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Olmsted Center
for Landscape Preservation

Cultural Landscape Report for Forts Baker, Barry, and Cronkhite

Golden Gate National Recreation Area

Volume II: Existing Conditions through Treatment



Cultural Landscape Report Forts Baker, Barry, and Cronkhite

Golden Gate National Recreation Area

Sausalito, California

Volume II: Existing Conditions, Analysis and Evaluation, and Treatment Recommendations

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Cover Image: Fort Barry from Wolf Ridge at Fort Cronkhite, looking southeast with the Presidio and San Francisco in the distance, 2009. (State University of New York College of Environmental Science and Forestry, hereafter SUNY ESF.)

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS v

FOREWORD xi

ACKNOWLEDGMENTS xiii

INTRODUCTION 1

Project Scope, Methods, and Organization 1
Summary of Findings 5

1. EXISTING CONDITIONS 11

Park Management Overview 11
Regional Setting 13
Natural Environment 15
Road and Trail Systems 18
Fort Baker 20
Fort Barry 29
Fort Cronkhite 49

2. ANALYSIS AND EVALUATION 105

National Register Evaluation 105
Cultural Landscape Evaluation 119
District Overview 120
Fort Baker 130
Table 2.1, Fort Baker Landscape Feature Inventory 154
Fort Barry 187
Table 2.2, Fort Barry Landscape Feature Inventory 217
Fort Cronkhite 269
Table 2.3, Fort Cronkhite Landscape Feature Inventory 293

3. TREATMENT RECOMMENDATIONS 327

Treatment Framework 328
Treatment Guidelines 339
District-Wide Treatment Task Recommendations 367
Fort Baker Treatment Task Recommendations 374

Fort Barry Treatment Task Recommendations 394
Fort Cronkhite Treatment Task Recommendations 437
Table 3.1, Summary of Recommended Landscape Treatment Tasks 465

REFERENCES **485**

APPENDICES **487**

A. Forts Baker, Barry, Cronkhite National Register District Map 487
B. Point Bonita Light Station National Register District Map 489
C. List of Related Cultural Resource Reports 491
D. Treatment Workshop Participants 493
E. Fort Baker Approved Plant List 495
F. List of Non-Native Invasive Plants at GOGA 499
G. Planting Plan for SF-87A, 1970 501
H. 1945 Aerial Photograph of East Fort Baker 503
I. Planned Natural Resource Projects at the Marin Headlands 505

Illustrations

INTRODUCTION FIGURES

0.1 Entrance to the Golden Gate, 2009 1
0.2 Map showing character areas used to organize the report 3

EXISTING CONDITIONS FIGURES

1.1 Marin Headlands from Fort Winfield Scott, 2009 11
1.2 Map of regional setting of the Marin Headlands 14
1.3 The Golden Gate from Fort Barry, 2009 14
1.4 The western Golden Gate from above Kirby Cove, 2009 15
1.5 Aerial showing setting of Forts Baker, Barry, and Cronkhite, ca. 2005 15
1.6 The historic Silva Ranch in Gerbode Valley, 2009 16
1.7 Tennessee Valley from Wolf Ridge, 2009 16
1.8 Sausalito and Fort Baker from San Francisco, 2009 16
1.9 Exposed Franciscan Complex along Roth Road, 2009 17
1.10 Exposed geologic formations north of Rodeo Beach, 2009 17
1.11 Rodeo Lagoon from the Fort Barry Main Post, 2009 18
1.12 Coastal scrub and grassland on Wolf and Coyote ridges, 2009 19
1.13 Riparian woodlands along Rodeo Creek in Fort Barry, 2009 19
1.14 A rebuilt section of Conzelman Road, 2011 20
1.15 Julian Road (Coastal Trail), 2009 20
1.16 Wolfback Ridge Road (SCA Trail), 2009 20
1.17 Aerial of Forts Baker, Barry, and Cronkhite showing major trails 21
1.18 West port of the Baker-Barry tunnel, 2014 22
1.19 Remnants of SF-87C T on Slaker Hill, 2009 23
1.20 Abandoned pumphouse along Alexander Avenue, 2009 23
1.21 Permit Area of Golden Gate Bridge at Fort Baker, 2009 23
1.22 US 101 and the Waldo Tunnel, 2009 24
1.23 US 101 and Vista Point, 2009 24
1.24 Sausalito-Marin City sewage treatment plant, 2009 24
1.25 Coast Guard Golden Gate main station building, 2009 25
1.26 View of San Francisco from the Fort Baker parade ground, 2011 26
1.27 Overview of Fort Baker Main Post from Vista Point, 2009 26
1.28 Turf and foundation plantings at Fort Baker officer quarters, 2011 26
1.29 Rehabilitated officer quarters along Kober Street, 2011 27
1.30 CavalloPoint Lodge buildings along Seitler Road, 2009 27
1.31 Overview of Fort Baker Quartermaster Area, 2009 27
1.32 Satterlee Road in the Fort Baker Quartermaster Area, 2009 28
1.33 Overview of Horseshoe Cove, 2009 28

1.34 West side of Horseshoe Cove with the mine wharf, 2009 29
1.35 Travis Marina lodge, 2011 29
1.36 Cavallo Battery, interior view, 2009 30
1.37 Battery Yates from Battery Cavallo, 2009 30
1.38 Battery Duncan, rear side, 2009 31
1.39 Parapet of Baker-McDowell cable terminal on San Francisco Bay, 2009 31
1.40 Battery Spencer from top of Lime Ridge, 2009 32
1.41 Covered way of Ridge Battery, 2007 32
1.42 Overview of Kirby Cove, 2009 33
1.43 Battery Kirby, 2009 33
1.44 Battery Gravelly gun platform and eroding cliff, 2009 33
1.45 Battery Orlando Wagner, 2009 34
1.46 B1 Wagner and B1 Kirby, 2009 34
1.47 Kirby Cove campground, 2009 34
1.48 Overview of Fort Barry from Wolf Ridge, 2009 35
1.49 50MM antiaircraft machine gun pit #29 near Fort Barry Main Post, 2012 36
1.50 Lighthouse at Diablo Point, 2009 36
1.51 Rodeo Lagoon from the Fort Barry Main Post, 2007 37
1.52 Overview of the Fort Barry Main Post, 2009 37
1.53 Upper part of the Fort Barry Main Post, 2011 37
1.54 Rosenstock Road and parking area, 2011 38
1.55 Barracks at Fort Barry, 2011 38
1.56 Post chapel at Fort Barry (visitor center), 2014 38
1.57 NOC quarters at Fort Barry, 2011 39
1.58 Fort Barry Quartermaster Area (Three Sisters), 2011 39
1.59 Overview of Fort Barry Motor Pool (Presidio Stables), 2009 40
1.60 Motor vehicle sheds (stalls) and balloon hangar, 2009 40
1.61 Overview of the Departmental Rifle Range, 2007 41
1.62 Target trench, 2009 41
1.63 Target house, 2009 41
1.64 Overview of Fort Barry Capehart Housing Area, 2009 42
1.65 Menges Street in Capehart Housing Area, 2009 42
1.66 Capehart housing units, 2009 42
1.67 Overview of Diablo Ridge, 2009 43
1.68 Casemate of BC 129, 2009 44
1.69 BC 129 battery commander station, Hawk Hill, 2014 44
1.70 SF87 control site remnants on Hawk Hill, 2014 44
1.71 Overview of Rodeo Ridge, 2009 45
1.72 New comfort station at Battery Wallace picnic area, 2014 45
1.73 Battery Wallace, 2009 46
1.74 Rodeo Hill and AA Battery #2, 2009 46

1.75 Gun platform of AA Battery #2, 2009 46
1.76 AA Battery #2 magazine, 2009 46
1.77 Battery Rathbone-McIndoe, 2009 47
1.78 B1S1 Wallace, 2009 47
1.79 BC Wallace, 2009 47
1.80 F3 (B4 Alexander) at the Bonita Cove shoreline, 2009 48
1.81 Overview of South Lagoon Defenses, 2009 48
1.82 Trail in dune area west of Battery Smith-Guthrie, 2009 49
1.83 Gun pit at Battery Alexander, 2009 49
1.84 Battery Alexander, rear side and parade, 2014 49
1.85 Battery Smith-Guthrie, rear side and parade, 2009 50
1.86 Gun mount and blocked firing line at Battery Smith-Guthrie, 2009 50
1.87 Overview of Battery O'Rorke, 2009 50
1.88 Overview of Bonita Ridge Defenses, 2009 51
1.89 Mendell Road with new red-chert surface, 2011 51
1.90 Blast aprons of Battery Mendell, 2009 52
1.91 AAA Position #81 gun emplacements at Bird Island Overlook, 2011 52
1.92 Barry mine casemate, 2009 52
1.93 Ruins of radio room next to Barry mine casemate, 2009 53
1.94 Overview of fire-control station cluster on Bonita Ridge, 2009 53
1.95 M1 Mines on Bonita Ridge, 2009 53
1.96 G2 Barry on Bonita Ridge prior to removal of siding, 2009 53
1.97 M4 Mines near Battery Mendell, 2009 54
1.98 Searchlight #9 and powerhouse near Bird Island, 2009 54
1.99 Gun mount on Bonita Ridge, 2009 54
1.100 Overview of the Nike SF-88 administration area (YMCA), 2011 55
1.101 Streets and buildings in SF-88 administration area, 2009 55
1.102 Overview of SF-88 launch site, 2009 56
1.103 The SF-88L Limited Area, 2009 56
1.104 The SF-88L Exclusion Area, 2009 56
1.105 Missile and open magazine at SF-88L, 2009 57
1.106 Overview of Point Bonita, 2009 57
1.107 Mainland portion of the Point Bonita Light Station, 2009 58
1.108 North tunnel portal at Point Bonita, 2009 58
1.109 Lighthouse Trail at Searchlight #10 Powerhouse, 2009 58
1.110 Suspension bridge at Point Bonita, 2009 59
1.111 Site of Third Keeper's dwelling at Point Bonita, 2009 59
1.112 Access road and picket fence at the former Life-Saving Station, 2009 60
1.113 Overview of the former Life-Saving Station, 2009 61
1.114 Fog-signal cisterns along Field Road, 2009 61
1.115 Overview of former lighthouse keepers' area, 2009 61
1.116 Overview of southern Fort Cronkhite from the south, 2009 62
1.117 Overview of the northern part of Fort Cronkhite, 2009 63

1.118 Reservoir on hill north of the Fort Cronkhite Cantonment, 2009 63
1.119 Access tunnel north of Rodeo Beach, 2009 63
1.120 Overview of Fort Cronkhite Cantonment, 2009 64
1.121 The west wing of the Fort Cronkhite Cantonment, 2009 65
1.122 A mess-hall storage shed in the Fort Cronkhite Cantonment, 2011 66
1.123 Walks in the west wing of the Fort Cronkhite Cantonment, 2011 66
1.124 Stone retaining wall along Kirkpatrick Street, 2011 66
1.125 Letter trenches north of Kirkpatrick Street, 2011 66
1.126 The Fort Cronkhite administration building, 2011 67
1.127 The Fort Cronkhite post exchange and firehouse, 2011 67
1.128 Barracks in the est wing of the Fort Cronkhite Cantonment, 2011 67
1.129 The Headlands Nursery, 2011 68
1.130 The Fort Cronkhite Commanding Officer's Quarters, 2011 68
1.131 Overview of the SF-87 administration area, 2009 68
1.132 Eastern part of the NatureBridge pedestrian zone, 2011 69
1.133 Western part of the NatureBridge pedestrian zone, 2011 69
1.134 The former Fort Cronkhite parade ground, 2014 69
1.135 Fort Cronkhite warehouse along Bunker Road, 2009 70
1.136 Overview of Tennessee Point, 2009 70
1.137 Fire-control stations at Tennessee Point, 2007 71
1.138 Overview of the Townsley Hill Defenses, 2009 71
1.139 Battery Townsley casemates, 2009 71
1.140 North portal of Battery Townsley, 2009 72
1.141 Townsley PSR Room, 2009 72
1.142 Townsley reserve magazine, 2009 72
1.143 Little Ranch Valley, 2009 73
1.144 Overview of the Wolf Ridge Defenses area, 2009 73
1.145 Western part of AA #1, 2009 74
1.146 AA Battery #1 Director's Pit and hutment anteroom, 2009 74
1.147 Remnants of AAA Position No. 10, 2009 74
1.148 B1S1 Townsley, Wolf Ridge, 2009 75
1.149 BC Townsley and powerhouse, Wolf Ridge, 2009 75
1.150 Remnants of SCR-296 #4, Wolf Ridge, 2009 76
1.151 Storage warehouse foundation, Wolf Ridge, 2009 76
1.152 World War II sandbag-type gun emplacement on Wolf Ridge, 2009 76
1.153 Overview of the Elk Valley Defenses area, 2009 77
1.154 M4 Mines I, Elk Valley, 2011 77
1.155 Cable manhole Mines I, Elk Valley, 2011 77
1.156 Overview of the Marine Mammal Center within SF-87L, 2009 78
1.157 The southern part of the park maintenance area in SF-87L, 2009 78
1.158 The northern part of the park maintenance area in SF-87L, 2009 78
1.159 Overview of the SF-88C site on Wolf Ridge, 2009 79
1.160 Painted sign/wall near entrance to SF-88C, 2009 80
1.161 The HIPAR building at SF-88C, 2014 80

1.162 The SF-88C ICC building and generator building, 2009 80
1.163 The SF-88C ready room 81

EXISTING CONDITIONS DRAWINGS

1.1 Fort Baker Military Reservation 83
1.2 Main Post of Fort Baker 85
1.3 Horseshoe Cove Waterfront 87
1.4 Gravelly Beach 89
1.5 Fort Barry Military Reservation 91
1.6 Main Post of Fort Barry 93
1.7 Diablo Ridge (Hawk Hill) 95
1.8 Bonita Ridge 97
1.9 Point Bonita 99
1.10 Fort Cronkhite Military Reservation 101
1.11 Fort Cronkhite Cantonment 103

ANALYSIS AND EVALUATION FIGURES

2.1 Overview of East Fort Baker toward the end of the historic period, 1959 130
2.2 Overview of Fort Barry and the southern part of Fort Cronkhite toward the end of the historic period, 1961 187
2.3 Overview of Point Bonita toward the end of the historic period, 1961 188
2.4 Overview of Fort Cronkhite toward the end of the historic period, 1961 269

ANALYSIS AND EVALUATION DRAWINGS

2.1 Fort Baker Military Reservation 185
2.2 Fort Barry Military Reservation 217
2.3 Fort Cronkhite Military Reservation 321

TREATMENT FIGURES

3.1 Map of area of Fort Baker covered by the Fort Baker Plan 329
3.2 Perspective of Fort Baker showing intended conditions under the Fort Baker Plan 329
3.3 2014 GMP management zone map showing zones at the Headlands 331
3.4 Comparison of historic and existing conditions at the Main Post of Fort Barry 340
3.5 Photographs of historic Cold War-era Army signs at the Headlands 340
3.6 A park building sign modified to indicate historic place identity 341
3.7 A ca. 1970 Army map of Fort Cronkhite showing commemorative road names 341
3.8 SCR #2 on Wolf Ridge showing structure that warrants identification 342
3.9 Photograph showing change in historic landscape maintenance at the Main Post of Fort Barry 344

3.10 Native scrub at Battery O'Rorke that is compatible with the landscape's historic character 346
3.11 Scrub at the Fort Barry chapel that is not compatible with the landscape's historic character 348
3.12 Change in historic character from the Project Headlands roadwork 349
3.13 Old Bunker Road showing appropriate treatment of closed roads 351
3.14 Julian Road showing change in historic character resulting from management as a trail 352
3.15 A social trail cutting across an anti-aircraft emplacement 352
3.16 Letter trenches on a failing slope at Fort Cronkhite 353
3.17 Spread of non-native trees near the Barry Motor Pool 355
3.18 Unmaintained area of historic turf at Fort Cronkhite Cantonment 356
3.19 Deteriorating condition of B1S1 Townsley 357
3.20 Earth and vegetation concealing a World War II field emplacement 358
3.21 Example of compatible new construction 360
3.22 Placement of new construction obstructing an historic viewshed 360
3.23 Strategic views from a gun platform obstructed by trees 361
3.24 Small-scale features that are compatible with the historic military character of the landscape 363
3.25 Small-scale features that are incompatible with the historic military character of the landscape 363
3.26 Incompatible small-scale features at the Main Post of Fort Barry 364
3.27 Example of archaeological remains that should be preserved in the landscape 365
3.28 Simulation of suggested design for historical place and feature signs 368
3.29 Suggested design hierarchy for historical place and feature signs 369

TREATMENT DRAWINGS

3.1 Fort Baker Military Reservation 475
3.2 Fort Barry Military Reservation 477
3.3 Main Post of Fort Barry 479
3.4 Fort Cronkhite Military Reservation 481
3.5 Fort Cronkhite Cantonment 483

Foreword

The *Cultural Landscape Report for Forts Baker, Barry, and Cronkhite* will be of enduring service to current and future stewards of this complex landscape of over 2,700 acres with its sensitive natural resources, magnificent scenery, diverse contemporary uses, and nationally significant cultural resources that are a legacy of a century of American harbor defenses. Volume II, which follows the site history in Volume I (2016), will support the park in fulfilling its mission of conserving the Forts Baker, Barry, and Cronkhite landscape for the enjoyment of current and future generations.

John Auwaerter, with the support of park staff, park partners, and university students and colleagues, has done outstanding work in documenting the fascinating history of the three military reservations, providing the first comprehensive inventory of the landscape's characteristics and features, and developing treatment recommendations that provide both short- and long-term visions for future conditions. The report provides a plan for the cultural landscape that will guide rehabilitation projects in ways that preserve and enhance historic character while addressing contemporary uses and protection of natural and archaeological resources. It will also be a great aid in interpreting the landscape's historic military identity and commemorative associations to the visiting public.

On behalf of park staff, notably Amy Hoke and Stephen Haller, I offer many thanks to John and his partners at the NPS Northeast Region's Olmsted Center for Landscape Preservation and the State University of New York College of Environmental Science and Forestry, particularly Bob Page and George W. Curry. We are grateful for the collective effort that has brought this report to its successful and impressive conclusion.

Cicely Muldoon
Acting Superintendent,
Golden Gate National Recreation Area

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The authors gratefully acknowledge the many individuals who contributed to the completion of the *Cultural Landscape Report for Forts Baker, Barry, and Cronkhite, Volume II*, which follows the first volume containing the site history that was published in 2016.

For a landscape of over 2,700 acres with significant natural resources and layers of historic development, this project presented many challenges and opportunities in documenting existing conditions, inventorying and evaluating landscape features, and addressing solutions to design and planning issues. The report is the result of a collaborative effort among park staff, park partners, National Park Service Olmsted Center staff, and landscape architecture students from the State University of New York College of Environmental Science and Forestry (SUNY ESF).

Special thanks to John Martini, historian and retired park ranger, for his generous assistance with existing conditions documentation and review of draft reports. Steve Haller, Historian, and Amy Hoke, Historical Landscape Architect, were instrumental as project leads who provided vision, assisted with research, reviewed draft reports, and facilitated communication with park staff and partners. Many others assisted with research and review of draft reports, or participated in site visits and workshops to discuss future management of the landscape, including park staff Maria Alvarez, Brian Aviles, Leo Barker, Kate Bickert, Jay Eickenhorst, Darren Fong, Abby Sue Fisher, Alison Forrestel, Susan Ewing Halley, Sue Fritzke, Peter Gavette, Daphne Hatch, Bob Holloway, Barbara Judy, Craig Kenkel, Kimball Koch, Donald Mannel, William Merkle, Mia Monroe, Keith Stegall, Gerald Scheumann, Paul Scolari, Johanthan Sifuentes-Winter, Keith Stegall, Kim Sykes, Jennifer Treutelaar, Joanne Wilkins, and Melanie Wollenweber; and Golden Gate National Parks Conservancy staff Sharon Farrell and John Skibbe. We would also like to acknowledge the support of the project from Superintendent Frank Dean (retired).

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From SUNY ESF, we acknowledge the contribution of landscape architecture graduate student Laura Roberts, who completed the initial mapping, field work, existing conditions photography, and feature inventory for Volume II over the course of a summer and two semesters. Many thanks also to other landscape architecture students who assisted with the maps and inventory, including Matthew Herbert, Ella Braco, and Alexandra von Bieberstein. Last, thanks to landscape architecture student Haichao Wang for help with setting up the treatment workshop at Fort Mason.

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Introduction

Forts Baker, Barry, and Cronkhite, an expansive landscape composed of three former harbor defense installations, extend across more than 2,700 acres on the Marin Headlands bordering San Francisco Bay, the Golden Gate, and the Pacific Ocean. These headlands of the Marin Peninsula are best known for panoramic scenery and as one of the country's largest open spaces within the core of a metropolitan area. While much of the landscape is natural, the engineered roads, mown parade grounds, red-roofed buildings, anti-aircraft emplacements, and large concrete batteries testify to its history of protecting the entrance to the Harbor of San Francisco (fig. 0.1). The inconspicuous and almost natural character of the military development and large expanse of the three reservations were part of an intentionally designed military landscape that developed on land shaped earlier by European ranchers and native Coast Miwok people. The conservation of the Marin Headlands as public land through the establishment of Golden Gate National Recreation Area is a legacy of this remarkable history.

This cultural landscape report, which follows the first volume containing the site history of Forts Baker, Barry, and Cronkhite, is intended as a resource to help the park manage this historic cultural landscape and ensure that it is conserved for future generations. The report includes documentation of existing landscape conditions, an inventory and evaluation of landscape characteristics and features, and recommendations to preserve and enhance the landscape's historic character. Forts Baker, Barry, and Cronkhite serve multiple purposes in keeping with the National Park Service's conservation mission that aims to balance resource preservation with public use and enjoyment. Maintaining and enhancing this



Figure 0.1. The entrance to the Golden Gate from the Pacific Ocean, looking south from Wolf Ridge across Forts Cronkhite and Barry towards Point Bonita, June 2009. (SUNY ESF)

historic landscape according to the park mission presents numerous challenges, which include protecting endangered species and managing the spread of invasive and non-native vegetation, addressing deterioration of obsolete military buildings and structures, providing for recreational opportunities and universal access to many thousands of visitors, and balancing natural and cultural resource values. Park managers must also meet the needs of numerous partner organizations at the Marin Headlands that make possible the adaptive reuse of the district's large stock of military buildings and structures.

PROJECT SCOPE, METHODS, AND ORGANIZATION

This second volume of the Cultural Landscape Report (CLR) for Forts Baker, Barry, and Cronkhite contains the Existing Conditions and Analysis and Evaluation sections of CLR Part I, and Treatment that is contained in CLR Part II. It also incorporates and updates the findings of the earlier Cultural Landscape Report for Fort Baker completed in 2005.[1] The report follows methods outlined in *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (National Park Service, 1998). A Cultural Landscape Report is the principal treatment document for historic landscapes in the National Park System and the primary tool for their long-term management. The park service defines a cultural landscape as a geographic area that includes both built and natural resources, and is associated with a historic event, activity, or person.[2] A cultural landscape, shaped by the interactions of people with the natural environment, includes not only landforms, roads, walks, and vegetation, but also buildings, views, and small-scale features, as well as less tangible uses and associations.

Primary goals of the report are to evaluate the cultural landscape holistically and define the overall historic character and significant relationships among the three military reservations that comprise the cultural landscape on the Marin Headlands; and to provides guidelines for the rehabilitation of the historic landscape in keeping with the park's recently adopted General Management Plan.

The project area for this CLR is the landscape within the historic boundaries of Forts Baker, Barry, and Cronkhite as they existed at the height of military development during World War II. Included within this district are areas historically managed and developed by the Coast Guard and other agencies through lease arrangements with the US Army. All of the land within the 1945 limits of the three military reservations is today part of Golden Gate National Recreation Area, although thirty-nine acres at Point Bonita and two acres at Point Diablo remain under Coast Guard jurisdiction, but are anticipated for eventual transfer to the National Park Service. The Golden Gate Bridge and its approaches (US 101, Alexander Avenue) are contained in rights-of-way and permitted areas, and are not managed by the park.

To document, evaluate, and provide treatment recommendations for this expansive landscape in an accessible format, the report organizes the district according to a hierarchy of areas, beginning with the overall district and regional setting. These are followed by each of the three military reservations, and then by character areas within each reservation. Character areas are portions of a landscape that share a common character, identity, or use. Over a century of military development on the headlands, the Army established standard support facilities, such as main posts and Quartermaster areas, and clusters of defensive works that formed part of the larger San Francisco harbor defenses.[3] Today, these clusters of military development form the character areas that serve as the framework for this CLR, and include the following (fig. 0.2):

Fort Baker

Main Post, Quartermaster Area, Horseshoe Cove Waterfront (Mine Depot, Marine Maintenance Facilities), Horseshoe Cove Defenses (Batteries Yates, Cavallo, and Duncan), Lime Point Ridge Defenses (Batteries Ridge and Spencer), and Gravelly Beach Defenses (Batteries Wagner and Kirby)

Fort Barry

Main Post, Quartermaster Area, Departmental Rifle Range, Barry Motor Pool (balloon hangar area), Capehart Housing Area (partly in Fort Baker), Diablo Ridge Defenses (Battery Construction 129, SF-87C, partly in Fort Baker), Rodeo Ridge Defenses (Batteries Wallace and Rathbone-McIndoe, AA Battery #2),

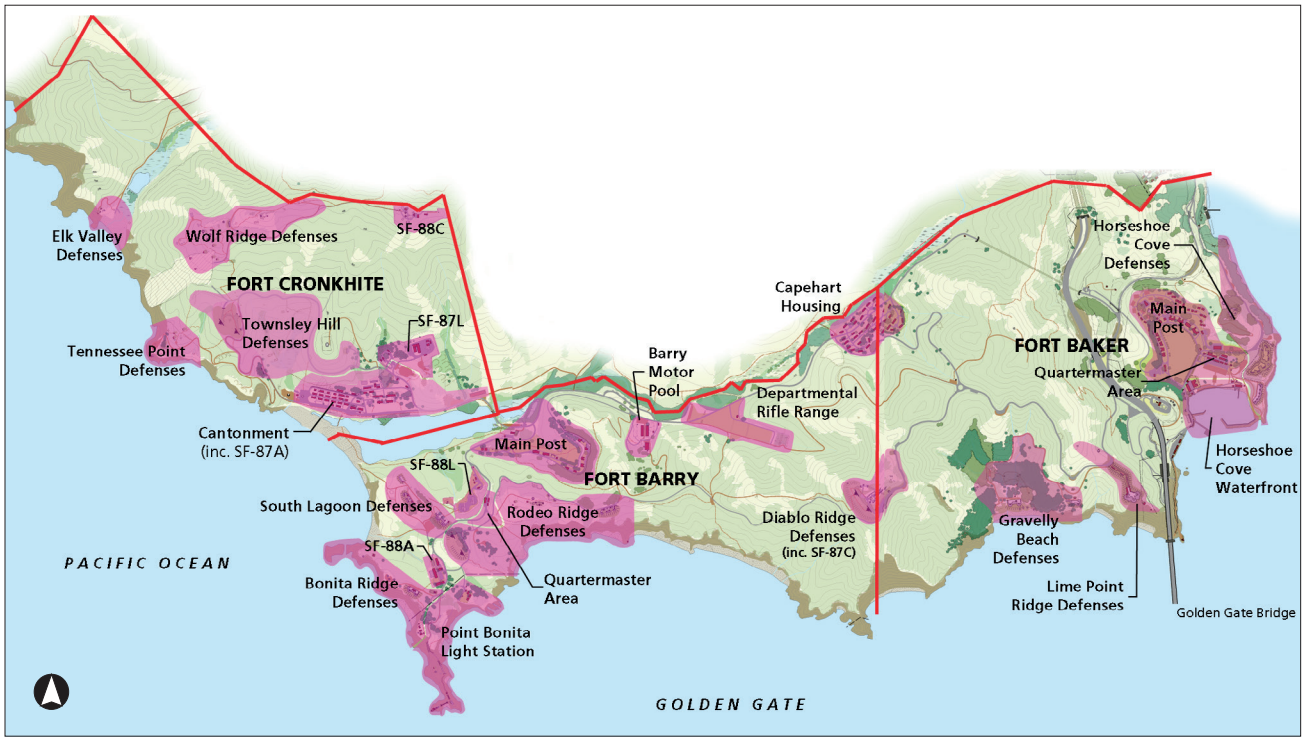


Figure 0.2. Map of Forts Baker, Barry, and Cronkhite showing historically developed areas (shaded pink) used to organize the cultural landscape. See Drawings 1.1–1.11 for detailed boundaries. (SUNY ESF)

Bonita Ridge Defenses (Battery Mendell, AAA Position No. 81), South Lagoon Defenses (Batteries Alexander, Smith-Guthrie, and O'Rorke), SF-88A, SF-88L, and the Point Bonita Light Station

Fort Cronkhite

Cantonment (including SF-87A), SF-87L (Marine Mammal Center), SF-88C, Tennessee Point Defenses, Townsley Hill Defenses (Battery Townsley), Wolf Ridge Defenses (AA Battery #1), and Elk Valley Defenses (Tennessee Cove)

Due to the large size and complexity of the district, this report omits some details of the landscape in the existing conditions documentation and feature inventory. Additional details may be found in other park resource management reports that address discrete areas or resources within the district, including: roads; the Main Post, marine repair facility, and Kirby Cove area at Fort Baker; the rifle range, balloon hangar (motor pool) area, Nike SF-88 launch site, Bird Island Overlook, and Point Bonita area at Fort Barry; and the Rodeo Beach wetlands at Fort Cronkhite (see Appendix C for a full list of related reports).

SUMMARY OF FINDINGS

EXISTING CONDITIONS

Chapter 1, Existing Conditions, provides a narrative and graphic overview of the existing character and use of the Forts Baker, Barry, and Cronkhite landscape, including its management, regional setting, natural environment, and system of roads and trails. The description of each reservation provides an overview of the landscape with its reservation-wide characteristics and features, followed by a description of each character area defined by clusters of military development. Documentation on individual landscape features, including their existing condition, is in Chapter 2 (Analysis and Evaluation). The existing conditions plans, which cover each of the three military reservations with detail plans for highly developed areas, graphically locate each of the landscape features inventoried in Chapter 2.

Forts Baker, Barry, and Cronkhite are three former military reservations developed during the post-Civil War, Endicott, World War I/II, and Cold War eras that are today contained within the Fort Baker and Marin Headlands units of Golden Gate National Recreation Area. Although they constitute a historic district listed in the National Register of Historic Places, the three reservations are not managed as a historic site, but rather as a place that offers a national park experience to diverse urban populations, while conserving the outstanding natural, historic, scenic and recreational values. Forts Baker, Barry, and Cronkhite encompass 2,708 acres that correspond with the maximum extent of military jurisdiction. The National Park Service today maintains jurisdiction over all this property except for thirty-nine

acres at Point Bonita and two acres at Point Diablo that are under the US Coast Guard. The park manages the historic district according to its General Management Plan approved in 2014, in cooperation with park partners, most notably the Golden Gate National Parks Conservancy. Primary public uses at Forts Baker, Barry, and Cronkhite include hiking, biking, driving, and scenic viewing. Most of the historic defensive works can be accessed by the public on the exterior, but just two—Battery Townsley and the Nike missing launch area SF-88 at Forts Barry and Cronkhite—are opened to the public for interpretation. Two-lane roads connect the three military reservations and are open to public use, along with a network of hiking trails that include portions of the state-wide Coastal Trail and regional San Francisco Bay Trail, many on former military roads. Overall, the cultural landscape is in good physical condition, but has been impacted in areas by heavy use, landslides, vandalism, limited maintenance, and spread of exotic invasive species. Condition issues are most pronounced at abandoned secondary defensive works such as fire-control stations and powerhouses.

Fort Baker (Drawings 1.1–1.4) contains 1,069 acres at the southeastern part of the Marin Headlands, including the anchorage of the Golden Gate Bridge and US 101. Its main developed area, the former Main Post, is today managed in partnership with a private company that operates *CavalloPoint: The Lodge at the Golden Gate*. The adjoining Quartermaster Area is home to the Bay Area Discovery Museum, while the waterfront contains an installation of the US Coast Guard, and Travis Marina, a legacy of Fort Baker's association with the Presidio that is today operated by a unit from Travis Air Force Base. The post-Civil War and Endicott-era batteries are located near the shoreline of the Golden Gate and San Francisco Bay. Battery Spencer, located on Lime Ridge above the Golden Gate Bridge, is a popular scenic overlook. A public campground is located near Battery Kirby along the Golden Gate shoreline. The Coast Guard operates two automated navigational aids at Lime Point and Yellow Bluff.

Fort Barry (Drawings 1.5–1.9) contains 979 acres at the southwestern part of the Marin Headlands, bordering Fort Baker, the Pacific Ocean, and the Golden Gate. There are several developed areas used by park partners: the Main Post, which is home to the Headlands Center for the Arts and the Marin Headlands Hostel, and also contains the park's visitor center for all of the Marin Headlands unit; the Fort Barry Motor Pool, home to the Presidio Riding Club; and the former Nike SF-88 administration area that serves as the campus of the Point Bonita YMCA. The restored Nike SF-88 launch site is open to the public for tours by park staff and volunteers. The Fort Barry Capehart Housing Area, which straddles the boundary with Fort Baker, is used for park and partner staff housing. The most-visited of the numerous Endicott- and World War I/II-era batteries at Fort Barry are Battery Mendell, adjacent to the Bird Island Overlook along the Pacific Coast; and BC 129 / Nike SF-87 control site along the Golden Gate, also known as Hawk Hill, which is a popular scenic overlook that is also used by the Golden Gate Raptor Observatory. The park maintains a campground along the Golden Gate near Battery

Wallace. Within Fort Barry is the former Coast Guard reservation at Point Bonita, which includes the automated Point Bonita lighthouse, over which NPS has a use permit for public access and maintenance. Also within the Coast Guard reservation is the former Point Bonita Life-Saving Station, which is used for staff housing and also privately leased. The minor automated lighthouse at Point Diablo along the Golden Gate shoreline on the Fort Baker boundary is still owned and operated by the Coast Guard.

Fort Cronkhite (Drawings 1.10, 1.11), the northernmost of the three reservations, contains 803 acres bordering the Pacific Ocean and extends north to Tennessee Valley. Fort Cronkhite is used primarily for outdoor recreation, education, and park operations. The main developed area is at the cantonment (equivalent of a main post) that contains World War II-era temporary buildings and a Nike administration complex that are used by the park and by NatureBridge as its Golden Gate campus. The adjoining redeveloped Nike SF-87 launch site is home to the Marine Mammal Center. The Tennessee Valley area at the northern extent of Fort Cronkhite, known by the Army as Elk Valley, is remote from the main developed areas and is accessible by foot from the cantonment and from Route 1 by the Tennessee Valley Trail. Fort Cronkhite has one major World War II-era defensive work, Battery Townsley, which has been partly restored and is open to the public for guided tours. Wolf Ridge, which extends across the middle of the reservation, is accessible by the Coastal Trail and contains a concentration of World War II field defenses, fire-control stations, anti-aircraft emplacements, and the control site for Nike SF-88, most of which have been cut-off by a major landslide.

ANALYSIS AND EVALUATION

Chapter 2, Analysis and Evaluation, inventories and evaluates the cultural landscape of Forts Baker, Barry, and Cronkhite as a basis for historic preservation planning. The chapter is organized in two parts. The first addresses the historic significance and integrity of the cultural landscape according to criteria established by the National Register of Historic Places. The second part evaluates the historic character of the cultural landscape according to National Park Service cultural landscape methods outlined in *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (National Park Service, 1998). This evaluation includes a comprehensive inventory of all landscape characteristics and features, and identifies those that contribute to the historic character of the landscape and therefore warrant preservation. While the landscape evaluation is property-wide, it does not encompass all cultural resources in the district, only those that characterize the cultural landscape.[4]

A graphic map (plan) for each of the three reservations (Drawings 2.1–2.3) illustrates changes in the landscape since the historic period. Features introduced since the recommended end of the period of significance for the landscape (1966) are shown in white, while historic features are shown in color. Features removed

since the end of the historic period are indicated by a dashed black line. The existing conditions plans (Drawing 1.1–1-11) graphically locate each of the inventoried landscape features.

Forts Baker, Barry, and Cronkhite were listed as a single historic district in the National Register of Historic Places in 1972. Since that time, changes in federal jurisdiction, additional inventory, and different inventory and evaluation methods, along with the findings of the CLR site history (Volume I), have made that documentation outdated. It is recommended that future updates to the National Register include an expanded statement of significance that documents the history of Forts Baker, Barry, and Cronkhite over the course of the Army's century at the Marin Headlands within the contexts of military history, architecture, maritime history (navigational aids), and commerce. The recommended period of significance for the cultural landscape under Criteria A and C begins in 1866 with the establishment of the Lime Point Military Reservation, and extends to 1966, the year when the last major Army development was completed: Nike SF-87 administration complex at Fort Cronkhite. All cultural landscape resources (buildings, structures, objects, districts, and sites) within Forts Baker, Barry, and Cronkhite are evaluated in this CLR as contributing provided they retain historic integrity to the period of significance (1866–1966) and are associated with the documented areas of significance. The Golden Gate Bridge, US 101/Waldo Tunnel, Vista Point, and Alexander Avenue are part of the historic setting of the district, since all of these features date to the recommended historic period. Both the Golden Gate Bridge and Alexander Avenue, which are National Register eligible in their own right, should be considered contributing to the Forts Baker, Barry, and Cronkhite district, but with their own distinct areas of significance (engineering, transportation, and community planning and development). The recommended boundaries for the Fort Baker, Barry, and Cronkhite National Register district correspond with the historic extent of the three military reservations (approximately 2,708 acres), including the former Coast Guard lighthouse reservation at Point Bonita that was historically part of Fort Barry.

The cultural landscape of the district is evaluated in this CLR according to National Park Service cultural landscape methods to assess changes in landscape character since the end of the recommended period of significance in 1966.The 2,708-acre cultural landscape of Forts Baker, Barry, and Cronkhite today retains the overall natural environment, circulation, and patterns of development that existed by 1966. Change since 1966 has occurred primarily in vegetation, notably the spread of invasive Monterey pine, cypress, and eucalyptus trees and continued loss of grassland; the retrofitting of military roads for public use; deterioration and removal of vacant buildings and structures; rehabilitation of buildings for park and partner uses; and loss of Army signs and security fencing along the borders and defensive works as the district was opened for public use and integrated with the former ranchlands to the north as the Marin Headlands unit of Golden Gate National Recreation Area.

TREATMENT RECOMMENDATIONS

Chapter 3, Treatment, provides recommendations for preserving and enhancing the historic character of the Forts Baker, Barry, and Cronkhite landscape in the context of contemporary site management and use. Maintenance (preservation) is the default treatment where there is no specific recommendation. The recommendations are conceptual and will require additional park planning to implement.

The chapter begins by defining a treatment framework to guide the long-term management of the cultural landscape based in legislation, policy, and current park planning (approved General Management Plan , 2014, and the Fort Baker Plan, 2000), and the findings of the CLR Analysis and Evaluation. The framework articulates a treatment philosophy that serves as the basis for all treatment actions. This is followed by treatment guidelines for the district, and then by specific treatment tasks and considerations, which are discrete actions that may correspond to work orders, or ideas for future planning. Treatment tasks are identified on a series of treatment plans (drawings 3.1–3.5).

While the overall treatment framework and guidance in this report applies to the entire district of Forts Baker, Barry, and Cronkhite, the CLR provides limited specific treatment recommendations for the Main Post, Quartermaster Area (Bay Area Discovery Museum), and Horseshoe Cove waterfront at Fort Baker. These areas are addressed in two previous park planning efforts: the Fort Baker Plan (2000) and the Cultural Landscape Report for Fort Baker (2005).

The treatment framework and recommendations were developed in collaboration with park staff and partners at a workshop held on May 20, 2014 at Fort Mason (see Appendix D for a list of participants). Participants discussed and concurred on a philosophy to guide landscape treatment, and specific landscape-related tasks that address issues ranging from planning, maintenance, visitor experience, and interpretation, to natural and cultural resource protection.

The recommended treatment philosophy is to preserve, reveal, and enhance the Cold War-era character of the landscape that resulted from a century of military use and development. This philosophy seeks to preserve history that remains evident in the landscape, while allowing for the continuation of natural processes and continued use of the cultural landscape as public parkland. In general, features would not be returned under this philosophy to a character that predates the Cold War, unless necessary to enhance interpretation or address other management issues. There are two exceptions to this treatment philosophy within the district: East Fort Baker and the Main Post of Fort Barry. These areas are recommended for treatment to enhance their World War II-era character based on historic integrity, other planning directives, and for interpretive purposes.

The treatment philosophy for the overall district translates to a treatment date of 1966, when the Army completed its last major military development in the

Headlands (end of the recommended period of significance). The recommended treatment date for the former East Fort Baker (Main Post, Quartermaster Area, Horseshoe Cove waterfront, and Horseshoe Cove Defenses) and the Main Post of Fort Barry is 1945, the year that World War II ended. This date reflects the height of significant war-time use and development in these areas. The East Fort Baker treatment date is a change from the 1939 date recommended in the Fort Baker CLR .

