SPECIAL USE PERMIT - VOLUME II

Prepared in Accordance with Revised Ordinance of Honolulu (ROH) Chapter 21 - Land Use Ordinance (LUO) of the City and County of Honolulu

PVT Integrated Solid Waste Management Facility Relocation Project

PVT Land Company, Ltd.
Waiʻanae District, Oʻahu, Hawaiʻi
Tax Map Key (TMK) 8-7-009:007

February 2020

SITE PLANS

Appendix M Site Development

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Figure 2 Lower Facilities Area
Figure 3 Upper Facilities Area
Figure 4 Parking Details

Appendix N Landfill Grading

Figure 1 Existing Grades
Figure 2 Liner Grades
Figure 3 Final Grades

Appendix O Landscape

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Sheet L-101 Landscape Plan - 1
Sheet L-102 Landscape Plan - 2
Sheet L-103 Landscape Plan - 3
Sheet L-104 Landscape Plan - 4
Sheet L-105 Landscape Plan - 5

Appendix P Irrigation

Sheet L-200 Overall Irrigation Plan
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Sheet L-202 Irrigation Plan - 2
Sheet L-203 Irrigation Plan - 3
Sheet L-204 Irrigation Plan - 4
Sheet L-205 Irrigation Plan - 5
Sheet L-206 Irrigation Details
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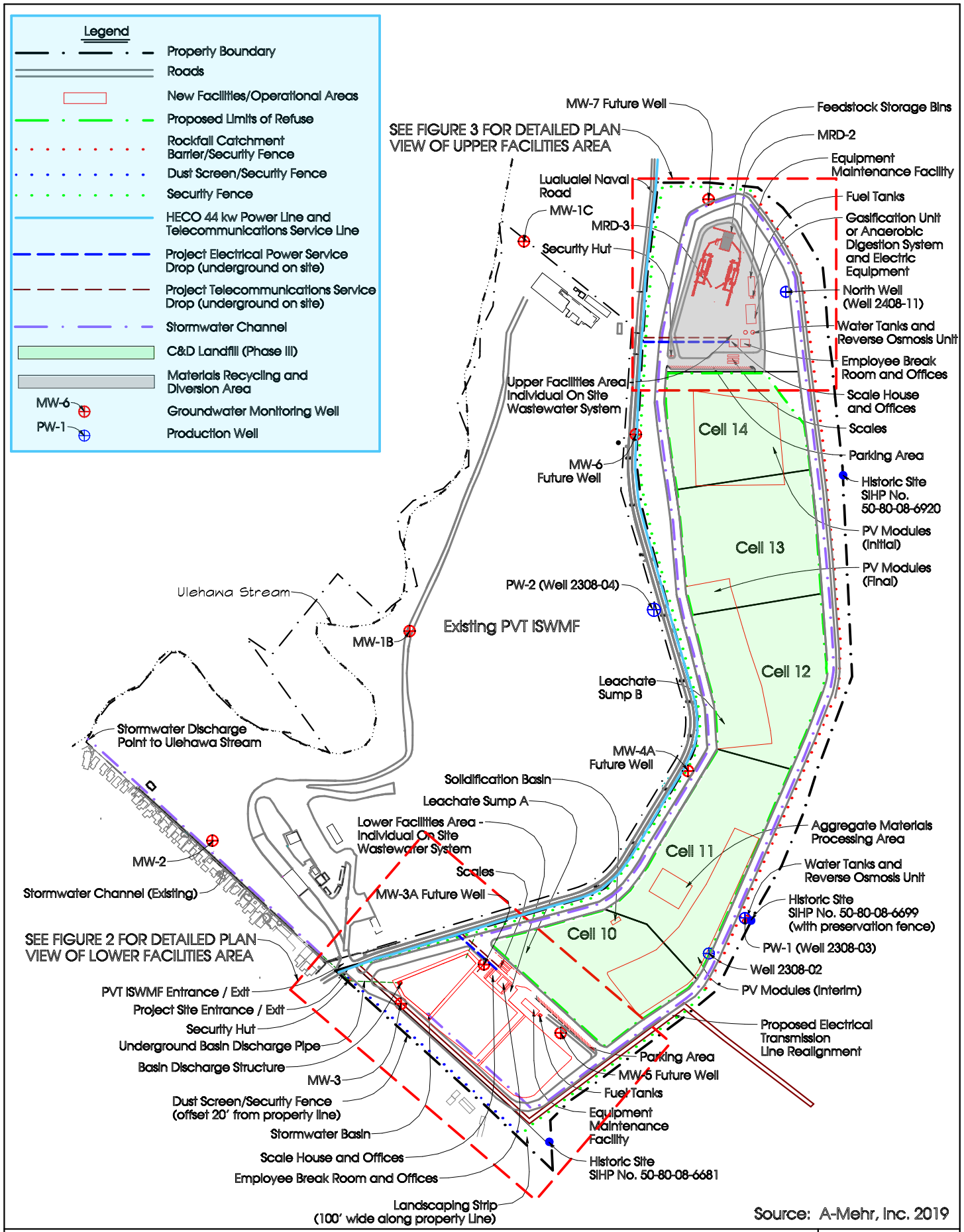
APPENDIX M

Site Development Plan

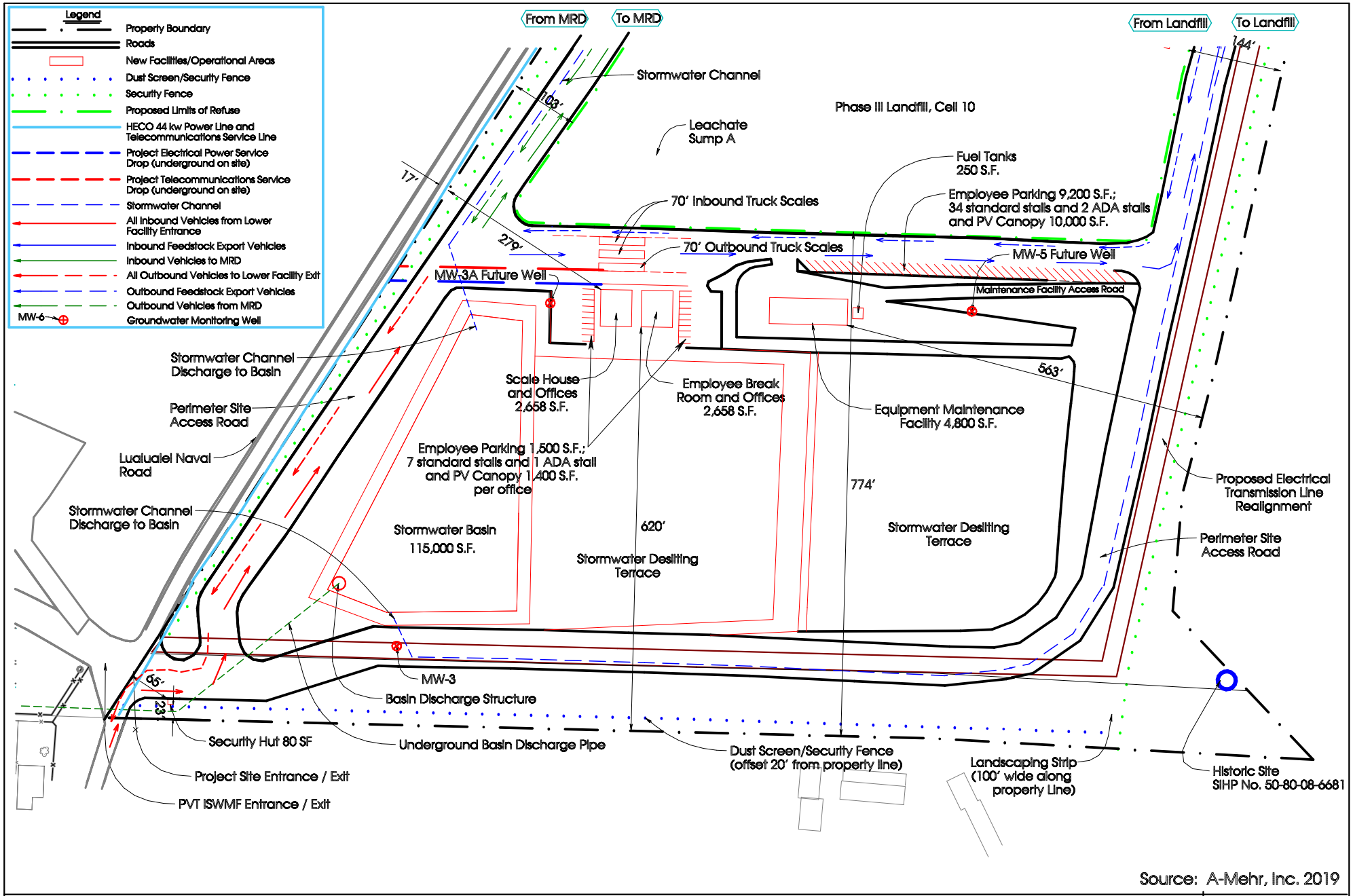


Project Site Development Plan

PVT ISWMF Relocation (Phase III)

Nanakuli, Waianae District, Oahu, Hawaii

Figure 1



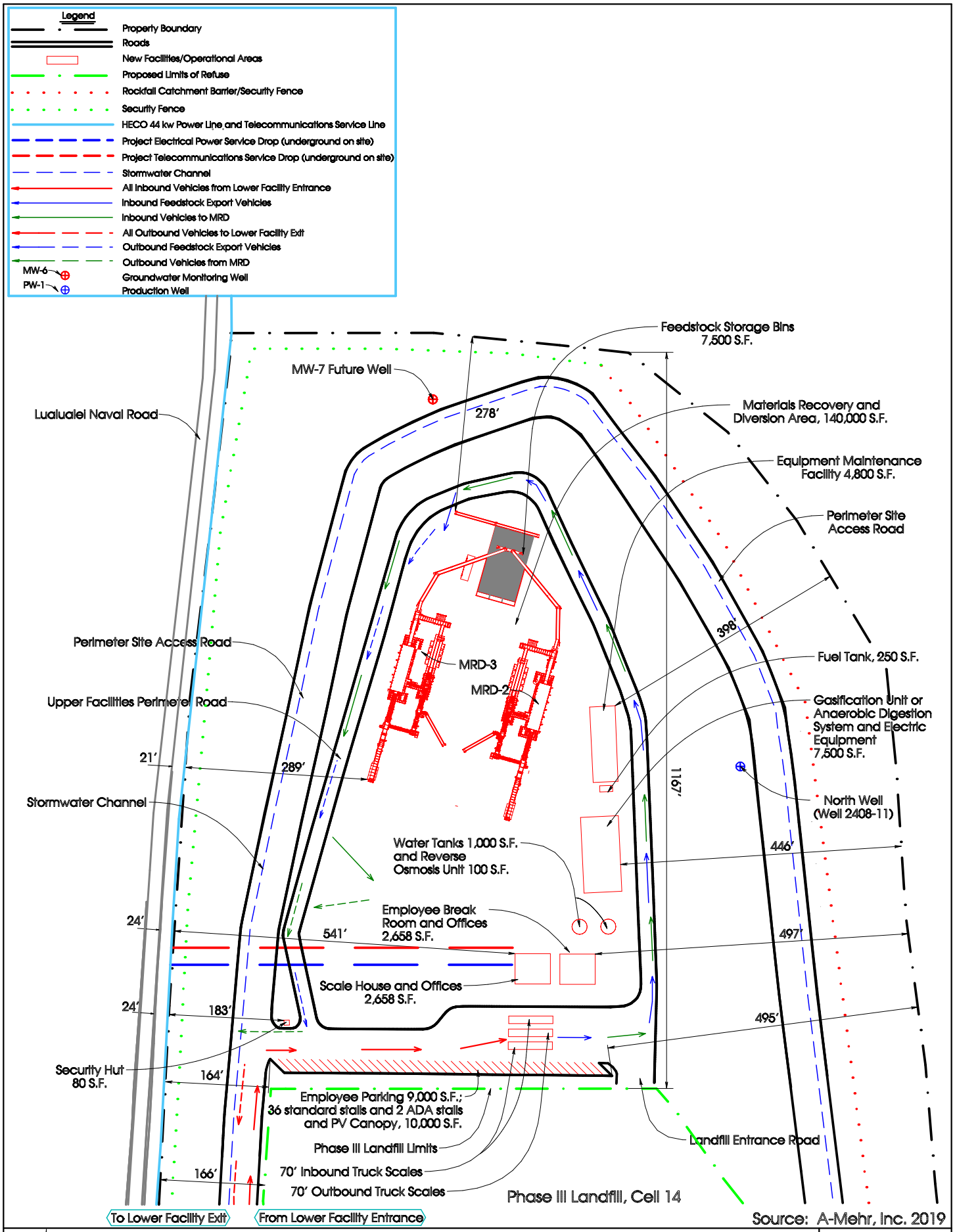
Source: A-Mehr, Inc. 2019

Lower Facilities Area

PVT ISWMF Relocation (Phase III)

Nanakuli, Waianae District, Oahu, Hawaii

Figure 2

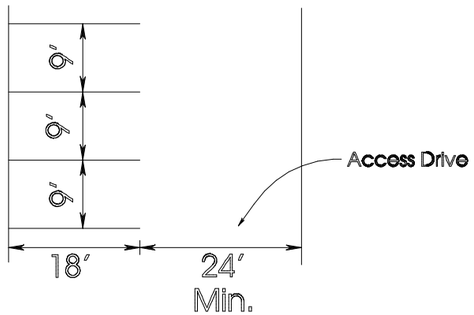


Upper Facilities Area

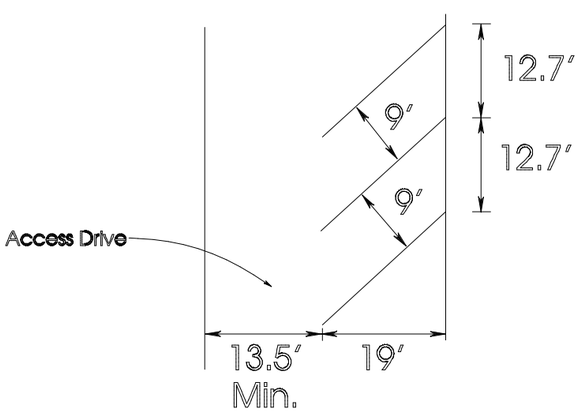
PVT ISWMF Relocation (Phase III)

Nanakuli, Waianae District, Oahu, Hawaii

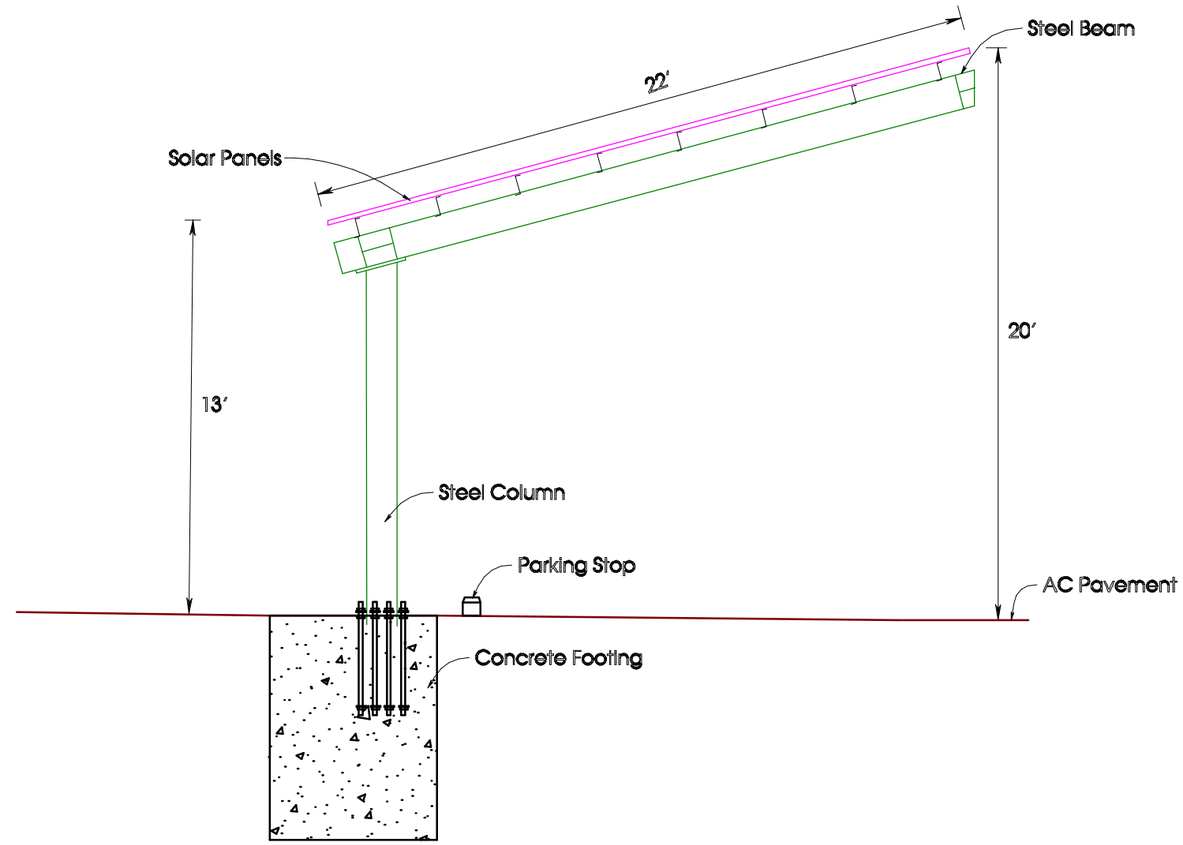
Figure 3



Parking Stall Layout (Typical)
Lower Facilities Parking Area



Parking Stall Layout (Typical)
Upper and Lower Facilities Parking Areas



PV Parking Canopy Elevation View

Parking Details
PVT ISWMF Relocation (Phase III)
Nanakuli, Waianae District, Oahu, Hawaii

Figure
4

APPENDIX N

Landfill Grading Plan

Source: A-Mehr, Inc. 2019

GRAPHIC SCALE 1" = 500'

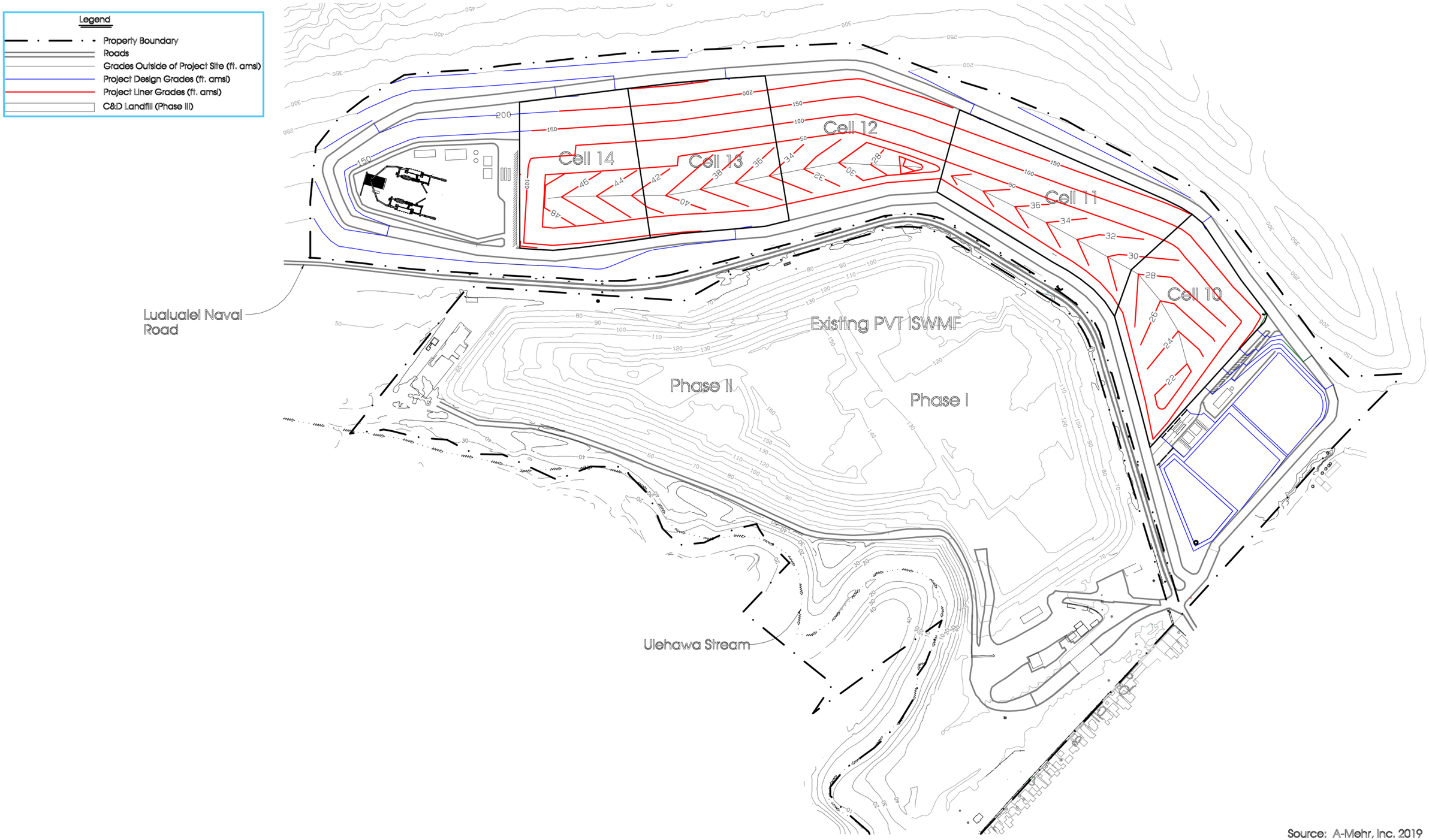
0 250 500 750

Existing Grades

Nanakuli, Waianae District, Oahu, Hawaii

Figure

1



Source: A-Mehr, Inc. 2019

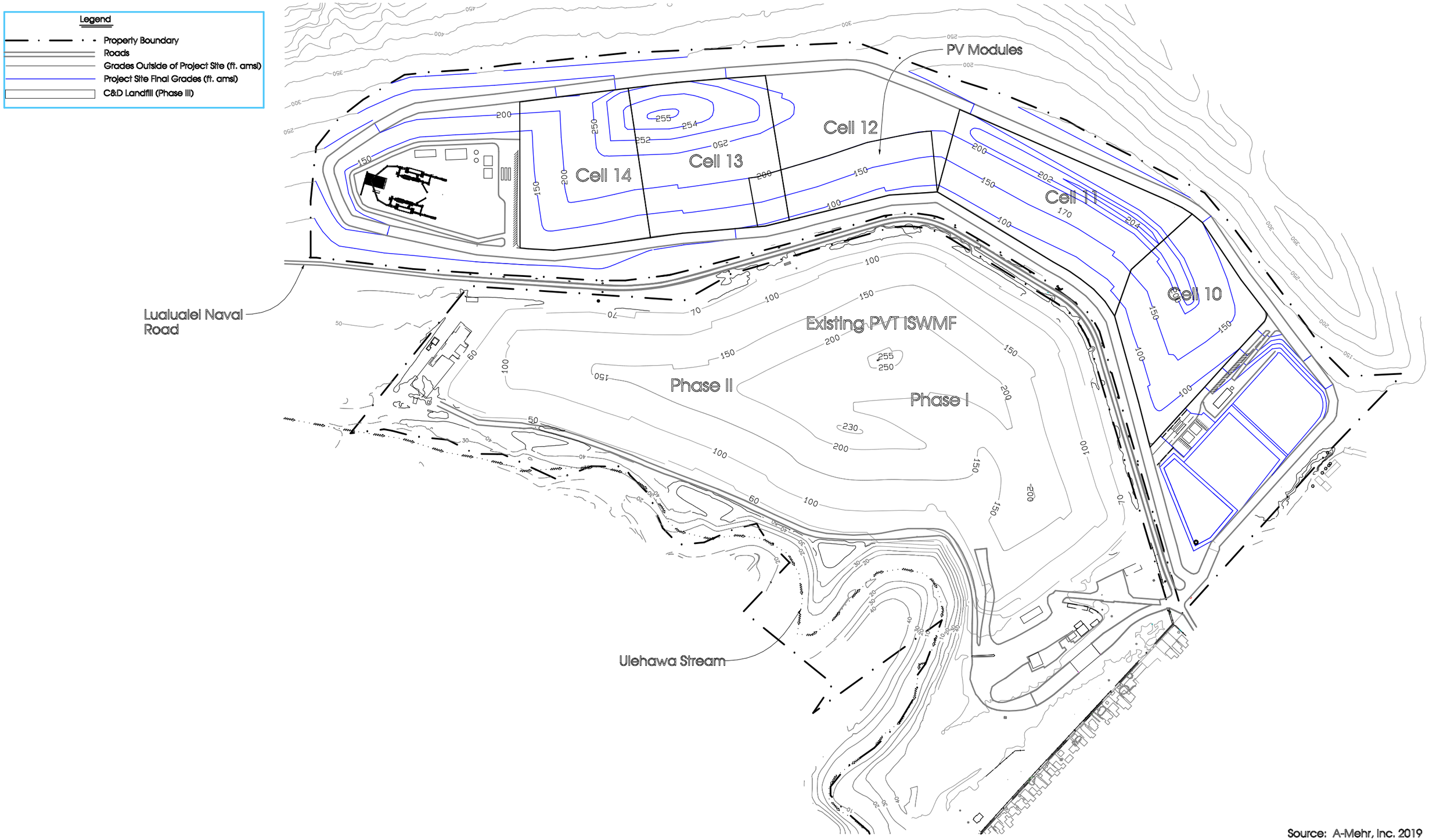
GRAPHIC SCALE 1"= 500'

