"	
Hawaiian Electric 3" Encasement	0"	0"	0"	
Telephone / CATV DB	12"	12"	6"	
Telephone / CATV DB Ducts	12"	12"	6"	
Telephone / CATV 3" Encasement	0"	0"	0"	5
Traffic Signal	12"	12"	12"	
Water DB (BWS Owned)	36"	36"	36"	1, 4
Customer Owned Water Service Laterals	12"	12"	12"	
Water (Concrete Jacketed) (BWS Owned)	36"	36"	36"	1, 4
Gas DB	12"	12"	12"	1
Gas (Concrete Jacketed)	12"	12"	12"	1
Sewer DB	36"	36"	36"	1, 2
Sewer (Concrete Jacketed)	36"	36"	36"	1, 2
Drain	12"	12"	12"	1
Fuel Pipelines				3

Notes:

1. Where space is available, parallel clearance to other utilities, or foreign structures other than communication or traffic signal shall be 36".
2. If 36" clearance cannot be met:
   - If clearance is less than 12", jacket sewer line with reinforced concrete (per Hawaiian Electric's STD. 30-1030) for a distance of 5' plus pipe diameter.
   - If clearance is between 12" and 36", jacket sewer line with plain concrete.
3. All fuel pipeline crossings shall be reviewed and approved by the company that owns and maintains it.
4. 5 feet clear to water mains 16" and larger.
5. For situations with 0" minimum separation, a 6" separation is recommended.
6. Clearances measured from outer edges or diameters of utilities. Whenever concrete jackets are involved, clearances shall be total clear distance between the concrete jacket and utility concerned.

Table 2: Guidelines For Minimum Vertical (Crossing) Clearances Hawaiian Electric And Other Underground Utilities

Underground Utility	Hawaiian Electric Direct Buried Cable	Hawaiian Electric Direct Buried In Conduit (no Concrete Encasement)	Hawaiian Electric 3" (minimum) Concrete Encasement	Applicable Notes:
Hawaiian Electric DB Conduits	6"	3"	0"	
Hawaiian Electric 3" Encasement	0""	0""	0"	
Telephone / CATV DB	12"	12"	6"	
Telephone / CATV DB Ducts	12"	12"	6"	
Telephone / CATV 3" Encasement	0"	0"	0"	3
Traffic Signal	12"	12"	6"	
Water DB (BWS Owned)	12"	12"	12"	5
Customer Owned Water Service Laterals	6"	6"	6"	
Water (Concrete Jacketed) (BWS Owned)	12"	12"	12"	5
Gas DB	12"	12"	12"	
Gas (Concrete Jacketed)	12"	12"	12"	
Sewer DB	24"	24"	24"	1
Sewer (Concrete Jacketed)	24"	24"	24"	1
Drain	12"	12"	6"	
Fuel Pipelines				2

Notes:

1. If 36" clearance cannot be met:
   - If clearance is less than 12", jacket sewer line with reinforced concrete (per Hawaiian Electric's STD. 30-1030) for a distance of 5' plus pipe diameter.
   - If clearance is between 12" and 24", jacket sewer line with plain concrete.
2. All fuel pipeline crossings shall be reviewed and approved by the company that owns and maintains it.
3. For situations with 0" minimum separation, a 6" separation is recommended.
4. Clearances measured from outer edges or diameters of utilities. Whenever concrete jackets are involved, clearances shall be total clear distance between the concrete jacket and utility concerned.
5. 36" clearance is required for trenchless installation work.

17. Authority

All construction, restoration work, and inspection shall be subject to whichever governmental agency has authority over the work.

18. Specifications

Construction of Hawaiian Electric's Underground Facilities shall be constructed in accordance with the latest revisions of Hawaiian Electric Specifications CS7001, CS7003, CS7202, CS9301, and CS9401 and applicable Hawaiian Electric Standards.

19. Construction

Contractor shall furnish all labor, materials, equipment, and services to properly perform and fully complete all work shown on the contract, drawings, and specifications. All materials shall be new and manufactured in the United States of America. All manhole, handhole, and ductline installations shall be inspected and approved by Hawaiian Electric prior to excavation and prior to placing concrete. Contractor shall notify Hawaiian Electric's Inspection Group at 543-2567 at least five (5) working days prior to installing facilities or placing concrete.

Contractor to coordinate work to break into Hawaiian Electric's existing electrical facilities with Hawaiian Electric's Inspection Group at 543-2567 at least ten (10) working days in advance.

20. Stakeout

The Contractor shall arrange for toneouts of all underground facilities and shall stakeout all proposed Hawaiian Electric Facilities within the project area so as to not conflict with any utility (existing or proposed) and any proposed construction or improvement work for verification by Hawaiian Electric before proceeding with Hawaiian Electric work.

21. Ductlines

All ductline installations shall be PVC Schedule 40 encased in concrete, unless otherwise noted. All completed ductlines shall be mandrel tested by the Contractor in the presence of Hawaiian Electric's Inspector using Hawaiian Electric's Standard Practice. The Contractor shall install 1800# tensile strength muletape pull line in all completed ductlines after mandrel testing is complete.

22. Joint Pole Removal

The last joint pole occupant off the poles shall remove the poles.

23. As-Built Plans

The Contractor shall provide Hawaiian Electric with a set of electronic and hard copy plans of each sheet showing the offsets, stationing, and vertical elevation of the duct line(s) constructed.

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ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HAWAIIAN ELECTRIC
COMPANY NOTES - 2
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. E-5 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	45	120

HAWAIIAN TELCOM NOTES:

1. The Contractor shall procure and pay for all licenses and permits and shall give all notices necessary and incident to the due and lawful prosecution of the work.

2. The Contractor shall obtain an excavation permit and toning request from Hawaiian Telcom's Excavation Permit Section, located at 1177 Bishop Street, two weeks prior to the start of construction. Hours of business are 8:00am to 11:00am and 12:00pm to 3:00pm Monday through Friday, except holidays.

3. Prior to the excavation of the ductline, the Contractor shall request Hawaiian Telcom to locate existing ductline wherever required. For underground cable locating and marking, five (5) working days advance notice is required. Three (3) working days advance notice is required for any inspection by a designated representative.

4. The locations of existing utilities are approximate only. The Contractor shall exercise extreme caution and shall maintain proper clearances whenever construction crosses or is in close proximity of Hawaiian Telcom facilities. The Contractor shall verify their locations and shall be liable for any damages to Hawaiian Telcom facilities. Any damages shall be reported immediately to Hawaiian Telcom's repair section at #611 (24 hours) or to the excavation permit section at 546-7746 (normal working hours, Monday through Friday, except holidays). As a result of his operations, adjustments to the new ductline alignment, if required, shall be made to provide the required clearances.

5. The Contractor shall take necessary precaution not to damage existing cables or ducts. A Hawaiian Telcom inspector or designated representative is required to be at any job site whenever there will be a breakage into or entry into any structure that contain Hawaiian Telcom's facilities. Temporary cable and duct supports shall be provided wherever necessary.

6. The Contractor shall notify Hawaiian Telcom's inspector or designated representative a minimum of 72 hours prior to excavation, bracing, or backfilling of Hawaiian Telcom's structures or facilities.

7. All applicable construction work shall be done in accordance with the "Hawaiian Telcom Standard Specifications for Placing Telephone Systems" dated January 2007, all subsequent amendments and additions, and all other pertinent standards for telephone construction. Contractor shall familiarize his personnel by obtaining applicable specifications.

8. When excavation is adjacent to or beneath Hawaiian Telcom's existing structures or facilities, the Contractor shall:

   a) Sheet and/or brace the excavation to prevent slides, cave-ins, or settlements to ensure no movement to Hawaiian Telcom's structures or facilities.

   b) Protect existing structures and/or facilities with beams, struts, or underpinning while excavating beneath them to ensure no movement to Hawaiian Telcom's structures or facilities.

9. The Contractor shall brace all poles or light standards near the new ductline, manhole, or handhole during his operations.

10. The Contractor shall saw-cut A.C. pavement and concrete gutter wherever new manholes, handholes, or ductlines are to be placed and shall restore to existing condition or better.

11. The Contractor shall comply with the policy adopted by the Department of Planning and Permitting, City and County of Honolulu, concerning the replacement of concrete sidewalks after excavation work.

12. The underground pipes, cables, or ductlines known to exist by the engineer from his search of records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.

13. Wherever connections to existing utilities are shown on the plans, the Contractor shall expose the existing lines prior to excavation of the main trenches to verify their locations and depths.

14. The Contractor, at his own expense, shall keep the project and surrounding area free from dust nuisance. The cost for supplementary measures, which will be required by the State, shall be borne by the Contractor.

15. The Contractor shall pump all manholes dry during final inspection.

16. The Contractor shall notify Hawaiian Telcom inspector 24 hours priors to the pouring of concrete or backfilling.

1. When connecting to manhole walls, all existing reinforcing bars shall be left intact. Ducts shall be adjusted in the field in order to clear reinforcing.

2. The Contractor shall be responsible for laying out all required lines and grades and shall preserve all bench marks and working points neccessary to lay out the work correctly. The new ductline shall be adjusted by the Contractor to suit the existing conditions and the details as described in the plans.

3. Minimum concrete strength shall be:

For ductline	2500 PSI at 28 days
For manhole	3000 PSI at 28 days or as specified in design notes

4. Bends in the duct alignment, due to changes in grade shall have a minimum radius of 25 feet. All 90 degree C-bends at a pole or at the building floor slab penetration, shall have a bend radius of ten times the diameter of the duct or greater.

5. After ductline has been completed, a mandrel with a square front not less than 12" long and having a diameter of 1/4" less than the inside diameter of the duct, shall be pulled through each duct after which a brush with stiff bristles shall be pulled through to make certain that no particles of earth, sand, or gravel have been left inside. Ducts shall be completely dry and clean.

6. All ducts and conduits shall have an 1800# polyester mule-tape (Neptco, WP1800P, Hawaiian Telcom Material Code No. 571154) installed throughout its entire length. All ducts shall be capped to prevent entry of foreign material during construction and at the completion of installation.

HAWAIIAN TELCOM GENERAL CONSTRUCTION NOTES WITHIN A BUILDING:

1. Metallic entrance conduits shall be grounded.

2. All conduits within a building shall:
   a) Be installed in the shortest and straightest possible run.
   b) Have no section longer than 100 feet nor contain more than two 90-degree bends. An approved sized junction box or gutter box shall be placed if this is exceeded.
   c) Have long sweep radius bendst but the inside radius of the bend MUST never be less than ten times the diameter of the conduit.

3. Ducts and/or conduits installed for usage by Hawaiian Telcom shall be inspected by Hawaiian Telcom.

1. All construction must be inspected and approved by Hawaiian Telcom prior to the installation of any of its facilities and the energizing of its systems.

2. Contractor and/or customer shall provide Hawaiian Telcom with sufficient installation time in their occupancy timetable.

3. Contractor shall provide all materials and furnish all labor and equipment necessary.

4. The Contractor shall provide a 5/8" x 8' galvanized ground rod below the telephone cabinet or backboard and a #6 TW insulated green ground wire with a 3' coil. Telephone cabinet shall be grounded and equipped with 3/4" treated backboard. Non-enclosed backboards will only be acceptable in situations complying with the current National Electrical Code.

APPROVED

Hawaiian Telcom Date

ORIGINAL DRAWING BY	SURVEY PLOTTED BY	RSY	DATE
NOTE BOOK	TRACED BY		
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HIGHWAYS DIVISION

HAWAIIAN TELCOM NOTES

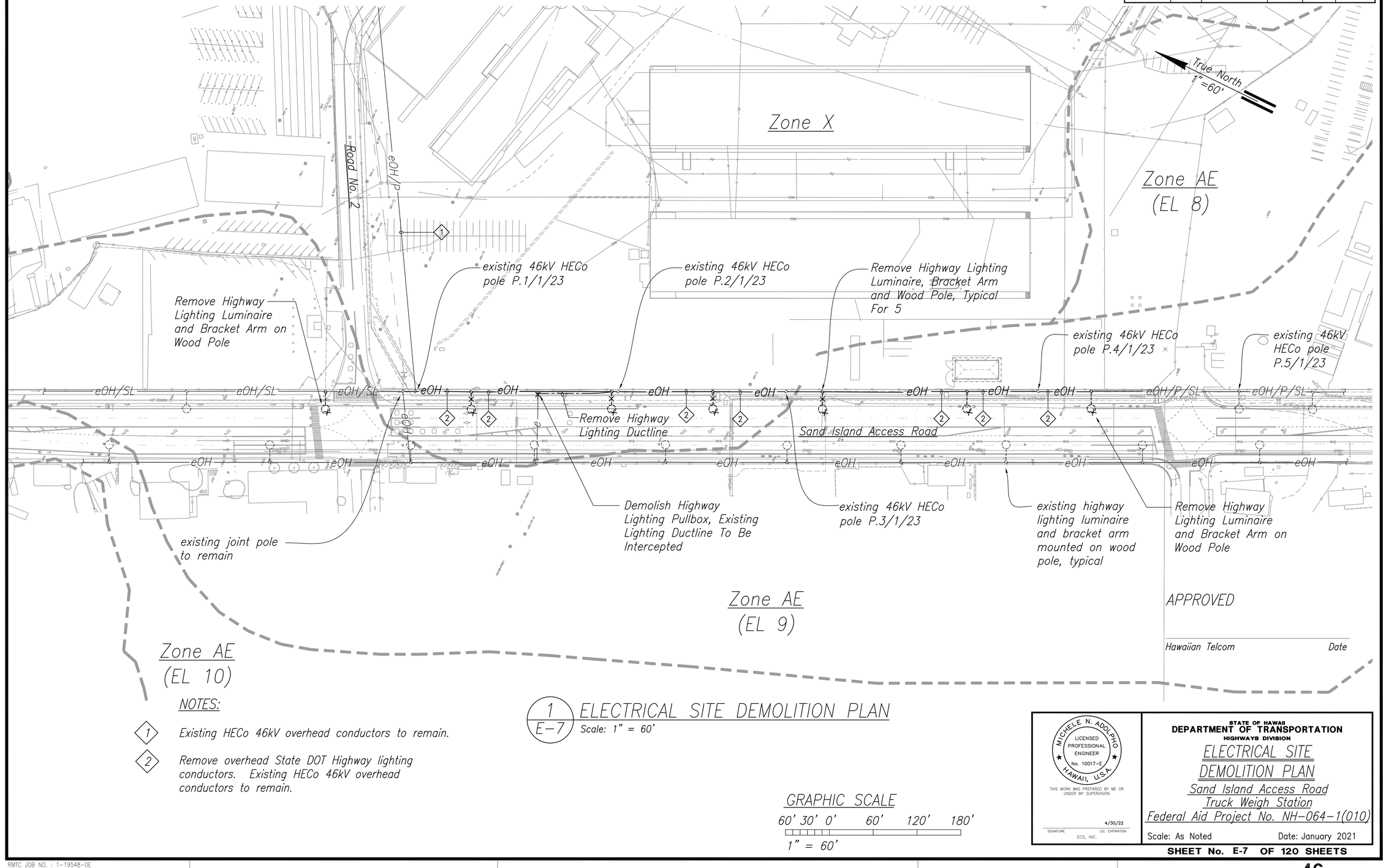
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. E-6 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	46	120



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NOTES:

1. Existing HECo 46kV overhead conductors to remain.
2. Remove overhead State DOT Highway lighting conductors. Existing HECo 46kV overhead conductors to remain.

1/E-7 ELECTRICAL SITE DEMOLITION PLAN

Scale: 1" = 60'

GRAPHIC SCALE

60' 30' 0' 60' 120' 180'

1" = 60'

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ELECTRICAL SITE DEMOLITION PLAN

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

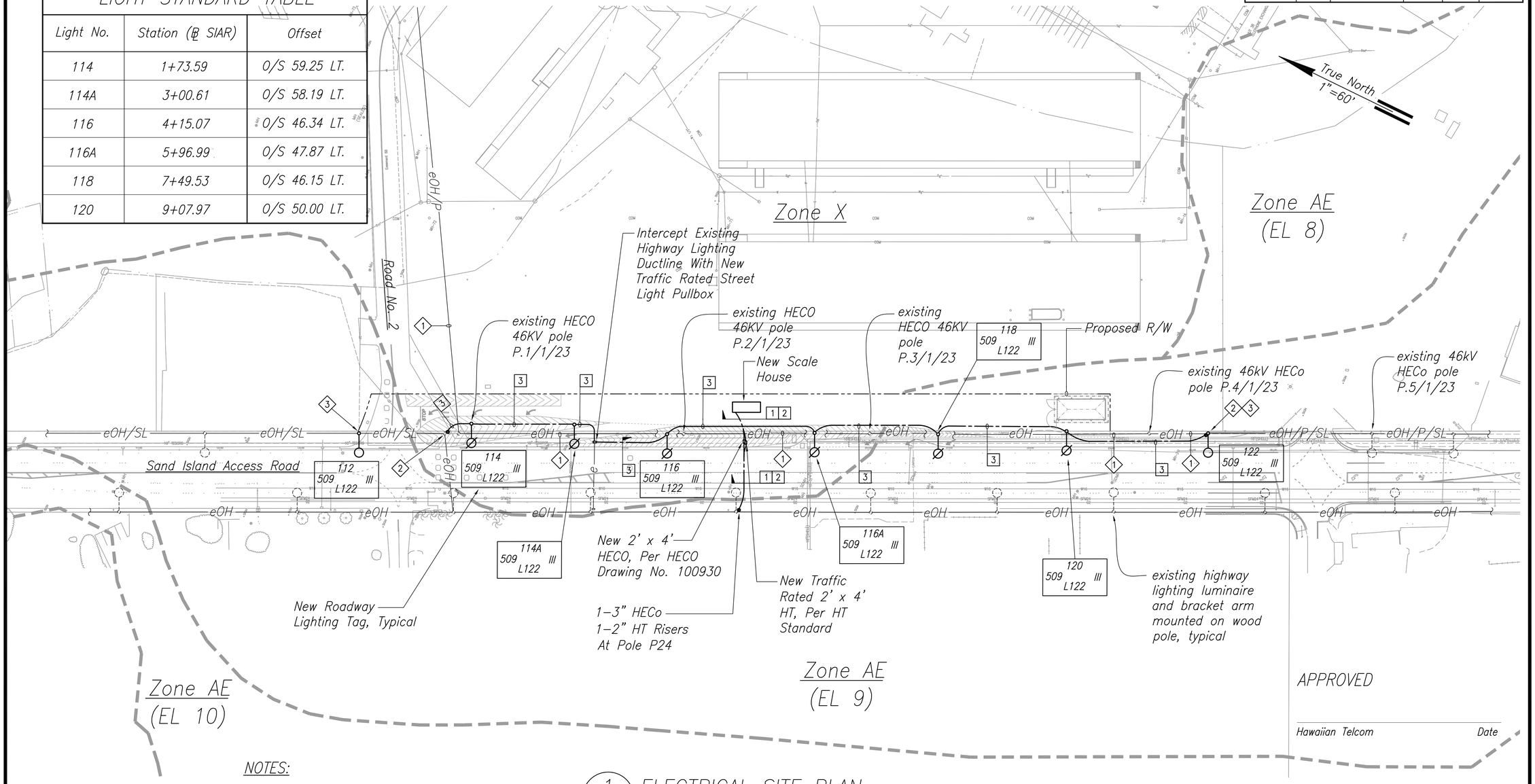
SHEET No. E-7 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	47	120

LIGHT STANDARD TABLE

Light No.	Station (℄ SIAR)	Offset
114	1+73.59	0/S 59.25 LT.
114A	3+00.61	0/S 58.19 LT.
116	4+15.07	0/S 46.34 LT.
116A	5+96.99	0/S 47.87 LT.
118	7+49.53	0/S 46.15 LT.
120	9+07.97	0/S 50.00 LT.



APPROVED

Hawaiian Telcom Date

NOTES:

1. Existing HECo 46kV overhead conductors.
2. Stubup 2" highway lighting conduit at wood pole.
3. Provide new highway lighting luminaire and bracket arm on existing wood pole. See 1/E-15

1/E-8 ELECTRICAL SITE PLAN
Scale: 1" = 60'

GRAPHIC SCALE
60' 30' 0' 60' 120' 180'
1" = 60'

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HIGHWAYS DIVISION

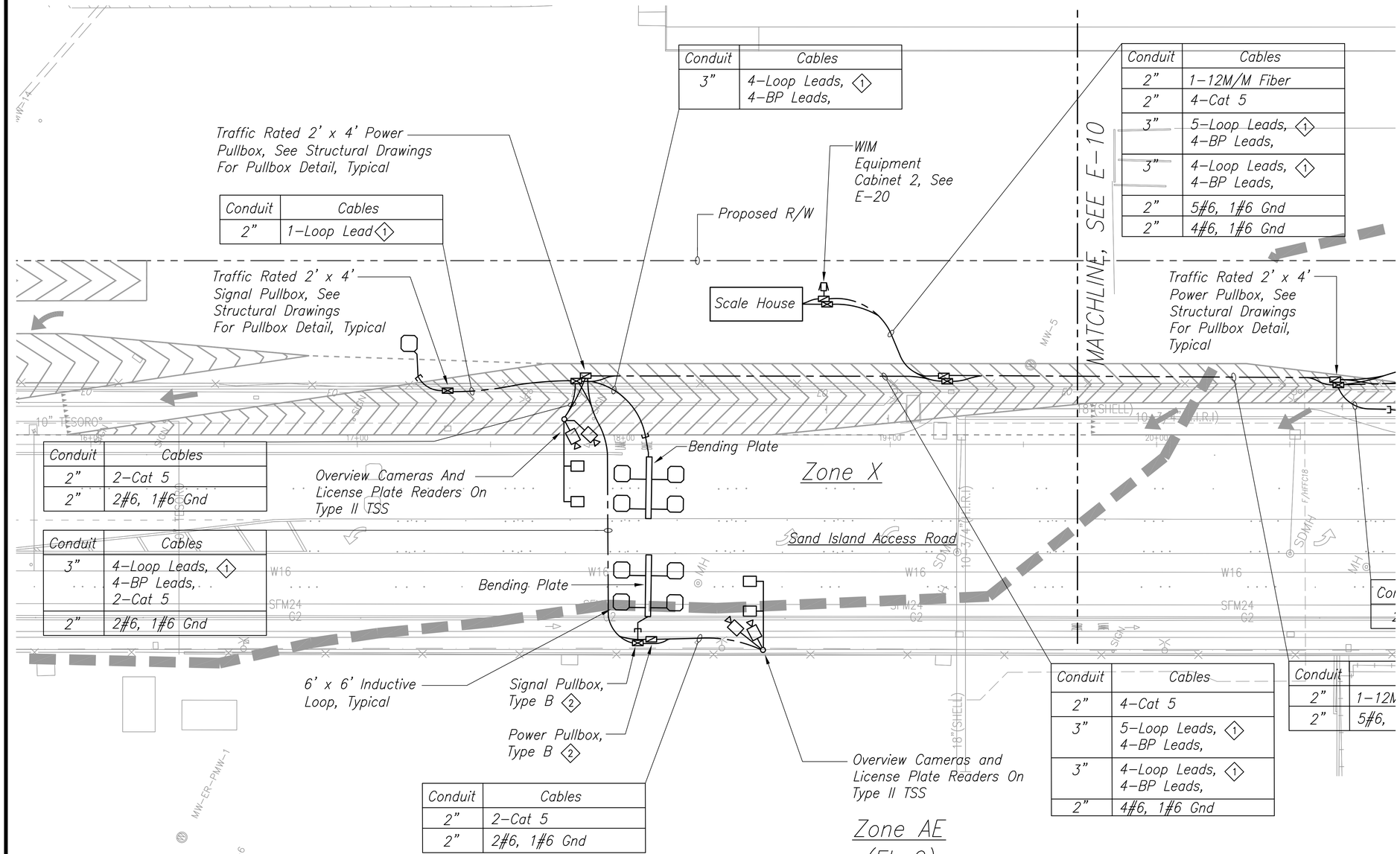
ELECTRICAL SITE PLAN

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. E-8 OF 120 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	48	120



1 WEIGH STATION ELECTRICAL DETAIL PLAN – 1

E–9 Scale: 1" = 20'

GRAPHIC SCALE

20' 0' 20' 40' 60' 80'

1" = 20'

NOTES:

1. ◇1 Cables provided by WIM system manufacturer.
2. ◇2 Refer to standard plan TE–37 for Type B pullbox details.
3. Coordinate WIM equipment locations, conduit/ductline sizing, cable types and quantities with the WIM system equipment manufacturer.

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	QUANTITIES BY
	CHECKED BY

MICHELE N. ADOLPHO LICENSED PROFESSIONAL ENGINEER No. 10017–E HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGH STATION
ELECTRICAL DETAIL PLAN – 1
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH–064–1(010)

Scale: As Noted Date: January 2021

SHEET No. E-9 OF 120 SHEETS

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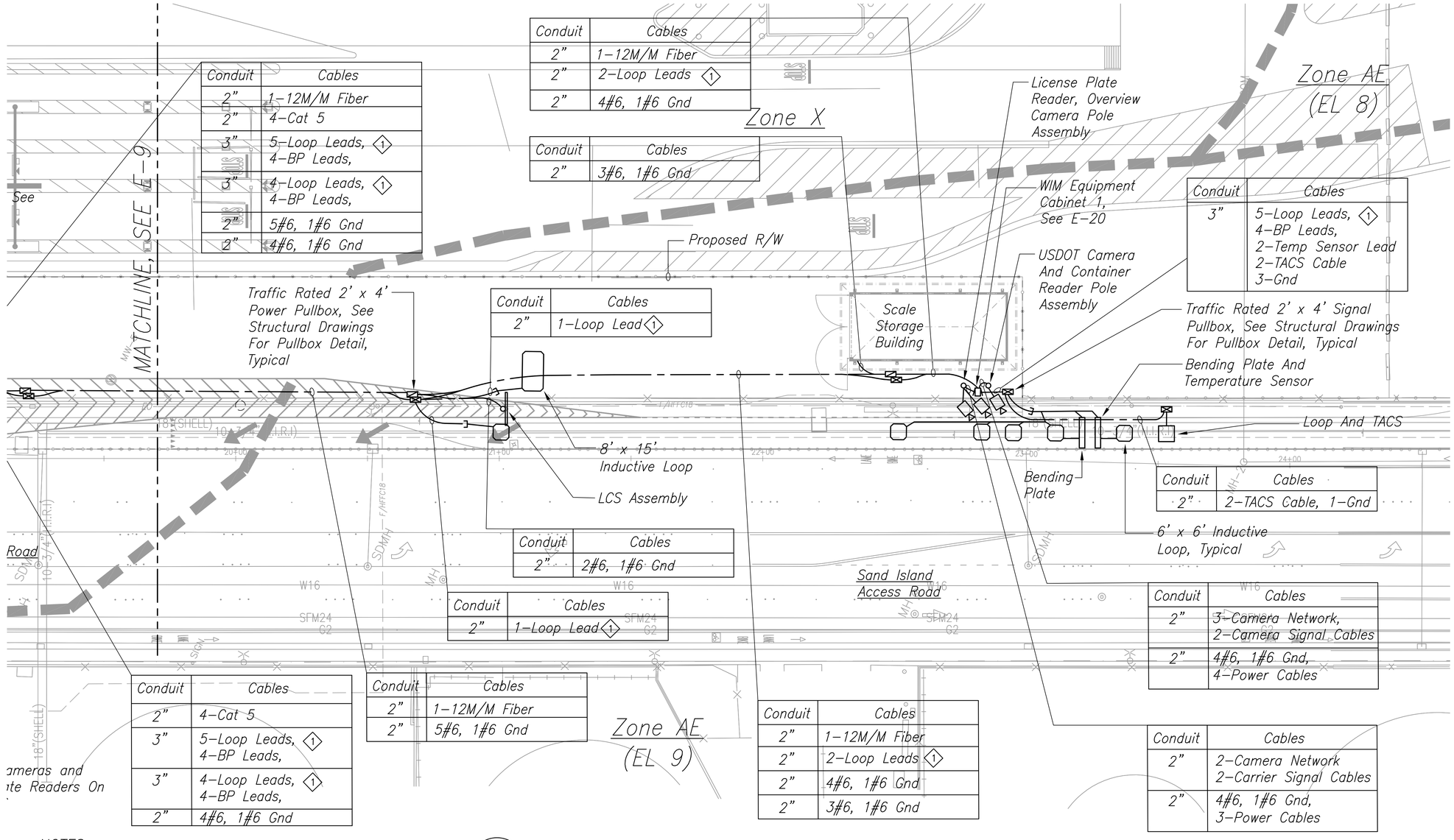
RMTC JOB NO. : 1–19548–0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	49	120



Conduit	Cables
2"	1-12M/M Fiber
2"	4-Cat 5
3"	5-Loop Leads, ◇1 4-BP Leads,
3"	4-Loop Leads, ◇1 4-BP Leads,
2"	5#6, 1#6 Gnd
2"	4#6, 1#6 Gnd

Conduit	Cables
2"	1-12M/M Fiber
2"	2-Loop Leads ◇1
2"	4#6, 1#6 Gnd

Conduit	Cables
2"	3#6, 1#6 Gnd

Conduit	Cables
3"	5-Loop Leads, ◇1 4-BP Leads, 2-Temp Sensor Lead 2-TACS Cable 3-Gnd

Conduit	Cables
2"	1-Loop Lead ◇1

Conduit	Cables
2"	2#6, 1#6 Gnd

Conduit	Cables
2"	2-TACS Cable, 1-Gnd

Conduit	Cables
2"	3-Camera Network, 2-Camera Signal Cables
2"	4#6, 1#6 Gnd, 4-Power Cables

Conduit	Cables
2"	4-Cat 5
3"	5-Loop Leads, ◇1 4-BP Leads,
3"	4-Loop Leads, ◇1 4-BP Leads,
2"	4#6, 1#6 Gnd

Conduit	Cables
2"	1-12M/M Fiber
2"	5#6, 1#6 Gnd

Conduit	Cables
2"	1-12M/M Fiber
2"	2-Loop Leads ◇1
2"	4#6, 1#6 Gnd
2"	3#6, 1#6 Gnd

Conduit	Cables
2"	2-Camera Network 2-Carrier Signal Cables
2"	4#6, 1#6 Gnd, 3-Power Cables

NOTES:

◇1 Cables provided by WIM system manufacturer.

2. Coordinate WIM equipment locations, conduit/ductline sizing, cable types and quantities with the WIM system equipment manufacturer.

True North
1"=20'

1 / E-10 WEIGH STATION ELECTRICAL DETAIL PLAN – 2
Scale: 1" = 20'

GRAPHIC SCALE
20' 0' 20' 40' 60' 80'
1" = 20'

ORIGINAL DRAWING BY	
SURVEY PLOTTED BY	BSY
DRAWN BY	
TRACED BY	
DESIGNED BY	WC
QUANTITIES BY	
CHECKED BY	
NOTE BOOK	
No.	
DATE	

2/3/21-15:14 Y:\660\660.203\660.203 E-10.502.dwg

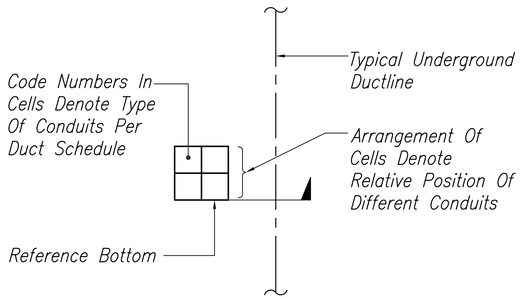
MICHELE N. ADOLPHO
LICENSED PROFESSIONAL ENGINEER
No. 10017-E
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
4/30/22
SIGNATURE LIC. EXPIRATION
ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
WEIGH STATION
ELECTRICAL DETAIL PLAN – 2
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
Scale: As Noted Date: January 2021

SHEET No. E-10 OF 120 SHEETS

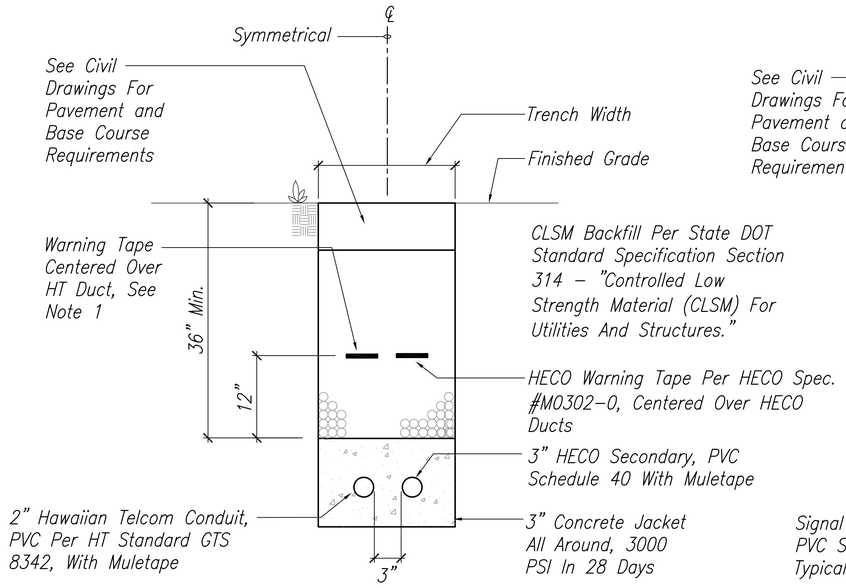
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	50	120



(Note: All Ductlines Are Concrete Encased)

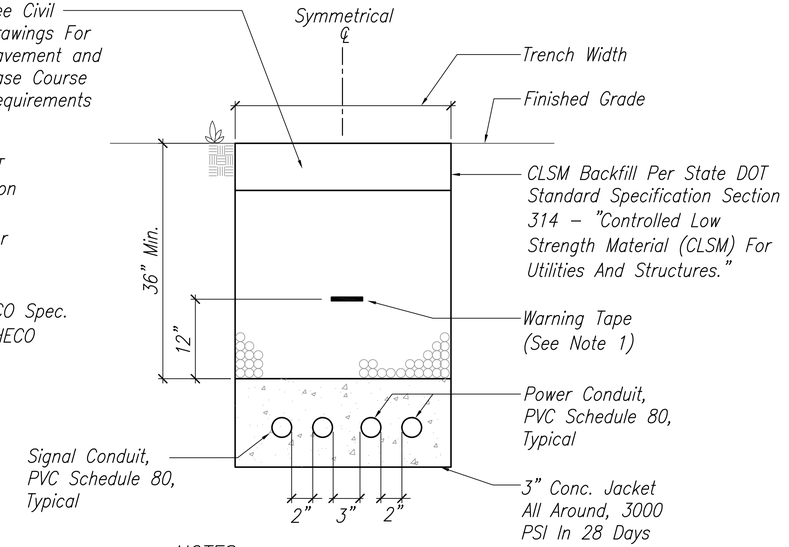
1 / E-11 DUCT SECTION FLAG CODE
No Scale



NOTES:

1. 8 mil thick orange colored plastic warning tape. 4" wide minimum for the entire length of trench. Tape shall read "WARNING – STOP DIGGING – CALL HAWAIIAN TELCOM, CABLE BURIED BELOW, FAILURE TO COMPLY COULD RESULT IN LEGAL ACTION."
2. All conduits in concrete shall be in conduit saddles. All conduits shall be tied securely into the saddles, and all saddles shall be anchored into the ground so that the conduits do not float.

2 / E-11 UTILITY COMPANY DUCT SECTION
Not To Scale



NOTES:

1. 8 mil thick red colored plastic warning tape. 3" wide with continuous metallic backing and corrosion resistant foil core inscribed with: "CAUTION – ELECTRICAL LINE BURIED BELOW" in black lettering, repeated at 36" intervals.
2. All conduits in concrete shall be in conduit saddles. All conduits shall be tied securely into the saddles, and all saddles shall be anchored into the ground so that the conduits do not float.