To implement this landscape treatment philosophy and the intent of the park's General Management Plan, the recommended primary (overall) treatment for the Forts Baker, Barry, and Cronkhite landscape is *Rehabilitation*, one of four treatments defined under the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

The treatment guidelines for Forts Baker, Barry, and Cronkhite provide general management direction for landscape planning and design, along with some issues that are not currently at a level sufficient to warrant specific treatment recommendations. The guidelines include enhancing the historic identity and interpretation of the military landscape; documenting and stabilizing threatened landscape features; addressing landscape maintenance to reflect the historic well-tended character in certain areas; suggestions for locating a central maintenance facility; and guidelines for enhancing historic character of the following landscape characteristics: Natural Systems and Features; Circulation; Topography; Vegetation; Buildings and Structures; Views and Vistas; Small-Scale Features; and Archaeological Sites.

Treatment tasks are organized by district-wide recommendations and recommendations for each of the three historic military reservations, summarized in table 3.1. Examples of tasks include implementing a system of signage to enhance historic military place identity; removing volunteer non-native trees that have spread from the historic plantings; stabilizing and repairing historic defensive works; reconstructing the World War II-era air-raid siren at the Fort Baker Main Post that was removed after the historic period; rebuilding walks and steps at the Fort Barry Main Post; documenting the remains of the Smith-Guthrie hutment remnants; interpreting the lighthouse keepers' area at Point Bonita; and removing the non-historic Tennessee Valley Lagoon. Treatment considerations capture treatment ideas that are not currently a priority for park management, or where there is insufficient information for a specific recommendation. Examples of treatment considerations include interpreting the Kirby Powerhouse ruins; identifying potential new building sites at the Fort Barry Main Post and Cronkhite Cantonment; and developing interpretive trails at Rodeo Hill and Little Ranch Valley.

ENDNOTES

1 The Existing Conditions and Analysis and Evaluation chapters are components of CLR Part I; Treatment is CLR Part II. The CLR for Fort Baker (Unpublished National Park Service report, July 2005) focused on inventorying and providing treatment recommendations for the Main Post and Quartermaster Area, and secondarily on the adjoining defensive works within the former East Fort Baker (current Fort Baker unit of Golden Gate National Recreation Area).

2 Robert Page, Cathy Gilbert, and Susan Dolan, *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (Washington D.C.: US Department of the Interior, National Park Service, Park Historic Structures and Cultural Landscapes Program, 1998), 129.

3 See US Army, "Locations of Seacoast Defense Elements, Fort Cronkhite to Fort Scott, 15 November 1945," in *Cultural Landscape Report for Forts Baker, Barry, and Cronkhite, Volume I.*

4 This report does not evaluate architectural significance of individual buildings under National Register Criterion C, archeological significance under Criterion D, or the significance of museum collections. The report also does also not document ethnographic significance. Additional research and evaluation would be required to fully document all areas of historic significance for all resources, such as through amended National Register documentation and updates to the park's List of Classified Structures (LCS) and Archeological Sites Management Information System (ASMIS).

1. Existing Conditions

From across the broad waters of the Golden Gate, the setting sun on the Pacific horizon highlights the ridges of the Marin Headlands that were formed millennia ago (fig. 1.1). At closer range, daylight makes clear the cultural landscape of this spectacular natural scene with its winding roads, seacoast defensive works, lighthouses, docks and wharves, groves of eucalyptus and cypress, and clusters of red-roofed buildings that developed over a century of military use at Forts Baker, Barry, and Cronkhite, with a longer history of aids to navigation and ranching, and age-old patterns that may trace back to the land's use by Native peoples. Today, this remarkable public landscape provides a scenic setting for a wide variety of uses under the stewardship of the National Park Service (NPS) and its many partners. The following description of the cultural landscape is based on documentation collected in large part between 2009 and 2014.

PARK MANAGEMENT OVERVIEW

Once three distinct but jointly managed military reservations, the Forts Baker, Barry, and Cronkhite landscape is today administered as the Fort Baker unit and the southern part of the Marin Headlands unit of Golden Gate National Recreation Area. This expansive urban park system, designated by UNESCO as part of the Golden Gate Biosphere Reserve, covers over 110 square miles on both sides of the Golden Gate, extending north across Marin County and south into San



Figure 1.1. The Marin Headlands looking north across the Golden Gate toward Fort Baker from Fort Winfield Scott in San Francisco, 2009. (SUNY ESF)

Mateo County. The overall purpose of the park is "to offer national park experiences to a large and diverse urban population while preserving and interpreting its outstanding natural, historic, scenic, and recreational values."[1] Although Forts Baker, Barry, and Cronkhite are listed in the National Register of Historic Places, they are not managed as a historic unit of the National Park System. Many of the historic military facilities have been adaptively reused by the park and its partners for recreational, educational, and scientific purposes, while the larger landscape is managed for its recreational, historic, scenic, and natural resources.[2]

Forts Baker, Barry, and Cronkhite encompass 2,708 acres that correspond with the maximum extent of military jurisdiction that was reached in 1937 and sustained until 1956.[3] Today, the National Park Service maintains jurisdiction over all this property except for thirty-nine acres at Point Bonita and two acres at Point Diablo that are under the US Coast Guard, an agency within the US Department of Homeland Security. The park has a long-term use permit for Point Bonita, which is anticipated for future transfer to the National Park Service.

There are a number of parcels that the park does not manage because they have been permitted for use by other public agencies. These include the Golden Gate Bridge permit area, US 101-Alexander Avenue rights-of-way, Coast Guard Station Golden Gate, and the Sausalito-Marin City sewage treatment plant, all at Fort Baker. In addition, a number of other areas are managed by park partners, although the park maintains management oversight. At Fort Baker, these areas include most of the Main Post that has been adaptively reused as the CavalloPoint Lodge, the Quartermaster Area that is home of the Bay Area Discovery Museum, and part of Horseshoe Cove that is home to the Travis Sailing Center, an operation associated with the US Department of Defense. At Fort Barry, areas under park partner use and management include most of the Main Post that is home to the Marin Headlands Hostel (operated by Hostelling International) and Headlands Center for the Arts, the balloon hangar/motor pool area that is used by the Presidio Riding Club, and the Nike SF-88A administration area that is occupied by the Point Bonita YMCA. At Fort Cronkhite, partner areas include the Nike SF-87 administration area and portions of the surrounding Cantonment that serve as the Golden Gate campus of NatureBridge, a native plants nursery in the Cantonment that is operated by the Golden Gate National Parks Conservancy, and the Nike SF-87 launch site that has been redeveloped as The Marine Mammal Center.

The Golden Gate National Parks Conservancy, a 12,000 member not-for-profit organization, serves as the park's primary partner throughout Golden Gate National Recreation Area. For the past quarter century, the Conservancy has provided funding to support education, interpretation, park management, operations, and facility management. At the Headlands, the Conservancy is directly involved in management of trails and the Golden Gate Raptor Observatory at Hawk Hill on the Baker-Barry boundary, in addition to the native plants nursery at Fort Cronkhite. The Conservancy also partners with the park on improving signage,

operating the visitor center, restoring and preserving endangered and threatened habitat, and rehabilitating historic structures, as well as assisting with educational programs and park planning.[4]

National Park Service administration is based at the park headquarters at Fort Mason in San Francisco. Park offices and other facilities within the three military reservations include a park-wide law enforcement office at the Fort Cronkhite Cantonment, roads and trails maintenance facilities at Fort Baker and Fort Cronkhite, and office space in two barracks and a maintenance garage at the Fort Baker Main Post. Due in part to the tight and expensive housing market in the Bay Area, the National Park Service maintains numerous housing units at Forts Barry and Cronkhite for park staff use. These are at the Fort Barry Capehart Housing Area along Bunker Road, in the Fort Cronkhite Cantonment, and at the Coast Guard Quarters area (former Life-Saving Station) at Point Bonita.

Primary public uses at Forts Baker, Barry, and Cronkhite include hiking, biking, driving, and scenic viewing. While most visitors arrive by private automobile or coach bus, there is limited public transit through the San Francisco MUNI bus service that goes to Rodeo Beach at Fort Cronkhite, and Golden Gate Transit bus routes to Sausalito follow Alexander Avenue in Fort Baker. Many visitors also arrive on foot and by bike. The park maintains scenic overlooks accessible by automobile and foot at most of the Endicott batteries, with the most popular ones at Battery Spencer, the SF-87 control area on Hawk Hill, and at the Bird Island Overlook and Battery Mendell at Fort Barry, along with numerous pull-offs along East Road and Conzelman Road in Fort Baker. A visitor center for the Marin Headlands is maintained in the chapel at the Fort Barry Main Post. There are two small camping facilities, the Kirby Cove campground at Fort Baker and the Bicentennial Campground at Fort Barry. Both have adjoining day-use picnic areas. Park staff and volunteers also maintain three areas that are open to the public as museum facilities with guided tours, including the Point Bonita Lighthouse and Nike SF-88 launch site at Fort Barry, and Battery Townsley at Fort Cronkhite.

REGIONAL SETTING

Forts Baker, Barry, and Cronkhite are located in Marin County, near the City of Sausalito and across the Golden Gate Bridge from San Francisco (fig. 1.2). The three former military reservations occupy the southern and western end of the Marin Peninsula, the approximately twenty-mile-long arm of land that divides San Francisco and San Pablo Bays on the east from the Pacific Ocean on the west. All three forts border park property within the Marin Headlands unit. Fort Baker also borders the City of Sausalito, the only urbanized area immediately adjoining the three reservations. The boundary between the City and County of San Francisco and Marin County follows the coastline of the Golden Gate and Horseshoe Cove to Cavallo Point.



Figure 1.2. Regional setting of Forts Baker, Barry, and Cronkhite and nearby units of Golden Gate National Recreation Area. (SUNY ESF)

THE GOLDEN GATE

The strait that connects San Francisco Bay with the Pacific Ocean is a busy shipping channel and recreational waterway renowned for its magnificent scenery. Characterized by frequent summer fog and swift tidal currents, the Golden Gate is approximately 300 feet deep, three miles long, and between one and three miles wide, with the narrowest section at the Golden Gate Bridge between Lime Point at Fort Baker on the north and Fort Point on the south (fig. 1.3). Forts Baker and Barry form the entire northern shore of the Golden Gate, which includes three promontories, Lime Point that marks the eastern end of the straits; Point Diablo that divides the northern shore into Kirby Cove to the east and Bonita Cove to the west; and Point Bonita, the narrow, quarter-mile-long arm of land that forms the entrance into the Golden Gate from the Pacific Ocean.



Figure 1.3. The Golden Gate looking east from Fort Barry, 2009. Fort Point is visible beneath the south (right) anchorage of the bridge. The promontory at left is Point Diablo, and in the background is downtown San Francisco. (SUNY ESF)

On the south side of the Golden Gate, the Civil War-era Fort Point, the oldest masonry fortification in San Francisco, marks the inner entrance to the harbor beneath the south anchorage of the bridge. The fort is a national historic site and is located within the limits of the Presidio, historically the Army's Western headquarters and today part of the national recreation area. The Golden Gate widens west of the bridge and is lined by steep cliffs and national park lands



Figure 1.4. The western Golden Gate looking south across Kirby Cove at Fort Baker, 2009. The wooded area beyond the bridge is the Presidio and Fort Scott, and to the right is Lands End and Point Lobos. The neighborhoods visible in between are Seacliff and Richmond. (SUNY ESF)

inherited primarily from former military reservations (fig. 1.4). From east to west, these areas include Fort Winfield Scott (Presidio), Baker Beach, China Beach, and Lands End with Point Lobos and the Cliff House. Point Lobos marks the entrance to the Golden Gate and is the southern counterpart to Point Bonita at Fort Barry.

MARIN HEADLANDS

The portion of the Marin Headlands unit of Golden Gate National Recreation Area outside of Forts Baker, Barry, and Cronkhite consists of former ranchlands with an extensive network of hiking trails (fig. 1.5, see also 1.2). The landscape has an expansive and windswept feeling characterized by high ridges, rolling hills, valleys, rock outcroppings, grasslands, and chaparral, with dramatic high cliffs along the Pacific and deciduous woods along stream margins.

Immediately north of Forts Baker and Barry is the former Silva Ranch that became part of Golden Gate National Recreation Area in 1974. This land includes the north side of Rodeo Valley, the valley along the northern boundary of Fort Barry, and extends to Sausalito on the east and Fort Cronkhite on the west (fig. 1.6). The ranch had a complex of buildings in Gerbode Valley, the north-south tending



Figure 1.5. Aerial photograph of Forts Baker, Barry, and Cronkhite showing immediate setting on the Marin Peninsula, ca. 2005. The heavy red line indicates the historic outer boundary of the three forts; the thin red lines are the boundaries between reservations; and the green lines are the boundaries of National Park Service property in Golden Gate National Recreation Area. (SUNY ESF, based on composite US Geological Survey aerial photographs)



Figure 1.6. A portion of the historic Silva Ranch, looking northwest through Gerbode Valley across Rodeo Valley from Fort Barry, 2009. The clump of trees in the right center are at the site of the Silva ranch buildings. (SUNY ESF)



Figure 1.7. Tennessee Valley looking northeast from Wolf Ridge at Fort Cronkhite, 2009. The buildings and cluster of trees in the center of the photograph are the Miwok Livery Stables. in the left distance is Mount Tamalpais, the highest point on the Marin Peninsula. (SUNY ESF)

valley due north of the Fort Barry Main Post along the Miwok and Bobcat Trails where today only a stand of eucalyptus trees remains. Gerbode Valley is a contemporary name honoring Martha Alexander Gerbode, who was instrumental in blocking the Marincello new town development that was proposed for the property in the 1960s.

East of Fort Cronkhite and north of the Silva Ranch is Tennessee Valley, which is the only valley that crosses the Marin Headlands from the bay on the east to the ocean on the west (fig. 1.7). It was historically home to several dairy ranches, and was incorporated into Golden Gate National Recreation Area in the late 1970s. This area is accessible by car from Tennessee Valley Road, which becomes Tennessee Valley Trail that leads to the Elk Valley area of Fort Cronkhite, north of Wolf Ridge. Several buildings that remain from one of the ranches in Tennessee Valley are today used by a park partner as the Miwok Livery Stables.

SAUSALITO

Sausalito is a small incorporated city with a population of 7,400 covering an area of 2.2 square miles.[5] The name is derived from a Spanish reference to willow groves that were native to the area, and also was the name of a larger township that included Forts Baker, Barry, and Cronkhite. Incorporated in 1893, the City of Sausalito was originally settled as a small port in the 1820s under Mexican rule and



Figure 1.8. Sausalito on San Francisco Bay looking north from San Francisco with Fort Baker and the Golden Gate Bridge at left, 2009. (SUNY ESF)

grew into thriving maritime center and suburban residential community with the arrival of railroads and ferry service to San Francisco after the Civil War. The city today has a lively commercial and recreational marina district bordering San Francisco Bay, with houses built on steep slopes above the harbor, east of US 101 and extending south to the boundary of Fort Baker (fig. 1.8). The average home price is $790,000 (2012).[6] North of Sausalito is Marin City, a largely post-World War II suburban community. The sewage treatment plant for Sausalito and Marin City, built in 1952 during a period of rapid suburban growth, is located along the bay front of Fort Baker under a outgrant from the National Park Service.

Sausalito is connected to Fort Baker by the two-lane East Road (Fort Baker Road), which parallels the shore of San Francisco Bay. This is the only public road into Forts Baker, Barry, and Cronkhite aside from US 101 and Alexander Avenue, originally named the Sausalito Lateral. This limited-access two-lane road extends northeast through Fort Baker to connect Sausalito with US 101.



Figure 1.9. Exposed Franciscan Complex ribbon chert in a cut along Roth Road (Kirby Cove Trail), looking west, 2009. This cut shows the formation's characteristic red color and deformed layers. (SUNY ESF)



Figure 1.10. Exposure of sandstone, shale, basalt, and chert in the bluffs north of Rodeo Beach, 2009. The farther promontory is Tennessee Point. (SUNY ESF)

NATURAL ENVIRONMENT

The rugged and hilly landform of Forts Baker, Barry, and Cronkhite is part of the Marin Hills section of the California Coast Ranges, a province of uplifted and folded ancient seafloor along the Pacific Coast. The highpoint of the Marin Hills is Mount Tamalpais (elevation 2,610'), approximately six miles north of the district (see fig. 1.7). The San Andreas fault, a tectonic boundary between the Pacific and North American plates, is on the ocean floor approximately two miles west of Point Bonita.

The main geologic formation in the Headlands is the Franciscan Complex composed of sedimentary rocks from the ancient seafloor including graywacke (a gray sandstone), black shale, and dark red-brown radiolarian ribbon chert. There are also formations of basalt, which is a gray, green, or black volcanic rock, and mixed (melange) and broken formations. Chert, which is often intensely folded, underlies approximately half of the Marin Headlands and is found along ridge tops and is most visible in old quarries and along road cuts (fig. 1.9). Basalt makes up approximately one-quarter of the rock at the Marin Headlands, and is exposed mostly along the coast. Conglomerate, sandstone, and shale make up the remaining quarter of the rock formations, and are generally exposed along coastal bluffs, such as north of Rodeo Beach (fig. 1.10). The bedrock in most areas is covered by

soils that have eroded from slopes and carried by streams along valley floors. Substantial sand deposits with dunes characterize the uplands in the western part of Fort Barry, where strong onshore winds have blown the sand inland from ocean beaches.[7]

The topography of the district is characterized by high ridges that rise from the Golden Gate and Pacific shorelines, numerous small valleys, and lower hills at the western part of Fort Barry near the Pacific coast. The high ridges, which top out at the 900-foot range, include Wolfback Ridge along the northern boundary of Fort Baker, Lime Point Ridge paralleling US 101 in Fort Baker, Diablo Ridge along the Baker-Barry boundary, Wolf Ridge in the central part of Fort Cronkhite, and Coyote Ridge north of Tennessee Valley. The high point within the district is Hill 88 (Nike Site SF-88C) on Wolf Ridge at 980 feet above sea level. The highest point immediately along the Golden Gate is Hawk Hill (Nike Site SF-87C) at an elevation of 673 feet. There are two large east-west tending valleys, Rodeo Valley bordering Forts Baker and Barry, and the west end of Tennessee Valley in Fort Cronkhite. Smaller U-shaped valleys, which were favorite sites for military support facilities, are found at the main posts of Forts Baker and Barry, at Kirby Cove, at the Barry Motor Pool (balloon hangar area) and Rifle Range in Fort Barry, and northwest of the Fort Cronkhite Cantonment. Some areas, particularly along the coast near Wolf Ridge and Point Bonita, are subject to ongoing landslides resulting from heavy rains and earthquakes that undermine surficial deposits.

The coastline is primarily sheer cliffs with small stretches of beach. Rodeo Beach is the largest, followed by Black Sands Beach along Bonita Cove, Tennessee Beach at Tennessee Cove, and Kirby Beach at Kirby Cove. Most are composed of course sand and gravel from red and green chert, and volcanic rock fragments. Rodeo Beach is a barrier bar that blocks the mouth of Rodeo Valley, forming Rodeo Lagoon.[8] A similar bar exists at the mouth of Tennessee Valley.



Figure 1.11. Rodeo Lagoon looking northwest from above the Fort Barry Main Post, 2009. The impounded section at right is known as Rodeo Lake. (SUNY ESF)

The natural hydrology in Forts Baker, Barry, and Cronkhite is primarily small perennial and intermittent streams. The largest is Rodeo Creek, which flows approximately 1.8 miles from Wolfback Ridge along the northern boundary of Fort Baker west through Rodeo Valley along the Fort Barry boundary into Rodeo Lagoon. This lagoon is the only natural body of open water within the three forts; the eastern end of the lagoon, known as Rodeo Lake, was separated by construction of the Bunker Road causeway in 1937 (fig. 1.11). Tennessee Creek is a similar stream that flows through Tennessee Valley, but is impounded in an artificial lagoon built in ca. 1957. Both creeks are lined by wetlands. Many of the small streams on the hillsides are fed by springs.



Figure 1.12. Patchwork of coastal scrub and grassland on Wolf and Coyote ridges, looking northwest across Tennessee Valley, 2009. This view also shows a typical pattern of scrub on more sheltered slopes, and grasslands on upper or more exposed south-facing slopes. (SUNY ESF)

In the sandy dune terrain in the western part of Fort Barry are several spring-fed gullies.

Most of the land outside of the developed areas is a patchwork of scrub, grassland, and scattered woodlands (fig. 1.12). Coastal scrub has replaced grassland that once dominated the landscape due to loss of grazing and other agricultural uses during the first half of the twentieth century. Coastal scrub is generally composed of thickets of coyote brush, California sage, poison oak, sticky monkey flower, bush lupine, ceanothus, toyon, and coffee berry. On dry soils and warm south-facing slopes, the scrub forms a community known as chaparral, which is composed of tough-leaved evergreens including manzanita, chemise, buckbrush, yerba santa, black sage, and coast lilac.[9]

Remaining grasslands are typically on higher elevations at Forts Baker, Barry, and Cronkhite, and are often interspersed with scrub. The grasslands are a mix of native and introduced annual and perennial grasses and forbs, including purple needle grass, California oat grass, California brome, blue wild rye, English plantain, common mustard, Douglas iris, yarrow, footsteps of spring, California poppy, California buttercup, and lupines.[10]

Woodlands are scattered along stream margins and protected areas. Along the bay shoreline of Fort Baker is the largest area of native woods in the district, dominated by coast live oak and toyon. Native riparian woods dominated by willows, elderberry, and dogwoods are along Rodeo Creek and other perennial drainages (fig. 1.13). Also along creeks, springs, lagoon shorelines, and other inland wet areas are rushes, stinging nettles, sedges, horsetails, and ferns. Groves of non-native Monterey pine, Monterey cypress, and bluegum eucalyptus are located near developed areas and have spread from original plantings. Although natural to the central California coast south of San Francisco, Monterey pine and cypress are not native to the Marin Peninsula. Bluegum eucalyptus is native to Australia.



Figure 1.13. Riparian woodlands along Rodeo Creek in Fort Barry, looking northwest along Smith Street, 2009. Wolf Ridge is in the distance. (SUNY ESF)

Special-status plant species—those that are protected under state and federal laws—found within the district or nearby areas include coast rock cress, San Francisco wallflower, San Francisco campion, beach layia, and San Francisco lessingia.[11] Exotic invasive species that have escaped from developed areas, in addition to the bluegum eucalyptus, Monterey



Figure 1.14. Conzelman Road in Fort Baker, looking west across a section rebuilt as part of Project Headlands, 2011. The project included the addition of curbs and widened shoulders, along with new guide rails and redesigned overlooks. (SUNY ESF)



Figure 1.15. Julian Road, the first road between forts Baker and Barry that is used as part of the Coastal Trail, looking west with Rodeo Valley to the right, 2009. (SUNY ESF)



Figure 1.16. Wolfback Ridge Road at Fort Baker, a former Army jeep road that is now the SCA Trail, looking north toward Sausalito, 2009. The roadbed has narrowed to a foot trail. (SUNY ESF)

pine, and Monterey cypress include calla lily, cape ivy, English ivy, iceplant, French broom, Pride of Madeira, and vinca.[12]

The relatively undeveloped landscape of Forts Baker, Barry, and Cronkhite supports diverse avian and terrestrial wildlife. Perhaps the best-known species are the raptors that migrate across the Headlands each fall and draw many visitors to Hawk Hill (Nike SF-87 control area). Special-status fauna in Marin County include black abalone, Mission blue butterfly, California red-legged frog, loggerhead turtle, green turtle, leatherback turtle, olive ridley sea turtle, marbled murrelet, western snowy plover, little willow flycatcher, peregrine falcon, bald eagle, California black rail, California clapper rail, California least tern, northern spotted owl, Steller sea lion, and salt marsh harvest mouse.[13]

ROAD AND TRAIL SYSTEMS

Forts Baker, Barry, and Cronkhite are tied together by a network of military roads built over the course of a century that today serve as vehicular roads and hiking trails. Most of the roads that are open to private automobiles outside of the main posts are two lanes and have been reconstructed with new paving, guiderails, shoulders, curbs, and redesigned intersections as part of Project Headlands, a comprehensive Federal Highway Administration road rehabilitation project begun in 2010 (fig. 1.14). Most of the roads closed to private vehicles are secondary Army roads that have an earthen-gravel surface with a reddish-brown color from native chert. Some of these are maintained for limited park vehicle use, while others are used only as trails and have thus narrowed in width (figs. 1.15, 1.16). Overhead utility lines on wood poles, which date back to the Army, line several roads along with park-related traffic, directional, and interpretive signs. Large park unit signs for Fort Baker are on Bunker Road and East Road; for the Marin Headlands on Conzelman Road and Bunker Road in Fort Baker; and for Fort

Cronkhite (not a park unit) on Mitchell Road near the Cantonment. There are no such signs for Fort Barry.

There are two primary east-west roads that connect the Fort Baker Main Post with Forts Barry and Cronkhite to the west: Conzelman Road along the southern part of the reservation, cut into the steep slopes above the Golden Gate, and Bunker Road along the north, which extends through the one-lane Baker-Barry Tunnel to Rodeo Valley and north across Rodeo Lagoon and through Fort Cronkhite toward Wolf Ridge. Bunker Road and Conzelman Road are connected by McCullough Road in Fort Baker. Another loop is formed by Field Road in Fort Barry, which leads to Point Bonita. Other primary park roads include Mitchell Road, which forms a loop with Bunker Road at Fort Cronkhite, and East Road (Fort Baker Road), which follows the shore of San Francisco Bay from the Fort Baker Main Post to Sausalito.

There are three points at which the road network is tied into surrounding public roads, all within Fort Baker: at US 101 southbound at Conzelman Road, Alexander Avenue at Danes Drive/Bunker Road, and East Road at Alexander Avenue. There is no road connection to Wolf Ridge or north into Tennessee Valley. This area is accessible by trail only, although the Tennessee Valley Trail, a former military and ranch road, can accommodate vehicles from a trailhead off Route 1. Wolf Ridge was historically reached from Bunker Road, but landslides have destroyed two sections, leaving the area accessible by trail only. The road to Point Bonita (Lighthouse Trail) is also only for pedestrians, although the trail north of the tunnel can accommodate vehicles.

Forts Baker, Barry, and Cronkhite are tied into a network of regional hiking trails, in addition to the numerous trails contained within the three reservations (fig. 1.17). The largest regional trail to cross the Headlands is the Coastal Trail, a 1,200-route along the entire California coast begun in 1972 and today approximately half complete. The trail is a joint undertaking of the Coastal Conservancy, Coastal Commission, State Parks, and Coastwalk California, a statewide non-profit. Within the Marin Headlands, the Coastal Trail is managed by the National Park Service.[14] The trail through the three reservations is part of Marin County sections 31 and 32, and begins on the Golden Gate Bridge, follows a non-historic alignment up Lime Point Ridge to Slacker

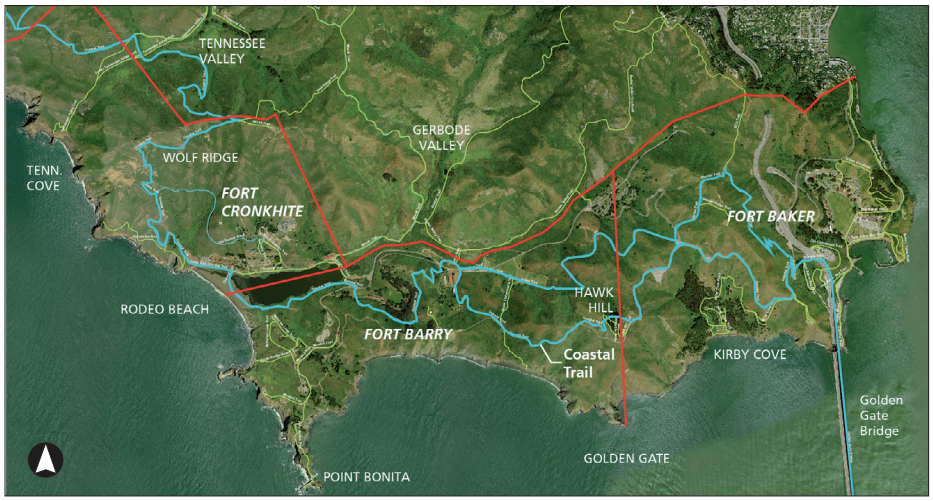


Figure 1.17. Aerial of Forts Baker, Barry, and Cronkhite showing major trails including the alignments of the Coastal Trail (blue lines) and other park trails (green lines). (Golden Gate National Recreation Area, annotated by SUNY ESF)

Hill, and from there turns west and continues mostly on historic Army roads and trails, including Slaker Road, Julian Road, and Bunker Road before turning north through Fort Cronkhite and across Wolf Ridge. At Wolf Ridge, the Coastal Trail exits Fort Cronkhite, but re-enters at the northeast corner of the reservation on its way across Coyote Ridge to Muir Beach.

The second regional trail to cross the district is the San Francisco Bay Trail, a planned 500-mile shoreline trail around the bay begun in 1996, with approximately fifty-seven miles completed to date. From the bike bridge on the Golden Gate Bridge, the trail follows streets, sidewalks, and off-street trails along Old Conzelman Road, Moore Road, through the Bay Area Discovery Museum, and along East Road toward Sausalito.[15]

Trails that extend from Forts Baker, Barry, and Cronkhite into adjoining areas of the Marin Headlands, aside from the Coastal and Bay trails, include the SCA Trail that follows Wolfback Ridge Road north from Fort Baker; the Miwok Trail that begins at the east end of Rodeo Lagoon in Fort Cronkhite; and the Tennessee Valley Trail from Tennessee Beach east through Fort Cronkhite. There are also three spur trails that connect the Rodeo Valley Trail with Bunker Road in Fort Barry.

FORT BAKER (DRAWING 1.1)

Fort Baker, a historic post-Civil War and Endicott-era military reservation with later military development through the Cold War, encompasses 1,069 acres on the southeastern extent of the Marin Headlands bordering San Francisco Bay on the east and southeast, and the Golden Gate on the south. The western boundary with Fort Barry is formed by a line that extends due north from Diablo Point, roughly following Diablo Ridge. The north boundary of the reservation follows the center of Rodeo Valley, crosses Wolfback Ridge above the US 101 Waldo Tunnel, and follows the City of Sausalito boundary. Most development is concentrated in the 335 acres east of US 101 and south of Alexander Avenue formerly known as East Fort Baker (present Fort Baker park unit). Character areas within Fort Baker include the Main Post, Quartermaster Area, Horseshoe Cove Waterfront, Horseshoe Cove Defenses, Lime Point Ridge Defenses, and Gravelly Beach Defenses (Kirby Cove). The Fort Barry Capehart Housing Area and Diablo Ridge Defenses character areas straddle the Baker-Barry boundary (see Fort Barry).



Figure 1.18. The Baker-Barry tunnel west portal and sentry station, looking east, 2014. Bunker Road was reconstructed in 2013 as part of Project Headlands. (SUNY ESF)

The Fort Baker military reservation is mostly open space shaped by natural landforms, woods bordering San Francisco Bay and in Kirby Cove, and



Figure 1.19. Remnants of Nike SF-87C T antennae on Slaker Hill, looking west with Rodeo Lagoonin the distance, 2009. (SUNY ESF)



Figure 1.20. One of two abandoned pump houses (FB578, below arrow) near the east portal of the Baker-Barry tunnel, looking east, 2009. The adjoining slope, covered in non-native Pride of Madeira, is the embankment of Alexander Avenue. (SUNY ESF)



Figure 1.21. The permit area for Golden Gate Bridge looking south from Vista Point, 2009. The buildings at lower left are temporary facilities associated with bridge security and seismic retrofitting work. In the distance is Lime Point, which retains an active Coast Guard fog signal. (SUNY ESF)

buildings and structures within the Main Post and defensive works. Outside of the developed areas, Fort Baker is primarily scrub, grassland, and patches of woods, with rocky cliffs along the shoreline. Primary built features outside the developed areas aside from roads and trails include the Baker-Barry tunnel (FB268) on Bunker Road, a single-bore tunnel that retains one of its two original sentry stations (FB272) (fig. 1.18). Remnants from a number of field defenses remain on ridges such as Duncan Hill near Alexander Avenue, and on Slacker Hill high above US 101, where there are remnants from a temporary Nike missile control facility (fig. 1.19). There are also scattered small buildings and structures associated with water and electrical utilities, such as two abandoned early twentieth-century pump houses near Alexander Avenue and the east portal of the Baker-Barry tunnel (FB577, 578) (fig. 1.20).

NON-NPS MANAGED AREAS

The areas and features within Fort Baker not managed by the National Park Service include the Golden Gate Bridge, US 101 and Alexander Avenue, the Sausalito-Marin City Sewage Treatment Plant, and three US Coast Guard facilities.

The Golden Gate Bridge, US 101, and Alexander Avenue, all completed in 1937, cut a swath through the middle of the reservation along the eastern slope of Lime Point Ridge and Slaker Hill, and through Duncan Hill. The bridge is owned, operated, and maintained by the Golden Gate Bridge, Highway, and Transportation District, an independent public agency that controls the Bridge Permit Area comprised of 30.14 acres surrounding the bridge tower and anchorage east of Battery Spencer, excluding the tip of Lime Point (fig. 1.21).[16] The permit area, which includes Moore Road (the historic access road to Lime Point) and three fire-control stations southeast of Battery Spencer (F1 G1 Baker, B1 Spencer, and B3 Spencer), is closed to the public except for a bike access route that extends off the bridge anchor. A chain-link fence runs along the



Figure 1.22. US 101 looking northeast from Slacker Hill with the Waldo Tunnel at left and Alexander Avenue at the far right, 2009. In the distance is the community of Tiburon at left, and Angel Island at right. (SUNY ESF)



Figure 1.23. US 101 looking southeast from Slacker Hill with Vista Point at right, 2009. At far left is the Fort Baker parade ground and Quartermaster Area. (SUNY ESF)



Figure 1.24. The portion of the Sausalito-Marin City sewage treatment plant along the bay shore of Fort Baker, looking north from the Baker-McDowell cable terminal, 2009. (SUNY ESF)

uphill (western) and northern boundaries of the permit area.

US 101, known as the Redwood Highway and also designated as State Route 1 (Coast Highway), is owned and maintained by Caltrans, the California Department of Transportation. US 101 occupies a right-of-way through Fort Baker that averages approximately 500 feet in width and includes Vista Point, the Caltrans-maintained scenic overlook north of the Golden Gate Bridge (figs. 1.22, 1.23). Several small easements have been appended to the right-of-way for slope stabilization and utility access. US 101 follows cut-and-fill along Lime Point Ridge and Slacker Hill, with four lanes in either direction, standard freeway lights, and chain-link fences along the right-of-way boundary. The highway enters the dual-bore Waldo Tunnel at Wolfback Ridge along the northern part of Fort Baker. The state right-of-way also extends along Alexander Avenue (Sausalito Lateral), the two-lane arterial highway that begins at US 101 at the first interchange north of the bridge, crosses north of the Main Post, and merges with East Road (Fort Baker Road) near the northern boundary of Fort Baker. Alexander Avenue was built at the same time as the Golden Gate Bridge and features the same Art-Deco ornamental light standards, along with white-painted concrete post and wood-plank guiderails. There are no maintained ornamental plantings along US 101 or Alexander Avenue.

The Sausalito-Marin City Sanitary District sewage treatment plant, located at #1 East Road along the shoreline of San Francisco Bay, occupies an outgrant from the National Park Service of approximately five acres. The plant, which dates back to 1952 and also serves Fort Baker, is mostly concealed from East Road within oak woods. A green-painted concrete office building and district residence dating to the 1960s and 1970s are located along East Road, and an access road leads down the slope to the sewage treatment facilities along the waterfront (fig. 1.24). Plans are underway to upgrade the plant



Figure 1.25. The main (station) building at the Coast Guard station along the Horseshoe Cover waterfront of Fort Baker, looking west along Satterlee Road with the historic mine cable building in the left background, 2009. (SUNY ESF)

to address stormwater discharge and improve the quality of treated water.[17]

The US Coast Guard, which has a history at Fort Baker dating back to 1883, continues to maintain a station and two outlying navigational aids within the former military reservation. The oldest facility is the Lime Point fog signal, located in the shadow of the Golden Gate Bridge on property transferred by the Army to the Coast Guard in 1956, and to the National Park Service in ca. 1985 (see fig. 1.21). The current electronic fog signal is mounted on the shell of the 1883 fog signal building. At Yellow Bluff north of Battery Cavallo is a modern Coast Guard pole-mounted beacon on property transferred to the park at the same time as Lime Point. Along Horseshoe Cove, at the site of the World War II-era Mine Depot and Station Hospital, is Motor Lifeboat Station Golden Gate that was built in 1990 within an area of just under an acre leased from the National Park Service. The station, which is the busiest search and rescue station on the West Coast, has a crew of forty-five enlisted personnel and four "motor lifeboats" and two "response boats" that are moored in Horseshoe Cove along the Moore Breakwater at the old Mine Depot.[18] The property, enclosed by a white metal picket fence, includes a two-story station house (FB655) built in 1990, and a parking lot that adjoins a brick Army pumphouse built in 1903 (FA671) and the mine cable building built in 1941 (fig. 1.25).

MAIN POST (DRAWING 1.2)

The Main Post of Fort Baker, initially developed between 1902 and 1909, is the historic administrative center of military reservation and is the largest developed area within Forts Baker, Barry, and Cronkhite. The overall character is highly maintained, with many new or refurbished buildings, roads, and plantings. Following a major rehabilitation completed in 2009, the Main Post is today home to a luxury resort and conference center, *CavalloPoint: The Lodge at the Golden Gate*. The resort, which provides luxury accommodations, dining, conference facilities, and a spa, is a project of The Fort Baker Retreat Group LLC, a venture of Passport Resorts.[19] It also makes use of the former mine storehouse (FB 407) at the southwest side of the Main Post. Several buildings also contain offices and meeting space for the park, Bay Area Discovery Museum, and the Institute at the Golden Gate, a program of the Golden Gate National Parks Conservancy that advances environmental preservation and global sustainability.

The Main Post is within a sheltered U-shaped valley that opens to Horseshoe Cove and San Francisco Bay to the south, with panoramic views toward the



Figure 1.26. The Main Post of Fort Baker, looking southeast across the parade ground toward Horseshoe Cove and the San Francisco skyline, 2011. (SUNY ESF)



Figure 1.27. Overview of the Fort Baker Main Post showing buildings organized around the central parade ground, looking east from Vista Point, 2009. (SUNY ESF)



Figure 1.28. Typical turf, foundation plantings, and specimen trees surrounding the officer quarters at Fort Baker rehabilitated as part of the CavalloPoint Lodge, looking south along Building 629, 2011. (SUNY ESF)

Presidio and downtown San Francisco skyline (fig. 1.26). Streets and buildings align with the topography and are organized around a central, ten-acre parade ground (fig. 1.27). The parade ground is turf bordered by young eucalyptus trees, with a flagstaff (FB648) in the upper center, near a fir tree and monument that commemorate the bicentennial of the US Army in 1975. Several aged eucalyptus trees, remnants of the original post plantings, are at the southeast and southwest corners of the parade ground. Along the west side, the post is bordered by an aged windbreak of Monterey cypress, and remnants of eucalyptus windbreaks are along the east side and upper west side.

The original post buildings were built according to standard Quartermaster Colonial Revival-style plans. The western part of the post, along Murray Circle that borders the parade ground, was historically officer housing (FB604-631), with the administration building (FB603) in the center, and barracks (FB601, 602, 636) and gymnasium/post exchange (FB623) on the east side. A guard house (FB615) is at the southeast corner of the parade ground. Most of the buildings have been converted to guest quarters, a restaurant, and meeting space for the Cavallo-Point Lodge. They are connected by concrete walks, and are surrounded by recently established low-mow turf grass and foundation shrubs (fig. 1.28). There are also scattered mature specimen trees including cryptomeria, Canary Island date palm, and black acacia. Garages, stone and concrete walls, and a service road (McReynolds Road) line the rear of the buildings.

At the back (north) side of the main circle of buildings along Kober Street are non-commissioned officer duplex houses (FB527–530) and hospital steward's quarters (FB522) (fig. 1.29). The quarters are today lodge guest rooms. Rustic stone retaining walls, built as part of 1930s federal work-relief projects, line the east side of Kober Street. At the north end of Kober Street is the Fort Baker post hospital (FB533), a larger two-story frame building that is awaiting renovation as the administration building



Figure 1.29. Rehabilitated officer duplexes along Kober Street, looking south, 2011. (SUNY ESF)



Figure 1.30. CavalloPoint Lodge buildings along Seitler Road, looking northeast from McReynolds Road with the Fort Baker chapel at right, 2009. (SUNY ESF)



Figure 1.31. The Fort Baker Quartermaster Area, home of the Bay Area Discovery Museum, looking northeast from Vista Point, 2009. The lower parking lot and open field in the foreground are the site of the World War II-era Station Hospital complex. (SUNY ESF)

for the CavalloPoint Lodge. Its entrance is flanked by Canary Island date palms. To the west, through a eucalyptus grove and beyond the site of an Army tennis court and greenhouse foundation, are three one-story World War II-era enlisted family houses along Seitler Road, adjoining a new building housing CavalloPoint's Healing Arts Center and Spa.