0 250 500 750

Liner Grades

Nanakuli, Waianae District, Oahu, Hawaii

Figure
2



Source: A-Mehr, Inc. 2019

GRAPHIC SCALE 1"= 500'

0 250 500 750

Final Grades

Nanakuli, Waianae District, Oahu, Hawaii

Figure 3

APPENDIX O

Landscape Plan

BROWNLIE & LEE
LANDSCAPE ARCHITECTURE
SITE PLANNING
IRRIGATION CONSULTANTS

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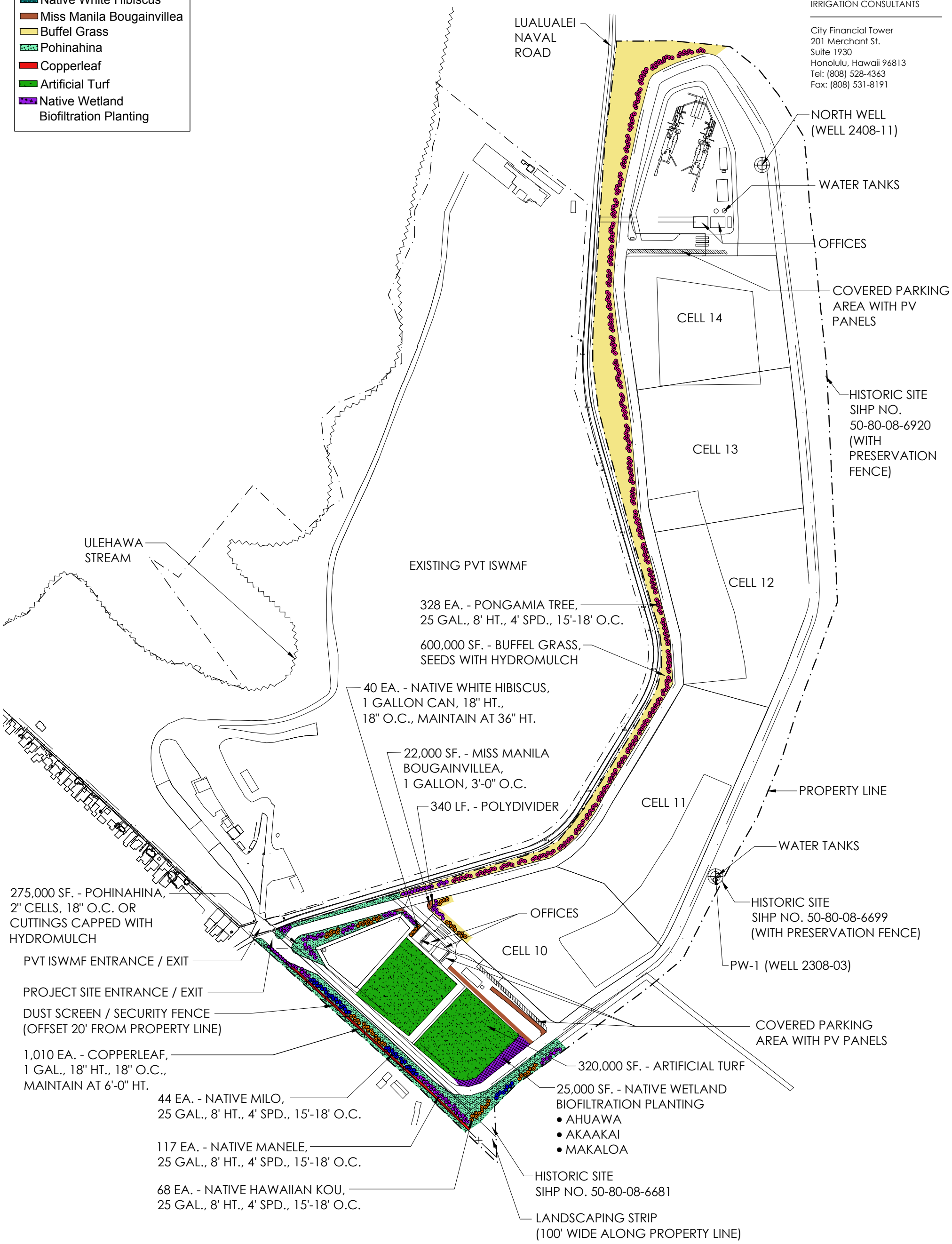
201 Merchant St.
Suite 1930
Honolulu, Hawaii 96813
Tel: (808) 528-4363
Fax: (808) 531-8191

Legend
- Pongomia Tree
- Native Hawaiian Kou
- Native Manele
- Native Milo
- Native White Hibiscus
- Miss Manila Bougainvillea
- Buffel Grass
- Pohinahina
- Copperleaf
- Artificial Turf
- Native Wetland Biofiltration Planting



NORTH

OVERALL LANDSCAPE PLAN

SCALE: 1" = 500'

0 250 500 1,000 1,500

SCALE: 1" = 500'

L-100

Legend
- Pongomia Tree
- Native Hawaiian Kou
- Native Manele
- Native Milo
- Native White Hibiscus
- Miss Manila Bougainvillea
- Buffel Grass
- Pohinahina
- Copperleaf
- Artificial Turf
- Native Wetland Biofiltration Planting

BROWNLIE & LEE

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NORTH

LANDSCAPE PLAN - 1

SCALE: 1" = 150'

0 75 150 300 450

SCALE: 1" = 150'

L-101

Legend

- Pongomia Tree
- Native Hawaiian Kou
- Native Manele
- Native Milo
- Native White Hibiscus
- Miss Manila Bougainvillea
- Buffel Grass
- Pohinahina
- Copperleaf
- Artificial Turf
- Native Wetland Biofiltration Planting

BROWNLIE & LEE

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NORTH

LANDSCAPE PLAN - 2

SCALE: 1" = 150'

0 75 150 300 450

SCALE: 1" = 150'

Legend

- Pongomia Tree
- Native Hawaiian Kou
- Native Manele
- Native Milo
- Native White Hibiscus
- Miss Manila Bougainvillea
- Buffel Grass
- Pohinahina
- Copperleaf
- Artificial Turf
- Native Wetland Biofiltration Planting

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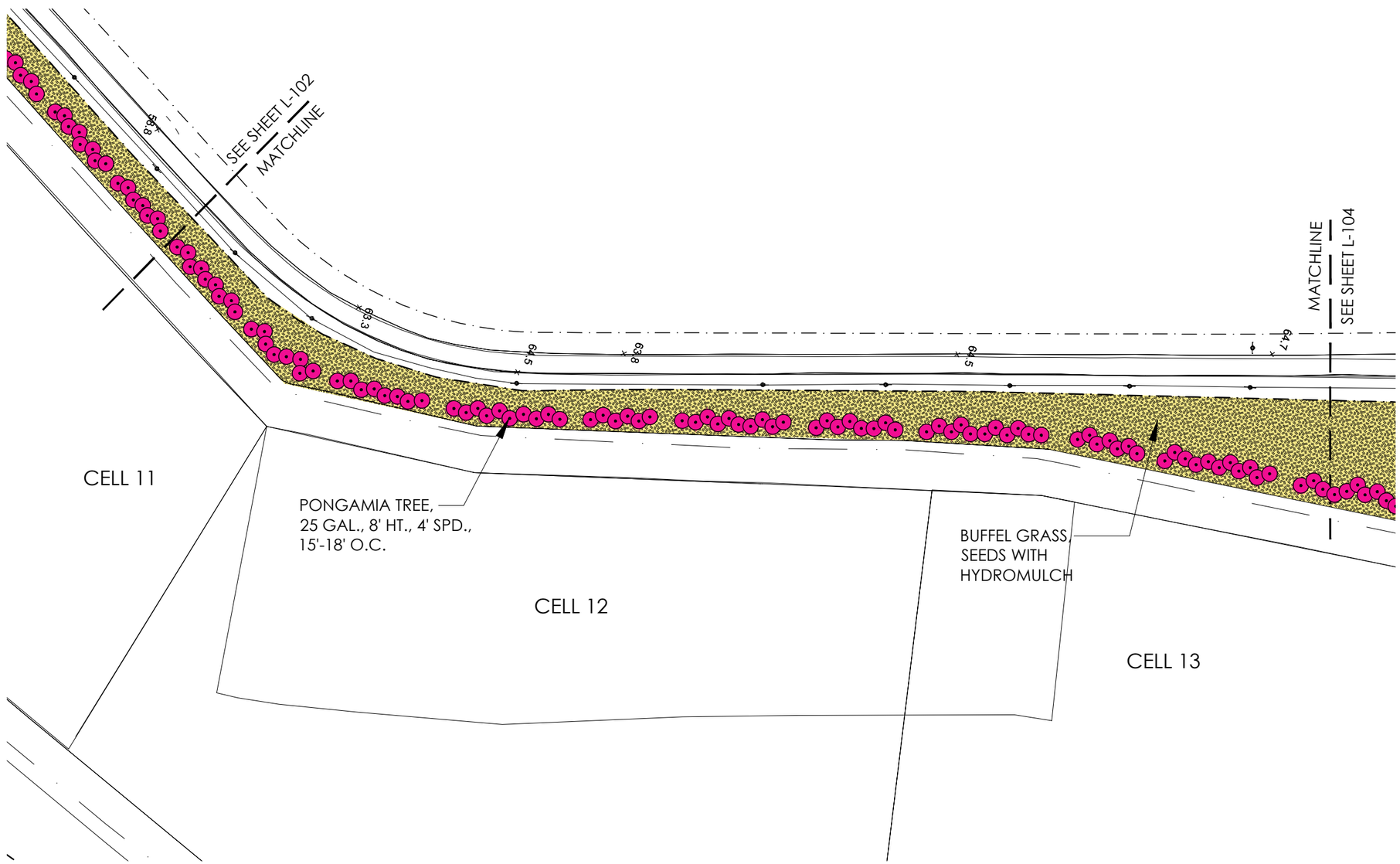

NORTH

LANDSCAPE PLAN - 3

SCALE: 1" = 150'

0 75 150 300 450

SCALE: 1" = 150'

Legend

- Pongomia Tree
- Native Hawaiian Kou
- Native Manele
- Native Milo
- Native White Hibiscus
- Miss Manila Bougainvillea
- Buffel Grass
- Pohinahina
- Copperleaf
- Artificial Turf
- Native Wetland Biofiltration Planting

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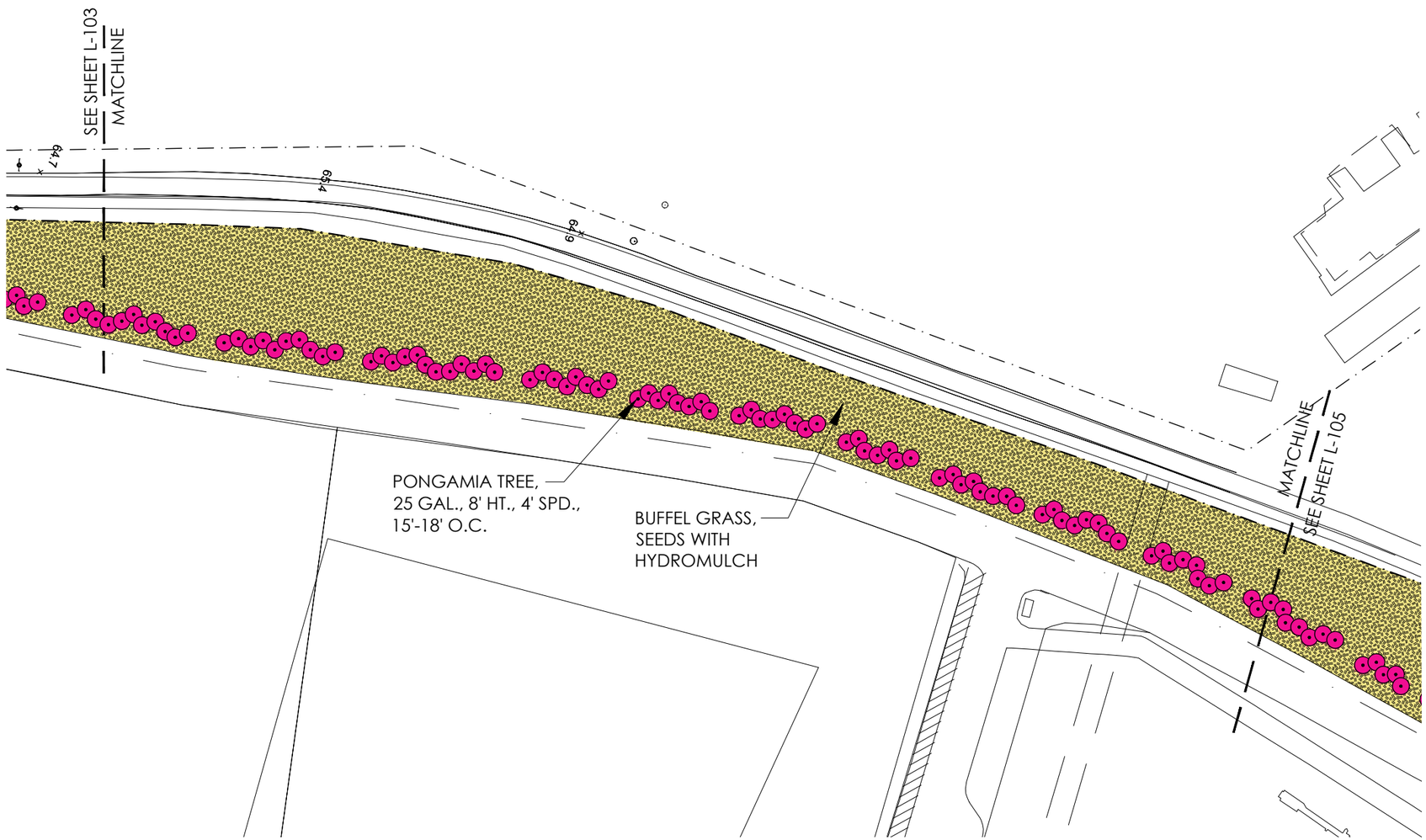


NORTH

LANDSCAPE PLAN - 4

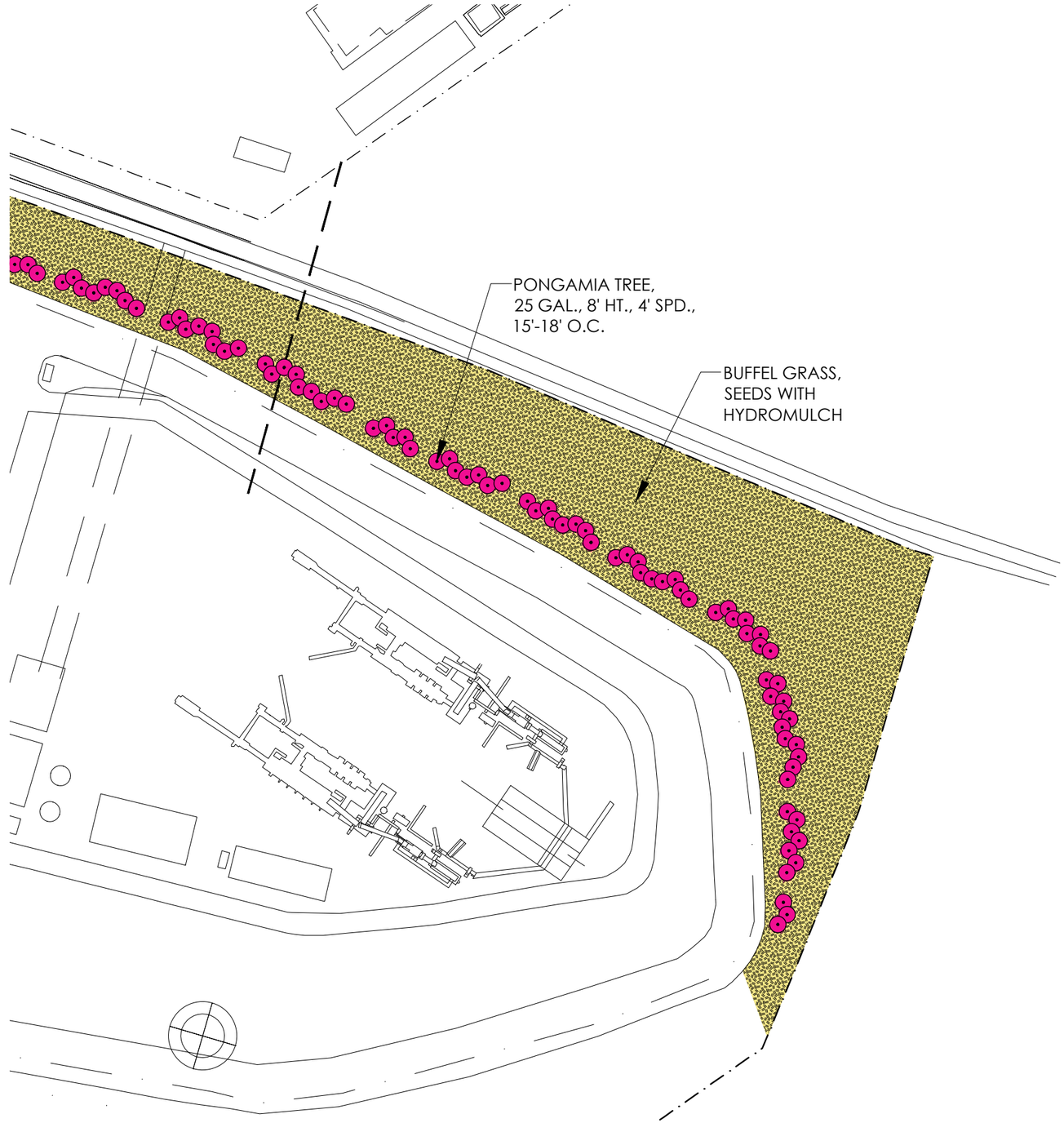
SCALE: 1" = 150'

0 75 150 300 450

SCALE: 1" = 150'

Legend

- Pongomia Tree
- Native Hawaiian Kou
- Native Manele
- Native Milo
- Native White Hibiscus
- Miss Manila Bougainvillea
- Buffel Grass
- Pohinahina
- Copperleaf
- Artificial Turf
- Native Wetland Biofiltration Planting



NORTH

LANDSCAPE PLAN - 5

SCALE: 1" = 150'

0 75 150 300 450

SCALE: 1" = 150'

BROWNLIE & LEE

LANDSCAPE ARCHITECTURE
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APPENDIX P

Irrigation Plan

BROWNLIE & LEE

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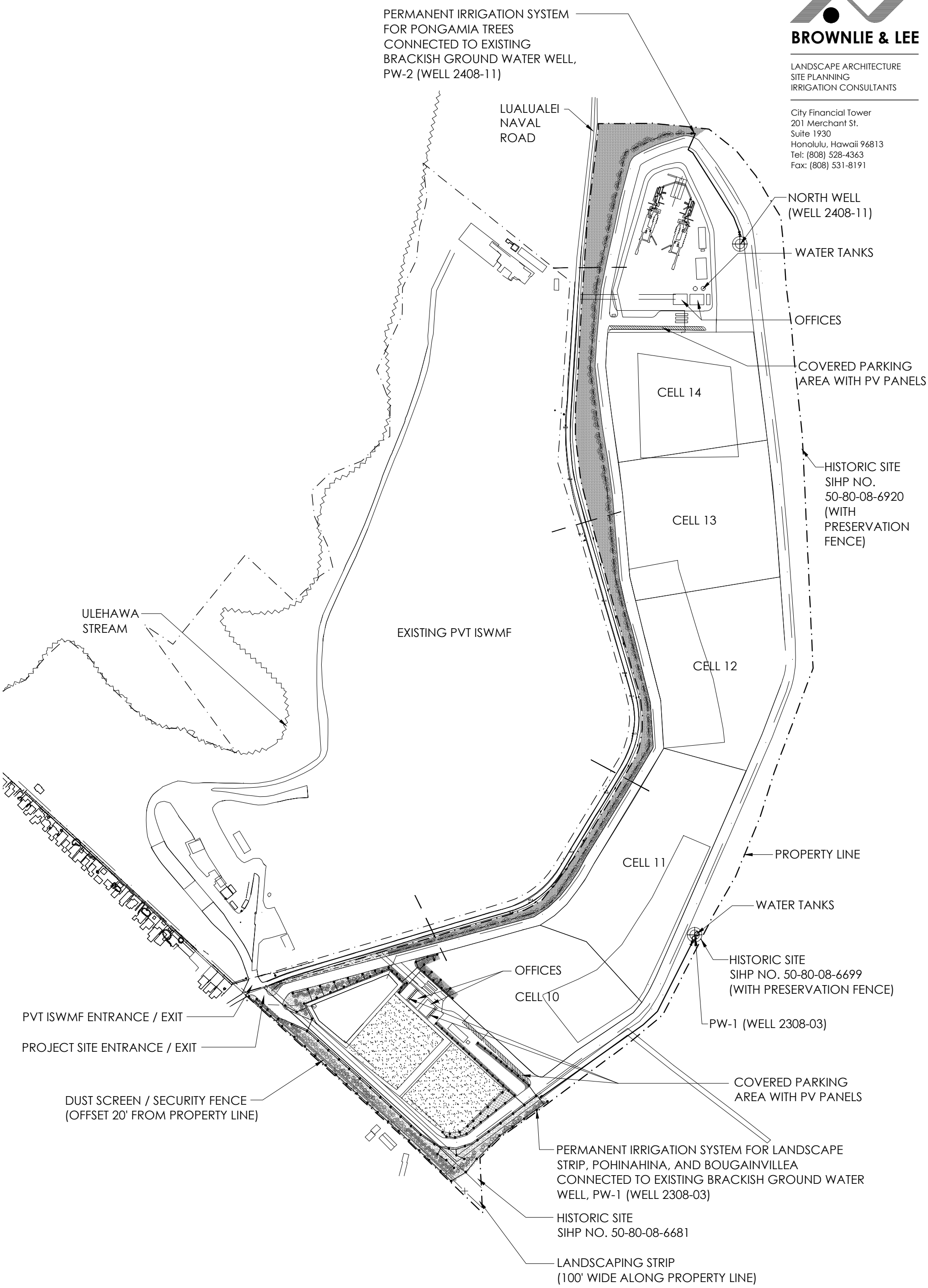

NORTH

OVERALL IRRIGATION PLAN

SCALE: 1" = 500'

0 250 500 1,000 1,500

SCALE: 1" = 500'