3 / E-11 TYPICAL DUCT SECTION
Not To Scale

DUCT SCHEDULE

Type	Type	Cables
1	3" HECO Secondary, PVC Schedule 40	By HECO, Provide Pullstring
2	2" Hawaiian Telcom, PVC Per GTS 8342	By HT, Provide Muletape
3	2" Highway Lighting, PVC Schedule 80	See Highway Lighting Diagram

2/3/21-15:14 V:\060\060.203\060.203 E-11.001.dwg

ORIGINAL PLAN SIZE: 24" x 36"	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY RSY	
No.	TRACED BY	
	DESIGNED BY WC	
	QUANTITIES BY	
	CHECKED BY	

MICHELE N. ADOLPHO
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No. 10017-E
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4/30/22
SIGNATURE LIC. EXPIRATION
ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DUCT DETAILS

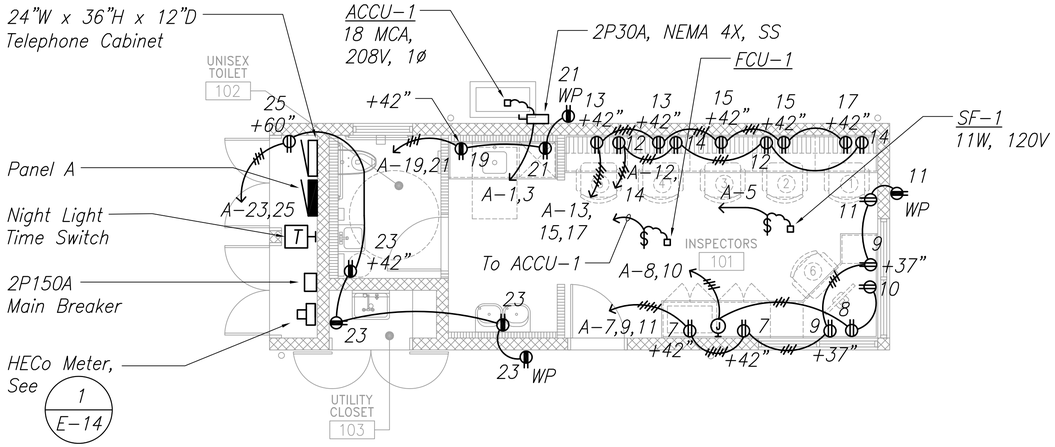
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

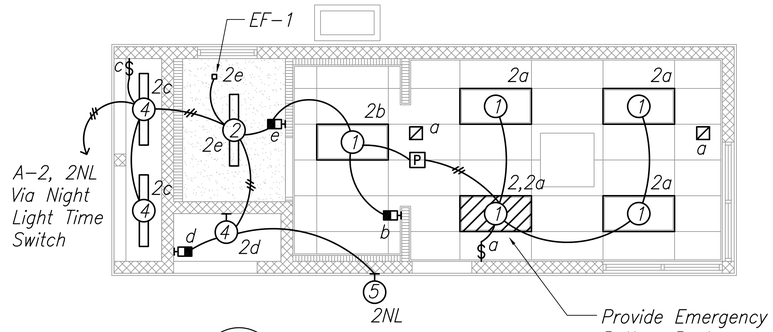
SHEET No. E-11 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	51	120



1 / E-12 POWER AND OUTLETS PLAN
Scale: 1/4" = 1'-0"

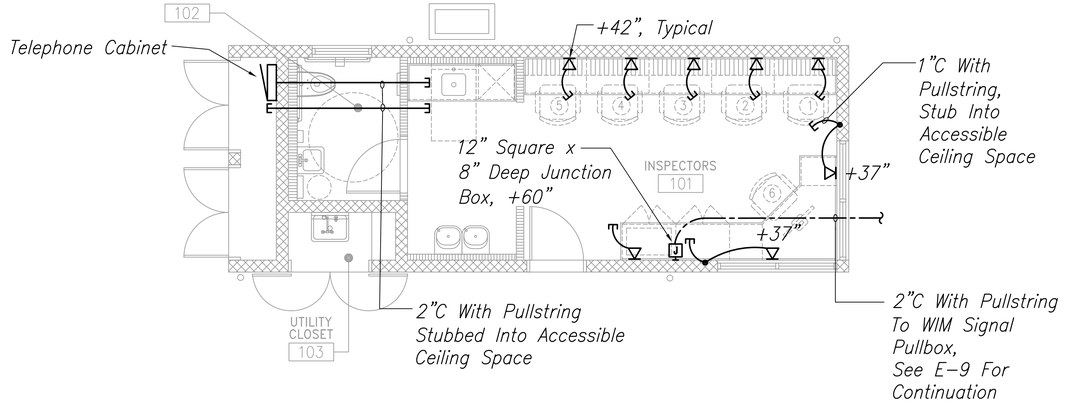


2 / E-12 LIGHTING PLAN
Scale: 1/4" = 1'-0"

PANEL A — 120/240 Volts, 1 Phase, 3 Wire; 225A Main Lugs; MIN AIC: 10,000; MOUNTING: Surface

WIRE SIZE (AWG)	CKT NO	USE	CKT BKR POLE	CKT BKR AMP	CONN LOAD (KVA) PHASE A	CONN LOAD (KVA) PHASE B	CKT BKR AMP	CKT BKR POLE	USE	CKT NO	WIRE SIZE (AWG)
12	1	ACCU-1	2		1.6	0.4	20	1	Lights	2	12
12	3			30	0.6	2.7	60	1	WIM Cab 1	4	4
12	5	SF-1	1	20	0.2	2.5	60	1	WIM Cab 2	6	4
12	7	Recept-Inspectors	1	20	0.6	1.0	20	1	WIM Control Station	8	12
12	9	Recept-Inspectors	1	20	0.6	1.0	20	1	WIM Control Station	10	12
12	11	Recept-Inspectors	1	20	0.6	1.0	20	1	Recept-Inspectors	12	12
12	13	Recept-Inspectors	1	20	0.6	1.0	20	1	Recept-Inspectors	14	12
12	15	Recept-Inspectors	1	20	0.6	1.0	20	1	Spare	16	–
12	17	Recept-Inspectors	1	20	0.6	1.0	20	1	Spare	18	–
12	19	Recept-Kitchen	1	20	1.0	1.0	20	1	Spare	20	–
12	21	Recept-Kitchen	1	20	1.0	1.0	20	1	Spare	22	–
12	23	Recept-Toilet/Utility	1	20	1.0	1.0	20	1	Spare	24	–
12	25	Elec/Comm Closet	1	20	0.5	0.5	20	1	Spare	26	–
–	27	PFB	1	–	–	–	–	1	PFB	28	–
–	29	PFB	1	–	–	–	–	1	PFB	30	–
–	31	PFB	1	–	–	–	–	1	PFB	32	–
* 6	33	Storage Building	2		0.5	–	–	1	PFB	34	–
* 6	35			30		0.5	–	1	PFB	36	–
		CONNECTED LOAD/PHASE			13.8	12.6					
		TOTAL CONNECTED LOAD			26.4 KVA						
		DEMAND FACTOR			0.7						
		TOTAL DEMAND LOAD			18.5 KVA =	77 AMPS					

* Provide 2P30A GFCI Breaker



3 / E-12 SIGNAL PLAN
Scale: 1/4" = 1'-0"

GRAPHIC SCALE
5' 0 5' 10' 15'
1/4" = 1'-0"

MICHELE N. ADOLPHO
LICENSED PROFESSIONAL ENGINEER
No. 10017-E
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
4/30/22
SIGNATURE LIC. EXPIRATION
ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SCALE HOUSE ELECTRICAL PLANS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

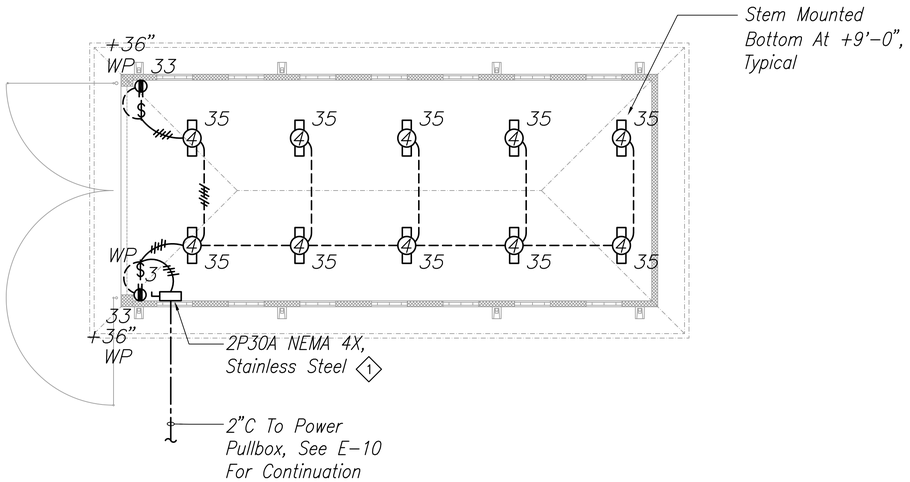
SHEET No. E-12 OF 120 SHEETS

ORIGINAL SURVEY PLOTTED BY: BSY
DRAWN BY:
TRACED BY:
DESIGNED BY: WC
QUANTITIES BY:
CHECKED BY:
DATE:
NOTE BOOK
No.

2/3/21-15:14 Y:\060\060.203\060.203 E-12.PDI.dwg

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	52	120



1 / E-13 WEIGH STORAGE BUILDING ELECTRICAL PLAN

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

GRAPHIC SCALE

5' 0' 5' 10' 15' 20' 25' 30' 35'

1/8" = 1'-0"

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

2/3/21-15:14 Y:\060\060.203\060.203 E-13.PDZ.dwg

RMTC JOB NO. : 1-19548-0E

MICHELE N. ADOLPHO
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No. 10017-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

4/30/22
SIGNATURE LIC. EXPIRATION

ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGHING STORAGE BUILDING ELECTRICAL PLAN

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

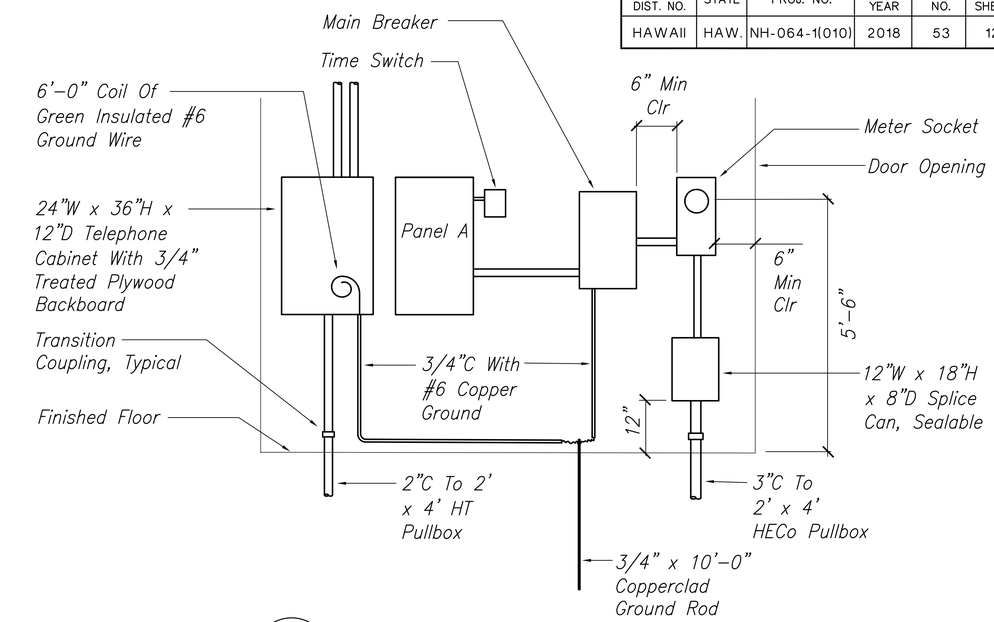
Scale: As Noted Date: January 2021

SHEET No. E-13 OF 120 SHEETS

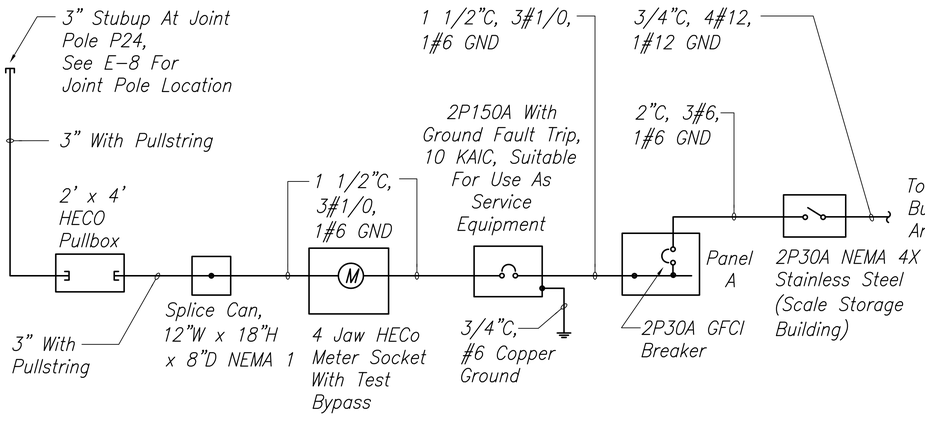
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	53	120

LUMINAIRE SCHEDULE

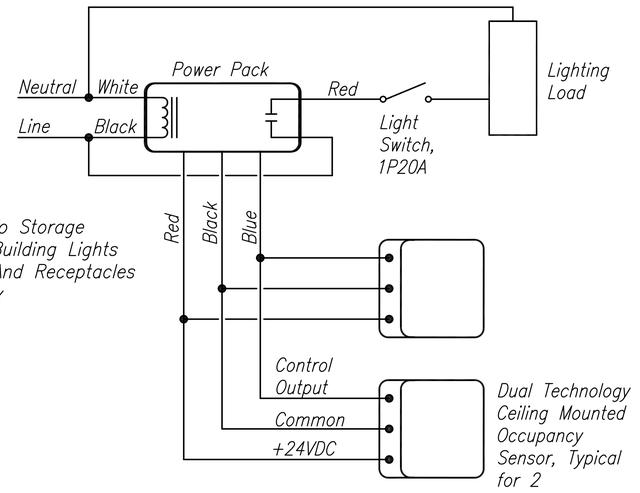
Type	Description	Lamps
1	LED, Recessed 2' x 4', Die Formed Cold-Rolled Steel Housing, Nominal 4,600 Luminaire Lumens, Nominal 102 Lumens Per Watt, 4" Maximum Depth, K12 Prismatic 0.125" Lens, 120V Driver, Emergency Battery Pack (1400 Lumens) Where Indicated Columbia #LJT24-35-MLG-FSA12125-EU-ELL14 Or Approved Equivalent	45W 3500K
2	LED, Ceiling Mounted, Prismatic Acrylic Wraparound, 8 1/4" Wide Heavy Gauge Steel Housing, Nominal 4700 Luminaire Lumens, 100 Lumens Per Watt, 120V Driver Columbia #LAW4-35-ML-EU Or Approved Equivalent	48W 3500K
3	LED, Wall Mounted Drum Light, Bottom At +84", Die-Cast Aluminum Housing, Bronze Finish, Clear Prismatic Polycarbonate Diffuser, 13" Diameter, 4" Max Depth, 1500 Delivered Lumens, 120V Driver Luminaire LED #ARV13-25W-3500K Or Approved Equivalent	15W 3500K
4	LED, Surface Mounted Gasketed Fiberglass Housing, Tamper Resistant Ribbed Frosted Polycarbonate Lens, Nominal 4850 Delivered Lumens, 120V Driver, Emergency Battery Pack Where Indicated Columbia #LXEM4-35ML-RFP-EU-ELL14 Or Approved Equivalent	47W 3500K
5	LED Wall Pack, Bottom At +7'-6", Die-Cast Aluminum Housing, Dark Bronze Powder Paint Finish, Acrylic Diffuser, Type **IV** Distribution, 3900 Delivered Lumens, Fully Shielded, Fully Gasketed, Tamper-Resistant Fasteners, Wet Location, 120V Driver Hubbell #LNC2-18LU-4K-4-DB Or Approved Equivalent	43W 4000K



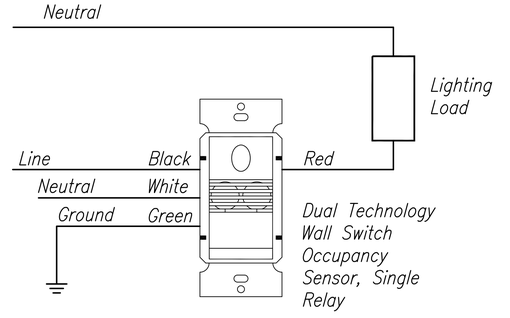
1 / E-14 SERVICE EQUIPMENT ELEVATION
Not To Scale



ONE-LINE DIAGRAM
No Scale



2 / E-14 CEILING OCCUPANCY SENSOR WIRING DIAGRAM
No Scale



3 / E-14 TYPICAL WALL SWITCH OCCUPANCY SENSOR WIRING DIAGRAM
No Scale

ORIGINAL DRAWING SIZE: 22" x 34"
SURVEY PLOTTED BY: DATE
DRAWN BY: BSY
TRACED BY:
DESIGNED BY: WC
QUANTITIES BY:
CHECKED BY:
NOTE BOOK
No.

2/3/21-15:14 Y:\060\060.203\060.203 E-14.003.dwg

RMTC JOB NO. : 1-19548-0E

MICHELE N. ADOLPHO
LICENSED PROFESSIONAL ENGINEER
No. 10017-E
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
4/30/22
SIGNATURE LIC. EXPIRATION
ECS, INC.

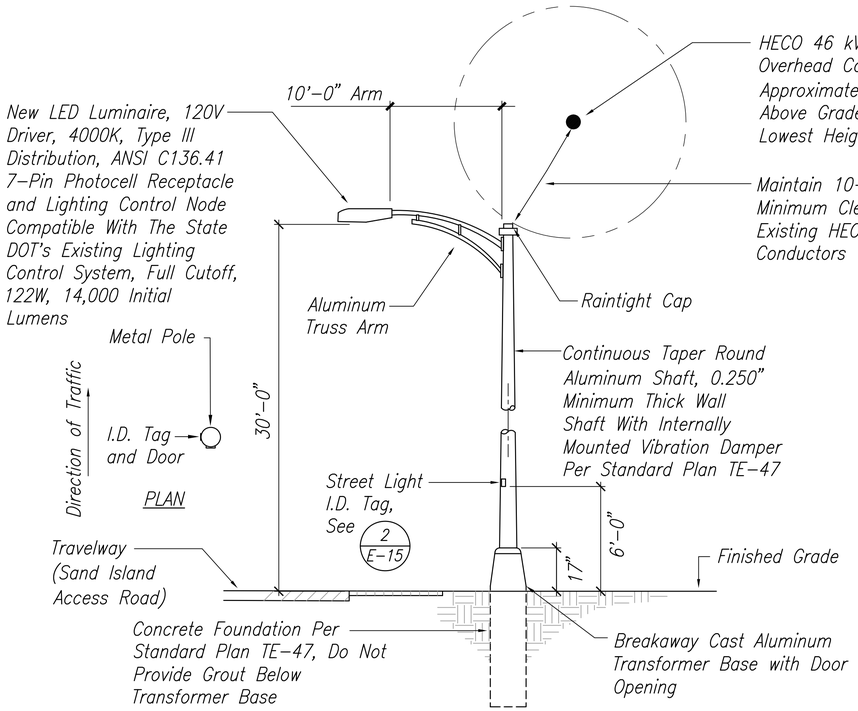
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ONE LINE DIAGRAM,
LUMINAIRE SCHEDULE
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

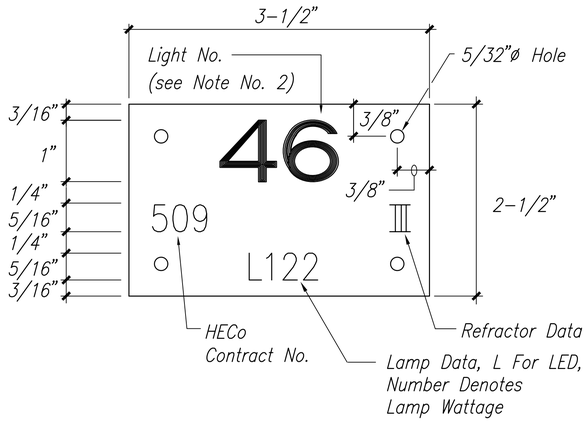
Scale: As Noted Date: January 2021

SHEET No. E-14 OF 120 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	54	120



1 E-15 HIGHWAY LIGHT STANDARD
Not To Scale

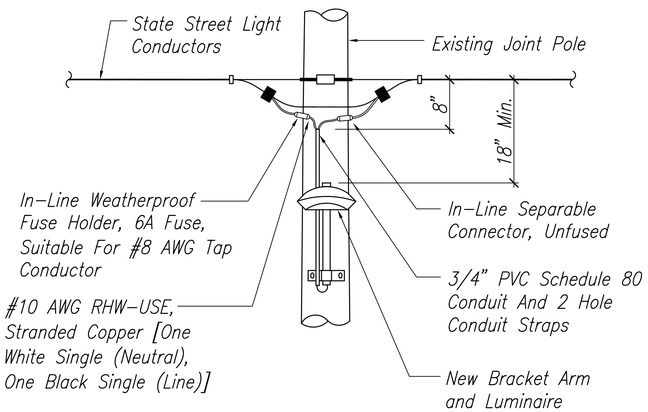


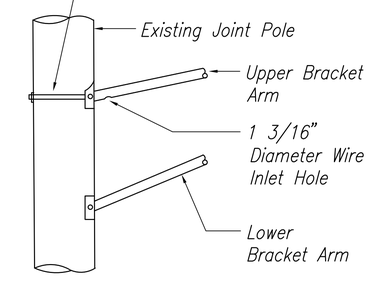
NOTES:

1. Use 3-Ply Laminated Flexible Plastic Black-White-Black Thickness; Black Cap Sheet-0.010", White Base Sheet-0.052", Black Base Sheet-0.010".
2. Light Number Size Shall Be 1" High And Engraved 1/8" Wide, White In Color. Obtain Light Numbers From The State.
3. Nomenclature Size Shall Be 5/16" High And Engraved 1/32" Wide, White In Color (HECo Contract Number, Lamp Data And Refractor Data As Required).
4. Attach To Aluminum Poles with No. 8 Stainless Steel Drive Screws in 1/8" Drill Hole. Attach To Wood Poles With 4D Aluminum Nails.
5. Numbers Are Inscribed By Cutting Through "Black Cap Sheet" To Expose "White Letters".

2 E-15 STREET LIGHT TAG
Not To Scale

3 E-15 HIGHWAY LIGHT ON JOINT POLE
Not To Scale





4 E-15 BRACKET ARM DETAIL
Not To Scale

ORIGINAL DRAWN BY	SURVEY PLOTTED BY	RSY	DATE
NOTE BOOK	TRACED BY		
	DESIGNED BY	WC	
No.	QUANTITIES BY		
	CHECKED BY		

2/3/21-15:14 Y:\060\060.203\060.203 E-15.005.dwg

MICHELE N. ADOLPHO LICENSED PROFESSIONAL ENGINEER No. 10017-E HAWAII, U.S.A.

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4/30/22
SIGNATURE LIC. EXPIRATION

ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

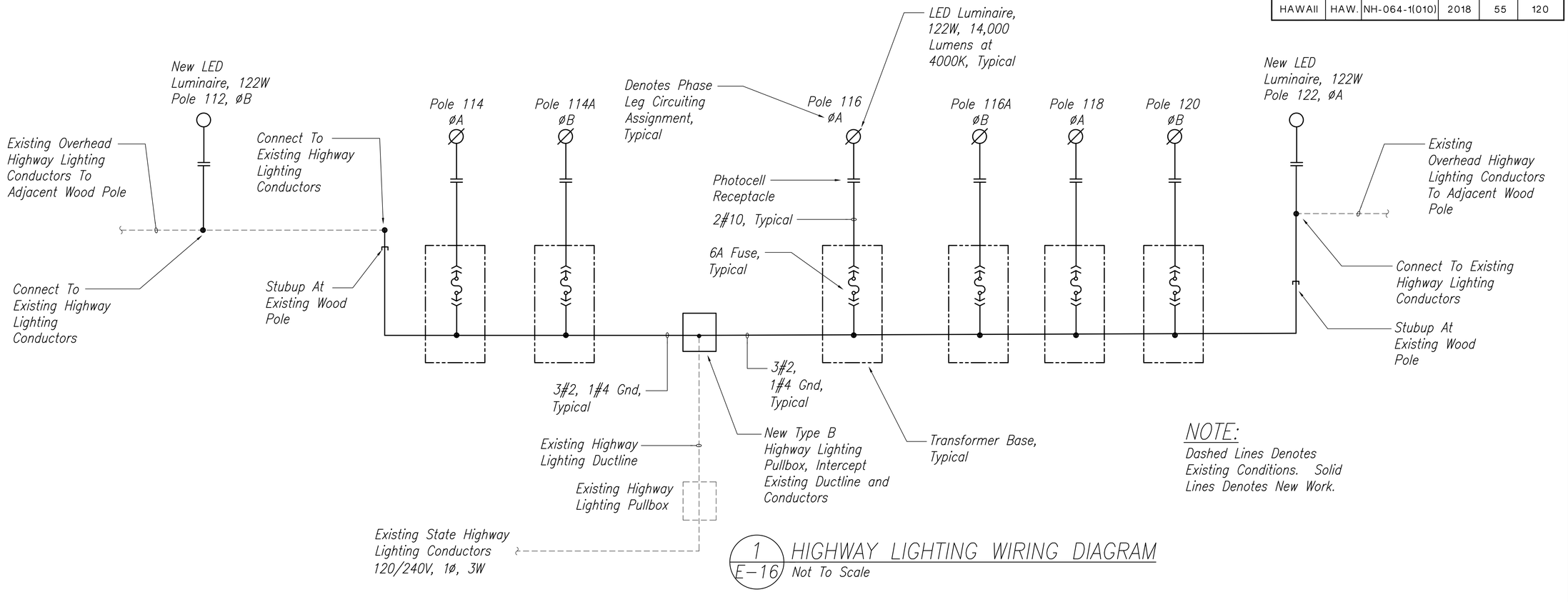
HIGHWAY LIGHTING
DETAILS
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. E-15 OF 120 SHEETS

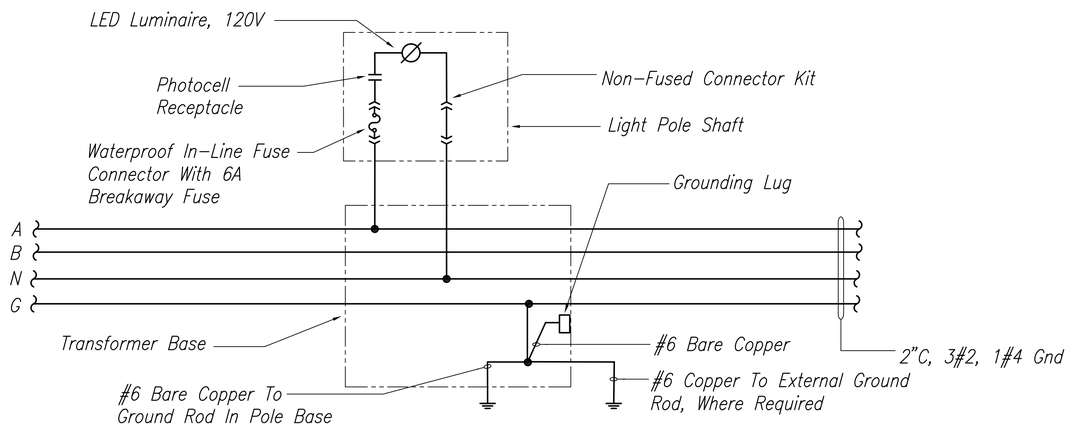
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	55	120



NOTE:
Dashed Lines Denotes Existing Conditions. Solid Lines Denotes New Work.

1 / E-16 HIGHWAY LIGHTING WIRING DIAGRAM
Not To Scale



2 / E-16 TYPICAL HIGHWAY LIGHT STANDARD WIRING DIAGRAM
Not To Scale

ORIGINAL DRAWING	SURVEY PLOTTED BY	DATE
	DRAWN BY	BSY
NOTE BOOK	TRACED BY	
	DESIGNED BY	WC
No.	QUANTITIES BY	
	CHECKED BY	

2/3/21-15:14 Y:\060\060.203\060.203 E-16.006.dwg

RMTC JOB NO. : 1-19548-0E

MICHELE N. ADOLPHO
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No. 10017-E
HAWAII, U.S.A.

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4/30/22
SIGNATURE LIC. EXPIRATION
ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

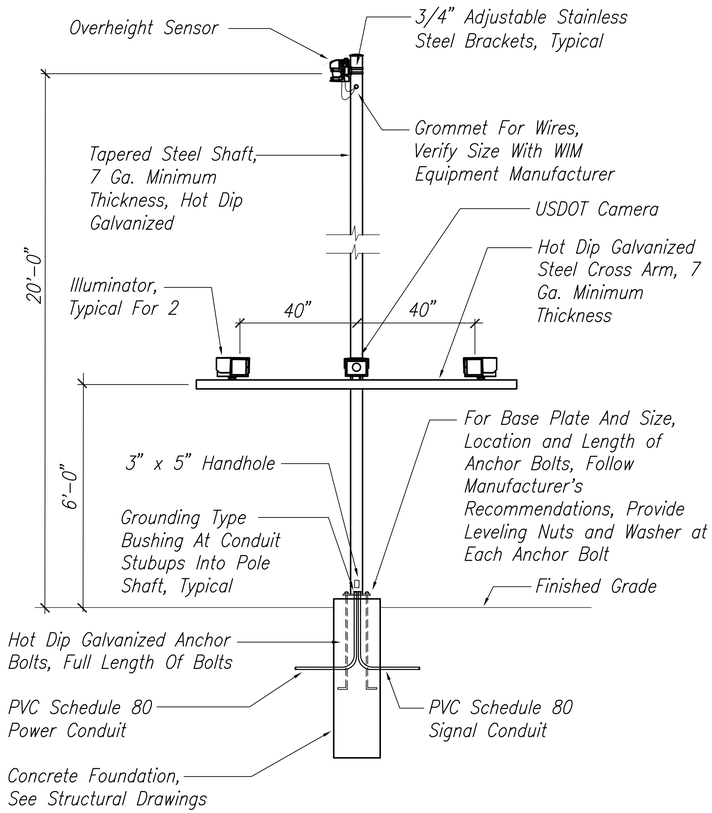
HIGHWAY LIGHTING WIRING DIAGRAM

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

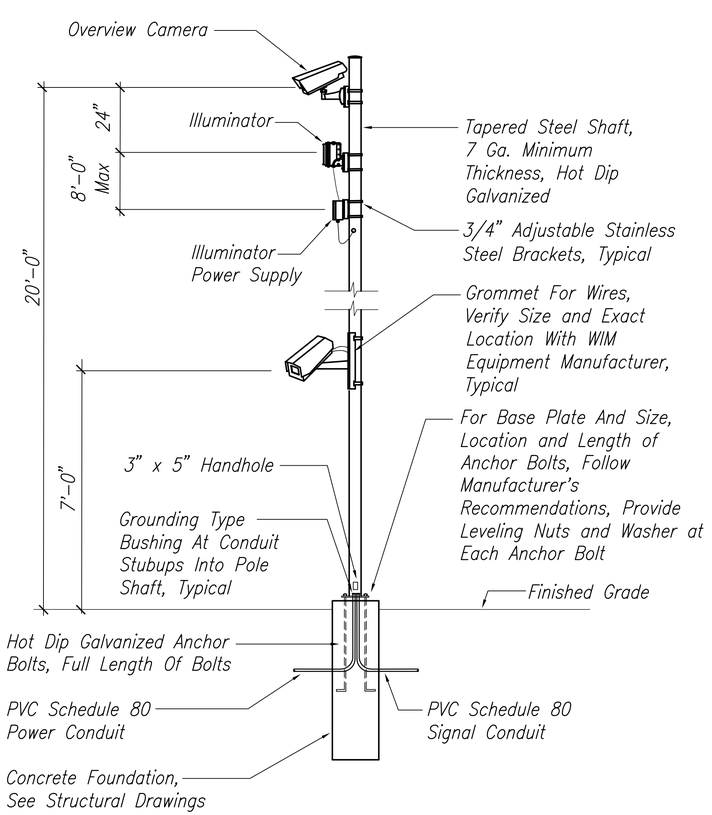
Scale: As Noted Date: January 2021

SHEET No. E-16 OF 120 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	56	120



1 E-17 OVERHEIGHT SENSOR AND USDOT CAMERA POLE ASSEMBLY
Not To Scale



2 E-17 OVERVIEW CAMERA AND LPR POLE ASSEMBLY
Not To Scale

NOTES:

1. Support structure designs shall conform with the AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 1st Edition (2015) including all subsequent interim revisions and editions.

2. Loads:
   a. Basic Wind Speed: 145 mph
   b. Mean Recurrence Interval of 1,700 years
   c. Fatigue importance factor, IF, shall be based on Fatigue Category I for cantilevered structures.
   d. Vortex shedding induced loads shall be considered for cantilevered mast arms and pole shafts that do not have tapers or have tapers of less than 0.14 in./ft.
   e. Structures shall be designed for a truck induced gust based on a truck speed of 20 MPH over the posted speed.
   f. Galloping and natural wind gusts shall be considered for cantilevered structures.

3. All accessories, fittings, connection details and stiffener details (as required) shall be designed for the loads specified above and submitted to the Engineer for approval.

4. All connection bolts shall be AASHTO M164 bolts and anchor bolts shall be AASHTO M134-105 bolts.

5. Aluminum members and surfaces in contact with structural steel shall be isolated with neoprene materials as approved by the Engineer.

6. The recommendations of the traffic pole manufacturer shall be followed. Manufacturer shall select pole, anchor bolts, etc. based on the criteria given in the contract documents. The Contractor shall submit catalog cuts and structural calculations to the Engineer for approval.

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

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RMTC JOB NO. : 1-19548-0E

MICHELE N. ADOLPHO
LICENSED PROFESSIONAL ENGINEER
No. 10017-E
HAWAII, U.S.A.