North and east along Seitler Road are small parking lots for the CavalloPoint Lodge built on the site of Army Capehart ranch-style houses built in 1959 and demolished in 2006. Farther east and continuing past the World War II-era chapel (FB519) along Merrill Street are thirteen new lodge buildings (FB1550–1562) located on the sites of Capehart houses, designed in a contemporary style to contrast with the military architecture and blend in with the hillside (fig. 1.30, see also fig. 1.27). Native plantings surround the new buildings. The hillsides are mostly grasses and chaparral, with a grove of eucalyptus surrounding an old quarry off Seitler Road, and a large quarry off the south end of McReynolds Road, behind a World War II barracks (FB507) used by law enforcement rangers.

At the west entrance to the Main Post along Bunker Road is a mixed grove of eucalyptus, cryptomeria, redwood, and Canary Island pine that was once the site of a complex of small frame houses for civilian employees and non-commissioned officers along Gibson Drive built between 1899 and 1903. Nearby is the former Service Club (FB405), a one-story frame building that is near a contemporary staff parking lot planted with Monterey cypress.

QUARTERMASTER AREA (DRAWING 1.2)

Off the southeast side of the Fort Baker Main Post is a linear cluster of Army service buildings known historically as the Quartermaster Area prior to World War II and as the Post Engineer Area thereafter. The area was initially developed along with the Main Post between 1902 and 1909, and since 1991, it has been home to the Bay Area Discovery Museum (fig. 1.31). The institution is an indoor and



Figure 1.32. Satterlee Road, historically the spine of the Quartermaster Area and today a pedestrian zone for the Bay Area Discovery Museum, looking east, 2009. The contemporary two-story building at left, on the site of a Quartermaster coal shed, is the museum's entrance pavilion. (SUNY ESF)

outdoor children's museum dedicated to nurturing creativity, focusing on children ages six months to eight years. Approximately 300,000 people visit annually.[20] The museum is a park partner and operates through a lease agreement with the National Park Service.

Vehicular access to the museum is from a contemporary turn-around and parking lots off Center Road and New Breitung Road. The museum occupies seven historic one-story buildings that line Satterlee Road (FB537, 644, 645, 557–561), which is an internal pedestrian zone closed off by plank fences (fig. 1.32). Two small former service station buildings (FB566, 567) at the east end of the complex serve as rest rooms. Two museum buildings are new construction on the site of historic buildings, one serving as the entrance pavilion (FB559), and the other exhibit space (FB562). At the east end of the complex is an outdoor learning lab and play area known as Lookout Cove on the site of a World War II-era warehouse.

The Quartermaster Area also includes the adjoining north side of East Road, which was developed during the World War II era. The sole remaining building (FB513), historically a Quartermaster storage building, is scheduled for demolition. The large eucalyptus trees that line this section of Fort Baker Road are the only trees in the Quartermaster Area, except for a palm and Monterey pine along Satterlee Road. Younger shrubs, small trees, and other ornamental plantings are in Lookout Cove, along with play equipment and other small-scale features.



Figure 1.33. Horseshoe Cove, looking east from Vista Point with Cavallo Point forming the eastern side, 2009. The boat slips along the east side of the cove are part of Travis Marina. Cavallo Battery is the brushy high ground beyond the Quartermaster Area. (SUNY ESF)

HORSESHOE COVE WATERFRONT (DRAWING 1.3)

The Horseshoe Cove Waterfront, developed mostly during the World War II era, is a mixed-use area with public recreational access, Coast Guard operations, and park partner uses. It is a natural cove that is defined by the Vista Point hill on the west, a field on the north, and the excavated west face of Cavallo Point on the east (fig. 1.33). The natural shoreline has been modified on all sides with concrete and timber bulkheads, and rubble rip rap. Two World War II-era rubble breakwaters enclosed the cove to the south: Moore Breakwater (FB632) on the west side and Satterlee Breakwater (FB630) on the east. The Moore Breakwater is used by the Coast Guard and is closed to the public. Three roads parallel the

shoreline: Moore Road, which continues south to Lime Point; Somerville Road along the north shore, originally a service road for the World War II-era Station Hospital; and Satterlee Road along the east shore, a loop road that connects the Quartermaster Area with the tip of Cavallo Point.

The west shore is lined by structures built as part of the Fort Baker Mine Depot, a submarine defense facility that was developed between 1937 and 1941. At the southern extent of the waterfront area is the Mine Wharf (FB415) designed to service mine craft and now used as a public fishing pier (fig. 1.34). It retains cast-iron bollards and cleats alongside aluminum safety railings. Remnants of the older Quartermaster wharf that stood to the south are evident along the bulkhead. Four cut-and-cover reinforced concrete structures (FB409–412), built to store and service mines and explosives, are built into the adjoining hillside, facing Moore Road. On the hillside sixty feet above the road is an underground Quartermaster fuel storage tank (FB414) and underground oil pump house (FB413) that stored fuel delivered to the Quartermaster wharf. North of Somerville Road adjoining the Coast Guard Station is a long sheet-metal sheathed building (FB670) once used for storing mine cables. Farther north within the Main Post, but still part of the Mine Depot, is a former mine storehouse (FB407), now a laundry facility for CavalloPoint Lodge.



Figure 1.34. The west side of Horseshoe Cove looking north from the mine wharf (public fishing pier), 2009. At far left are the mine loading rooms built into the hillside. The gray building in the middle distance, left of the yellow Coast Guard building, is the mine cable building. (SUNY ESF)

The north shore, south of the Coast Guard Station, features a small concrete structure (FB670) that is the above-ground component of a 1904 cable terminal that connected Fort Baker with Fort Scott across the Golden Gate. To the east is a building (FB633) and concrete ramp (FB634) that were part of a small marine maintenance facility built in 1941. The field to the east, above the timber bulkhead, was the site of the twenty-eight-building Station Hospital complex built in 1941 and demolished by 1983.



Figure 1.35. The Travis Marina lodge (large building at right) on Horseshoe Cove, looking west toward the parade ground, 2011. Along the waterfront are the marine railway and berthing dock and derrick remaining from the World War II-era marine repair facility. (SUNY ESF)

East of the field is the former marine repair facility built in 1943 that is now home to the Travis Marina, formerly known as the Presidio Sailing Center (fig. 1.35). It is a recreational legacy of Fort Baker's association with the Presidio and is today an activity of the 60 Support Squadron of Travis Air Force Base, located sixty miles to the east in Fairfield, California. Travis Marina provides recreational boating opportunities for active duty, reserve, and retired

US Armed Services personnel, as well as Coast Guard and federal civilian employees.[21] The marina lodge is housed in the former marine repair shop (FB679), which features a wood deck and non-historic floating dock that extend out along a former marine railway (FB668). The marina's boat slips are located along the east side of the cove and off the Satterlee Breakwater (see fig. 1.33). Other components of the old marine repair facility include the remnants of a berthing dock and derrick (FB657), a welding shop (FB699), and a repair shop (FB665) along Somerville Road near the lodge. A concrete telephone cable terminal building erected in ca. 1950 by Pacific Telephone & Telegraph is next to the lodge, with a worn cable crossing billboard on the adjoining hillside near Cavallo Battery.

HORSESHOE COVE DEFENSES (DRAWINGS 1.1, 1.3)

The Horseshoe Cove Defenses are a dispersed cluster of post-Civil War and Endicott-era defensive works bordering San Francisco Bay and on Duncan Hill. The primary works, built to protect the inner harbor, are Cavallo Battery, Battery Yates, and Battery Duncan. Access to this area, which is a mix of woods, brush, and grassland, is by East Road, Drown Road (Battery Duncan Trail), Satterlee Road, and Yates Road, along with the Bay Area Trail and Yates Trail. Native oak woods line the shoreline of San Francisco Bay.



Figure 1.36. Cavallo Battery, looking southwest through the interior of the southern half, 2009. The mounds are earthen traverses with brick magazine portals. (SUNY ESF)

Cavallo Battery (FB575), completed in 1876 above the cliffs of Yellow Bluff, is a rare-surviving standard Army "Plan of 1870" barbette battery consisting of high earthen parapets, earthen traverses with brick magazines, and thirteen gun emplacements (fig. 1.36). The battery forms an arrowhead shape pointed southeast into San Francisco Bay. The floor of the battery is mown, and brush and high grass cover the parapets. Public access is restricted by an Army-era perimeter chain-link fence maintained to protect the fragile earthen parapets and habitat for the endangered Mission blue butterfly. From outside, the battery is largely indistinguishable from the surrounding landscape (see fig. 1.33).



Figure 1.37. Battery Yates on Cavallo Point, looking south from Battery Cavallo, 2009. (SUNY ESF)

The two Endicott-era batteries in the Horseshoe Cove Defenses are Battery Yates and Battery Duncan. Battery Yates (FB571), completed in 1905 at the site of an outwork of Cavallo Battery on Cavallo Point, is a reinforced concrete battery designed for six rapid-fire guns, positioned southeast toward



Figure 1.38. The rear of Battery Duncan showing concrete structure and mown earthen cover, looking west, 2009. The woods in the background are eucalyptus that conceal views of the battery from the rest of Fort Baker. (SUNY ESF)



Figure 1.39. The earthen parapet and concrete portal of the Baker-McDowell cable terminal, looking south with the bay to the left, 2009. (SUNY ESF)

the inner harbor (fig. 1.37). It is similar to Battery O'Rorke at Fort Barry. The exterior of Battery Yates is accessible to the public and is popular for its views across the bay from the top. Battery Duncan (FB573), completed in 1899 at the top of Duncan Hill at an elevation of 214 feet above the water, is a reinforced concrete battery designed for two eight-inch guns directed south across the inner harbor. The central support rooms between the guns are protected in earth cover that is kept mown, but the surrounding area is eucalyptus woods (fig. 1.38). A narrow viewshed clearing along a historic firing line is south of the battery. The foundation of a latrine building (FB573A) is on the approach road, next to a concrete reservoir (FB572). Due to dangerous drop-offs, Battery Duncan is closed to the public and is surrounded by a chain-link fence.

In addition to the three major works, there are a number of secondary defensive works and World War II-era anti-aircraft field emplacements in the Horseshoe Cove Defenses. Along the shoreline of the bay, these include the abandoned Baker-McDowell cable terminal, an earth-covered structure built in 1898 as a mine casemate and supported by a seawall (fig. 1.39). At Cavallo Battery is the Coincidence Range Finder Station Yates (FB575B), a small structure built in 1919 that consists of low concrete walls and a metal framework that once held a canvas cover. On Cavallo Point, several concrete footings remain from a watchtower, searchlight, and movable guns there were part of AMTB Battery Cavallo. There are key-hole sandbag-type anti-aircraft field emplacements on top of Battery Duncan (FB573B), on Cavallo Battery (FB575C), and two on Duncan Hill near Alexander Avenue (FB 820A, 820B) along with traces of a portable searchlight (FB830).

LIME POINT RIDGE DEFENSES (DRAWING 1.1)

The Lime Point Ridge Defenses are a small cluster of post-Civil War and Endicott-era defensive works extending from Lime Point up the ridge north and west of the Golden Gate Bridge. There is one primary defensive work, Battery Spencer, which incorporates the earlier Ridge Battery. The area, which is primarily brush and grassland, includes an excavated cliff along Moore Road near Lime Point where

work began in 1867 for an unrealized Third System fort that was intended as the northern counterpart to Fort Point.

Battery Spencer, completed in 1897 on the site of the earlier Cliff Battery at an elevation of 370 feet above the Golden Gate, is an Endicott-era reinforced concrete three-gun battery built into the ridge and designed to protect the inner entrance of the harbor (fig. 1.40). It is the most visited defensive work at the Headlands due to its ready access off US 101 and panoramic views across the San Francisco Bay Area. The broad concrete blast aprons in front of the gun emplacements, and the adjoining exterior slope rimmed by safety cable railing, serve as the public overlook. Battery Spencer is well maintained and has recently undergone concrete conservation. Pedestrian access from Conzelman Road is by a covered way (sunken road) lined by brush-covered earthen parapets that are part of Ridge Battery, an adjoining Plan of 1870 four-gun battery completed in 1873 (fig. 1.41). The covered way is marked by concrete entrance posts built in 1910 and lined by Endicott-era support buildings near the entrance off Conzelman Road, one of which has been converted to public restrooms. A wide foot trail to the overlook is along the top of the east parapet of Ridge Battery. Public parking is along Conzelman Road.

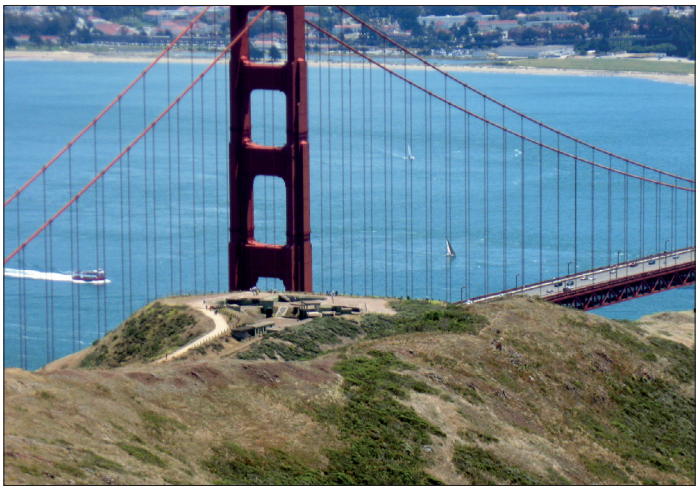


Figure 1.40. Battery Spencer, today used as a public overlook, view southeast from the top of Lime Ridge, 2009. (SUNY ESF)



Figure 1.41. The covered way to Battery Spencer that is part of Ridge Battery, looking north toward Conzelman Road, 2007. At the far end of the covered way are support buildings for the batteries. (SUNY ESF)

Secondary defense elements in the Lime Point Ridge Defenses include three vacant fire-control stations that descend down the steep cliff in front of Battery Spencer. These include two Endicott-period fire-control stations, F1G1 Baker and B1 Spencer, and one Taft-era fog-level station, B3 Spencer, which is beneath the Golden Gate Bridge. There are remnants of a walk from Battery Spencer to the two upper stations. All three are within the Bridge Permit Area and are therefore not maintained by the park or accessible to the public. B1 Spencer has lost its roof. The fourth fire-control station in the area is on the ridge north of Conzelman Road. It is a concrete shell built in ca. 1910 that was never finished or assigned to a battery. A World War II-era water tank for Battery Spencer is on the ridge east of this station.



Figure 1.42. Overview of the Gravelly Beach Area and Kirby Cove, looking south from above Conzelman Road, 2009. (SUNY ESF)



Figure 1.43. Battery Kirby looking west with the beach to the left, 2009. The raised structure is a battery commander's station. The low hills to either side of the battery are two of four traverses remaining from Gravelly Beach Battery. (SUNY ESF)



Figure 1.44. The eastern concrete gun plug from Battery Gravelly, looking east, 2009. Erosion is undermining the structure. (SUNY ESF)

GRAVELLY BEACH DEFENSES (DRAWING 1.4)

The Gravelly Beach Defenses are a cluster of Endicott-era defensive works in and adjoining the valley west of Lime Point Ridge that opens onto the Golden Gate at Kirby Beach, earlier known as Gravelly Beach. There are two primary defensive works, Battery Kirby and Battery Orlando Wagner, and two minor World War II-era batteries consisting of circular gun mounts, Battery Gravelly Beach and Battery Kirby Beach. The valley floor is used as the Kirby Cove campground and day-use picnic area, which is accessible by Roth Road, a limited access road designated as the Kirby Cove Trail. Most of the area is wooded with patches of scrub and grassland along the upper slopes (fig. 1.42). The woods are Monterey pine, Monterey cypress, and eucalyptus that have spread up the sides of the valley from early twentieth-century plantations. Many of the Monterey pine on the valley floor are dying due to pitch canker disease.

Battery Kirby, completed in 1900 on the site of the earlier Gravelly Beach Battery (1873), is an Endicott-era reinforced concrete battery designed to protect the middle of the Golden Gate from water level with two emplacements for massive twelve-inch guns (fig. 1.43). The broad, flat turf parapet overlooking Kirby Beach today serves as a viewing and picnic area. To either side of Battery Kirby are four approximately ten-foot-high mounds that are traverses from Gravelly Beach Battery, designated A, B, E, and F. The portals to the interior magazines are covered. Other remnants from the old battery include two platforms for the Rodman guns, one visible near traverse A and the other near traverse E, and a large brick culvert that carries an unnamed stream beneath the battery. The eastern traverse (F) of Gravelly Beach Battery is also the battery commander station for the World War II-era AMTB (Anti Motor Torpedo Boat) Battery Gravelly, with its two concrete plugs for rapid-fire guns in front along the cliff overlooking the beach (fig. 1.44). Two additional, larger concrete gun plugs are in front of



Figure 1.45. Battery Orlando Wagner, looking southwest toward the outer Golden Gate and Pacific Ocean, 2009. (SUNY ESF)



Figure 1.46. Fire-control stations B1 Wagner (foreground) and B1 Kirby, looking north from Battery Orlando Wagner, 2009. (SUNY ESF)



Figure 1.47. Kirby Cove campground, looking southwest toward the Golden Gate, 2009. The Monterey pine on the valley floor date to the 1950s. (SUNY ESF)

the east flank of Battery Kirby. These are the remnants of Battery Kirby Beach, another World War II emplacement for two three-inch guns.

The second major Endicott work in the Gravelly Beach Defenses is Battery Orlando Wagner, a smaller reinforced concrete work completed in 1901 and located on a ridge off Roth Road on the eastern edge of the valley. It was designed to protect the middle of the Golden Gate with two five-inch guns at an elevation of approximately 300 feet. The battery is heavily covered in graffiti and its firing lines are obstructed by Monterey pine trees (fig. 1.45).

The Gravelly Beach Defenses include two secondary defensive works, the shell of an Endicott-era fire-control station (B1 Kirby) and a Taft-era station (B1 Wagner) on the slope above Battery Orlando Wagner (fig. 1.46). Both are covered in graffiti and in poor condition. All that remains from the station B4 Spencer-Kirby in the valley east of Battery Kirby is the building terrace. There are also traces of tent pads (earthen terraces) along the east side of the valley floor that date back to World War I. Other military features in the area include the concrete walls of the powerhouse for Battery Kirby, located in heavy brush on the west side of the valley. All other features in the area are contemporary and relate to the Kirby Beach campground and day-use area, including a parking area, footbridge and trails, a maintenance shed, four tent campsites with picnic tables, storage lockers, and fire rings, and three prefabricated restroom buildings (fig. 1.47). An abandoned wood water tank, added in the late 1960s by the state, is on the east side of the valley, accessed from an abandoned road that was most likely was built for access to B4 Spencer.

FORT BARRY (DRAWING 1.5)

Fort Barry, a historic Endicott-era military reservation with later military development through the Cold War, encompasses 979 acres on the southwestern extent of the Marin Headlands bordering the Golden Gate on the south and the Pacific Ocean on the west (fig. 1.48). The eastern boundary with Fort Baker is formed by a survey line that extends due north from Diablo Point, roughly following Diablo Ridge. The north boundary of the reservation roughly aligns with Rodeo Creek and the center of Rodeo Lagoon. Most development is concentrated in three U-shaped valleys south of Rodeo Valley, and in the relatively gentle topography of the western third of the reservation. Character areas within Fort Barry include five support clusters: the Main Post, Quartermaster Area, Nike SF-88 Administration Area, Barry Motor Pool (balloon hangar area), Departmental Rifle Range, and Capehart Housing Area (partly in Fort Baker); five defense clusters: Diablo Ridge Defenses (partly in Fort Baker and including Nike SF-87C), Rodeo Ridge Defenses, South Lagoon Defenses, Bonita Ridge Defenses, and Nike launch site SF-88L; and the Point Bonita Light Station.

Like the rest of the Headlands, the Fort Barry military reservation is mostly open space shaped by natural landforms, and to a lesser degree by patches of woods and structures. Outside of the developed areas, Fort Barry is primarily scrub and grassland, with high rocky cliffs along the ocean and Golden Gate. There are two accessible beaches, Black Sands Beach along Bonita Cove off Conzelman Road and the Upper Fisherman's Trail, and the southern part of Rodeo Beach north of Bird Island.

Primary built features outside the developed areas aside from roads and trails are largely traces and ruins. These include old sand pits in the gully north of Battery Mendell that are remnants from construction of the batteries at the turn of the twentieth century; a World War II-era quarry near the Capehart Housing area; and traces of the World War II Smith Street housing area off Bunker Road. World War II anti-aircraft field emplacements, primarily concrete sandbag-type revet-



Figure 1.48. Overview of Fort Barry looking south from Wolf Ridge at Fort Cronkhite, with Diablo Ridge at left and Point Bonita at right, 2009. (SUNY ESF)



Figure 1.49. A keyhole-type sandbag field emplacement for 50 MM caliber antiaircraft machine gun #29 on the ridge above the Fort Barry Main Post, looking west, 2012. (John Martini)



Figure 1.50. Distant view of the Coast Guard lighthouse at Point Diablo (indicated by arrow), looking west from above Kirby Cove, 2009. Access is by water only; there are no maintained trails to the site. (SUNY ESF)

ments, are located north and west of Diablo Ridge, north of Conzelman Road, and on ridges surrounding the Main Post, in addition to some within the character areas (fig. 1.49). There are also scattered structures and small buildings associated with water, sewer, and electrical utility systems, including two below-grade reservoirs on the ridges above the Main Post, and a valve house (FA 904) near Smith Street. Overhead power lines on wood poles, which date back in part to the Army, are along Bunker Road, across the Main Post, and along Field Road toward Point Bonita.

At Point Diablo along the Golden Gate, the US Coast Guard retains jurisdiction over two acres where a minor lighthouse with a solar-powered electric beacon is maintained at the base of steep rock cliffs. The light is installed on a small white-painted frame building dating to ca. 1922 that has a gable roof and a front porch (fig. 1.150). The primary access is by boat and a steep flight of stairs that lead down the cliff to the water's edge.

MAIN POST (DRAWING 1.6)

The Main Post of Fort Barry, initially developed between 1905 and 1907, is the historic administrative center of the military reservation. It follows the same plan and architecture as the Main Post of Fort Baker, but contains about half as many buildings and is not contiguous with its Quartermaster area. The overall existing character compared with Fort Baker is less formal and manicured. While the building exteriors are well maintained, some of the roads, walks, turf, and shrubs are in poor condition.

The Fort Barry Main Post is today home to the Marin Headlands Hostel and the Headlands Center for the Arts, as well as the Marin Headlands visitor center. The Headlands Center for the Arts, which occupies eight buildings, is a "multidisciplinary, international arts center dedicated to supporting artists; the creative process; and the development of new, innovative ideas and artwork."[22] The Marin Headlands Hostel, which occupies two buildings, is operated by the Golden Gate Council of Hostelling International USA, a nonprofit network of eight hostels in and around the Bay Area. The vision of the Golden Gate Council is for its guests to become "caring global citizens who are catalysts for intercultural exchange and understanding."[23]



Figure 1.51. View of Rodeo Lagoon and the Pacific Ocean looking west from the main post of Fort Barry, 2007. The visitor center in the historic post chapel is behind the two large trees in the center distance. (SUNY ESF)



Figure 1.52. Overview of the Fort Barry Main ost looking southeast from Wolf Ridge, 2009. The upper buildings to the left are hidden by the eucalyptus windbreak and Monterey cypress. Two of the post buildings are off the right side of the photograph. (SUNY ESF)



Figure 1.53. The upper post of Fort Barry, looking south along Simmonds Road with officer quarters facing the parade ground at right. 2011. In the background is the eucalyptus windbreak. (SUNY ESF)

Situated in the geographic center of the reservation north of Battery Rathbone-McIndoe, the Fort Barry Main Post faces northwest toward Rodeo Lagoon and the Pacific Ocean (fig. 1.51). As at Fort Baker, the Main Post is within a sheltered U-shaped valley, with streets and buildings following the topography and organized around a central parade ground (fig. 1.52). The upper (eastern) post contains the officer quarters, administration building, post hospital, and two barracks. The lower (western) post, which has lost a number of its historic buildings, contains the chapel, gymnasium, and non-commissioned officer housing. Simmonds Road is the historic main road and is marked by remnants of a gateway at the eastern entrance to the upper post, but is one-way and little used. Rosenstock Road, the rear service road, is the current primary access to the upper post buildings. Bunker Road and Field Road are the main thoroughfares and extend along the lower part of the post. Along the north side of Bunker Road are two utility buildings and woods that surround remnants of an earthen reservoir within Rodeo Lake that once supplied the post with water for its flushing system.

The buildings of the upper post, as with all of the original buildings, are standard Quartermaster Colonial Revival-style designs and are located on a terrace above Simmonds Road overlooking the parade ground (fig. 1.53). The administration building (FA940) and post hospital (FA941) have 1950s-era entrance porches. The hostel uses the post hospital as its "Main House" and the middle officer quarters (FA937) as the "Annex." The Headlands Center for the Arts occupies the other buildings. All are connected by a concrete walk along the front, with walks extending back to Rosenstock Road. Recently built wood and aluminum steps in front of each building provide access up the steep slope from Simmonds Road. Rosenstock Road is lined on the uphill side by a stone retaining wall and contains two small parking areas bordered by stone edging, all built in the late 1930s and probably constructed



Figure 1.54. Rosenstock Road, the rear service road in the upper post, looking south toward one of the former officer quarters (FA 939), 2011. The parking area with its low stone wall dates to the late 1930s. (SUNY ESF)



Figure 1.55. The two barracks at Fort Barry, looking southeast along the front of the buildings facing the parade ground, 2011. The small entry porches and fire escapes date to the 1950s and replaced two-story full-width porches. (SUNY ESF)



Figure 1.56. The chapel at Fort Barry, now the Marin Headlands visitor center, looking north along Bosworth Road, 2014. (SUNY ESF)

through through federal work-relief programs (fig. 1.54).

On the hillsides around the upper post is a large windbreak of bluegum eucalyptus, and below along the perimeter of the parade ground are Monterey cypress trees, both plantings dating to ca. 1908. Around the buildings, the grounds are a mix of mown grass, tall grass and scrub, mulched areas, bare earth, trees and shrubs, foundation beds, and a small community vegetable garden. The hostel also maintains a picnic area near the post hospital. The specimen trees around the buildings include Monterey pine, Canary island date palm, black acacia, and eucalyptus. Foundation plantings are an informal mix of older shrubs and herbaceous perennials, including California coffeeberry, California lilac, flowering quince, pittosporum, vinca, agapanthus, calla lily, rosemary, crocosmia, French broom, lavender, and jasmine. Clipped hedges of Texas privet are in front of the administration building and post hospital.

The upper parade ground, which contains a Cold War-era tennis court (FA932), is mown turf, while the lower or western end is wet meadow and scrub with scattered Monterey cypress and eucalyptus trees. At the northeastern edge of the parade ground, near the gatepost on Simmonds Road, are the concrete anchors for the original (1909) flagstaff (FA950). Remnants of the second (ca. 1940) flagstaff are in the utility/parking area, a former World War II assembly area on the west side of the administration building.

Along the southern side of the parade ground west of the post hospital is a small one-story house that was the hospital steward quarters (FA942), and two large three-story buildings that were the barracks (FA944, 945), all of which are used by the Headlands Center for the Arts (fig. 1.55). Between the hospital steward quarters and the barracks are concrete footings and retaining walls from the post firehouse (1917) demolished in ca. 1960. Approximately 500 feet west of the barracks is Bosworth Road, which



Figure 1.57. The non-commissioned officer quarters at Fort Barry, looking west along Simmonds Road, 2011. (SUNY ESF)

forms a 'Y' intersection with Simmonds Road and connects to Field Road and a visitor parking lot adjoining the visitor center in the World War II-era chapel (FA948) that is the same design as the chapel at Fort Baker (fig. 1.56). The chapel faces east toward the upper post and borders a trace of Bosworth Road removed in the 1990s. A small front yard enclosed by stone walls that were built along with the chapel contains two mature eucalyptus trees planted in ca. 1943 and several picnic tables.

Along Simmonds Road to the west is the former gymnasium (FA948), which now serves as studio space for the Headlands Center for the Arts, and 300 feet farther west are the two non-commissioned officer quarters (FA 955, 956), which are counterparts of the quarters along Kober Street at Fort Baker (fig. 1.57). These two houses, which are close to Field Road and an eroding cut in the hillside, are today used as partner staff housing and have gardens, play equipment, and grills in the surrounding grounds. A concrete walk with several lost sections once connected the houses to the upper part of the Main Post.

QUARTERMASTER AREA (DRAWING 1.5)

The Fort Barry Quartermaster Area is approximately 1,000 feet to the south of the Main Post along Field Road, across a ridge and above the launch site for the Nike SF-87 launch site. The existing buildings, known as the "Three Sisters," are remnants of a larger complex that originally included a Quartermaster wharf on Bonita Cove (later site of the Coast Guard boat launch). The largest building (FA960, former commissary) is used by the Headlands Center for the Arts, and the other two (FA961, 962, former ordnance storehouse and bakery) are vacant (fig. 1.58). They are standard Quartermaster designs completed in 1907. As at the Fort Baker Quartermaster Area, the buildings are aligned directly along the road. At the intersection of Field Road and Conzelman Road to the south is the Lower Fisherman's Lot, a public parking area that provides access to several trails and nearby Battery Wallace. This parking lot was the site of the Quartermaster wagon shed, stables, corral, and firehouse, most of which were removed prior to World War II.



Figure 1.58. The Fort Barry Quartermaster Area looking southwest along Field Road, 2011. The building at right is the commissary storehouse used today by the Headlands Center for the Arts. The flat area in the left background once contained the Quartermaster shops, stable, wagon shed, corral, and firehouse. Battery Wallace is in the wooded area at right. (SUNY ESF)

BARRY MOTOR POOL (DRAWING 1.5)

The Barry Motor Pool, known today as the balloon hangar area and Rodeo Valley Stables, is a cluster of three buildings in a small U-shaped valley off Bunker Road east of the Fort Barry Main Post (fig. 1.59). The area has been used for nearly five decades by the Presidio Riding Club, a park partner. A legacy of military use of the Headlands, the club is a nonprofit cooperative equestrian organization with membership limited to active duty or retired military and members of their immediate families. It operates the site through a park permit as a private horse boarding facility with a horse hostel that is open to the public for viewing and short-term use. The site also serves as a base for the miles of trail riding in the park.[24] The surrounding area contains numerous volunteer Monterey cypress, pine, and acacia trees, and the area to the south, site of an Endicott-era camp for the rifle range used as an Army dump beginning in the late 1960s, is covered in heavy brush and trees and is plagued by contamination.



Figure 1.59. Overview of the Fort Barry Motor Pool area (Rodeo Valley Stables), looking southeast from Wolf Ridge, 2009. The site of the Smith Housing Area is along the side road to the left of Bunker Road. Part of this area was redeveloped for a trailhead parking lot in 2012. (SUNY ESF)



Figure 1.60. The motor vehicle sheds (stalls) and balloon hangar, looking south from Bunker Road, 2009. (SUNY ESF)

Access to the Barry Motor Pool area is by two paved roads and an unpaved parking area off Bunker Road. A trail along an old Army road extends south to the Coastal Trail and Conzelman Road. The two large one-story shed-roof buildings at the north side of the area (FA901, 902) constructed in 1940 as open motor sheds, are used as horse stalls and tack rooms (fig. 1.60). Along the east side and between the two buildings are paddocks enclosed by pipe-rail fences, and a third paddock is west of the buildings. The balloon hangar (FA905), built in 1921 to house Army observation balloons, is at the south side of the site. The tall, steel-frame building, used by the Presidio Riding Club as an indoor rink, was recently rehabilitated to address deterioration of the corrugated fiberglass and metal sheathing and adapt the building for use by park maintenance. At the west side and rear of the building are two small concrete-block utility sheds (FA906, 907) dating to the early 1960s when the balloon hangar was used as part of the Nike missile program.



Figure 1.61. The Departmental Rifle Range showing mown field and berms, looking northwest toward Bunker Road and the front of the range, 2007. Old Bunker Road extends through the woods at the far western end of the range. (SUNY ESF)



Figure 1.62. The abandoned target trench at the east end of the rifle range, looking southwest, 2009. The rifle range is to the right. (SUNY ESF)



Figure 1.63. The target house at the Departmental Rifle Range, looking southeast, 2009. (SUNY ESF)

DEPARTMENTAL RIFLE RANGE (DRAWING 1.5)

The large rectangular mown field within a U-shaped valley at the foot of Diablo Ridge east of the Barry Motor Pool is the Departmental Rifle Range, an Endicott-era 600-yard practice field established in 1904 (fig. 1.61). The park originally designated this area for special events, but now discourages such use. A World War II-era alignment of Bunker Road cuts across the western half of the range. The west end of the rifle range near Rodeo Creek is bordered by the original alignment of Bunker Road built in 1905, which has recently been closed. The area surrounding the rifle range is primarily grassland and scrub, which is encroaching into the historic limits of the range north of Bunker Road, and covers the backstop area at the opposite end. Dirt and gravel roads, including Julian Road along the south side, line the perimeter of the range. These roads have shifted in alignment and do not follow the historic rectangular limits of the range. There is a partially blocked drainage ditch along the east side of the range paralleling Julian Road, with stone and metal culverts at existing and abandoned road crossings. The ground throughout the rifle range and surrounding backstop areas is contaminated with lead.

At the 200, 300, 500, and 600-yard intervals are low grass-covered berms that are mown less frequently than the rest of the range. The 600-yard range has been removed, and only traces remain of the 500-yard berm, which is bisected by Bunker Road. At the southeast end of the rifle range is an abandoned target trench (FA830) that is overgrown with brush and enclosed by a chain-link fence (fig. 1.62). Inside the trench, which floods due to blockage of the rifle range drainage system, are deteriorating remnants of wood targets. Beyond the target trench are remnants of two backstop embankments and trenches that are obscured by heavy brush. Along the north side of the range is the target house (FA828), a vacant frame building dating to 1942 with boarded-up windows (fig. 1.63). The field to the north of the rifle range is a remnant of a smaller revolver range

also dating to 1904 that fell out of use by World War II. The adjoining hillside served as the backstop and has gouges from decades of shooting practice. A small mown area south of the rifle range along Julian Road is a later pistol range added in ca. 1941.



Figure 1.64. Overview of the Fort Barry Capehart Housing Area, looking northwest from Diablo Ridge, 2009. (SUNY ESF)



Figure 1.65. Menges Street showing street character and building arrangement in the Capehart Housing Area, looking south, 2009. (SUNY ESF)



Figure 1.66. Capehart housing units showing typical building details, site furnishings, and plantings, 2009. (SUNY ESF)

The woods west of the existing range north of Bunker Road and east of Smith Street were part of the long-range section added in 1907. It is long abandoned, but traces of the 800-yard berm may remain in the woods.

CAPEHART HOUSING AREA (DRAWING 1.5)

The Capehart Housing Area is a large cluster of thirty-two single and duplex ranch houses along both sides of Bunker Road straddling the Baker-Barry boundary (fig. 1.64). The complex, completed in 1959 as housing for enlisted personnel and their families on the site of the earlier West Portal Housing Area and CCC Camp Spurr developed between 1935 and 1941, is used as housing for park staff. The houses north of Bunker Road, within the GMP Natural Zone, are proposed for removal. The surrounding area includes native woods along Rodeo Creek to the north and Monterey pine, cypress, and scrub on the hillsides to the east, south, and west. McCullough Road borders the southern and western sides of the complex.

The suburban-style houses (FA805–870), designed by San Francisco architect Angus McSweeney under the direction of the Army District Engineer, are laid out in an irregular, informal pattern set back from curving streets and cul-de-sacs without sidewalks (fig. 1.65). Shiley Street is the only straight road and is a remnant of the earlier housing area. The streets have concrete curbs and gutters lined by overhead utility lines on wood poles. The houses, which follow a standardized plan used throughout the Army's San Francisco installations, are low-slung one-story frame buildings with smooth stucco siding, low-sloped gable roofs with overhanging eaves, inconspicuous entrances, and aluminum-frame sliding windows (fig. 1.66). Some of the houses have vinyl replacement windows. Each unit features a

broad driveway, parking apron, concrete entrance walks, a frame utility shed, and laundry lines. Many have outdoor furnishings and objects added by the residents. A wood air-raid siren tower (FA819) built in 1950 is on the hillside above Shiley Street in the center of the complex.

Plantings, many established by the Army in the early 1960s based on a plan by landscape architects Osmundson & Staley of Berkeley, include specimen Monterey pine, acacia, Oriental plane, and Norway maple trees, and a variety of ornamental shrubs and groundcover including jade, dracaena, oleander, and iceplant.

DIABLO RIDGE DEFENSES (DRAWING 1.7)

The Diablo Ridge Defenses is a small cluster of World War II and Cold War-era defensive works straddling the Baker-Barry boundary and overlooking the Golden Gate on the southern end of Diablo Ridge (fig. 1.67). There is one primary defensive work, Battery Construction 129 (BC 129), with the remnants of the control (radar) area for Nike SF-87 on top of the battery and adjoining ridge. Its companion launch site is SF-87 at Fort Cronkhite (now the Marine Mammal Center), and its administration area is SF-87 (now part of NatureBridge Golden Gate campus) in the Fort Cronkhite Cantonment.



Figure 1.67. Overview of Diable Ridge looking east, 2009. The ridge-top trees surrounding Battery Construction 129 were removed in 2012. (SUNY ESF)

The ridgetop is today known as Hawk Hill, named after its use by the Golden Gate Raptor Observatory, a program of the Golden Gate National Parks Conservancy in cooperation with the National Park Service. For the past quarter century, Observatory volunteers have used Hawk Hill to tabulate the annual fall migration of birds of prey over the Headlands.[25] Hawk Hill also serves as a popular scenic overlook for its panoramic views across the Golden Gate and San Francisco. Improved visitor facilities at Hawk Hill, including walks, trails, benches, and signage, along with conservation of historic features, are being planned.

The natural landscape of the Diablo Ridge Defenses is steep terrain dominated by rock outcrops, grassland, and scrub. The west and north sides of Hawk Hill, including the valley formed by the 'V' shaped ridge between the two tunnels, were cleared of Monterey pine and cypress woods in 2012.

BC 129 (FA773, 773A), completed in 1944 but never armed or named, is a World War II-era two-gun reinforced concrete casemated battery that faces southwest



Figure 1.68. One of the two casemated gun portals of Battery Construction 129 on the west face of Diablo Ridge, looking east, 2009. (SUNY ESF)



Figure 1.69. The BC 129 battery commander's station with retaining walls from SF-87 in the background, 2014. The structure has lost its original earth cover. (SUNY ESF)



Figure 1.70. The scenic overlook on Hawk Hill at the former SF-87 control site, looking west with a circular radar platform at right, 2014. This area is scheduled for improvement in the near future. (SUNY ESF)

toward the Pacific Ocean and the mouth of the Golden Gate (fig. 1.68). It is the highest battery in the San Francisco Harbor Defenses, and is similar in design to Battery Townsley at Fort Cronkhite. The cut-and-cover concrete structure features two access tunnels that are open to the public and lead to either end of the primary structure and gun mounts from Conzelman Road. The north tunnel consists of two sections to either side of the valley created by the 'V'-shape of the ridge. The tunnel portals are concrete with native stone masonry used to stabilize the steep banks. The underground interior rooms and corridors in the battery are closed to the public.

Above the battery on Hawk Hill are the remains of the Cold War-era Nike SF-87 control site, and two structures related to Battery Construction 129. Pedestrians access to this area is along the steep paved entry road from Conzelman Road that leads to a series of paved and unpaved walks and trails. BC 129 features include an underground reservoir (FA778) and a cut-and-cover concrete battery commander's station (FA792) that is the only standing building on the hill (fig. 169). The SF-87 control site features are clustered along the spine of the ridge, where there is an asphalt walk lined by benches, located above a tall concrete retaining wall facing the Golden Gate. SF-87 features include a raised steel pedestal for the Target Ranging Radar (TTR) (FA772), and three circular concrete platforms that contained the Target Tracking Radar (TTR, FA788), Low Power Acquisition Radar (LOPAR, FA787) and the Missile Tracking Radar (MTR, FA786) (fig. 1.70). To the north are foundation remnants from the Standby Generator Building (FA791) and Fire Unit Integration Facility (FA798), and concrete pads where the battery control van (FA795) and radar control van (FA794) were stationed. The unpaved east end of the hill, which is the highest point, serves as the primary area for the raptor observatory and contains additional concrete pads from fuel tanks, generators, and transformers.