L-200

BROWNLIE & LEE

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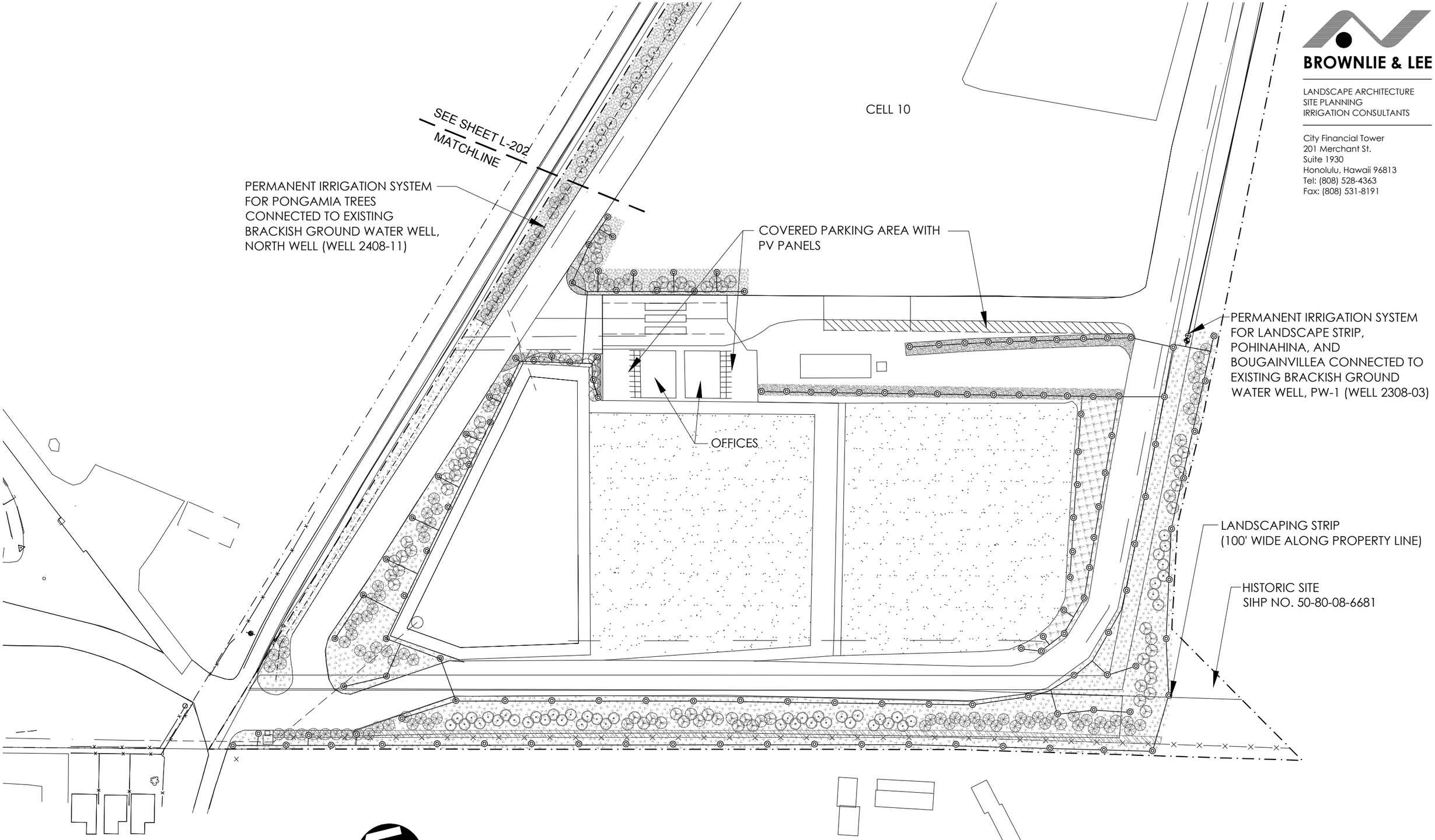

NORTH

IRRIGATION PLAN - 1

SCALE: 1" = 150'

0 75 150 300 450

SCALE: 1" = 150'

L-201

BROWNLIE & LEE

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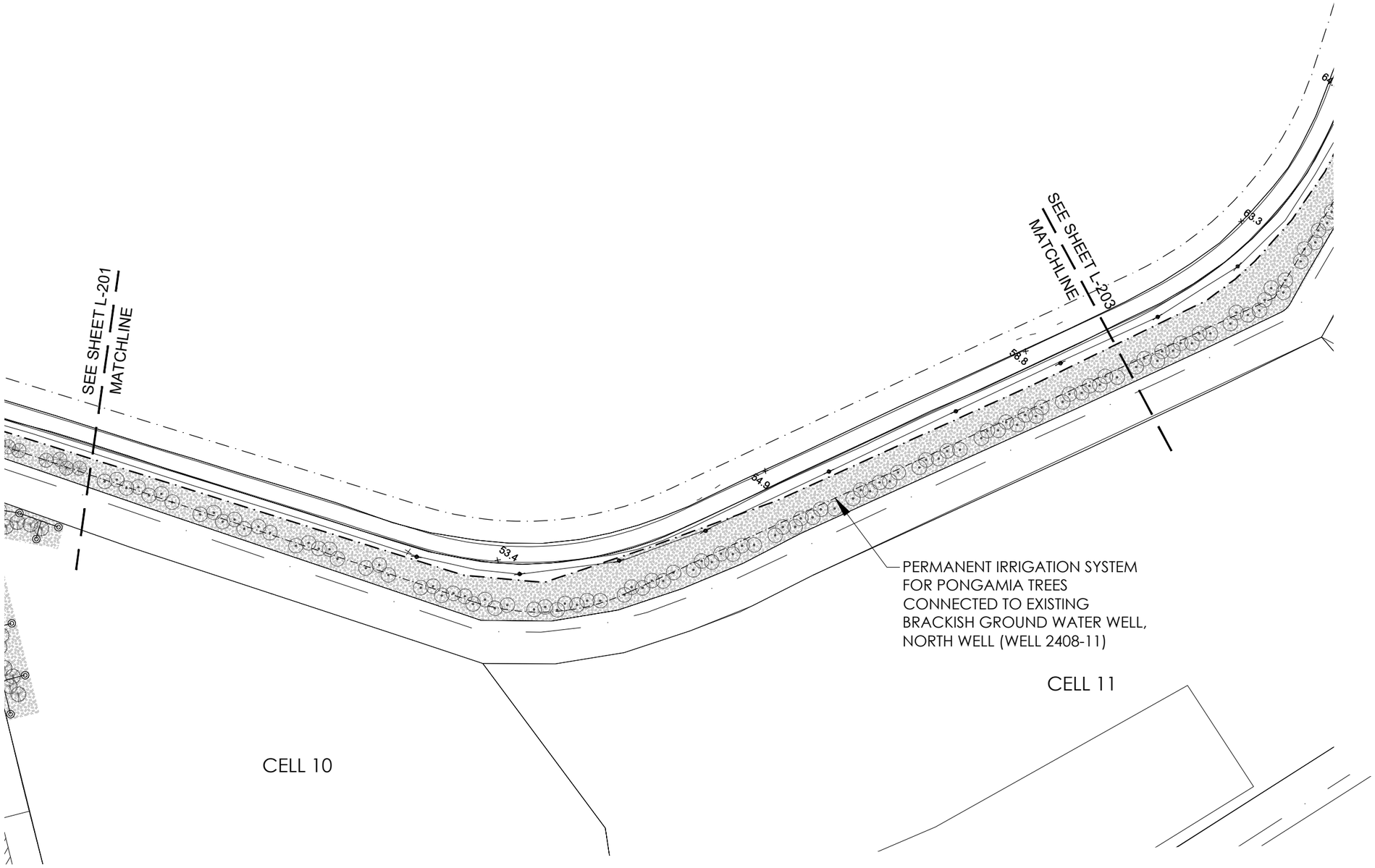

NORTH

IRRIGATION PLAN - 2

SCALE: 1" = 150'

0 75 150 300 450

SCALE: 1" = 150'

BROWNLIE & LEE

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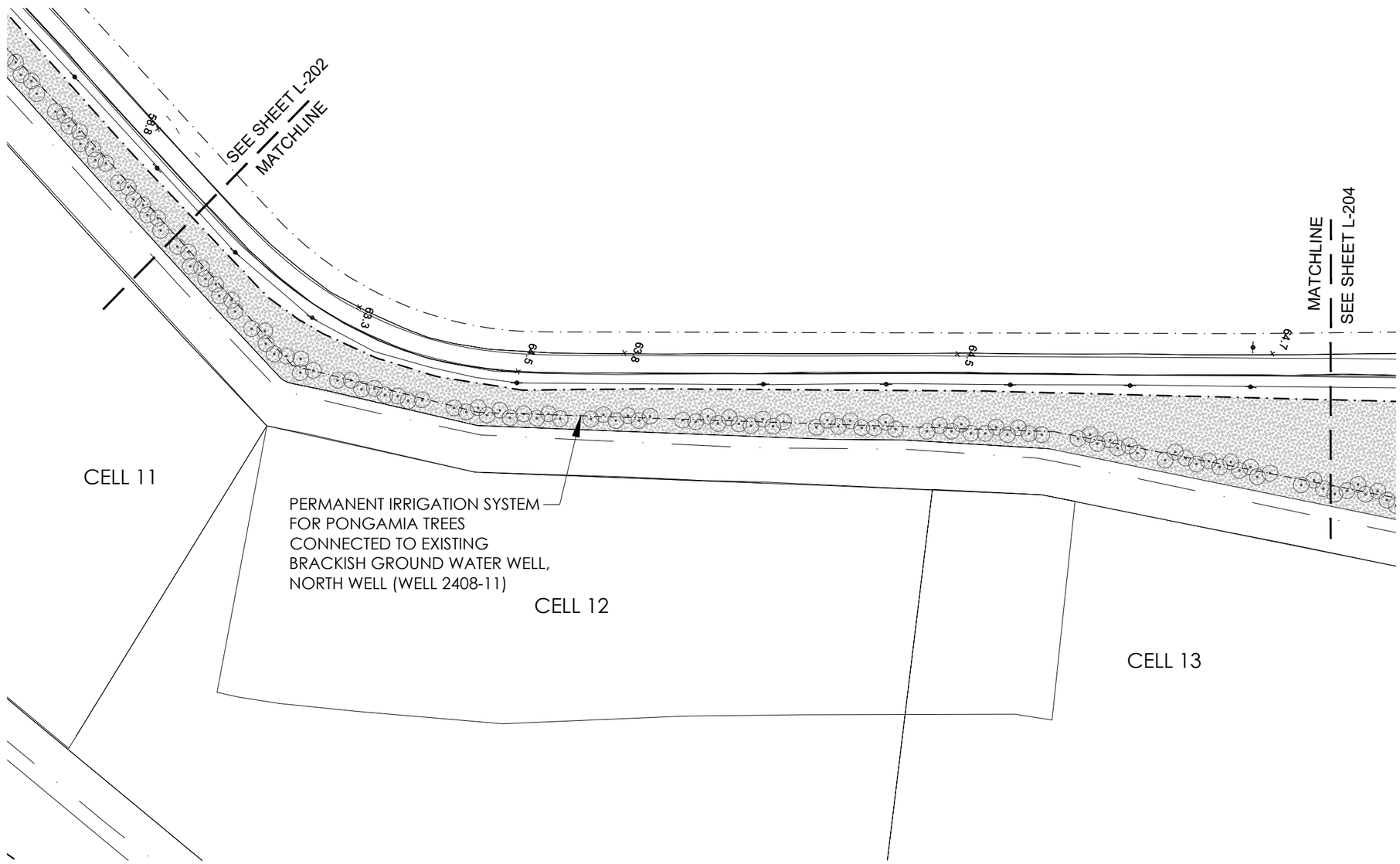

NORTH

IRRIGATION PLAN - 3

SCALE: 1" = 150'

0 75 150 300 450

SCALE: 1" = 150'

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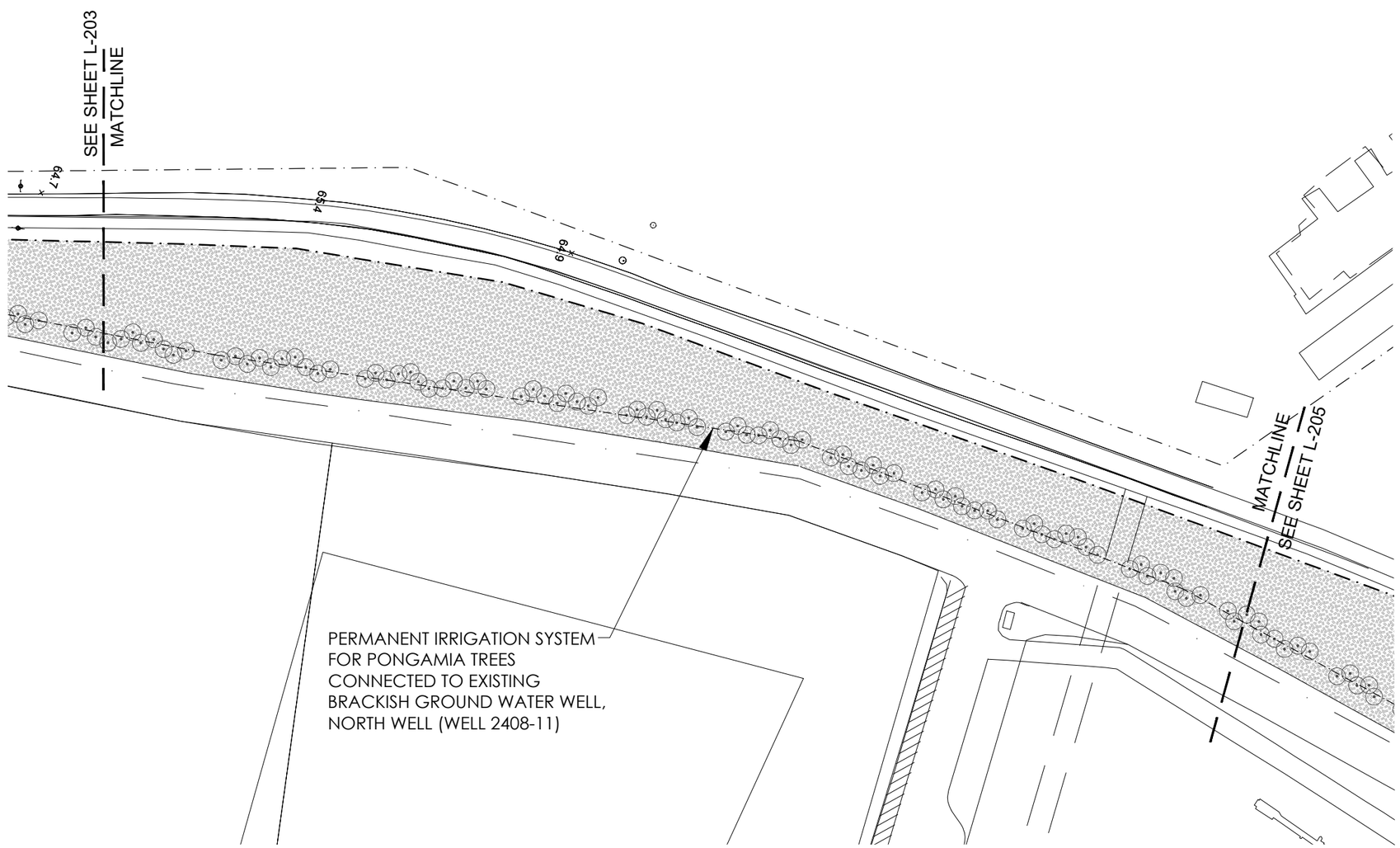

NORTH

IRRIGATION PLAN - 4

SCALE: 1" = 150'

0 75 150 300 450

SCALE: 1" = 150'

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LANDSCAPE ARCHITECTURE
SITE PLANNING
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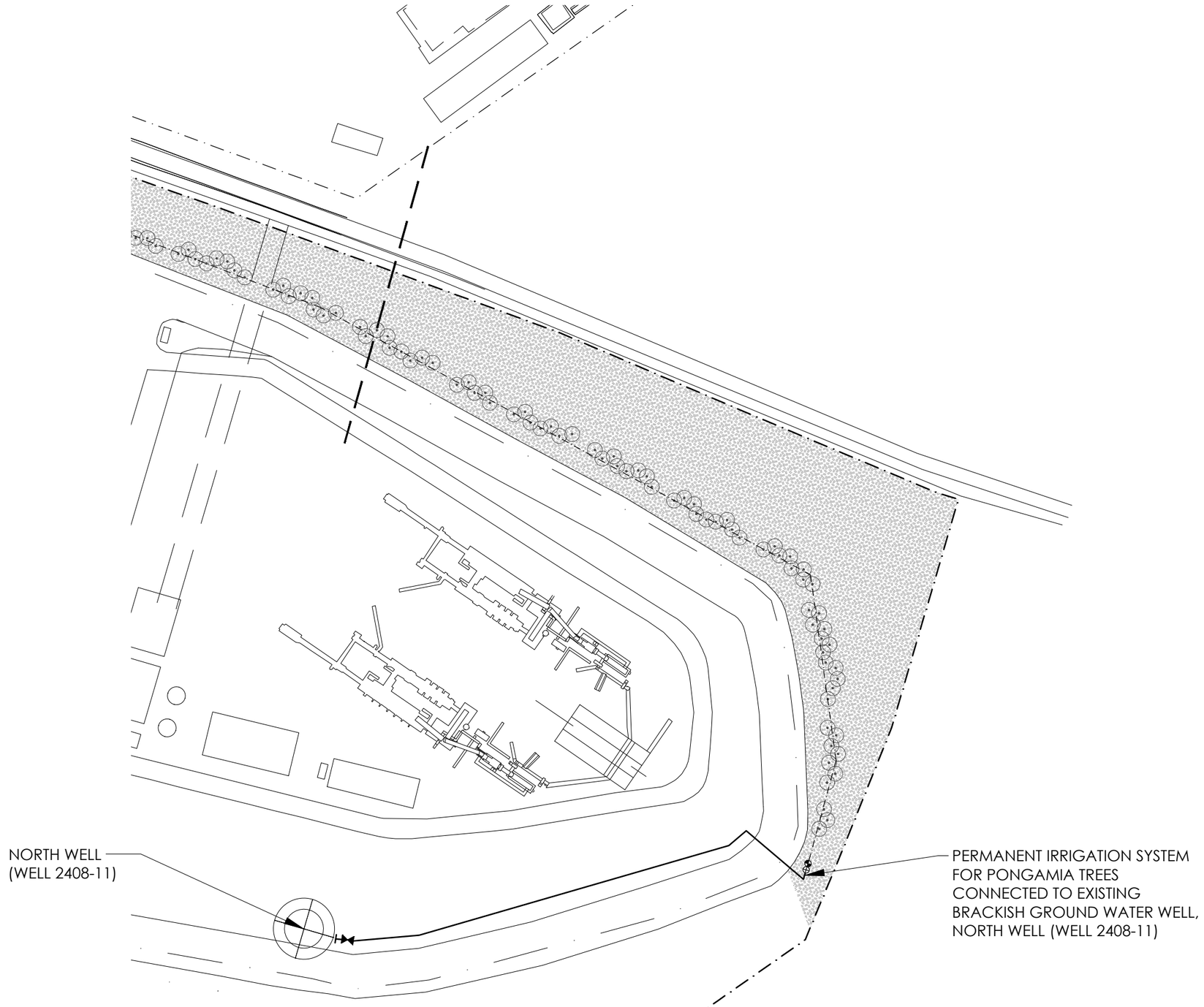

NORTH

IRRIGATION PLAN - 5

SCALE: 1" = 150'

0 75 150 300 450

SCALE: 1" = 150'

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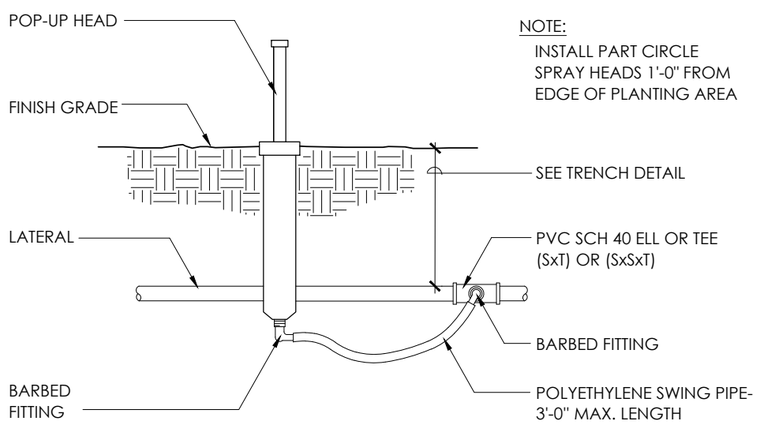
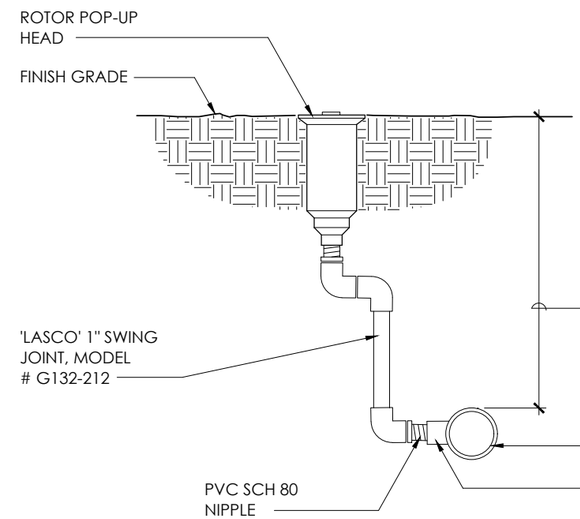


NOTE:
INSTALL PART CIRCLE SPRAY HEADS 1'-0" FROM EDGE OF PLANTING AREA

SPRAY HEAD POP-UP

NOT TO SCALE

IH-001
12/30/98



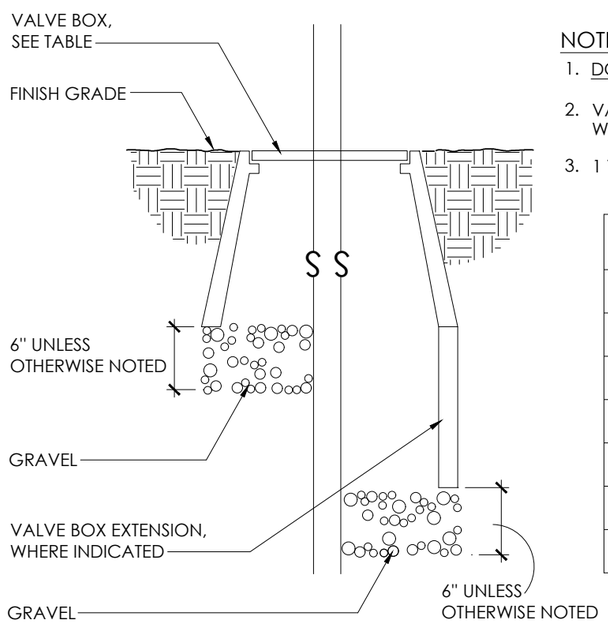
NOTE:

1. DO NOT INSTALL HEAD IN DRAINAGE SWALE.
2. INSTALL PART CIRCLE ROTOR HEADS 1'-0" FROM EDGE OF PLANTING AREA

ROTOR HEAD - POP-UP

NOT TO SCALE

IH-006A
5/5/15



NOTES:

1. DO NOT INSTALL VALVE BOX IN DRAINAGE SWALE
2. VALVE BOX EXTENSIONS SHALL BE COMPATIBLE WITH CORRESPONDING VALVE BOX
3. 1 VALVE PER VALVE BOX UNLESS OTHERWISE NOTED

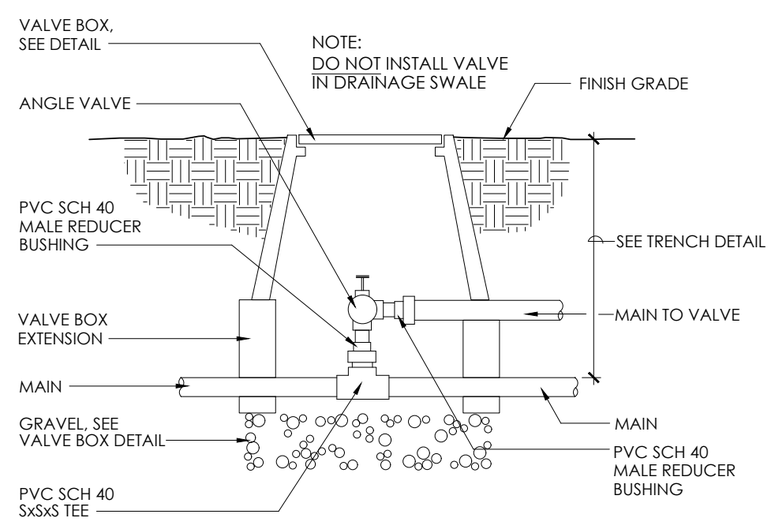
VALVE BOX CONTENTS	VALVE BOX MODEL NO. (OR APPROVED EQUAL)
GATE VALVE	RAINBIRD VB 10" ROUND
ANGLE VALVE	RAINBIRD VB 10" ROUND
ELECTRIC VALVE	RAINBIRD VB STANDARD
QUICK COUPLER	RAINBIRD VB 10" ROUND
IRRIGATION WIRES	RAINBIRD VB STANDARD
WATER METER	RAINBIRD VB STANDARD
PRESSURE REDUCING VALVE	RAINBIRD VB STANDARD