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4/30/22
SIGNATURE LIC. EXPIRATION
ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

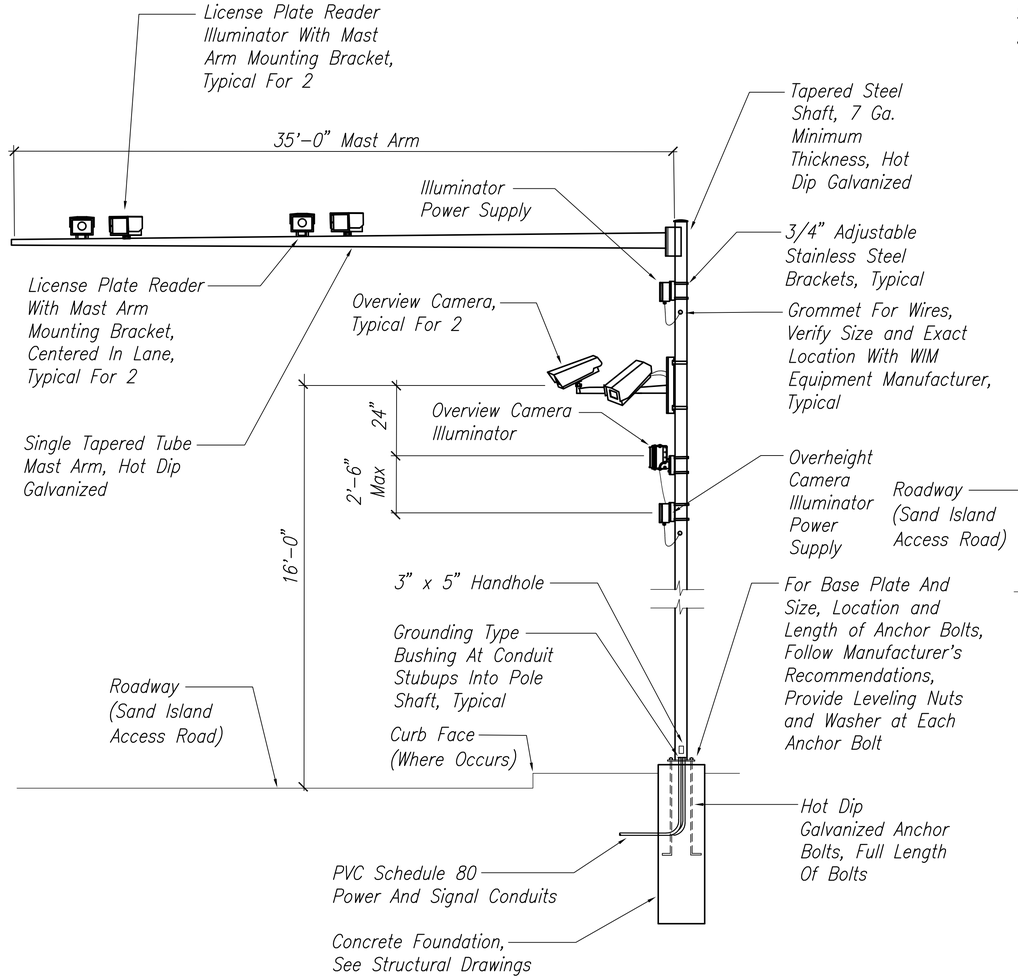
WIM DETAILS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

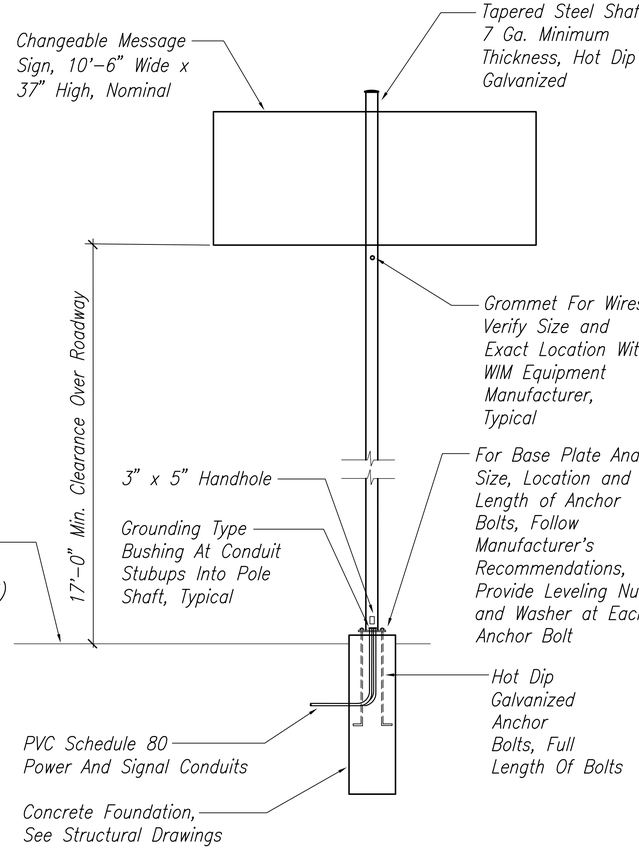
Scale: As Noted Date: January 2021

SHEET No. E-17 OF 120 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	57	120



1 E-18 OVERVIEW CAMERA AND LPR POLE ASSEMBLY – TYPE II TRAFFIC SIGNAL STANDARD
Not To Scale



2 E-18 LCS POLE ASSEMBLY
Not To Scale

NOTES:

1. Support structure designs shall conform with the AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 1st Edition (2015) including all subsequent interim revisions and editions.

2. Loads:
   a. Basic Wind Speed: 145 mph
   b Mean Recurrence Interval of 1,700 years
   c. Fatigue importance factor, IF, shall be based on Fatigue Category I for cantilevered structures.
   d. Vortex shedding induced loads shall be considered for cantilevered mast arms and pole shafts that do not have tapers or have tapers of less than 0.14 in./ft.
   e. Structures shall be designed for a truck induced gust based on a truck speed of 20 MPH over the posted speed.
   f. Galloping and natural wind gusts shall be considered for cantilevered structures.

3. All accessories, fittings, connection details and stiffener details (as required) shall be designed for the loads specified above and submitted to the Engineer for approval.

4. All connection bolts shall be AASHTO M164 bolts and anchor bolts shall be AASHTO M134-105 bolts.

5. Aluminum members and surfaces in contact with structural steel shall be isolated with neoprene materials as approved by the Engineer.

6. The recommendations of the traffic pole manufacturer shall be followed. Manufacturer shall select pole, anchor bolts, etc. based on the criteria given in the contract documents. The Contractor shall submit catalog cuts and structural calculations to the Engineer for approval.

ORIGINAL PLAN	SURVEY PLOTTED BY: BSY
NOTE BOOK	DRAWN BY:
No.	TRACED BY:
	DESIGNED BY: WC
	QUANTITIES BY:
	CHECKED BY:
	DATE:

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RMTC JOB NO. : 1-19548-0E

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HIGHWAYS DIVISION

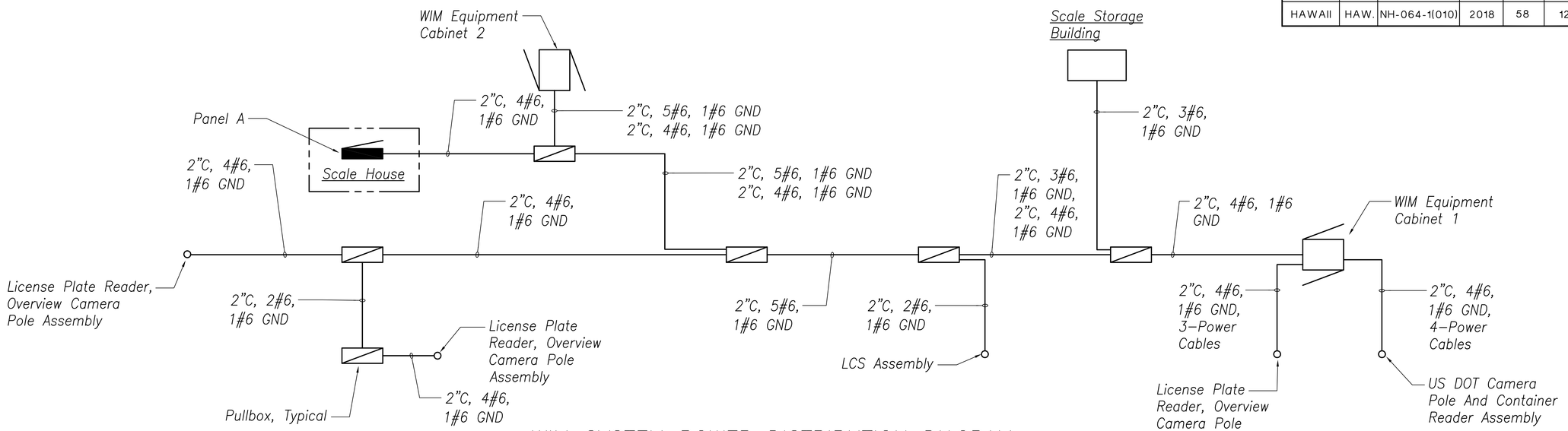
WIM DETAILS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

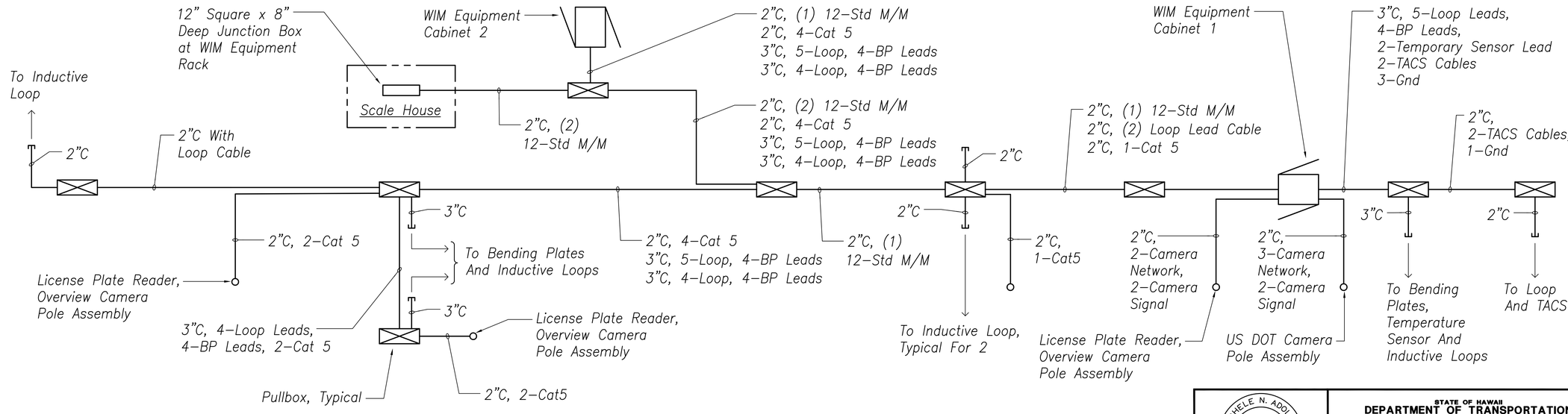
SHEET No. E-18 OF 120 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	58	120



WIM SYSTEM POWER DISTRIBUTION DIAGRAM

No Scale



WIM SYSTEM COMMUNICATIONS DISTRIBUTION DIAGRAM

No Scale

ORIGINAL PLAN NO.	SURVEY PLOTTED BY	RSY	DATE
NOTE BOOK	DRAWN BY		
No.	TRACED BY	WC	
	DESIGNED BY		
	QUANTITIES BY		
	CHECKED BY		

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WIM SYSTEM SITE DISTRIBUTION DIAGRAMS

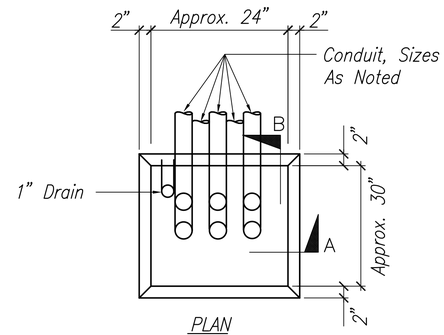
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

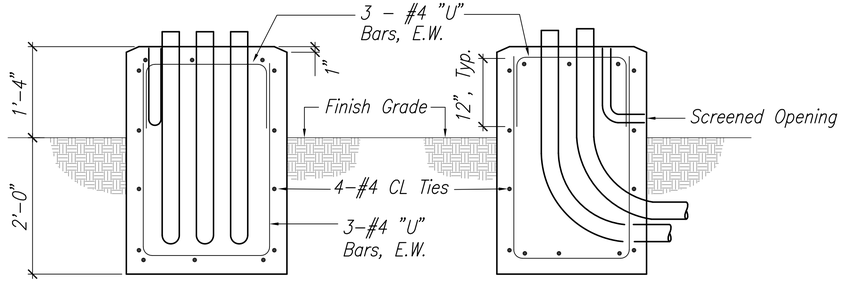
SHEET No. E-19 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	59	120

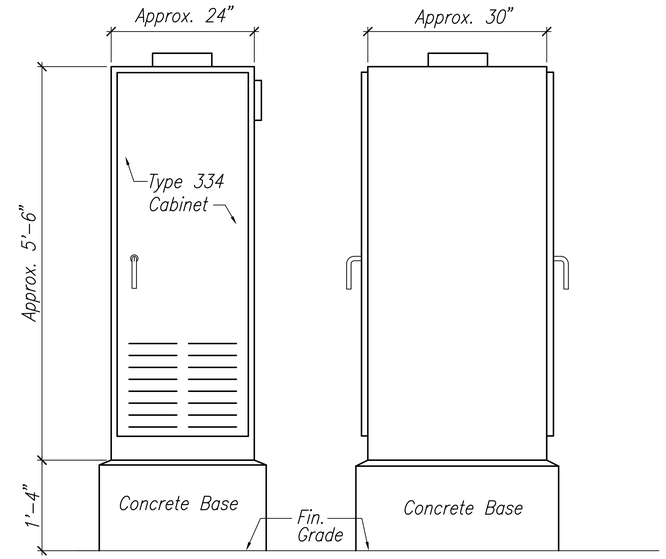


PLAN



SECTION "A" SECTION "B"

CONCRETE BASE



FRONT VIEW SIDE VIEW

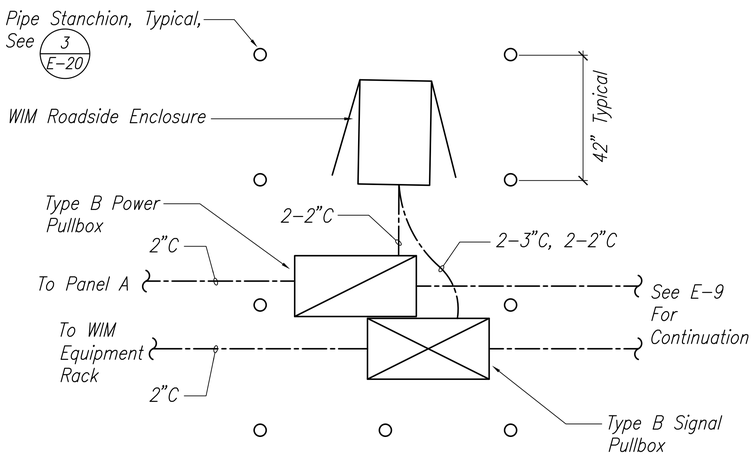
TYPE 334 CABINET

1 / E-20 WIM ROADSIDE ENCLOSURE

Not To Scale

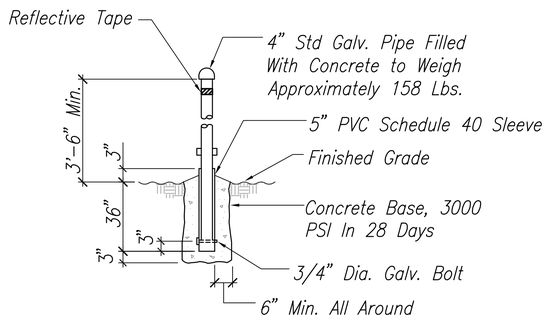
NOTES:

1. Concrete Shall Be Class "B".
2. Dimensions Shall Be Altered To Suit Controller Cabinet Actually Furnished.
3. Conduit Bend And Drain Are Incidental To Concrete Base.
4. Refer To Cabinet Manufacturer's Specifications For Details Of Anchor Bolts And Base Settings.
5. All Exposed Surfaces Of Concrete Base Shall Be Given A Class 2, Rubbed Finish.
6. Provide Type II Object Marker Per Standard Plan TE-15.



2 / E-20 WIM EQUIPMENT CABINET 2 LAYOUT

Not To Scale



NOTE:
Stanchion shall be painted yellow per ANSI Spec Z535.1 to comply with OSHA Standards for coloring code.

3 / E-20 PIPE STANCHION

Not To Scale

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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NOTE BOOK	TRACED BY	
	DESIGNED BY WC	
No.	QUANTITIES BY	
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RMTC JOB NO. : 1-19548-0E

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ECS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WIM ROADSIDE ENCLOSURE

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. E-20 OF 120 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	60	120

TRAFFIC SIGNAL NOTES:

1. The locations of the traffic signal standards, traffic signal standards with mast arms, pedestrian pushbuttons, traffic controller, pullboxes, conduits, and loop detectors shall be staked out in the field by the Contractor and approval of the locations shall be obtained from the Engineer prior to construction and installation.

2. All splicing shall be done in the pullboxes.

3. Furnishing and installing the conduit stubouts (pullboxes to edge of pavement) will not be paid for separately but, shall be considered incidental to the various contract items.

4. A solid #8 bare copper wire shall be pulled with the traffic signal control cable for equipment ground. Cost shall be incidental to the installation of the control cable.

5. Should any defect be encountered during the warranty period, the manufacturer will be notified and he shall promptly correct such defect. Service call (by factory qualified representative) during the warranty period for repairs or other maintenance shall be answered within 24 hours and shall be done at no expense to the State. All repairs shall be done as soon as possible.

6. All traffic signal work shall conform to the requirements of the "Manual on Uniform Traffic Control Devices for Streets and Highways", Federal Highway Administration (1988) and Amendments.

7. Locations of traffic markings and markers (lane lines, stop lines, crosswalk, etc.) shown on the plans shall be verified with the Engineer prior to the installation of the traffic signal system.

8. All conduits between pullboxes and traffic signal standards shall not be paid for separately, but shall be considered incidental to various contract items.

9. All signal-drop cables (Type 5 cables) from the various types of traffic signal heads on the traffic signal standards and mast arms to the pullboxes shall not be paid for separately, but considered ncidental to the traffic signal head.

10. After installing all the traffic signal cables, the Contractor shall duct seal all conduits in the pullboxes, traffic signal standards and traffic signal controller cabinet concrete base. The duct seal material shall be approved by the Traffic Signal Inspector/Engineer and shall not be paid for separately, but considered incidental to the direct buried and/or concrete encased conduits.

11. After installing the traffic signal system, the Contractor shall apply grease to all parts of the traffic signal system (i.e., fittings, brackets, nipples, elbows, screws, signal head assemblies, bolts, hinges, etc.) as directed by the Traffic Signal Inspector, to prevent rust and corrosion. The grease material shall be approved by the Signal Inspector.

12. Connecting into existing traffic signal system and marking all necessary adjustments shall not be paid for separately, but considered incidental to the various traffic signal contract items.

13. The Contractor shall notify the Traffic Control Branch, Department of Transportation Services, City & County of Honolulu, (Phone No. 523-4589) three (3) working days prior to commencing any work on the traffic signal system.

14. The Department of Transportation Services, City & County of Honolulu, will assist the Engineer in construction inspection for the traffic signal system.

15. The traffic signal system shall be kept operational during construction. Any relocation required shall be approved by the Traffic Control Branch, Department of Transportation Services, and paid for by the Contractor.

16. Contractor shall be responsible for any damages to the existing traffic signal facilities, including the traffic signal interconnect system. Any and all damages to these facilities shall be repaired by the Contractor at his cost in accordance with the requirements of the State.

17. The Contractor shall be responsible for any damages to the existing traffic signal fiber optic cable system. Any and all damages to these facilities shall be repaired by the Contractor at his cost in accordance with the requirements of the State.

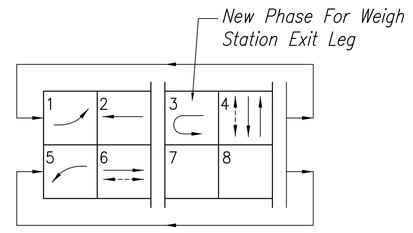
18. Abandon existing traffic signal pullboxes in sidewalks by demolishing top 6" of box, filling with #3 rock, and patching with 4" of concrete to match existing.

19. Refer to standard plans TE-32, TE-34, TE-35, TE-36 and TE-37 for traffic signal standard, pullbox and duct details.

20. Install backplates on new traffic signal heads. Backplates shall be 6" with slots to reduce wind load with 3" retroreflective border.

TRAFFIC SIGNAL SYMBOL LIST

SYMBOL	DESCRIPTION
	Existing Traffic Signal Pullbox (Type As Noted)
	New or Adjusted Traffic Signal Pullbox
	Existing Traffic Signal Type I Standard With Attached Signals
	Existing Type II Traffic Signal Mast and Attached Signals
	Existing Street Light Standard
	Existing 6' x 6' Detector Loop to Remain
	New 6' x 6' Detector Loop
	Existing Detector Loop to be Removed
	Existing Pedestrian Pushbutton
—TS—	New Traffic Signal Ductline, See E-11 For Duct Section Detail
--TS--	Existing Traffic Signal Ducts to Remain
-TS-	Existing Traffic Signal Duct to be Abandoned/Removed
	Existing Pedestrian Signal Head
C	Existing Traffic Signal Controller
TSPB	Denotes Traffic Signal Pullbox
SLPB	Denotes Street Light Pullbox



MODIFIED PHASE DIAGRAM –
SAND ISLAND ACCESS ROAD/ROAD NO. 2

No Scale

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL SYMBOL LIST,
TRAFFIC SIGNAL NOTES

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. TS-1 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	61	120

Conduit	Cable
2"	2/C #14

Conduit	Cable
2"	1-4/C #14

to existing 2 each 6' x 6' loop detectors

New 1-6' x 6' Loop Detector Centered In Lane, Typical For 4

New Type I TSS (B)

Road No. 2

existing type B TSPB

Install New 4/C #14 In Existing 2" Conduit

type I TSS to be removed by Kapalama Container Terminal Project

existing type B TSPB (C)

New Traffic Rated TSPB, See Structural Drawings For Pullbox Detail

New Type I TSS (A)

Remove Type I TSS, Demolish Foundation

Zone X

STOP

existing traffic signal controller

existing joint pole

existing traffic signal system HECo meter, meter #346973

See TS-2 For Continuation

Install New 2/C #14 In Existing Spare 2"C

existing type C TSPB

Pedestrian Signal Head And Pedestrian Pushbutton To Be Removed By Kapalama Container Terminal Project; Remove Type I TSS and Traffic Signal Head, Demolish Foundation

New Type I TSS (D)

Zone AE (EL 9)

New Traffic Head On Existing Type I TSS, Remove Existing One-Way Mounting Bracket And Provide New Two-Way, Top Of Pole Mounting Bracket

existing type II TSS

Sand Island Access Road (State)

existing loop detectors to remain, typical

to existing 4 each 6' x 6' loop detectors

existing traffic signal system secondary service conductors

existing type B TSPB

existing type I TSS, typical

existing type B TSS

existing type B TSPB

existing type B TSPB

existing type II TSS

to existing 3 each 6' x 6' loop detectors

True North

1" = 10'

TRAFFIC SIGNAL PLAN - 1

Scale: 1" = 10'

GRAPHIC SCALE

10' 5' 0' 10' 20' 30'

1" = 10'

TRAFFIC SIGNAL HEAD SCHEDULE

Traffic Signal Head Type and Description	12" RYG Traffic Signal Head	12" RY ← Traffic Signal Head
Pole Letter Signal Head Number	A-1	B-1, C-1, D-1

LIST OF MATERIALS

Pole Letter	Standard Type	Mounting Type	Signal Faces
A	I-10	Slipfitter One Way	R-Y-G
B	I-10	Slipfitter One Way	R-Y-←
C	Existing I-10	Slipfitter Two Way	R-Y-← Existing R-Y-G, Existing Opticom
D	I-10	Slipfitter One Way	R-Y-←

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HIGHWAYS DIVISION

TRAFFIC SIGNAL PLAN - 1

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. TS-2 OF 120 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	RSY	DATE
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NOTE BOOK	DESIGNED BY	WC	
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	CHECKED BY		

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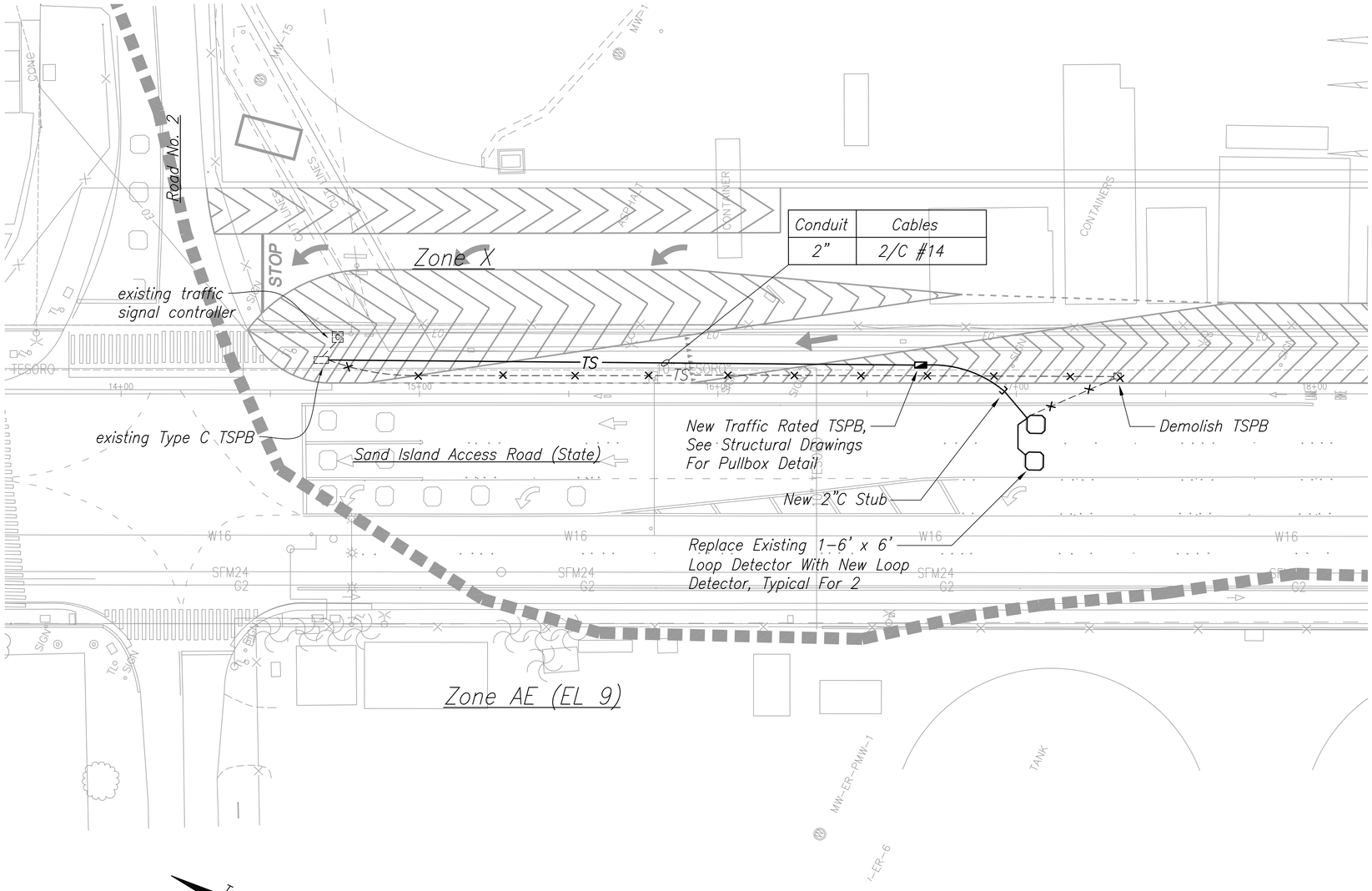
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	62	120



True North
1" =20'

TRAFFIC SIGNAL PLAN – 2

Scale: 1" = 20'

GRAPHIC SCALE

20' 0' 20' 40' 60' 80'

1" = 20'

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ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	BSY
NOTE BOOK	TRACED BY	
	DESIGNED BY	WC
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No.	CHECKED BY	

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HIGHWAYS DIVISION

TRAFFIC SIGNAL PLAN – 2

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. TS-3 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

ABBREVIATIONS

&	AND	(E)	EXISTING	L	LENGTH OR LONG		
@	AT	EA	EACH	LAM	LAMINATED	SC	SCALE OR SOLID CORE
℄	CENTERLINE	EFS	EXTERIOR FINISH SYSTEM	LAV	LAVATORY	SCD	SEAT COVER DISPENSER
'	FOOT: FEET	EIFS	EXTERIOR INSULATION & FINISH SYSTEM	LB	POUND	SCHED	SCHEDULE
"	INCH	EJ	EXPANSION JOINT			SD	SOAP DISH OR DISPENSER
#	POUND: NUMBER	EL	ELEVATION	MAX	MAXIMUM	SHT	SHEET
		ELEC	ELECTRICAL	MECH	MECHANICAL	SIM	SIMILAR
AB	ANCHOR BOLT	ELEV	ELEVATOR	MET	METAL	SL	SLOPE
AC	ASPHALT CONCRETE	ENCL	ENCLOSED	MFR'D	MANUFACTURED	SLDG	SLIDING
A/C	AIR CONDITIONING	EQ	EQUAL	MIN	MINIMUM	SND	SANITARY NAPKIN DISPENSER
ACOUS	ACOUSTICAL	EXP	EXPOSED OR EXPANSION	MISC	MISCELLANEOUS	SNR	SANITARY NAPKIN RECEPTACLE
ADJ	ADJUSTABLE	EXST	EXISTING	MLDG	MOLDING	SPEC	SPECIFICATION
AEWC	ACCESSIBLE ELECTRIC WATER COOLER	EXT	EXTERIOR	MO	MASONRY OPENING	SQ	SQUARE
AFF	ABOVE FINISHED FLOOR			MT	MARBLE THRESHOLD	SSK	SERVICE SINK
AL	ALUMINUM			MTD	MOUNTED	SSTL	STAINLESS STEEL
APPROX	APPROXIMATE	FD	FLOOR DRAIN			STD	STANDARD
ASK	ACCESSIBLE SINK	FCO	FLOOR CLEAN OUT	(N)	NEW	STL	STEEL
		FEC	FIRE EXTINGUISHER CABINET	NIC	NOT IN CONTRACT	STOR	STORAGE
BD	BOARD	FFE	FINISH FLOOR ELEVATION	NO	NUMBER	STRL	STRUCTURAL
BLK	BLOCK	FIN	FINISH	NOM	NOMINAL	STRUC	STRUCTURE
BLKG	BLOCKING	FL	FLOOR	NTS	NOT TO SCALE	SUSP	SUSPENDED
BLDG	BUILDING	FT	FOOT OR FEET			SYM	SYMMETRICAL
BOT	BOTTOM	FURR	FURRING OR FURRED	OA	OVERALL		
BS	BOTH SIDES			OC	ON CENTER	T&G	TONGUE AND GROOVE
		GA	GAUGE	OD	OUTSIDE DIAMETER	THK	THICK OR THICKNESS
		GALV	GALVANIZED	OPNG	OPENING	THR	THRESHOLD
CEM	CEMENT	GWB	GYPSUM WALL BOARD	OPP	OPPOSITE	THRU	THROUGH
CER	CERAMIC	GYP	GYPSUM			TJ	TOOLED JOINT
CJ	CONTROL JOINT			PL	PLATE	TOW	TOP OF WALL
CLG	CEILING	H	HIGH OR HEIGHT	PLAM	PLASTIC LAMINATE	TPD	TOILET PAPER DISPENSER
CLR	CLEAR	HB	HOSE BIBB	PLAS	PLASTER	TYP	TYPICAL
CMU	CONCRETE MASONRY UNITS	HC	HOLLOW CORE	PLYWD	PLYWOOD		
COL	COLUMN	HDWD	HARDWOOD	PNL	PANEL	UON	UNLESS OTHERWISE NOTED
CONC	CONCRETE	HDWE	HARDWARE	PR	PAIR	UR	URINAL
COND	CONDITION	HM	HOLLOW METAL	PTD	PAPER TOWEL DISPENSER		
CONT	CONTINUOUS	HR	HOUR	PTN	PARTITION	VCT	VINYL COMPOSITION TILE
CORR	CORRIDOR			PTR	PAPER TOWEL RECEPTACLE	VERT	VERTICAL
CT	CERAMIC TILE	ID	INSIDE DIAMETER	PVC	POLYVINYL CHLORIDE		
CTR	CENTER	IN	INCH			W	WIDE OR WIDTH
		INCL	INCLUSIVE, INCLUDED	QT	QUARRY TILE	W/	WITH
DBL	DOUBLE	INSUL	INSULATION			WC	WATER CLOSET
DET	DETAIL	INT	INTERIOR	RAD	RADIUS	WD	WOOD
DF	DRINKING FOUNTAIN			RD	ROOF DRAIN	W/O	WITHOUT
DIA	DIAMETER	JAL	JALOUSIE	REFR	REFRIGERATOR	WO	WHERE OCCURS
DIM	DIMENSION	JAN	JANITOR	REINF	REINFORCED	WP	WATERPROOF
DN	DOWN	JT	JOINT	REQ	REQUIRED	WR	WATER RESISTANT
DR	DOOR			REV	REVISION OR REVERSED	WSCT	WAINSCOT
DS	DOWNSPOUT			RM	ROOM	WWF	WELDED WIRE FABRIC
DW	DISHWASHER			RFG	ROOFING	WWM	WELDED WIRE MESH
DWG	DRAWING			RO	ROUGH OPENING		

DRAWING SYMBOLS

A / D KEY TO INTERIOR ELEVS B / C — INTERIOR ELEVATION KEY

ROOM NAME / T201 — ROOM IDENTIFICATION

1 — DOOR NUMBER
(REFER TO PLANS & DOOR SCHEDULE)

1 — WINDOW NUMBER
(REFER TO PLANS & WINDOW SCHEDULE)

— TYPE OF WALL CONSTRUCTION
(REFER TO PLANS & WALL TYPE DETAILS)

— KEYNOTE

— SIGNAGE NUMBER
(REFER TO PLANS & SIGNAGE DETAIL)

N — NORTH ARROW

1 / A-1 — DETAIL SECTION
(TOP NUMBER IDENTIFIES SECTION NUMBER, BOTTOM NUMBER IDENTIFIES SHEET WHERE SECTION IS DRAWN)

1 / A-1 — DETAIL
(TOP NUMBER IDENTIFIES DETAIL NUMBER, BOTTOM NUMBER IDENTIFIES SHEET WHERE DETAIL IS DRAWN)

DATUM POINT OR FINISH FLOOR ELEVATION

+12'-8" — CEILING HEIGHT

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	76	120

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

DENNIS S. KIMURA — LICENSED PROFESSIONAL ARCHITECT — No. 3795-A — HAWAII, U.S.A.

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D. S. K. 4/30/22
SIGNATURE — LIC. EXPIRATION
PACIFIC ARCHITECTS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ARCHITECTURAL SYMBOLS & ABBREV.