Outside the primary cluster of defensive features on Hawk Hill are two related structures. Approxi-

mately 400 feet north of Hawk Hill along Conzelman Road in Fort Baker is the Plotting-Spotting-Radio (PSR) room for Battery Construction 129 (FB770), a cut-and-cover structure with a concrete portal. Approximately 200 feet northwest of gun 1 of the battery are two concrete walls that formed the base of the Fire Unit Integration Facility antennae for SF-87 (FA774).

RODEO RIDGE DEFENSES (DRAWING 1.5)

The Rodeo Ridge Defenses are a cluster of widely dispersed Endicott, post-World War I, and World War II-era defensive works that are spread out on ridges along the northwest side of Bonita Cove, centered on a high point known as Rodeo Hill (fig. 1.71). The largely inaccessible coastline along Bonita Cove is characterized by steep, rocky cliffs with narrow bands of sand and gravel beach. The primary defensive works are Battery Wallace, Anti-Aircraft (AA) Battery #2, and Battery Rathbone-McIndoe. Rodeo Ridge is currently used for hiking, scenic overlooks, camping, and picnicking. Bicentennial Campground is one of two campgrounds in the district along with the one at Kirby Cove. It is located in a Monterey cypress-shaded valley with groves off Conzelman Road east of Battery Wallace, and contains three camp sites, each of which can accommodate one tent. The nearby picnic area, located along Conzelman Road, contains picnic tables and barbecue grills in the open understory of Monterey cypress trees (fig. 1.72). Outside of these areas, the landscape of Rodeo Ridge is primarily open grassland and scrub, except for two groves of eucalyptus near Battery Rathbone-McIndoe.

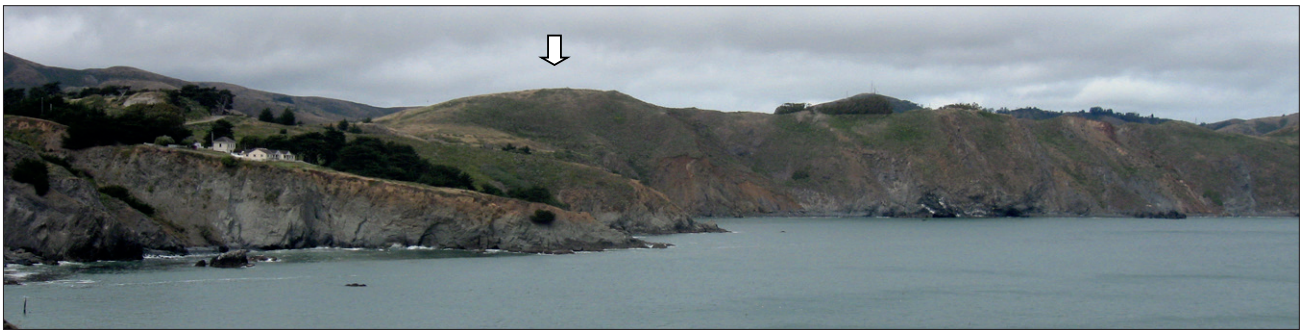


Figure 1.71. Overview of the Rodeo Ridge Defenses area looking northeast with Rodeo Hill (site of AA Battery #2) left of center (indicated by arrow), 2009. Battery Wallace is toward the far left and Battery Rathbone-McIndoe is at far right. The buildings at left are part of the former Coast Guard Life-Saving Station. (SUNY ESF)



Figure 1.72. The picnic area near Bicentennial Campground and Battery Wallace, looking east across Conzelman Road, 2014. The comfort station and accessibility improvements were completed in 2014. (SUNY ESF)

Battery Wallace (FA999), a cut-and-cover reinforced concrete defensive work initially completed in 1921 as two open gun emplacements and casemated in 1942–44, occupies a low ridge in the same line as Batteries Alexander, Smith-Guthrie, and O'Rorke to the north within the South Lagoon Defenses. The two widely-spaced guns, similar to those at Bat-



Figure 1.73. Battery Wallace, looking east with the SF-88 administration area (Point Bonita YMCA) in the foreground, 2009. (SUNY ESF)



Figure 1.74. Rodeo Hill with AA Battery #2, looking east across the Fort Barry Quartermaster Area showing reservoir on top of the hill (indicated by arrow), 2009. Also visible are the fire-control stations on the hillside, and the cut at the base of the hill where a mobile radar device was located. The buildings are in the former Quartermaster Area. (SUNY ESF)

tery Construction 129 and Battery Townsley, face the Pacific Ocean above the SF-88 administration area (YMCA) (fig. 1.73). The guns are accessible to visitors through two short tunnels off Conzelman Road. The interior rooms and corridors of the battery are closed. Monterey cypress trees have been recently cut back from around the casemates, but remain along Field Road.

On and around Rodeo Hill is AA Battery #2, completed in 1925 and enlarged in 1940–41. The only structure visible from afar on the barren hilltop is a large, cracked concrete reservoir (FA950) (fig. 1.74). The battery consists of a number of dispersed elements, with a core of three eighteen-foot diameter concrete firing platforms at the top of the hill designed for three-inch caliber guns. (FA1380, 1381) (fig. 1.75). Adjoining these is a concrete director's pit and a height-finder platform, with a collapsed connecting underground room (hutment). The hilltop is accessible by a trail from the Lower Fisherman's Lot that continues east to Battery Rathbone-McIndoe. At the base of Rodeo Hill along Conzelman Road are a number of former support facilities for AA Battery #2, including the remnants of a day room in a cut in the hillside, and two cut-and-cover structures, a magazine (FA991) and storeroom-powerhouse (FA993) (fig. 1.76). Another cut where



Figure 1.75. One of three gun platforms at Anti-Aircraft Battery #2 on Rodeo Hill, looking southwest with Point Bonita in the distance, 2009. (SUNY ESF)



Figure 1.76. Anti-Aircraft Battery #2 magazine at the base of Rodeo Hill, looking northwest along Conzelman Road, 2009. This structure is the counterpart of a similar magazine at AA Battery #1 on Wolf Ridge. (SUNY ESF)



Figure 1.77. Battery Rathbone-McIndoe, looking southwest from the Coastal Trail, 2009. The two small projecting structures on top of the work are battery commander stations added during World War II. (SUNY ESF)



Figure 1.78. Fire-control station B1S1 Wallace on Rodeo Hill, looking southeast, 2009. At the rear is the concrete entrance hatch portal. (SUNY ESF)



Figure 1.79. Battery Command station for Battery Wallace with closed window shutter (right) and its associated powerhouse on Rodeo Hill (left), looking north, 2009. (SUNY ESF)

Conzelman Road bends around Rodeo Hill was the site of mobile anti-aircraft radar.

Battery Rathbone-McIndoe (FA911), located east of AA Battery #2 along Conzelman Road, is an Endicott-period reinforced concrete battery similar to Battery Smith-Guthrie, completed in 1905. It features four gun emplacements for six-inch guns that protected the outer part of the Golden Gate between Point Diablo and Point Bonita, with earth-covered support rooms between the guns (fig. 1.77). At the east end of the battery is a foundation slab from a latrine building (FA959). Two battery commander stations on top of the work date to the World War II era. The battery is used as a scenic overlook, with a trail to a bench at the edge of the cliff. Graffiti on the concrete walls has been painted over with gray paint.

The Rodeo Ridge Defenses contain a number of secondary cut-and-cover defense elements. On the west slope of Rodeo Hill, between Anti-Aircraft Battery #2 and the Lower Fisherman's parking lot are two cut-and-cover fire-control stations and a powerhouse associated with Battery Wallace. B1S1 Wallace (FA989), completed in 1921, is a half hexagonal-fronted concrete work with intact World War II-era stone and earth camouflage and anchors for camouflage netting (fig. 1.78). A short distance downhill is BC Wallace (FA985), a pillbox-type station completed in 1943. It retains its curved steel roof, hatch, and window shutter, along with steel roof brackets that once held camouflage (fig. 1.79). The powerhouse (FA985A), dating to 1944, is a simple concrete box structure with a projecting ventilator shaft.

To either side of Battery Rathbone-McIndoe are two fire-control stations, B1 Rathbone (no building number) completed in 1919 to the west, and B1 McIndoe (no building number) to the east, dating to the same time. B1 Rathbone is a similar design to B1 Wallace and also retains much of its camouflage. B1 Rathbone is also the same design, but is just the concrete shell, which has rolled halfway down the



Figure 1.80. Fire-control station F3 (originally B4 Alexander) at the coastline of Bonita Cove, looking southeast from Battery Rathbone-McIndoe, 2009. (SUNY ESF)

hill due to a landslide. The fifth fire-control station in the Rodeo Ridge Defenses is F3 (earlier B4 Alexander, no building number), a fog-level Taft-era work built in 1910 that is on a rocky promontory at the shoreline below Battery Rathbone-McIndoe. It is a simple square concrete structure, accessed by a winding path down the steep cliff (fig. 1.80).

The Rodeo Ridge Defenses also include several temporary field emplacements and support structures dating to World War II. These include three concrete sandbag-type anti-aircraft field emplacements, one with an unknown designation near BC Wallace, a concrete mount for a .30-caliber gun near Battery Rathbone-McIndoe, and the site of 40-mm Anti-Aircraft Automatic Weapon #9 (FA911B) approximately 400 feet east of the battery. In the slope north of the battery are the remains of a large hutment, which was a temporary complex of barracks, mess halls, and other support structures built into the ground. Two large groves of eucalyptus cover these remains, none of which are readily visible from Conzelman Road.

SOUTH LAGOON DEFENSES (DRAWING 1.5)

The South Lagoon Defenses are a line of Endicott-era defensive works that protected the Pacific approach to the Golden Gate and are positioned along a low, sandy ridge south of Rodeo Lagoon (fig. 1.81). The primary defensive works are Battery Alexander, Battery Smith-Guthrie, and Battery O'Rorke. These batteries are linked by red-chert gravel roads with concrete curbs and gutters that connect with a recently rebuilt trailhead parking area off Field Road, on the site of a World War II-era parking area. The area is used mostly for hiking, scenic viewing, and for picnicking. From the tops of the batteries and from the trail to the west, there are panoramic views south toward Bird Island and north along the Pacific Coast (fig. 1.82). Aside from eucalyptus groves and scattered other trees



Figure 1.81. Overview of the South Lagoon Defenses looking east, 2009. Battery Alexander is hidden by a line of historic eucalyptus trees. (Copyright (C) 2002-2017 Kenneth & Gabrielle Adelman, California Coastal Records Project, www.Californiacoastline.org, annotated by SUNY ESF)



Figure 1.82. A trail in the dune area west of Battery Smith-Guthrie showing expansive views north along the Pacific Coast, 2009. (SUNY ESF)



Figure 1.83. One of the two mortar pits of Battery Alexander, looking west, 2009. These originally held twelve-inch mortar guns. (SUNY ESF)



Figure 1.84. Battery Alexander, looking south along the rear (east) side showing the earth-covered support rooms between each gun pit, 2009. The historic access road was narrowed to a foot trail in 2014. (SUNY ESF)

around the batteries, the landscape is low scrub and groundcover, including extensive areas of iceplant, which was used historically to stabilize the sandy earthen parapets of the batteries. East and west of the batteries along minor trails, the land slopes down to a deep gully where there are traces of pits where sand was excavated to make the concrete fro the batteries.

Battery Alexander (FA1356), the southernmost work in the cluster, is an Endicott-era reinforced concrete mortar battery completed in 1905, the only one of its type in the district. The battery features two rectangular mortar pits surrounded by high earthen parapets on three sides that are covered in iceplant and other low vegetation (fig. 1.83). Partially shaded by Monterey pine trees planted in the 1960s, these areas now serve as picnic areas. Between each pit are the earth-covered support rooms, which feature concrete parapet walls and iron shutters over the doors and windows (fig. 1.84). At the openings of the mortar pits are two small concrete buildings used as mortar booths (FA1353, 1355), and at the south side of the battery is a concrete latrine building (FA1356A), the only one of its type remaining in the Headlands, and a long flight of steps leading up to Field Road. The parade at the rear of the battery is covered in weeds and soil. Along the front (west) side of the battery is a line of eucalyptus trees planted in ca. 1905, probably to conceal the battery from ships at sea.

Battery Smith-Guthrie (FA1354), located approximately 400 feet north of Battery Alexander on a short spur road, is a reinforced concrete Endicott-period barbette battery similar to Battery Rathbone-McIndoe, completed in 1905. It features four gun emplacements for six-inch guns, with earth-covered support rooms between the guns covered in iceplant, grass, and other low-growing vegetation (fig. 1.85). At the rear and north sides of the battery along the road to Battery O'Rorke is a concrete slab foundation (FA 1354A) from a latrine building. The firing lines from the battery's gun platforms, which are accessible to the public, are partially obscured



Figure 1.85. Battery Smith-Guthrie, looking north along the access road, 2009. The projecting structures are battery commander stations added during World War II. (SUNY ESF)



Figure 1.86. A gun mount on Battery Smith-Guthrie with westward views of the Pacific partially blocked by eucalyptus trees, 2009. (SUNY ESF)



Figure 1.87. Battery O'Rorke, looking north from Battery Smith-Guthrie with the Pacific to the left, 2009. In the distance is the Fort Cronkhite cantonment. (SUNY ESF)

by eucalyptus trees (fig. 1.86). There is graffiti on the concrete walls.

Two hundred feet north and slightly east of Smith-Guthrie is Battery O'Rorke (FA1351), a smaller reinforced concrete battery completed in 1905 (fig. 1.87). Similar to Battery Yates at Fort Baker, Battery O'Rorke was designed for four rapid-fire three-inch guns, which were designed to protect Rodeo Beach from enemy landing. The earthen parapets along the front and sides are covered in iceplant and low-growing vegetation. The rear of the battery is enclosed by an earthen slope. Like Battery Smith-Guthrie, Battery O'Rorke is accessible to the public, with panoramic views from its gun mounts. There was extensive graffiti along its rear walls, which has recently been covered with green camouflage paint.

Secondary works in the South Lagoon Defenses include an access tunnel south of Battery Smith-Guthrie that is a remnant of World War II .50-caliber anti-aircraft emplacement #21. There may be remnants of the actual emplacement, but it is obscured by heavy scrub. Along the trail west of Battery Smith-Guthrie are a series of depressions and mounds that are remnants of temporary missile launchers (group 1) for Nike SF-88, dating prior to the construction of the permanent launch facility at Fort Barry. A smaller remnant from temporary launcher group 2 is in the valley east of Battery O'Rorke. Both groups are obscured by vegetation.

On the slope east of the batteries are two foundation slabs (FA1354C, FA1354B) that are remnants of a World War II hutment that included barracks, mess halls, and a bathhouse. At the south end of the hutment, hidden within a eucalyptus grove, is the Battery Smith-Guthrie radio-switchboard room (FA1352), a cut-and-cover structure dating to 1943.

BONITA RIDGE DEFENSES (DRAWINGS 1.1, 1.7)

The Bonita Ridge Defenses are a dispersed cluster of Endicott, Taft, and Korean War-era defensive works above the steep cliffs along the Pacific Coast from Bonita Ridge on the south to near Bird Island on the north (fig. 1.88). The southern part of the area is on the geologic namesake ridge that was the location of the first lighthouse (1855–1907). This ridge is within the Point Bonita Light Station property that the Army transferred in 1966 to the Coast Guard, which maintains active navigational equipment there. The northern part of the area contains the park-maintained Bird Island Overlook. East of the area is Nike SF-88 administration area (YMCA Point Bonita) and a sandy gully that opens onto a beach north of Bird Island. There are two primary defensive works, Battery Mendell and Anti-Aircraft Artillery (AAA) Position No. 81. The landscape is open, except for dense groves of Monterey cypress on Bonita Ridge.



Figure 1.88. Overview of the Bonita Ridge Defenses looking southwest from Wolf Ridge, with Bonita Ridge (wooded area) and Battery Mendell at left and Bird Island Overlook at right of center, 2009. (SUNY ESF)

The Bonita Ridge Defenses area is at the western terminus of Field Road, which was recently rebuilt into a large asphalt turn-around with concrete curbs, near the site of the lighthouse keeper's dwellings. From here, Mendell Road, recently resurfaced in its pre-Cold War-era surface of red-chert gravel and closed to vehicles, leads north to the Bird Island Overlook (fig. 1.89). A gated service road to Bonita Ridge branches off the new circular turn-around. A narrow trail, bordered in part by a cable railing, leads along the top of the cliff from Bonita Ridge to the Bird Island Overlook. There are no maintained trails to Bird Island.



Figure 1.89. Mendell Road looking south, showing recently rebuilt red-chert gravel surface, 2011. Battery Mendell is at right.(SUNY ESF)

Battery Mendell, completed in 1902, is an Endicott-era reinforced concrete battery designed to protect the outer entrance to the Golden Gate from an elevation of approximately 210 feet above the Pacific with two emplacements for twelve-inch guns (fig. 1.90). The battery is similar to Battery Kirby at Fort Baker, but has support rooms with porches that extend along the entire rear side. Two curbed grass



Figure 1.90. The top blast-aprons of Battery Mendell, looking north from the cliff-side trail to Bonita Ridge, 2009. (SUNY ESF)



Figure 1.91. One of the four Korean War-era gun emplacements of AAA Position No. 81 at the Bird Island Overlook, prior to resurfacing of the surrounding area in red-chert gravel, looking west, 2011. (SUNY ESF)



Figure 1.92. The iceplant-covered Barry mine casemate looking north across Mendell Road, with Battery Wallace in the background, 2009. The radio room is to the right of the mound. (SUNY ESF)

islands separate the parade from Mendell Road. The exterior of the battery is accessible to the public, and broad concrete blast aprons lined by safety railings serve as a scenic overlook.

AAA Position No. 81, currently maintained as the Bird Island Overlook, is a Korean War-era anti-aircraft defensive work. It is a counterpart of AAA Position No. 10 on Wolf Ridge in Fort Cronkhite. Position No. 81 consists of four gun emplacements with circular earthen revetments covered in iceplant, with single access openings (fig. 1.91). These originally held mobile M1A 90-mm guns. The revetments have eroded and some are crossed by social trails. The ground surrounding three of the emplacements is maintained with a red-chert gravel surface; the fourth emplacement is hidden by dense vegetation.

Most of the structures in the Bonita Ridge Defenses are secondary defense elements, including a mine casemate, two clusters of fire-control stations, a searchlight shelter, and anti-aircraft field emplacements. The Barry mine casemate (FA1365), completed in 1908 and rebuilt in 1941, is an earth-covered structure at the intersection of Field and Mendell Roads that contained the controls for submarine minefields in the waters outside the Golden Gate (fig. 1.92). It is one of two such structures at the Headlands along with one along San Francisco Bay at Fort Baker (redesignated as the Baker-McDowell cable terminal). The earth cover is a tall hill with metal ventilators and retains a nearly complete cover of iceplant. The south side is supported by a concrete wall that contains the entrance portal and closely adjoins the ruins of a radio room (FA1366) dating to the 1941 rebuilding of the mine casemate (fig. 1.93). It is a one-story reinforced concrete structure built below grade and is surrounded by dense vegetation, earthen parapets, and concrete walls.

On the narrow tip of Bonita Ridge at an elevation of approximately 300 feet is one of two clusters of fire-control stations in the Bonita Ridge Defenses. The



Figure 1.93. The overgrown radio room ruin next to the Barry mine casemate, looking south, 2009. (SUNY ESF)



Figure 1.94. Overview of the fire-control station cluster on Bonita Ridge with the active Coast Guard VTS tower, looking east, 2009. (Copyright (C) 2002-2017 Kenneth & Gabrielle Adelman, California Coastal Records Project, www.Californiacoastline.org)

area includes an active Coast Guard Vehicle Traffic Service (VTS) radio tower erected in 2006 (fig. 1.94). This tower is partly located on the foundation of a ca. 1902 engine house that powered the tramway from the Quartermaster wharf on Bonita Cove. The area is in poor condition, characterized by deteriorating structures, graffiti, and erosion. The three fire-control stations, which were completed in 1910, have characteristic Taft-era flat roofs and reinforced concrete walls, and are partially below ground and surrounded by trenches with connecting access tunnels. The southernmost is M1 Mines (FA 1385), a two-room fire-control station that has lost its roof and has heavy graffiti on its concrete walls (fig. 1.95). To the north is Mine Groupment (FA1379), a similar two-room fire-control station with a timber roof that is near collapse. To the north is a pair of fire-control stations in the same trench, designated BC B1 Barry (FA1377) and G2 Barry (FA1378). These were most recently the support buildings for the old Coast Guard VTS tower erected 1962 to the south that was removed in 2006 (fig. 1.96).

In addition to the three fire-control stations, Bonita Ridge contains a two-story reinforced concrete structure next to the steel VTS tower erected in 1943 as a Navy signal tower (FA1376) (see fig. 1.94). The concrete-slab roof has collapsed into the narrow slit observation window. To the north, along the

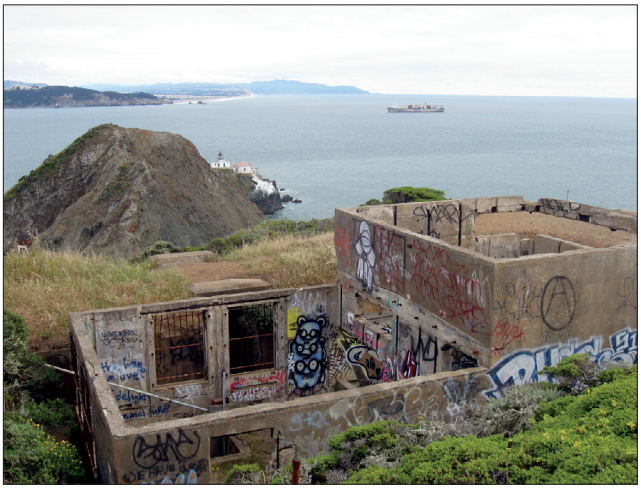


Figure 1.95. M1 Mines, the southernmost fire-control station on Bonita Ridge, looking south, 2009. The observation window is in the taller section at right. An access tunnel is visible in the trench just beyond the lower section. (SUNY ESF)



Figure 1.96. Fire-control station G2 Barry, most recently a Coast Guard utility building, looking north from the roof of Mine Groupment, 2009. The metal siding added by the Coast Guard was recently removed from G2 Barry and its pair, B1 Barry. (SUNY ESF)



Figure 1.97. M4 Mines, one of three fire-control stations near the Bird Island Overlook, looking north along the cliff side trail to Bonita Ridge, 2009. (SUNY ESF)

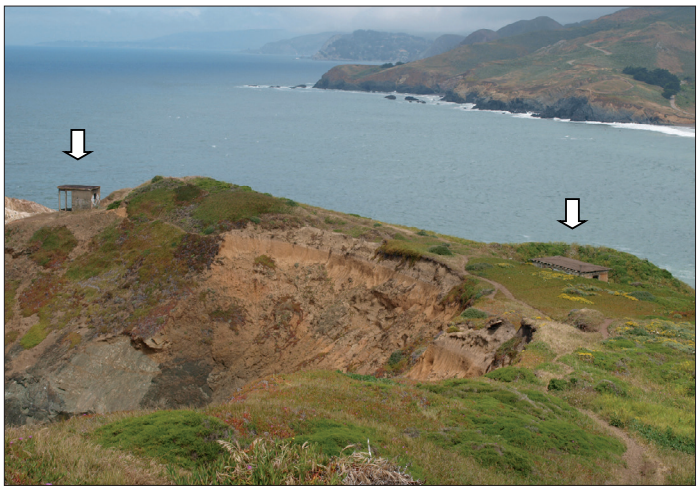


Figure 1.98. Searchlight #9 shelter (left) and powerhouse (right), looking north from the Bird Island Overlook, 2009. (SUNY ESF)



Figure 1.99. A World War II-era machine gun pit on Bonita Ridge west of Battery Mendell, looking west, 2009. (SUNY ESF)

edge of the cliff on the other side of the VTS tower are concrete footings from a 1944 SCR (Surface Craft Radar) tower. At the south end of the cluster next to M1 Mines is a small shed building (FA1382) and tower footings from a Navy "Shoran" (Short Range Navigation) radio ground station, dating to 1957.

Bonita Ridge once included two fog-level reinforced concrete fire-control stations built in 1917 at the base of the cliff below the main cluster, designated as B2S2 Springer and B2S2 Chester associated with batteries at Fort Miley. Today, after decades of pounding surf, only traces of the building platforms remain in the rock.

The second cluster of fire-control stations in the Bonita Ridge Defenses is north of Battery Mendell near the Bird Island Overlook. These are World War II-era structures and include two pill-box type stations, M4 Mines II completed in 1943, and B2S2 Chamberlin (FA1363) completed in 1941 that are accessible from the cliff-side trail (fig. 1.97). Some of the earth cover and camouflage has eroded away. B2S2 Smith, completed in 1941, is a square cut-and-cover concrete station built into the cliff face and not readily visible from the overlook area.

Approximately 400 feet north of the Bird Island Overlook is the Taft-era shelter of Searchlight #9 and the accompanying powerhouse, both of which date to 1911 (fig. 1.98). The searchlight shelter (FA1360) is a reinforced concrete structure with a flat roof and hexagonal front containing the windows, now without glass. The powerhouse, surrounded by protective earthen parapets, is a rectangular one-story structure with a low hipped roof. Both are one of two surviving examples of their type in the Headlands, along with Searchlight #10 shelter and powerhouse at Point Bonita.

World War II-era field emplacements within the Bonita Ridge Defenses include two hexagonal concrete machine gut pits, one between M1 Mines and Mine Groupment, and the other on the edge of the cliff halfway to Battery Mendell (fig. 1.99). Remnants

of a .50-caliber antiaircraft gun emplacement are also near M1 Mines. The area north of this cluster was heavily fortified during World War II, where there may be remnants of field emplacements and trenches within an existing Monterey cypress grove.

NIKE ADMINISTRATION AREA SF-88A (DRAWING 1.8)

The administration area for Nike site SF-88 is a Cold War-era complex of four buildings along Field Road between Battery Alexander and Batter Mendell (fig. 1.100). Completed in 1965 on the site of the Mendell Housing Area built in 1940, the complex has been home for over three decades to the YMCA Point Bonita Outdoor & Conference Center, a park partner. The goal of the center is to connect children and adults to the natural world through educational programs and conference facilities. The center is a program of the YMCA of San Francisco.[26] The surrounding area includes low ground to the west and north that leads to a gully that opens to a Pacific beach north of Bird Island. A short distance to the south is the Barry mine casemate, to the northeast is Battery Wallace, and to the southeast is the former Life-Saving Station.



Figure 1.100. The Nike SF-88 administration area, home to the Point Bonita YMCA, looking southwest with Battery Mendell in the background, 2011. (SUNY ESF)

The main entrance to the SF-88 administration area from Field Road, opposite the intersection with Conzelman Road, leads to two interior curbed asphalt-paved roads. The interior north-south road, on the alignment of an earlier road within the Mendell Housing Area, forms the spine of the complex, and is closed off at the north end by a gate. There is a large asphalt parking lot in the south end of the complex and a smaller one to the north.



Figure 1.101. The Nike SF-88 administration buildings, looking south along the central interior road, 2009. (SUNY ESF)

The low-slung concrete-block buildings (FA981, 983, 984, 986) have flat roofs and small windows with replacement sash (fig. 1.101). Built according to a standardized Army plan, they were originally two barracks, a mess hall, and an administration building, and are today used for similar purposes as meeting space, a dining hall, and overnight accommodations for up to 150 people. The buildings retain an exterior green color scheme used by the Army. Concrete sidewalks parallel the buildings and connect with the entrances.

On the west side of the complex is a multi-use (tennis, basketball) court (FA998) built in 1961 prior to SF-88A. Most other features were added by the

YMCA and include a small outdoor amphitheater known as the San Francisco Rotary Club Camp Fire Site, a fenced vegetable garden, two-plank wood fences along Field Road, and a large propane tank near the entrance. Overhead utility lines border the west side of the complex. Outside of the vegetable garden, vegetation includes black acacia trees, Monterey pine and cypress trees, and scattered shrubs along the building foundations and sidewalks mostly planted after 1966.



Figure 1.102. Overview of the SF-88 launch site looking east from Battery Alexander toward the Fort Barry Quartermaster Area, 2009. The fenced area with two small buildings in the foreground contained the guard dog kennels for SF-88L. (SUNY ESF)



Figure 1.103. The SF-88L Limited Area, looking north with Fort Cronkhite in the distance, 2009. The entrance to the SF-88 launch site and sentry station is at far right. (SUNY ESF)



Figure 1.104. The SF-88L Exclusion Area, looking north from Field Road, 2009. On the high point of Wolf Ridge in the distance is the SF-88 control (radar) site. (SUNY ESF)

NIKE LAUNCH SITE SF-88L (DRAWING 1.5)

The SF-88 launch site is a Cold War-era fenced complex of missile launch pads and support building located off Field Road between the Fort Barry Quartermaster Area and Battery Alexander (fig. 1.102). Its companion control site is SF-88C on Wolf Ridge in Fort Cronkhite, and its administration area is SF-88A in Fort Barry (present Point Bonita YMCA). Completed in 1955, the restored SF-88L site is operated by the park and volunteers as the "Historic Nike Missile Site" and is open for public tours three afternoons a week. Measuring approximately 1,200 feet long and 400 feet wide, the site consists of a terraced landform cut into the upper end of a shallow valley that opens to Rodeo Lagoon to the north. A ditch diverts water along the uphill side. SF-88L is enclosed by a chain-link and barbed-wire security fence, and most of the landscape is mown lawn and asphalt, with small groves of trees and scrub along slopes. The main entrance is at the north end of the site, where there is a sentry station (FA970), with a secondary entrance at the south end that connects to Battery Alexander. A central asphalt road winds through the site to the missile launchers. A recently reconstructed path and stairs leads to the former ready room in the old Fort Barry Quartermaster buildings along Field Road.

SF-88L consists of two zones: the Exclusion Area in the south half with the missile launchers, and the Limited Area encompassing the rest of the site with support buildings and kennels. Buildings in the Limited Area, completed between 1955 and 1965, are simple one-story sheet-metal and concrete-



Figure 1.105. A display missile and open elevator doors in the SF-88L Exclusion Area, looking east, 2009. In the background is one of the buildings in the Fort Barry Quartermaster Area. (SUNY ESF)

block structures painted light green with dark green trim (fig. 1.103). These include the missile test building (FA963), generator building (FA966), and warhead building (FA967) that is set behind an earthen berm. There are also pads for parking support vans. In front of the missile test building are ornamental red-gravel beds with battalion insignia, and in front of the generator building is the Army Corps of Engineers insignia painted on the asphalt pavement, along with picnic tables. At the rear are two radar units and radar-control vans from the abandoned SF-88 control site on Wolf Ridge that are displayed for interpretive purposes.

The Exclusion Area, enclosed by a barbed-wire and chain-link security fence, consists of two missile launch pads above underground missile magazines (fig. 1.104). A sentry station (FA976) is outside the entrance gate. The asphalt launch pads feature large flush rectangular doors that open to allow the functioning elevators to transport the missiles up to the launch pads from the underground magazines, which are also restored and are operated as part of the public tours (fig. 1.105). Various types of equipment are typically displayed on the launch pad for interpretive purposes. Northeast of the Exclusion Area is a small fenced are used as kennels for guard dogs.

POINT BONITA LIGHT STATION (DRAWINGS 1.8, 1.9).

The Point Bonita Light Station area, developed between 1855 and 1961, is at the southwestern extreme of Fort Barry and includes the narrow peninsula of Point Bonita that separates Bonita Cove from the Pacific Ocean (fig. 1.106). The area also includes the adjoining mainland with the former Coast Guard Life-Saving Station, but excludes Bonita Ridge (see Bonita Ridge Defenses). The landscape, which was used by both the Coast Guard and the Army, reflects historic military and navigational development. Today, the US Coast Guard (District 11 of the Pacific Area) retains jurisdiction over a thirty-nine-acre tract (including Bonita Ridge), but only maintains the active navigational light at the Point Bonita lighthouse and the VTS tower on Bonita Ridge. There are no Coast Guard personnel on site. Staffing, public access, interpretation, maintenance, and housing at Point Bonita are provided by the National Park Service



Figure 1.106. Overview of the east side of Point Bonita looking southwest from the Coast Guard housing area, 2009. The ridge in the center is Point Bonita Hill. The wood piles near the shore mark the site of a Coast Guard dock and boathouse. The cut in the rock in the right foreground is a trace of the access road that has been destroyed by landslides. (SUNY ESF)



Figure 1.107. The mainland portion of the Point Bonita Light Station along Bonita Cove, looking northeast from Point Bonita, 2009. The cluster of buildings is the Coast Guard housing area, originally the Point Bonita Life-Saving Station. (SUNY ESF)

through a use permit from the Coast Guard. Public access to the southern part of the point and the lighthouse is allowed three afternoons a week. The area features two existing clusters of development at the lighthouse on the tip of the peninsula, and at the former Life-Saving Station (Coast Guard housing area) on the mainland (fig. 1.107). Along the rocky shoreline of Bonita Cove are the remnants of the Coast Guard boathouse and dock that was the site of the original Fort Barry Quartermaster wharf.

Field Road, recently reconstructed with a large turn-around terminus that encroached on the site of the 1908 Assistant Keeper's dwelling and original 1855 dwelling, is the main access to the Point Bonita area. There is a small roadside parking lot, from where visitors can walk down the Lighthouse Trail to the Point Bonita Lighthouse. There is separate access to the Life-Saving Station along the World War II-era alignment of Old Conzelman Road, and by School Road, which is the original 1899 access road to the station.

Point Bonita Peninsula

The natural setting of the Point Bonita peninsula is dominated by steep, 100-foot-high rock cliffs composed primarily of pillow basalt (greenstone), which is volcanic rock that erupted underwater. Cliffs of softer graywacke sandstone and serpentine, concentrated along the northern part of the peninsula and adjoining mainland, show the effects of numerous landslides. In the middle of the peninsula is Point Bonita Hill, which has a highpoint of approximately 225 feet. The landscape is open without any trees, but the gentler slopes and protected areas have multi-hued matts of lichens, grasses, and forbs, including sedum, thistle, and blue-dicks, and many other natives, along with exotic cabbage, iceplant, mustard,



Figure 1.108. The north tunnel portal at Point Bonita, looking south along the Lighthouse Trail, 2009. The cut from the gangway around the cliff that predated the tunnel is visible at left. (SUNY ESF)



Figure 1.109. The Lighthouse Trail south of the tunnel showing Army-built concrete walk with park railings and a former Army powerhouse for Searchlight #10, looking south, 2009. (SUNY ESF)



Figure 1.110. The pedestrian suspension bridge and Point Bonita Lighthouse, looking northeast, 2009. The bridge was replaced in-kind in 2012. Below the lighthouse is the fog signal building, shelter for Searchlight #10, and fire-control station BC2 B4S4 Alexander-B1S1 Mendell. (Copyright (C) 2002-2017 Kenneth & Gabrielle Adelman, California Coastal Records Project, www.Californiacoastline.org)

morning glory, and phlox that most likely spread from lighthouse keepers' gardens.

The asphalt-paved northern half of the Lighthouse Trail is lined by white-plank railings and there are two steel-girder bridges where landslides eroded the earlier roadbed. At Point Bonita Hill, the trail crosses an earlier girder bridge and enters a six-foot-wide, 188-foot-long tunnel (PB1396) excavated from solid rock in 1876 (fig. 1.108). A steel door at the north portal controls access to the lighthouse. In the adjoining rock cliff is a cut that once supported a wooden gangway, which provided access to the point prior to the tunnel. South of the tunnel, Lighthouse Trail narrows to five feet and is surfaced by a concrete walk with an asphalt-covered utility trench down the middle that was constructed by the Army (fig. 1.109). This walk is on the site of the 1871 lighthouse railway that extended from the lighthouse wharf and tramway on Bonita Cove near the south tunnel portal to the tip of the point. Remnants of the tramway down to the wharf are visible in a cut in the rock cliff, and there are concrete footings along the trail from the tram winch. The south section of the trail also includes two small contemporary steel-truss bridges that span landslides, and composite three-plank railings. At the terminus of the trail is a 180-foot-long cable and white-painted timber suspension bridge, built in 1954 to replace an eroding land bridge and recently replaced in-kind, that provides pedestrian access to the Point Bonita lighthouse (fig. 1.110).



Figure 1.111. Concrete retaining walls and foundations of the Third Keeper's dwelling with vegetation that may be from a lighthouse keeper's garden, looking southeast, 2009. (SUNY ESF)

At the south end of the trail near the suspension bridge is a terrace that contains concrete walks, walls, and foundation remnants from the Third Keeper's dwelling that was built in 1908 on the site of a fog-signal building constructed in 1874, and removed in ca. 1955 (fig. 1.111). Portions of the adjoining excavated rock face served as retaining walls and are parged and painted white. This area today serves as a visitor gathering place and has four interpretive waysides and a timber bench.

The Point Bonita Lighthouse (PB1393), built in 1877 with a lantern relocated from the original 1855 lighthouse on Bonita Ridge, is a one-story flat-roofed rectangular brick building topped by a low one-story lantern tower (see fig. 1.110). The building is set on a narrow concrete terrace bordered by pipe railings. At the east end are a set of concrete pylon footings (PB1392) from a Coast Guard radio tower added in 1938 and removed around 1965. Stairs at the west end lead down to a lower terrace containing the fog signal building (PB1394), a one-story brick building with a red-slate hipped roof built in 1903. The lighthouse buildings are painted white to serve as navigational daymarks.

Army defensive works on the Point Bonita peninsula include a hexagonal-front Taft-era shelter for Searchlight #10 (FA1382) built in 1911 in the cliff below the fog signal building (see fig. 1.110). The building is a shell, without its glass front. The accompanying one-story concrete powerhouse (FA1382A) is built into a cut in the rock cliff along the Lighthouse Trail and is used for storage (see fig. 1.109). Below the searchlight shelter and accessed by a long flight of stairs is a Taft-era fire-control station last designated BC2 B4S4 Alexander–B1S1 Mendell. In the middle of the peninsula on the top of Point Bonita Hill is a cut-and-cover fire-control station with a hexagonal front built in 1921 and last designated B2S2 Crosby. To the south are the remnants of a World War II-era concrete sandbag 40-mm gun emplacement designated Anti-Aircraft Automatic Weapon #6. There are no existing trails to these works on Point Bonita Hill.

Mainland Area

At the eastern end of the mainland area of the Point Bonita Light Station is the former Point Bonita Life-Saving Station established in 1899 and later designated as Coast Guard Station #311, and subsequently known as the Coast Guard housing area. It contains approximately two acres with three frame houses and a garage overlooking Bonita Cove (see fig. 1.107). The area is accessed by the unpaved School Road, which turns southwest along the upper side of the area that is lined by myoporum trees and a white picket fence that encloses the entire compound (fig. 1.112). A dense grove of Monterey cypress and eucalyptus borders the north side of the road, south of the site of the Fort Barry school that stood until ca. 1970. An older line of Monterey cypress trees borders the east side of the area. To the west of the access road are traces of its continuation down the cliff to the site of the Coast Guard boathouse on Bonita Cove, which was initially built in 1912 and removed around 1955, leaving behind the existing concrete slab. There are wood piles and steel rails remaining from the associated dock and boat ramp (see fig. 1.106). The excavated cliff face



Figure 1.112. The access road to the former Life-Saving Station (Coast Guard housing area), looking east toward School Road, 2009. This road originally continued down to the boathouse on Bonita Cove. In the distance is the garage and to the right is Quarters D. (SUNY ESF)



Figure 1.113. The former Life-Saving Station, looking southwest across the central lawn with Point Bonita in the distance, 2009. At left is Quarters A, and at right, the hose shed and bell. The main station building stood in the lawn at upper right until ca. 1966. (SUNY ESF)



Figure 1.114. The masonry cisterns that originally stored water for the steam fog signal at Point Bonita, located along the southeastern side of the former lighthouse keepers' area, looking southeast, 2009. (SUNY ESF)



Figure 1.115. The former Point Bonita lighthouse keepers' area looking west along the Lighthouse Trail (gated road at left) toward Bonita Ridge, 2009. The two dwellings were in the area to the right of the Lighthouse Trail and on the site of the new Field Road turn-around at right. (SUNY ESF)

to the east of the boathouse site is a former rock quarry used by the Army to build the Endicott batteries at Fort Barry beginning in ca. 1901.

The interior of the area features an upper terrace along the road that is retained by a low stone wall bordered by a concrete walk, with a fire hose shed in the middle that dates to the original development of the Life-Saving Station. At the northeast corner of the site is the garage (PB1342) dating to ca. 1900 and Quarters 19 (formerly Quarters D), which was built in 1938 and expanded in 1961 (see fig. 1.112). A large lawn, with panoramic views to Point Bonita and the Pacific, is crossed by two concrete walks that meet at a flagstaff, which is partly obstructed by a Monterey pine tree (fig. 1.113). The walks lead to two ranch-style houses on the lower terrace that were built in 1961 and are designated Quarters 17 (PB1346) and Quarters 18 (1344). The three quarters are partially enclosed by privacy stockade fences, and are painted tan instead of the historic white that allowed the buildings to function as daymarks. The main station building, a large, towered Shingle-style building demolished in 1962, was located in the lawn at the northwest corner of the site.