VALVE BOX TABLE

VALVE BOX

NOT TO SCALE

IV-021A
12/30/98



NOTE:
DO NOT INSTALL VALVE IN DRAINAGE SWALE

ANGLE VALVE

NOT TO SCALE

IV-016
12/30/98

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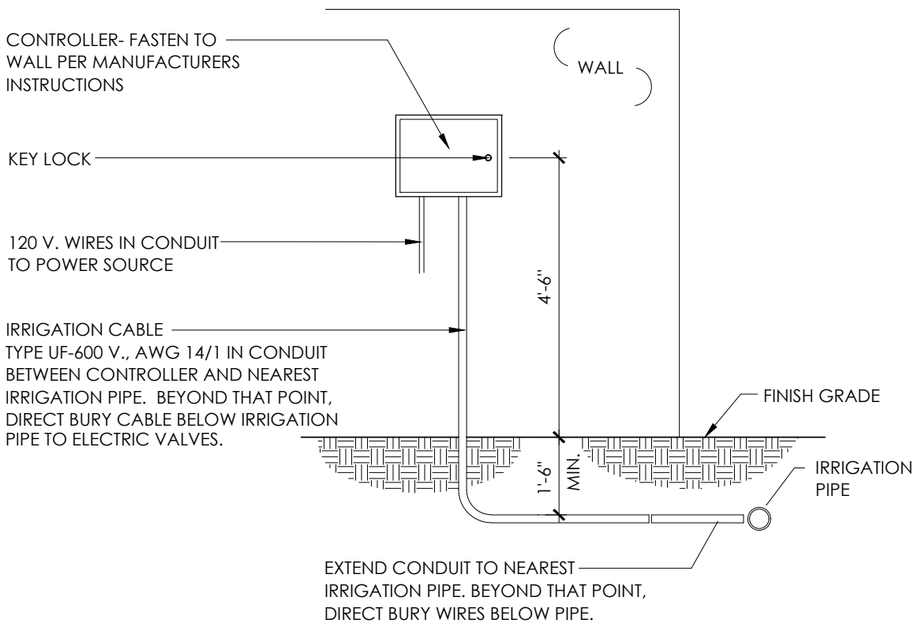
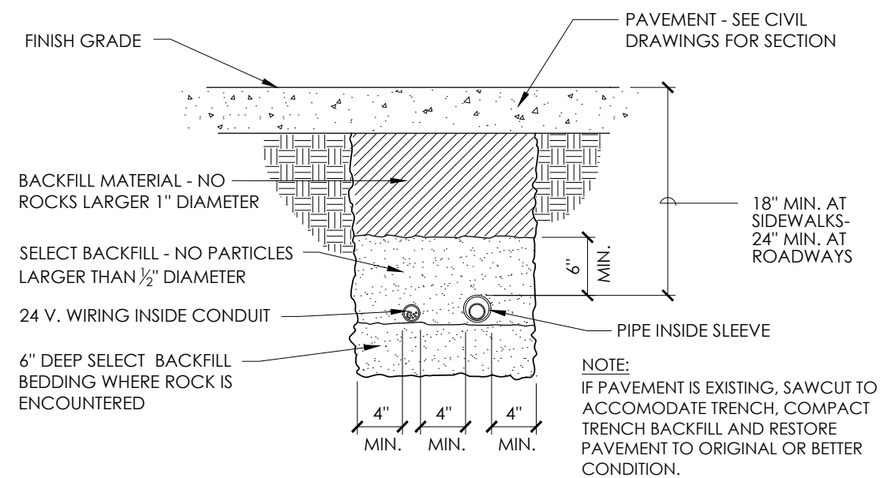


CONTROLLER-EXTERIOR WALL MOUNTED

NOT TO SCALE

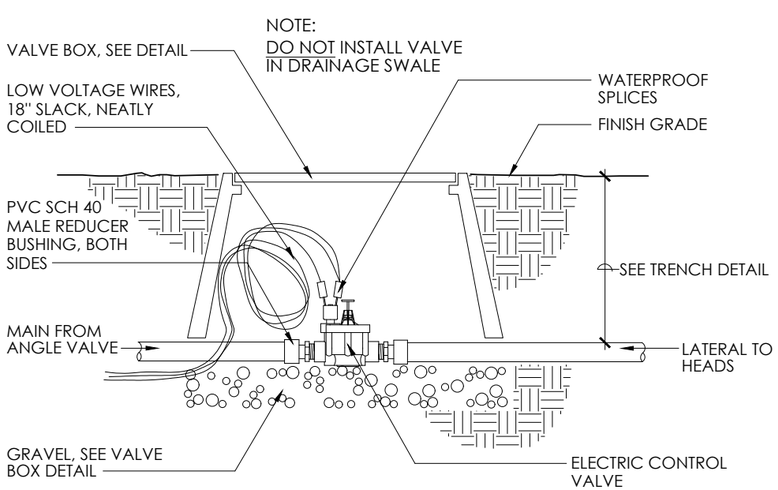
IC-006
12/10/02



PIPE TRENCH - PAVED AREAS WITH CONDUIT

NOT TO SCALE

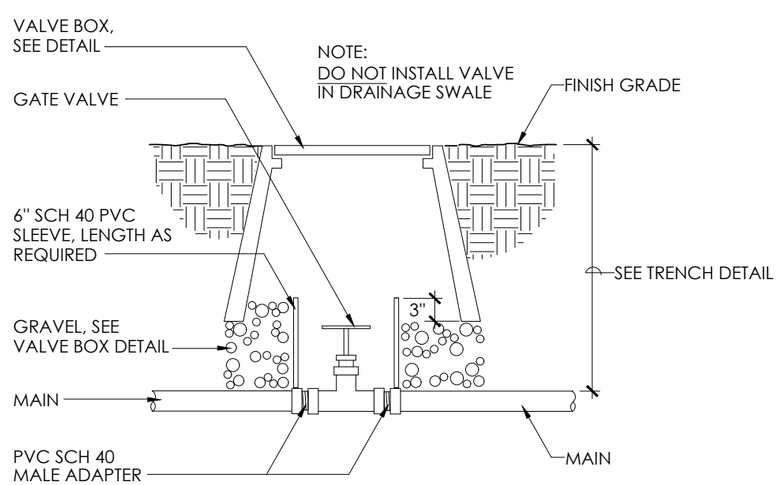
IT-003B
9/23/15



ELECTRIC VALVE

NOT TO SCALE

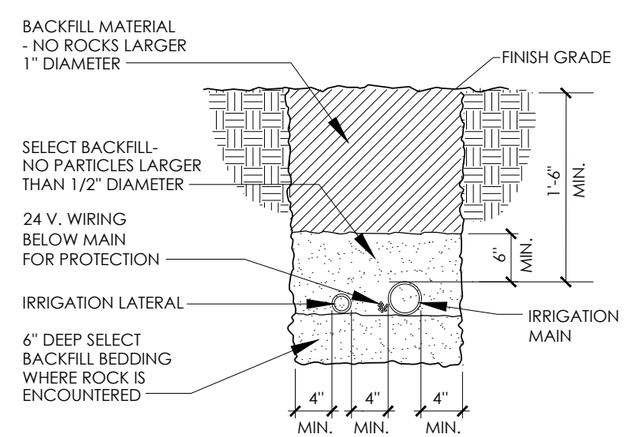
IV-004
12/30/98



GATE VALVE (3" AND SMALLER)

NOT TO SCALE

IV-011
12/30/98



PIPE TRENCH - PLANTING AREAS

NOT TO SCALE

IT-001A
8/3/12

SITE DRAWINGS

Appendix Q Buildings

Figure 4 Lower Scale House and Offices
Figure 4A Lower Scale House and Offices Floor Plan
Figure 5 Lower Employee Break Room and Offices
Figure 5A Lower Employee Break Room and Offices Floor Plan
Figure 6A Lower Equipment Maintenance Facility
Figure 6B Upper Equipment Maintenance Facility
Figure 7 Security Hut (Upper and Lower)
Figure 8 Upper Scale House and Offices
Figure 8A Upper Scale House and Offices Floor Plan
Figure 9 Upper Employee Break Room and Offices
Figure 9A Upper Employee Break Room and Offices Floor Plan

Appendix R Structures and Equipment

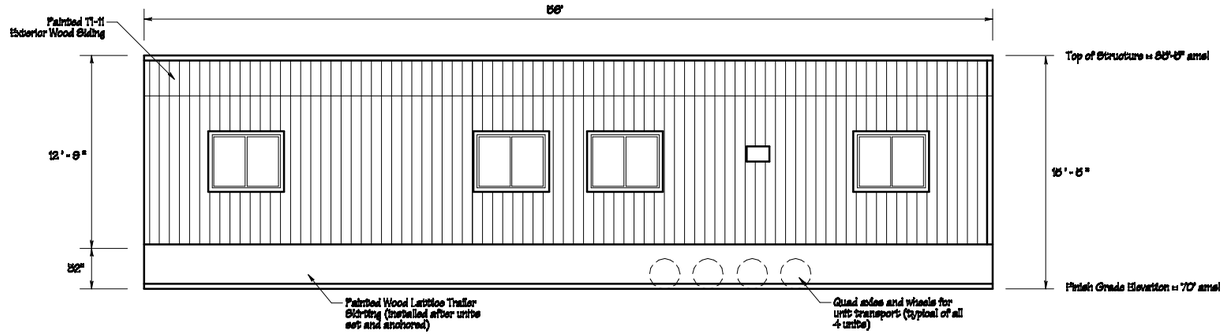
Figure 1 Material Recovery and Diversion Equipment Plan View
Figure 2 Material Recovery and Diversion Equipment Elevation View
Figure 3 Gasification and Electrical Generation System
Figure 4 Fuel Storage Tank
Figure 5 Water Storage Tank
Figure 6 Truck Scales
Figure 7 Security and Dust Fence
Figure 8 Stormwater Basin Cross-Section

Appendix S Photovoltaic Power System

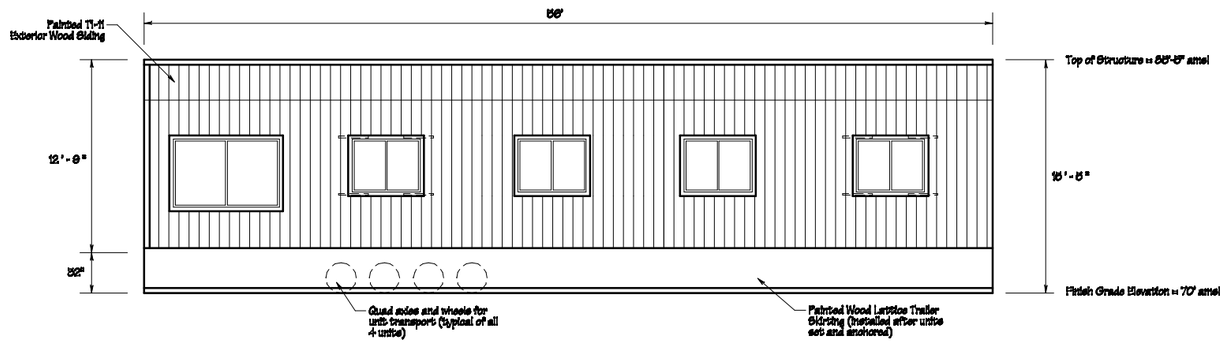
Figure 1 Location Map
Figure 2 Initial Installation Location
Figure 3 Interim Installation Location
Figure 4 Final Installation Location
Figure 5 Panel Mount & Foundation Details

APPENDIX Q

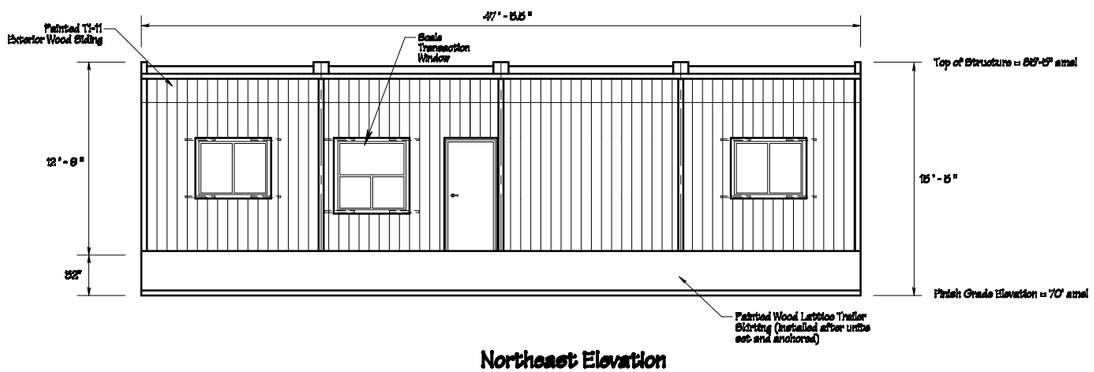
Building Drawings



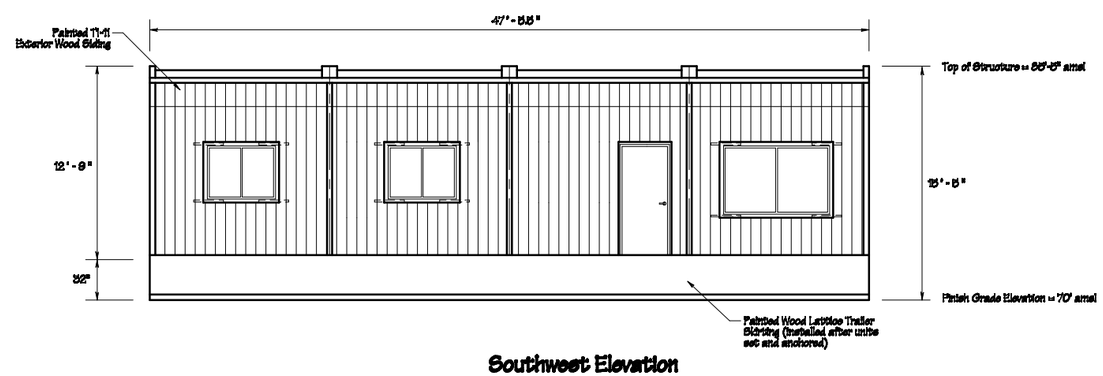
Northwest Elevation



Southeast Elevation



Northeast Elevation



Southwest Elevation

GRAPHIC SCALE 1"= 10'

0 5 10 15

Lower Scale House and Offices

Nanakuli, Waianae District, Oahu, Hawaii

Figure

4

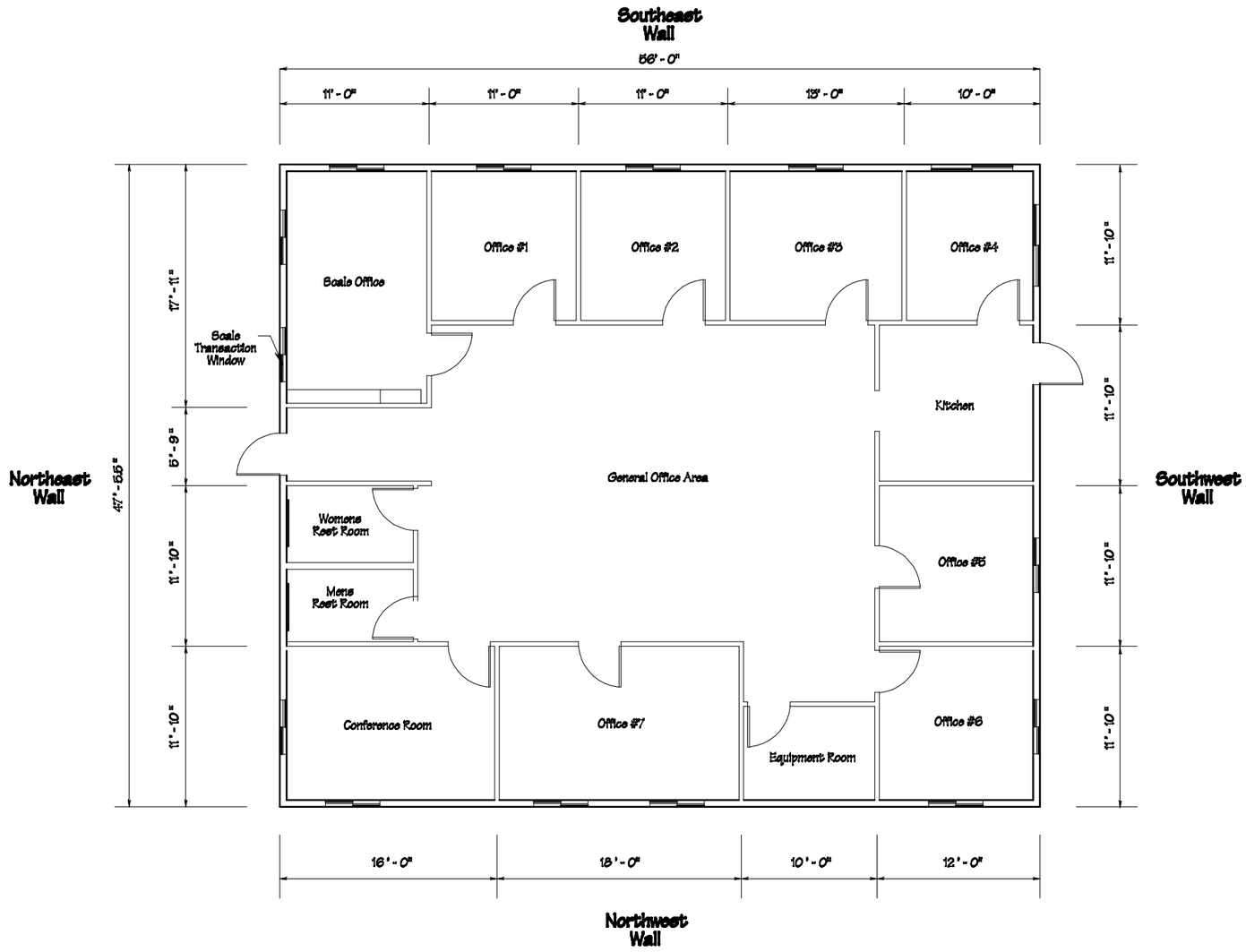


Figure 4A - Lower Scale House & Offices Floor Plan

GRAPHIC SCALE 1"= 10'

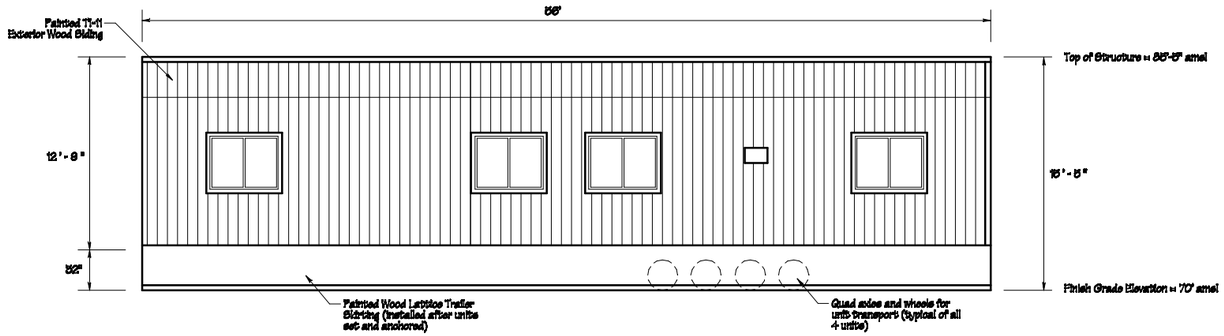
0 5 10 15

Lower Scale House & Offices Floor Plan

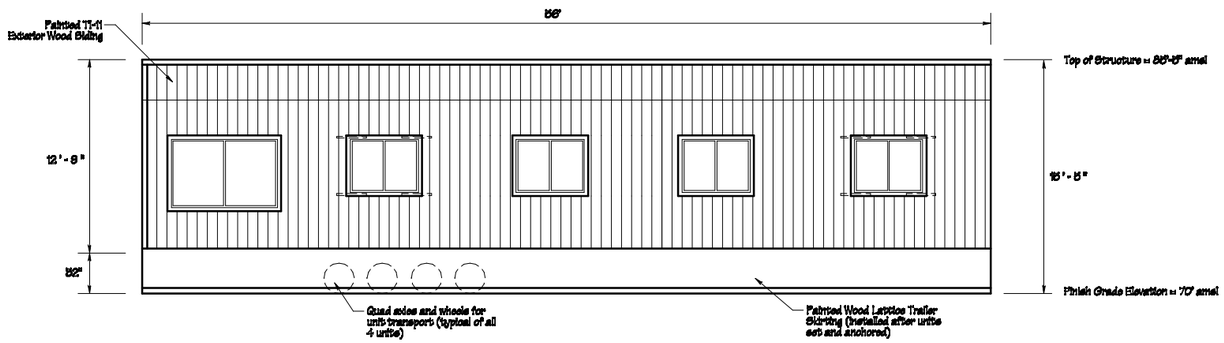
Nanakuli, Waianae District, Oahu, Hawaii

Figure

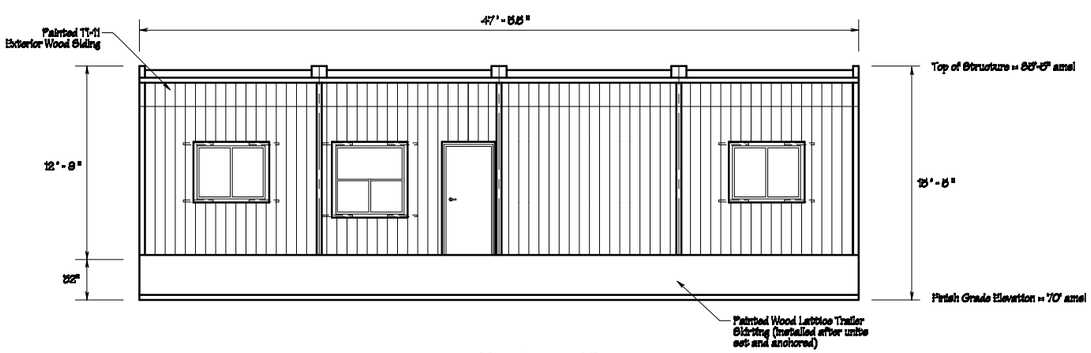
4A



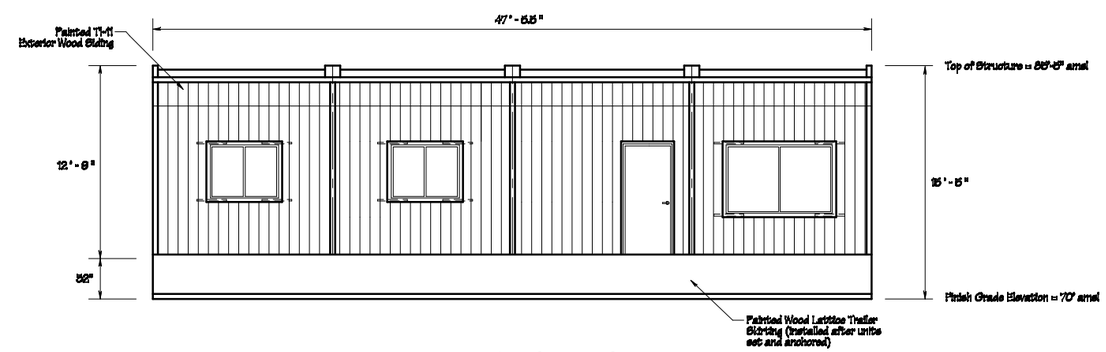
Northwest Elevation



Southeast Elevation



Northeast Elevation



Southwest Elevation

GRAPHIC SCALE 1"= 10'