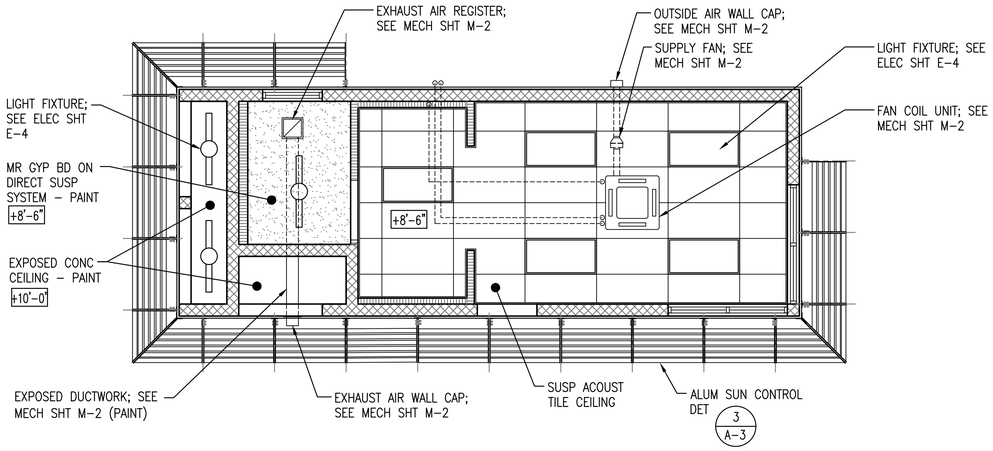
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: **As Noted** Date: **January 2021**

SHEET No. A-1 OF 120 SHEETS

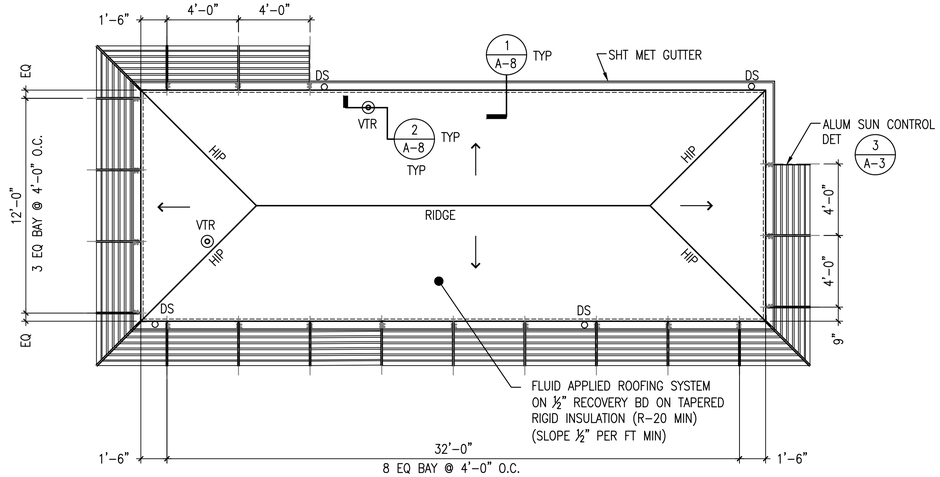
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	77	120



REFLECTED CEILING PLAN

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

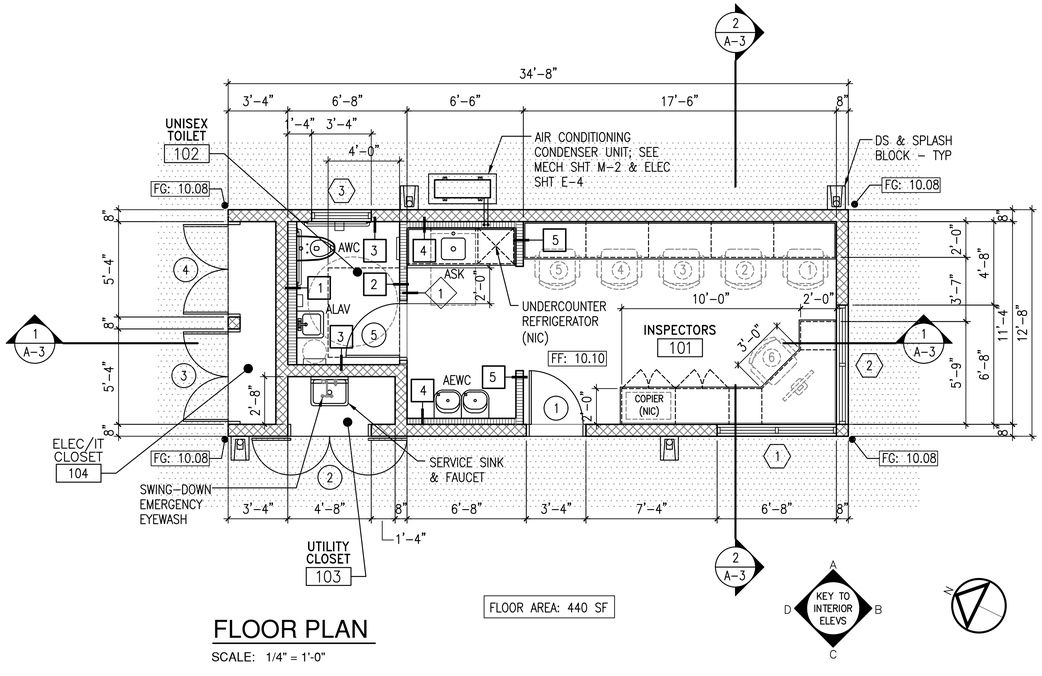


ROOF PLAN

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

ROOM FINISH SCHEDULE

ROOM NO.	ROOM	FLOOR				BASE			WALL					CEILING			
		CERAMIC TILE	RESILIENT TILE	CONCRETE WITH SEALER		CERAMIC TILE	RESILIENT BASE		CMU WALL - PREP & PAINT	GYPSUM BOARD - PREP & PAINT	WR GYPSUM BOARD - PREP & PAINT	CERAMIC TILE	CONCRETE BEAM - PREP & PAINT	SUSPENDED ACOUS TILE	WR GYPSUM BOARD - PREP & PAINT	CONCRETE - PREP & PAINT	
101	INSPECTORS		●				●		●	●	●			●			
102	UNISEX TOILET	●				●			●		●	●			●		
103	UTILITY CLOSET			●					●				●			●	
104	ELECTRICAL/IT CLOSET			●					●				●			●	



FLOOR PLAN

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

FLOOR AREA: 440 SF

GRAPHIC SCALE: 1" = 4'-0"

0 2 4 8 16

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

DENNIS S. KIMURA
LICENSED PROFESSIONAL ARCHITECT
No. 3795-A
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

PACIFIC ARCHITECTS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FLOOR, CEILING & ROOF PLANS

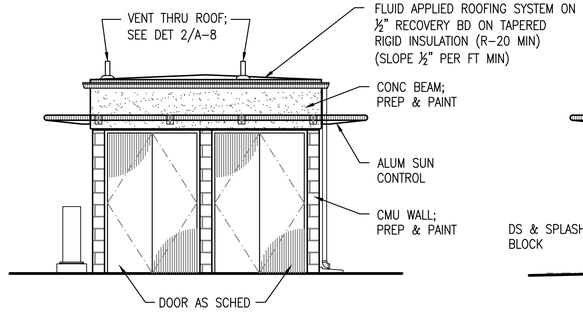
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. A-2 OF 120 SHEETS

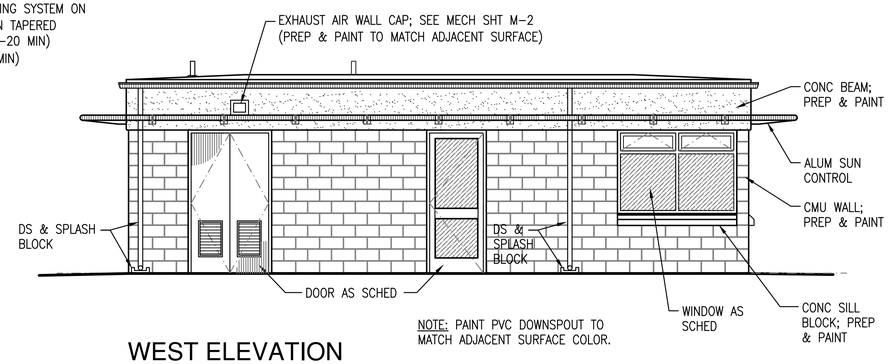
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	78	120



NORTH ELEVATION

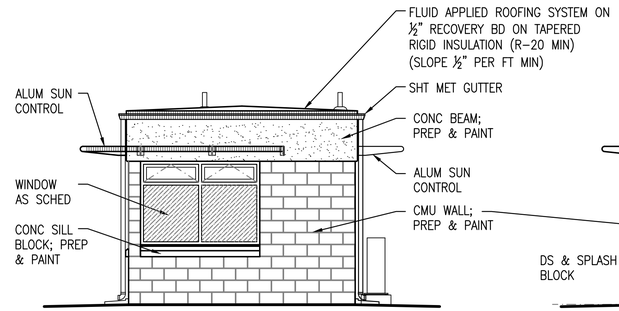
SCALE: 1/4" = 1'-0"



NOTE: PAINT PVC DOWNSPOUT TO MATCH ADJACENT SURFACE COLOR.

WEST ELEVATION

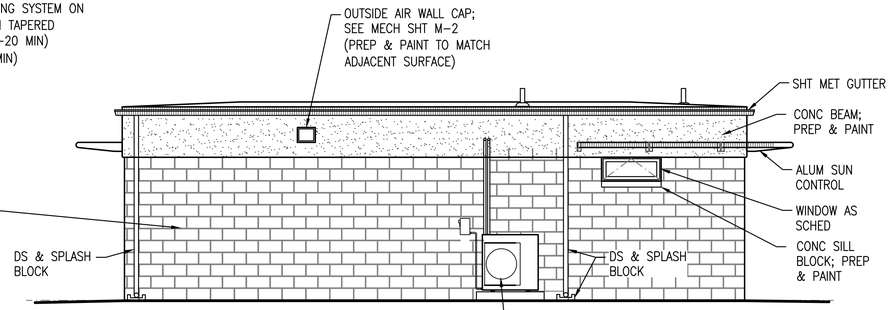
SCALE: 1/4" = 1'-0"



NOTE: PAINT PVC DOWNSPOUT TO MATCH ADJACENT SURFACE COLOR.

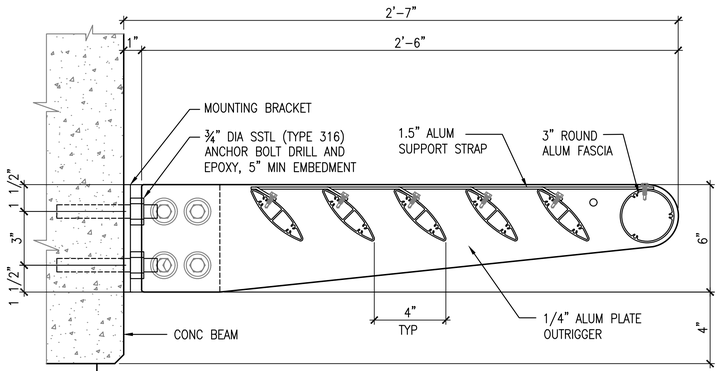
SOUTH ELEVATION

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



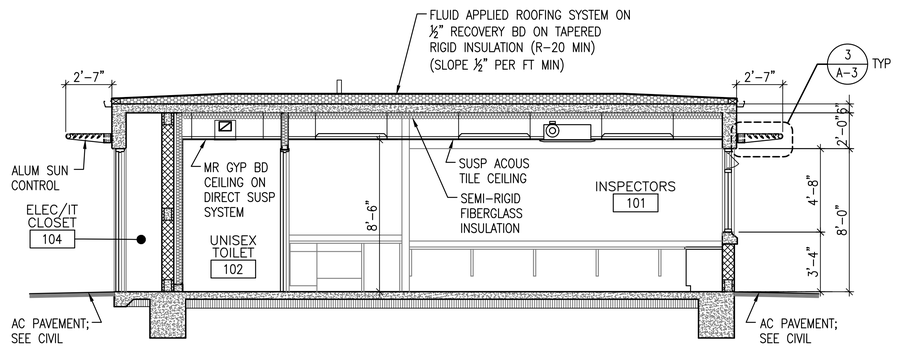
EAST ELEVATION

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



3 / A-3 SUN CONTROL DETAIL SECTION

SCALE: 6" = 1'-0"

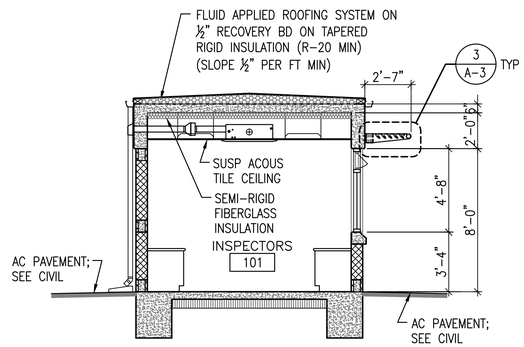


1 / A-3 BUILDING SECTION

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

GRAPHIC SCALE: 1" = 4'-0"

0 2 4 8 16



2 / A-3 BUILDING SECTION

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

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

DENNIS S. KIMURA
LICENSED PROFESSIONAL ARCHITECT
No. 3795-A
HAWAII, U.S.A.

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SIGNATURE

4/30/22
LIC. EXPIRATION

PACIFIC ARCHITECTS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXT. ELEVATIONS & BLDG. SECTIONS

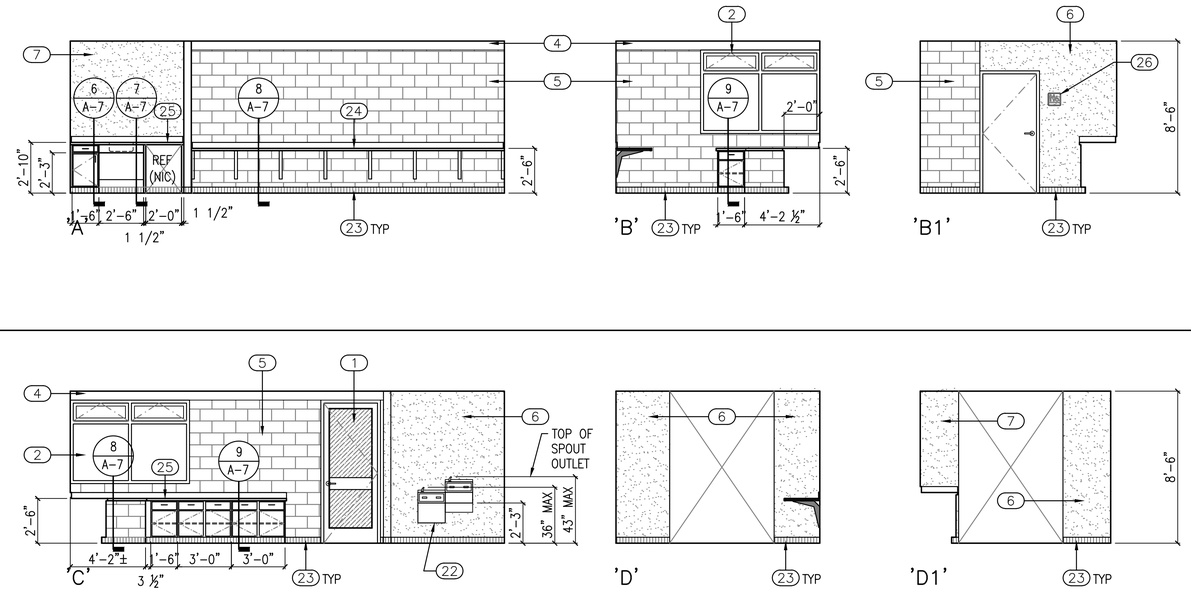
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: **As Noted** Date: **January 2021**

SHEET No. A-3 OF 120 SHEETS

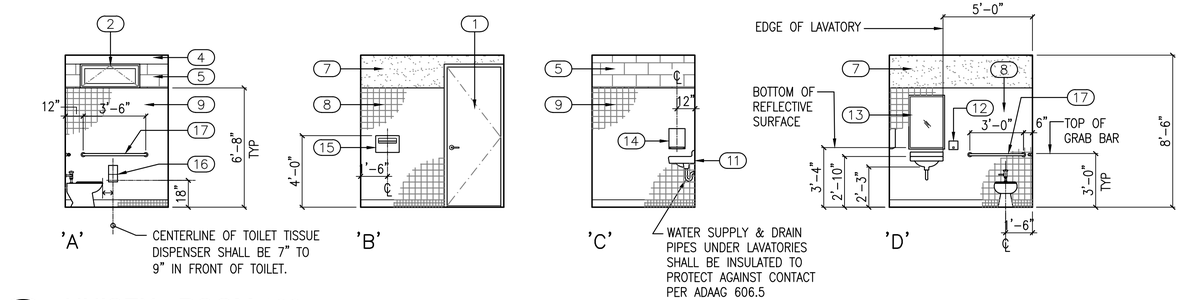
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	79	120



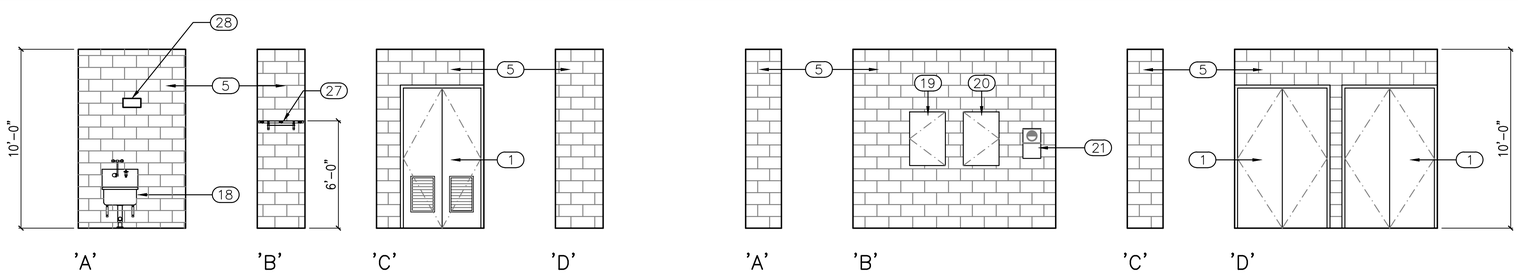
1 / A-4 INSPECTORS - ROOM 101

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



2 / A-4 UNISEX - ROOM 102

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



3 / A-4 UTILITY CLOSET - ROOM 103

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

4 / A-4 ELECTRICAL / IT CLOSET - ROOM 104

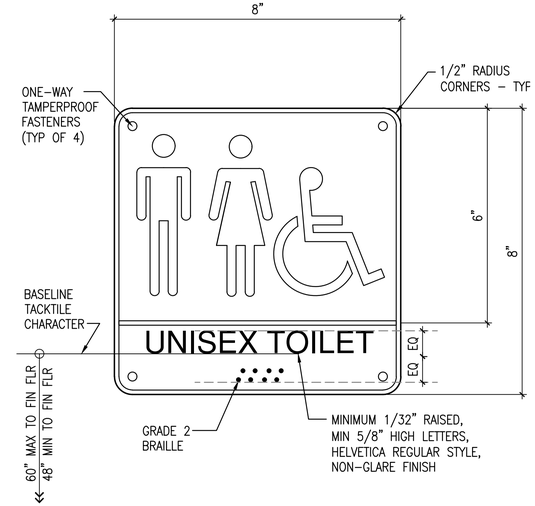
SCALE: 1/4" = 1'-0"

GRAPHIC SCALE: 1" = 4'-0"

0 2 4 8 16

NOTES

1	DOOR AS SCHEDULED; SEE SHEET A-5
2	WINDOW AS SCHEDULED; SEE SHEET A-5
3	BASE AS SCHEDULED; SEE SHEET A-5
4	CONCRETE BEAM – PREP & PAINT
5	CMU WALL – PREP & PAINT
6	GYPSUM BOARD WALL – PAINT & PAINT
7	WATER RESISTANT GYPSUM BOARD WALL – PREP & PAINT
8	CERAMIC WALL TILES & BASE ON THINSET OVER BACKER BOARD
9	CERAMIC WALL TILES & BASE ON THINSET OVER CMU WALL
10	ACCESSIBLE WATERCLOSET – SEE MECHANICAL DRAWING SHEET M-2 FOR ADDITIONAL NOTES
11	ACCESSIBLE LAVATORY – SEE MECHANICAL DRAWING SHEET M-2 FOR ADDITIONAL NOTES
12	LIQUID SOAP DISPENSER
13	24" WIDE x 30" HIGH MIRROR; SET MIRROR AT 40" ABOVE FINISH FLOOR TO BOTTOM OF REFLECTIVE SURFACE
14	PAPER TOWEL DISPENSER
15	TOILET SEAT COVER DISPENSER
16	TOILET TISSUE DISPENSER
17	GRAB BAR; SIZE AS INDICATED – PROVIDE REINFORCED BLOCKING AS REQUIRED
18	SERVICE SINK WITH SWING DOWN EMERGENCY EYEWASH – SEE MECHANICAL DRAWING SHEET M-2 FOR ADDITIONAL NOTES
19	TELEPHONE CABINET – SEE ELECTRICAL DRAWINGS FOR ADDITIONAL NOTES
20	ELECTRICAL PANEL – SEE ELECTRICAL DRAWINGS FOR ADDITIONAL NOTES
21	HECO METER SOCKET – SEE ELECTRICAL DRAWING SHEET E-4 FOR ADDITIONAL NOTES
22	ACCESSIBLE ELECTRIC WATER COOLER (AEWC); COMPLY WITH ADAAG 307 & 602 – SEE MECHANICAL DRAWING SHEET M-2 FOR ADDITIONAL NOTES
23	WALL BASE AS SCHEDULED
24	PLASTIC LAMINATE WORKSURFACE TOP, SPLASH, & EDGES
25	PLASTIC LAMINATE COUNTERTOP, SPLASH, & EDGES
26	UNISEX TOILET ROOM SIGN – SEE DETAIL 5/A-4
27	MOP HOLDER
28	WALL MOUNTED LIGHT FIXTURE SEE ELECTRICAL DRAWING SHEET E-4.



5 / A-4 SIGNAGE DETAIL

SCALE: 6" = 1'-0"

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

DENNIS S. KIMURA LICENSED PROFESSIONAL ARCHITECT No. 3795-A HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

PACIFIC ARCHITECTS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

INTERIOR ELEVATIONS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: **As Noted** Date: **January 2021**

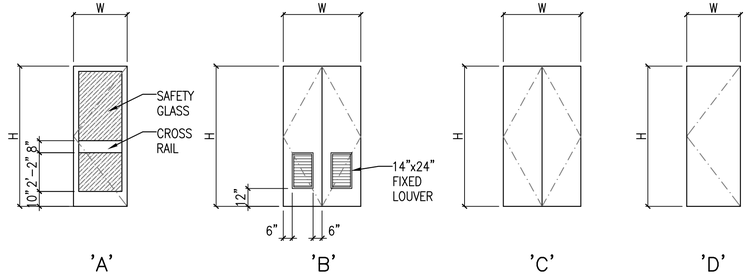
SHEET No. A-4 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

DOOR SCHEDULE

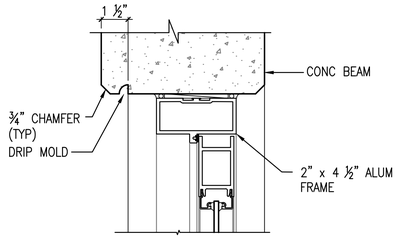
DOOR NO.	DOOR SIZE (W X H)	THICK.	TYPE	DOOR		FRAME		DETAIL			HDWR SET	REMARKS
				MAT'L.	FINISH	MAT'L.	FINISH	HEAD	JAMB	THRESHOLD		
1	3'-0" x 7'-10"	1-3/4"	A	ALUM	SEE SPECS	ALUM	SEE SPECS	1/A-5	2/A-5	3/A-5	01	STOREFRONT ENTRANCE
2	4'-4" x 7'-10"	1-3/4"	B	ALUM	SEE SPECS	ALUM	SEE SPECS	4/A-5	4/A-5 SIM	5/A-5	02	FLUSH ALUM DOOR W/ LOUVER
3	5'-0" x 7'-10"	1-3/4"	C	ALUM	SEE SPECS	ALUM	SEE SPECS	4/A-5	4/A-5 SIM	5/A-5	02	FLUSH ALUM DOOR
4	5'-0" x 7'-10"	1-3/4"	C	ALUM	SEE SPECS	ALUM	SEE SPECS	4/A-5	4/A-5 SIM	5/A-5	02	FLUSH ALUM DOOR
5	3'-0" x 7'-10"	1-3/4"	D	ALUM	SEE SPECS	ALUM	SEE SPECS	6/A-5	6/A-5 SIM	7/A-5	03	UNDERCUT DOOR 3/4" AFF

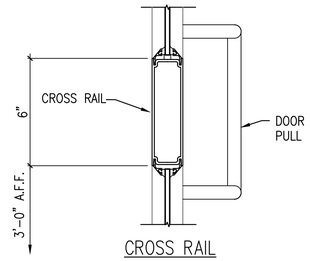
DOOR TYPES



GRAPHIC SCALE: 1" = 4'-0"

0 2 4 8 16

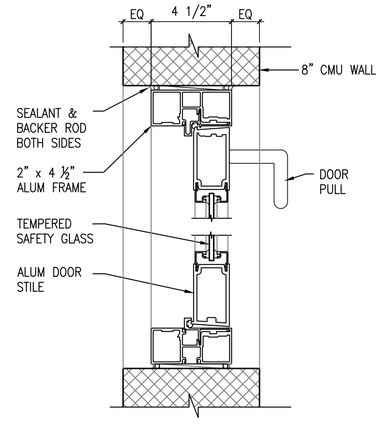




CROSS RAIL

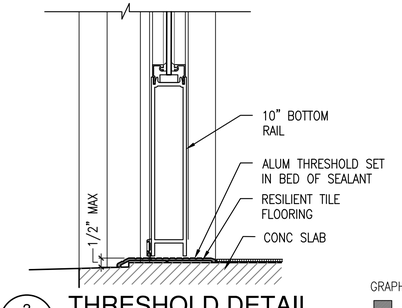
1 A-5 HEAD DETAIL

SCALE: 3" = 1'-0"



2 A-5 JAMB DETAIL

SCALE: 3" = 1'-0"

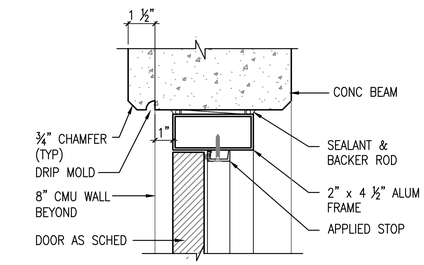


3 A-5 THRESHOLD DETAIL

SCALE: 3" = 1'-0"

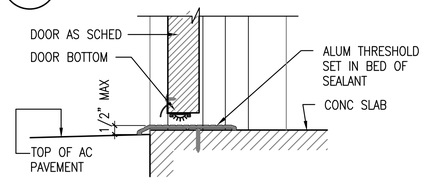
GRAPHIC SCALE: 1" = 4"

0 2 4 8 16



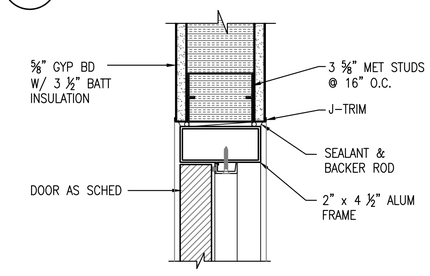
4 A-5 HEAD DETAIL (JAMB SIM)

SCALE: 3" = 1'-0"



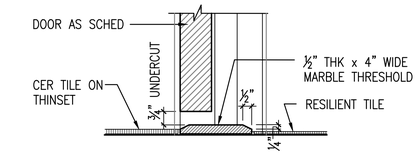
5 A-5 THRESHOLD DETAIL

SCALE: 3" = 1'-0"



6 A-5 HEAD DETAIL (JAMB SIM)

SCALE: 3" = 1'-0"



7 A-5 THRESHOLD DETAIL

SCALE: 3" = 1'-0"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	80	120

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

DENNIS S. KIMURA
LICENSED PROFESSIONAL ARCHITECT
No. 3795-A
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

PACIFIC ARCHITECTS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DOOR SCHEDULE & DETAILS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: **As Noted** Date: **January 2021**

SHEET No. A-5 OF 120 SHEETS

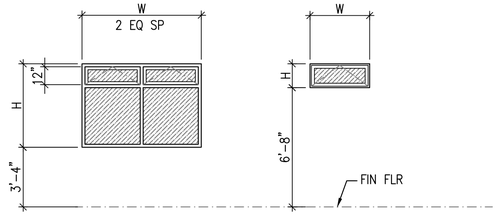
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	81	120

WINDOW SCHEDULE

WINDOW NO.	WINDOW SIZE (ROW x ROH)	TYPE	FRAME		GLAZING	DETAIL				REMARKS
			MAT'L	FINISH		HEAD	JAMB	MULLION	SILL	
1	6'-8" x 4'-8"	A	ALUM	SEE SPECS	TINTED	1/A-6	2/A-6	4/A-6	3/A-6	
2	6'-8" x 4'-8"	A	ALUM	SEE SPECS	TINTED	1/A-6	2/A-6	4/A-6	3/A-6	
3	3'-4" x 1'-4"	A	ALUM	SEE SPECS	TINTED	5/A-6	5/A-6 SIM	–	6/A-6	

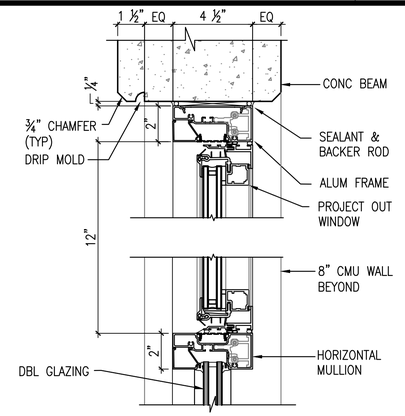
WINDOW TYPES



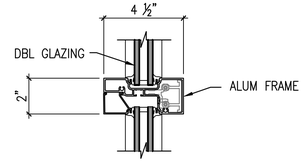
'A'
FIXED/AWNING WINDOW

'B'
AWNING WINDOW

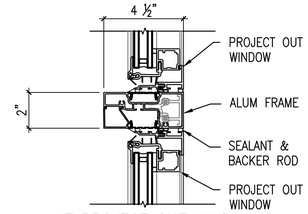
GRAPHIC SCALE: 1" = 4'-0"
0 2 4 8 16



HORIZONTAL MULLION



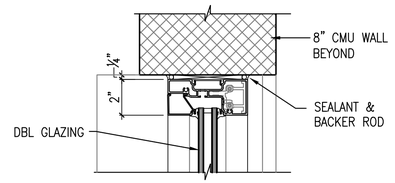
AT FIXED WINDOW



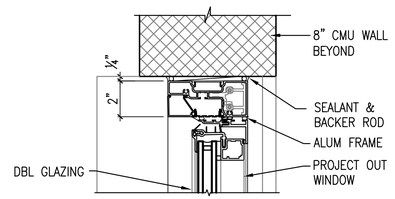
AT PROJECT OUT WINDOW

1 A-6 HEAD DETAIL
SCALE: 3" = 1'-0"

4 A-6 MULLION DETAILS
SCALE: 3" = 1'-0"

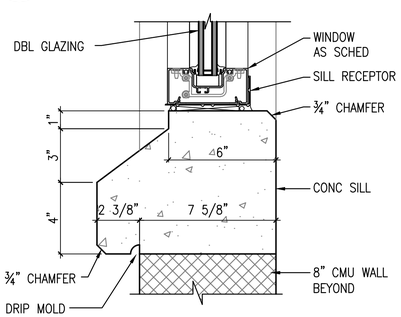


AT FIXED WINDOW

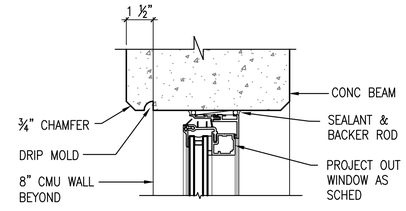


AT PROJECT OUT WINDOW

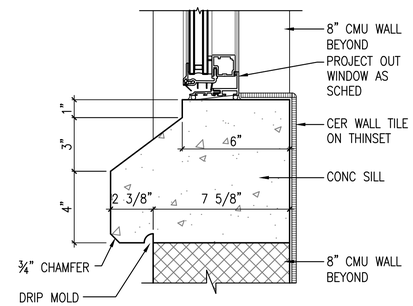
2 A-6 JAMB DETAILS
SCALE: 3" = 1'-0"



3 A-6 SILL DETAIL
SCALE: 3" = 1'-0"



5 A-6 HEAD DETAIL (JAMB SIM)
SCALE: 3" = 1'-0"



6 A-6 SILL DETAIL
SCALE: 3" = 1'-0"

GRAPHIC SCALE: 1" = 4"
0 2 4 8 16

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

DENNIS S. KIMURA
LICENSED PROFESSIONAL ARCHITECT
No. 3795-A
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

PACIFIC ARCHITECTS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WINDOW SCHEDULE & DETAILS

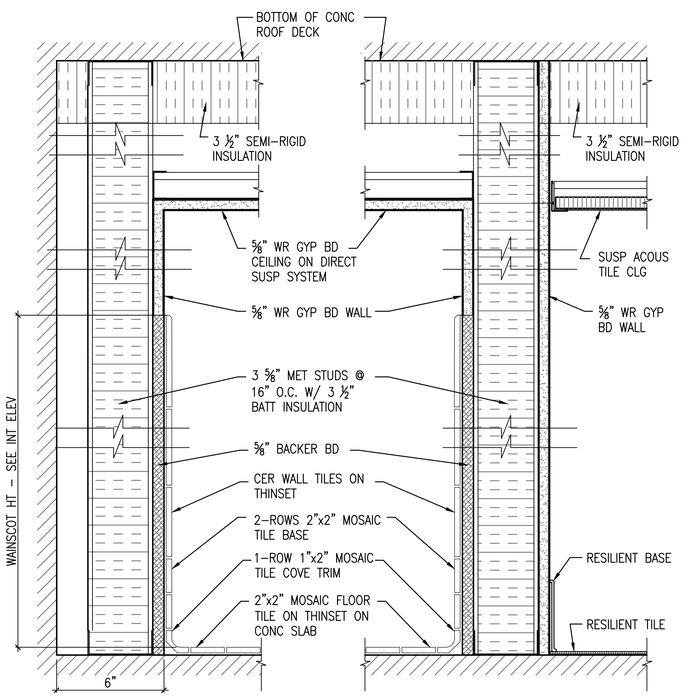
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. A-6 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

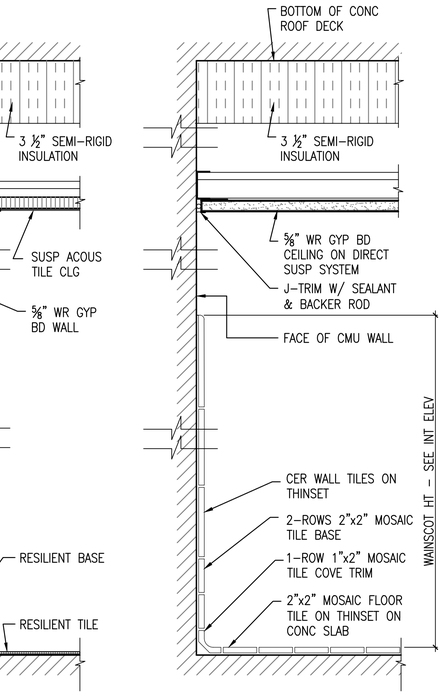
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	82	120



1

1/A-7 WALL TYPE 1

SCALE: 3" = 1'-0"



2

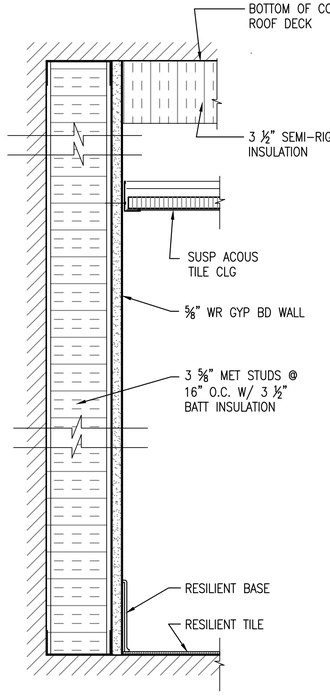
2/A-7 WALL TYPE 2

SCALE: 3" = 1'-0"

3

3/A-7 WALL TYPE 3

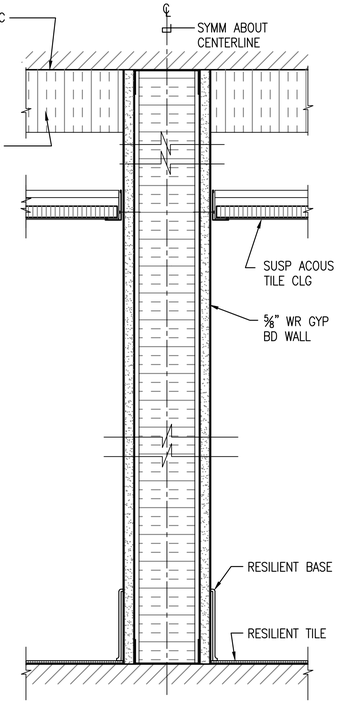
SCALE: 3" = 1'-0"



4

4/A-7 WALL TYPE 4

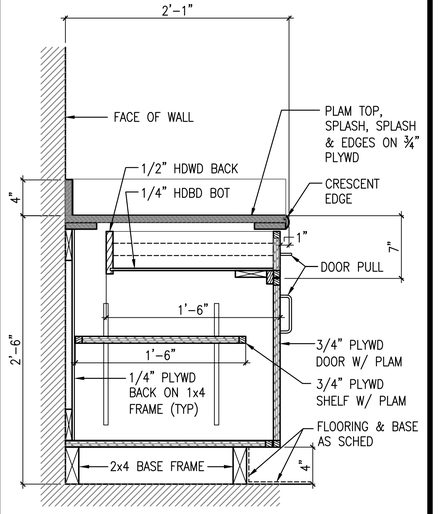
SCALE: 3" = 1'-0"