West of the Coast Guard housing area off the south side of the Field Road turn-around, near the former entrance to the keepers' area, are two large masonry cisterns that were built in ca. 1871 to service boilers for the original fog signal at Point Bonita (fig. 1.114).

The site of the lighthouse keepers' area, which contained two residences built in ca. 1875 and 1908 and demolished in ca. 1961, is between the Lighthouse Trail and Bonita Ridge to the north and west (fig. 1.115). The most conspicuous remnant is a grove of Monterey cypress that originated around 1910 as hedges and has since spread along Bonita Ridge and down a gully toward the site of the Coast Guard boathouse. Within the Monterey cypress grove is a retaining wall, masonry cistern, remains of a wood water tank, and a concrete utility pit associated with the ca. 1875 keeper's dwelling. The actual house site is beneath an abandoned gravel parking area. There

are no visible traces of the 1908 assistant keepers' duplex built on the site of the original 1855 dwelling in the open ground to the east and partly occupied by the recently built Field Road turn-around. Non-native ornamental vegetation, including calla lily, ice plant, narcissus, red hot poker, periwinkle, and German ivy, are most likely remnants from the lighthouse keepers' gardens.

FORT CRONKHITE (DRAWING 1.10)

Fort Cronkhite, a historic World War II-era military reservation with some Taft-era and Cold War military development, encompasses 803 acres along the Pacific coast north of Fort Barry (figs. 1.116, 1.117). The southern boundary with Fort Barry is formed by a line through the center of Rodeo Lagoon and turns north at the Bunker Road causeway, west along Wolf Ridge, and then northwest across Tennessee Valley to Coyote Ridge. The part of Fort Cronkhite north of Wolf Ridge at Tennessee Cove is inaccessible from the southern part, except by the Coastal Trail that crosses outside of the military reservation. Most development is concentrated along Rodeo Lagoon and on strategic highpoints around Tennessee Point and on Wolf Ridge. Character areas within Fort Cronkhite include two support clusters, the Cantonment (temporary post) that includes Nike administration area SF-87A, and six defense clusters: Tennessee Point Defenses, Townsley Hill Defenses, Wolf Ridge Defenses, Elk Valley Defenses, Nike control site SF-88C, and Nike launch site SF-87L. Fort Cronkhite is used primarily for outdoor recreation, education, and park operations, with partner uses including NatureBridge at Golden Gate in the Cantonment and the Marine Mammal Center at SF-87L. Historical interpretation is focused on the recently-restored Battery Townsley.

Like the rest of the Headlands, the Fort Cronkhite military reservation is mostly open space shaped by natural landforms, and to a lesser degree by patches of woods and clusters of development. Fort Cronkhite has relatively little tree cover compared to Forts Baker and Barry, primarily introduced Monterey pine and



Figure 1.116. Overview of the southern part of Fort Cronkhite, looking north across Rodeo Beach from Fort Barry toward the Cantonment and Wolf Ridge, 2009. The promontory at far left is Tennessee Point. (SUNY ESF)



Figure 1.117. Overview of the northern part of Fort Cronkhite that includes Tennessee Cove, looking west through Tennessee Valley from near the former military reservation boundary, 2009. The military road is now the Tennessee Valley Trail. (SUNY ESF)



Figure 1.118. The Army reservoir on the hill north of the Fort Cronkhite Cantonment, looking southeast, 2009. The cut around the hill is Bunker Road. (SUNY ESF)



Figure 1.119. An access tunnel to a World War II-era anti-aircraft gun emplacement north of Rodeo Beach, looking southeast with the Cronkhite cantonment in the background, 2009. The split-rail fence is along the Tennessee Valley Trail. (SUNY ESF)

cypress in the Cantonment and SF-87L, and native shrubs and trees along several narrow stream corridors and bordering Rodeo Lagoon. Most of the undeveloped landscape is wide-open scrub and grassland, wetlands, rock ridges, and steep cliffs along the ocean. A major landslide has impacted the western end of Wolf Ridge within the past few decades. There are two main valleys, Rodeo Valley to the south bordering Fort Barry and Tennessee Valley to the north, and the secondary north-south Little Ranch Valley encircled by Bunker Road and Mitchell Road at the rear of Battery Townsley. There are two interior areas of open water, Tennessee Lagoon, which was created by an earthen dam built around 1957, and the natural Rodeo Lagoon on the Fort Barry border. Although shared by both military reservations, Rodeo Lagoon is most visible and accessible from Fort Cronkhite.

There are two main beaches, Tennessee Beach that is accessible only by trail, and Rodeo Beach that is accessible by Mitchell Road. Rodeo Beach is a popular destination at the Headlands for visitors, hikers, and surfers, with municipal bus service from San Francisco available Sundays and holidays. There are picnic areas, restrooms, showers, and parking available along Mitchell Road in and around the Cantonment. An unimproved parking area known as the Surfers' Lot west of the Cantonment was recently removed and the area returned to its native wetlands. The Coastal Trail is on an undefined route along the south side of the beach, and there is a footbridge that crosses Rodeo Lagoon from the middle of the beach to the Cantonment.

Primary built features outside the developed areas aside from roads and trails are largely traces and ruins, except for a large concrete reservoir (FC1100) built in 1941 on a hilltop north of the Cantonment (fig. 1.118). World War II emplacements for .50-caliber machine guns are on the hill east of the Cantonment and along the coast south of Tennessee Beach and north of Rodeo Beach (fig. 1.119). A 40-mm gun emplacement is north of Rodeo Beach in an area now known as Scotty's Bluff. Near here are also

three unidentified shallow excavated areas that date to the Cold War period, and temporary launch sites for Nike missiles used prior to development of the permanent SF-87 launch site near the Cantonment.

FORT CRONKHITE CANTONMENT (DRAWINGS 1.10, 1.11)

The Fort Cronkhite Cantonment, a World War II-era mobilization post built in 1941 with a later Cold War-era redevelopment for the Nike SF-87 administration area built in 1966, is the historic administrative and support center for the military reservation. Compared with the main posts of Forts Baker and Barry, the Fort Cronkhite Cantonment is more utilitarian and dense, is dominated by temporary-style construction, does not have a central parade ground or Quartermaster area, and historically shared a chapel with Fort Barry. It also has a more exposed location than the older main posts.

Today, the Fort Cronkhite Cantonment is home to several park partners and park operations. The primary occupant is NatureBridge at Golden Gate, formerly known as the Headlands Institute, an environmental education organization with branch campuses at Yosemite, Olympic, and Channel Islands national parks. At Golden Gate, NatureBridge provides school and group field science, family and youth programs, professional teacher development, summer youth day camps, and conference and event facilities based out of a core campus at the SF-87 administration area, but also occupying other buildings in the Cantonment.[27] Nearby, the Golden Gate National Parks Conservancy operates the Marin Headlands Nursery, a native plant nursery that supports other park programs to restore and preserve the native ecology of the parklands. The Fort Cronkhite nursery is one of six nursery sites operated by the Conservancy.[28] Home Away from Homelessness, which serves homeless children, operates two cottages at Fort Cronkhite (Buildings 1073 and 1076) where groups of children can play and encounter nature.[29] Building 1062, a two-story barracks that houses park natural resource staff, was



Figure 1.120. Overview of the Fort Cronkhite Cantonment, looking northwest from Fort Barry, 2009. The red roofs are the World War II-era buildings, and the flat-roof one-story buildings date to the Cold War. (SUNY ESF)

for many years home to the Foundation for Deep Ecology.[30] Other uses at the Cantonment include park offices, park staff housing, and park maintenance. Building FC1059 was formerly used as a museum to interpret the World War II and Cold War history of Fort Cronkhite.

Situated at the southern extreme of the military reservation along Bunker Road and Mitchell Road, the Fort Cronkhite Cantonment faces southwest toward Rodeo Beach, and is built on a series of terraces that parallel the shore of Rodeo Lagoon (fig. 1.120). The Cantonment is laid out in a three-part plan consisting of two wings flanking a central administrative area, with a former gun and tractor park (present parking area) to the west, and a parade ground (present parking lot) and service area (warehouse) to the east. Two streams are diverted beneath the terraces and reemerge south of Mitchell Road. A ditch along the hillside above the western part of the Cantonment was built to divert runoff. Traces of World War II-era practice field defenses, most of which are concealed by vegetation., are scattered across the hillside above the west wing.

The Cantonment has thirty-one primary World War II wood-frame buildings, which are standard Army Series 700 barracks, recreation buildings, storehouses, mess halls, and officer quarters. They feature gable roofs with open eaves and asphalt shingles, wood drop siding, multi-paned double-hung sash windows, and concrete pier foundations. The four Nike buildings, designed according to standard Army plans, are horizontal in massing and built of concrete blocks, with flat roofs, small entry porches, and small double-hung sash windows with horizontal muntins. Overhead utility lines on wood poles extend though the Cantonment, perpendicular and parallel to the streets.

West Wing

The west wing consists of four parallel rows of buildings (FC1049–1071, 1077) organized along Mitchell Road, Edison Street, and Kirkpatrick Street, which meet in half-circle alignments at the west end of the Cantonment. The streets are paved in black asphalt and have concrete gutters with red chert aggregate along the uphill sides. Buildings in the inner rows are two stories (except FC1060, 1071), and those in the outer rows are one story (fig. 1.121). In the southern row along Mitchell Road, only two buildings remain in the original row of six. There are also two small board-and-batten shacks (FC1084, 1085) known as "spud bins," which were added during World War II as storage buildings for the mess halls (fig. 1.122). Buildings in the west wing are accessed



Figure 1.121. The west wing of the Fort Cronkhite Cantonment, looking northwest across Rodeo Lagoon, 2009. At far left is the Rodeo Beach parking lot. (SUNY ESF)



Figure 1.122. One of two surviving World War II-era mess-hall storage sheds (FC1084) in the Fort Cronkhite Cantonment, looking northwest, 2011. (SUNY ESF)



Figure 1.123. Walks in the west wing of the Fort Cronkhite Cantonment, looking west along Building FC1061, 2011. (SUNY ESF)



Figure 1.124. The stone retaining wall and former enlisted men's club building along Kirkpatrick Street in the west wing of the Fort Cronkhite Cantonment, looking east, 2011. (SUNY ESF)



Figure 1.125. World War II letter trenches in the hillside above Kirkpatrick Street in the west wing of the Fort Cronkhite cantonment, looking northwest, 2011. A landslide or excavation destroyed the lower parts of the trenches. (SUNY ESF)

by a network of concrete sidewalks that parallel the buildings and have wood steps along the slopes between the terraces (fig. 1.123). Some of the steps and walks have been removed, notably where buildings are missing. Along the north side of Kirkpatrick Street is a stone retaining wall and a former recreation building that originally served as the Enlisted Service Club (FC1077) (fig. 1.124). There are few trees in the west wing, notably a large Monterey cypress along Edison Street and a grove of black acacia behind the Enlisted Service Club. Most of the ground is maintained as turf, except for herbaceous plantings around FC1060 and 1071, and scrub along the base of the upper terrace between Kirkpatrick and Edison Streets.

The west wing retains remnants of the many defensive trenches built within and around the Cantonment during World War II. These include traces of filled trenches near FC1054 and 1055 that are visible in the turf during dry spells. On the hillside above Kirkpatrick Street are exposed, unfilled trenches opposite FC1068 and 1069 that were most likely built as practice defenses (fig. 1.125). Other trenches are to the east and are part of the larger World War II-era practice field that extended up the hillside above the west wing.



Figure 1.126. The Fort Cronkhite Cantonment administration building, looking northeast, 2011. The surrounding trees were removed in 2012. (SUNY ESF)



Figure 1.127. The post exchange (right) and firehouse in the Fort Cronkhite Cantonment center area, looking northwest across Bunker Road, 2011. (SUNY ESF)



Figure 1.128. The remaining World War II-era barracks (right) and bachelor officers' quarters (left) in the east wing of the Fort Cronkhite Cantonment, looking east along Kirkpatrick Street, 2011. (SUNY ESF)

Center Cantonment

The center part of the Fort Cronkhite Cantonment, which originally contained the reservation's administration facilities, is a triangular-shaped area between the west and east wings, bordered by Hagget Street to the west and Glassburn Street to the east. The focal point is the Administration Building (FC1033), a utilitarian Series 700 building that now houses classrooms for NatureBridge. It is distinguished from the other buildings in the Cantonment by its two-story massing, two front entrances, and windows with six-over-six sash and frame awnings (fig. 1.126). The surrounding landscape within the island formed by the surrounding roads is turf with scattered older shrubs of oleander, dracaena, and myoporum. The area was framed by a perimeter line of Monterey pine and cypress, the last of which were recently removed. Along the street in front of the building is the circular concrete base for the original cantonment flagstaff; the existing park flagpole is near the corner of Hagget Street and Mitchell Road. South of the administration building, bordered a line of World War II-era Monterey cypress, is the former post exchange (FC1046) and fire station (FC1045) (fig. 1.127). The post exchange is a park maintenance facility, and the fire station was used up until 2010 as Fire Station 2 of the Presidio Fire Department, but is presently closed. Fire protection is currently provided by the Southern Marin Fire Protection District.[31] North of the administration building at Kirkpatrick and Hagget Streets is the former cantonment guard house (FC1044), and the concrete footings from a Cold War air-raid siren tower.

East Wing and SF-87A

The east wing of the Fort Cronkhite Cantonment contains remnants of World War II-era development along Kirkpatrick Street and Bunker Road, including two, two-story barracks, (FC1034 and 1035) that are used by NatureBridge as classroom space, and a former bachelor officers' quarters (FC1042), which is now park housing (fig. 1.128).



Figure 1.129. The Headlands Nursery complex along Kirkpatrick Street, looking east, 2011. The building at left is a greenhouse, and at right is a potting shed/office. (SUNY ESF)



Figure 1.130. The Fort Cronkhite Commanding Officer's Quarters across from the former parade ground (park maintenance area), looking southeast along Bunker Road, 2011. The house is now used a residence for A Home Away from Homelessness. (SUNY ESF)



Figure 1.131. Overview of SF-87 administration area (NatureBridge campus) in the east wing of the Fort Cronkhite cantonment, looking north, 2009. At upper left is the Headlands Nursery, and in the upper right is the park maintenance area in the former SF-87 launch area. (SUNY ESF)

On the hillside adjoining this building is a multi-use court dating to the Korean War period, and the Headlands Nursery complex developed in ca. 2000 that consists of a potting shed, greenhouse, and two large shade houses built on the site of the Officer Service Club building and a Korean War-era parking lot (fig. 1.129). At the east end of Kirkpatrick Street and Bunker Road across from the former parade ground are two small houses that are used by Home Away From Homelessness, one a former guest house, and the other the Commanding Officer's Quarters (fig. 1.130).

Most of the east wing was redeveloped for the SF-87 administration area that replaced the interior buildings in 1965. Home to NatureBridge at Golden Gate, the area is the companion to the SF-87 launch site, now the Marine Mammal Center, and the SF-87 control site on Hawk Hill (Battery Construction 129) on the Baker-Barry boundary. SF-87A occupies the middle of three original terraces in the east wing, with the lower terrace along Mitchell Road and three-quarters of the upper terrace along Kirkpatrick Street devoid of buildings (fig. 1.131). The lower terrace is maintained as natural grassland, and the upper terrace serves as outdoor classroom space for NatureBridge. Groves of Monterey cypress, first planted in the 1960s, screen the eastern approach to the complex that is accessed by Stennis Street, which dead-ends at a pedestrian zone between the four Nike buildings (fig. 1.132). At either end are two parking lots dating to the Cold War period, and a sunken amphitheater added by the Headlands Institute. The four buildings are the former SF-87 administration building (FC1011), now the Coast Lab; the SF-87 mess hall (FC1012), now Houston Dining Hall; and two SF-87 barracks along the north side of the complex (FC1010, 1013), now the Heron Dorm and Pelican Dorm. The one-story buildings are painted



Figure 1.132. SF-87A, looking east through the central pedestrian zone with the remnant of Stennis Street in the distance, 2011. At right is the former Nike administration building (now the Nature Bridge Coast Lab), and at left is a former Nike barracks (Pelican Dorm). (SUNY ESF)



Figure 1.133. The interior pedestrian zone of SF-87A, looking west toward the Fort Cronkhite administration building, 2011. At right is a Nike barracks (now Heron Dorm). (SUNY ESF)

white instead of Army green. The pedestrian zone between the buildings, which serves as the core of the NatureBridge campus, features large mulched areas, a central flagpole, raised beds with small trees, concrete walks, and shrubs along the building foundations (fig. 1.133). Service access to the buildings is along the south side of the Coast Lab and dining hall.

Rodeo Beach Visitor Parking Lot and Former Surfers' Lot

At the west end of the west wing is a paved visitor parking area on part of the site of a World War II-era staging area for 155-mm guns and tractors (see fig. 1.119). The restrooms and showers for Rodeo Beach, along with a picnic area, are along the west side of this lot. This historic gun and tractor park historically extended west on fill across the foot of Little Ranch Valley, and was until recently used as an unpaved parking area known as the Surfers' Lot. This lot and the World War II-era fill, which included a culvert and concrete headwall, were recently removed to restore the native wetlands.



Figure 1.134. The former Fort Cronkhite parade ground, redeveloped as a visitor parking lot in 2012, looking southeast toward Bunker Road, 2014. The road in the foreground is the non-historic entrance drive to the Marine Mammal Center. (SUNY ESF)

Parade Ground, Warehouse, and Incinerator Site

The easternmost part of the Fort Cronkhite Cantonment along Bunker Road contains the former parade ground, now a visitor parking lot (fig. 1.134). The contemporary drive to the Marine Mammal Center cuts through the parade ground site, and the western third of the parade ground is used by park maintenance as part of its facility in the adjoining former SF-87 launch site. On the prominent hill to the southeast are traces of a World War II



Figure 1.135. The Fort Cronkhite warehouse on Bunker Road east of the Cantonment, looking west, 2009. (SUNY ESF)

.50-mm anti-aircraft gun emplacement. Farther east on Bunker Road is a large Series 700 warehouse (FC1111) (fig. 1.135). At the foot of the hill west of the warehouse is an old red-chert quarry used in development of Fort Cronkhite, and the site of the cantonment incinerator.

TENNESSEE POINT DEFENSES (DRAWING 1.10)

The Tennessee Point Defenses are a small cluster of Taft and World War II-era secondary defensive works on the promontory in the Pacific below Battery Townsley (fig. 1.136). Originally a 5.5-acre military reservation of its own established in 1914, the area was incorporated into Fort Cronkhite in 1937. Access is by a gravel road (now a trail) that winds along the coast from Mitchell Road and the Cantonment. Remnants of a chain-link fence, added in ca. 1970, mark the former limits of an ammunition destruction area and align with the original reservation boundary. A narrow canyon to the south has remnants of a concrete pumphouse and dam used to supply the original reservation. The broad gravel terrace at the northern part of the point marks the site of the two disappearing searchlights built in 1915; the adjoining valley with Monterey cypress trees at the bend in the access road was the site of the accompanying powerhouse. Uphill from the powerhouse site is a subsurface concrete structure that was most likely a searchlight controller booth built in ca. 1915. In the west cliff face of the point are two reinforced concrete fire-control stations built in 1917: B2 Mendell, later used as a searchlight controller booth and now collapsed, and B2S2 Guthrie.



Figure 1.136. Overview of Tennessee Point showing the access road from the Cantonment and grove where the searchlight powerhouse stood, looking southeast, 2009. The two structures in the cliff face are B2 Mendell (left) and B2S2 Guthrie (right). At the upper margin are the Battery Townsley casemates. (Copyright (C) 2002-2017 Kenneth & Gabrielle Adelman, California Coastal Records Project, www.Californiacoastline.org)

In the uppermost part of the area are three fire-control stations, bordering the chain-link boundary fence. The two west of the fence within the original reservation are post-World War I cut-and-cover reinforced concrete structures built in 1921 to replace earlier frame "emergency" stations erected during World War I. Last designated M2 Mines I and B3S3 Battery Construction 243, they are the same design as B1S1 Wallace on Rodeo Hill at Fort Barry, with hexagonal fronts, and



Figure 1.137. Post-World War I fire-control stations at Tennessee Point, looking northeast, 2007. The lower station is M2 Mines 1, and the upper one is B3S3 BC243. (John Martini)



Figure 1.138. Overview of the Townsley Hill Defenses looking south from Wolf Ridge with Little Ranch Valley toward the left, 2009. Battery Townsley (rear side) is the hill to the right; the Townsley PSR room is beneath the grove of Monterey cypress to the left. (SUNY ESF)



Figure 1.139. Battery Townsley looking south showing one of the two casemates and inconspicuous character of the defensive work, 2009. (SUNY ESF)

topped by rock camouflage and angle iron supports for camouflage netting dating to World War II (fig. 1.137). Some of the rock camouflage and plantings remain. Immediately to the south are underground remnants of a World War II-era hutment. Uphill from these stations outside of the original reservation is B2S2 Rathbone, a pillbox-type fire-control station with a curved steel roof completed in 1941, similar to B2S2 Chamberlain and M4 Mines II at the Bird Island Overlook in Fort Barry.

TOWNSLEY HILL DEFENSES (DRAWING 1.10)

The Townsley Hill Defenses extend from Battery Townsley on the west to the Townsley Reserve Magazine on the east, and include Little Ranch Valley that forms the rear approach to the battery (fig. 1.138). Bunker Road was the historic primary road to Battery Townsley, but Mitchell Road now serves as the main access, and is part of the Coastal Trail, which continues uphill off-road to Wolf Ridge. The hilly landscape is mostly open and characterized by grassland, chaparral, and rocky outcrops. Little Ranch Valley has groves of willow along the stream banks and thick wetland vegetation in low areas.

Battery Townsley, completed in 1940 as part of the nationwide "1937 Project" to modernize harbor defenses, is the largest defensive work in the Headlands and the northern counterpart to Battery Davis at Fort Funston. Battery Townsley has been restored and is open to the public during the first Sunday of each month. Located on Hill 417 (a number referring to the elevation), Battery Townsley is a cut-and-cover reinforced concrete battery with two casemated gun emplacements designed for sixteen-inch caliber guns (fig. 1.139). Two concrete circular gun mounts outside the battery between the two casemates are the mounting blocks from three-inch caliber rifles that were used for sub-caliber practice by the troops staffing the battery. Tunnels provide access from Mitchell Road to each of the casemates (fig. 1.140). Another portal gives access to the interior rooms. The hillsides above the work



Figure 1.140. The north portal of Battery Townsley that leads to Gun #1, looking west, 2009. To the right are stumps and erosion fabric from removal of Monterey pine and cypress trees. (SUNY ESF)



Figure 1.141. The tree-covered Townsley PSR room, detail of one of the two portals looking west, 2009. The structures in the background are shafts for ventilation and other mechanical systems. (SUNY ESF)



Figure 1.142. The reserve magazine for Battery Townsley, looking southwest, 2009. This area is now used in part for park maintenance and storage. (SUNY ESF)

have remnants of erosion fabric and stumps from clearing of Monterey pine and cypress that had grown up around the battery since the 1960s. The original guns were scrapped after World War II, but a matching naval gun tube (68 feet long, 120 tons) is today displayed outside the battery, and plans are underway to install it on a replica carriage in the south casemate (Gun #2).

There are two major secondary works in this defensive cluster, the Townsley PSR Room (FC1008) and the Townsley Reserve Magazine (FC1130). The PSR (Plotting, Spotting, Radio) room is a cut-and-cover structure along Mitchell Road that is concealed by Monterey pine and cypress that were planted after the war, probably by the Boy Scouts (fig. 1.41). The Townsley Reserve Magazine, located approximately a half mile to the east of the battery off Bunker Road, is on the east side of the hill north of the Fort Cronkhite Cantonment. It is a large cut-and-cover structure with five bays and is currently used for park maintenance and storage (fig. 1.142). Northwest of Battery Townsley are the traces of access roads to the World War II-era SCR-584 radar station, where huge concrete blocks had previously been placed in 1941 to test the firing power of Battery Townsley.

Little Ranch Valley, which was the Gioli Ranch and later Silva Little Ranch prior to Army acquisition in 1938, became heavily fortified with defensive positions on the approach to Battery Townsley, and its buildings became decoys, with the last removed in ca. 1975. Today, the valley appears as a largely natural landscape, but hidden beneath the vegetation are numerous traces of military and ranch development (fig. 1.143). At the upper end of the valley is a pumphouse (FC1015), collecting reservoir (FC1015A) and sumps (FC1015B, C) from the original water supply system for Battery Townsley that was improved from an earlier ranch system (another storage reservoir, FC1152, is farther up Wolf Ridge). The many foxholes, trenches, tent sites, wood revetments, and machine gun pits and other field defenses in the valley, dating to the panic of



Figure 1.143. Little Ranch Valley, looking south toward Rodeo Beach with Mitchell Road at right and Bunker Road at left, 2009. The arrow indicates the approximate site of the ranch buildings. (SUNY ESF)

US entry into World War II when Army planners feared a Japanese invasion from Rodeo Beach, are hidden beneath vegetation. The valley also includes the site of a World War II commando training area and mock village, and a later training area known as Vietnam Village. Little is known about surviving traces in these brush-covered areas.

WOLF RIDGE DEFENSES (DRAWING 1.10)

The Wolf Ridge Defenses is an expansive and dispersed cluster of World War II and Korean War-era defensive works overlooking the Pacific at elevations upwards of 850 feet above sea level (fig. 1.144). Bunker Road is the historic access to this area, but has been partially destroyed by a massive landslide on the lower western face of the ridge. The Wolf Ridge Defenses are accessible to the public by foot, along the Coastal Trail that winds up the hillside to connect the sections of Bunker Road dead-ended by the landslide. Park vehicles can access the area from the north by the Miwok Trail through Gerbode Valley. There are two primary defensive works, Anti-Aircraft (AA) Battery #1 and Anti-Aircraft Artillery (AAA) Position No. 10, along with a large number of secondary defense works. The landscape is windswept and barren, characterized by grassland, chaparral, and rock outcroppings, with panoramic views in nearly all directions. The arid and remote location



Figure 1.144. Overview of the Wolf Ridge Defenses, looking west along Bunker Road near the Nike SF-88 control site, 2009. Battery Townsley is at the far left. (SUNY ESF)



Figure 1.145. The western part of AA #1 looking west, 2009. The arrow indicates the platform for Gun #1, and at the base of the hill are the storeroom and powerhouse-magazine portals. (SUNY ESF)



Figure 1.146. The AA Battery #1 director's pit (concrete structure on top of the hill to the left) and height-finder base (concrete structure to the right), looking east, 2009. The timber and sheet-metal ruins are from the hutment anteroom. (SUNY ESF)



Figure 1.147. Remains of one of the three gun pits of AAA Position No. 10 at Wolf Ridge (indicated by arrow), looking northwest, 2009. The concrete in the foreground shows the imprint of concrete sandbags that lined the approach. (SUNY ESF)

has helped avoid the vandalism, redevelopment, and cover of vegetation characteristic of other defensive works in the Headlands.

AA Battery #1, completed in 1940 as the newer counterpart to AA Battery #2 on Rodeo Hill at Fort Barry, is made up of a number of dispersed and inconspicuous elements that span the ridge along a distance of nearly 1,500 feet. The functional core of the battery consists of three 18-foot diameter concrete firing platforms on top of a hill, designed for three-inch caliber guns. Gun platform #1 is visible, but the others are either covered by earth and vegetation, or have been removed. These were originally accessed by a spur road since destroyed by a landslide that wound up from Bunker Road along the lower part of the hill. Footings from the fuel tanks that serviced the battery (FC1261) remain at the end of the road. Along the opposite (east) side of the hill, off another unpaved spur road from Bunker Road, are the storeroom (FC1275) and powerhouse-magazine (FC1274), both cut-and-cover structures with concrete portals (fig. 1.145). Next to the storeroom are the foundations from the battery's ready room (FC1275A). At the terminus of the spur road, at the top of a steep hill 600 feet east of the storeroom, are the concrete director's pit and platform for the height finder (FC1200A) (fig. 1.146). Surrounding these structures is a hutment, a complex of timber and corrugated sheet-metal earth-covered structures where the soldiers who operated AA #1 and the other defensive works on Wolf Ridge lived during World War II. The hutment includes an office and day room-mess (FC1200B), an anteroom (FC1200C), and a Quonset-type storeroom (FC1200D). The hutment is in poor condition and most of the structures are collapsing.

Occupying the western edge of the same hilltop as the AA Battery #1 gun platforms are the remnants of the Korean War-era AAA Position No. 10, a dispersed three-gun emplacement built in 1951 that was a counterpart to AAA Position No. 81 at the Bird Island Overlook in Fort Barry. Each of the emplacements, which were designed for portable

120-mm antiaircraft guns, are today marked by remnants of concrete-lined polygonal gun pits (FC1200G) that were originally surrounded by concrete sandbag revetments (fig. 1.147). Gun pits #4 and #5 are connected to an underground shelter (FC1200F) built of Quonset-type corrugated metal structures, and gun pit #6 is attached to a second; a third underground shelter is near gun platform 1 of AA Battery #1.

On the southwestern slopes of Wolf Ridge downhill from AA Battery #1 and AAA Position No. 10 emplacements are five fire-control stations and a powerhouse built between 1940 and 1944 that form the largest such cluster in the Headlands. These are within and bordering the large landslide. The uppermost station near the 650-foot elevation line is B1 S1 Townsley (FC1273), a rectangular concrete structure with a side access portal and substantially intact camouflage consisting of rocks, earth, and vegetation (fig. 1.48). In front of the work is a manhole. Fifty feet lower along the very edge of the landslide are G1 Cronkhite (group control) (FC1272), a pillbox-type station with a rounded steel roof, and BC Townsley (Battery Commander station) (FC1271), which is similar to B1S1 Townsley (fig. 1.49). Fifty feet south of BC Townsley is a reinforced concrete powerhouse (later switchboard room) that has lost most of its earthen cover. Below these were two rectangular-fronted fire-control stations, B4S4 Davis (for Battery Davis at Fort Funston) completed in 1941 and B1S1 BC 129 for Battery Construction 129 at the Baker-Barry boundary, completed in 1943, but never functional. The reinforced concrete structures remain intact, but slid approximately fifty feet downhill due to the large landslide.



Figure 1.148. Fire-control station B1S1 Townsley, looking east, 2009. Much of the original naturalistic camouflage remains. (SUNY ESF)



Figure 1.149. BC Townsley (right arrow) and powerhouse (left) looking west, 2009. The lower land below and to the side/rear of BC Townsley is part of the large landslide. (SUNY ESF)

With its high elevation along the coast, the Wolf Ridge Defenses were a prime location for World War II-era radar installations. Approximately 600 feet east of AA Battery #1 on the highest point within the area are the remains of a general surface radar installation, Surface Craft Radar (SCR)-682 #2, completed in 1944. The remains, accessible by a spur road off Bunker Road, include four concrete footers from a twenty-five-foot-tall steel tower, and a concrete slab foundation from a powerhouse. At a lower elevation at the western end of the ridge along the access road to the AA Battery #1 guns are remnants from SCR-296 #4 (FC1259), including concrete pylon footers from the radar tower, and



Figure 1.150. Remnants of SCR-296 #4 radar installation at the western foot of Wolf Ridge, looking northwest, 2009. In the foreground is the original access road, which has been cut off by the landslide on the western face of Wolf Ridge (off left side of photograph). (SUNY ESF)



Figure 1.151. The massive foundation and earthen embankment of a Cold War-era acid storage warehouse, looking northwest with Tennessee Valley in the background, 2009. In front is the asphalt driveway apron. (SUNY ESF)



Figure 1.152. A well-preserved World War II-era concrete sandbag-type gun emplacement, designated 40mm AA AW #2, looking west with the AA Battery #1 storeroom and powerhouse-magazine in the background, 2009. (SUNY ESF)

foundation slabs from an antenna house and two power houses (fig. 1.150). North and east along the access road is a large raised rectangular concrete foundation (FC1260) from a Cold War-era acid storage warehouse dating to 1957 (fig. 1.151).

The Wolf Ridge defenses also retain a number of World War II-era foxholes and temporary concrete sandbag-type emplacements for anti-aircraft artillery. The foxholes, located near fire-controls stations and the AA Battery #1 hutment, are difficult to discern due to vegetation and erosion that has partially filled the shallow pits. Four of the concrete sandbag emplacements survive along the ridgeline from near B1 S1 Townsley east to near the SCR-682 radar foundations (fig. 1.152).

ELK VALLEY DEFENSES (DRAWING 1.10)

The Elk Valley Defenses is a small cluster of secondary World War II-era defense elements at Tennessee Cove and the foot of Tennessee Valley in the remote northern part of Fort Cronkhite (fig. 1.153). Elk Valley is the earlier name of Tennessee Valley that the Army used to define the group of defenses that supported the North Channel submarine minefield in the Pacific. Access to the area is by the Tennessee Valley Trail, formerly an Army road that extended west from a right-of-way along an old ranch road from Route 1 north of Sausalito, and terminated in a turn-around just above the beach. The landscape, framed by the steep valley walls and the horizon of the Pacific, consists of rock cliffs, pebbly beach, grassland, chaparral, and wetlands.



Figure 1.153. Overview of the Elk Valley Defenses at Tennessee Beach, looking north from Wolf Ridge, 2009. The structure at the top of the cliff is fire-control station M4 Mines 1. (SUNY ESF)



Figure 1.154. Fire-control station M4 Mines I at the top of the cliff above Tennessee Beach, looking northwest, 2011. The structure has lost its earthen cover. (SUNY ESF)



Figure 1.155. Cable manhole Mines I, looking southeast with the Tennessee Valley Trail to the right and trail to M4 Mines 1 at left, 2011. The hills in the distance are outside Fort Cronkhite, but are still within the Marin Headlands unit of Golden Gate National Recreation Area. (SUNY ESF)

The Elk Valley defenses consist of one fire-control station, one powerhouse, and a cable manhole on the north side of the valley, and a cable hut on the south side. This last structure, which housed the terminus of the cable connecting Elk Valley with the main part of Fort Cronkhite, is not visible and is most likely buried at the foot of the slope off the southeast end of the beach. An Army access road off Tennessee Valley Trail serves as the current trail to the two works at the top of the north cliff. At the terminus of this road is M4 Mines 1 (FC1206), a reinforced concrete fire-control station completed in 1944, with a rounded front and side portal (fig. 1.154). The structure is covered in graffiti and the surrounding area is heavily eroded, with most of the earthen cover and camouflage gone. Approximately 100 feet to the east is the reinforced concrete powerhouse for Mines I (FC1206A), which retains its earthen cover and is surrounded by trees. At the base of the cliff at the end of Tennessee Valley Trail is the cable manhole for Mines 1 (FC1206B), completed in ca. 1940 (fig. 1.155). A small portion of the formerly underground communications cable is visible nearby. A bench above the work is oriented toward views looking east through the valley.

NIKE LAUNCH SITE SF-87L (DRAWING 1.10)

The Nike SF-87 launch site is a redeveloped Cold War-era complex of missile launch pads and support building located off Bunker Road northeast of the Fort Cronkhite Cantonment. Its companion control site is SF-87C on Hawk Hill (BC 129) at the Baker-Barry boundary, and its administration area is SF-87A in the Fort Cronkhite Cantonment (NatureBridge campus). Today, SF-87L is occupied by a park maintenance facility and the Marine Mammal Center in two separate areas of the site. The mission of the Marine Mammal Center, a 30,000-member park partner founded in 1975 at Fort Cronkhite, is to expand knowledge of marine mammals and foster conservation of their ocean environment. The core work of the center is science, education, and the rescue and rehabilitation of sick and injured



Figure 1.156. The Marine Mammal Center at SF-87L (launch site), looking north, 2009. A remaining Nike feature is the one-story white building (FC1104, noted by arrow), formerly the Ready Room (SUNY ESF)



Figure 1.157. The southern part of the SF-87L Limited Area used by park maintenance, looking west, 2009. The Nike buildings from left to right include the flammable storage shed, standby generator building, and missile assembly and test building. (SUNY ESF)



Figure 1.158. The northern part of the SF-87L Limited Area used by park maintenance, looking west, 2009. The building at left is the Nike acid fuel station. This historic planted berm is at left. (SUNY ESF)

marine mammals. The Marine Mammals Center is open to the public daily and offers exhibits and animal viewing areas.[32]

The SF-87L site, completed in 1955, measures approximately 1,200 feet long and 800 feet at its widest, and is terraced into the hillsides above the old Fort Cronkhite parade ground, now a visitor parking lot (see Fort Cronkhite Cantonment). The area is partially enclosed by remnants of a Nike chain-link security fence. The original main entrance drive, now cut-off and serving only the park maintenance area, is off Bunker Road along the west side of the parade ground. The entrance to the Marine Mammal Center is from a contemporary driveway off Bunker Road that extends through the middle of the parade ground.

SF-87L consists of two standard Nike zones: the Exclusion Area in the eastern part that contained the missile launch pads and is now occupied by the Marine Mammal Center, and the Limited Area in the western part of the site that contained the Nike support facilities and is now used as the park's roads and trails maintenance facility. The Exclusion Area has been substantially redeveloped by the Marine Mammal Center with new buildings, driveways, and a parking lot (fig. 1.156). The underground Nike missile magazines remain, but have been retrofitted for use by the center. The only intact above-ground Nike feature that remains is the former ready room (FC1104) on the south side of the launch area. The area to the south of the launch pads was the former dog kennel area, which is now used for staging and storage. Southeast of the launch area are two rows of four overgrown earthen revetments that contained the temporary launchers for Nike SF-87 built in 1954 prior to the permanent site.

The Limited Area, which unlike the one at SF-88L is separated from the Exclusion Area by approximately 300 feet, consist of a cluster of buildings along a loop drive with a planted berm in the middle. Monterey pine and cypress are on the berm and have spread to form a large grove around the west,

north, and east sides of the Limited Area. On the south side of the berm are three Nike buildings: a flammable storage shed (FC1120), standby generator building (FC1107, present Roads and Trails office), and missile assembly and test building (FC1106, now a garage) built between 1955 and 1965 (fig. 1.157). On the north side of the berm is the acid fuel station (FC1109, now an equipment shed) built in 1959, two small Nike sheds (FC1108, 1121), and a contemporary open vehicle shed (fig. 1.158). All of the buildings, which are painted white with brown trim, are used for park maintenance purposes. Vehicles, machinery, and storage trailers line the loop road.

NIKE CONTROL SITE SF-88C (DRAWING 1.10)

The Nike SF-88 control site, developed between 1954 and 1962, is an abandoned Cold War-era complex of missile radar facilities located at the terminus of Bunker Road on Wolf Ridge, at a high point known as Hill 88 at 980 feet above sea level (fig. 1.159). The companion launch site is the restored SF-88L at Fort Barry, and the associated administrative area is SF-88A, now the Point Bonita YMCA at Fort Barry. Due to the landslide on the western slope of Wolf Ridge that destroyed part of Bunker Road, there is no vehicular access to SF-88C from the main part of Fort Cronkhite. Hikers can reach the site from the Coastal Trail and Wolf Ridge Trail, and park vehicles can use the Miwok Trail from the north. The complex is surrounded by a chain-link fence and extends nearly 1,200 feet from east to west, and approximately 500 feet from north to south. The landscape is open with panoramic views of the Bay Area in all directions. The surrounding slopes of Wolf Ridge are primarily chaparral, grassland, and rock outcrops.

Unlike the SF-87C site on Hawk Hill, SF-88C retains nearly all of its built features, although most are stripped of doors, windows, and equipment. The site has five



Figure 1.159. The SF-88 control site on Wolf Ridge, looking east along Bunker Road showing structures on the leveled ridgetop, 2009. (SUNY ESF)



Figure 1.160. A sign near the entrance to SF-88C, with the pedestals for the TRR and TTR radar in the background, looking east, 2009. The steel platform in the center background collapsed while under repair and was removed in 2013, leaving the concrete pedestal. (SUNY ESF)

concrete-block flat-roofed buildings, which were recently repainted, repaired, and sealed. There are five concrete pads and pedestals that originally supported the radar antennae (two of which are on display at the restored SF-88 launch site) that were once protected by white geodesic domes visible from across the Bay Area.