0 5 10 15

Lower Employee Break Room and Offices

Nanakuli, Waianae District, Oahu, Hawaii

Figure

5

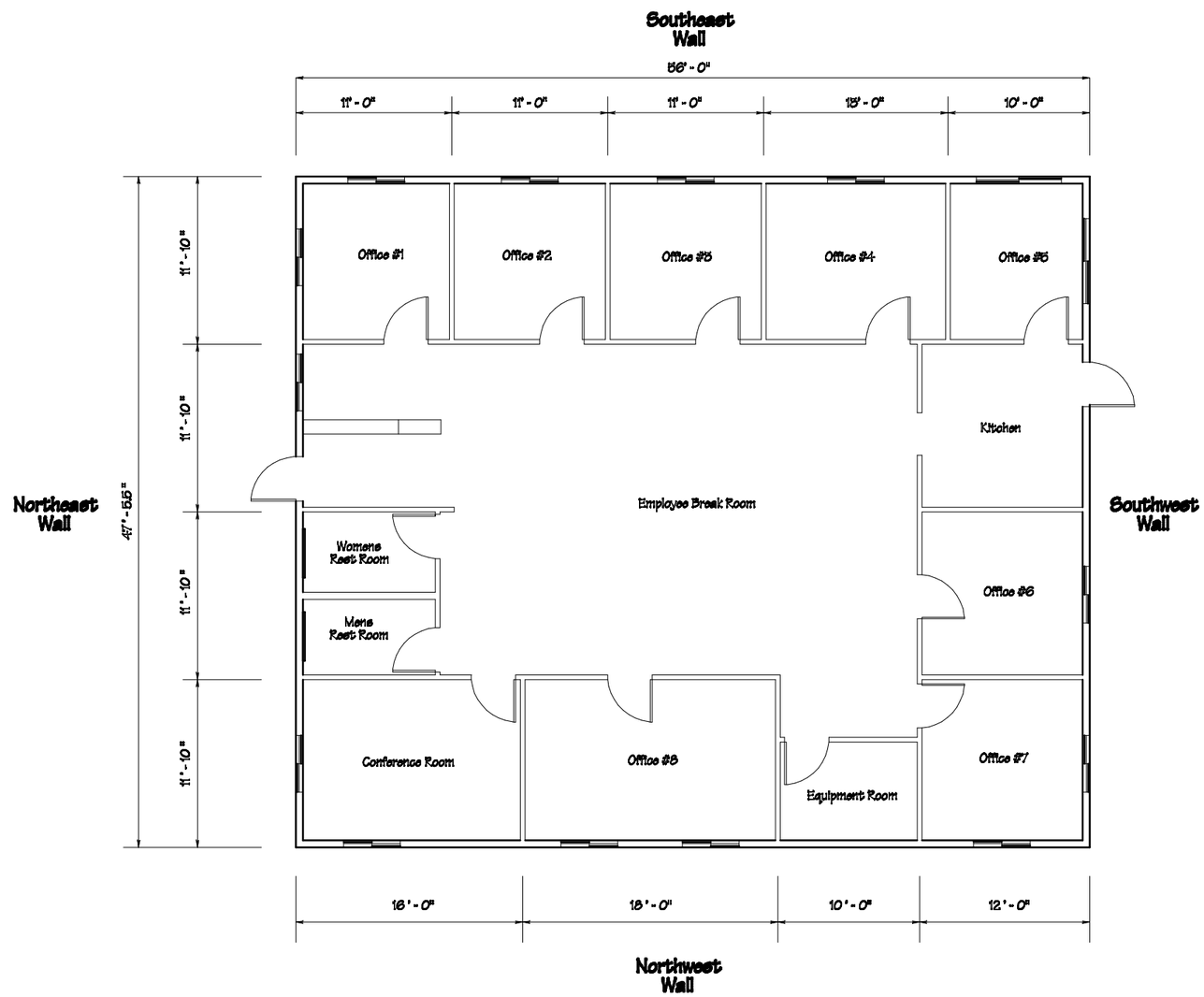


Figure 5A - Lower Employee Break Room & Offices Floor Plan

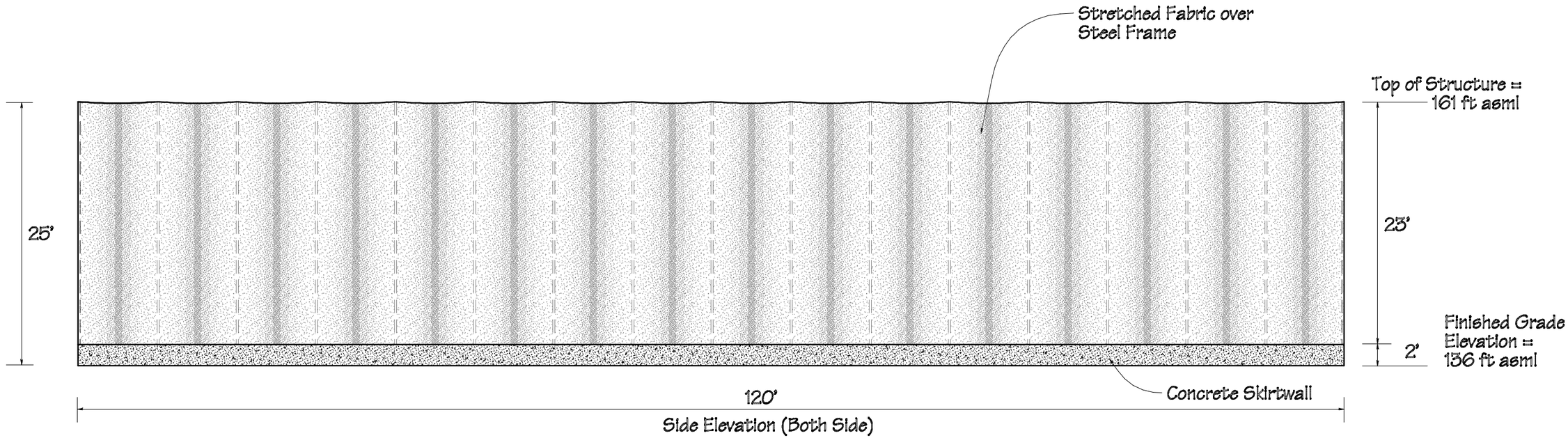
GRAPHIC SCALE 1"= 10'

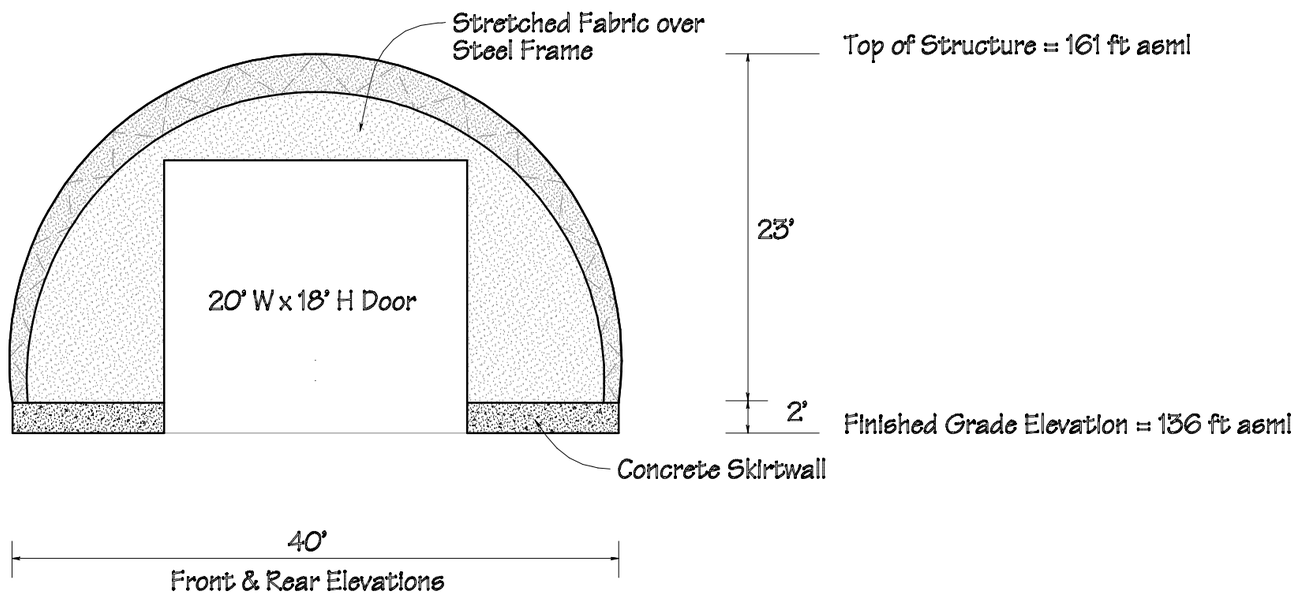
0 5 10 15

Lower Employee Break Room & Offices Floor Plan

Nanakuli, Waianae District, Oahu, Hawaii

Figure 5A



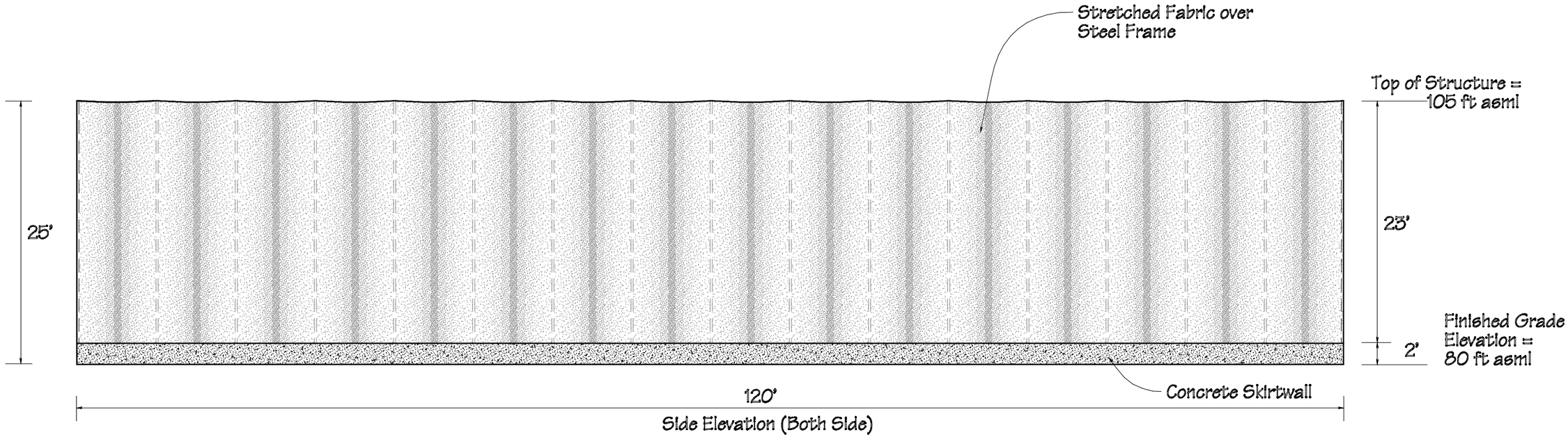


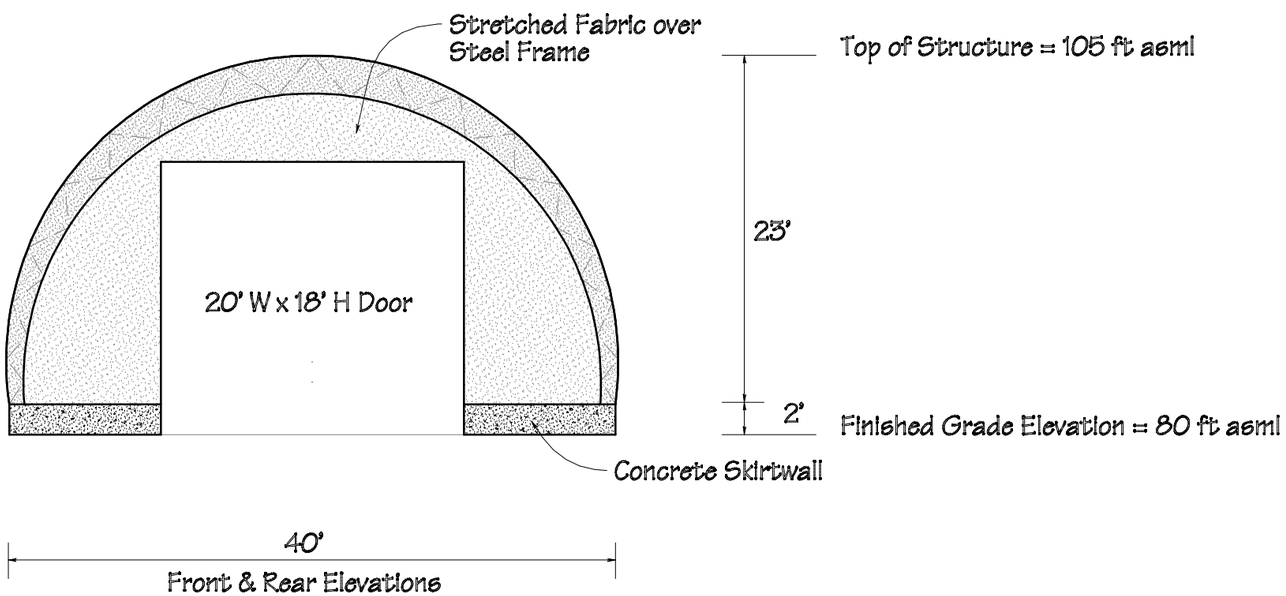
GRAPHIC SCALE 1"= 10'
0 5 10 15

Lower Equipment Maintenance Facility

Nanakuli, Waianae District, Oahu, Hawaii

Figure
6A



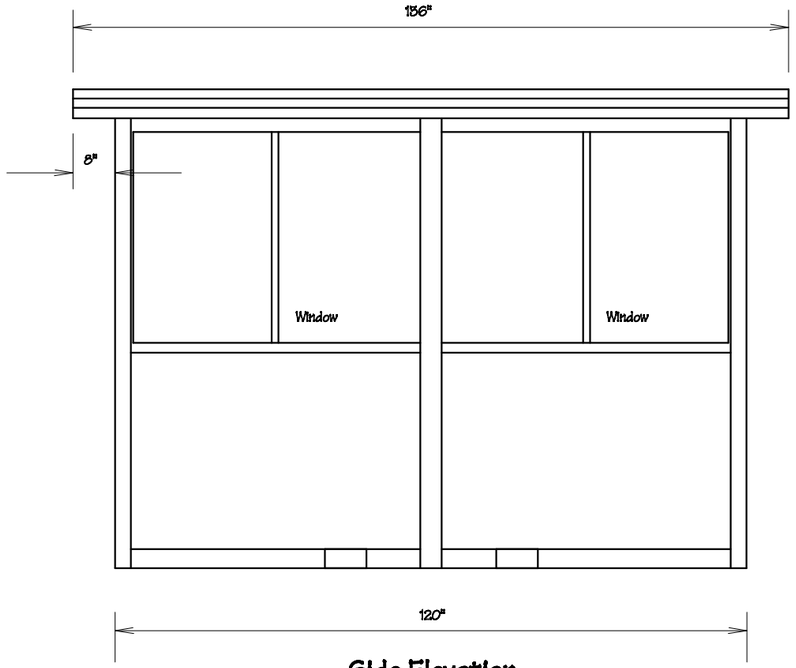


GRAPHIC SCALE 1"= 10'
0 5 10 15

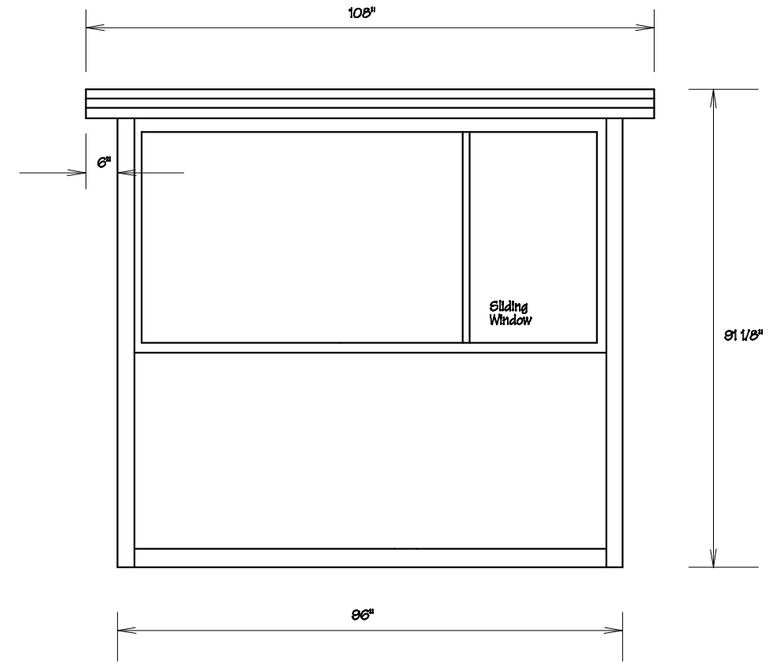
Upper Equipment Maintenance Facility

Nanakuli, Waianae District, Oahu, Hawaii

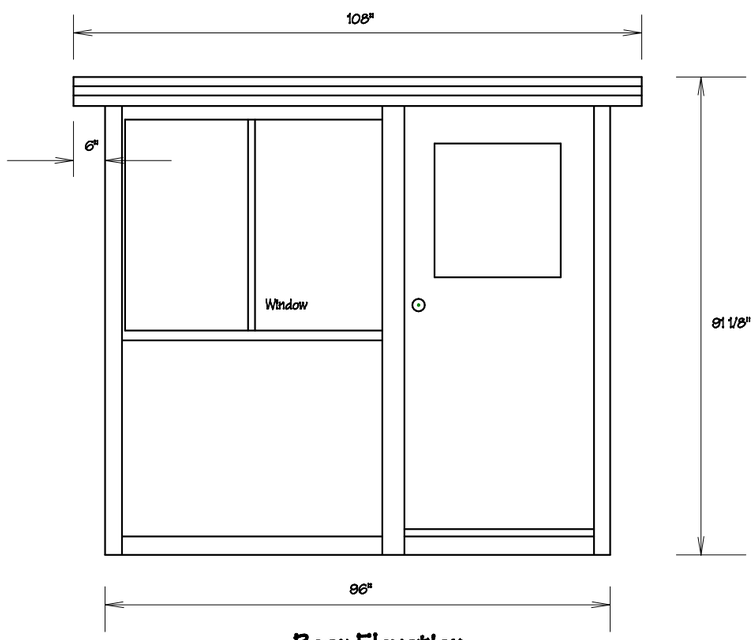
Figure
6B



Side Elevation



Front Elevation



Rear Elevation

GRAPHIC SCALE 1"= 40'

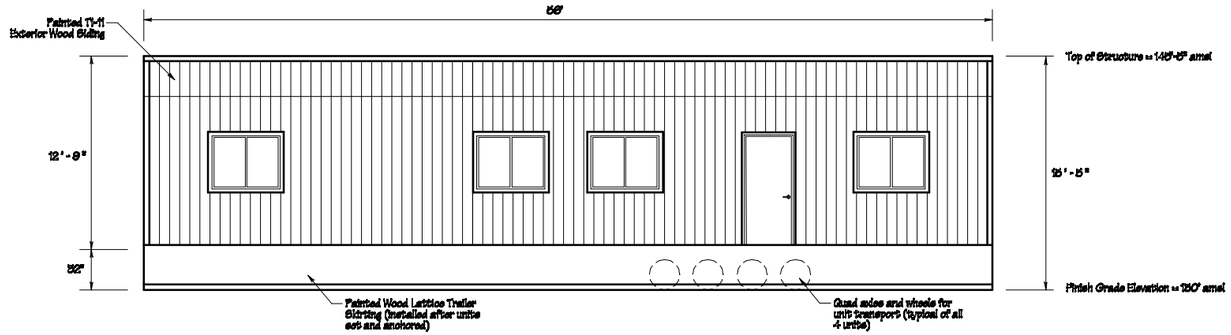
0 20 40 60

Security Hut (Lower and Upper)

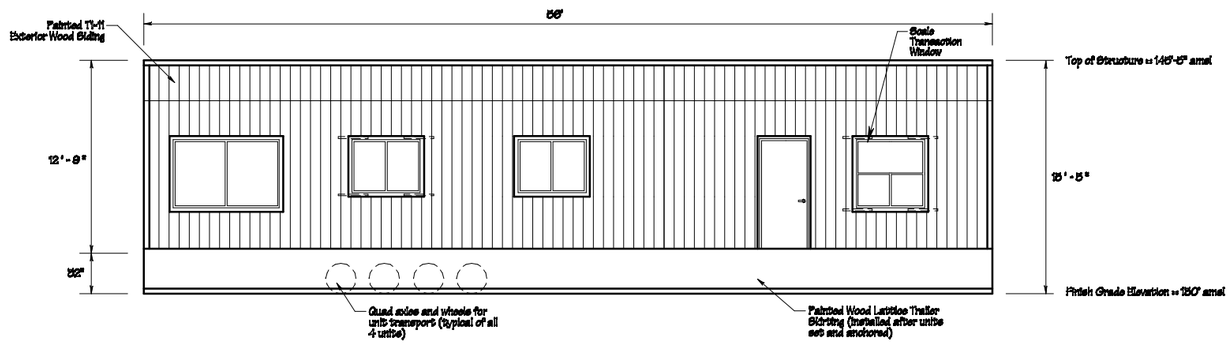
Nanakuli, Waianae District, Oahu, Hawaii

Figure

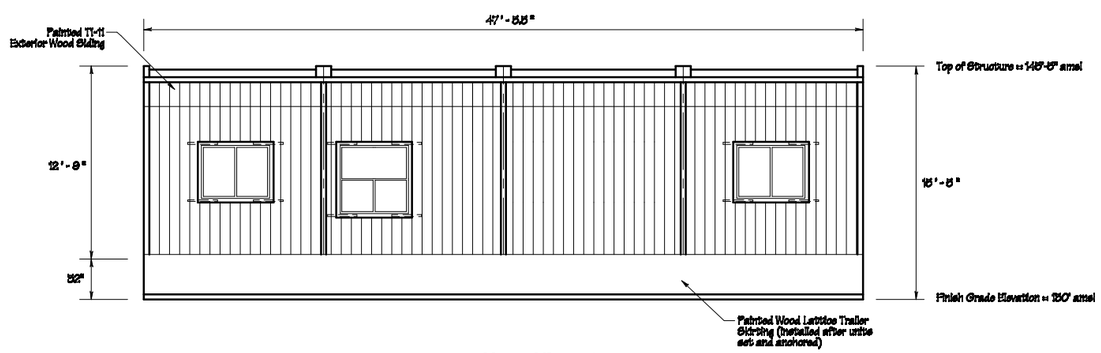
7



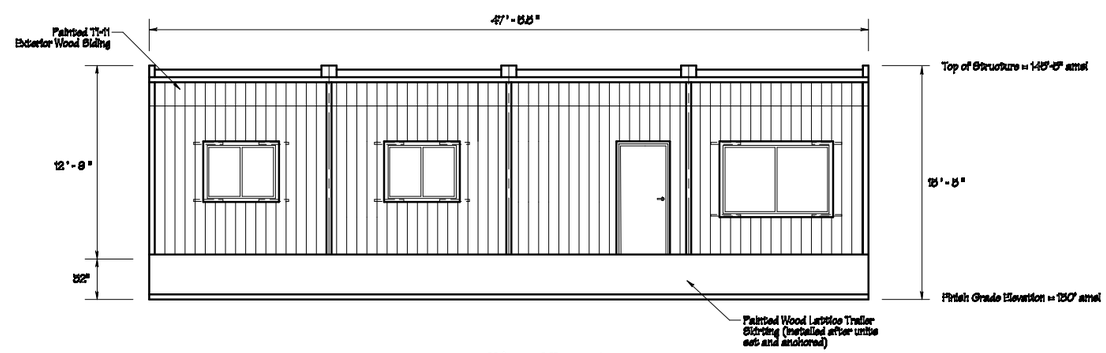
North Elevation



South Elevation



East Elevation



West Elevation

GRAPHIC SCALE 1"= 10'