5

5/A-7 WALL TYPE 5

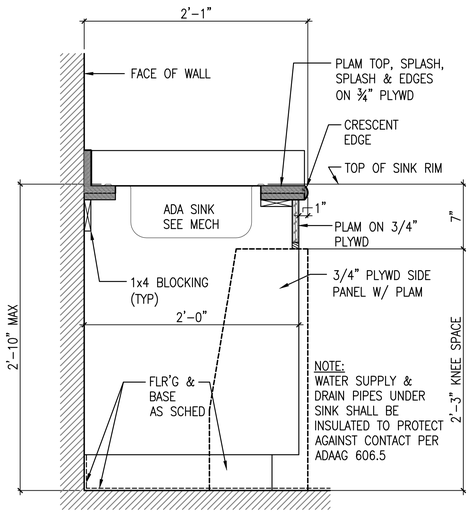
SCALE: 3" = 1'-0"



9

9/A-7 CABINET DETAIL

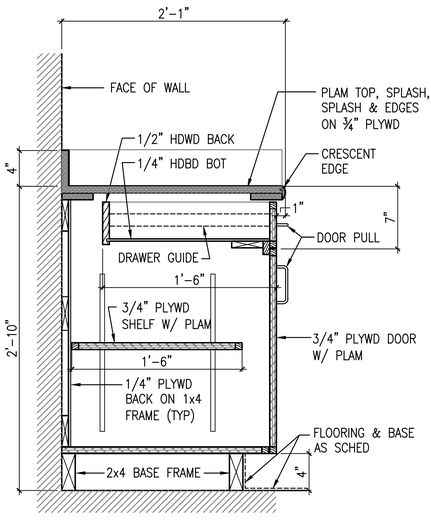
SCALE: 1 1/2" = 1'-0"



6

6/A-7 SINK CABINET DETAIL

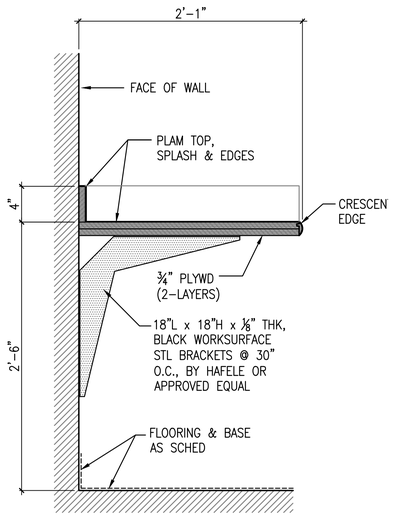
SCALE: 1 1/2" = 1'-0"



7

7/A-7 CABINET DETAIL

SCALE: 1 1/2" = 1'-0"



8

8/A-7 WORKSURFACE DETAIL

SCALE: 1 1/2" = 1'-0"

GRAPHIC SCALE: 1" = 4"

0 2 4 8 16

GRAPHIC SCALE: 1" = 8"

0 4 8 16 32

ORIGINAL PLAN	SEWER PLOTTED BY	RST	DATE
	DRAWN BY		
NOTE BOOK	TRACED BY	WC	
	DESIGNED BY		
	QUANTITIES BY		
No.	CHECKED BY		

DENNIS S. KIMURA
LICENSED PROFESSIONAL ARCHITECT
No. 3795-A
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

PACIFIC ARCHITECTS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WALL TYPES & MILLWORK DETAILS

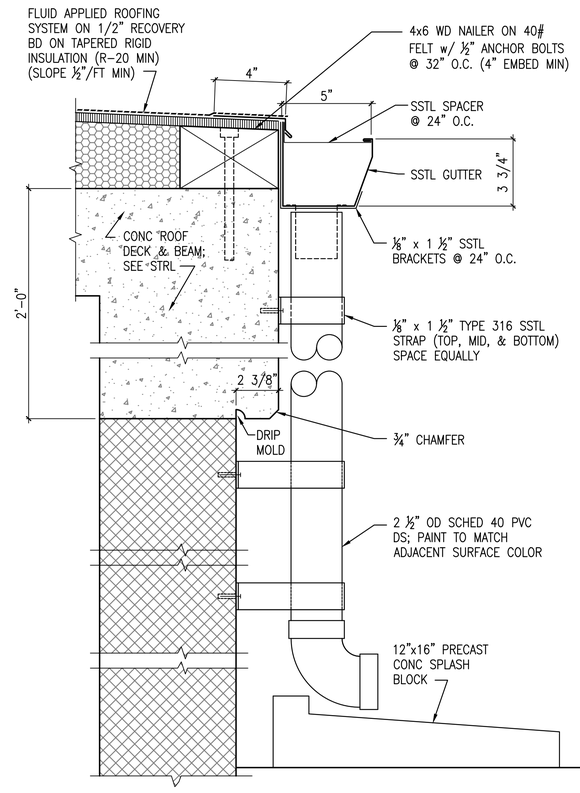
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: **As Noted** Date: **January 2021**

SHEET No. A-7 OF 120 SHEETS

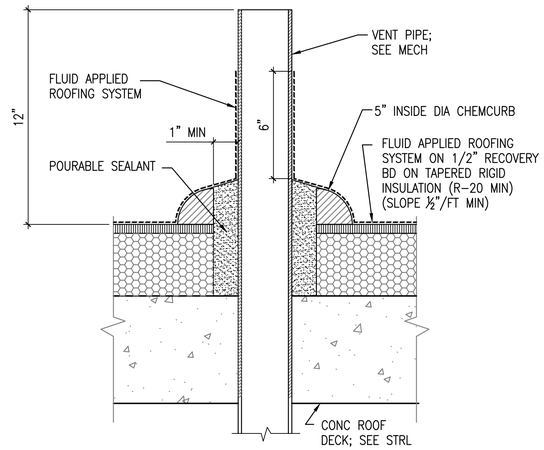
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	83	120



1 / A-8 GUTTER & DOWNSPOUT (DS) DETAIL

SCALE: 3" = 1'-0"



2 / A-8 VENT PIPE FLASHING

SCALE: 3" = 1'-0"

ORIGINAL PLAN	SHEET PLOTTED BY	DATE
NOTE BOOK	DRAWN BY BST	
No.	TRACED BY	
	DESIGNED BY WC	
	QUANTITIES BY	
	CHECKED BY	

GRAPHIC SCALE: 1" = 4"

0 2 4 8 16

DENNIS S. KIMURA LICENSED PROFESSIONAL ARCHITECT No. 3795-A HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

PACIFIC ARCHITECTS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS

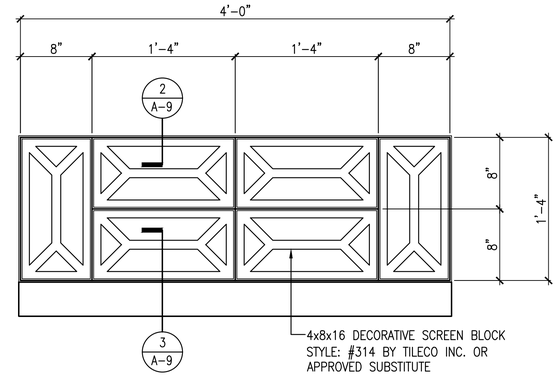
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: **As Noted** Date: **January 2021**

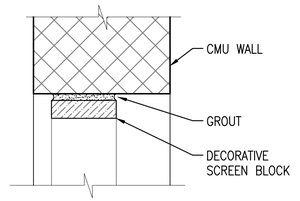
SHEET No. A-8 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

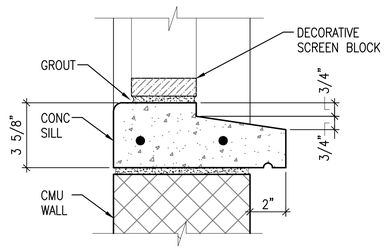
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	84	120



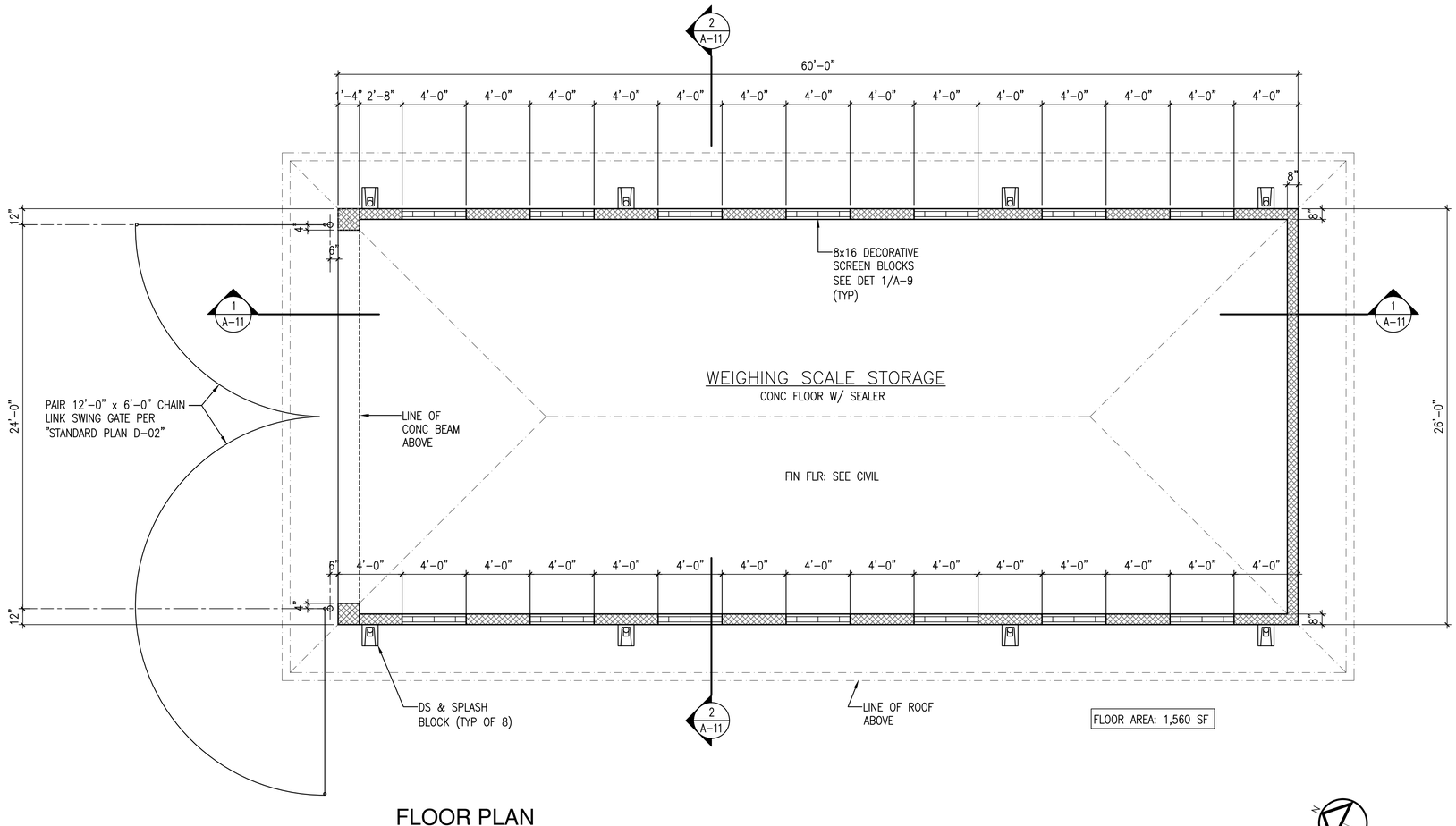
1 A-9 **DECORATIVE SCREEN BLOCK**
SCALE: 1 1/2" = 1'-0"



2 A-9 **HEAD DETAIL (JAMB SIM)**
SCALE: 3" = 1'-0"



3 A-9 **SILL DETAIL**
SCALE: 3" = 1'-0"



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

GRAPHIC SCALE: 1" = 4'-0"
0 2 4 8 16

GRAPHIC SCALE: 1" = 8"
0 2 4 8 16

GRAPHIC SCALE: 1" = 4
0 2 4 8 16

ORIGINAL PLAN	SIGNED PLOTTED BY RST DATE
	DRAWN BY . . . . .
NOTE BOOK	TRACED BY WC
	DESIGNED BY
No.	QUANTITIES BY
	CHECKED BY

DENNIS S. KIMURA
LICENSED PROFESSIONAL ARCHITECT
No. 3795-A
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION
PACIFIC ARCHITECTS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

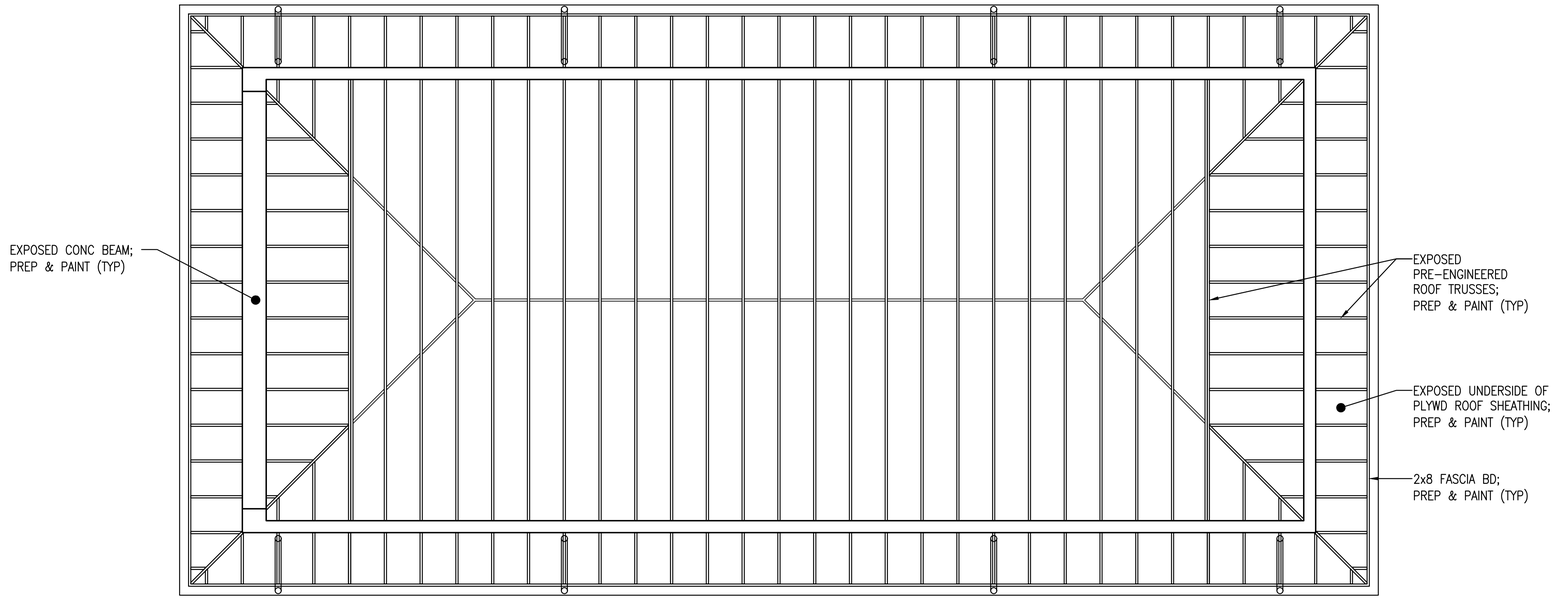
WEIGHING SCALE STORAGE
FLOOR PLAN
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: **As Noted** Date: **January 2021**

SHEET No. A-9 OF 120 SHEETS

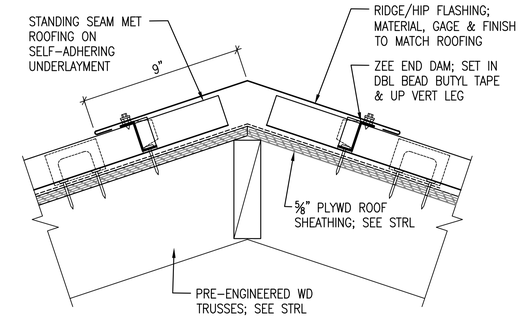
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	85	120



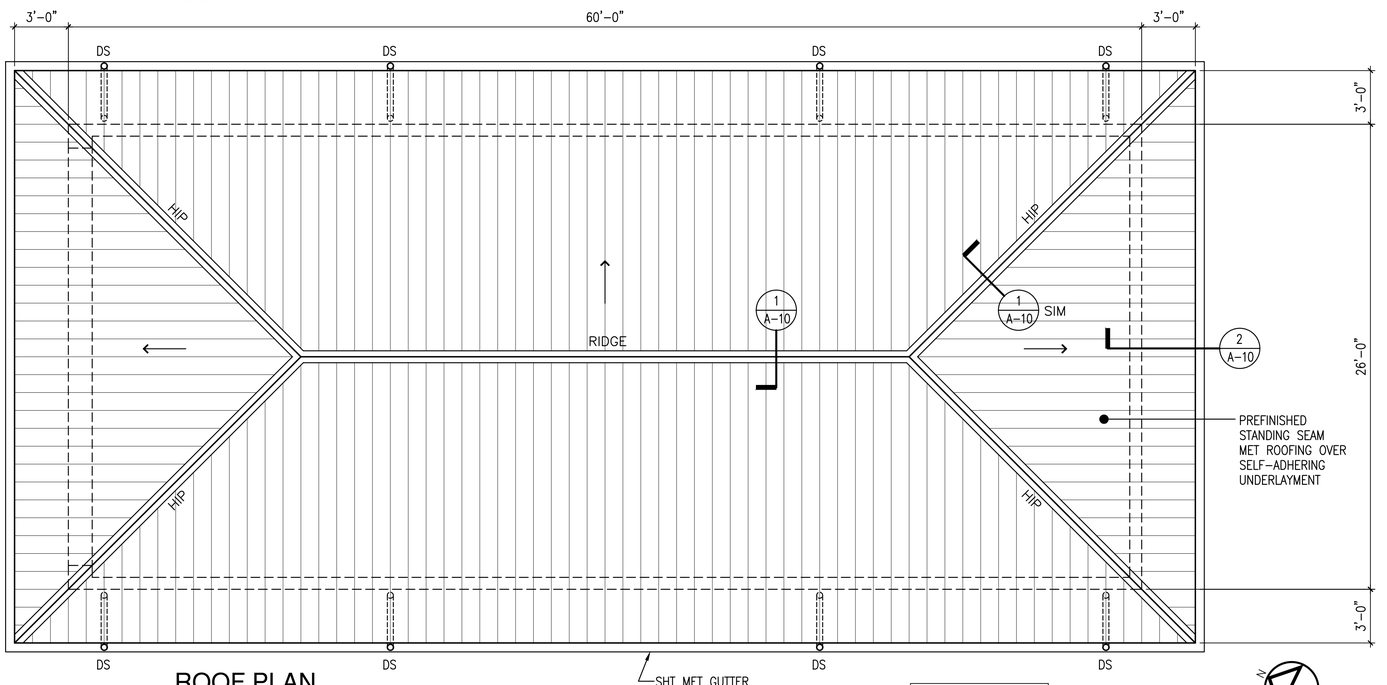
REFLECTED CEILING PLAN

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



1/A-10 RIDGE DETAIL

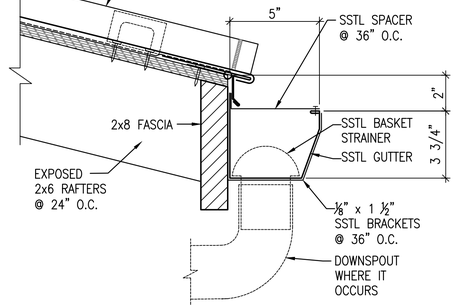
SCALE: 3" = 1'-0"



ROOF PLAN

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

FLOOR AREA: 1460 SF



2/A-10 GUTTER DETAIL

SCALE: 3" = 1'-0"

NOTE:
DOWNSPOUT & SPLASH BLOCK SIM TO DET 1/A-8

GRAPHIC SCALE: 1" = 4'-0"

0 2 4 8 16

ORIGINAL PLAN
NOTE BOOK
SURVEY PLOTTED BY BSY DATE
DRAWN BY *
TRACED BY *
DESIGNED BY WC
QUANTITIES BY *
CHECKED BY *
No.

DENNIS S. KIMURA
LICENSED PROFESSIONAL ARCHITECT
No. 3795-A
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SIGNATURE 4/30/22 LIC. EXPIRATION

PACIFIC ARCHITECTS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

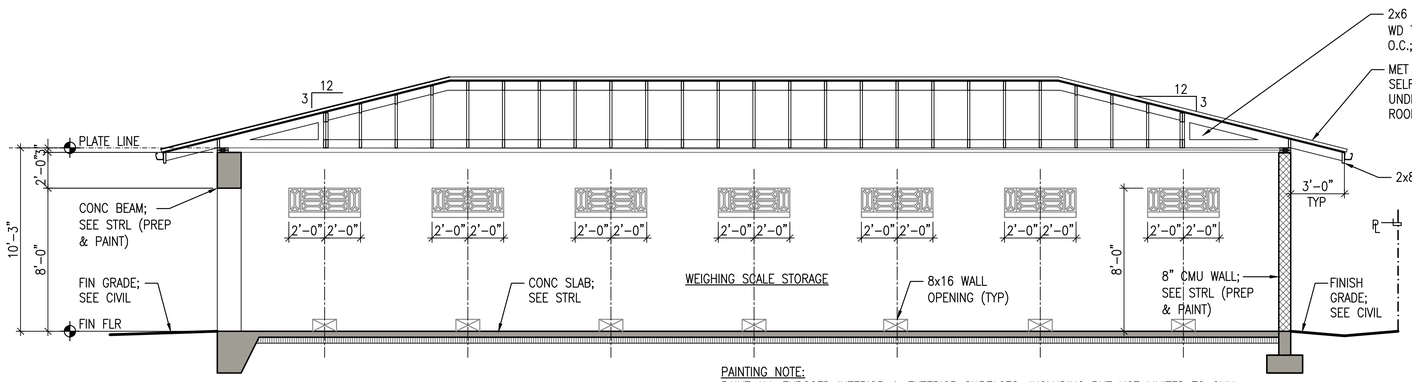
WEIGHING SCALE STORAGE
REFLECTED CEILING PLAN, ROOF PLAN
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: **As Noted** Date: **January 2021**

SHEET No. A-10 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

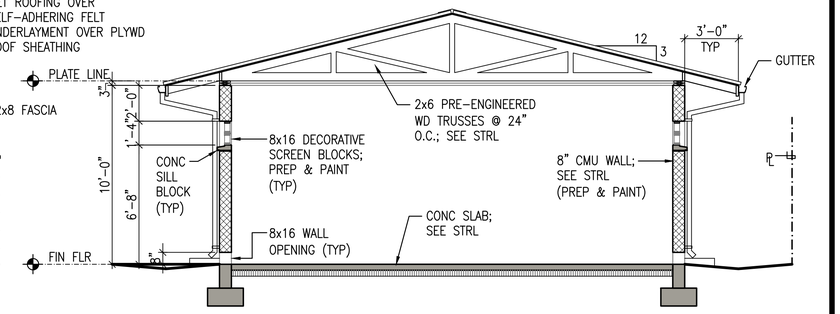
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	86	120



1 A-11 **BUILDING SECTION**

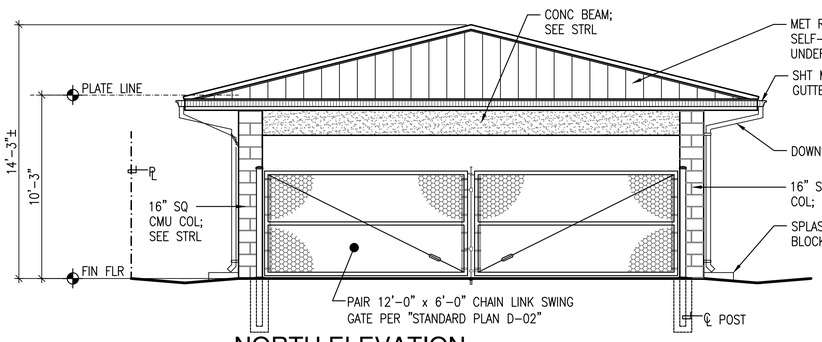
SCALE: 1/4" = 1'-0"

PAINTING NOTE:
PAINT ALL EXPOSED INTERIOR & EXTERIOR SURFACES, INCLUDING BUT NOT LIMITED TO CMU WALLS, CONCRETE BEAM, DECORATIVE SCREEN BLOCKS, CONCRETE SILL BLOCKS, WOOD TRUSSES, PLYWOOD ROOF SHEATHING, FASCIA, WOOD BLOCKING, METAL TIES, BOLTS, ETC. UNLESS NOTES OTHERWISE.



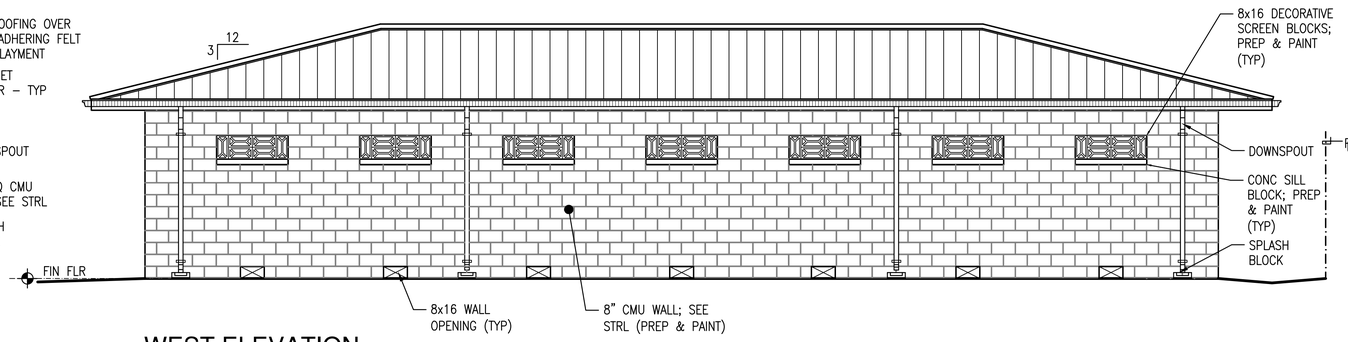
2 A-11 **BUILDING SECTION**

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



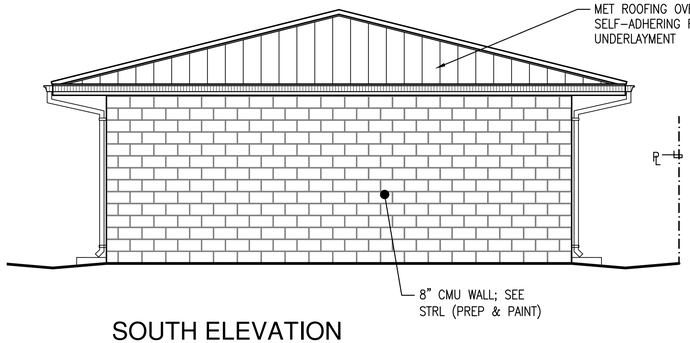
NORTH ELEVATION

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



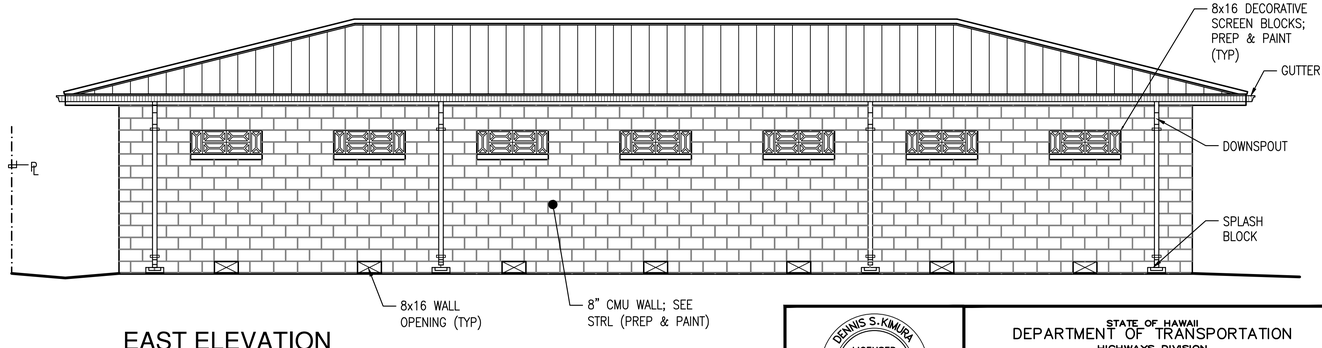
WEST ELEVATION

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



SOUTH ELEVATION

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



EAST ELEVATION

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

GRAPHIC SCALE: 1" = 4'-0"

0 2 4 8 16

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

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SIGNATURE 4/30/22 LIC. EXPIRATION

PACIFIC ARCHITECTS, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGHING SCALE STORAGE
EXTERIOR ELEVATIONS & BLDG SECTIONS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: **As Noted** Date: **January 2021**

SHEET No. A-11 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	91	120

General:

A. Workmanship and materials shall conform to the building code of the City and County of Honolulu (Amended IBC 2012 Edition). However, where reference is made to performance conforming to other standards the more stringent shall apply.
B. The contractor shall take field measurements and verify field conditions and shall compare such field measurements and conditions with the drawings before commencing the work. Report in writing to the engineer all inconsistencies or omissions.
C. The contractor shall be responsible for methods of construction, work and job safety. The contractor shall provide temporary shoring and bracing as required for stability of structural members and systems.
D. Details noted as typical on structural drawings shall apply in all conditions unless specifically shown or noted otherwise.
E. The contractor shall be responsible for coordinating the work of all trades.
F. The contractor shall be responsible for protection of the adjacent properties, structures, streets, and utilities during the construction period. Any damage or deteriorated property shall be restored to the condition prior to the beginning of work or better at no cost to the owner.

Design Criteria:

A. Live loads
   1. Roof ---------- 20 psf
   2. Floor ---------- 125 psf
B. Soils
   1. Allowable bearing capacity:---------- 3000 psf
   2. Foundation coefficient of friction:---------- 0.35
C. Wind design data
   1. Basic wind speed (3-second gust, ultimate):---------- 130 mph
   2. Risk category:---------- II
   3. Exposure category:---------- D
D. Earthquake design data
   1. Risk category:---------- II
   2. Mapped spectral response accelerations
      a. Short period:---------- 0.574g
      b. 1-sec period:---------- 0.166g
   3. Site class:---------- D
   4. Design category:---------- D

Reinforcing Steel:

A. New reinforcing steel shall be deformed bars conforming to ASTM A615, Grade 60.
B. Welded reinforcing steel shall be low alloy deformed bars conforming to ASTM A706, Grade 60.
C. Plain welded wire fabric shall conform to ASTM A185, galvanized; deformed welded wire fabric shall conform to A497, galvanized. Only flat sheets of welded wire fabric shall be used. No rolled welded wire fabric reinforcement will be allowed.
D. Clear concrete coverage for reinforcing bars shall be as follows, unless otherwise noted:
   1. Footing, wall, etc. Cast against earth:---------- 3"
   2. Footing, wall etc. Formed and exposed to earth:---------- 2"
   3. Wall faces exposed to earth or weather: ---------- 2"
   4. All others:---------- 2"

Reinforcing Steel Continue:

E. Splices:
   1. Reinforcing steel shall be spliced only where indicated on plans. Provide lap splice length per typical details and schedule, unless otherwise noted.
   2. Plain welded wire fabric shall be lapped 8 inches or one full mesh plus 2 inches, whichever is greater.
   3. Deformed welded wire fabric shall be lapped 12 inches or one full mesh plus 2 inches, whichever is greater. The overlap measured between the outmost cross wires of each fabric sheet shall not be less than 2.0 inches.
   4. Offset laps of adjoining welded wire fabric sheet widths to prevent continuous laps in either direction.
F. Bar bends and hook shall be "standard hooks" in accordance with ACI 318.

Concrete:

A. Concrete construction shall conform to american concrete institute ACI 318.
B. Concrete shall be normal weight and shall have the following minimum 28 days compressive strength of 4000 psi.
C. All inserts, anchor bolts, plates, etc. Embedded in concrete shall be H.D. Galvanized unless other wise noted.
D. Conduits, pipes, and sleeves passing through concrete area not conforming to typical details shall be located and submitted to the engineer for approval.
E. Construction joints may be located by the contractor and submitted to the engineer for approval. Construction joints shall be made and located as not to impair the strength of the structure and to minimize shrinkage stresses. All construction joints shall be cleaned, laitance removed and wetted. See typical details for specific requirements.
F. Non-shrink grouts shall be premixed compound consisting of non-metallic. Aggregate and shall be in accordance with ASTM C1107. Non-shrink grout shall be non-staining types, cement, water reducing and plasticizing agents capable of developing minimum compressive strength of 4,000 psi in 3 days and 7,000 psi in 28 days.
G. Joint filler shall be ASTM D1751 or ASTM D994; asphalt impregnated fiberboard or felt 1/2 inch thick.
H. Unless otherwise noted, chamfer all concrete edges 3/4".
I. Concrete delivery tickets shall record all free water in the mix: at batching by plant, for consistency by driver, and any additional request by contractor if permitted by the mix design.
J. Reinforcing bars, anchor bolts, inserts and other items to be cast in the concrete shall be secured in position prior to placement of concrete.

Structural Steel:

A. Fabrication and erection of structural steel shall conform to the American Institute of Steel Construction manual of steel construction, thirteenth edition.
B. Structural steel shall conform to ASTM A36 unless otherwise noted.
C. Bolts shall conform to ASTM A307, Grade A unless otherwise noted.
D. Welds and welding procedures shall conform to the Structural Welding Code AWS D1.1 of the American Welding Society.
E. Welding shall be performed by welders prequalified for welding procedures to be used.
F. Welding electrodes shall be E70xx.
G. All anchor bolts, plates, and other items to be cast in concrete shall be hot-dipped galvanized according to ASTM A153 unless otherwise noted.

Concrete Masonry Units (CMU):

A. Concrete masonry units shall be type ii, normal weight hollow load-bearing units conforming to ASTM C-90 and have a minimum compressive strength of 1,500 psi. The units shall be sampled and tested per ASTM C-140.
B. Mortar shall be type m conforming to ASTM C270 and have a minimum compressive strength of 1900 psi at 28 days. Pre-measured bags for mortar are permitted if in conformance with all requirements stated above.
C. Grout shall conform to ASTM C476 with a minimum compressive strength of 2,000 psi at 28 days. The compressive strength of grout shall be determined in accordance with ASTM C-1019.
D. All cells and bond courses shall be grouted.
E. Masonry construction shall comply with section 2104 of the IBC and ACI 530.1-11 / TMS 402-05, unless noted otherwise.
F. Grout lift height shall not exceed five (5) feet.
G. When grouting is stopped for one hour or longer, horizontal construction joints shall be formed by stopping the grout pour 1 1/2 inches below the top of the uppermost unit.
H. The contractor shall locate contraction joints so as not to impair the strength of the structure and to minimize shrinkage stresses. Submit location of contraction joints to the engineer for approval, unless location is specifically noted. Maximum spacing between contraction joints shall be 25 feet, unless noted otherwise.
I. Walls shall be constructed in conventional running bond, unless otherwise noted.
J. See architectural drawings for laying pattern, height of units, surface texture, and joint type.
K. Exposed joints shall be finished with a concaved compressed finish, unless otherwise noted.
L. Open-ended blocks may be substituted for standard concrete masonry units at contractor's option.

Vapor Barrier:

Vapor barrier shall have the following qualities:
A. Conform to ASTM E 1745 class A.
B. Minimum thickness of 15 mils.
C. Minimum wvtr as tested by ASTM E 96 of 0.008.