The entrance to SF-88C is through a chain-link gate with a concrete-block sentry station (FC1179). Just beyond is a helipad and a low concrete wall painted with the battalion insignia and an image of the Golden Gate Bridge, and fronted by a brick-edged flower bed (fig. 1.160). The black asphalt drive winds around and through a core area of gravel and asphalt containing the radar pads, pedestals, and support buildings. In the center are two pedestals, one for the Target Tracking Radar (TTR, FC1197) that has lost its platform, and the other for the Target Range Radar (TRR, FC1194). On the southern side extending out above the slope above a concrete retaining wall is the pad for the Missile Tracking Radar (MTR, FC1196), and on level ground nearby is the Low Powered Acquisition Radar (LOPAR, FC1195) pad, both surrounded by pipe railing. On the north side of the core area is a hexagonal pad for the High Powered Acquisition Radar (HIPAR, FC1187) and its support building (FC1180) that is built out from the slope above a concrete retaining wall (fig. 1.161). The east side of the core area is bordered by the Integrated Control Center (FC1183, also known as the Interconnecting Corridor Building) and Generator Building (FC1182) (fig. 1.162). Nearby are concrete pads where the



Figure 1.161. The HIPAR building on the north side of the core of SF-88C, looking north showing recent repairs, 2014. The green colors were a standard Nike paint scheme. (Golden Gate National Recreation Area)



Figure 1.162. The SF-88C Integrated Control Center building at left and generator building at right, looking east though the core area, 2009. The buildings were sealed and painted in 2014. (SUNY ESF)



Figure 1.163. The SF-88C ready room, looking east from the core area, 2009. At the top of the hill in the distance is the base of the bore site mast. (SUNY ESF)

radar control vans, which functioned as part of the Integrated Control Center, were parked.

East of the core area and down a steep slope is the Ready Room (FC1186) that housed the men stationed at SF-88C (fig. 1.163). It is accessed by a drive to the north and a long flight of concrete steps to the south. A dirt road continues east to a rise at the eastern end of SF-88C that contains the base for the Bore Site Mast (FC1193), which was used to calibrate electrical, radar, and optical instruments used in tracking the missiles.

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30 The Foundation for Deep Ecology is an organization that supports education and advocacy on behalf of wild nature, with offices presently on Union Street in San Francisco. Foundation for Deep Ecology, "Our Mission," http://www.deepecology.org/mission.htm (accessed December 18, 2012).

31 Wiki, "History of the Presidio Fire Department," http://presidiofire.com/Wiki/tabid/112/Default.aspx?topic=History+of+the+Presidio+Fire+Department (accessed December 18, 2012).

32 Marine Mammal Center website, http://www.marinemammalcenter.org/ (accessed January 2, 2013).

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite

Golden Gate National Recreation Area
Sausalito, California

Fort Baker
Existing Conditions Plan

National Park Service
Olmsted Center for Landscape Preservation
www.nps.gov/oclp

in partnership with
Department of Landscape Architecture
SUNY College of Environmental
Science and Forestry, www.esf.edu/la/

SOURCES

1. NPS, Marin County GIS data
2. NPS, Land status map, 2002
3. US Army, Fort Baker general site plans, 1972
4. Coastal California Records Project photographs, 1972
5. Aerial photographs, 1972, 1987, 2012

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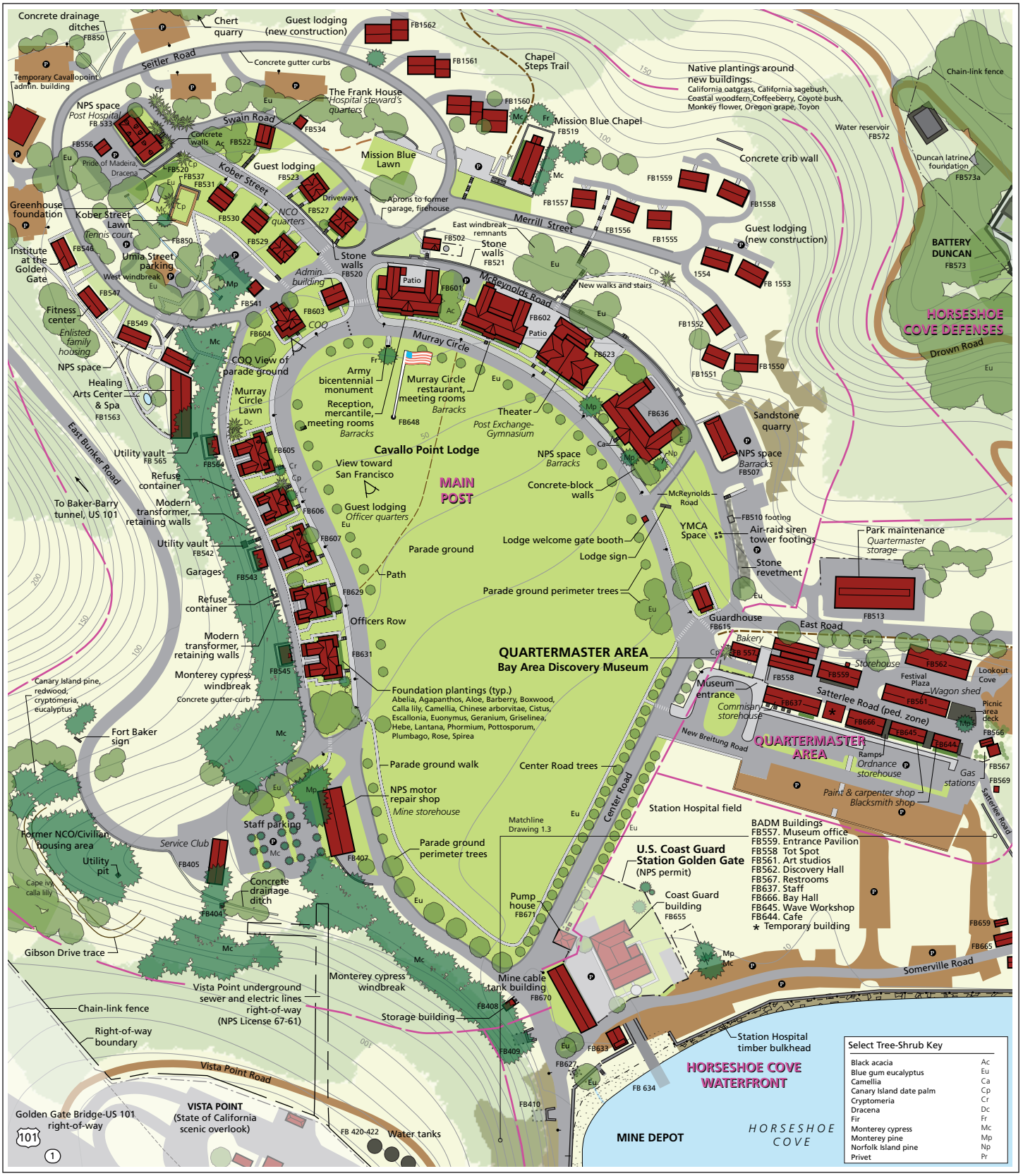
LEGEND

- Property boundary
- Historic reservation boundary
- Character area boundary
- Building
- Structure, Substructure
- Wall
- Water tank, reservoir
- Post-Civil War-era battery
- Endicott-era battery
- Earth parapet of defensive work
- Temp. gun emplace.
- Road, asphalt
- Road, earth/gravel
- Parking area
- Trail
- Fence
- Remnant, trace
- Bridge
- Campground
- View
- Deciduous trees
- Coniferous trees
- Native woods
- Chapparal or scrub
- Turf, groundcover
- Grassland or bare earth
- Riparian vegetation
- Wetland
- Stream
- Rock cliff
- Rip rap
- Beach
- Cut, Fill
- 50' contours
- Power line

NOTES

1. Plan shows landscape in 2014.
2. All features shown at approximate location and scale.
3. All batteries feature panoramic views from parapets.
4. Plan does not show all overhead utility lines, trails, jeep roads, antiaircraft gun emplacements, or small-scale features.
5. White mask indicates limits of Fort Baker study area and areas not managed by NPS.

Drawing 1.1



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NOTES
1. All features are shown in approximate scale and location.
2. Plan shows landscape in 2014.
3. Plan does not show all small-scale features.
4. Historic building uses shown in italics.
5. Masked areas not managed by NPS.
6. See drawing 1.1 for sources and other notes.

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LEGEND

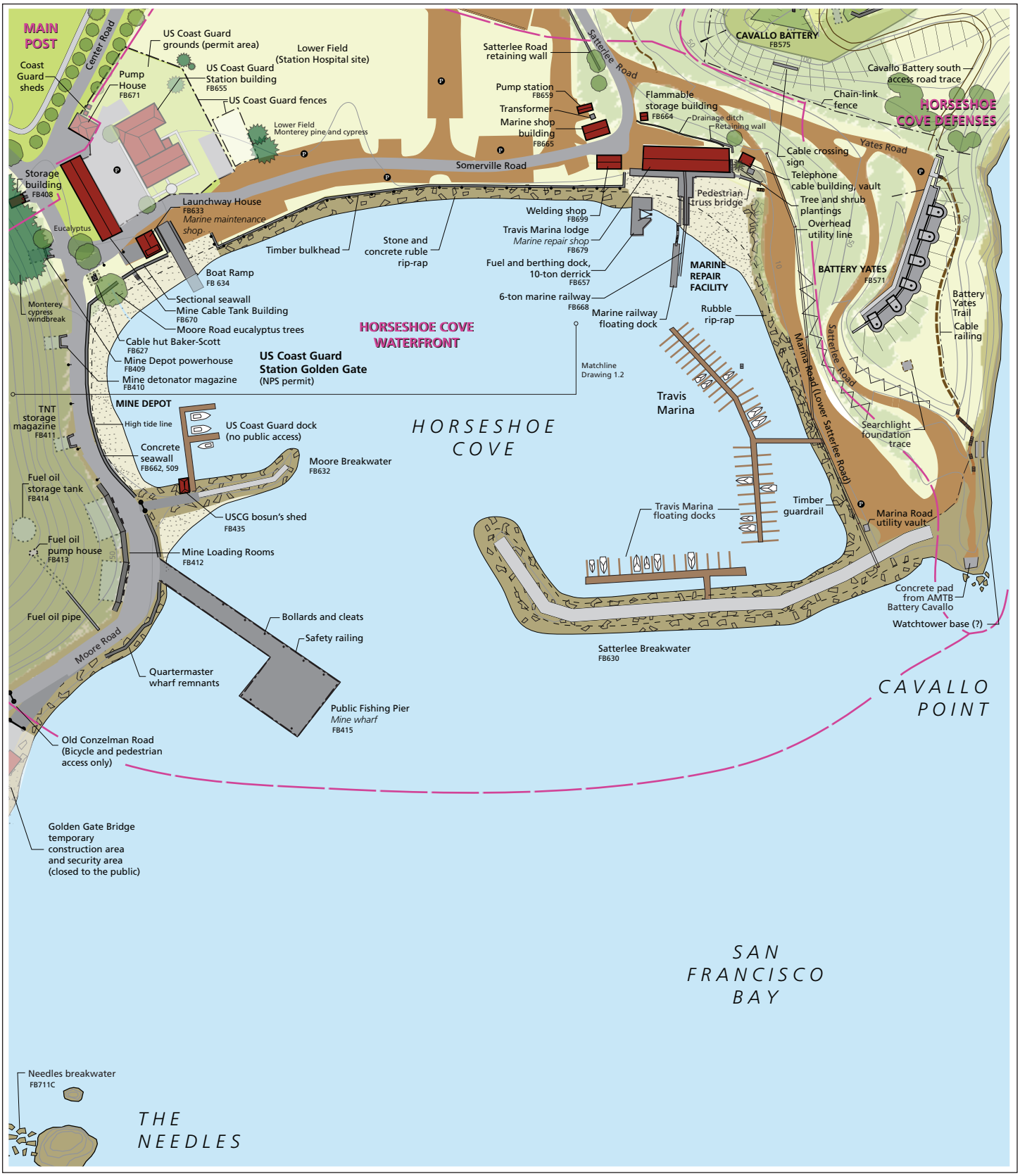
- Building
- Structure, Substructure
- Road, asphalt with gutter curb
- Road, gravel/earth
- Parking area
- Sidewalk, Steps
- Trail
- Wall, Fence
- Gate, Bollards
- Street light
- Planted tree (Palm, deciduous, conifer)
- Shrub, planted bed
- Woods, scrub
- Turf, groundcover
- Grassland or bare earth
- Rip rap
- Rock, rock cliff
- Beach, stream

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite
Golden Gate National Recreation Area

Main Post of Fort Baker Quartermaster Area Existing Conditions Plan

0′ 100′ 300′

Drawing 1.2



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Illustrator CS 5, 2014

NOTES
1. All features are shown in approximate scale and location.
2. Plan shows landscape in 2014.
3. Plan does not show all small-scale features.
4. Historic building uses shown in italics.
5. Masked areas not managed by NPS.
6. See drawing 1.1 for sources and other notes.

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LEGEND

- Building
- Structure, Substructure
- Road, asphalt
- Road, gravel/earth
- Parking area
- Sidewalk, Trail
- Wall
- Fence
- Gate
- Street light
- Turf
- Grassland or bare earth
- Woods, scrub
- Planted tree (deciduous, conifer)
- Rip rap
- Rock cliff
- Cut, Fill
- Beach, stream

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite
Golden Gate National Recreation Area

Horshoe Cove Waterfront Existing Conditions Plan

0' 100' 200'

Drawing 1.3



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NOTES
1. All features are shown in approximate scale and location.
2. Plan shows landscape in 2014.
3. Plan does not show all small-scale features.
4. See drawing 1.1 for sources and other notes.

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LEGEND

- Building
- Structure, Substructure
- Road, paved
- Road, unpaved
- Parking area
- Trail, Stairs
- Bridge
- Wall
- Fence or guiderail, gate
- Campsite, Picnic table
- Grassland or bare earth
- Woods, scrub
- Deciduous woods, Coniferous woods
- Riparian vegetation
- Mown turf
- Cut, Fill
- Rock, rock cliff
- Trace or remnant

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite
Golden Gate National Recreation Area

Gravelly Beach Defenses Existing Conditions Plan

0' 100' 200'

Drawing 1.4

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite

Golden Gate National Recreation Area
Sausalito, California

Fort Barry
Existing Conditions Plan

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SOURCES

1. NPS, Marin County GIS data
2. US Army, Fort Barry General Site Map, 1970
3. Coastal California Records Project photographs, 1972–2010
4. Aerial photograph, 2012

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LEGEND

- Jurisdiction boundary
- Historic reservation boundary
- Character area boundary
- Building
- Structure, Substructure
- Wall
- Water tank, reservoir
- Endicott-era battery
- WWII-era casemated battery
- Earth parapet of defensive work
- Temp. gun emplace., machine gut pit
- Road, asphalt
- Road, earth/gravel
- Parking area
- Trail
- Fence
- Remnant, trace
- Bridge
- Campground
- View
- Deciduous trees
- Coniferous trees
- Native woods
- Chapparal or scrub
- Managed turf, groundcover
- Grassland or bare earth
- Riparian vegetation
- Wetland
- Stream
- Rock cliff
- Rip rap
- Beach
- Cut, Fill
- 50’ contours
- Power line

NOTES

1. Plan shows landscape in 2014.
2. All features shown at approximate location and scale.
3. All batteries feature panoramic views from parapets.
4. Plan does not show all overhead utility lines, trails, minor jeep roads, field defenses, and antiaircraft gun emplacements.
5. White mask indicates limits of Fort Barry study area.

Drawing 1.5

Abbreviations

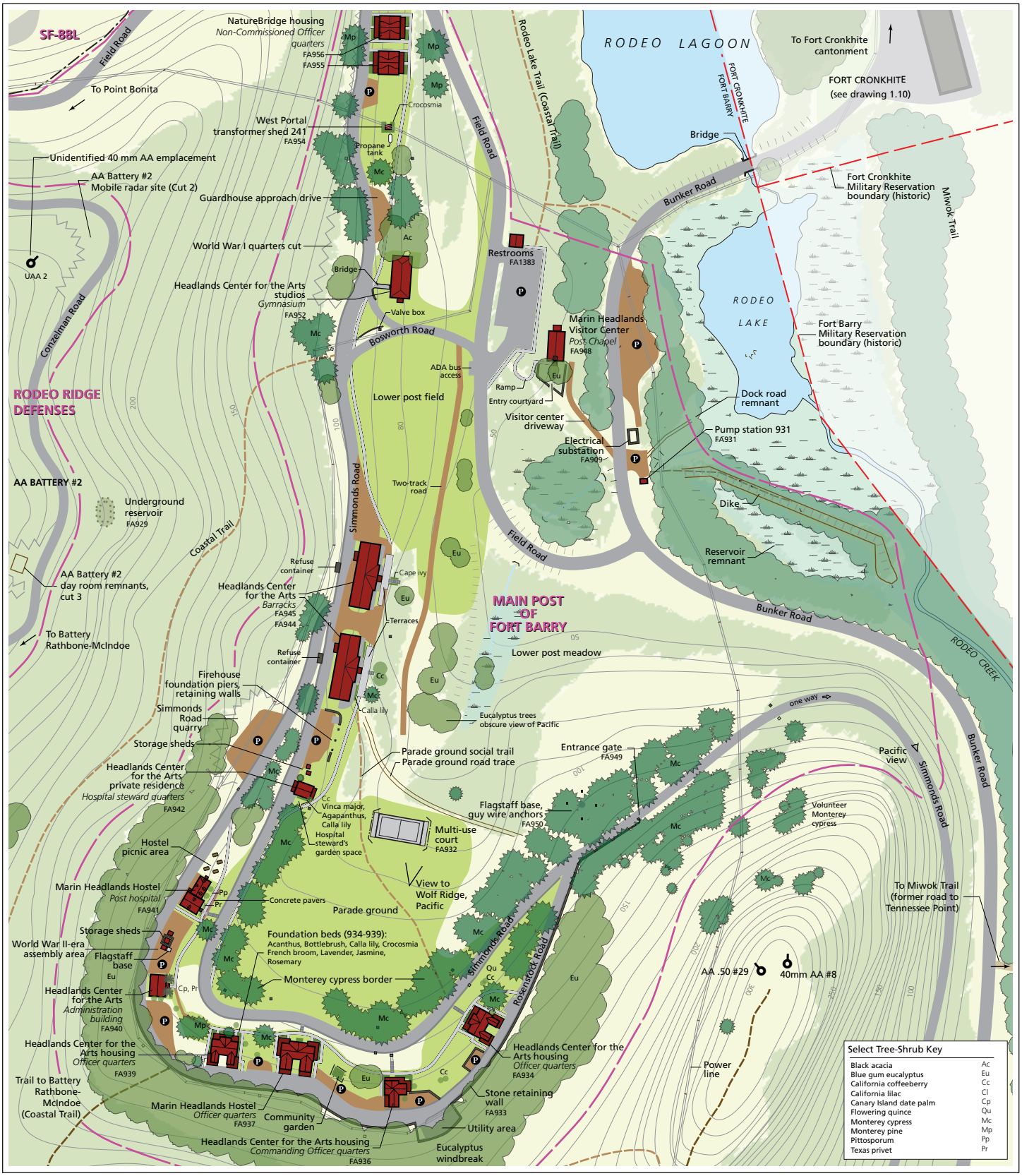
F	Fort command station
FC	Fort commander’s station
BC	Battery commander’s station
B, BS	Base end / Spotting station
E	Emergency battery station
MC	Mine command station
M	Mine station
AA	Anti-Aircraft
AW	Automatic weapon
AMTB	Anti-motor torpedo boat
40 MM	40 millimeter AA gun
.50	.50 caliber AA gun
SCR	Surface craft radar
GGNPC	Golden Gate National Parks Conservancy

Numbers after station abbreviations indicate primary (1), secondary (2) and supplementary (3 and higher) stations.

All defensive works vacant or abandoned, except where noted.

Building Number Key:
See Landscape Feature Inventory (Fort Barry)

0’ 400’ 800’ 1,600’



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Illustrator CS 5, 2014

NOTES
1. All features are shown in approximate scale and location.
2. Plan shows landscape in 2014.
3. Plan does not show all small-scale features.
4. Historic building uses shown in italics.
5. See drawing 1.5 for sources and other notes.

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LEGEND

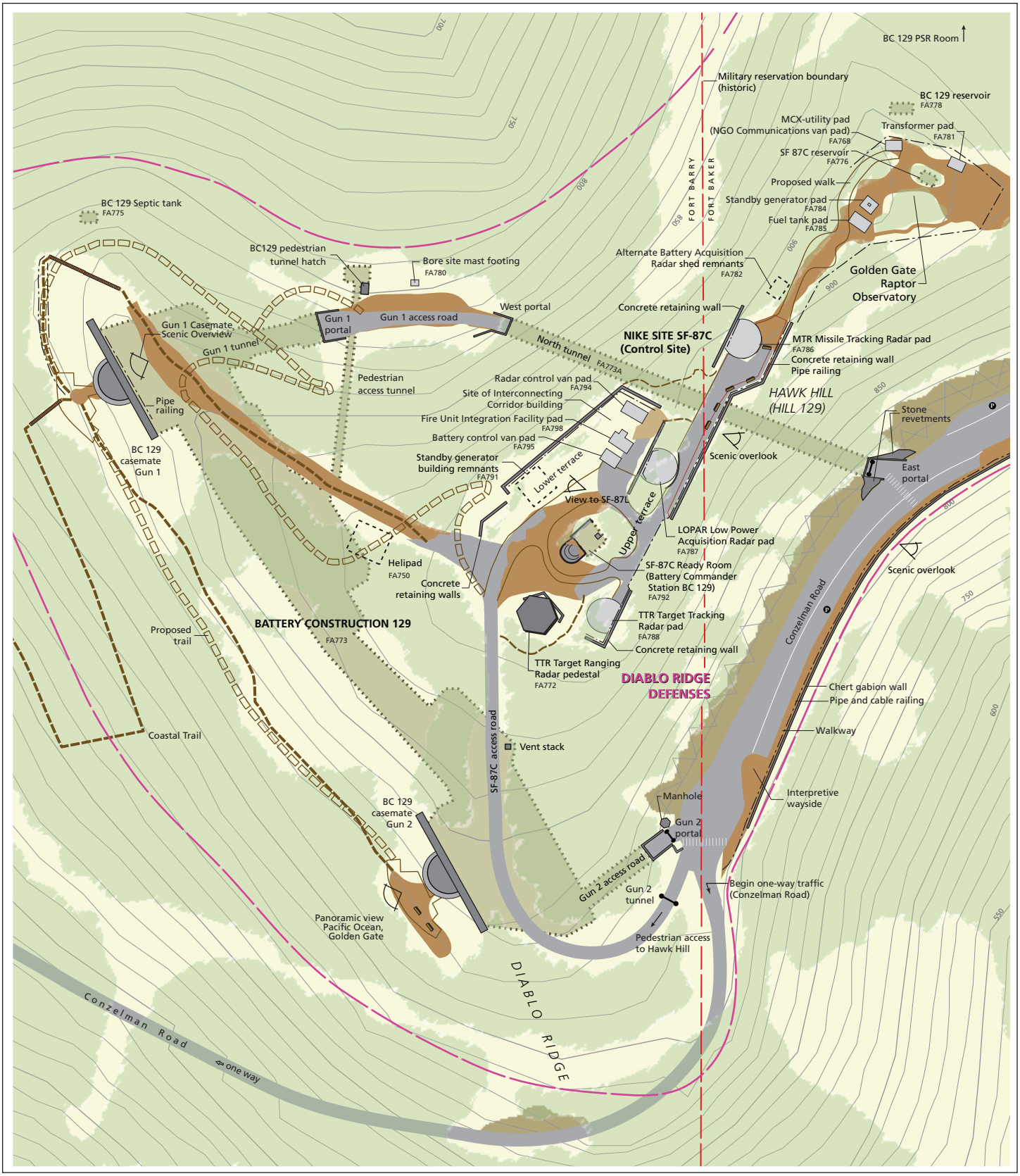
- Building
- Structure, Substructure
- Asphalt with gutter curb
- Gravel/earth
- Parking area
- Sidewalk, Steps
- Trail
- Wall, Fence
- Gate, Bollards
- Power line Drain inlet, outlet
- Palm, deciduous, conifer tree
- Shrub, planted bed
- Native woods, scrub
- Wetland
- Turf
- Grassland or bare earth
- Cut, fill
- Remnant, trace

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite
Golden Gate National Recreation Area

Main Post of Fort Barry Existing Conditions Plan

0′ 100′ 300′

Drawing 1.6



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NOTES
1. All features are shown in approximate scale and location.
2. Plan shows landscape in 2014.
3. Plan does not show all small-scale features.
4. Proposed features based on Drawing 641-119728, 9/19/13
5. See drawing 1.5 for other sources and notes.

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LEGEND

- Structure, Substructure
- Concrete pad
- Asphalt
- Gravel or earth
- Parking area
- Trail
- Steps
- Wall
- Gate
- Fence, railing
- Remnant, trace
- Proposed trail, walk (2015-17)
- Bench
- Scrub (chaparral)
- Grassland or bare earth
- Cut
- Rock cliff

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite
Golden Gate National Recreation Area

Diablo Ridge (Hawk Hill) Existing Conditions Plan

0′ 100′ 200′

Drawing 1.7



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Illustrator CS 5, 2014

NOTES
1. All features are shown in approximate scale and location.
2. Plan shows landscape in 2014.
3. Plan does not show all small-scale features.
4. Historic building uses shown in italics.
5. See drawing 1.5 for sources and other notes.

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LEGEND

- Building
- Structure, Substructure
- Asphalt
- Gravel or earth
- Parking area
- Sidewalk, Steps
- Trail, Bridge
- Wall, Fence
- Gate
- Trace or remnant
- Deciduous trees
- Coniferous trees
- Chaparral, scrub
- Turf
- Grassland or bare earth
- Cut, fill
- Rock or sand beach
- Rock, rock cliff

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite
Golden Gate National Recreation Area

Bonita Ridge
Existing Conditions Plan

0′ 100′ 300′

Drawing 1.8



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John Auwaerter, Laura Roberts, Ella Braco
Illustrator CS 5, 2014

NOTES
1. All features are shown in approximate scale and location.
2. Plan shows landscape in 2014.
3. Plan does not show all small-scale features.
4. Historic building uses shown in italics.
5. See drawing 1.5 for sources and other notes.

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LEGEND

- Building
- Structure, Substructure
- Road, asphalt
- Road or walk, gravel/earth
- Trace or remnant
- Minor bridge
- Parking area
- Concrete walk, Steps
- Wall
- Parged cliff face
- Fence or railing
- Scrub, low vegetation
- Cut
- Sand or stone beach
- Rock, rock cliff

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite
Golden Gate National Recreation Area

Point Bonita
Existing Conditions Plan

0′ 50′ 100′ 150′

Drawing 1.9

Cultural Landscape Report Forts Baker, Barry, and Cronkhite

Golden Gate National Recreation Area
Sausalito, California

Fort Cronkhite Existing Conditions Plan

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SUNY College of Environmental
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SOURCES

1. NPS, Marin County GIS data
2. L. Guidry survey of Wolf Ridge, 1993
3. NPS, GGNRA Land Status Map, 2002
4. US Army, Fort Cronkhite general site plan, 1970
5. Aerial photograph, 2012

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John Auwaerter, Laura Roberts, Illustrator CS5, 2014

LEGEND

- Historic reservation boundary
- Character area boundary
- Building
- Structure, Substructure
- Wall
- Water tank, reservoir
- WWII-era casemated battery
- Earth parapet of defensive work
- Temp. gun emplace., machine gun pit
- WW II defensive position
- Road, asphalt
- Road, earth/gravel
- Parking area
- Trail
- Fence
- Remnant, trace
- Bridge
- View
- Deciduous trees
- Coniferous trees
- Native woods
- Chapparal or scrub
- Managed turf, groundcover
- Grassland or bare earth
- Riparian vegetation
- Wetland
- Stream
- Rock cliff
- Rip rap
- Beach
- Cut
- Fill
- 50' contours
- Power line

NOTES

1. Plan shows landscape in 2014.
2. All features shown at approximate location and scale.
3. Panoramic views characterize most of the landscapes.
4. Plan does not show all overhead utility lines, trails, minor jeep roads, field defenses, and antiaircraft gun emplacements.
5. White mask indicates limits of Fort Cronkhite study area.

Drawing 1.10

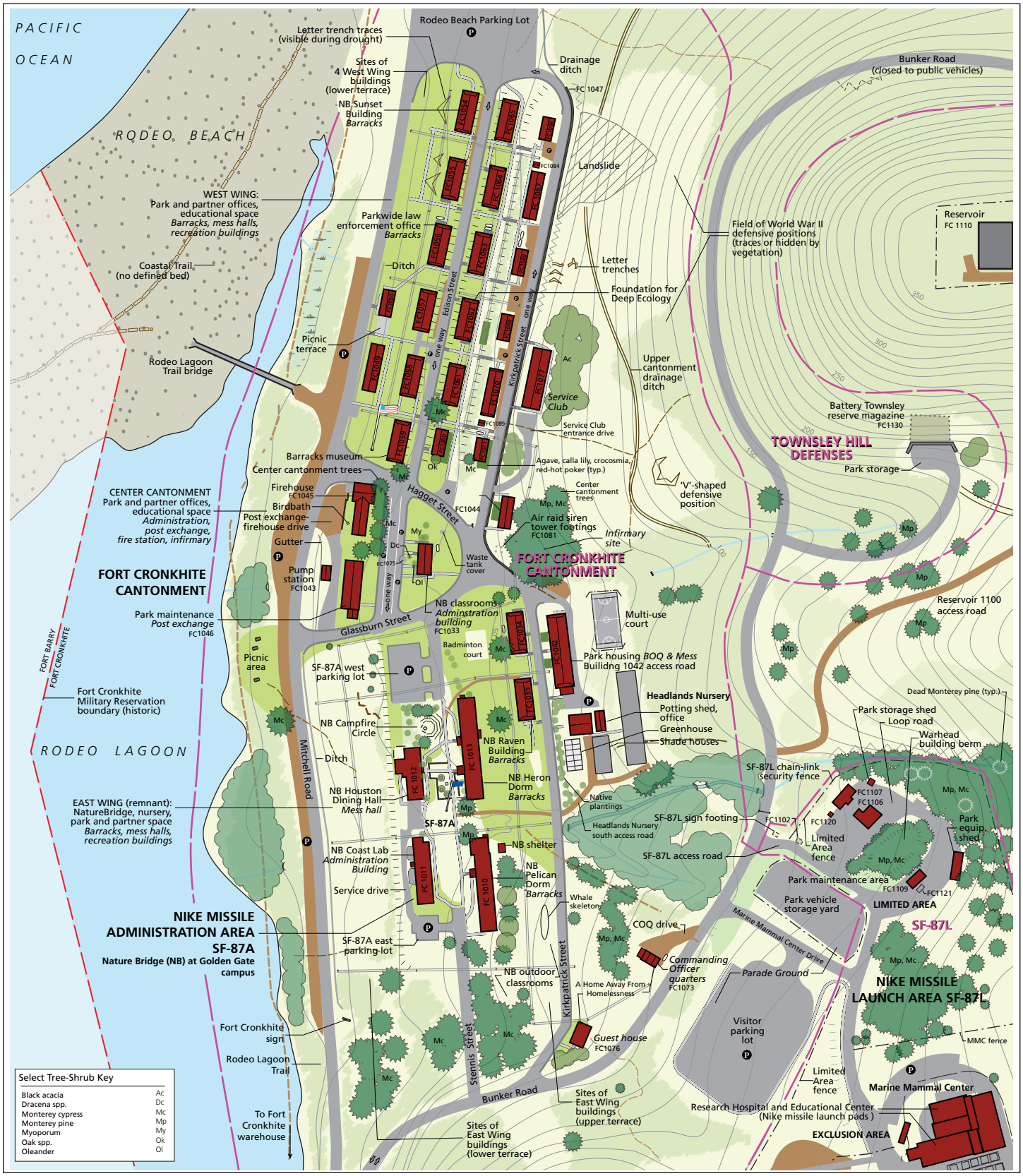
Abbreviations

F	Fort command station	AAA	Anti-Aircraft Artillery	L, C, A	Launch, Control, Administration
FC	Fort commander's station	AW	Automatic weapon		
BC	Battery commander's station	AMTB	Anti-motor torpedo boat		
B, BS	Base end / Spotting station	40 MM	40 millimeter AA gun		
E	Emergency battery station	.50	.50 caliber AA gun		
MC	Mine command station	PSR	Plotting-spotting-radio room		
M	Mine station	SCR	Surface craft radar		

Numbers after station abbreviations indicate primary (1), secondary (2) and supplementary (3 and higher) stations.

All defensive works vacant or abandoned, except where noted.

Building Key: See Landscape Feature Inventory (Fort Cronkhite)



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Illustrator CS 5, 2014

NOTES
1. All features are shown in approximate scale and location.
2. Plan shows landscape in 2014.
3. Plan does not show all small-scale features.
4. Historic building uses shown in italics.
5. See drawing 1.10 for sources and other notes.

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LEGEND

- Building
- Structure, Substructure
- Road, asphalt with gutter
- Road, gravel/earth
- Parking area, Gate
- Sidewalk, Steps
- Trail, propane tank
- Wall, Fence
- Remnant, trace
- Power line Drain inlet, outlet
- Deciduous, conifer tree
- Shrub, herbaceous plantings
- Native woods, scrub
- Wetland
- Turf
- Grassland or bare earth
- Cut, fill
- Beach, stream

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite
Golden Gate National Recreation Area

Fort Cronkhite Cantonment Existing Conditions Plan

0′ 100′ 300′

Drawing 2.11

2. Analysis and Evaluation

The systems of defensive works, support areas, roads, and natural areas of Forts Baker, Barry, and Cronkhite were designed to defend the harbor of San Francisco through four periods of changing military strategy and technology, from the close of the Civil War through the height of the Cold War. Although the landscape never witnessed active combat, it does embody the distinctive characteristics of a military landscape. J. B. Jackson, the noted writer and founder of the journal *Landscape,* observed during his service in World War II that a military landscape was

> . . .a Classical landscape of well-defined places and well-defined inhabitants, all animated by that one collective purpose. The landscape came into being as a result of those innumerable tactical questions: Where are your headquarters? Who is your commanding officer? What is your unit and branch of service? What are the boundaries, the routes, the channels of communication. . .the landscape ceased to be an empty impersonal stage and became part of a whole way of life, a place where men and environment were in harmony with one another and where an overall design was manifest in every detail.[1]

The landscape of Forts Baker, Barry, and Cronkhite exhibits these same characteristics, but some have been lost or concealed since the transition to park uses began in the 1960s. The landscape retains its large areas of undeveloped lands with dispersed seacoast batteries tied together by roads, with strategic views across the Golden Gate and Pacific Ocean; its numerous secondary defensive works such as fire-control stations, powerhouses, and searchlights; clusters of support buildings reflecting standardized military architecture; navigational aids that have long coexisted alongside defensive works; and finally, the three-part systems of the Nike missile installations. Notable changes to the military landscape include deterioration of defensive works, removal of security fences and gates, loss of names and place identity, and addition of parking lots, signs, scenic overlooks, and trails to accommodate recreational and educational uses. Perhaps the most poignant change is the absence of the military personnel, operations, and culture that had characterized the Marin Headlands for over a century.

NATIONAL REGISTER EVALUATION

The National Register of Historic Places provides the basis for documenting the historical significance and integrity of the Forts Baker, Barry, and Cronkhite cultural landscape. This section summarizes existing National Register documentation and determinations of eligibility, and provides recommendations for updating National Register documentation pertaining to the cultural landscape in terms of its historical significance, period of significance, identification of contributing resources, and district boundaries. The section concludes with an evaluation of the cultural landscape according to the National Register aspects of integrity.

EXISTING NATIONAL REGISTER DOCUMENTATION

There are presently two properties listed in the National Register of Historic Places within the historic boundaries of Forts Baker, Barry, and Cronkhite: a district of the same name, and the Point Bonita Light Station. There is also one National Register listing adjacent to the three military reservations: the remains of the steamship *Tennessee*, an 1853 wreck located in the Pacific Ocean off Tennessee Cove near Fort Cronkhite.[2]

Forts Baker, Barry, and Cronkhite National Register District

As the Army was preparing for transfer of its property to the National Park Service in the early 1970s, it prepared a nomination to list Forts Baker, Barry, and Cronkhite in the National Register of Historic Places. This action was in keeping with the recently enacted Executive Order 11593, signed by President Nixon in 1971, which called for all federal agencies to locate, inventory, and nominate historic properties under their control to the National Register. The Army contracted with Thomas Lile, Architect, of San Francisco to prepare the National Register nomination form. The form was based on a history of the San Francisco Harbor Defenses by Raymond Emanuel Lewis that was completed in 1970. Lile completed the National Register form on March 26, 1973, and the district was listed in the National Register of Historic Places on December 12, 1973.[3]

As was typical of many early National Register nominations, the form was not comprehensive or detailed. The narrative description (Section 7) only addressed the major defensive works and the Baker-Barry tunnel. None of the post buildings, secondary defensive works, or roads was documented, nor was there any description of the landscape. While there was no specific period of significance, the Statement of Significance addressed the period through World War II, as well as the Nike defenses built in the 1950s. According to the narrative description, the nominated district encompassed 2,279 acres (historic extent of the three forts was 2,708 acres), which was the land that remained under jurisdiction of the Army, plus the land recently transferred to California stat parks in forts Baker and Barry. Excluded from the district was the state park land in Tennessee Valley (northern part of Fort Cronkhite), and Coast Guard property at Wolf Ridge, Point Bonita, Point Diablo, Lime Point, and Yellow Bluff (map of National Register district in Appendix A).[4]

To address deficiencies in the 1973 nomination form, the National Park Service prepared revised National Register documentation in 1979. Written by historian Erwin N. Thompson, it documented all major defensive works including the Nike launch and control sites, most support buildings including those built around World War II that were not yet fifty years old, and some landscape features such as parade grounds. The period of significance was identified as 1850 to 1960. The revised boundaries corresponded to the historic limits of Forts Baker, Barry, and

Cronkhite (listed as 2,699 acres), including Point Bonita and other lands under jurisdiction of the US Coast Guard, as well as the northern part of Fort Cronkhite in Tennessee Valley (the state park lands had been transferred to the NPS by the date of writing). This updated documentation, however, was not forwarded to the Keeper of the National Register.[5] Seventeen years later in 1996, Golden Gate National Recreation Area prepared a revised Statement of Significance (Section 8) to expand on the district's World War II history, but the park did not forward this draft to the Keeper.[6]

Point Bonita Light Station National Register District

The thirty-nine-acre Point Bonita Light Station property, which the Army transferred to the US Coast Guard in 1966, was not part of the 1973 National Register listing of Forts Baker, Barry, and Cronkhite. In 1981, the National Park Service, with Coast Guard approval, submitted a National Register nomination for a fourteen-acre district comprising Point Bonita from the tunnel south. The nomination was certified by the State Historic Preservation Officer in 1981, but was not accepted by the Keeper of the National Register.[7] Around the same time, the National Park Service drafted another nomination for the Point Bonita Life Saving Station Complex, including the site of the Coast Guard boathouse, wharf, access road, and residential quarters in the northern part of the thirty-nine-acre Coast Guard property. This nomination was also not advanced, presumably due to the property's lack of historic integrity.[8]

In 1989, a revised nomination form for the Point Bonita Light Station was submitted as part of the "Light Stations in California" multiple property listing (map of National Register district in Appendix B.) The nomination was accepted by the Keeper and listed in the National Register on September 3, 1991. The boundaries of the fourteen-acre district at the southern half of the peninsula were drawn to include the contributing resources and the immediate setting, not the entire limits of the historic light station. The documentation identified two contributing buildings (lighthouse and fog-signal building), one contributing structure (tunnel), and one non-contributing structure (1954 suspension bridge), identified as non-contributing because it was less than fifty years old. The remnants of several other buildings and structures were also referenced, including the lighthouse incline tramway remnants, foundation of the 1874 fog-signal building (1908 Third Keeper's dwelling), and 1903 oil tank. Other remnants not within the fourteen-acre property, including several associated with the demolished keepers' dwellings north of the point, were also described. The nomination did not document or evaluate any of the military structures within the district. The period of significance for the property was documented as 1855 to 1940 in the areas of maritime history, transportation, architecture, and commerce.[9]

DETERMINATIONS OF ELIGIBILITY

Through Sections 106 and 110 of the National Historic Preservation Act, the California State Historic Preservation Officer (SHPO) has concurred with National Park Service determinations of eligibility for resources at Forts Baker, Barry, and Cronkhite that were not addressed in the 1973 National Register documentation. These determinations have not been incorporated into updated National Register documentation for the Point Bonita or Forts Baker, Barry, and Cronkhite districts.

Nike Site SF-87L

On June 30, 2003, the California SHPO concurred with the National Park Service that Nike Missile Launch Site SF-87L had lost historical integrity and no longer contributed to the historical significance of the Forts Baker, Barry, and Cronkhite National Register district. The Exclusion Area (launch pads) portion of the site had been substantially altered through redevelopment as the Marine Mammal Center. The determination applied to both the Exclusion Area occupied by the Marine Mammal Center, and the Limited Area (support area) occupied by park maintenance operations.[10]

Fort Baker Cultural Landscape Inventory

The National Park Service completed a Cultural Landscape Inventory (CLI) for the Fort Baker Military Reservation in 2004, focusing on the 71-acre former East Fort Baker area south and east of US 101 and Alexander Avenue.[11] This CLI reflected research that had been completed for a draft Cultural Landscape Report for Fort Baker (completed in 2005), and planning for the Fort Baker Plan (1999). This plan was developed by the National Park Service to provide comprehensive guidance for new uses and site improvements at the Main Post of Fort Baker and adjoining bay front, as part of the conversion of the property from military to park use.[12] The California SHPO concurred with the findings of the CLI.[13]

National Register Criteria: In addition to the documented significance under Criterion A (military history) for the Forts Baker, Barry, and Cronkhite district, the CLI found that Fort Baker is nationally significant under Criterion C for its military engineering and architecture, reflecting standardized Army plans used across the country that were adapted to specific conditions at Fort Baker.