0 5 10 15

Upper Scale House and Offices

Nanakuli, Waianae District, Oahu, Hawaii

Figure

8

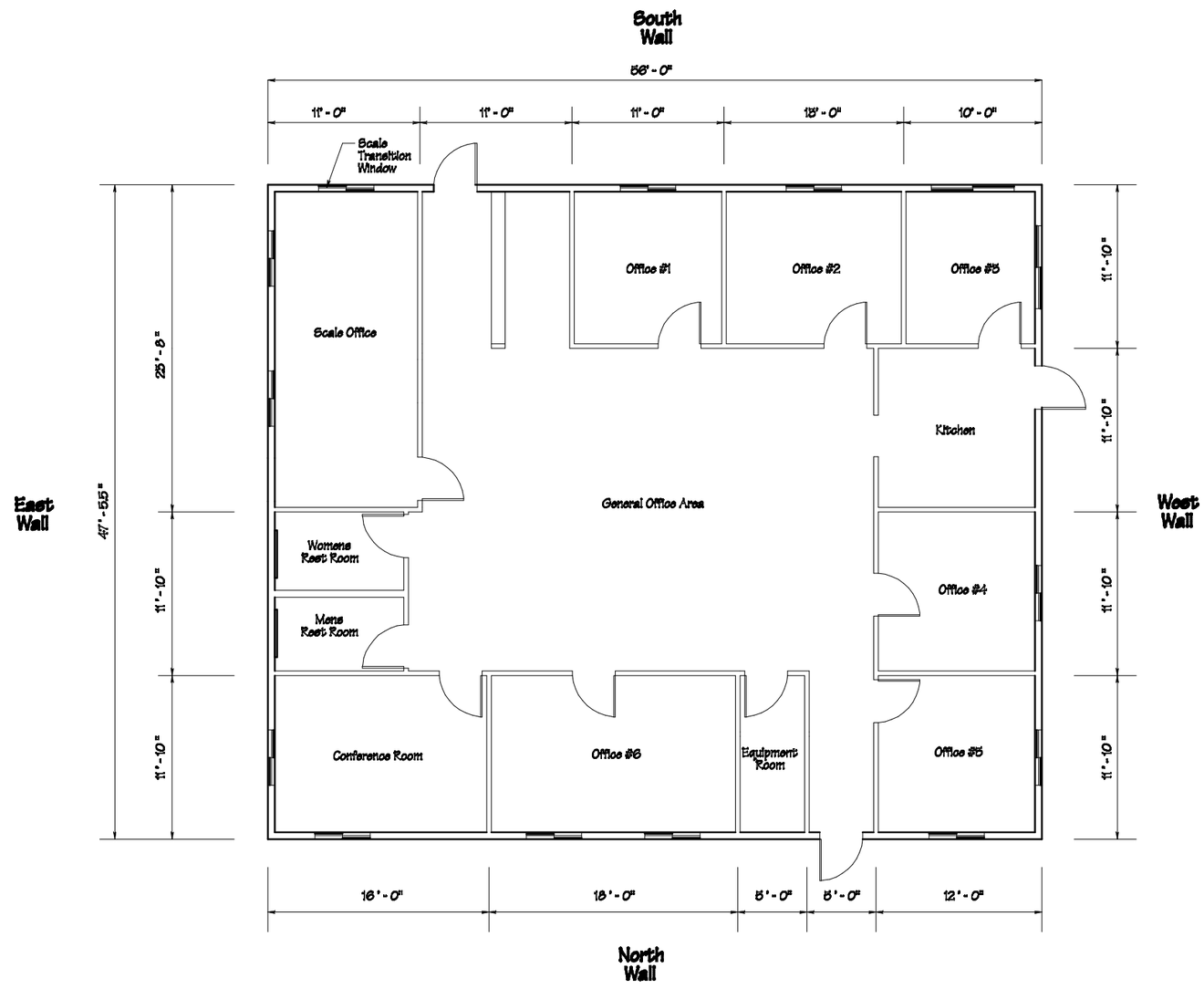


Figure 8A - Upper Scale House & Offices Floor Plan

GRAPHIC SCALE 1"= 10'

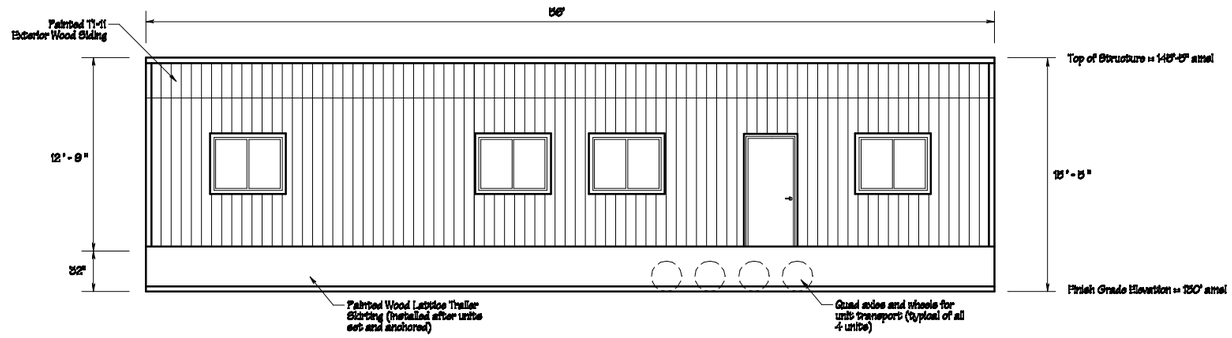
0 5 10 15

Upper Scale House & Offices Floor Plan

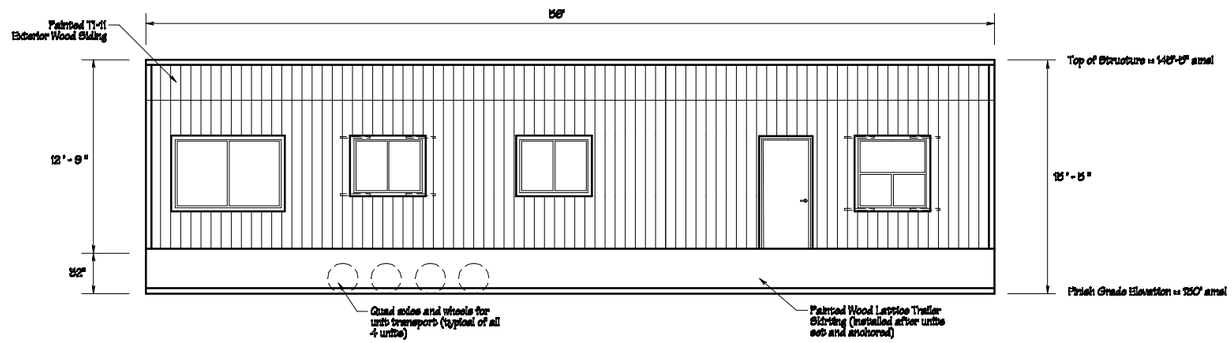
Nanakuli, Waianae District, Oahu, Hawaii

Figure

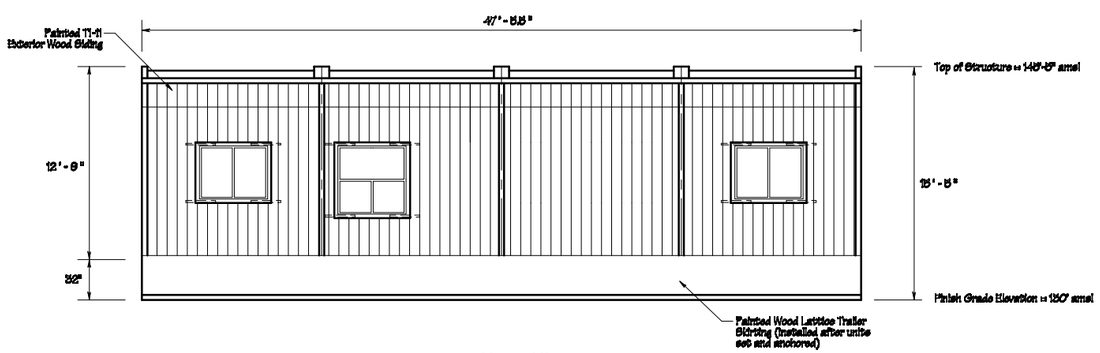
8A



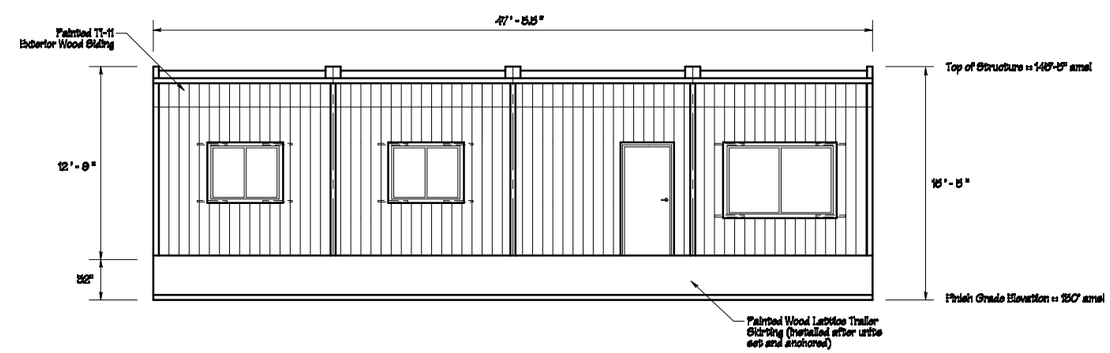
North Elevation



South Elevation



East Elevation



West Elevation

GRAPHIC SCALE 1"= 10'

0 5 10 15

Upper Employee Break Room and Offices

Nanakuli, Waianae District, Oahu, Hawaii

Figure

9

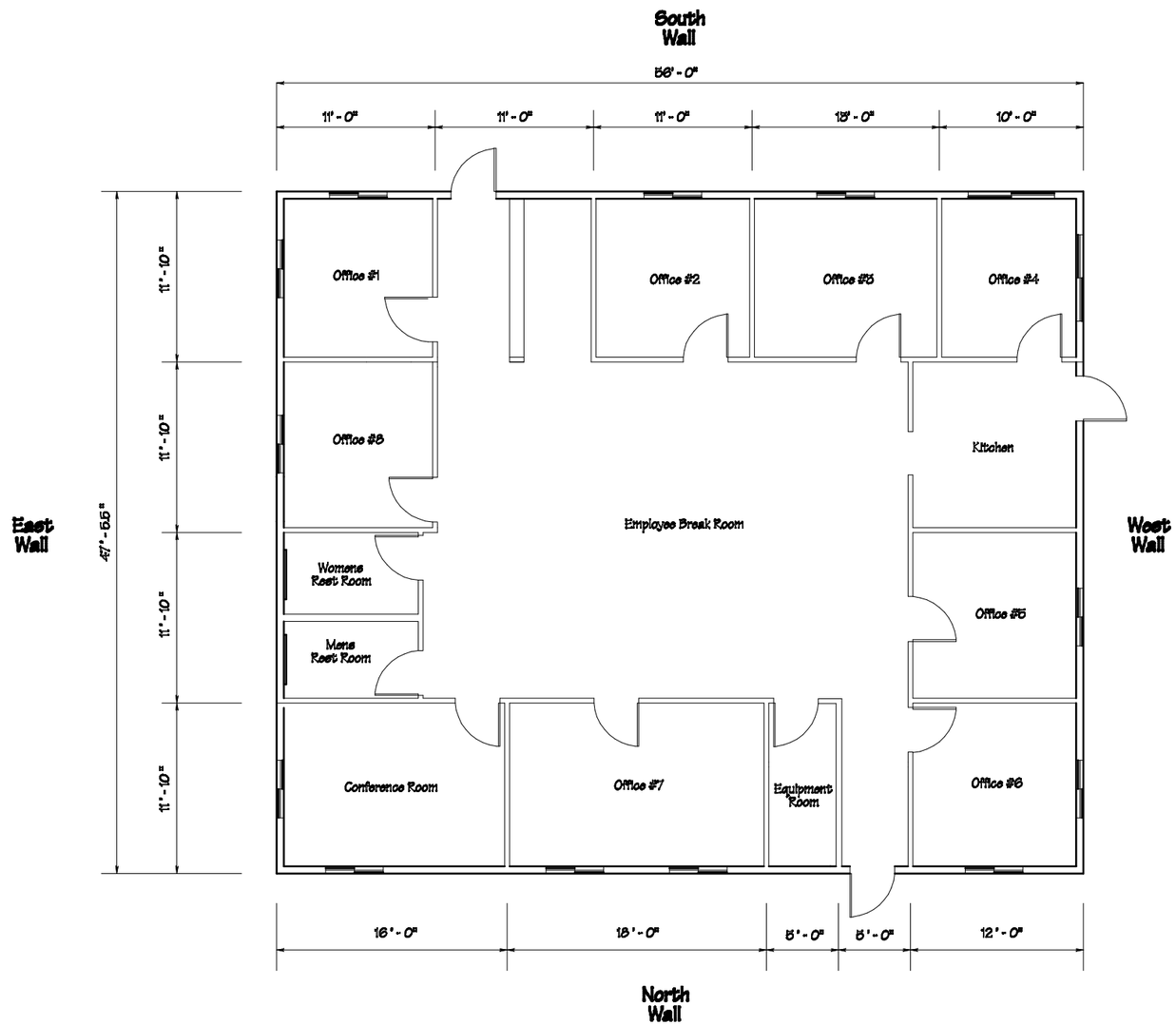


Figure 9A - Upper Employee Break Room & Offices Floor Plan

GRAPHIC SCALE 1"= 10'

0 5 10 15

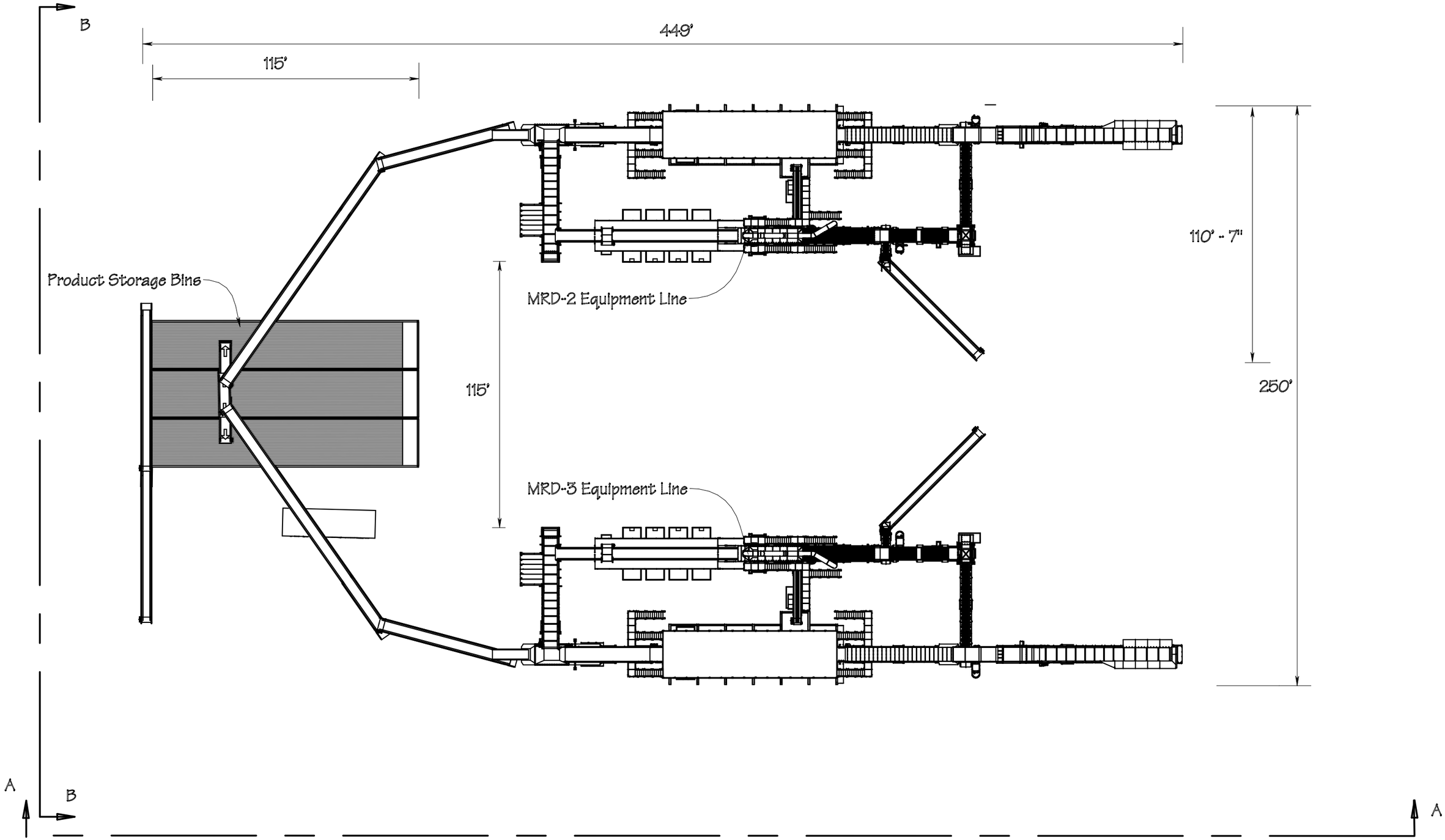
Upper Employee Break Room & Offices Floor Plan

Nanakuli, Waianae District, Oahu, Hawaii

Figure 9A

APPENDIX R

Structure and Equipment Drawings

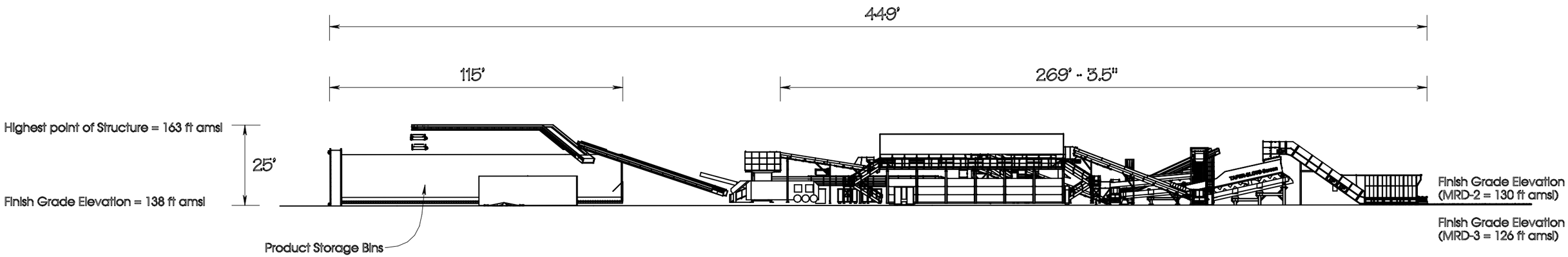


Source: CP Manufacturing, Inc. 2019

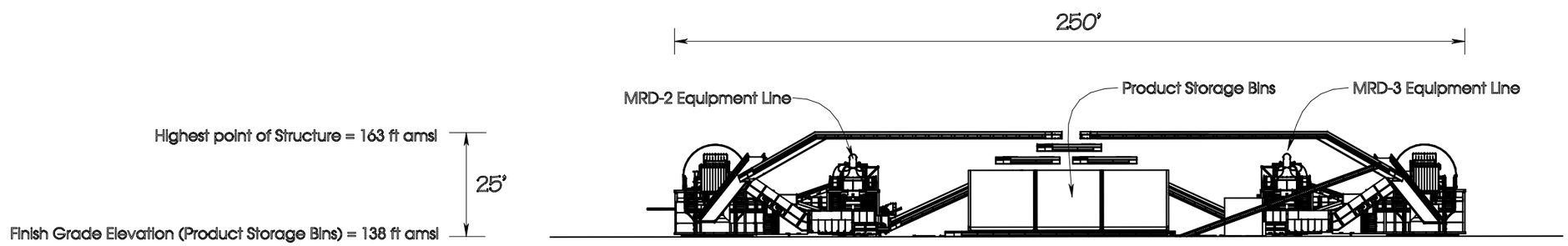
GRAPHIC SCALE 1"= 40'
0 40 80 120

Material Recovery and Diversion Equipment
Plan View
Nanakuli, Waianae District, Oahu, Hawaii

Figure
1



Section A-A



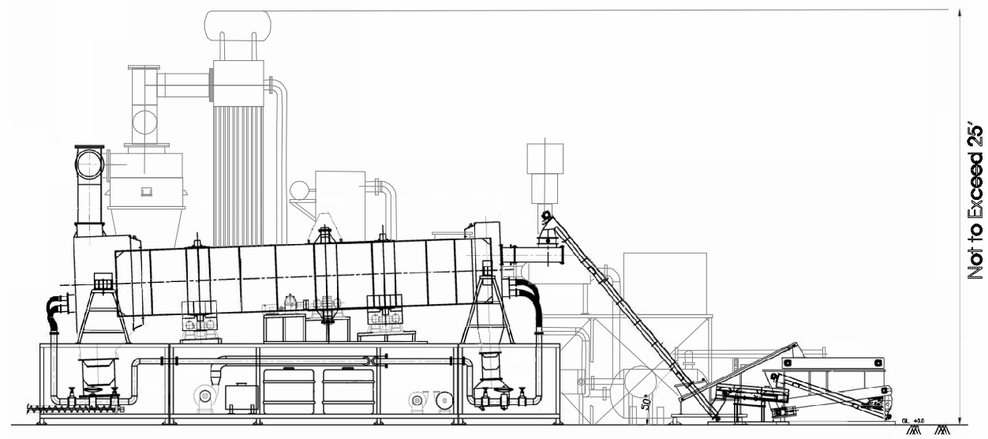
Section B-B

Source: CP Manufacturing, Inc. 2019

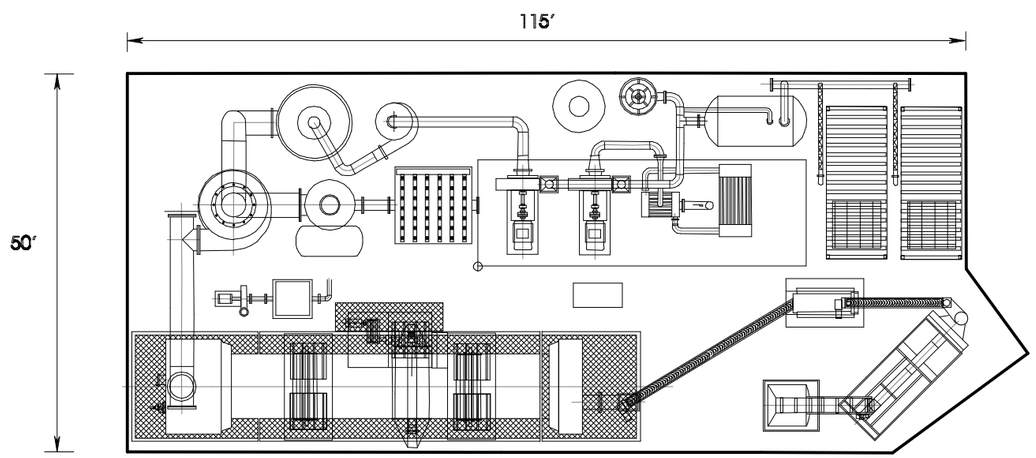
GRAPHIC SCALE 1"= 40'
0 40 80 120

Material Recovery and Diversion Equipment
Elevation View (MRD-3 shown, MRD-2 consists of identical equipment)
Nanakuli, Waianae District, Oahu, Hawaii

Figure
2



Profile View



Plan View

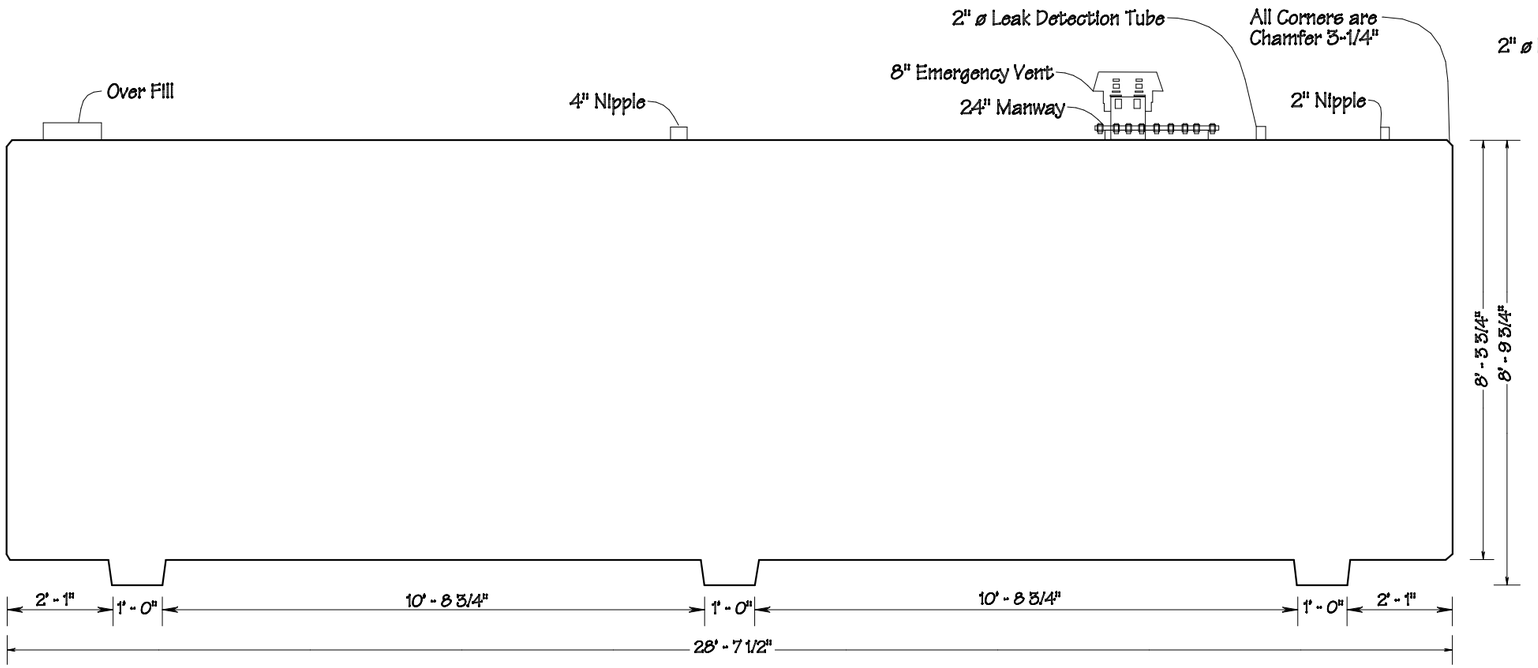
Note: Standard shop drawings were provided by Biomass Energy System, Inc. The proposed gasification unit will be designed to meet requirements specific to the PVT ISWMF Project Site.