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

KEN KAZUO HAYASHIDA
LICENSED PROFESSIONAL ENGINEER
No. 6818-S
HAWAII, U.S.A.

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SIGNATURE — LIC. EXPIRATION 4/30/22
KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES - 1

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. S-1 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	92	120

Foundation:

A. *Foundation design is based on Geotechnical Report by Geolabs, inc., dated October 27, 2016.*

B. *Contractor shall provide de-watering of excavated areas, as required.*

C. *Contractor shall provide design and installation of all cribbing, sheeting, and shoring necessary to preserve excavations and earth banks. Shoring shall conform to OSHA regulations.*

D. *Footings shall bear on undisturbed in-situ firm soils bottom of footings shall be compacted to provide a relatively firm and smooth bearing surface prior to placement of reinforcing steel and concrete. If soft and/or loose materials are encountered at the bottom of footing excavations, they shall be over-excavated to expose the underlying firm materials. The over-excavated area shall be backfilled with select granular material compacted to a minimum of 90% relative compaction or the footing bottom may be extended down to the underlying competent material. Contractor may substitute flowable concrete or the granular material upon approval from the engineer.*

E. *Excavations for footings shall be approved by the licensed geotechnical engineer in State of Hawaii (provided by contractor) prior to placement of concrete and reinforcing.*

F. *Engineered fill and backfill shall be in accordance with section 703.20 of the Hawaii Standard Specifications for Road and Bridge construction, 2005 edition.*

G. *Fill should be moisture conditioned to within two percent of the optimum moisture content and placed in horizontal lifts not to exceed six inches. Fill shall be compacted to minimum 90% relative density as measured by ASTM D1557, method A or D.*

H. *Controlled low-strength material (CLSM) shall be in accordance with entire section 314 of the Hawaii Standard Specifications for Road and Bridge construction, 2005 edition. The CLSM shall be placed as shown in the drawings or as approved by the engineer in writing.*

Dimension Lumber:

A. *Wood used for supporting loads shall be identified by the grade mark of a lumber grading or inspection agency that has been approved by an accreditation body that complies with American Softwood Lumber Standard DOC PS 20 or equivalent.*

B. *Unless noted otherwise, wood used for supporting loads shall have the following grades or better:*

1. *2x: ---------- grade no. 2*

C. *Wood structural panels shall conform to the requirements for their type in DOC PS 1 or PS 2. Each panel or member shall be identified for grade and glue type by the trademarks of an approved testing agency.*

D. *Wood supporting permanent structures shall be preservative treated and conform to the requirements of the applicable AWPA standard for the species, product, preservative, and end use. Preservative shall conform to AWPA C2.*

E. *Wood required to be preservative treated shall bear the quality mark of an inspection agency.*

F. *Wood shall be at a moisture content of 19 percent or less before being covered with insulation, interior wall finish, floor coverings or other materials.*

G. *The number and size of nails connecting wood members shall not be less than that set forth in table 2304.9.1. Nails shall be stainless steel common nails.*

Dimension Lumber Continue:

H. *Nails for wood structural panel sheathing shall be placed no less than 3/8 inch from the panel edge, not more than 12 inches apart along intermediate supports, and 6 inches along panel edge bearings. Sheet type sheathing shall be arranged so that the width of a sheet shall not be less than 2 feet.*

I. *Metal framing anchors shall be Simpson strong tie, stainless steel or approved equal. Install per manufacturer's recommendations.*

J. *Place a layer of 30# roofing felt between all wood members and concrete masonry surfaces.*

Special Inspections:

A. *The contractor shall be responsible for ensuring that special inspection of portions of the work as required by the building code is made at the appropriate time. The contractor shall submit statement of responsibility to the owner and building department prior to the commencement of work. The contractor shall give timely notice of when and where inspections are to be made and provide access for the inspector. Frequency of inspection is defined in the IBC, section 1704 tables, as amended by the city. The contractor shall correct defective work at no additional cost to the state and pay for re-inspection as required.*

B. *Special inspectors shall keep records of inspections. Reports shall indicate that work inspected was done in conformance with approved construction documents. The inspector shall submit a final signed report to the state and engineer who in turn shall submit a written statement to the city certifying receipt of the final inspection letter and documenting that there are no known unresolved code requirements.*

C. *The following type of work listed in the IBC, section 1704, as amended by the city, requires special inspection:*

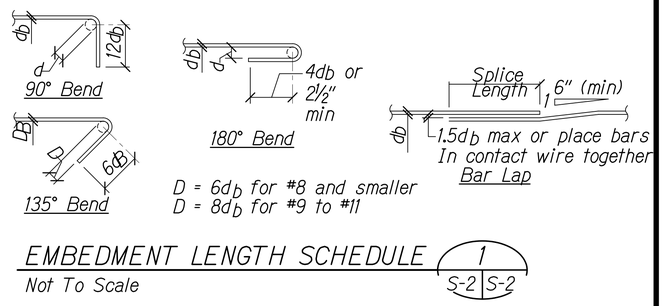
1. *Inspection of fabricator/shop unless work is done by a registered and approved fabricator shop.*
   a. *Pre-engineered trusses*
2. *Concrete construction*
   a. *Placement of reinforcing steel*
   b. *Concrete pour inspection not required per exceptions below:*
      i. *Concrete footings supporting buildings three stories or less in height that are fully supported on earth or rock and designed for f'c=2,500 psi.*
      ii. *Non structural slabs support directly on ground.*
3. *Masonry construction*
   a. *Placement of reinforcing steel*
   b. *Mortar and mortar joints*
   c. *Placement of grout*
4. *Complete load path and uplift ties.*

Minimum Splice & Embedment Lengths

Concrete Strength = 4,000 psi

Bar Size	Lap Splice		Embedment		
			Straight		
	Bot Bar or Wall Bar	Top Bar	Bot Bar or Wall Bar	Top Bar	W/ Std Hook
#3,#4	20"	26"	16"	20"	10"
#5	26"	34"	20"	26"	12"
#6	30"	40"	24"	30"	16"
#7	44"	58"	34"	44"	18"

Notes:
1. *Lengths are for concrete with rebar spaced 6 bar diameters minimum. Increase 25% for bars spaced less than 6 bar diameters.*
2. *"top bars" are horizontal bars with 12" or more of concrete cast below.*



EMBEDMENT LENGTH SCHEDULE (1 / S-2 | S-2)

Not To Scale

ORIGINAL PLAN
NOTE BOOK
No.
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DATE

KEN KAZUO HAYASHIDA
LICENSED PROFESSIONAL ENGINEER
No. 6818-S
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES - 2

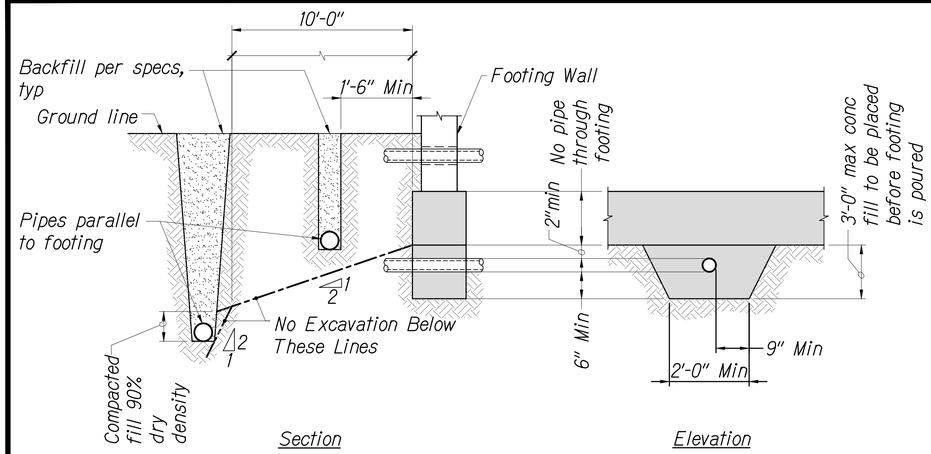
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. S-2 OF 120 SHEETS

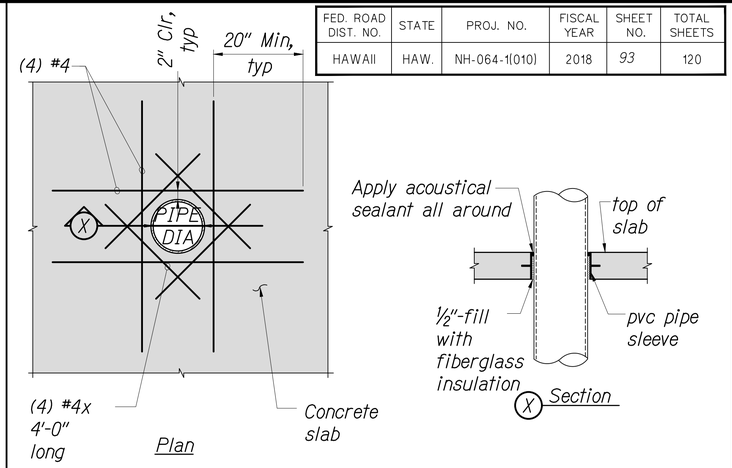
RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	93	120

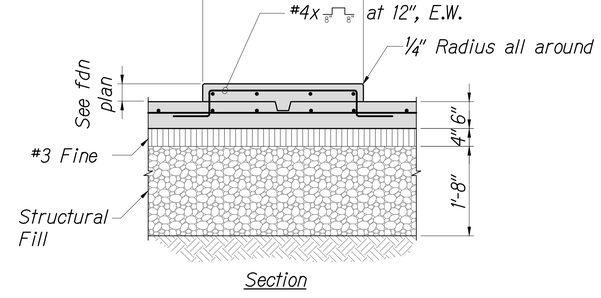


Notes:
1. For pipe perpendicular to footing more than 3'-0" below bottom of footing, trench may be backfilled with compacted fill. See specifications.
2. Depth of footing may be affected by location of pipes. General contractor shall determine exact depth and location of pipes prior to excavation for footings.

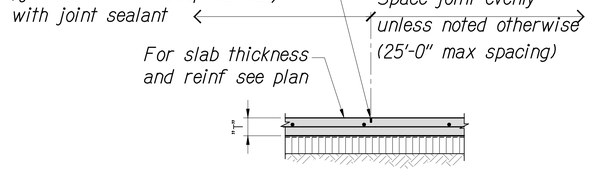
TYPICAL PIPE AT FOOTING DETAIL 1
Not To Scale — S-3 | S-3



TYPICAL PIPE PENETRATION THRU FLOOR SLAB 2
Not To Scale — S-3 | S-3



EQUIPMENT PAD DETAIL 3
Not To Scale — S-3 | S-3



Notes:
1. Saw cutting shall occur as soon as concrete surface is firm enough to not be torn by cutting blade and before shrinkage cracking occurs, but no later than 12 hours after concrete has been poured.
2. Submit jointing plans for review.

SLAB CONTROL JOINT DETAIL 4
Not To Scale — S-3 | S-3

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY RSY	
NOTE BOOK	TRACED BY	
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No.	CHECKED BY	

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL DETAILS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

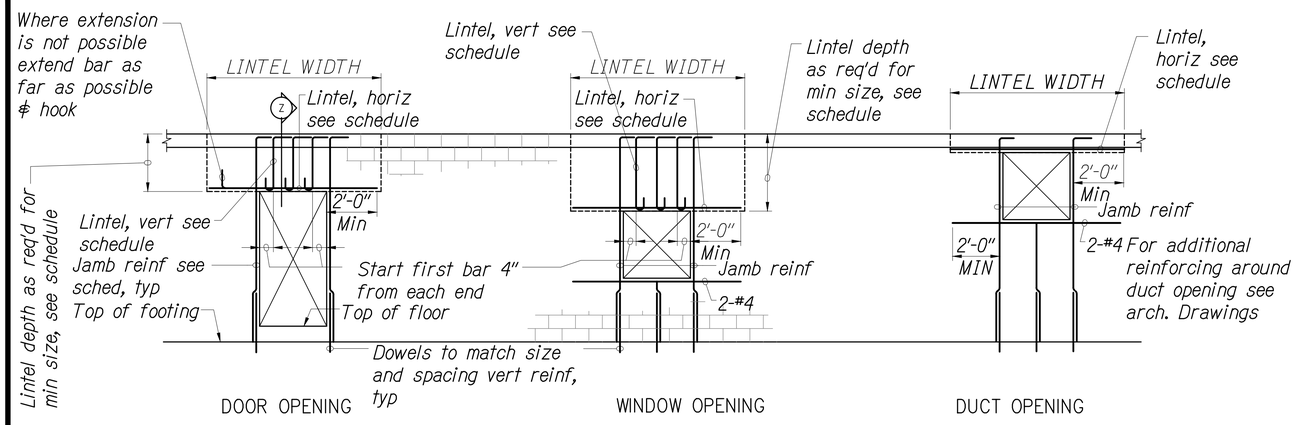
Scale: As Noted — Date: January 2021

SHEET No. S-3 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

93

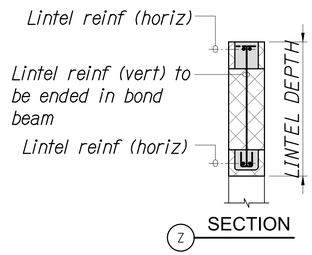
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	94	120



TYPICAL CMU WALL OPENING LINTEL BEAM DETAIL

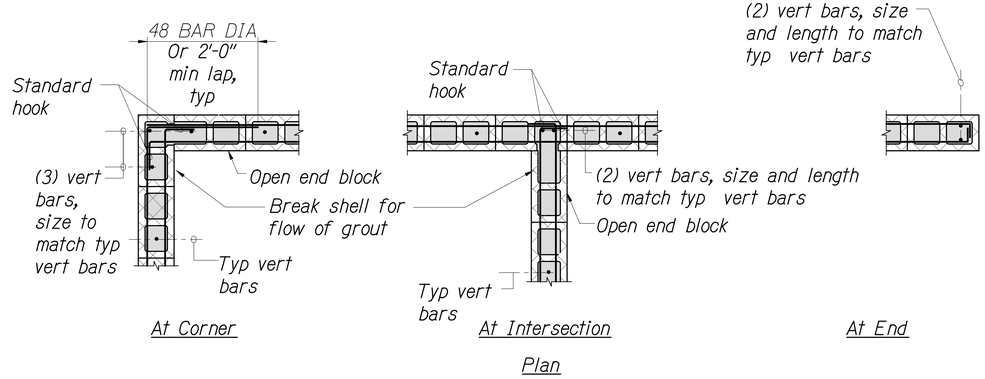
Not To Scale

1 / S-4 | S-4



Opening Schedule				
Opening Width	Lintel Depth (Minimum)	Reinforcing		
		Jamb	Lintel Horiz	Lintel Vert
W < 5'-0"	2'-8"	(2) #5	(2) #4	#4 at 8"
5'-1" < w < 7'-0"	2'-8"	(2) #6	(2) #5	#4 at 8"
7'-1" < w < 9'-0"	2'-8"	(2) #7	(2) #8	#5 at 8"
9'-1" < w < 17'-0"	3'-6"	(2) #8	(2) #8	#5 at 8"

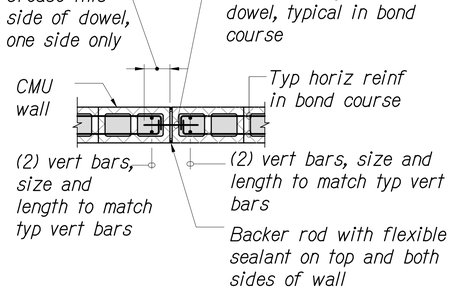
Note: All walls shall be solid grouted.



CMU WALL REINFORCING AT BOND BEAM

Not To Scale

2 / S-4 | S-4



CONTROL JOINT FOR CMU WALL

Not To Scale

3 / S-4 | S-4

Notes:
1. Control joints shall be a maximum of 25'-0" apart and 10'-0" minimum from corner, or as shown on plans.
2. Control joint shall be continuous vertical line from top of footing to top of wall.
3. All horizontal reinforcing shall be discontinuous across control joints, except bond course at the top of walls.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	RSY
NOTE BOOK	TRACED BY	WC
	DESIGNED BY	
No.	QUANTITIES BY	
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KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL CMU DETAILS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

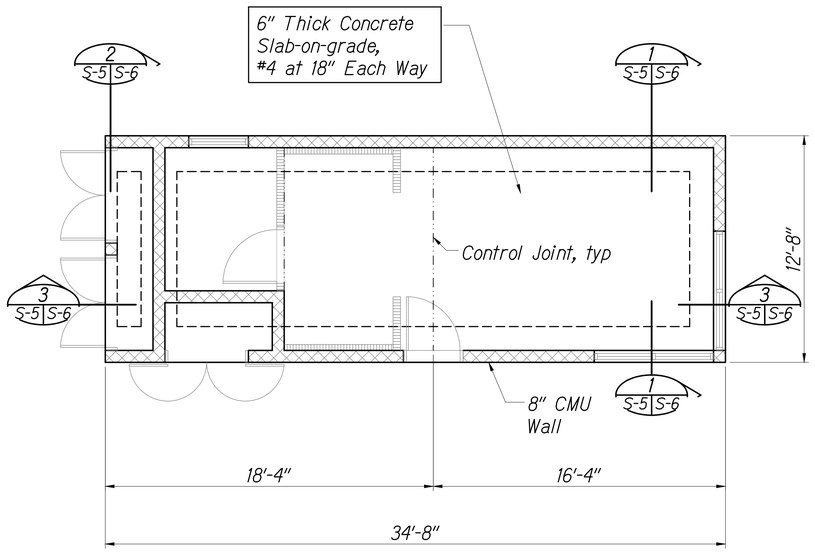
Scale: As Noted Date: January 2021

SHEET No. S-4 OF 120 SHEETS

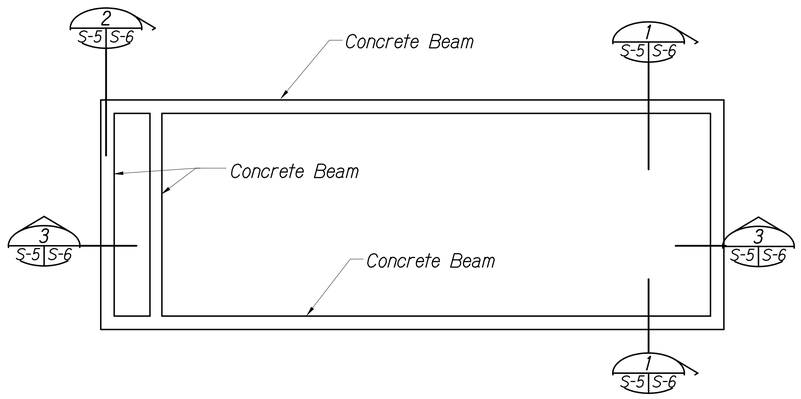
RMTC JOB NO. : 1-19548-0E

94

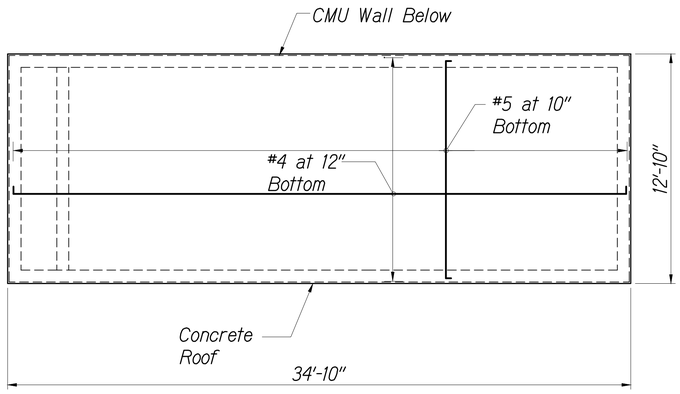
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	95	120



FOUNDATION PLAN VIEW 2 S-5 S-5
Scale: 1/4" = 1'-0"



FRAMING PLAN VIEW 1 S-5 S-5
Scale: 1/4" = 1'-0"



ROOF PLAN VIEW 3 S-5 S-5
Scale: 1/4" = 1'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY	RSY	DATE
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KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGH STA. BLDG. PLAN

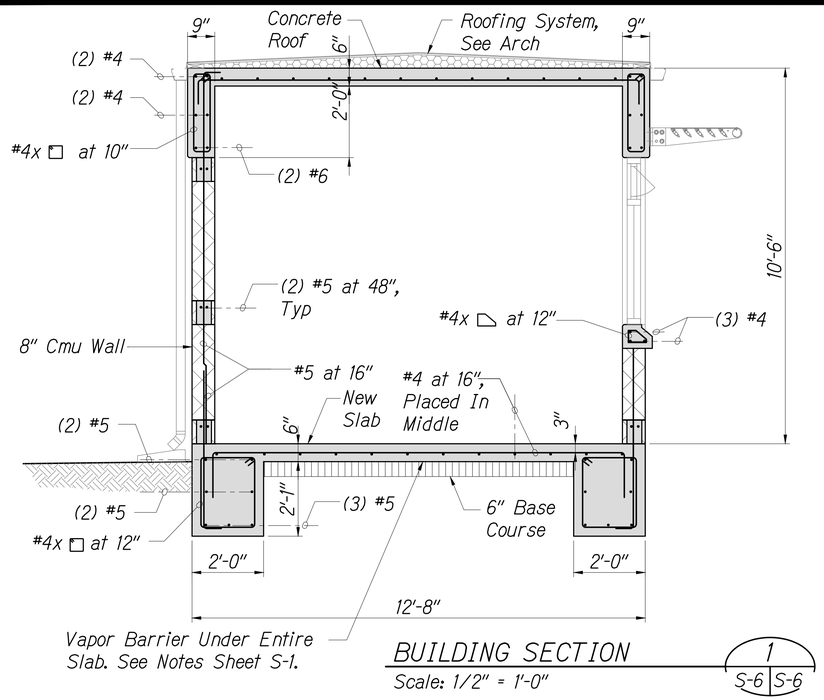
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

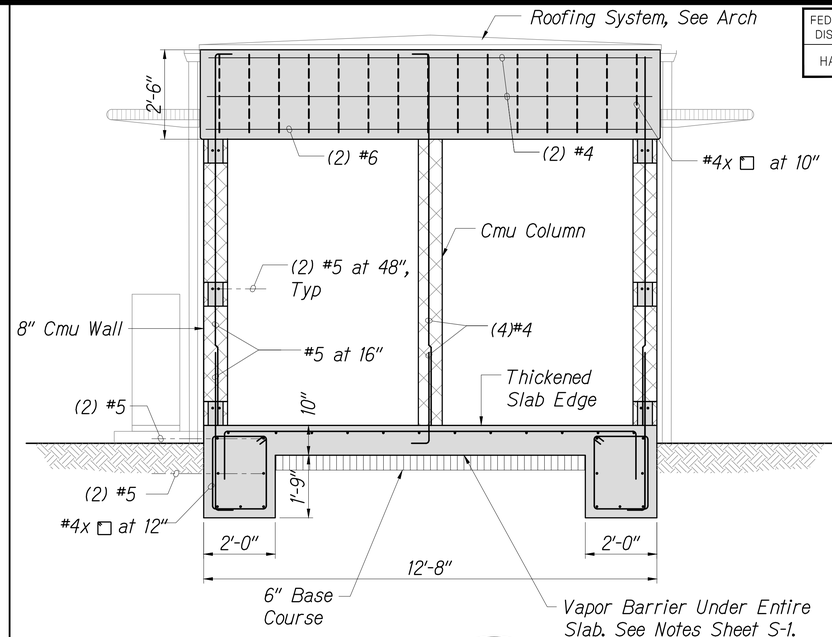
SHEET No. S-5 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

95



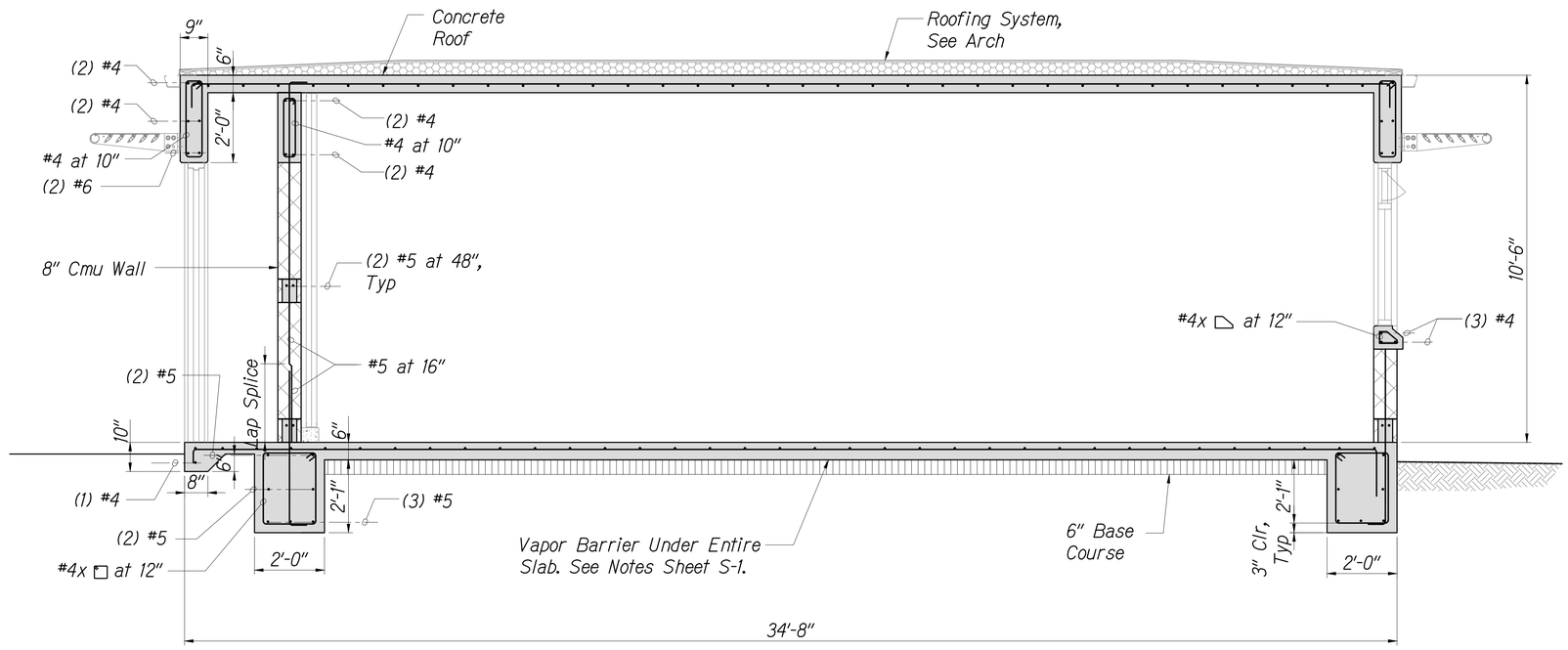
BUILDING SECTION 1
Scale: 1/2" = 1'-0"
S-6 | S-6



BUILDING SECTION 2
Scale: 1/2" = 1'-0"
S-6 | S-6

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	96	120

Note:
Roof slab reinforcing not shown for clarity.



BUILDING SECTION 3
Scale: 1/2" = 1'-0"
S-6 | S-6

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY RSY	
NOTE BOOK	TRACED BY WC	
	DESIGNED BY	
No.	QUANTITIES BY	
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KEN KAZUO HAYASHIDA
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KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGH STA. BLDG. SECTIONS

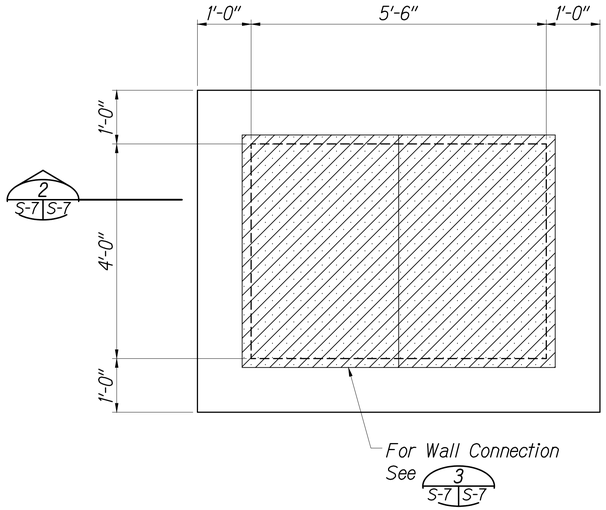
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. S-6 OF 120 SHEETS

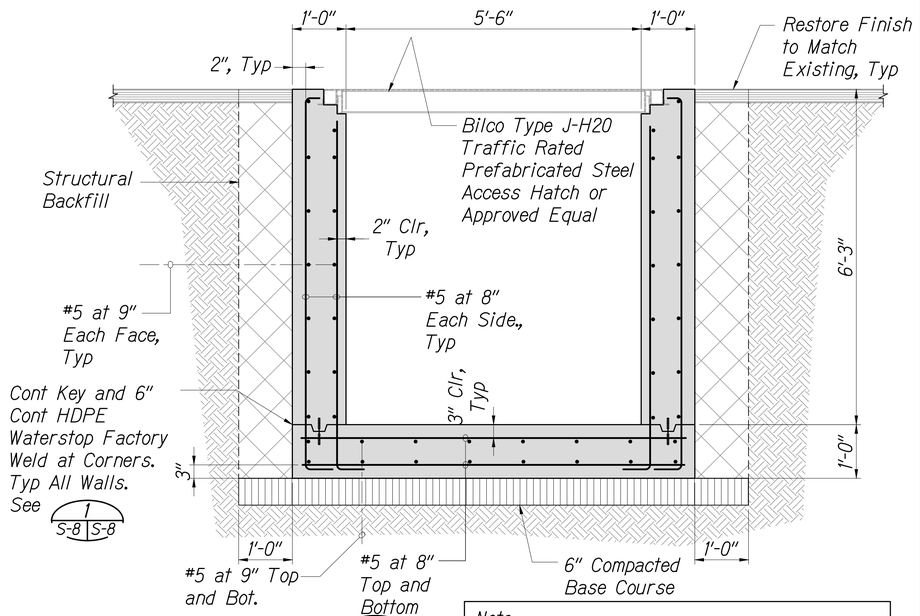
RMTC JOB NO. : 1-19548-0E

96



UTILITY VAULT PLAN 1
S-7 S-7

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

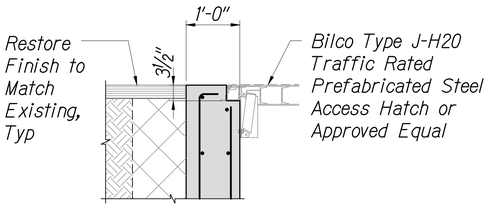


UTILITY VAULT SECTION 2
S-7 S-7

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

Note:
Build top of wall surface per manufacturer's recommendation to fit hatch.

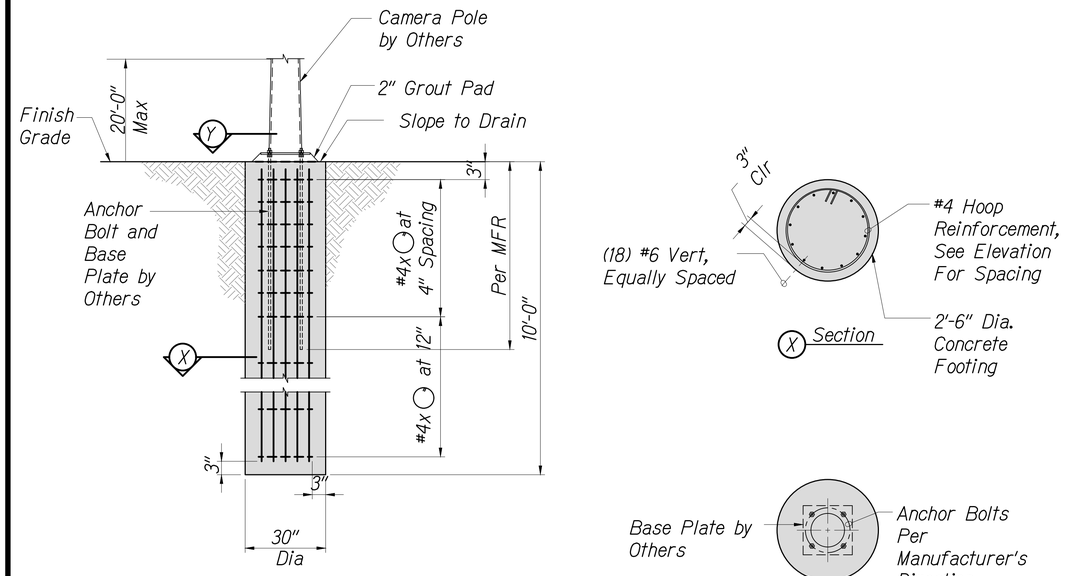
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	97	120



Note:
Build top of wall surface per manufacturer's recommendation to fit hatch.