Period of Significance: The CLI identified a period of significance of 1867 to 1946 for Fort Baker, representing the period from initial military construction on the site to the deactivation of artillery following World War II.[14] This was an earlier end date than suggested in the 1973 National Register documentation or proposed in the 1979 draft documentation.

List of Contributing Resources: The SHPO concurred with the CLI that 145 resources were contributing to the National Register district. These were primarily buildings, structures, and roads constructed prior to 1946. Alexander Avenue

(Sausalito Lateral) and its overpass at East Road were also determined to be contributing. The CLI found that 61 resources were non-contributing. Most of these were Capehart houses and their associated roads at the Main Post and those in the Fort Baker part of the Fort Barry Capehart housing on Bunker Road.[15] Also determined non-contributing were Slacker Road, Umia Street, Gibson Drive, Danes Drive, and US 101 that pre-dated 1946, as well as Vista Point, and the wood bulkhead along Horseshoe Cove added after 1946.

Boundaries: The CLI did not recommend different boundaries, since the CLI component landscape for Fort Baker was within the boundaries of the Forts Baker, Barry, and Cronkhite National Register district.

Point Bonita Cultural Landscape Inventory

The National Park Service completed a Cultural Landscape Inventory (CLI) for the thirty-nine-acre Coast Guard property at Point Bonita (NPS use permit) in 2005.[16] The California State Historic Preservation Officer (SHPO) concurred with the Point Bonita CLI recommendations on updating the 1991 National Register documentation pertaining to the National Register Criteria, period of significance, list of contributing resources, and boundaries. The CLI did not recommend changing the areas of significance to include military history. The SHPO concurred with the findings of the CLI. [17]

National Register Criteria: The CLI found that Point Bonita was eligible under Criterion D (information potential/archeological resources), in addition to the documented Criteria A and C, to address remnants of navigational aids.

Period of Significance: The CLI extended the end date from 1940 to 1966, to address the suspension bridge and Coast Guard residences in the former Life-Saving Station added between 1954 and 1961; the documented start date of 1850 was retained.

List of Contributing Resources: The CLI evaluated 39 resources as contributing. These included roads, trails, fences, walls, cisterns, fire hydrants, eight archeological resources (including four shipwrecks), the suspension bridge (identified as non-contributing in the 1991 documentation), and five buildings within the Coast Guard housing area (former Life-Saving Station), including the two residences completed in 1961. The CLI evaluated 25 resources as non-contributing, including a 1903 oil tank (also listed as non-contributing in the 1991 documentation), a modern shipwreck, military structures and roads, and a variety of modern railings, bridges, benches, and other furnishings. The report identified military resources as non-contributing because the CLI did not address significance of the property in military history. The CLI identified the Army searchlight, searchlight powerhouse, and fire-control stations near the lighthouse as non-contributing, but the four Army fire-control stations on Point Bonita Ridge were identified as "contributing to another district." [18]

Boundaries: Although not specifically addressed in the SHPO concurrence documentation, the boundaries of Point Bonita district were expanded from the 14 acres at the lower part of the peninsula encompassed in the National Register documentation, to the entire thirty-nine-acre Coast Guard property. This change is reflected in the list of contributing resources. The CLI identified the Coast Guard property as encompassing 92 acres, which included underwater land extending 300 feet out from the shore to encompass the five shipwrecks inventoried as part of the CLI.[19]

List of Classified Structures

Beginning in 1992, the National Park Service conducted a comprehensive survey and evaluation of all lands within Golden Gate National Recreation Area to identify resources (primarily buildings and structures) eligible for listing in the National Register as part of the Forts Baker, Barry, and Cronkhite National Register district, and Point Bonita National Register district. Approximately 324 buildings and structures were entered into the LCS for Forts Baker, Barry, and Cronkhite, and ten at Point Bonita.[20] The only resources entered as contributing were those identified in the National Register documentation, and those that received SHPO determinations of eligibility through the Fort Baker and Point Bonita CLIs, and through various other reviews through Sections 106 and 110, such as Nike site SF-87L (Marine Mammal Center). All other resources not specifically identified as contributing are currently identified in the LCS as "Ineligible-Managed as Resource," which is used as a placeholder until the park receives SHPO concurrence.[21]

Capehart Housing

Through the Fort Baker CLI (2004), the Capehart housing at the Fort Baker Main Post and the section of the Fort Barry Capehart housing within the boundary of the Fort Baker military reservation (completed in 1959 and not yet 50 years old in 2004) were determined to be non-contributing resources in the Forts Baker, Barry, and Cronkhite historic district. The Capehart housing at the Fort Baker Main Post was demolished in 2006.

In 2002, the Advisory Council on Historic Preservation issued a Program Comment intended to facilitate the Army's compliance with the National Historic Preservation Act with regard to management of Capehart and Wherry-era family housing at Army properties across the country.[22] While this Program Comment is not binding on the National Park Service, it does establish that certain Capehart housing may be eligible for listing in the National Register based on its own historical significance.

Under the Program Agreement, the Advisory Council, together with the Army, National Trust for Historic Preservation, and National Council of State Historic Preservation Officers (NCSHPO) outlined a process for identifying appropriate treatment for Capehart and Wherry-era housing and associated site features

(1949–62) that allowed the Army to streamline its responsibilities under Section 106. The Army agreed to complete a study that addressed the historic context of the housing and its relation to broader developments in suburbanization; identify those Capehart and Wherry properties that may be of particular importance due to their association with historically important builders, developers, and architects; complete an inventory of all Capehart and Wherry housing, including associated structures and landscape features; and develop design guidelines, along with several other provisions.[23] The Program Agreement did not identify specific Capehart and Wherry properties that meet the National Register criteria.

Golden Gate Bridge, US 101 with Vista Point, and Alexander Avenue

The Golden Gate Bridge, the Marin anchorage of which is located within a permit area at Fort Baker, is widely recognized as historically significant. The NPS submitted a nomination to list the bridge in the National Register; as a result, the bridge was determined eligible in 1980, but was not listed. In 1990, the bridge was designated California Historical Landmark No. 974, and as City of San Francisco Landmark No. 222 in 1999.[24] The bridge is not presently listed in the National Register or designated as a National Historic Landmark. The Marin landing of the bridge (bridge permit area) was excluded from the existing 1973 Forts Baker, Barry, and Cronkhite National Register district.

US 101 (Redwood Highway) with the Waldo Tunnel, and Alexander Avenue (Sausalito Lateral), which are part of the historic development associated with the Golden Gate Bridge, are not individually listed in the National Register, but are in part within the Forts Baker, Barry, and Cronkhite National Register district. Alexander Avenue, which has not been substantially altered since its completion in 1937, has been determined eligible for listing in the National Register by the California SHPO.[25] US 101, which was completed in 1937 and widened in the 1950s, has not been individually evaluated, nor has the Vista Point scenic pull-off, which was built in 1962 and has since been altered.

Proposed National Historic Landmark Nomination, Seacoast Fortifications of San Francisco Bay

A nomination to designate the Seacoast Fortifications of San Francisco Bay as a National Historic Landmark (multiple property submission) is presently being developed by staff of Golden Gate National Recreation Area. A formal determination of eligibility by the National Historic Landmark Program has not been issued. The proposed nomination would represent a higher level of recognition for the harbor defenses at Forts Baker, Barry, and Cronkhite, and also tie the three reservations into the broader military context of the Bay Area.

At Forts Baker, Barry, and Cronkhite, the proposed nomination includes all batteries, secondary defensive works, Nike launch and control installations, directly associated roads, the Fort Baker mine depot and marine repair facility, and the associated landscape. The proposed boundaries are drawn to incorporate the pri-

mary and secondary defensive works and directly associated circulation and topographic features. The draft nomination excludes support buildings and structures and other landscape features not directly associated with the defensive works. The Nike SF-87 launch area (Marine Mammal Center) is also excluded from the proposed district due to loss of integrity.[26]

RECOMMENDATIONS FOR NATIONAL REGISTER ELIGIBILITY

Based on the findings of this Cultural Landscape Report, it is recommended that the existing 1973 documentation for the Forts Baker, Barry, and Cronkhite National Register district be updated to adjust boundaries, extend the period of significance, and comprehensively address all areas of significance.

The following National Register recommendations pertain to the cultural landscape, which incorporates all above-ground resources as documented in the site history (CLR Volume I) and existing conditions (Chapter 1 of this volume). Additional research and documentation would be necessary to identify all areas of significance including military history, archeology, and ethnic heritage, as well as associated resources.

Recommendations for the Statement of Significance (Section 8)

The cultural landscape of Forts Baker, Barry, and Cronkhite is nationally significant for illustrating a century of development in US harbor defenses, from the post-Civil War period through the height of the Cold War. Integral to this military legacy is a maritime history that shares the same geography and purpose in safeguarding San Francisco as the West Coast's most important harbor. The remarkable concentration of military works, support facilities, and navigational aids in an expansive open-space setting reflects the changes in military strategy and technology that occurred through the post-Civil War period, the Endicott and Taft eras, World Wars I and II, and the Cold War. The district does not illustrate any of these periods alone, but rather conveys the course of military and navigational use and development, including abandonment of the seacoast batteries for anti-aircraft ballistic missiles during the Cold War, and automation of navigational aids. The only portion of the district that has lost historic integrity and is therefore noncontributing is the Nike SF-87 launch site at Fort Cronkhite, including both the Exclusion Area and the Limited Area (SHPO Determination of Eligibility opinion, 2003).

Updated National Register documentation should include an expanded statement of significance that documents the history of the Army's use and development of Forts Baker, Barry, and Cronkhite over the course of its century at the Headlands within the contexts of military history, architecture, maritime history, and commerce. These areas of significance are well documented in the draft 1979 National Register documentation for Forts Baker, Barry, and Cronkhite, 1989 Point Bonita Light Station National Register documentation, the 1996 draft Statement of

Significance on World War II context, the proposed National Historic Landmark designation in the historians' files at Golden Gate National Recreation Area, and the site history of this Cultural Landscape Report (Volume I).

It is recommended that revisions to the National Register documentation for the district incorporate the significance of the three military reservations in maritime history as documented in the Point Bonita Light Station National Register Inventory-Registration Form, and in the Point Bonita Cultural Landscape Inventory. This context should be expanded to address the context of navigational aids in San Francisco harbor as it relates to all navigational aids and life-saving operations within Forts Baker and Barry, including historic resources at Lime Point, Point Diablo, and Point Bonita.

The historical significance of Forts Baker, Barry, and Cronkhite should also be documented under Criterion D to address the information potential of the many historic remnants of military, navigational, and agricultural history in the district. Because only traces remain of agricultural use, primarily at the Fort Cronkhite site of the Gioli/Silva Little Ranch, the district does not appear to be eligible under Criterion A in the area of agriculture. These traces do not retain sufficient integrity to illustrate their historical significance, but may have the potential under Criterion D to reveal important information about the region's agricultural past.

Recommended Period of Significance

The recommended period of significance for the cultural landscape of Forts Baker, Barry, and Cronkhite under Criteria A and C begins in 1866 with the establishment of the Lime Point Military Reservation, and extends to 1966, the year when the last major Army development was completed. This period reflects the time when extant historic resources were developed. Significance related to continued activation of defensive works under Criterion A may extend the period until 1974, when the last defensive work—Nike site SF-88—was decommissioned following deactivation of SF-87 in 1971. While defensive uses had decreased to a considerable extent after the recommended end date of 1966 for the cultural landscape, the continued activation of the three SF-88 sites at Forts Barry and Cronkhite reflect potentially significant ongoing defensive uses in the district. Additional research is necessary to document the full military history of the district under Criterion A.[27]

Justification for 1866 Start Date: The 1866 start dates corresponds with the US government's acquisition of property for the Lime Point Military Reservation that created the existing boundaries of Forts Baker and Barry, thus beginning a century of military development in the Marin Headlands, and was soon followed by the military development at Fort Baker. The Point Bonita Light Station National Register district, recommended for incorporation into the larger district, has a period of significance that begins in 1855, when the light station was established. Because the earliest surviving resources at Point Bonita date to ca. 1870 (including known

archeological resources), it is recommended that the overall period for the Forts Baker, Barry, and Cronkhite district not extend back to 1855.[28]

Justification for 1966 End Date: The year 1966 corresponds with the last major Army development in the Baker-Barry-Cronkhite landscape: completion of the administration area for Nike SF-87 at the Fort Cronkhite Cantonment, which occurred a short time after the completion of the administration area for Nike SF-88 at Fort Barry in 1965 and additions to the launch sites, including the missile assembly-test building at SF-88L. The year 1966, which meets the fifty-year threshold for National Register eligibility, is also an appropriate end-date for the landscape because it reflects a turning point in the Army's investment in Forts Baker, Barry, and Cronkhite.[29] After this time during its waning years at the Headlands between 1966 and 2001, the Army constructed no major new buildings or other infrastructure that reflected ongoing use of the district for defensive purposes.

By 1966, portions of Forts Baker, Barry, and Cronkhite were no longer under Army jurisdiction, but the transferred land, largely on the periphery of the military reservations, did not undergo significant physical change by 1966, with a few exceptions. The properties transferred by the Army prior to 1966 included a 162-acre tract in the Tennessee Valley area of Fort Cronkhite that went to the Navy in 1956, and then to the State of California in 1961; two-acre or less parcels at Yellow Bluff, Lime Point, and Diablo Point that the Army transferred to the Coast Guard in 1956; a 222-acre parcel on Wolf Ridge at Fort Cronkhite transferred to the Coast Guard in 1963; and a 146-acre tract on Wolfback Ridge in Fort Baker that was acquired by the State of California in 1961.[30]

The year 1972, when Congress passed legislation creating Golden Gate National Recreation Area, is not recommended as an end date because the establishment of Golden Gate National Recreation Area that year did not mark a defined changed in physical character, ownership, or use. Instead, it marked the beginning of a long process of transfer of military land to national park administration and use that would continue for the next thirty years.

Fort Baker Period of Significance: The CLI for Fort Baker identified a period of significance of 1867–1946 for Fort Baker. Since Fort Baker is part of a single historic property (Forts Baker, Barry, and Cronkhite National Register district), it is recommended that it have a period of significance consistent with the rest of the district (1866–1966). The Cold War period between 1946 and 1966 at Fort Baker did not see significant physical changes, but the site continued to serve as the administrative center of the three reservations. Despite loss of integrity from this period (notably demolition of the Station Hospital and Capehart housing at the Main Post), Fort Baker still reflects its overall character of the Cold War years. The Capehart housing at the Fort Barry border, Satterlee Road along Horseshoe Cove, and the remains of Nike radar installation on Slacker Hill are part of the Cold War history of Fort Baker. In addition, the widening of US 101, the Waldo Tunnel, and

addition of the Vista Point scenic overlook are part of the district's Cold War setting.

Recommendations for the Description of Resources (Section 7)

All cultural landscape resources (buildings, structures, objects, districts, and sites) within Forts Baker, Barry, and Cronkhite should be documented as contributing provided they retain historical integrity to the period of significance (1866–1966) and are associated with the documented areas of significance. The many remnants and traces in the district, including World War II and Korean War-era defensive positions, anti-aircraft emplacements, and hutments, along with remnants of navigational and agricultural buildings and structures, should be considered contributing if they became traces before the end of the recommended period of significance for the landscape (1966). Remnants that reflect removals after 1966 may be contributing for their information potential under Criterion D, not as part of the historic character of the landscape under Criteria A and C.

The Golden Gate Bridge, US 101/Waldo Tunnel, Vista Point, and Alexander Avenue are part of the historic setting of the district, since all of these features date to the recommended historic period. Both the Golden Gate Bridge and Alexander Avenue, which are National Register eligible in their own right, should be considered contributing to the Forts Baker, Barry, and Cronkhite district, but with their own distinct areas of significance (engineering, transportation, and community planning and development). There are historic Army resources within the Golden Gate Bridge permit area (property managed by the Golden Gate Bridge Highway & Transportation District) that are contributing to the district in the area of military history, notably three fire-control stations (F1G1 Baker, B1 Spencer, and B3 Spencer), the excavated site of the Third System fort, Moore Road, and a portion of Old Conzelman Road. Vista Point has undergone substantial changes after 1966 and most likely does not meet the National Register criteria on its own.

Some existing SHPO Determinations of Eligibility for contributing resources warrant reevaluation based on the findings of this Cultural Landscape Report. The following resources evaluated as non-contributing in the CLI and LCS should be reevaluated as contributing (see Cultural Landscape Evaluation section of this chapter for justifications):

Fort Baker CLI: Danes Drive, Fort Barry Capehart Housing, Lamoraux Drive, Marina Road (Lower Satterlee Road), Menges Street, Slacker Road, Smiley Street, Telephone Cable Terminal

Point Bonita CLI: Guy-Line Support Towers (Navy Shoran station on Bonita Ridge). The historic military resources identified in the Point Bonita CLI as non-contributing to the Point Bonita Light Station (fire-control stations, searchlight powerhouse, searchlight shelter, and Battery Mendell Road) should be evaluated as contributing in comprehensive district documentation (they are recorded as such in the LCS).

The SHPO determination of ineligibility for Nike SF-87 launch site remains valid due to loss of integrity from redevelopment as the Marine Mammal Center and park maintenance area. The site and all its associated resources should be considered non-contributing, but remain within the boundaries of the historic district.[31]

Recommended District Boundaries

The recommended boundaries for an updated Forts Baker, Barry, and Cronkhite National Register district correspond with the historic extent of the three military reservations (approximately 2,708 acres). This boundary encompasses the entire landscape historically owned and developed by the Army, including navigational aids developed by the Coast Guard and its predecessor agencies on Army land. The Army had transferred a number of tracts to the Coast Guard and State of California by 1966 (Tennessee Valley, Wolf Ridge, Diablo Point, Lime Point, and Yellow Bluff), but in 1966 these properties retained their historic character from the time of Army ownership. The National Park Service currently has jurisdiction over all land within the district, except for Point Bonita, Diablo Point, and Lime Point that remain under the US Coast Guard (Department of Homeland Security).

The Point Bonita Light Station National Register district is recommended for inclusion within the boundaries of Forts Baker, Barry, and Cronkhite because the property was part of Fort Barry during the historic period, and it reflects the historic overlay of navigational and military resources. There was historically no distinction between military and Coast Guard areas after the Army began developing defensive works at Point Bonita in 1901, although after World War II, the Army largely abandoned most of its facilities at Point Bonita.

Lands within the district boundaries that are presently leased, permitted, or granted to others should be included within the National Register district boundaries to avoid creation of so-called doughnut holes. These include the Golden Gate Bridge, US 101, and Alexander Avenue (rights-of-way and bridge permit area); the Sausalito-Marin City Sanitation District sewage treatment plant; and the Coast Guard Station Golden Gate. Areas that have lost historic integrity or have been redeveloped since 1966 should be included, but identified as non-contributing. These include the Sausalito-Marin City sewage treatment plant, the US Coast Guard Station Golden Gate, the new Cavallo Point Lodge buildings, and the Marine Mammal Center (SF-87 L Exclusion Area).

Additional research is necessary to justify extension of the National Register boundaries to 300 feet off-shore to include underwater shipwrecks, as is documented in the Point Bonita CLI. All visible waters surrounding the Headlands are part of the historic setting of the cultural landscape.

NATIONAL REGISTER INTEGRITY EVALUATION

According to the National Register, integrity is the ability of a property to convey its historical significance through physical resources. The National Register program identifies seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association.[32] The following section provides a concise evaluation for each of the seven aspects of integrity for the entire Forts Baker, Barry, and Cronkhite district, comparing aspects at the recommended end of the period of significance in 1966 with existing conditions. The cultural landscape evaluation provides a more in-depth evaluation of change in historic character. Overall, the cultural landscape retains integrity of location, design, setting, materials, workmanship, and association, but has lost integrity of feeling. This evaluation does not consider integrity of interior spaces, below-ground utilities and archeological sites, or other resources that do not shape the character of the landscape.

Location

Location is the place where the historic property was constructed, or where the historic event occurred. Forts Baker, Barry, and Cronkhite have been incorporated into the larger landscape of the Marin Headlands unit of Golden Gate National Recreation Area, so historic boundaries are no longer apparent. Despite this, the cultural landscape retains its historic location; no property has been lost.

Evaluation: Retains integrity of location.

Design

Design is the combination of elements that create the form, plan, space, structure, and style of a property. Design in the Forts Baker, Barry, and Cronkhite cultural landscape overall has changed little since the end of the historic period, and is evident in the standardized military and navigational buildings and structures, and in the overall patterns in the landscape shaped by military strategy from the post-Civil War period through the Cold War. Changes in design have occurred within isolated areas, and include construction of the Marine Mammal Center on the site of Nike site SF-87L; loss of buildings at the Fort Cronkhite Cantonment on Mitchell Road and Kirkpatrick Street, and in the Main Post of Fort Baker at the Station Hospital and Capehart housing area; creation of patios and other restaurant/lodge features at the Main Post of Fort Baker; and reconstruction of the main roads with paved shoulders, curbs, accessible bus stops, metal guiderails, rotaries, and 'T' intersections that replaced 'Y' intersections. Overall, however, the historic design of the property remains intact.

Evaluation: Retains integrity of design.

Setting

Setting is the physical environment of a historic property, including its surroundings. The setting of the Forts Baker, Barry, and Cronkhite district has not changed significantly since the end of the historic period. The historic setting within the district, consisting of expansive natural environment with clusters of development and crossing of the Golden Gate Bridge and US 101, remains intact. The surrounding setting also remains intact, with waters of San Francisco Bay, Golden Gate, and the Pacific Ocean to the east, south, and west; and undeveloped former ranchlands to the north (Marin Headlands unit of the park), and the city of Sausalito to the northeast. Minor changes in setting have occurred from spread of tree and scrub cover on former grasslands, and removal of security fences along the boundary of the reservations and around major defensive works.

Evaluation: Retains integrity of setting.

Materials

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. Forts Baker, Barry, and Cronkhite retain the general palette of materials that characterized the property at the end of the historic period, including asphalt and red-chert gravel for roads and trails; reinforced concrete for defensive works; wood, brick, stucco, concrete block, and red asphalt-shingle roofing for buildings; and native grass, tree, and shrub species, along with non-native Monterey pine, Monterey cypress, acacia, eucalyptus, and iceplant for vegetation. Modern materials have been introduced with precast building panels, stained wood trim, solar panels, and seamed metal roofing at the Marine Mammal Center and Cavallo Point Lodge buildings, and in cable and post railings, corrugated PVC drainage structures, and gabion walls along roads and at overlooks.

Evaluation: Retains integrity of materials.

Workmanship

Workmanship refers to the physical evidence of the crafts in the construction of and use of a property. Overall, Forts Baker, Barry, and Cronkhite display the workmanship that characterized the district at the end of the historic period. Workmanship remains evident in the reinforced concrete and metal construction of defensive works and in the wood, concrete, and metal construction of buildings and structures. Changes in workmanship are evident in asphalt surfaces and concrete curbing on recently reconstructed roads, and in the modern buildings at the Main Post of Fort Baker and the Marine Mammal Center at Fort Cronkhite.

Evaluation: Retains integrity of workmanship.

Feeling

Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. While Forts Baker, Barry, and Cronkhite retain most of their historic built structures and the overall setting, the district has lost the feeling of an active and secured Cold War military reservation with a legacy of infrastructure going back to shortly after the Civil War. Today, the district has an overall feeling of a public park and land preserve. This loss of integrity is due to the absence of military personnel and activities; replacement of Army signs with park and road signs; reconstruction of the major roads according to contemporary highway standards with road striping, curbs, paved shoulders, and rotaries; conversion of roads to trails; continued loss of maintained surfaces around the defensive works to tree and scrub cover; and removal of chain-link security fences along the boundary of the reservations and around the major defensive works. Certain areas, such as Battery Townsley, have been managed to maintain a military feeling, while Wolf Ridge with its many abandoned World War II remnants still conveys the feeling of a military outpost than a public park. The loss of staffed navigational aids has also diminished the historic feeling of the district, although functioning signals remain at Point Bonita, Diablo Point, Lime Point, and Yellow Bluff.

Evaluation: Does not retain integrity of feeling.

Association

Association is the direct link between an important historic event or person and a historic property. Forts Baker, Barry, and Cronkhite retain the key built and natural features that convey the property's historic association with a century of seacoast defenses at San Francisco and aids to navigation along the Golden Gate.

Evaluation: Retains integrity of association.

CULTURAL LANDSCAPE EVALUATION

Based on the National Register evaluation and using National Park Service CLR methods, this section analyzes and evaluates the cultural landscape of Forts Baker, Barry, and Cronkhite to identify characteristics and features that define its historic character. The evaluation begins with a brief overview of the entire district, including district-wide natural systems, spatial organization, circulation types, buildings and structure types, and archeological sites. The evaluation for each of the three military reservations is organized by landscape characteristics that include Spatial Organization, Land Use, Circulation Topography, Vegetation, Buildings and Structures, Views and Vistas, Constructed Water Features, Small-Scale Features, and Archeological Sites (Natural Systems and Features are covered only under the district overview). This characteristic evaluation is intended to provide an overview of historic development, with feature-level documentation provided

in the tables at the end of the three sections (tables 2.1, 2.2, and 2.3).[33] As recommended in the preceding National Register evaluation, the district encompasses the historic limits of Forts Baker, Barry and Cronkhite as expanded through 1937, which remained in large part under military jurisdiction and use through 1966.

Each characteristic describes the evolution of the landscape through the period of significance (1866–1966), and summarizes change in character since the end of the historic period (1966–2013). The historic military periods of development within the period of significance include Post-Civil War (1866–1890), Endicott-Taft (1890–1917), World War I–II (1917–45), and Cold War (1945–66). Analysis and Evaluation plans for each of the three reservations (drawings 2.1–2.3) at the end of the chapter provide graphic illustration of the overall change in character by depicting non-contributing features and features removed since 1966. Historic conditions prior to 1966 are documented in the period plans of CLR Volume I.

The landscape feature inventory in tables 2.1, 2.2, and 2.3, which inventory only existing features, contain the name of the feature, park building/structure number, List of Classified Structures (LCS) number, and Facilities Management Software System (FMSS) Location data where available. Each feature is evaluated to determine whether it is contributing or non-contributing to the historic character of the cultural landscape, based on change in character since the end of the historic period (1966) and whether the feature is associated with the historic significance of the district. All features are labeled on the existing conditions plans (drawing 1.1–1.11) as named in the feature tables, with some exceptions. Photographs for each inventoried feature are not included, although most features are shown in the figures in Chapter 1.[34]

DISTRICT OVERVIEW (DRAWINGS 2.1–2.3)

Over the course of the century between 1866 and 1966, the character of the Forts Baker, Barry, and Cronkhite landscape changed along with shifts in military strategy and technology, from Fort Baker's short-range gun batteries at the inner Golden Gate during the post-Civil War period; to larger and more powerful seacoast and anti-aircraft batteries focused on the outer Golden Gate and Pacific approach between the Endicott-Taft and World War I-II periods; and finally, to abandonment of the harbor defenses and development of two Nike anti-aircraft ballistic missile installations during the Cold War. Throughout these periods, navigational aids were developed and maintained along the Golden Gate on Army property, and the once remote Headlands became connected to San Francisco through completion of the Golden Gate Bridge and US 101 in 1937. The natural environment changed, too, as abandonment of defensive works and lack of grazing after World War II led to increasing loss of grassland and mown areas to scrub and tree cover.

The 2,708-acre cultural landscape of Forts Baker, Barry, and Cronkhite today retains the overall natural environment, circulation, and patterns of development that existed by 1966. Change since 1966 has occurred primarily through vegetation, notably the spread of Monterey pine, cypress, and eucalyptus trees and continued loss of grassland; the retrofitting of military roads for public use; deterioration and removal of vacant buildings and structures; rehabilitation of buildings for park and partner uses; and loss of Army signs and security fencing along the borders and defensive works as the district was opened for public use and integrated with the former ranchlands to the north as the Marin Headlands unit of Golden Gate National Recreation Area.

District-Wide Natural Systems and Features

Landforms, hydrology, and flora share a similar history and character across the Forts Baker, Barry, and Cronkhite district.

Landforms

The valleys, promontories, hills, and ridges of the Marin Headlands have remained a constant and dominant characteristic of the landscape, and a key influence on patterns of development. Interior U-shaped valleys provided sheltered locations for support buildings, coves allowed for development of wharves, promontories served as sites for navigational aids, and ridges and shoreline cliffs and beaches provided strategic sites for defensive works that allowed for broad sight lines across San Francisco harbor, the Golden Gate, and the Pacific Ocean. While the strategic importance of these landforms to seacoast defenses diminished during the Cold War with the shift to anti-aircraft ballistic missile defenses, their importance to the historic character of the district, and to navigational aids, remains undiminished.

The landforms underwent minor changes throughout the historic period to accommodate development of defensive works, roads, and post facilities. Since 1966, there have been no additional changes, with exception of naturally-occuring landslides along Bonita Cove and the western side of Wolf Ridge that have destroyed some built features, and cutting and filling along Conzelman Road to accommodate road widening and addition of scenic overlooks.

Hydrology

Forts Baker, Barry, and Cronkhite were characterized during the historic period by numerous small perennial and intermittent streams and hillside springs, with one large internal water body, Rodeo Lagoon. These systems provided for potable water and sanitary water systems within the military reservations that include above- and below-ground tanks and reservoirs that were located on high points to make use of gravity feed.

Hydrologic systems underwent change throughout the historic period as they were tapped for water supply, for example springs on the north side of Diablo Ridge and the reservoir built in Rodeo Lagoon; drained, notably the loss of a small lagoon near the lighthouse keeper's area and the marsh at the foot of the Fort Baker Main Post; and bridged or placed underground in culverts in developed areas and at road crossings. Alterations to the coastline occurred at the Needles through construction of a breakwater, and within Horseshoe Cove through the construction of seawalls and breakwaters. Since the end of the historic period, there have been no known cultural changes to hydrologic systems in the district, with the exception of continued siltation and reduction of open water in Rodeo Lake caused by the Bunker Road causeway. Expansion of wetlands in Little Ranch Valley due to blocked drainage may have begun during the Cold War, but continued after the historic period; the system has been returned to natural conditions through removal of fill and culverts originally building in 1941 for the Fort Cronkhite 155-mm gun and tractor park. A hydrologic change that occurred during the historic period, but which lacks historic significance, was the damming of Tennessee Creek at Fort Cronkhite in ca. 1957 to create a fishing pond for the Dean Witter hunting preserve, on land leased by the Navy after transfer from the Army in 1956.

Flora

The flora of Forts Baker, Barry, and Cronkhite at the beginning of the historic period was largely grassland, with patches of native woods along stream corridors and the San Francisco Bay shoreline. This character was most likely not strictly natural, but rather the result of agricultural practices by Native Americans and European-American ranchers over centuries. During the historic period, the Army allowed neighboring ranchers to graze their cattle within the military reservations up until the late 1930s, effectively maintaining a large part of the landscape as grassland.[35] During World War II, the Army encouraged native vegetation as camouflage for its defensive works. After World War II, chaparral and other native scrub communities spread across the grasslands, except on the high elevations and exposed, dry slopes. Some grassland and scrub was also replaced by exotic invasive species, notably black acacia, Monterey pine, Monterey cypress, and bluegum eucalyptus trees, and iceplant groundcover. This process continued after the end of the historic period. Today, the character of the native flora in the landscape is similar to the end of the historic period, with additional spread of exotic invasive species and reduction in grassland.

Spatial Organization

The overall spatial organization of Forts Baker, Barry, and Cronkhite consists of clusters of development within a natural open-space setting. This spatial character resulted from the Army's harbor defense strategy of dispersion developed after the Civil War, where defensive works were located across large areas rather than concentrated at a single point. These batteries were located along the coastline where fields of fire extended out across San Francisco Bay, the Golden Gate and

Pacific Ocean, while the clusters of support facilities were generally in sheltered valleys away from the coast. The external boundaries of the reservations were enclosed by fences that set apart the landscape as a secured area. There were never marked internal boundaries between the individual military reservations.

Developed areas, which created distinct spaces in the landscape, historically included the seacoast batteries, associated secondary defensive works (fire-control stations, searchlights) that were near the batteries or grouped in clusters, the main post or cantonment that housed administrative, housing, and recreational facilities, and the Quartermaster area that contained facilities for supply and operation of the post. Forts Baker and Barry also contained Engineer Department areas that contained the support facilities for the Army engineers who oversaw the initial design and construction of the defensive works. Fort Barry also featured three secondary housing areas, a rifle range that served the Western Department of the Army, two motor pools that housed and serviced vehicles, and a balloon field.

Between World Wars I and II, defense against aerial attack led to alteration of spatial character in the landscape as individual defensive elements became more dispersed and concealed. Through World War II, the continuing effort to conceal defensive works from both air and sea resulted in increasingly less spatial definition to the defensive works. World War II also saw the installation of temporary anti-aircraft positions across the undeveloped areas of Headlands that did not follow earlier clustered organization, but rather were scattered along ridge tops and other strategic positions.

During the Cold War following abandonment of the harbor defenses, the Army developed a new type of spatial organization for its Nike anti-aircraft ballistic missile installations that did not relate to the old boundaries of the military reservations. Each of the Nike installations at the Headlands, designated SF-87 and SF-88, included three distinct areas of development spread across Forts Barry and Cronkhite: a launch area in a protected inland location, a control (radar) area at a high elevation site, and an administrative area near the launch area. The launch and control areas required a visual connection. SF-87 and SF-88 were two of thirteen Nike installations in the San Francisco Bay area.

The spatial organization of navigational aids at Forts Baker, Barry, and Cronkhite was distinct from the military development, although the two overlapped. Lighthouses and fog signals were located on natural promontories that provided for maximum audible and visual exposure to ships at sea. Housing for the keepers was located directly adjoining or nearby. Life-saving operations were also located close to the coast with easy access to boathouses where lifeboats were launched.

Circulation

Circulation within Forts Baker, Barry, and Cronkhite consisted historically of six general types: roads, parking areas, walks, trails, dockage, and railways.

Roads

Military roads at the Headlands in general were one or two lanes wide and followed the natural landforms, with minimal cutting and filling. Streetlights were restricted to the main posts, and safety railing and fencing occurred in isolated stretches along steep drop-offs. Roads outside of the developed areas and batteries were characterized by surface drainage and no shoulders or curbs.

The earliest military roads built after the Civil War for horse power were surfaced in native red-chert gravel, and most likely had no curbs and few drainage structures. During the Endicott-Taft period, roads were improved with concrete gutters and curbs within the main posts and approaches to the batteries. As engine-powered vehicle use increased after 1910, the roads in the main posts, Quartermaster areas, and some of the main outlying roads were surfaced in red bituminous macadam or concrete. During the 1930s and into World War II, many of the roads were improved with new pavement and 'Y' intersections, but remained without curbs and few drainage structures outside of the developed areas. During World War II, Jeep roads were built across the Headlands to access anti-aircraft field defenses. These were generally narrow, unpaved, and minimally graded. During the Cold War, most of the main roads were repaved in black asphalt, and the Capehart housing areas featured curbed asphalt roadways and asphalt driveways. After 1966, many of the main roads were altered to accommodate public use, safety, and accessibility. Changes include widened shoulders, addition of concrete curbs and drainage structures, widened curves, replacement of 'Y' intersections with 'T' intersections or rotaries, and addition of metal and timber guiderails on long stretches.

In addition to military roads, public highways were another type of road introduced into the district, consisting of US 101 and Alexander Avenue built as high-speed limited access freeways during the 1930s that were expanded during the 1950s. In contrast to the military roads, these freeways were wide and featured on and off ramps, concrete pavement later resurfaced in part with asphalt, streetlights, and large signs.

Parking Areas

Parking areas first were constructed in the district as places to store military vehicles and weapons during the Endicott-Taft period, and began to be used for automobiles during the World War I-II era and more so during the Cold War. Early automobile parking areas examples were generally along roads within the main posts. After World War II, as personal car ownership expanded and commuting increased, larger parking lots were built within the main posts and Nike administration areas, and driveways for parking cars were included in the Capehart housing areas. With opening of the Headlands for public and partner use beginning in the late 1960s, parking lots and parking areas along roads were built to provide scenic overlooks and access to popular areas and trailheads.

Walks and Trails

Walks within Forts Baker, Barry, and Cronkhite were generally limited to the developed areas of the main posts, and included sidewalks along roads and entrance walks to buildings. During the Endicott-Taft period, temporary walks were built with wood planks and permanent walks in concrete. Many of the entrance walks featured stairs built of either wood or concrete. Temporary construction during World War II included asphalt walks and wood steps, primarily at Fort Cronkhite. The Cold War-era suburban-style development of the Capehart housing areas included concrete entrance walks, but no sidewalks along the roads.

Trails were the earliest type of circulation within the district, predating military ownership. Early trails possibly dating to the Miwoks and other Native Americans may have extended along Duncan Hill above San Francisco Bay, through Gerbode Valley to Point Bonita, through Rodeo Valley, and along the Golden Gate following near the current alignment of Conzelman Road. Through the Endicott-Taft period, circulation by foot remained an important means of transportation, so trails persisted, although used mostly for shorter distances between defensive works and developed areas. As automobile use increase after World War I and through the Cold War, many of the old trails disappeared, although some were still required for access to fire-control stations and facilities on steep terrain. With opening of the Headlands to public park use beginning in the late 1960s, there was a resurgence of trail use that led to reopening of old trails, reuse of Army roads as trails, and introduction of some new trails.

Wharfs

Shipping was the primary means of transport to Forts Baker and Barry into the early twentieth century, so wharfs and docks were important military circulation features in the district. These included wharves near Horseshoe Cove and at Bonita Cove that were erected by the Engineer Department to bring supplies in for construction of batteries in the 1860s and first decade of the twentieth century; these were subsequently used by the Quartermaster for transportation of supplies. The lighthouse station at Point Bonita also relied on a wharf on Bonita Cove for transportation of goods. As shipping decreased in importance and improved roads were constructed after World War I, the wharfs fell out of use. Development of the Golden Gate Bridge and Mine Depot at Fort Baker in the 1930s and 1940s included building of two construction wharfs near the bridge, and smaller docks and slips around Horseshoe Cove for servicing and storing boats. From the 1960s on, remaining docks at Fort Baker were reused for recreation, or replaced with new docks and piers.

Railways

Railways, including tramways and cartways, were circulation features that existed in the district historically, but only traces remain today. The US Lighthouse Board built tramways and railways in the 1870s to haul coal and other supplies: one

along the current Lighthouse Trail from the wharf site south of the tunnel to the light and fog signal stations at Point Bonita, and the other from the Army's wharf at Fort Baker to the fog signal station at Lime Point. At Fort Barry, the Army also built a tramway in ca. 1901 to transport goods up the steep slope from its wharf on Bonita Cove.

Buildings and Structures

Buildings and structures in Forts Baker, Barry, and Cronkhite during the historic period consisted of three general types: defensive works, military support buildings and structures, and navigational aids. Except for navigational aids, these followed standardized military designs that were found at harbor defense and Nike missile installations across the country.

Defensive Works

The first defensive works to be completed at the Headlands, based on the Army's Plan of 1870, were earthen barbette batteries built during the early and mid-1870s. These batteries consisting of paired gun emplacements set behind brick parapet walls and massive earthen parapets stabilized with sod. The sides of the emplacements were protected by traverse parapets containing subsurface magazines for storage of ammunition. These barbette batteries were sited in dispersed locations, and their low crests and turf-covered parapets set within the larger natural environment made them inconspicuous to ships at sea.

Like their post-Civil War predecessors, Endicott batteries, so-named after the Endicott Board recommendations issued in 1885, were dispersed barbette batteries with earthen parapets, but were built around massive concrete structures designed to handle larger caliber guns. The Endicott batteries featured interior earth-covered support rooms, open gun emplacements, and thick concrete walls designed together with turf-covered earthen parapets to absorb heavy bombardment from ships at sea. Endicott battery types included the seacoast gun battery, featuring two or more emplacements set on disappearing carriages designed for long-range breech-loading rifles; and the mortar battery, designed for cannon used to fire large projectiles in a high arc for landing on the decks of ships. The mortar battery consisted of a square, deep pit surrounded by concrete parapet walls and high earthen embankments. The third type of Endicott battery was designed for smaller, rapid-fire guns designed to protect submarine minefields in the harbor from attack by fast mine-sweeping craft, and to protect the larger seacoast gun batteries. These featured simple pedestal carriages set on concrete emplacements behind low parapet walls.