GRAPHIC SCALE 1"= 20'
0 20 40 60

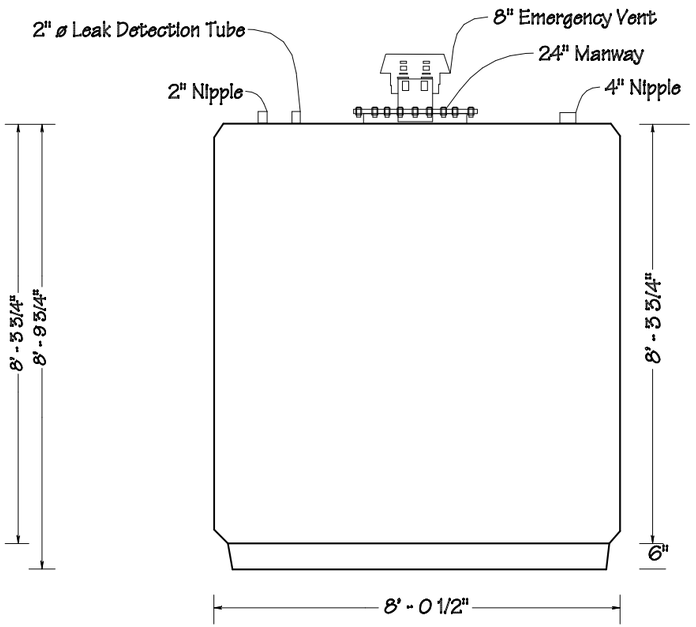
Gasification and Electrical Generation Equipment

Nanakuli, Waianae District, Oahu, Hawaii

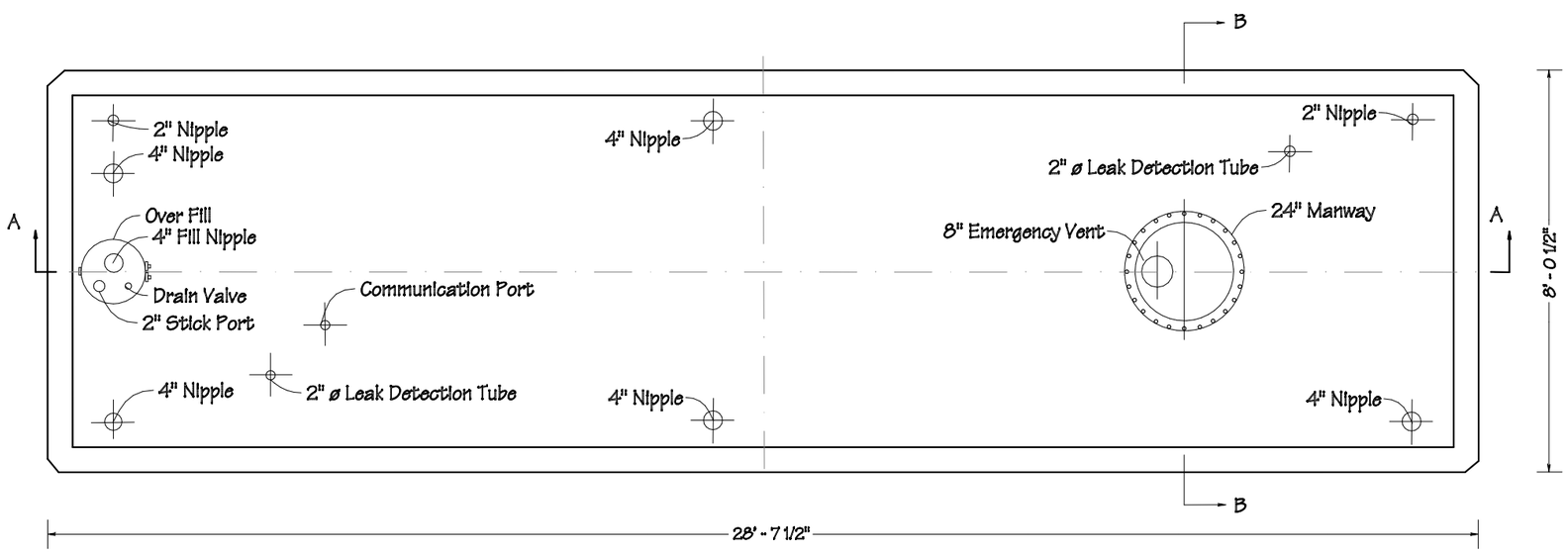
Figure
3



Section A-A



Section B-B



Plan View

Notes:

1. Steel Tank shall be U.L. 142 listed for above Ground Storage of Flammable Liquids.
2. Steel Tank Skin shall be 3/16" Thick A.S.T.M. A-36 Steel Plate.
3. All Exposed Metal with the Exception of Stainless Steel must be power Coated to inhibit Corrosion.
4. Steel Tanks shall be Rectangular in shape and have Continuous welds on the outside.
5. Steel Tank and Secondary Containment shall be encased in six inches of 4000 P.S.I. reinforced Concrete.
6. Steel Tank shall be pressure tested at 5 P.S.I.G. for 24 hours without pressure Drop.
7. Tank Wall System shall be listed in Accordance with U.L. Standard 2085 and shown to have a two hour Fire Rating.
8. Vaults shall have the Capability of physical Monitoring between the primary and the Secondary Containment.
9. The Secondary Containment shall consist of A 30 ML high Density Polyethylene GEO Linear.
10. The Vault shall be of a Monolithic (Seamless and Continuous) Concrete pour and contain no cold joints or heat Sinks (Heat Transfer points) on the Bottom or sides.
11. Vaults shall have Coated Concrete Exterior to Resist weather and Reflect Sunlight.

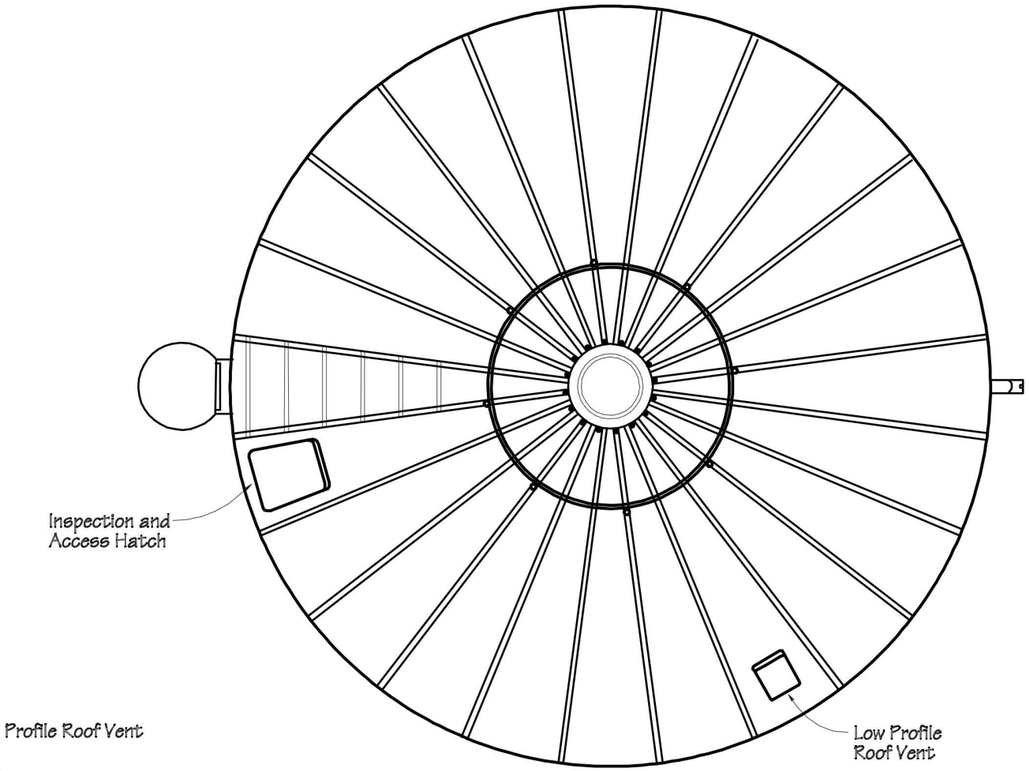
Source: Cunvault 2011, 2013

GRAPHIC SCALE 1"= 3'
0 3 6 9

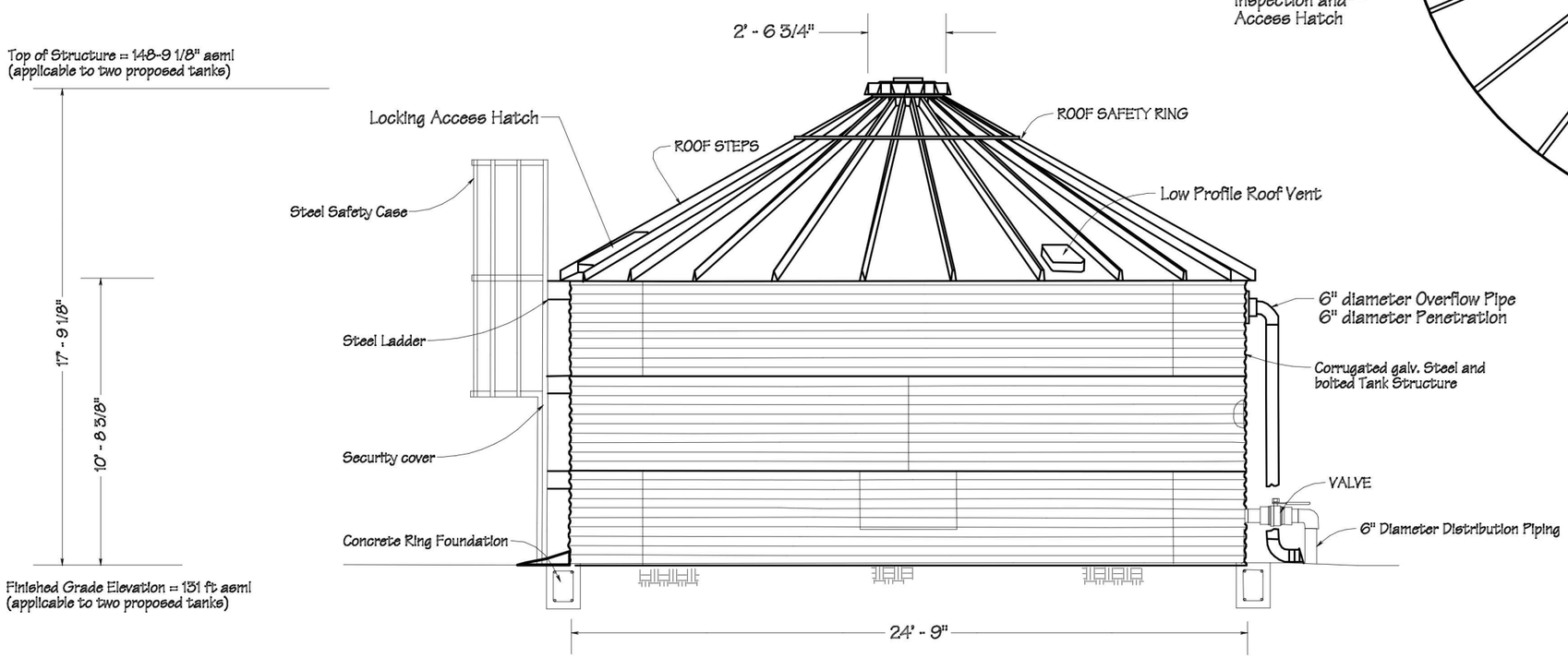
Fuel Storage Tank

Nanakuli, Waianae District, Oahu, Hawaii

Figure
4



PLAN



ELEVATION

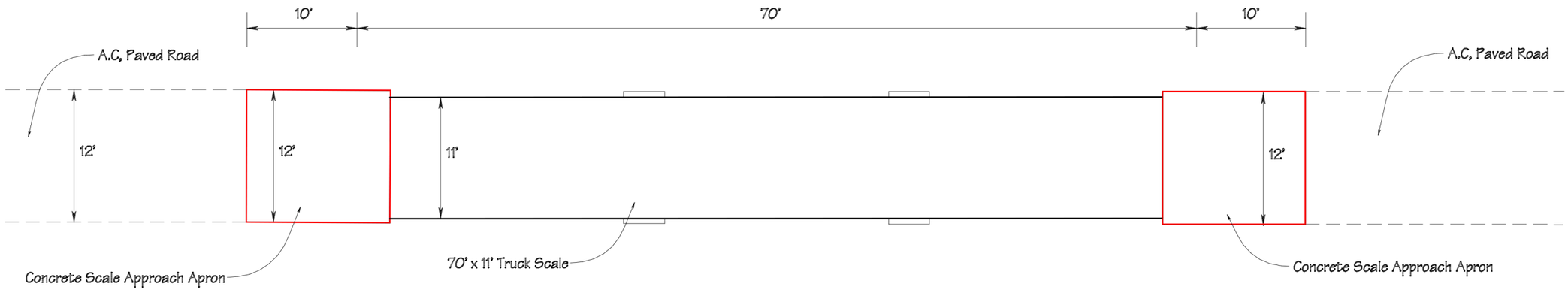
Note: Plan and Elevation representative of the two new proposed tanks and the two existing water tanks presently on the project property.