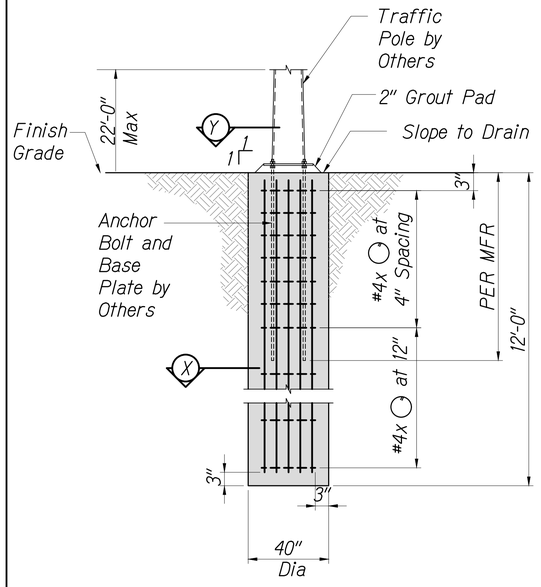
HATCH TO WALL DETAIL 3
S-7 S-7

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



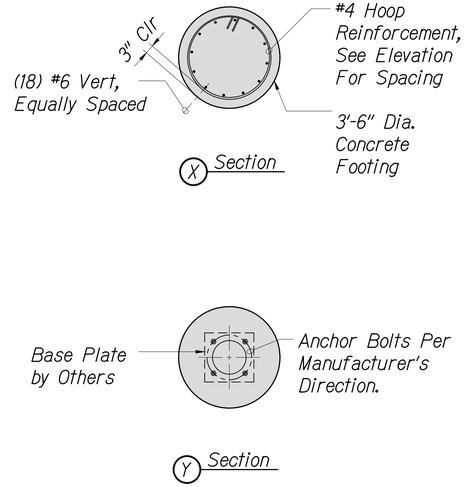
CAMERA POLE FOUNDATION - ELEVATION 4
S-7 S-7

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



TRAFFIC SIGNAL POLE FOUNDATION - ELEVATION 5
S-7 S-7

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



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

KEN KAZUO HAYASHIDA
LICENSED PROFESSIONAL ENGINEER
No. 6818-S
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

VAULT & POLE DETAILS

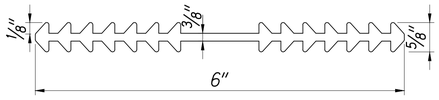
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. S-7 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	98	120

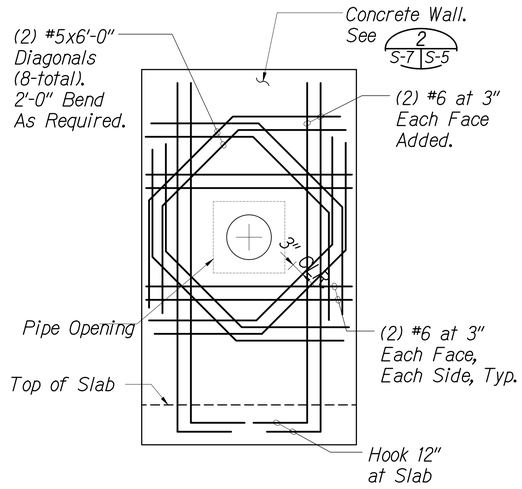


Earth Shield High Density Polyethylene (HPDE)
Pe637

Note:
Waterstop Shall be "Earth Shield Pe637" or Approved Equal

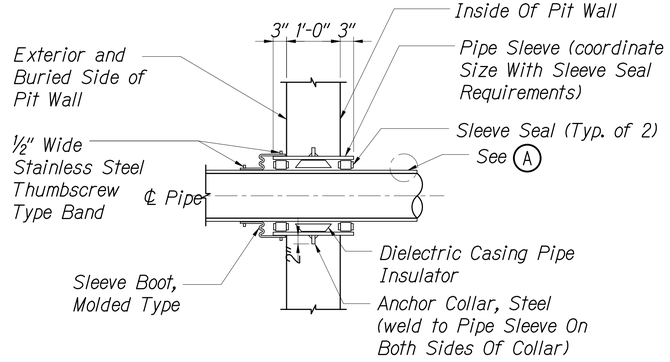
FUEL RESISTANT WATERSTOP 1
S-8 | S-8

Not to Scale



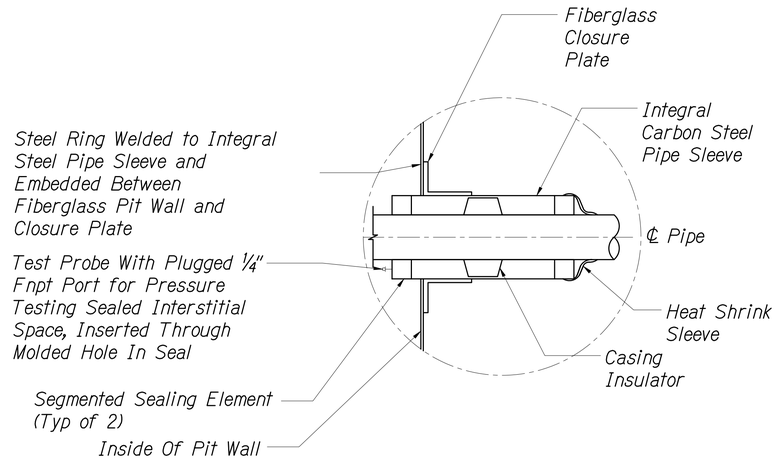
WALL PIPE OPENING ADDED REBARS DETAIL 2
S-8 | S-8

Not to Scale



CONCRETE PIT PENETRATION 3
S-8 | S-8

Not to Scale



A FIBERGLASS PIT PENETRATION

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

KEN KAZUO HAYASHIDA
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SIGNATURE 4/30/22 LIC. EXPIRATION

KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WatERStoP and PIPE OPENING DETAIL

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

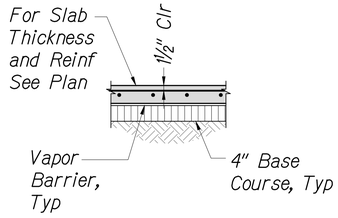
Scale: As Noted Date: January 2021

SHEET No. S-8 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

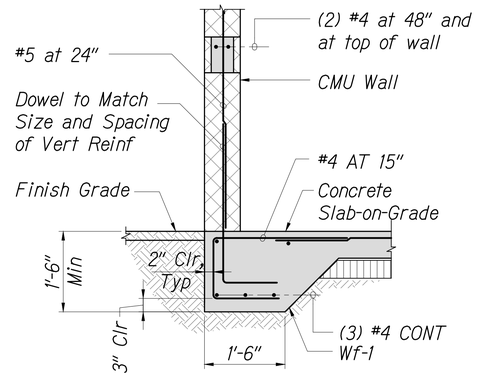
98

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	98	120

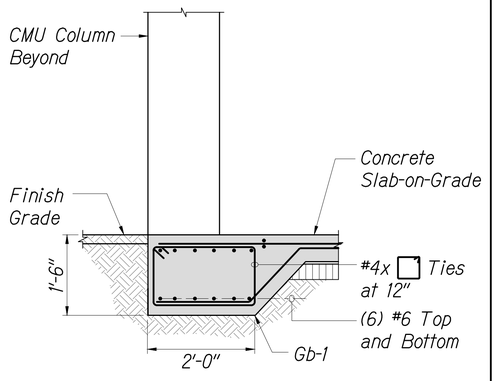


Slab On Grade Notes:
1. Thickness of slab-on-grade shown are minimum and shall be maintained at all sloped and depressed areas.
2. For floor elevations, depressed slabs locations, slopes to drain, and equipment pad and curb locations see architectural, electrical and mechanical drawings.

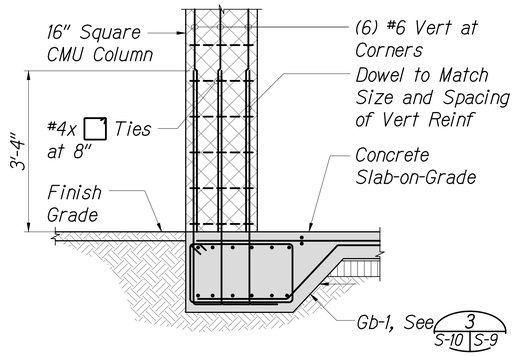
TYPICAL SLAB-ON-GRADE DETAILS — 1 / S-9 | S-9
No Scale



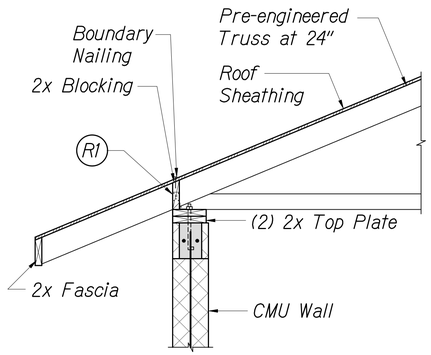
SECTION — 2 / S-10 | S-9
Scale: 3/4" = 1'-0"



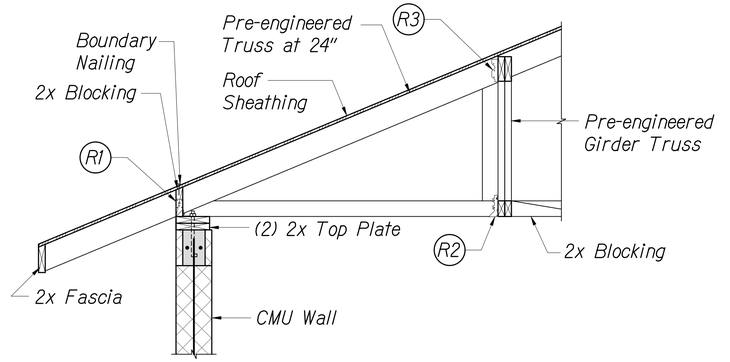
SECTION — 3 / S-10 | S-9
Scale: 3/4" = 1'-0"



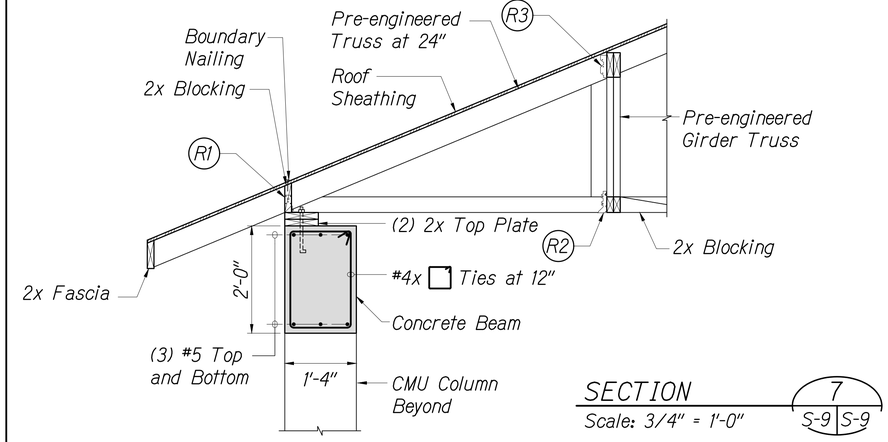
SECTION — 4 / S-10 | S-9
Scale: 3/4" = 1'-0"



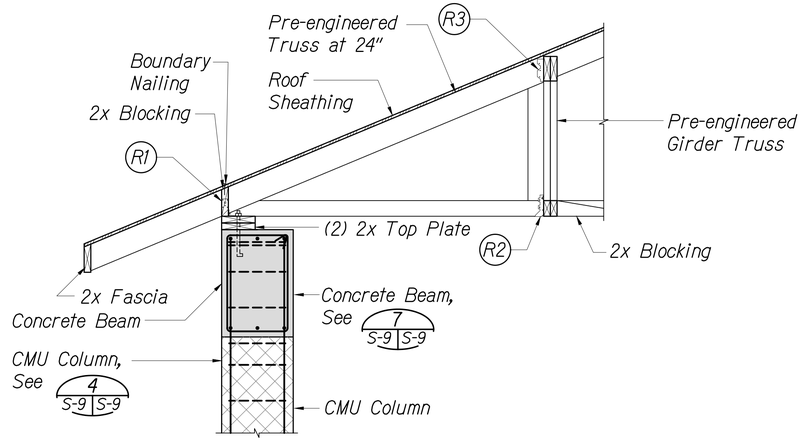
SECTION — 5 / S-11 | S-9
Scale: 3/4" = 1'-0"



SECTION — 6 / S-11 | S-9
Scale: 3/4" = 1'-0"



SECTION — 7 / S-9 | S-9
Scale: 3/4" = 1'-0"



SECTION — 8 / S-11 | S-9
Scale: 3/4" = 1'-0"

0' 1' 2' 3' 4'
3/4" = 1'-0"

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

KEN KAZUO HAYASHIDA
LICENSED PROFESSIONAL ENGINEER
No. 6818-S
HAWAII, U.S.A.

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SIGNATURE — 4/30/22 LIC. EXPIRATION

KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

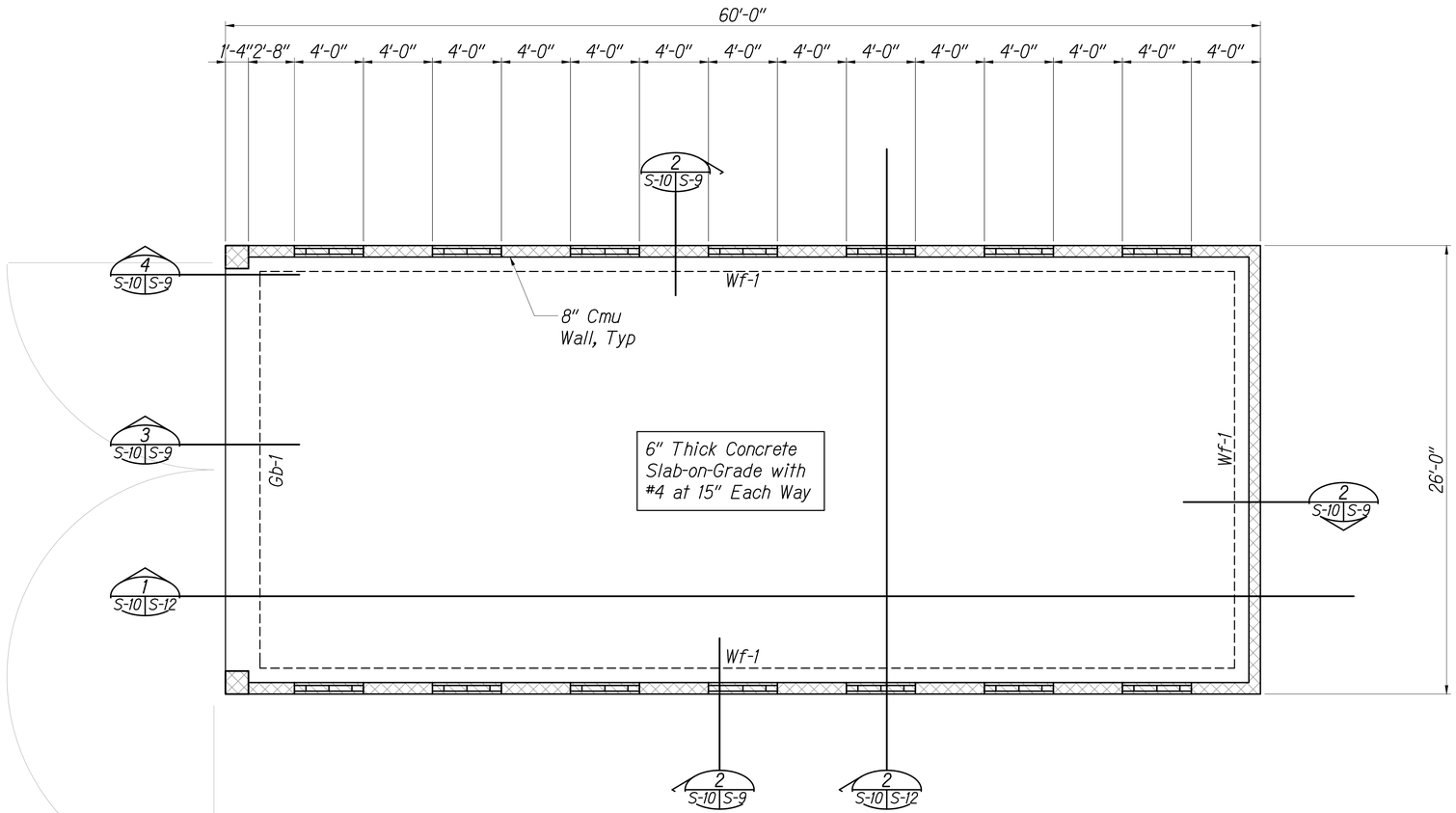
WEIGHING SCALE STORAGE
STRUCTURAL DETAILS
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted — Date: January 2021

SHEET No. S-9 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	100	120



FOUNDATION PLAN
Scale: 1/4" = 1'-0"
1 S-10 S-10

Legend

Wf-1	Indicates wall footing type, see 2/S-9
Gb-1	Indicates grade beam type, see 3/S-9 and 4/S-9
	Indicates change in elevation
	Indicates full height CMU wall
	Indicates partial height CMU wall

Slab-On-Grade Notes:

1. Thickness of slab-on-grade shown are minimum and shall be maintained at all sloped and depressed areas.
2. For floor elevations, depressed slabs locations, slopes to drain and equipment pad and curb locations, see architectural, electrical and mechanical drawings.
3. For exterior concrete slab-on-grade, see architectural and civil drawings.

Foundation Notes:

1. For dimensions not shown, see the architectural drawings.
2. For waterproofing requirements and details, see architectural drawings.

Reference Drawings:
General notes, see S-1
Typical slab-on-grade details, see 1/S-9
Typical concrete details, see S-9
Typical CMU wall details, see S-9

TRUE NORTH

0' 2' 4' 8' 12'
1/4" = 1'-0"

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

KEN KAZUO HAYASHIDA
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KAI HAWAII, INC. LIC. EXPIRATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGHING SCALE STORAGE
FOUNDATION PLAN
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

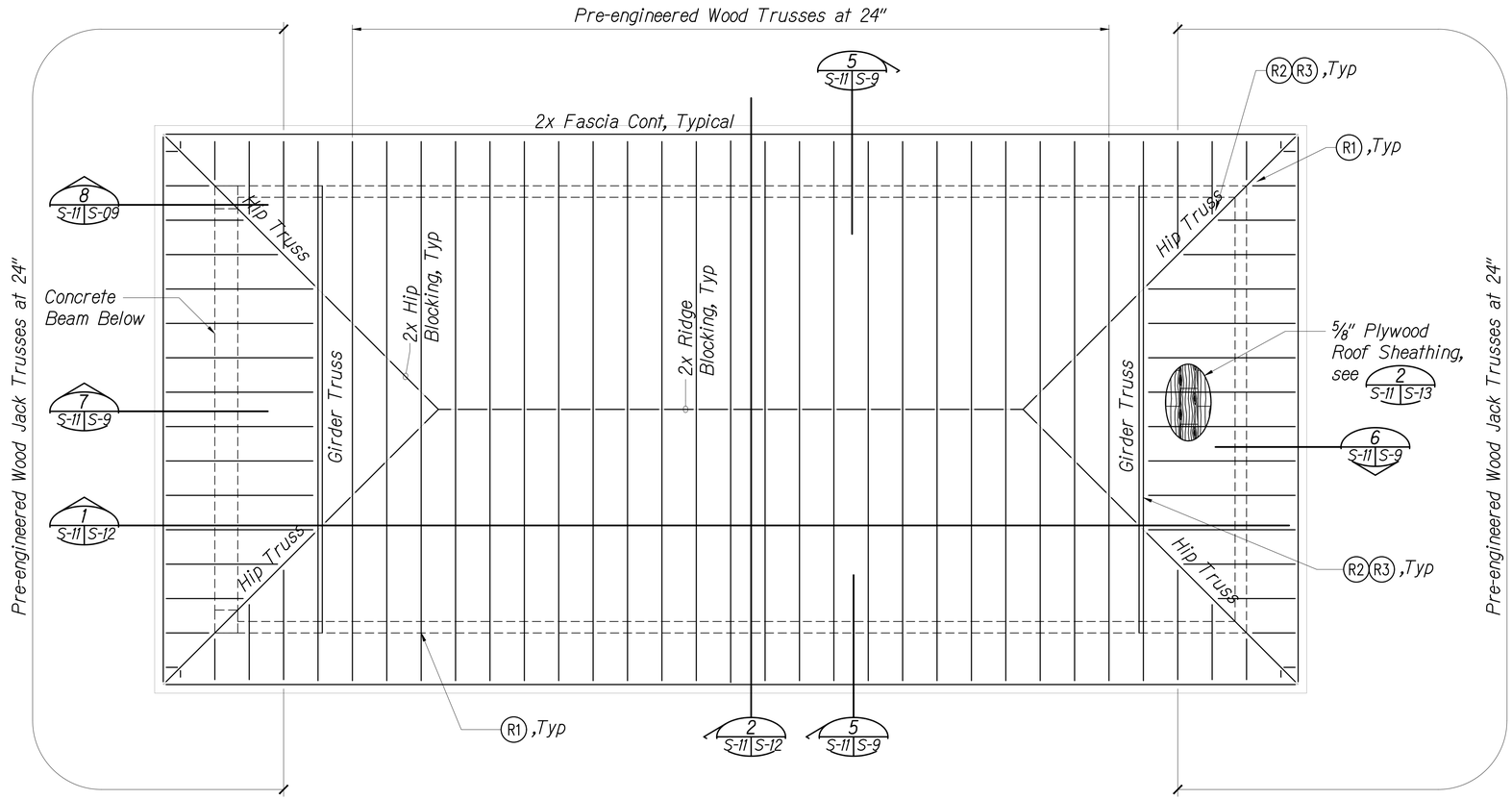
Scale: As Noted Date: January 2021

SHEET No. S-10 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

100

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	101	120



Legend

[- - -] *Indicates CMU wall below*

(R1) *Indicates framing connector, see 3/S-13*

Reference drawings:

General notes, see S-1 and S-2

Truss notes and elevations, see S-13

Typical roof framing details, see S-13

ROOF FRAMING PLAN (1 / S-11 | S-11)

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

TRUE NORTH

0' 2' 4' 8' 12'

1/4" = 1'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY ____ DATE
NOTE BOOK	DRAWN BY ____ RSY
No. ____	TRACED BY ____
	DESIGNED BY ____ WC
	QUANTITIES BY ____
	CHECKED BY ____

KEN KAZUO HAYASHIDA
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No. 6818-S
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KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGHING SCALE STORAGE
ROOF FRAMING PLAN
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

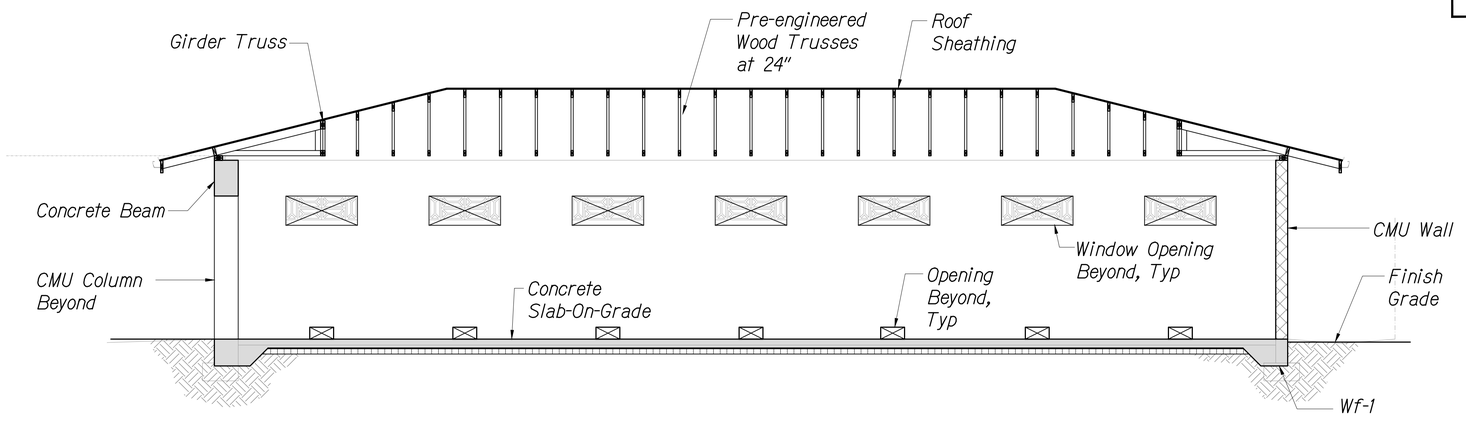
Scale: As Noted Date: January 2021

SHEET No. S-11 OF 120 SHEETS

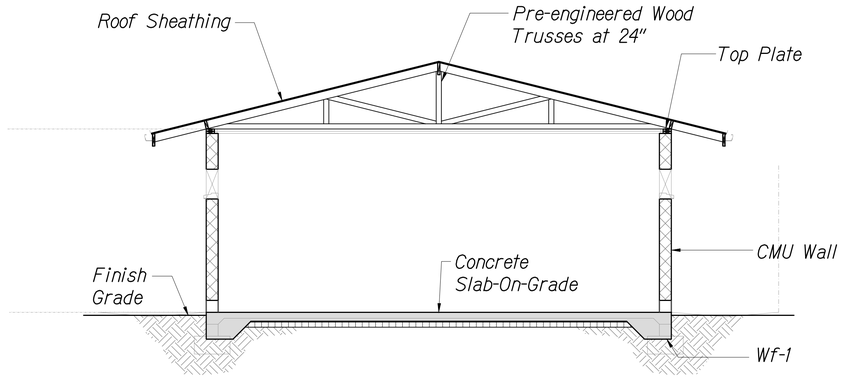
RMTC JOB NO. : 1-19548-0E

101

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	102	120



BUILDING SECTION 1
Scale: 1/4" = 1'-0"
S-10,S-11 | S-12



BUILDING SECTION 2
Scale: 1/4" = 1'-0"
S-10,S-11 | S-12

0' 2' 4' 8' 12'
1/4" = 1'-0"

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

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SIGNATURE 4/30/22 LIC. EXPIRATION
KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGHING SCALE STORAGE SECTIONS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. S-12 OF 120 SHEETS

102

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	103	120

Metal-Plate Connected Wood Trusses:

A. Metal-plate-connected wood trusses shall comply with:
   1. TPI 1, National Design Standard for metal-plate-connected wood truss construction.
   2. TPI DSB, recommended design specification for temporary bracing of metal-plate-connected wood trusses.
   3. TIP HIB, commentary and recommendation for handling, installing and bracing metal-plate-connected wood trusses.

B. The fabricator shall be a member of tpi and have a minimum of 3 years successful experience in the fabrication of metal-plate-connected wood trusses. the fabricator shall have sufficient production capacity to produce, transport and deliver the required trusses without cause of delay in the work.

C. Truss construction documents shall be prepared or under the supervision of a qualified professional engineer licensed to practice in the state of hawaii and shall be provided to the building official and approved prior to installation. truss construction documents shall include, at a minimum, the information specified below:
   1. Show location, pitch, span, camber, configuration and spacing for each type of truss required.
   2. Indicate sizes, stress grade and species for lumber.
   3. Indicate locations of permanent bracing required to prevent buckling of individual truss members due to design loadS.
   4. Indicate type, size, material, finish, design values, orientation, and location of metal connector plates.
   5. Show splice details and bearing details.
   6. Include structural analysis data signed and sealed by the qualified professional engineer responsible for the design.

D. Wood shall be preservative treated.

E. Metal connector plates shall be hot dipped galvanized astm a 653, g60 coating designation, and not less than 0.036 inch.

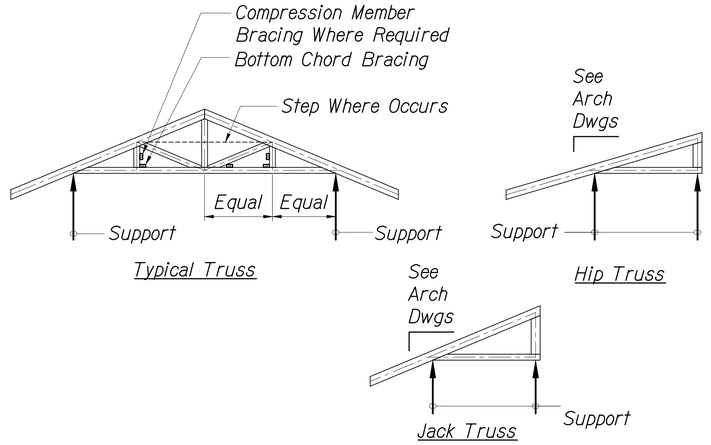
F. Truss members shall not be cut, notched, drilled, spliced or otherwise altered in any way without the approval of a registered design professional.

G. Multi-ply trusses shall be nailed to each other with 16d common nails at 10 inches o.c. along all truss members.

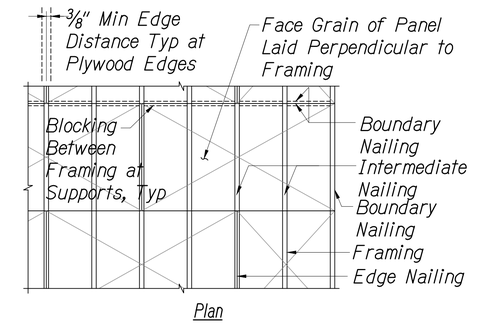
H. SEe architectural drawings for slopes of top and bottom chords.

I. Structural performance
   1. Roof dead load (not including self weight of trusses) =11 psf
   2. Roof live load top chord = 20 psf (reducible)
   3. Bottom chord live load = 10 psf

4. Wind loads in accordance with building code criteria noted on drawings
5. Load combinations in accordance with building code.
6. Top chord and bottom chord live load need not act concurrently.
7. Vertical deflection under total load shall be limited to 1/240 of span or 1 1/4", whichever is less.
8. Vertical deflection under live or wind load shall be limited to 1/360 of span or 3/4", whichever is less.
9. Wind loads along collector trusses are reversible. loads along top chord shall be transferred to bottom chord through truss member connections.
10. Minimum truss member sizes
    a. Top chord = 2x6
    b. Bottom chord = 2x4
    c. Web members = 2x4



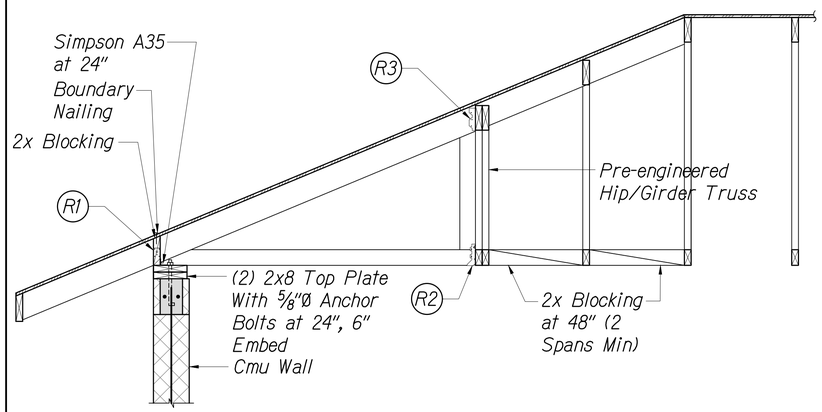
TRUSS ELEVATIONS — Not to Scale — 1 (S-11 | S-13)



Plan

Fastening Schedule				
Location	Edge	Boundaries	Intermediate	Remarks
Roof	8d at 6"	8d at 6"	8d at 12"	

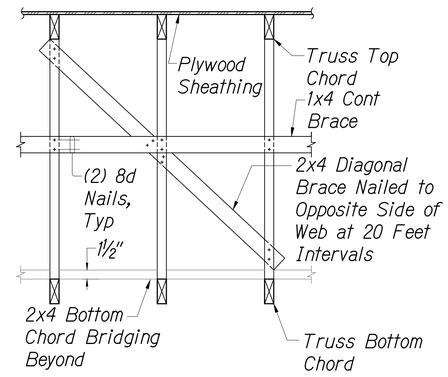
SHEATHING SCHEDULE — Not to Scale — 2 (S-11 | S-13)



At Typical, Girder, Jack/Hip Truss

Connector Schedule					
Member	Support	(R1)	(R2)	(R3)	(R4)
Typical Truss	Wall/Beam, Girder Truss	Simpson H10	-	-	-
Jack Truss	Wall/Beam, Hip/Girder Truss	Simpson H1	Simpson LUS26	Simpson LS50	-
Hip Truss	Wall/Beam, Hip/Girder Truss	(2) Simpson LS50	Simpson SUR/L26	Simpson LS50	-
Girder Truss	Wall/Beam	(2) Simpson H25A	-	-	-

TYPICAL TRUSS CONNECTION DETAIL — Not to Scale — 3 (S-11 | S-13)



TYPICAL MINIMUM WOOD TRUSS WEB BRACE DET — Not to Scale — 4 (S-11 | S-13)

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

KEN KAZUO HAYASHIDA — LICENSED PROFESSIONAL ENGINEER — No. 6818-S — HAWAII, U.S.A.

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SIGNATURE — 4/30/22 LIC. EXPIRATION — KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STORAGE ROOF FRAMING SECTIONS AND DETAILS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted — Date: January 2021

SHEET No. S-13 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	111	120

GENERAL NOTES:

1. CONFORM TO ALL REQUIREMENTS OF THE BUILDING, PLUMBING, AND ELECTRICAL CODES OF THE CITY AND COUNTY OF HONOLULU, STATE OF HAWAII HEALTH REGULATIONS, FIRE DEPARTMENT REGULATIONS, BOARD OF WATER SUPPLY SYSTEM STANDARDS, HAWAII STATE MODEL ENERGY CODE, MANUFACTURER'S RECOMMENDATIONS AND ANY OTHER APPLICABLE REGULATIONS AND/OR AGENCIES HAVING JURISDICTION.
2. EXAMINE ALL PROJECT PLANS AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND THE EXTENT OF REMOVAL, RELOCATION AND/OR NEW WORK PRIOR TO BIDDING. NOTIFY AND COORDINATE WITH THE CONTRACTING OFFICER FOR ANY MAJOR DEVIATIONS OR DISCREPANCIES DISCOVERED IN THE PLANS AND SPECIFICATIONS DUE TO UNFORESEEN OR VARYING FIELD CONDITIONS.
3. INSTALLATION SHALL BE GUARANTEED TO BE FREE FROM DEFECTS FOR ONE (1) YEAR FROM FINAL DATE OF ACCEPTANCE OF THE PROJECT AS A WHOLE.
4. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO BID AND CONSTRUCTION.
5. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING LINE SIZES, CONDITIONS, AND INVERTS PRIOR TO BID AND CONSTRUCTION.
6. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO COVER THE COMPLETE INSTALLATION OF SYSTEMS TO FUNCTION AS DESCRIBED AND SPECIFIED. THE OMISSION OF REFERENCE TO ANY NECESSARY ITEM OF LABOR OR MATERIAL SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING SUCH LABOR AND MATERIAL AT NO ADDITIONAL COST TO THE STATE.
7. PAY FOR ALL PERMITS AND APPLICATIONS.
8. PREPARE SIX (6) SETS OF SHOP DRAWINGS SUBMITTED TO THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO THE START OF WORK. NO REPRODUCTIONS OF ANY KIND OF THE CONTRACT DOCUMENTS SHALL BE ACCEPTABLE AS SHOP DRAWINGS. PROVIDE ONE (1) SET OF REPRODUCIBLE AS-BUILT DRAWINGS SHOWING THE ACTUAL INSTALLED CONDITIONS AND SUBMIT TO THE CONTRACTING OFFICER UPON COMPLETION OF WORK.
9. ALL EQUIPMENT AND FIXTURES SHALL BE CAPABLE OF FITTING INTO THE SPACES ALLOTTED WHILE MEETING THE MANUFACTURER'S RECOMMENDED ACCESS REQUIREMENTS. REVIEW ALL SPACES WHERE EQUIPMENT AND FIXTURES ARE TO BE INSTALLED PRIOR TO ORDERING OF ITEMS AND NOTIFY THE CONTRACTING OFFICER OF ANY INADEQUATE CLEARANCES OR CONDITIONS THAT WILL PREVENT THE PROPER INSTALLATION, MAINTENANCE, AND OPERATION OF THE EQUIPMENT AND FIXTURES.
10. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DO NOT SHOW EVERY EXACT DETAIL OF PIPING/DUCTWORK. PROVIDE OFFSETS AS NECESSARY TO AVOID LOCAL OBSTRUCTIONS OR INTERFERENCES WITH OTHER TRADES. REVIEW ALL PIPING/DUCT RUNS PRIOR TO FABRICATION AND IMMEDIATELY NOTIFY THE CONTRACTING OFFICER OF ANY INTERFERENCES AND/OR LACK OF ADEQUATE CLEARANCES.
11. SHOULD PROJECT CONDITIONS REQUIRE REARRANGEMENT OF WORK, MARK SUCH CHANGES ON THE AS-BUILT DRAWINGS. IF THESE CHANGES REQUIRE ALTERNATE METHODS TO THOSE APPROVED BY THE CONTRACT DOCUMENTS, SUBMIT SHOP DRAWINGS SHOWING THE PROPOSED ALTERNATE METHODS TO THE CONTRACTING OFFICER FOR REVIEW/APPROVAL PRIOR TO PROCEEDING WITH WORK.
12. ALL SWITCHES, TIMECLOCKS, THERMOSTATS, AND CONTROL ITEMS SHALL BE ADA ACCESSIBLE AND SHALL BE MOUNTED AT 44" AFF AS PER ADA REQUIREMENTS OR ACCORDING TO CONTRACTING OFFICER'S INSTRUCTIONS.
13. CAULK ALL PENETRATIONS WATERTIGHT. PROVIDE ALL CUTTING, PATCHING, AND RESTORING OF EXISTING SURFACES TO MATCH ORIGINAL SURFACE FINISHES. REPAIR ANY DAMAGE TO EXISTING CONSTRUCTION RESULTING FROM THE INSTALLATION OF MECHANICAL ITEMS. THE AREAS REPAIRED SHALL MATCH THE EXISTING ADJACENT SURFACES IN TEXTURE AND COLOR.
14. ALL STEEL SHALL BE HOT DIPPED GALVANIZED. GALVANIZED STEEL EXPOSED TO WEATHER SHALL HAVE WEATHER PROOF PAINT TO MATCH ADJACENT SURFACES. PROVIDE TWO EXTRA COATS OF EPOXY PAINT.
15. COORDINATE ALL WORK WITH OTHER TRADES TO AVOID INTERFERENCES AND DELAYS.
16. SEISMICALLY BRACE ALL EQUIPMENT, PIPING, AND DUCTWORK IN ACCORDANCE WITH THE CURRENT BUILDING CODES.
17. TONE AND LOCATE ALL UTILITY LINES OR OTHER INTERFERENCES IN AREAS OF PROPOSED TRENCH WORK PRIOR TO START OF EXCAVATION. REPAIR OR PAY FOR ALL DAMAGES TO EXISTING UTILITIES.
18. PROVIDE DIELECTRIC UNIONS OR SEPARATIONS AT ALL DISSIMILAR METALS. PROVIDE UNIONS AFTER ALL SHUTOFF VALVES.
19. PROVIDE ACCESS PANELS FOR ALL ITEMS UNDER THIS SECTION REQUIRING SERVICING, INSPECTION, MAINTENANCE, AND ADJUSTMENT.
20. PROVIDE ESCUTCHEON PLATES AT ALL EXPOSED WALL PENETRATIONS IN FINISHED AREAS, EXTERIOR WALL, ETC.
21. AFTER CONNECTION OF NEW FIXTURES TO WASTE, CLEANOUT/SNAKE EXISTING LINES FOR PROPER OPERATION.
22. CONTRACTOR SHALL SCHEDULE, TAG, AND LABEL ALL VALVES AND PIPING. ALL PIPING SHALL ALSO BE LABELED WITH DIRECTION OF FLOW.
23. ALL EXTERIOR NUTS, BOLTS, SCREWS, WASHERS, FASTENERS, SUPPORTS STRAPS, ETC. SHALL BE TYP 304 STAINLESS STEEL.