GRAPHIC SCALE 1"= 5'
0 5 10 15

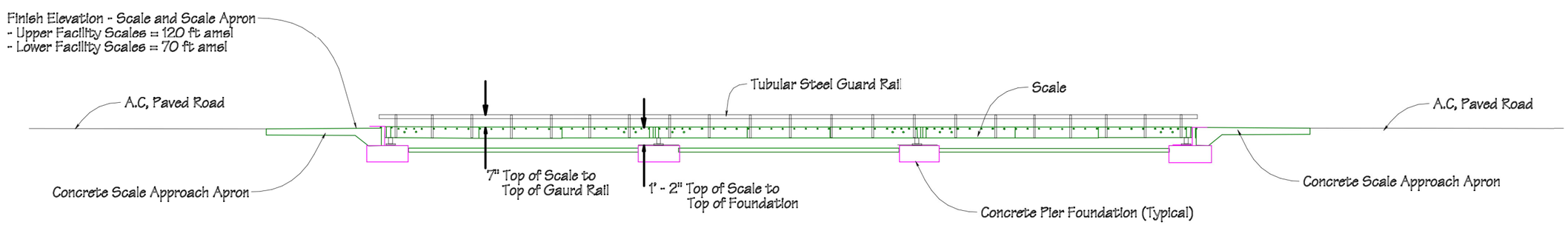
Water Storage Tank

Nanakuli, Waianae District, Oahu, Hawaii

Figure
5



Plan View



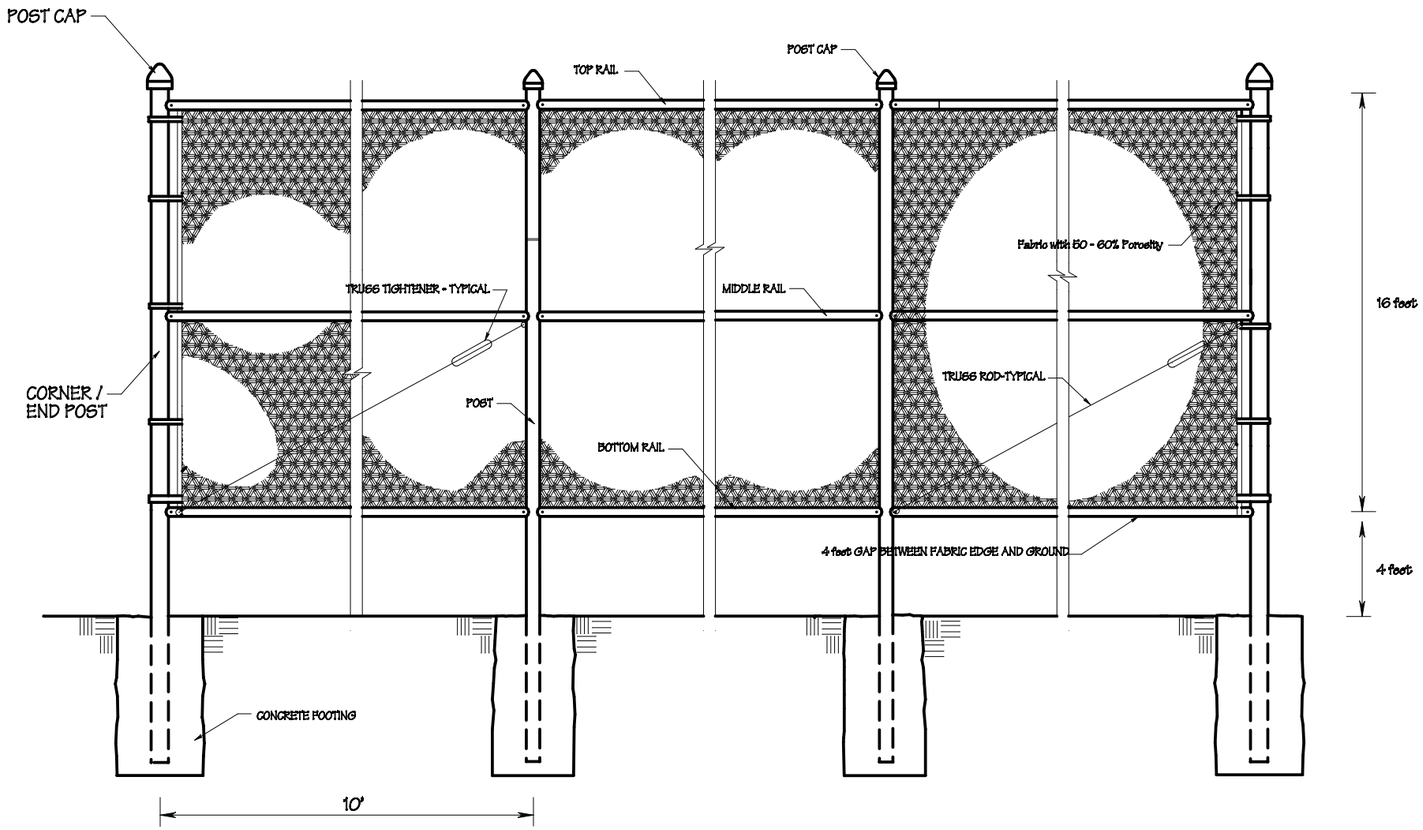
Elevation View

GRAPHIC SCALE 1"= 10'
0 5 10 15

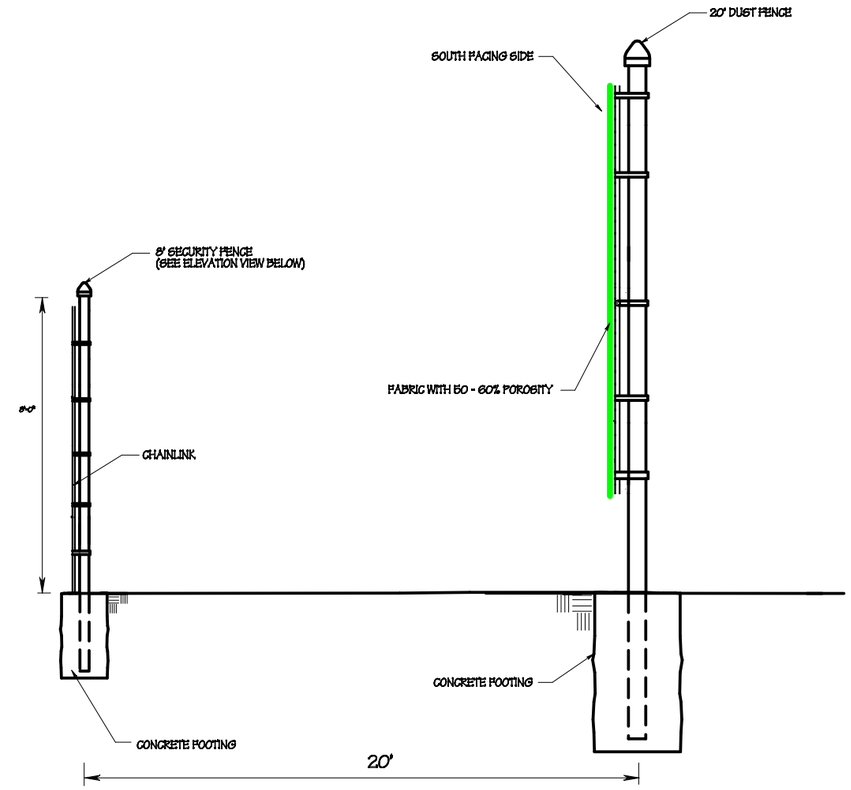
Truck Scales

Nanakuli, Waianae District, Oahu, Hawaii

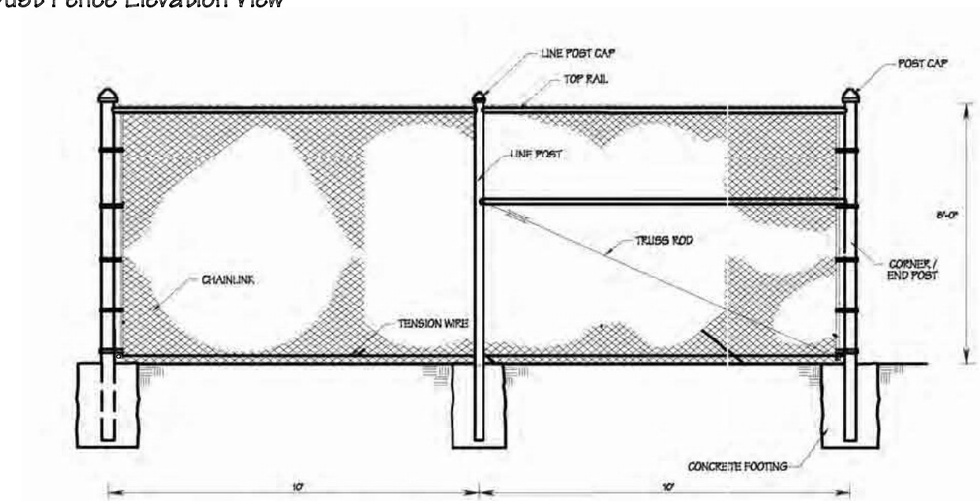
Figure
6



Dust Fence Elevation View



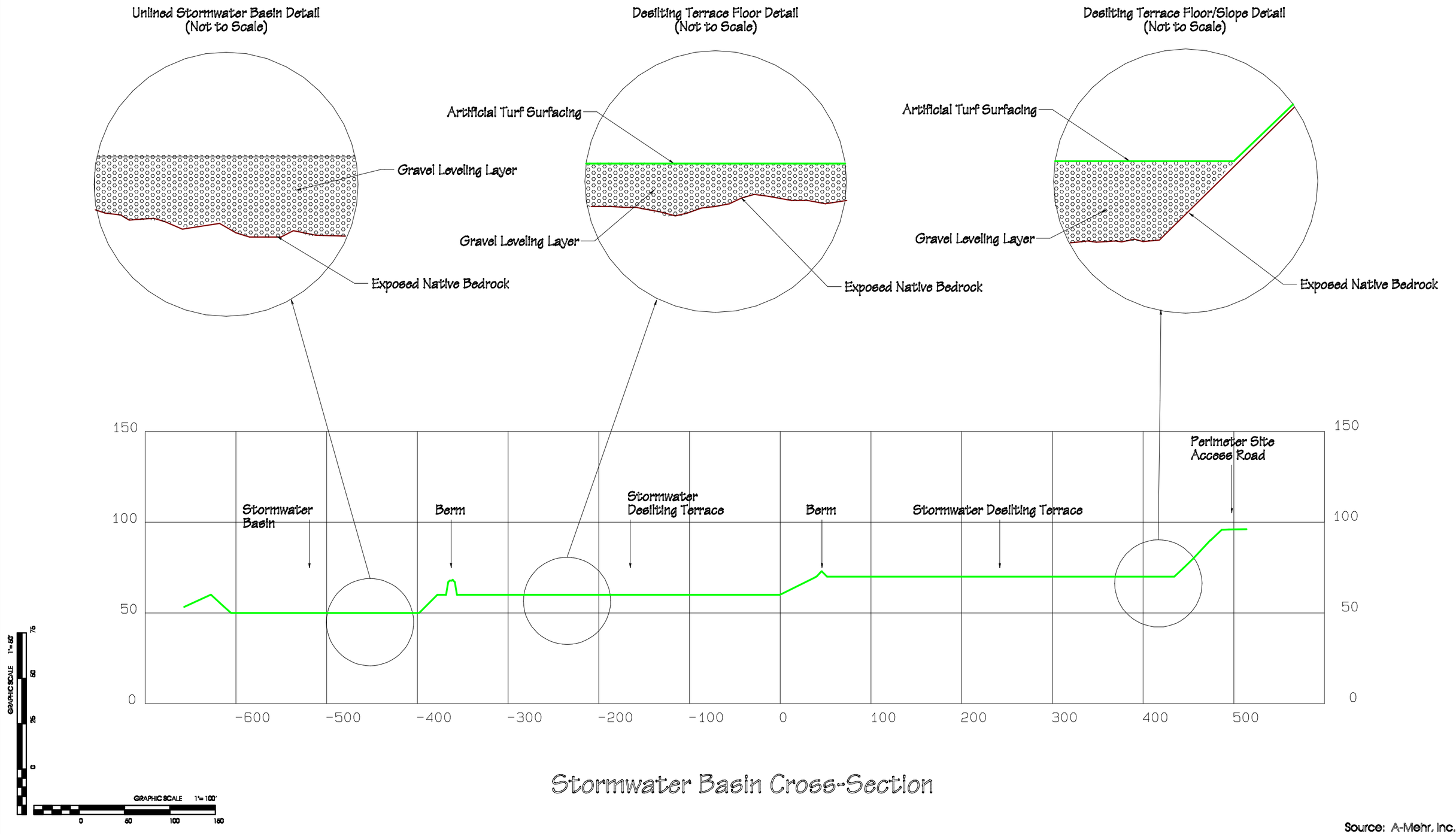
Dust and Security Fence Profile View



Security Fence Elevation View

Security and Dust Fence
PVT ISWMF Relocation (Phase III)
Nanakuli, Waianae District, Oahu, Hawaii

Figure
7



Stormwater Basin Cross-Section

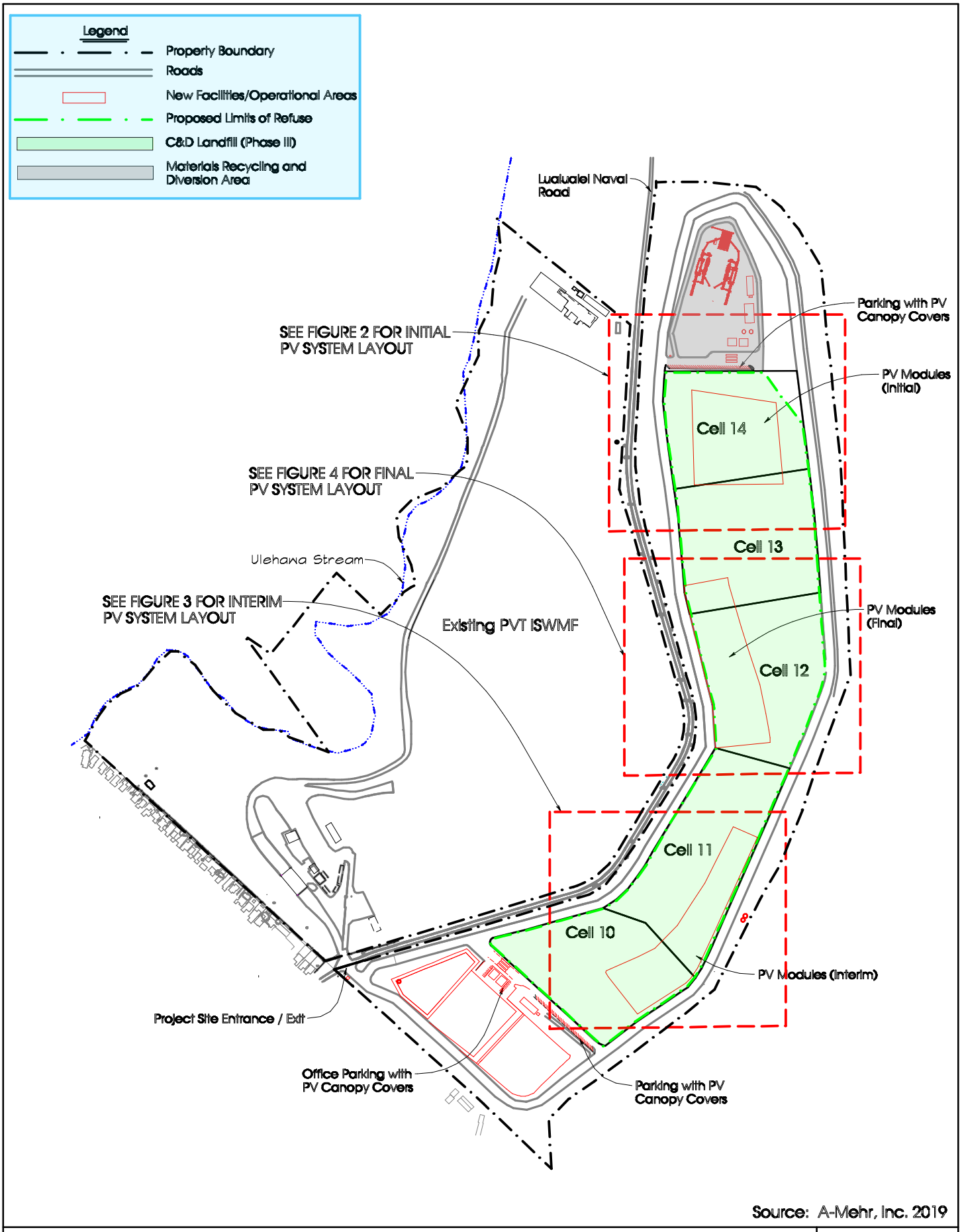
Source: A-Mehr, Inc. 2019

Stormwater Basin Cross-Section
PVT ISWMF Relocation (Phase III)
Nanakuli, Waianae District, Oahu, Hawaii

Figure
8

APPENDIX S

Photovoltaic Power System Drawings



Source: A-Mehr, Inc. 2019

GRAPHIC SCALE 1"=800'

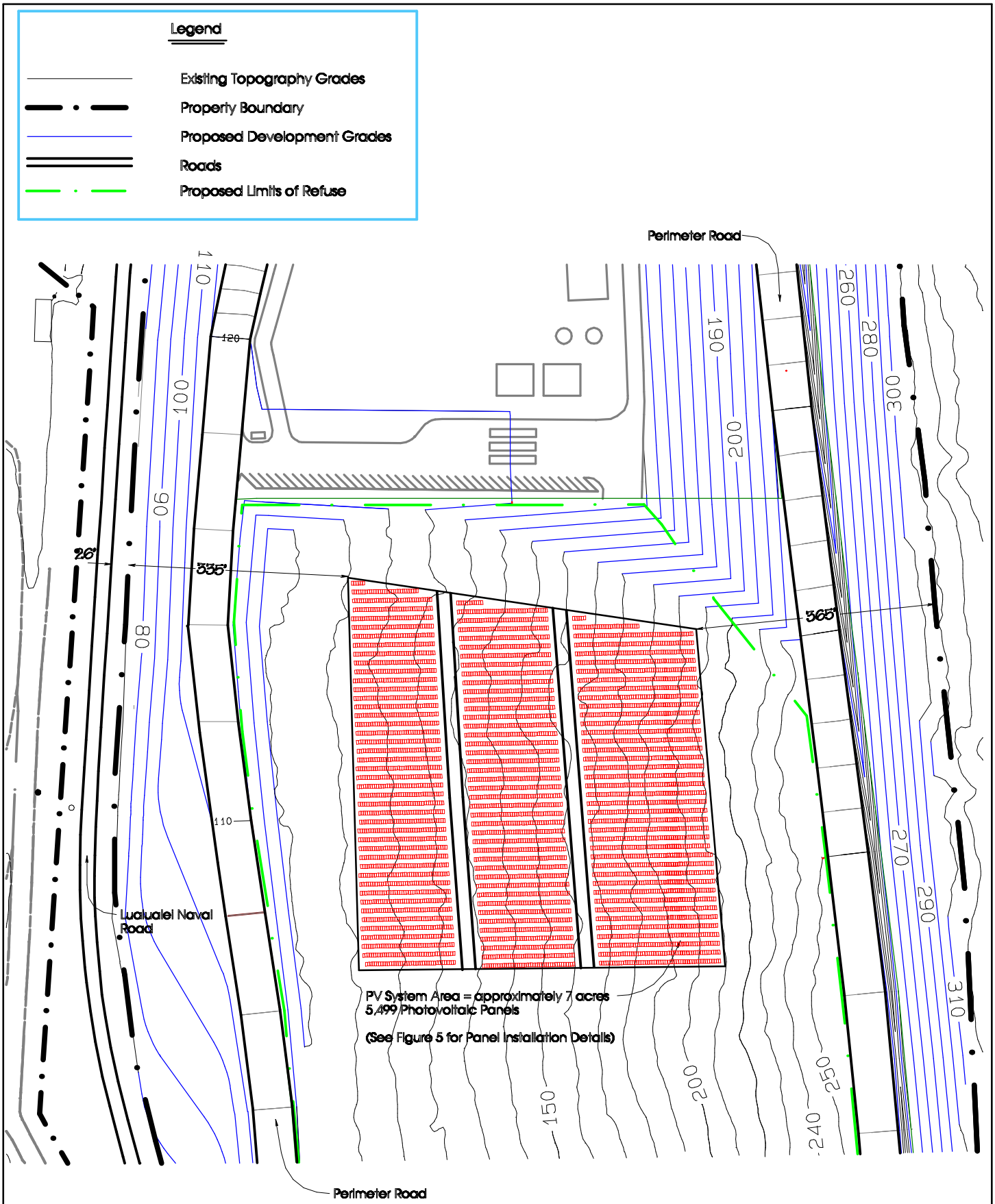
0 400 800 1200

Photovoltaic Power System Location Map

PVT ISWMF Relocation (Phase III)

Nanakuli, Waianae District, Oahu, Hawaii

Figure 1



GRAPHIC SCALE 1"=200'

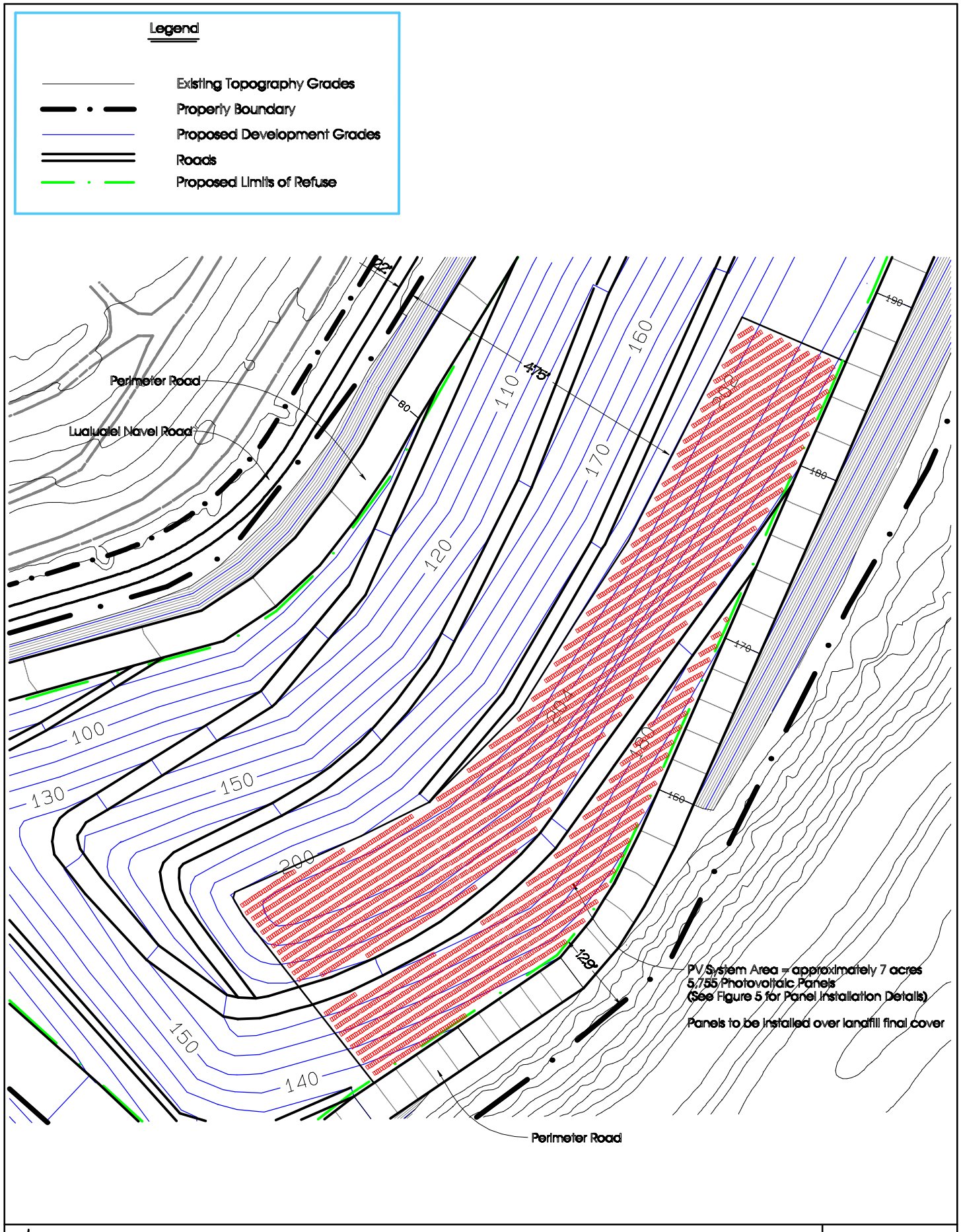
0 100 200 300

Photovoltaic Power System - Initial Installation Location

PVT ISWMF Relocation (Phase III)

Nanakuli, Waianae District, Oahu, Hawaii

Figure 2



GRAPHIC SCALE 1"=200'

0 100 200 300

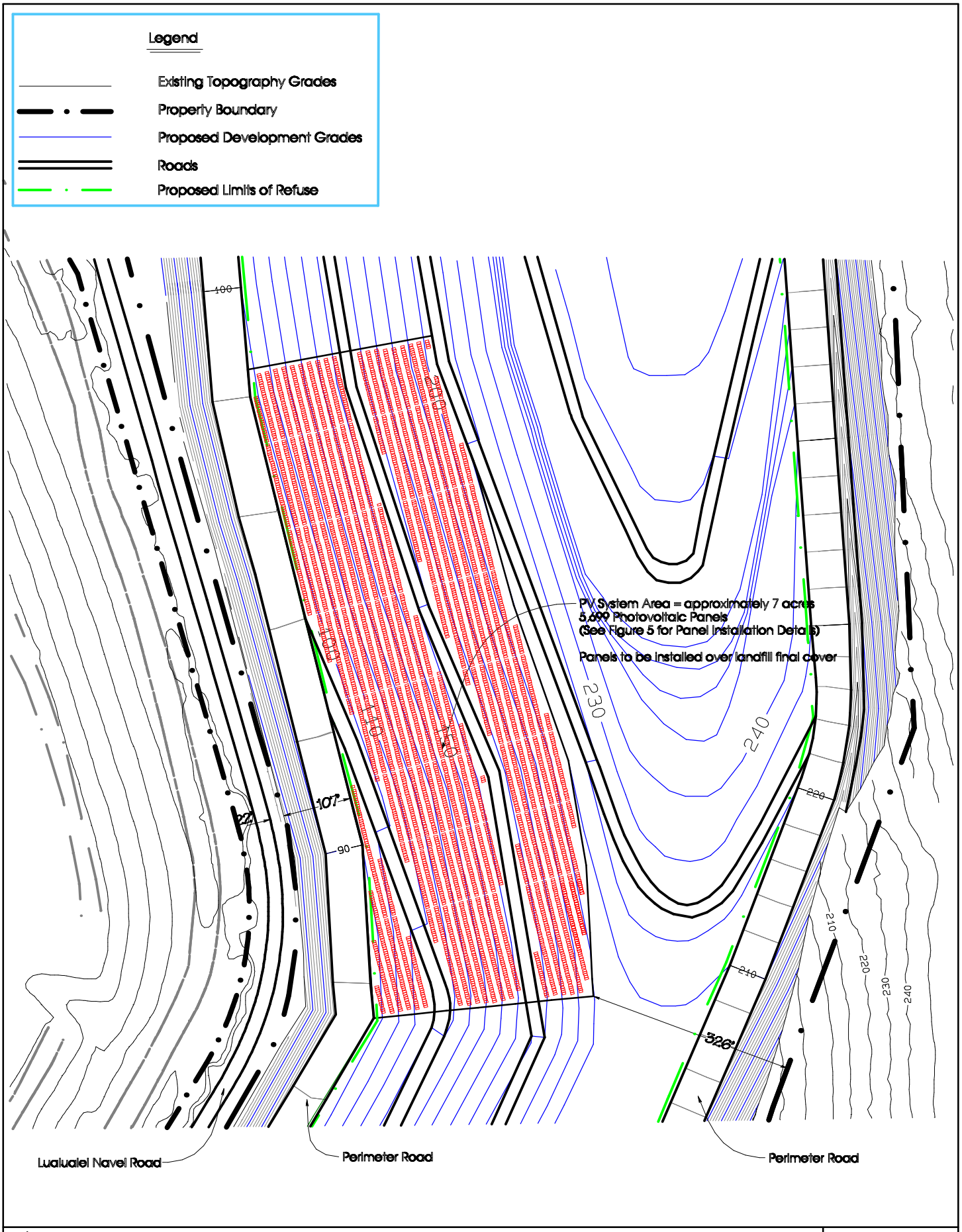
Photovoltaic Power System - Interim Installation Location

PVT ISWMF Relocation (Phase III)

Nanakuli, Waianae District, Oahu, Hawaii

Figure

3



GRAPHIC SCALE 1"=200'

0 100 200 300

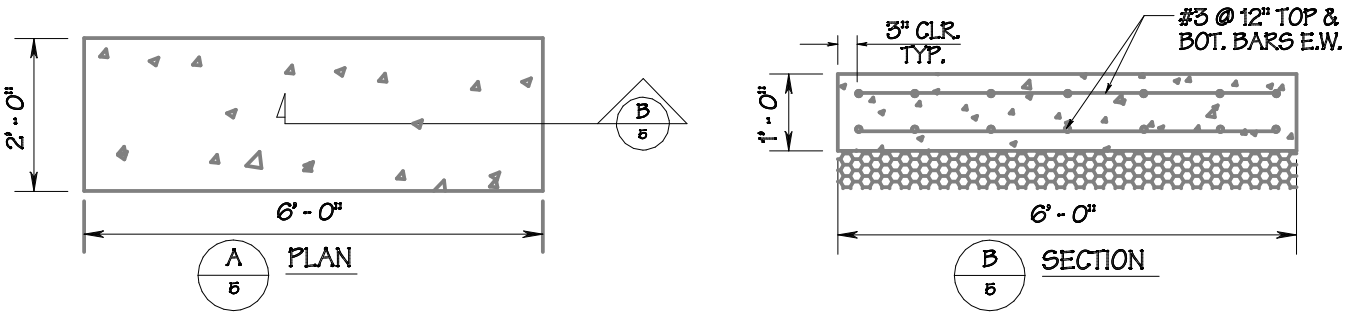
Photovoltaic Power System - Final Installation Location

PVT ISWMF Relocation (Phase III)

Nanakuli, Waianae District, Oahu, Hawaii

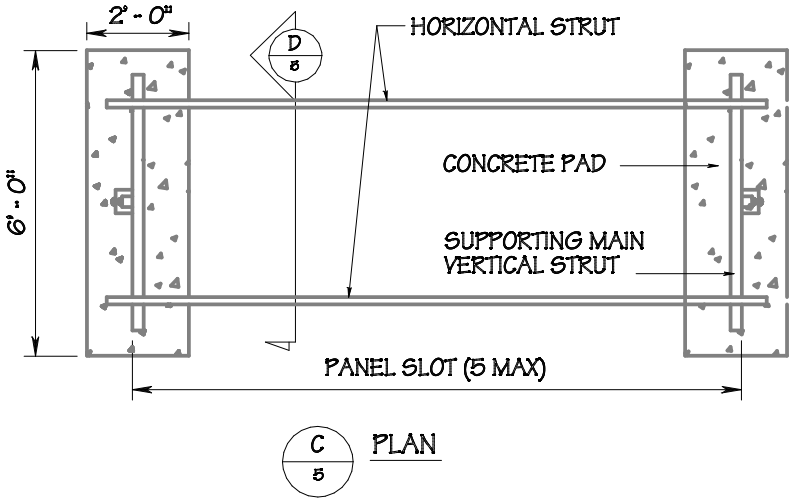
Figure

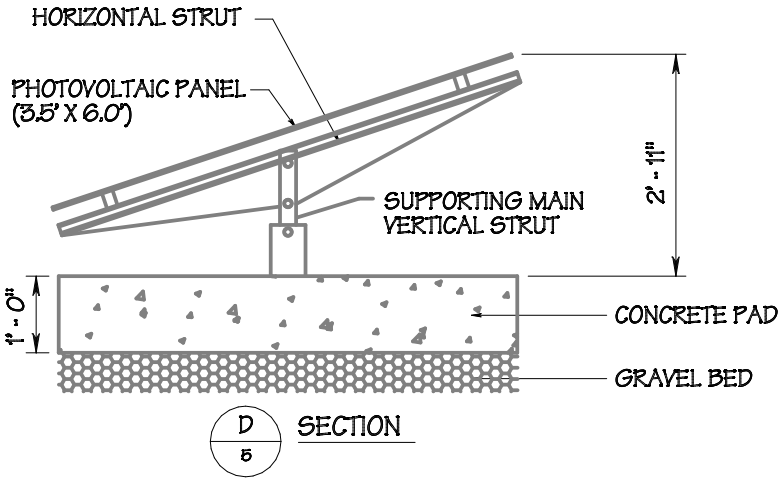
4



1/5 PANEL CONCRETE PAD DETAIL

SCALE: AS SHOWN





2/5 PANEL BALLASTED GROUND MOUNT DETAIL

SCALE: AS SHOWN

N

GRAPHIC SCALE 1"=200'

0 100 200 300

Photovoltaic Power System - Panel Mount & Foundation Details

PVT ISWMF Relocation (Phase III)

Nanakuli, Waianae District, Oahu, Hawaii

Figure

5