MECHANICAL LEGEND

SYMBOL	ABBRV.	DESCRIPTION
GENERAL		
	BFF	BELOW FINISHED FLOOR
	CLG	CEILING
	DEMO	DEMOLITION
	DN	DOWN
(E)	EXIST	EXISTING
	FLR	FLOOR
(N)		NEW
	POC	POINT OF CONNECTION
	POR	POINT OF REMOVAL
(R)		REMOVE
	TYP	TYPICAL
HVAC		
	ACCU	AIR-COOLED CONDENSING UNIT
	CD	CONDENSATE DRAIN
	DT	DUCT
☒	EAR	EXHAUST AIR REGISTER
	EF	EXHAUST FAN
	FCU	FAN COIL UNIT
	OA	OUTSIDE AIR
☒	RAR	RETURN AIR REGISTER
	SA	SUPPLY AIR
☒	SAD	SUPPLY AIR DIFFUSER
	SF	SUPPLY FAN
Ⓣ	TSTAT	THERMOSTAT
	UC	(DOOR) UNDERCUT
⌊‾‾	VD	VOLUME DAMPER
PLUMBING		
	AEWC	ACCESSIBLE ELECTRIC WATER COOLER
	ALAV	ACCESSIBLE LAVATORY
	ASK	ACCESSIBLE SINK
	AWC	ACCESSIBLE WATER CLOSET
	CO	CLEANOUT
-⊖-	COTG	CLEANOUT TO GRADE
-·-·-·-	CW	COLD WATER
-⊖-	FCO	FLOOR CLEANOUT
———	S	SANITARY
	S/S	SERVICE SINK
⋈	SOV	SHUT OFF VALVE
- - - - - - -	VT	VENT
I——	WCO	WALL CLEANOUT

BWS FLOW REQUIREMENT

METER NUMBER (M/N): # NEW METER
PREMISE ID #: # NEW METER

		FU	GPM	GPD
A.	PROPOSED DOMESTIC	8.6	25.0	750.0
B.	PROPOSED IRRIGATION	0.0	0.0	0.0
C.	OTHER	0.0	0.0	0.0
D.	TOTAL PROPOSED	8.6	25.0	750.0
E.	DEMOLITION	0.0	0.0	0.0
F.	NET CHANGE	8.6	25.0	750.0
G.	EXIST'G TO REMAIN	0.0	0.0	0.0
H.	GRAND TOTAL	8.6	25.0	750.0

NOTES:

1. THERE IS NO IRRIGATION SYSTEM ON THIS METER.
2. THE NEW METER DOES NOT SERVE AN AUTOMATIC FIRE SPRINKLER SYSTEM.
3. AIR CONDITIONING WORK WILL NOT AFFECT WATER DEMAND.

BWS FIXTURE UNIT COUNT

NEW WORK (LOW FLOW)

FIXTURE	QUANTITY	F.U. EACH	SUBTOTAL F.U.
WATER CLOSET, VALVE (AWC)	1	3.4	3.4
LAVATORY (ALAV)	1	0.6	0.6
ELEC WATER COOLER (AEWC)	1	1.0	1.0
SERVICE SINK (S/S)	1	2.0	2.0
KITCHEN SINK (ASK)	1	1.6	1.6
TOTAL			8.6 FU 25.0 GPM 750.0 GPD

CITY AND COUNTY OF HONOLULU
CHAPTER 3-181.1 HAWAII ADMINISTRATIVE RULES,
2015 IECC AS AMENDED

TO THE BEST OF MY KNOWLEDGE, THIS PROJECT'S DESIGN SUBSTANTIALLY CONFORMS TO THE STATE ENERGY CONSERVATION CODE (2015 IECC AS AMENDED) FOR:

_____ BUILDING COMPONENT SYSTEMS
_____ ELECTRICAL COMPONENT SYSTEMS
✓ MECHANICAL COMPONENT SYSTEMS

SIGNATURE: R.S.O.
NAME: ROSS S. OKUDA
TITLE: PRESIDENT
PE #: 9377-M
DATE: 1/29/2021

ROSS S. OKUDA LICENSED PROFESSIONAL ENGINEER No. 9377-M HAWAII, U.S.A.
EXP. 4-30-2022

APPROVED:

_____ _____
Manager and Chief Engineer, BWS DATE
(for work affecting BWS facilities
State R/W & BWS easements only)

ROSS S. OKUDA LICENSED PROFESSIONAL ENGINEER No. 9377-M HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WAS SO UNDER MY SUPERVISION TO THE EXTENT OF CONSTRUCTION AS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

R.S.O. 4/30/22
SIGNATURE LIC. EXPIRATION
MECHANICAL ENTERPRISES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MECHANICAL GENERAL NOTES
LEGEND, BWS FIXTURE COUNT

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

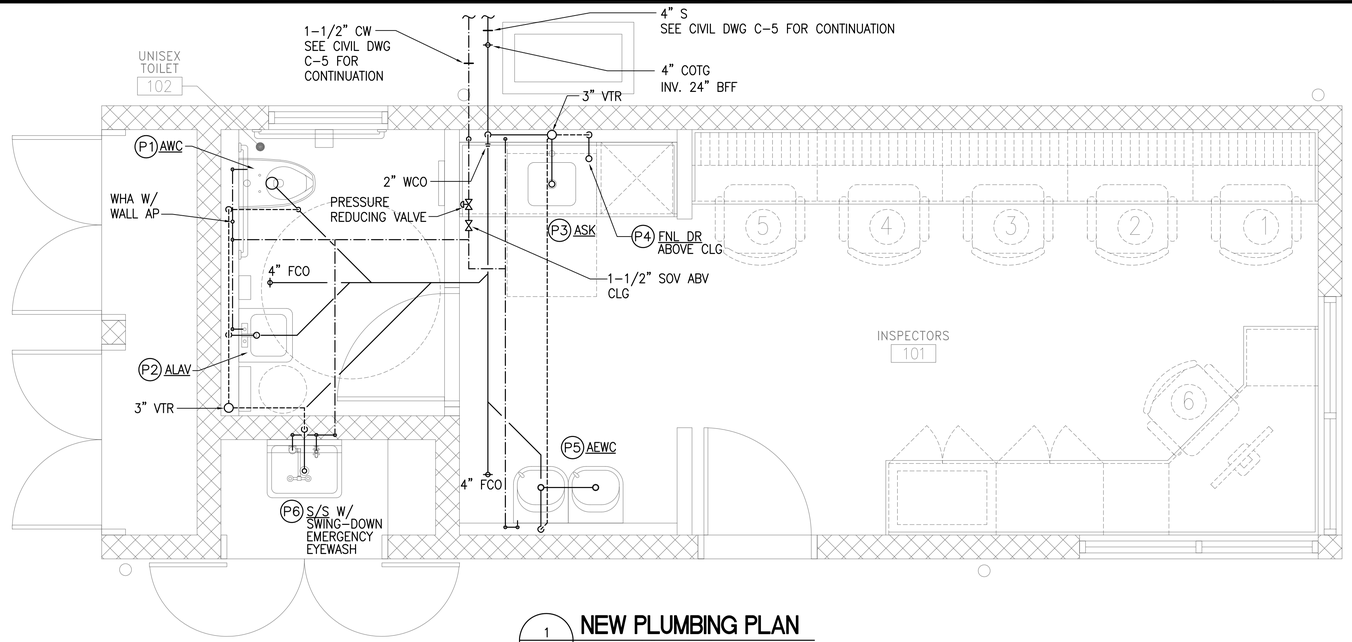
TMK: (1) 1-2-025: 002
Scale: As Noted Date: January 2021

SHEET No. G-3 OF 120 SHEETS

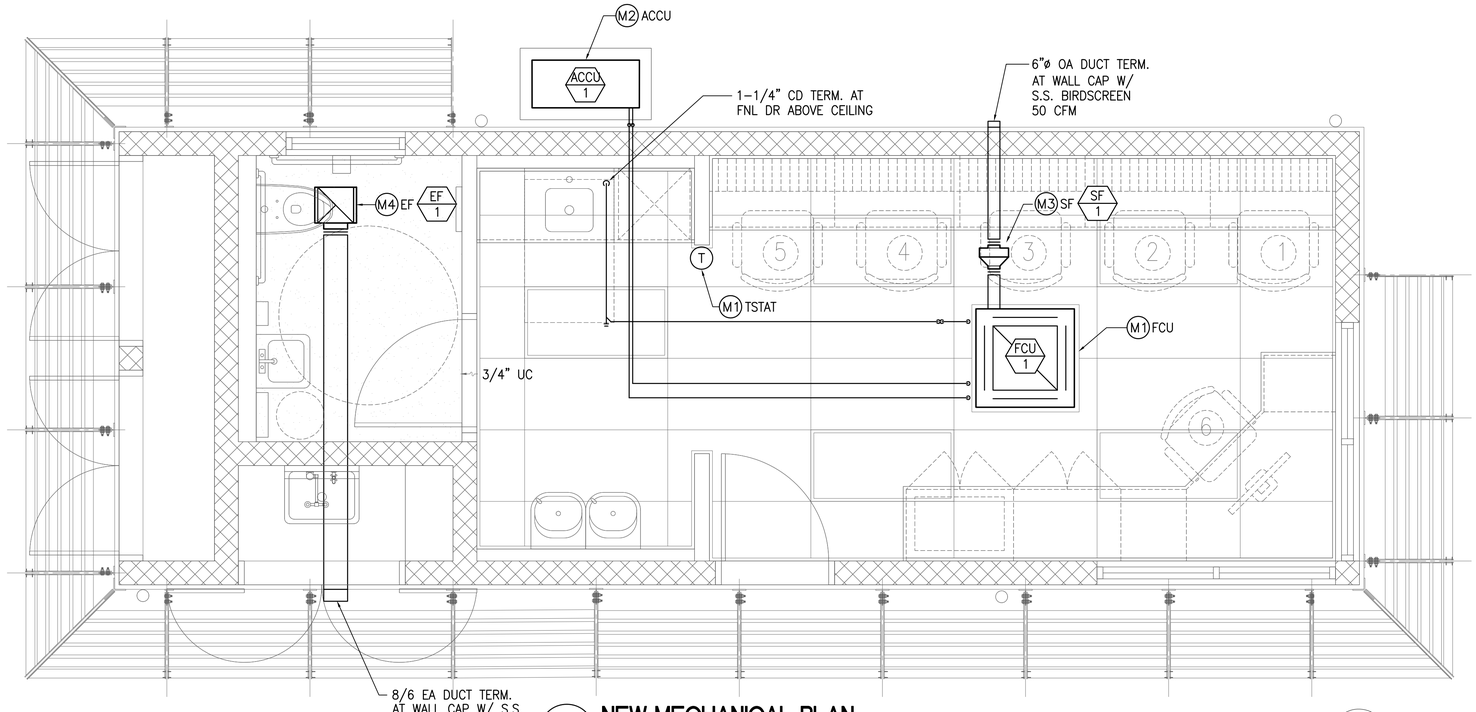
ORIGINAL PLAN	SURVEY PLOTTED BY	WM/JS	DATE
	DRAWN BY		
NOTE BOOK	TRACED BY	CWL	
	DESIGNED BY		
No.	QUANTITIES BY:		
	CHECKED BY:		

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	112	120



1 / M-2 **NEW PLUMBING PLAN**
SCALE: 1/2" = 1'-0"



2 / M-2 **NEW MECHANICAL PLAN**
SCALE: 1/2" = 1'-0"

NEW PLUMBING NOTES:

(P1) PROVIDE NEW ACCESSIBLE WATER CLOSET COMPLETE INCLUDING NEW SANITARY, WATER, AND VENT PIPING AS INDICATED. PROVIDE NEW FLUSH VALVE ON OPPOSITE SIDE OF CLOSEST SIDE PARTITION/WALL. INSTALL IN ACCORDANCE WITH ADAAG 2010 PARAGRAPH 604 REQUIREMENTS. PATCH WALL/FLOOR AS REQUIRED TO MATCH ADJACENT SURFACE. CONTRACTOR TO FIELD VERIFY.

(P2) PROVIDE NEW ACCESSIBLE LAVATORY COMPLETE INCLUDING NEW SANITARY, WATER, AND VENT PIPING AS INDICATED. PROVIDE P-TRAP, SUPPLY STOPS, SUPPLY PIPING AND ACCESSORIES AS REQUIRED FOR NEW INSTALLATION. INSTALL IN ACCORDANCE WITH ADAAG 2010 PARAGRAPH 606 REQUIREMENTS. PATCH WALL/FLOOR AS REQUIRED TO MATCH ADJACENT SURFACE. CONTRACTOR TO FIELD VERIFY.

(P3) PROVIDE NEW ACCESSIBLE SINK COMPLETE INCLUDING NEW SANITARY, WATER, AND VENT PIPING AS INDICATED. PROVIDE WITH P-TRAP, SUPPLY STOPS, SUPPLY PIPING AND ACCESSORIES AS REQUIRED FOR NEW INSTALLATION. INSTALL IN ACCORDANCE WITH ADAAG 2010 PARAGRAPH 606 REQUIREMENTS. PATCH WALL/CABINET AS REQUIRED TO MATCH ADJACENT SURFACE. CONTRACTOR TO FIELD VERIFY.

(P4) PROVIDE NEW FUNNEL DRAIN COMPLETE INCLUDING NEW SANITARY AND VENT PIPING TO MEET REQUIREMENTS OF A/C CONDENSATE DISPOSAL AS INDICATED. COORDINATE LOCATION WITH A/C SUBCONTRACTOR. PROVIDE INSULATED P-TRAP AND DRAIN PIPING AS REQUIRED FOR NEW INSTALLATION. INSULATE FUNNEL DRAIN AND DRAIN PIPING UP TO CONNECTION TO MAIN BRANCH LINE. INSTALL ABOVE CEILING AND OUTSIDE OF WALL AS REQUIRED TO PROVIDE ADEQUATE ACCESS. CONTRACTOR TO FIELD VERIFY.

(P5) PROVIDE NEW DUAL HEIGHT ACCESSIBLE ELECTRIC WATER COOLER COMPLETE INCLUDING NEW SANITARY, WATER, AND VENT PIPING AS INDICATED. PROVIDE P-TRAP, SUPPLY STOPS, SUPPLY TUBING AND ACCESSORIES AS REQUIRED FOR NEW INSTALLATION. INSTALL IN ACCORDANCE WITH ADAAG 2010 PARAGRAPH 602 REQUIREMENTS. PATCH/WALL AS REQUIRED TO MATCH ADJACENT SURFACE. CONTRACTOR TO FIELD VERIFY.

(P6) PROVIDE NEW SERVICE SINK COMPLETE INCLUDING NEW SANITARY, WATER, AND VENT PIPING AS INDICATED. PROVIDE P-TRAP W/ INTEGRAL CLEANOUT, SUPPLY STOPS, SUPPLY PIPING AND ACCESSORIES AS REQUIRED FOR NEW INSTALLATION. PROVIDE NEW SWING-DOWN EMERGENCY EYEWASH SYSTEM COMPLETE INCLUDING NEW WATER PIPING AS INDICATED. PATCH WALL/FLOOR AS REQUIRED TO MATCH EXISTING ADJACENT SURFACE. CONTRACTOR TO FIELD VERIFY.

NEW MECHANICAL NOTES:

(M1) PROVIDE NEW 4-WAY CEILING CASSETTE FCU COMPLETE. PROVIDE INSULATED REFRIGERANT PIPING, INSULATED CONDENSATE DRAIN PIPING, TSTAT, WIRING AND ASSOCIATED ACCESSORIES AS REQUIRED FOR COMPLETE SPLIT SYSTEM INSTALLATION IN ACCORDANCE WITH MANUFACTURER RECOMMENDATION. CONTRACTOR TO PROGRAM CONTROLS TO HAVE RETURN SENSOR AT THE UNIT TO REGULATE TEMPERATURE IN SPACE. PROVIDE 1-INCH THICK CLOSED-CELL ELASTOMERIC INSULATION WITH THERMAL CONDUCTIVITY BETWEEN 0.21 AND 0.27 BTU-IN/(H-FT2-°F) ON ALL REFRIGERANT AND CONDENSATE DRAIN PIPING. EXTERIOR PIPING SHALL ADDITIONALLY BE COVERED WITH ALUMINUM JACKET AND MADE WEATHER-TIGHT.

(M2) PROVIDE NEW AIR COOLED CONDENSING UNIT COMPLETE. PROVIDE NEW CONCRETE PAD, INSULATED REFRIGERANT PIPING, CONTROLS, WIRING, AND ACCESSORIES AS REQUIRED FOR COMPLETE SPLIT SYSTEM INSTALLATION IN ACCORDANCE WITH MANUFACTURER RECOMMENDATION. PROVIDE 1-INCH THICK CLOSED-CELL ELASTOMERIC INSULATION WITH THERMAL CONDUCTIVITY BETWEEN 0.21 AND 0.27 BTU-IN/(H-FT2-°F) ON ALL REFRIGERANT PIPING. EXTERIOR PIPING SHALL ADDITIONALLY BE COVERED WITH ALUMINUM JACKET AND MADE WEATHER-TIGHT.

(M3) PROVIDE NEW INLINE OUTSIDE AIR SUPPLY FAN COMPLETE INCLUDING CONTROLS, AIR DEVICES, BACKDRAFT DAMPER, WALL CAP, ACCESSORIES, AND ASSOCIATED DUCTWORK AS REQUIRED. INTERLOCK WITH FCU-1.

(M4) PROVIDE NEW EXHAUST AIR SYSTEM COMPLETE INCLUDING CEILING CABINET EXHAUST FAN WITH ASSOCIATED DUCTWORK, WALL CAP, BACKDRAFT DAMPER AND ACCESSORIES. INTERLOCK WITH LIGHT SWITCH.

SCALE: 1/2" = 1'

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY WW/JS	
NOTE BOOK	TRACED BY	
	DESIGNED BY CWL	
	QUANTITIES BY	
No.	CHECKED BY	

ROSS S. OKUDA
LICENSED PROFESSIONAL ENGINEER
No. 9377-M
HAWAII, U.S.A.

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R.S. Okuda 4/30/22
SIGNATURE LIC. EXPIRATION

MECHANICAL ENTERPRISES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NEW PLUMBING PLAN & NEW MECHANICAL PLAN

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

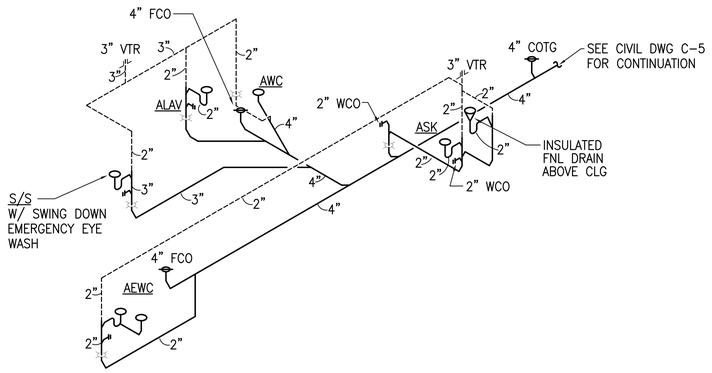
TMK: (1) 1-2-025: 002

Scale: As Noted Date: January 2021

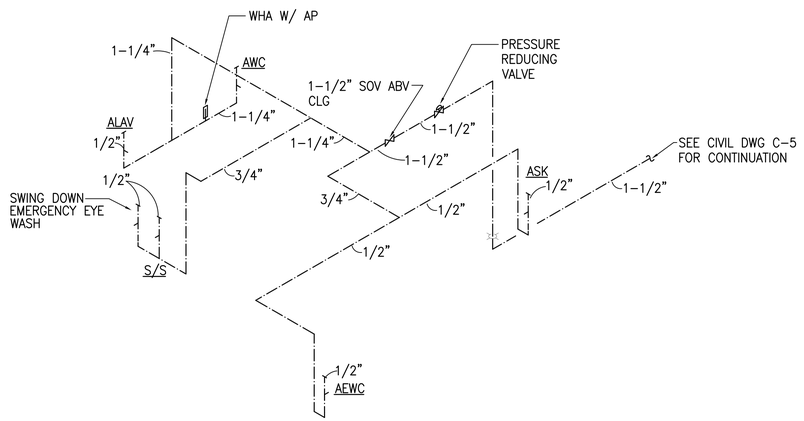
SHEET No. M-2 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	113	120



1 / M-3 **SANITARY PIPING DIAGRAM**
SCALE: NTS



2 / M-3 **WATER PIPING DIAGRAM**
SCALE: NTS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY WM/JS	
NOTE BOOK	TRACED BY	
	DESIGNED BY CWL	
No.	QUANTITIES BY	
	CHECKED BY	

ROSS S. OKUDA
LICENSED PROFESSIONAL ENGINEER
No. 9377-M
HAWAII, U.S.A.

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4/30/22
SIGNATURE — LIC. EXPIRATION
MECHANICAL ENTERPRISES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SANITARY PIPING DIAGRAM & WATER PIPING DIAGRAM

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

TMK: (1) 1-2-025: 002

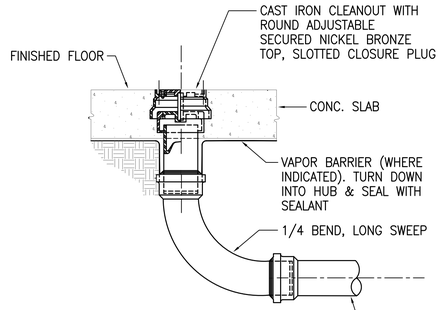
Scale: As Noted Date: January 2021

SHEET No. M-3 OF 120 SHEETS

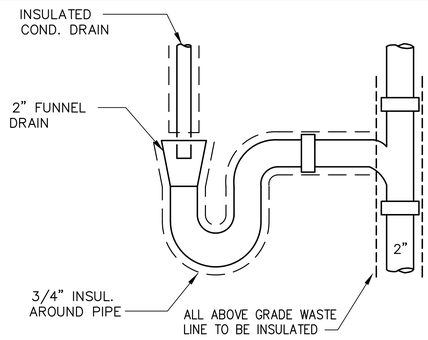
RMTC JOB NO. : 1-19548-0E

6/22/2020

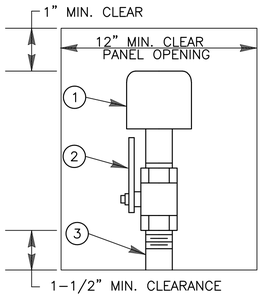
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	114	120



1 / M-4 **FLOOR CLEANOUT DETAIL**
SCALE: NOT TO SCALE



3 / M-4 **FUNNEL DRAIN DETAIL**
SCALE: NOT TO SCALE

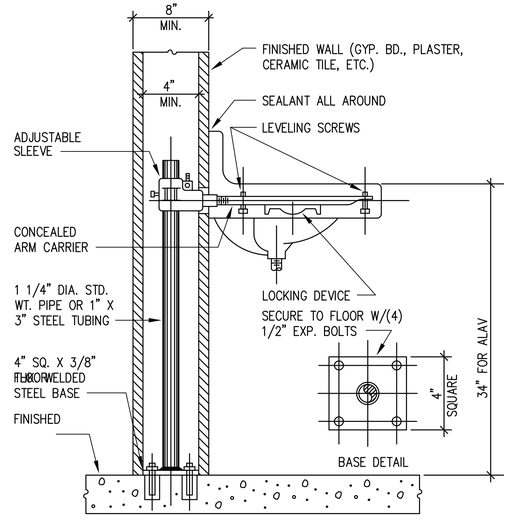


KEY

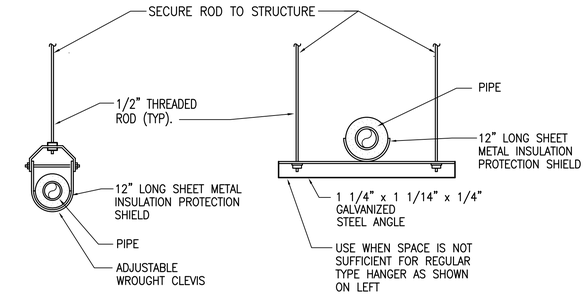
1. WATER HAMMER ARRESTOR
2. BALL VALVE, SAME NOMINAL SIZE AS PIPE BRANCH IN CHASE. OPENING IN BALL VALVE TO MATCH PIPE I.D.
3. PIPE SAME SIZE AS BRANCH IN CHASE TO WHICH IT IS ATTACHED.

NOTE: PROVIDE REDUCER IF REQUIRED BETWEEN VALVE AND WATER HAMMER ARRESTOR.

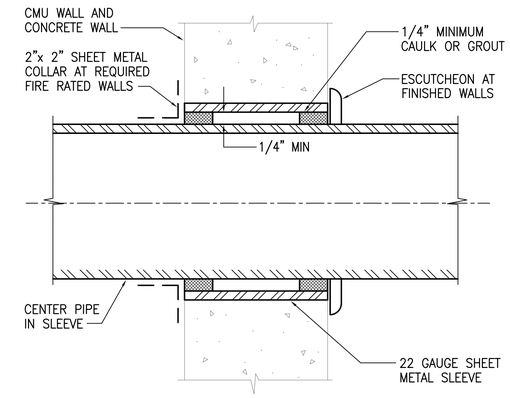
4 / M-4 **TYPICAL WATER HAMMER PANEL**
SCALE: NOT TO SCALE



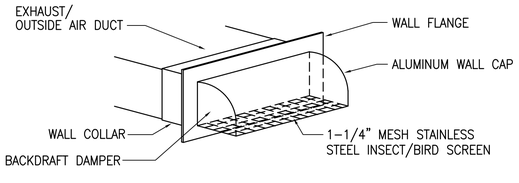
5 / M-4 **TYPICAL LAVATORY - WALL HUNG**
SCALE: NOT TO SCALE



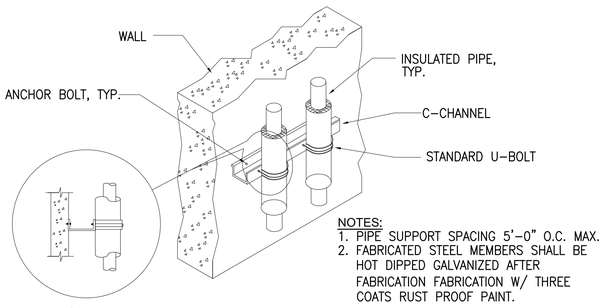
6 / M-4 **PIPE HANGING DETAIL**
NOT TO SCALE



7 / M-4 **PIPE THRU WALL DETAIL**
SCALE: NOT TO SCALE



8 / M-4 **TYPICAL WALL CAP DETAIL**
NOT TO SCALE



NOTES:
1. PIPE SUPPORT SPACING 5'-0" O.C. MAX.
2. FABRICATED STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION FABRICATION W/ THREE COATS RUST PROOF PAINT.

9 / M-4 **REFRIGERANT PIPE WALL SUPPORT DETAIL**
SCALE: NOT TO SCALE

ORIGINAL PLAN	SURVEY PLOTTED BY	
	DRAWN BY	WM/JS
NOTE BOOK	TRACED BY	
	DESIGNED BY	CWL
No.	QUANTITIES BY	
	CHECKED BY	
	DATE	

ROSS S. OKUDA
LICENSED PROFESSIONAL ENGINEER
No. 9377-M
HAWAII, U.S.A.

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SIGNATURE — LIC. EXPIRATION 4/30/22
MECHANICAL ENTERPRISES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MECHANICAL DETAILS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)
TMK: (1) 1-2-025: 002

Scale: As Noted Date: January 2021

SHEET No. M-4 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	115	120

MECHANICAL SCHEDULE NOTE

PROVIDE MAGNETIC STARTER/DISCONNECTS WITH AUTOMATIC RESET FOR ALL UNITS. PROVIDE NEMA-4X STARTER ENCLOSURE FOR ALL OUTDOOR EQUIPMENT. ALL OUTDOOR EQUIPMENT SHALL HAVE POLYSILOXANE COATING PROTECTION ON INSIDE AND OUTSIDE OF HOUSING. COILS (CONDENSER) SHALL HAVE BLYGOLD POLUAL COATING. PROVIDE CONTROL VOLTAGE TRANSFORMERS.

DX SPLIT-SYSTEM AIR CONDITIONING UNIT SCHEDULE

INDOOR UNIT

UNIT NO.	MANUFACTURER AND MODEL OR APPROVED EQUAL	AREA SERVED	TYPE	MAX SUPPLY AIR, CFM	OUTSIDE AIR, CFM	TOTAL CAPACITY (BTUH)	ENT AIR TEMP db (°F)	ENT AIR TEMP wb (°F)	REFRIG LINES* LIQ	REFRIG LINES* GAS	COND DRAIN	MAX SOUND LEVEL (dBA)	OPR WT (LBS)	REMARKS
FCU 1	MITSUBISHI PLA-A24AA	OFFICE	CEILING CASSETTE	710	50	24,000	90	73	1/4"	1/2"	1-1/4"	30	53	PROVIDE WITH WIRED PROGRAMMABLE THERMOSTAT, INTEGRAL CONDENSATE PUMP AND CONTACT/RELAY AS REQUIRED TO INTERLOCK WITH SF-1.

*CONTRACTOR SHALL CONFIRM REFRIGERANT PIPE SIZES WITH MANUFACTURER PRIOR TO PROCUREMENT.

OUTDOOR UNIT

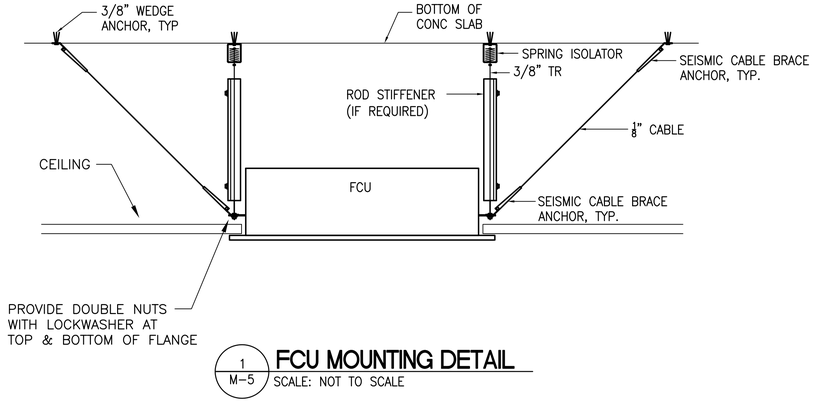
UNIT NO.	MANUFACTURER AND MODEL OR APPROVED EQUAL	LOCATION	TYPE	REFRIG	TOTAL CAPACITY (BTUH)	AMBIENT AIR TEMP (°F)	ELECTRICAL V	ELECTRICAL ø	ELECTRICAL Hz	ELECTRICAL MCA	ELECTRICAL MOCP	OPR WT (LBS)	REMARKS
ACCU 1	MITSUBISHI PUY-A24NHA	GROUND FLOOR	DX SPLIT SINGLE-ZONE	R410A	24,000	95	208	1	60	18	25	97	PROVIDE NEOPRENE ISOLATORS, STARTER AND DISCONNECT, FACTORY APPLIED CORROSION INHIBITOR COATING ON CONDENSER COIL AND CASING. PROVIDE WIRING AND PIPING TO INDOOR UNIT

EXHAUST FAN SCHEDULE

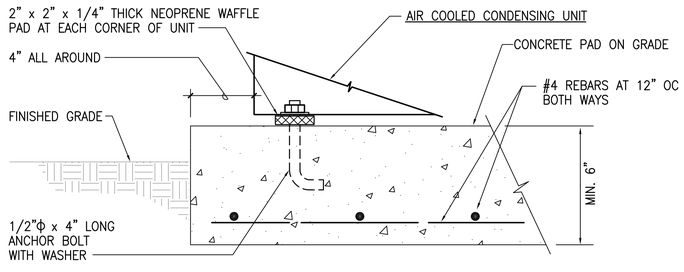
UNIT	AREA SERVED	TYPE	CFM	ESP (INCH WG)	FAN RPM	W	ELECTRICAL V	ELECTRICAL PH	ELECTRICAL HZ	MAX SONE	MAKE & MODEL OR APPROVED EQUAL	REMARKS
EF 1	RESTROOM	CEILING CABINET	100	0.5	818	128	115	1	60	2.0	SP-B150	PROVIDE DISCONNECT AT UNIT. PROVIDE FAN SPEED CONTROL, BACKDRAFT DAMPER AND ISOLATOR KIT. INTERLOCK W/ LIGHT SWITCH.

SUPPLY FAN SCHEDULE

UNIT NO.	MANUFACTURER AND MODEL OR APPROVED EQUAL	SERVICE	TYPE	CFM	SP INCHES	FAN RPM	ELECTRICAL V	ELECTRICAL ø	ELECTRICAL Hz	ELECTRICAL W	SONES	OPR WT (LBS)	REMARKS
SF 1	FANTECH FG 4	FCU-1	CENTRIFUGAL INLINE	50	0.4	2458	120	1	60	11.1	–	7.01	PROVIDE NEW WITH BACKDRAFT DAMPER, ISOLATION MOUNTS, & SOLID STATE FAN SPEED CONTROL. PROVIDE DISCONNECT AT UNIT. PROVIDE CONTROL CIRCUIT RELAY TO INTERLOCK FAN WITH FCU-1.

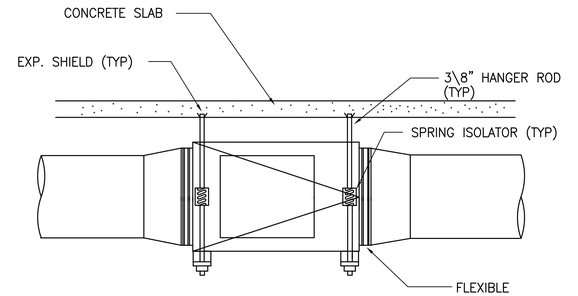


1 / M-5 **FCU MOUNTING DETAIL**
SCALE: NOT TO SCALE



INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS

2 / M-5 **ACCU MOUNTING DETAIL**
SCALE: NOT TO SCALE



3 / M-5 **SUPPLY FAN MOUNTING DETAIL**
SCALE: NOT TO SCALE

ORIGINAL PLAN	NOTE BOOK	No.	DATE
SURVEY PLOTTED BY			WM/JS
DRAWN BY			
TRACED BY			CWL
DESIGNED BY			
QUANTITIES BY			
CHECKED BY			

ROSS S. OKUDA
LICENSED PROFESSIONAL ENGINEER
No. 9377-M
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

4/30/22
SIGNATURE — LIC. EXPIRATION

MECHANICAL ENTERPRISES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MECHANICAL DETAILS & EQUIPMENT SCHEDULES

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

TMK: (1) 1-2-025: 002

Scale: As Noted Date: January 2021

SHEET No. M-5 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E