The seacoast gun batteries were often supplemented with remote flat-roof dug-in fire-control stations used for sighting and calculating the location of targets. This system, begun in the Endicott period, expanded following recommendations of the Taft Board in 1905, and improved through World War II, included base-end stations usually designated with the letter "B" or "BS" and "M" for those control-

ling submarine minefields; group command centers designated by "F" or "G;" and battery commander stations often located on the battery, designated by "BC."

The era from World War I to World War II witnessed the incorporation of anti-aircraft defenses into the traditional seacoast defenses. Foremost among the new developments were anti-aircraft batteries that featured open gun platforms on ridge tops, with dispersed support facilities including director's pit, height-finding station, radar installations, and cut-and-cover storage and power rooms that were built into hillsides, with only concrete portals visible on the outside. Such features were designed to be inconspicuous from air and protect against aerial bombardment. The military's "1937 Project" modernization program was designed for both anti-aircraft and seacoast defenses, and used cut-and-cover construction for batteries and fire-control stations. Instead of open guns, the new batteries featured casemated emplacements and more substantial earthen cover over the entire battery that concealed the work from aerial view. Fire-control stations were likewise built with covered interior rooms and only the front of the sighting room exposed. During World War II, troops built hundreds of fighting positions across the Headlands, including trenches and simple protective dugouts for one or two soldiers with small arms known as foxholes, and more substantial emplacements for portable anti-aircraft machine guns. Most of these emplacements featured key-hole-shaped revetments lined by low walls built of concrete sandbags.

In the months leading up to Pearl Harbor and continuing during the war, the Army implemented an extensive camouflage program for defensive works that was intended to conceal them from aerial view by blending into the natural environment. The program included painting exposed concrete structures to the tone of the surrounding area, installing camouflage nets over gun emplacements, constructing artificial rock covers at exposed portals, and encouraging growth of native vegetation on earthworks instead of mown turf. The program also called for construction of dummy features to direct attention away from actual targets, including fake buildings and roads. Most of the built camouflage features were removed after the war, but some, such as lower Conzelman Road, were retained.

During the Cold War, the Army abandoned the seacoast gun batteries and focused on anti-aircraft ballistic missile defenses. The two anti-aircraft installations developed at the Headlands during the Korean War shared similar characteristics to the earlier anti-aircraft batteries, and reused some of same structures. The shift to Nike missiles beginning in 1954 brought about new types of buildings and structures that were organized into three components: a missile control (radar) area, a missile launch area, and an administrative area (discussed in following section). The control areas, developed between 1954 and 1962, contained a series of radar antennae that tracked the target and missile, along with a generator building and movable vans containing the control equipment, which were docked to a building. Most of the radar antennae were protected by conspicuous white fabric geodesic dome covers. The initial Nike launchers were temporary installations set

in earthen revetments. The permanent launch sites featured a battery of grouped missiles housed in large underground concrete magazines, with elevators for lifting the missile to its firing position above ground. Both the launch and control areas featured a variety of ancillary buildings, along with pads for parking mobile equipment. Because these defenses were designed to combat high-altitude missiles, there was no need for concealment on the ground or protection from aerial bombardment. Nike buildings and structures were therefore lightly constructed, except for the underground missile magazines, and not camouflaged. Buildings were painted green, which allowed them to recede visually within the natural surroundings when viewed from afar.

Military Support Buildings and Structures

All of the non-defense support buildings at Forts Baker, Barry, and Cronkhite were built by the Army or according to standardized plans developed or approved by the Army. Exceptions included small houses built by and for civilians during the initial development of Forts Baker and Barry.

The Army's earliest construction at the Headlands in the late 1860s included simple gable-roof frame buildings at Fort Baker that supported construction of the batteries. With completion of the first Endicott batteries in the late 1890s, the need arose for permanent posts with barracks, officer quarters, post exchanges, gymnasia, administration buildings, guardhouses, and Quartermaster storehouses and workshops. As built between 1902 and 1909, the main post buildings were standard Army designs of frame and brick in a simple Colonial Revival style. Most of the buildings in the main posts were two stories and featured brick and cast-stone foundations, slate gable roofs, porches, clapboard siding, and multi-paned double-hung sash windows. The Quartermaster buildings were simpler, utilitarian one-story frame and brick buildings with clapboard siding. The buildings were initially painted in a light color with dark color on the window sashes, and by the 1910s were a darker color with light-colored sash. These colors schemes were most likely intended to reduce the visibility of the buildings from enemy ships at sea.

During World War I, the Army constructed temporary frame buildings at Forts Baker and Barry, including officer quarters, mess halls, and barracks, that used standardized Series 600 plans. Between the wars, there were no new building campaigns except for development of a Civilian Conservation Corps camp consisting of a complex of one-story frame buildings along Bunker Road near the West Portal. One of the few new Army buildings constructed at Fort Baker during the interwar years was designed in the Mission Revival style employed at Fort Scott at the Presidio, the only example of this style at the Headlands. With the onset of World War II, the Army developed a new style of temporary frame construction known as Series 700. These were gable-roof frame buildings with wood clapboard or drop (novelty) siding, multi-paned double-hung sash windows, and concrete footers.

During the Cold War, the Army changed the color scheme of its buildings to all white with red asphalt shingle roofs, reflecting a larger change in strategy from the muted colors intended to conceal buildings from view at sea and air. New construction during this period reflected the national popularity of horizontal massing and simplified details typified by the California ranch style. These included the Capehart housing completed by 1959, which were one-story houses with low gable roofs and stucco siding designed for the Army by San Francisco architect Angus McSweeney. The Nike administration areas completed in 1965–66, which also reflected the popularity of simple, horizontal massing, were designed by Army engineers probably based on prototypes by Spector & Montgomery Architects-Engineers. These were one-story flat-roofed concrete block buildings designated as barracks, mess halls, and offices, painted light green with dark green trim.

Navigational Aids

Buildings and structures associated with navigational aids erected by the Coast Guard and its predecessor agencies reflect a variety of forms and styles as built between 1855 and 1961. Building types included lighthouses, fog signal buildings, garages and storehouses, keeper's dwellings, and boathouses. There were also wharves, domed masonry cisterns, boat ramps, beacon towers, and radio towers. Building styles ranged from utilitarian to Shingle/Queen Anne, Gothic Revival, Colonial Revival, and Craftsman. With some exceptions, all buildings were painted bright white to serve as navigational daymarks, in contrast to pre-Cold War color schemes on Army buildings intended to make them inconspicuous from sea and air.

Archeological Sites

Because most of Forts Baker, Barry, and Cronkhite were maintained military reservations during the historic period, above-ground ruins and traces were not characteristic of the landscape, with the exception of those related to earlier agricultural uses. Changes in military technology did lead to abandonment of defensive works and support structures, especially after World War II. Some of these fell into ruins that could be classified as archeological sites, but most retained their overall form. Features that were ruins or traces before 1966 contribute to the historic character of the landscape because they existed as ruins during the historic period. Features that became ruins after 1966 may be significant for their information potential under National Register Criterion D, but do not contribute to the historic character of the landscape in their existing state. No inventory of prehistoric remains was undertaken for this CLR.

FORT BAKER CULTURAL LANDSCAPE CHARACTERISTICS
(DRAWING 2.1, FIGURE 2.1)

Natural Systems and Features (see District Overview)

Spatial Organization

The spatial organization of the Fort Baker Military Reservation landscape was characterized during the historic period in large part by natural landforms, and second by buildings, structures, fences, and planted vegetation within developed areas. Throughout the historic period, most of Fort Baker was open space characterized by grassland or low scrub.

Post-Civil War, 1866–90

In the initial military development of Fort Baker, the main constructed spaces in the landscape were defined by the batteries at Cavallo Point, Lime Point, and Gravelly Beach, and the cluster of support buildings at the Engineer Camp (valley beneath Golden Gate Bridge viaduct). Fenced corrals that predated the Army may have persisted in Old Ranch Valley (Main Post).



Figure 2.1. Overview of the Fort Baker landscape looking north across Horseshoe Cove and the Main Post showing overall character toward the end of the historic period in 1966, photographed 1959. The red lines indicate significant changes from the time of the photograph to the end of the historic period in 1966 (addition of the finger piers for the Presidio Yacht Club). (Golden Gate National Recreation Area, Park Archives and Records Center, GOGA 35301.0910, annotated by SUNY ESF.)

Endicott-Taft, 1890–1917

With development of the Endicott batteries beginning in the 1890s, the spaces defined by the old batteries were modified and expanded, establishing three broad clusters of defensive works: Batteries Duncan and Yates, and Cavallo Battery north and east of Horseshoe Cove; Battery Spencer and Ridge Battery on Lime Point Ridge; and Batteries Kirby and Orlando Wagner at Gravelly Beach. A more visible addition to the spatial organization of the landscape was the Main Post, with its line of buildings and trees around the oval open space of the parade ground. At the southwest side of the main post was a cluster of small houses for civilian employees that formed its own distinct space. Along the northwest side of the parade ground, the Army laid out a 300-yard target range on the floor of a small valley. Southeast of the Main Post was the Quartermaster Area, defined by two rows of buildings. The Quartermaster wharf, located on the southwest side of Horseshoe Cove, was separated from the cluster of buildings.

The spatial enclosure of the parade ground was heightened by windbreaks of trees planted around the east, north, and west perimeters between ca. 1905 and 1915. The south side of the parade ground was originally open, and was later closed with planting of trees along Center Road in ca. 1915. The natural enclosure of the valley at Kirby Cove was heightened through establishment of forest plantations on the steep valley walls shortly before World War I. Scattered plantings of eucalyptus trees on Duncan Hill, in contrast, did not initially create defined space.

World War I-II, 1917–45

Changes in the spatial organization of Fort Baker during this period included enlargement of the target range in ca. 1917 and its removal in 1937, loss of buildings in the civilian housing area of the Main Post off Bunker Road, and removal of buildings in the Engineer Camp by ca. 1935. Two new spaces were developed during this period: a compact complex of buildings at the Station Hospital; and the breakwaters, moorings, Mine Depot, and marine repair facilities that transformed Horseshoe Cove into a semi-enclosed space set apart from the adjoining bay. Construction of US 101 and Alexander Avenue in the 1930s created corridors through Fort Baker that separated the reservation into east and west sections.

Cold War, 1945–66

In the Main Post of Fort Baker, the Cold War saw the loss of the civilian housing area with removal of all but one of the buildings, and expansion along the north and east sides with the suburban-style Capehart housing completed in 1959. Loss in continuity of the eucalyptus windbreaks on the northeast and north sides of the post, and loss of trees around the parade ground, decreased spatial enclosure. Spread of eucalyptus woods on Duncan Hill created a dense enclosure on top and sides of the hill. In 1962, the state developed the prominent hilltop along US 101 southwest of the Main Post into a distinct space that served as a scenic overlook and rest area known as Vista Point.

Evaluation

Since the end of the historic period in 1966, changes to the spatial character of Fort Baker include loss of the Station Hospital complex that was demolished by 1983 and replaced in part by the Coast Guard Station Golden Gate, and demolition of the Capehart housing and partial replacement by new buildings for CavalloPoint Lodge. Subtle changes have occurred through growth and decline of vegetation, notably at Kirby Cove and Battery Duncan, and through removal of the boundary fence and most battery fences. The south side of the parade ground was opened with demolition of the Station Hospital by 1983, but will become enclosed one again as trees along Center Road planted in 2009 mature.

Overall, the spatial organization of the Fort Baker Military Reservation retains historic character from the end of the historic period in 1966. The spatial character of the Main Post reflects pre-World War II conditions in large part due to removal of the Station Hospital and Capehart housing.

Land Use

Land use at the Fort Baker Military Reservation was characterized throughout the historic period by dominance of military activities, with secondary uses related to agriculture, public recreation, and navigation. Highway transportation has also been an important part of the Fort Baker landscape along the Golden Gate Bridge, US 101, and Alexander Avenue. Although not related to the significant military uses of the landscape, these transportation uses were a highly visible part of the landscape's historic character beginning in the 1930s. A small part of Fort Baker is also used for a municipal sewage treatment plant off East Road along the bay front near the Sausalito city line built in 1952. Unlike the transportation uses, however, this ongoing land use, which is also not related to the significant military uses of the district, was never a conspicuous part of the landscape (the plant is largely hidden by topography and woods along the San Francisco bay front).

Post-Civil War, 1866–90

This period saw the arrival of military uses that would dominate the Headlands for a century. In 1866, the landscape had been used for agriculture for perhaps centuries, most recently for grazing as part of Rancho Sausalito. Corrals and ranch buildings were most likely at the site of the Main Post that was initially known as Old Ranch Valley. Grazing continued, presumably under approval of the Army, as military use and development began following the establishment of Lime Point Military Reservation in 1866. Military development began in 1868 with construction of the unrealized Third System fort at Lime Point, and continued through 1876 with near-completion of Cavallo Battery. After this time, military uses at Fort Baker went into a lull as Congress cut funding. The scenic landscape began to draw public recreational uses with growth of Sausalito and extension of railroads and ferry service to the Headlands in the 1870s. Hiking became poplar by the 1880s during the period of military inactivity. This period also saw the arrival of

aids to navigation with establishment of the Lime Point Fog Signal Station in 1883 by the US Lighthouse Board under permit from the Army.

Endicott-Taft, 1890–1917

Military use and development of Fort Baker, officially designated in 1897, expanded greatly between 1893 when construction began on Battery Spencer, to 1905 when Battery Yates was completed, bringing the number of seacoast defense batteries at Fort Baker to six. New military technology spread development farther into the landscape with construction of six fire-control stations between 1900 and 1910 and two searchlights with accompanying powerhouses in 1912. The major increase in defensive works required development of a post with barracks, administration building, post hospital, and civilian employee housing, and a Quartermaster area with supply and workshop buildings, most built between 1899 and 1909. The main officer quarters were located along the west side of the parade ground, in an area known as Officers' Row. The need for active recreation led to construction of a tennis court near the post hospital and a baseball field near the Quartermaster Area in ca. 1905. The post facilities and the defensive works required electrical, communication, and water utilities that led to building of water tanks, pumphouses, and overhead lines across the reservation, as well as submarine communications cables with onshore terminal buildings. Horses continued to serve as a means of transport, as evidenced by corrals and stables at the Main Post and Quartermaster Area.

Non-military uses continued during this period, including navigational aids at Lime Point, where a light beacon was added to the fog signal in ca. 1900. Agriculture and public recreation were restricted to areas outside of the Main Post and defensive works. There may have been military-related agricultural uses near Battery Kirby, where there was a post garden and possibly a ranch run by troops during the late nineteenth and early twentieth centuries.

World War I-II, 1917–45

The build-up to World War I witnessed some increase in military use at Fort Baker, but was followed by a decade of decreased military activity that led to abandonment of three of the batteries as strategic shifts favored the outer defenses at Fort Barry. Battery Orlando Wagner and Battery Duncan were disarmed in 1917, and Battery Kirby in 1934. At the Main Post, the decrease in military use correlated with removal of flowerbeds and temporary barracks and officer quarters. Expansion of automobile transportation led changes in roads, addition of garages, and loss of horse corrals and stables. Navigational uses increased with the Coast Guard's establishment of a beacon on Yellow Bluff in ca. 1935, while the advent of regional freeways brought about the Golden Gate Bridge, US 101, and Alexander Avenue completed in 1937.

Declaration of the Limited National Emergency in 1939 and entry of the US into World War II in 1941 led to dramatic increases in military activity and develop-

ment at Fort Baker, most notably the addition of three minor gun batteries at Kirby Cove and Cavallo Point; the Mine Depot, Station Hospital (a branch of the Army's Letterman General Hospital at the Presidio), and marine repair facilities on Horseshoe Cove; temporary-style barracks and a chapel at the Main Post; and searchlights and anti-aircraft field emplacements across the reservation. The increase in military activity most likely led to the end of grazing at Fort Baker as well as public recreational use due to heightened security.

The Army managed its defenses at Fort Baker according to four clusters during this period: Horseshoe Cove Defenses (Battery Yates to Battery Duncan), Lime Point Ridge Defenses (Battery Spencer), Gravelly Beach Defenses (Batteries Kirby and Orlando Wagner), and Diablo Ridge Defenses (Battery Construction 129) straddling the Fort Barry boundary.

Cold War, 1945–66

The end of World War II and beginning of the Cold War witnessed a dramatic change in military use and technology that led to abandonment of the seacoast gun batteries. Battery Spencer had been disarmed in 1943, and in 1946, Battery Yates was the last to be disarmed at Fort Baker. Most of the temporary anti-aircraft emplacements and the minor gun batteries were disarmed and abandoned. Lack of use led to demolition of some support facilities such as the latrine at Battery Duncan, and growth of trees that were beginning to obscure fields of fire, notably the eucalyptus at Battery Duncan. In 1956, the Army transferred Lime Point and Yellow Bluff to the Coast Guard, reflecting the end of the strategic importance of these promontories. The only major Cold War defensive element installed at Fort Baker, with the exception of SF-87C on the Fort Barry boundary, was a radar tower for SF-87C T (temporary site) on Slacker Hill installed in ca. 1954.

The support function of Fort Baker expanded during the Cold War, most notably with the development of the Capehart family housing at the Main Post completed in 1959. The Station Hospital was converted to use as a lab and support facility for the Army Reserve medical labs, and a parking lot was constructed on the adjoining parade ground to accommodate employees who commuted by car. The importance of recreation for military personnel stationed at Fort Baker was evident through the construction of a softball field on the parade ground in 1950.

The combination of the Cold War security with increasing population and new access from US 101 and Alexander Avenue resulted in the most prolonged period of restricted public access after World War II. [36] However, the potential use of Fort Baker for public recreation began to manifest late in the historic period, when the Army transferred a 146-acre parcel in the northern part of Fort Baker on Wolfback Ridge to the state of California in 1961 for use as a state park. No park development, however, occurred during the historic period.

The use of Fort Baker for navigational aids declined during the Cold War, in part due to navigational lights on the Golden Gate Bridge that made the light at Lime

Point obsolete. A greater impact came from automation, which led to demolition of the keeper's dwelling and outbuildings in 1961. The fog signal building was retained.

Evaluation

Since the end of the historic period in 1966, land use at Fort Baker has witnessed a marked transformation from a secured military reservation to a public recreation area with quasi-public museum and resort uses. This has led to physical changes in the landscape such as conversion of roads to trails, addition of public parking and scenic overlooks, removal of security fences and military signs, retrofitting of buildings and grounds for park and partner uses, and conservation of natural resources.

Aside from Wolfback Ridge, the conversion to public recreational uses began in 1967, when the Army transferred 338 acres along the Golden Gate, including Kirby Cove and Battery Spencer, to the state of California for use as a public park. The transformation to park use culminated with establishment of Golden Gate National Recreation Area in 1972, and transfer of West Fort Baker (west of US 101) to the National Park Service in 1974. At East Fort Baker, the Army began to transfer land to the park in 1984, and in 1995, the Army announced final closure of the military reservation. By 2002, the last Army uses at Fort Baker ceased, and transformation of the Main Post as the CavalloPoint lodge began. This followed adaptive reuse of the Fort Baker Quartermaster Area as the Bay Area Discovery Museum beginning in 1991.

The current dominance of recreational and educational land uses in the Fort Baker Military Reservation reflects a marked change since the end of the historic period in 1966. While public recreation existed at Fort Baker as far back as the late nineteenth century, it was never a dominant use. Existing land use therefore does not contribute to the historic character of the district, with the exception of ongoing aids to navigation at Lime Point and Yellow Bluff.

Circulation

Circulation in the Fort Baker Military Reservation was characterized during the historic period by a network of one- and two-lane military roads that connected defensive works, by wharves and piers, and by streets and walks in the developed areas built between 1867 and 1959. The most conspicuous circulation features at Fort Baker remain US 101/Golden Gate Bridge and Alexander Avenue, which were completed by public authorities in 1937 within Fort Baker, and expanded in 1954.

Post-Civil War, 1866–90

During this period, the primary access to Fort Baker was by ship, via the Engineer wharf built in ca. 1867 north of Lime Point. Soon after, the Army began construc-

tion of roads to the three batteries, including Moore Road to Lime Point built in 1867, followed by the road to Gravelly Beach (current Conzelman and Roth Roads) in 1870, and the road to Cavallo Battery (current Center Road and East Road) and Cavallo Battery Outwork (current Satterlee Road, site of Battery Yates) in ca. 1872. A covered way built by 1873 extended through Ridge Battery to Cliff Battery. In 1874, work began on a road to Fort Barry (Point Bonita) from Ridge and Cliff Batteries over Diablo Ridge through Rodeo Valley (parts of current Conzelman and Julian roads), but the project was abandoned in 1875. There were also most likely trails to Point Bonita and Sausalito.

The Lime Point Fog Signal Station, built in 1883, had its own circulation system consisting of a railway or cartway along Moore Road used to transport coal from the Engineer Wharf to the fog signal station.

Endicott-Taft, 1890–1917

With development of the Endicott batteries at Fort Baker came a number of new and improved roads that extended the earlier system. During the 1890s, the Army constructed approach roads to Battery Duncan (Drown Road) Battery Orlando Wagner, and Battery Yates (Satterlee and Yates Roads). The first road between Forts Baker and Barry (current Conzelman, Julian, and Bunker Roads), begun in 1874, was completed in ca. 1901 and realigned in 1905 (Dubois Road) to bypass the rifle range at Fort Barry. In 1901, the first road connecting Fort Baker with Sausalito (East Road) was built along a curving alignment that followed the hillside above San Francisco Bay. Despite the new road to Sausalito, shipping remained a primary means of transportation at Fort Baker. In 1903, construction was completed on the Quartermaster wharf at Horseshoe Cove that served as the Army's main shipping facility at the Marin Headlands.

Development of the Main Post and Quartermaster Area beginning in 1901 included a number of new roads, with red-chert gravel or red macadam surfaces and concrete gutters and curbs. These included Murray Circle, the oval-shaped loop that served as the main road of the post; McReynolds Road, the service road to Murray Circle; the pre-existing Center Road, which formed the southern side of the parade ground; Kober Street, which provided access to the rear section of the post; and Swain Road and Umia Street, the service roads to Kober Street. Satterlee Road served as the axis of the Quartermaster Area. The roads in the Main Post were bordered by concrete sidewalks. Concrete entrance walks, many with concrete stairs, connected the sidewalks with the buildings.

World Wars I–II, 1917-45

World War I saw one major change in circulation at Fort Baker: the construction of a one-lane tunnel under Wolfback Ridge to Rodeo Valley, completed in 1918 to provide a safer and more direct route between Forts Baker and Barry than the twisting road over Diablo Ridge (Conzelman, Julian, and Dubois Roads). The project included construction of a new concrete-surfaced road to the Main Post

(Bunker Road) that extended west to the old Baker-Barry Road (Dubois and McCullough Roads). Around the same time, a loop road (Gibson Drive) was built through the civilian housing area off Bunker Road. The roads in the Main Post, Quartermaster Area, and some of the main outlying roads were surfaced in red bituminous macadam in the years during and after World War I.

A number of major new circulation features were introduced during the 1930s with assistance of federal work-relief programs, most notably the Golden Gate Bridge, US 101, and Alexander Avenue (Sausalito Lateral) completed in 1937. Construction of the bridge cut off Conzelman Road around Vista Point (current Vista Point Road), and required the Army to build a bypass (current Old Conzelman Road). An exit to Fort Baker was created from Alexander Avenue to Bunker Road, requiring realignment of Bunker Road and construction of a concrete overpass. A similar overpass was built at the north end of East Road. Two minor roads along the bridge anchorage and viaduct were built as part of the project (Bridge Road, Anchorage Road). In addition, the bridge authority constructed two bridge construction piers, one near Lime Point and the other at the site of the Engineer Department wharf. Other changes during this time included straightening of East Road north of the Quartermaster Area in ca. 1937, and reconstruction of sidewalks and entrance walks along Kober Street and McReynolds Roads.

Declaration of the Limited National Emergency in 1939 and the build-up to World War II led to some additional changes to circulation at Fort Baker. These included extension of Conzelman Road west from Julian Road to Battery Construction 129 (Hawk Hill) on the Fort Barry boundary in 1942, and a new road to Rodeo Valley (McCullough Road) built in 1943 to bypass Julian and Dubois Roads. These roads, which required cutting into the steep hillsides, were surfaced in macadam, had no curbs, and used 'Y' intersections. Other circulation changes included extension of Satterlee Road to Cavallo Point, and addition of numerous Jeep roads to access temporary anti-aircraft defenses built in ca. 1941–42, notably on Slaker and Duncan hills, and along Wolfback Ridge. Security gates were established at road intersections along the US 101 and Alexander Avenue, and on East Road. Wharves, boat ramps, slips, and marine railways were added to Horseshoe Cove as part of the Mine Depot and marine maintenance facility developed between 1938 and 1944. A mine planter dispersion pier was built along San Francisco Bay in 1941.

Within the Main Post and Quartermaster Area, circulation changes during the World War II era included new roads to access temporary buildings, including Seitler Road and drives to the chapel and barracks on the east side of the Main Post built in 1941. Development of the Station Hospital in 1941 included an access road along Horseshoe Cove (Somerville Road), a circular entrance drive off Center Road, and a network of concrete walks connecting the buildings in the complex.

Cold War, 1945–66

Soon after the end of World War II, East Road was straightened, and the abandoned curves were used as pull-offs and scenic overlooks. In 1954, US 101 was expanded, and Lower Satterlee Road (Marina Road) was built along the east side of Horseshoe Cove to provide direct access to a pier for ferry service to Nike installations on Angel Island. Development of the suburban-style Capehart Housing Area extended Seitler Road and added Merrill Street, both of which were completed by 1959 with black asphalt and concrete gutter curbs with no sidewalks. Merrill Street terminated in a cul-de-sac. Each of the Capehart units was accessed by a short asphalt driveway, with concrete walks to the entrance doors. Throughout Fort Baker, most of the main roads were resurfaced with black asphalt during this period. In ca. 1965, the sidewalk along Murray Circle was widened, requiring removal of the curb-side plantings along Officers' Row.

Evaluation

Since 1966, Fort Baker has undergone numerous changes to circulation, but no new major additions or alterations. Changes include addition of pull-offs along Conzelman Road in the 1970s to provide scenic overlooks for motorists, removal of the Station Hospital with its entrance drive and walks by 1983, and creation of the Coastal Trail and San Francisco Bay Trail in the 1980s and 1990s. Some of the World War II Jeep roads were converted to trail use. In Kirby Cove, trails and a parking area were built in ca. 1969 as part of the Kirby Beach Day-Use Area. Other trails were laid out along Ridge Battery to access the scenic overlook at Battery Spencer. In ca. 1991, Satterlee Road through the Quartermaster Area was converted into a pedestrian zone for the Bay Area Discovery Museum, and in 2008, Breitung Road along the south side of the area was realigned to the south and the old alignment was expanded as museum parking. Rehabilitation of the Main Post as CavalloPoint Lodge between 2008 and 2010 included repair and replacement of roads and walks, addition of five small parking lots on Capehart house sites, removal of the parking lot on the parade ground, construction of a new staff parking area off Bunker Road, and addition of new walks and drives to the thirteen new lodge buildings along Seiter Road and Merrill Street. Road improvements that began in 2011 changed the character of Conzelman Road, Bunker Road, and East Road through widening of shoulders, removal of 'Y' intersections, and addition of concrete curbs and guiderails to address driver and pedestrian safety. The former red-chert surface of Lower Satterlee Road near the breakwater was formalized with parking areas and asphalt pavement in 2015 (not shown on drawings 1.3 or 2.1).

Overall, circulation in the Fort Baker Military Reservation retains historic character from the end of the historic period in 1966. Historic features range in age from Moore Road built in ca. 1868, to Merrill Street in the former Capehart housing completed in ca. 1959, reflecting development from the post-Civil War period through the Cold War. The Golden Gate Bridge, US 101, and Alexander Avenue,

located within Fort Baker on rights-of-way, are part of this historic character. While recent road work has altered historic details of primary roads outside of the Main Post, some of the secondary roads retain their historic details, such as red-chert gravel surface and concrete gutters, notably on Roth Road, Julian Road, and Drown Road.

Topography

Topography, defined as built changes to natural landforms, was historically an important characteristic of defensive works and maritime facilities in the Fort Baker Military Reservation. Other topographic changes were part of quarries, roads, and building sites.

Post-Civil War, 1866–90

The Army's earliest topographic change at the Headlands was blasting of the cliff near Lime Point in 1868–69 for the unrealized Third System fort, intended to be a massive masonry structure similar to Fort Point. Around the same time, the Army was transforming its design of defensive works to open barbette batteries with earthen parapets to absorb gun fire and camouflage the batteries from sight of enemy ships. This new design, known as the Plan of 1870, led to the abandonment of work on the Lime Point Third System fort and completion of Ridge Battery, Cliff Battery, and Gravelly Beach Battery in 1873, and the main work and outwork of Cavallo Battery in 1876. Each featured massive turf-covered earthen parapets and traverses. Other topographic changes during this period included construction of a rubble stone breakwater at the Needles in ca. 1867, and cutting and filling for the roads between 1867 and 1875.

Endicott-Taft, 1890–1917

The design of Endicott seacoast gun batteries continued to employ earthen parapets as protective cover, although in a less prominent way than the post-Civil War barbette batteries. The construction of Batteries Spencer, Duncan, Kirby, and Yates between 1893 and 1905 included extensive topographic changes surrounding their massive concrete structures, but with retention of overall surrounding natural landforms. Several of the secondary defensive works, including B1 Wagner and B1 Kirby, also involved excavation and construction of protective earthen parapets. The Cavallo Battery main work was not updated and retained its original earthen parapets and traverses.

Other topographic changes during this period at Fort Baker included extensive filling of the Old Ranch Valley for construction of the Main Post in ca. 1902, filling of the marsh at the foot of the Main Post in 1903, and leveling of the valley floor northwest of the post in ca. 1905 for a target range. Two quarries were established on the hillsides surrounding the post in the 1910s. North of Battery Kirby, the valley floor was filled as a tent terrace. Cutting and filling occurred with construction

of new roads, notably the road to Sausalito (East Road), and the Baker-Barry Road (Conzelman and Julian Roads).

World Wars I–II, 1917–45

The most conspicuous topographic change of the World Wars I–II period was the massive cutting and filling along Wolfback Ridge and the ridge north of Duncan Hill required for the construction of US 101 and Alexander Avenue, completed in 1937. The rocky ridge above Lime Point was also blasted to accommodate the Golden Gate Bridge Marin anchorage. Other changes included construction of two large rubble stone breakwaters in Horseshoe Cove in 1942–43, and filling along the Horseshoe Cove shoreline. Cutting and filling occurred along new roads, notably Bunker Road in 1918, and McCullough Road in 1943. A long trench or ditch, either a diversion for runoff or a defensive position, was built along the hillside of the Main Post.[37]

Cold War, 1945–66

Roadwork continued to require topographic changes during the Cold War period. This included straightening of East Road in ca. 1945 that required cutting back of the adjoining hillsides, and excavation of the west side of Cavallo Point along Horseshoe Cove for the construction of Lower Satterlee Road in ca. 1954. Widening of US 101, completed in 1954, included extensive filling that required extension of the Baker-Barry tunnel at the East Portal. Development of Vista Point included leveling of the prominent hilltop between the Main Post and US 101. Construction of the Capehart housing at the Main Post, completed in 1959, required topographic changes to create level building sites on the hillsides.

Evaluation

Since the end of the historic period in 1966, there have been no major topographic changes to the landscape of the Fort Baker military reservation. Minor changes have occurred with construction of trails along Ridge Battery and the Coastal Trail that ascends the ridge to the north. The recent widening of Conzelman Road and enlargement of pull-offs required additional cut and fill. Growth of vegetation on Ridge Battery and Cavallo Battery has obscured the topography of the earthen parapets, although this vegetation most likely grew in during the Cold War.

Overall, topography of the Fort Baker Military Reservation retains historic character from the end of the historic period in 1966. The most prominent topographic features are the earthworks of the post-Civil War and Endicott batteries, and the cut and fill along US 101 from the period between World Wars I and II.

Vegetation

Vegetation, defined as planted or managed plant material, was historically used at Fort Baker Military Reservation for sustenance, ornament and windbreaks, soil stabilization, and possibly for strategic concealment. The dominant planted

species included bluegum eucalyptus, black acacia, Monterey pine, and Monterey cypress.

Prior to establishment of the Lime Point Military Reservation in 1866, most of the vegetation at Fort Baker consisted of grasslands that were most likely the product of grazing and other agricultural practices that may have dated back to in part to Miwok use of fire to keep the land open.

Post-Civil War, 1866–90

Vegetation during this time was largely confined to turf that was established to stabilize steep slopes of the earthen parapets and traverses at Cliff, Ridge, Gravelly Beach, and Cavallo batteries, completed between 1873 and 1876. Grasslands continued to be maintained through grazing.

Endicott-Taft, 1890–1917

Turf was used to stabilize earthen parapets and earth cover on the Endicott batteries, including Batteries Spencer, Duncan, Kirby, and Yates built between 1893 and 1905. Other groundcover such as iceplant may have been planted on steep slopes around the batteries and fire-control stations. On the steep valley walls surrounding Battery Kirby, plantations of Monterey cypress and bluegum eucalyptus were planted in ca. 1915, probably to stabilize the slopes and provide windbreaks. Bluegum eucalyptus trees were planted in scattered locations on Duncan Hill surrounding Battery Duncan between 1910 and 1915, possibly for tactical concealment. A post garden was established north of Battery Kirby in ca. 1902. [38]

At the Main Post of Fort Baker, the parade ground and grounds surrounding the buildings were planted in turf, and a perimeter of blue-gum eucalyptus and black acacia trees was planted along the perimeter of the parade ground in ca. 1905. A flower border was added along Murray Circle and flowerbeds were added in front of the officer quarters in ca. 1910. A large windbreak of Monterey cypress was planted along the hillside on the west side of the post in ca. 1905, and windbreaks of bluegum eucalyptus were established at the northwest and east sides of the post in ca. 1905 ad 1915. Eucalyptus, Monterey pine, and Monterey cypress were planted as street trees along Center Road in ca. 1915. Specimen trees and foundation plantings were added around the post buildings around this time as well.

World Wars I–II, 1917–45

During this period, the mown turf cover on most of the battery earthworks may have been replaced with native vegetation to provide camouflage from the new threat of aerial attack. After World War I, the herbaceous flowerbeds in the Main Post were removed, and the post garden at Battery Kirby was abandoned. During the 1930s, new foundation plantings, sidewalk plantings, and specimen trees were established at the Main Post and Quartermaster Area, and the perimeter of trees around the parade ground thinned. A new windbreak of Monterey cypress was

planted along the chapel built in 1941. Eucalyptus trees were planted along lower East Road following its realignment in 1937. The eucalyptus trees planted on Duncan Hill by 1915 spread along the western and southern sides of the hill. At the Station Hospital built in 1941, the island in the entrance loop was planted with six circular flowerbeds and a perimeter privet hedge, and a variety of trees and shrubs were established throughout the complex.

Cold War, 1945–66

Changes to vegetation during the Cold War were primarily around the Capehart housing at the Main Post, where a variety of specimen trees and foundation plantings were introduced, including acacia, Norway maple, Monterey cypress, Monterey pine, and Oriental plane tree. Earlier plantings of eucalyptus on Duncan Hill spread, and trees were planted at the former civilian housing area along Bunker Road, including Monterey cypress, Japanese cryptomeria, and Canary Island pine around earlier plantings of bluegum eucalyptus. The trees around the perimeter of the parade ground continued to thin, along with the trees in the eucalyptus windbreaks. Monterey pine in the open valley floor north of Battery Kirby, and trees in a valley north of Alexander Avenue were planted in the 1950s and 1960s, probably by the Boy Scouts as conservation projects. The eucalyptus and Monterey cypress plantations at Battery Kirby spread along the adjoining hillsides. At the batteries, the Army ceased any management of vegetation on the parapets, and some of the earthworks, particularly at Cavallo Battery, became covered in heavy scrub and trees.

Evaluation

Since the end of the historic period in 1966, changes in planted and managed vegetation included continued spread of planted Monterey cypress, Monterey pine, and bluegum eucalyptus, with many volunteers that seeded in former grassland and brush. At Cavallo Battery, the volunteer trees and scrub on the earthworks were removed by the 1990s.

Demolition of the Station Hospital by 1983 included removal of trees and shrubs within the complex. On Duncan Hill, the park removed eucalyptus trees to reestablish the lines of fire from Battery Duncan. As part of the rehabilitation of the Main Post as the CavalloPoint Lodge between 2008 and 2010, the park planted non-invasive bluegum eucalyptus around the parade ground, and the lodge developers established low-mow turf around the buildings and planted a wide variety of foundation shrubs and trees. Healthy trees and shrubs planted by the Army were retained, including the windbreak of Monterey cypress and a group of aged eucalyptus near the guardhouse. Many of the plantings around the Capehart houses were removed.

Overall, planted and managed vegetation in the Fort Baker Military Reservation retains historic character as displayed through the patterns and species from the end of the historic period in 1966. These patterns date in large part to the Endi-

cott-Taft period. Vegetation has changed through spread of exotic invasive species in historically open spaces, and planting of Monterey pine at the Kirby Cove campground (although these trees are succumbing to pitch canker disease). Individual plantings at the Main Post have changed considerably since 1966 through introduction of new low-maintenance and native species, although the overall patterns of foundation plantings, perimeter trees around the parade ground, and scattered specimen trees remain. The Monterey pine and other trees probably planted by the Boy Scouts at Kirby cove and near the Main Post in the 1950s and 1960s were relatively immature in 1966, and their introduction appears to be unrelated to the military significance of the district.

Buildings and Structures

Buildings and Structures in the Fort Baker Military Reservation are characterized by defensive works (batteries, control stations, anti-aircraft defenses, cable terminals), support buildings and structures (barracks, officer quarters, hospitals, Quartermaster buildings, marine repair facilities, reservoirs, retaining walls, wharfs), and navigational aids.

Before establishment of the Lime Point Military Reservation in 1866, there were two existing buildings built at an undetermined date in Old Ranch Valley, near the site of the existing Officer Quarters building 631. These were probably a wood frame ranch house and barn.

Post-Civil War, 1866–90

Construction of military buildings began with the Engineer Camp (later known as the Engineer Department Area) in 1868. This was a cluster of ten frame buildings, a reservoir, and a wharf in a sheltered valley south of Horseshoe Cove (present site of Golden Gate Bridge viaduct). These buildings included an office, quarters, shops, storehouse, and stables related to construction of roads and defensive works in the Lime Point Military Reservation. The primary structures built during this period were Ridge Battery and Cliff Battery on Lime Point Ridge completed in 1873; Gravelly Beach Battery at Kirby Cove completed in 1873; and the Cavallo Battery main work and outwork at Cavallo Point substantially completed in 1876 when the Army ceased development of the defensive works.

In 1883, the US Lighthouse Board completed the Lime Point Fog Signal Station on a promontory known as Sugar Loaf Rock. The complex included a one-story masonry fog signal building and a connected two-story dwelling at the rear with parapet roofs and shuttered windows. The buildings were painted white to serve as daymarks. A wooden water flume along the hillside above Moore Road supplied the fog signal boilers with water from six tanks near the Engineer Camp.

Endicott-Taft, 1890–1917

The Endicott Plan for the modernization of the San Francisco harbor defenses called for extensive improvements to defensive works at Fort Baker, including replacement of three of the post-Civil War barbette batteries. Construction of the Endicott batteries began in 1893 and was completed in 1905, and included Battery Spencer, completed in 1897 on the site of Cliff Battery that retained the covered way of Ridge Battery; Battery Duncan on the hill near Yellow Bluff completed in 1899; Battery Kirby completed in 1900 on the site of Gravelly Beach Battery; Battery Orlando Wagner completed in 1901 between Batteries Kirby and Spencer; and Battery Yates completed in 1905 on the site of the Cavallo Battery outwork. The main work of Cavallo Battery, which was improved with gun platforms and parapet walls in 1890, was not replaced. Other defensive works included a mine casemate built in 1898 on San Francisco Bay that was converted to a cable terminal in 1903, and four fire-control stations associated with Batteries Duncan, Spencer, and Kirby. Accessory harbor defenses called for by the Taft Board beginning in 1905, which included expansion of fire-control system and addition of searchlights, included three additional fire-control stations, and 60-inch searchlights at Cavallo Point and Lime Point. Other buildings and structures erected during this period included powerhouses, water tanks, and battery latrines.

The largest number of buildings constructed during the Endicott-Taft period was in the Main Post and Quartermaster Area. As completed between 1902 and 1910, the post buildings were Colonial Revival-style officer quarters, barracks, post-exchange/gymnasium, and an administration building around the parade ground, and non-commissioned officer quarters, post hospital, and hospital steward's quarters along Kober Street at the rear. A temporary-style unpainted one-story barracks with two smaller barracks and a lavatory were erected at the southeast corner of the parade ground in ca. 1905, and a hospital pavilion ward was erected in ca. 1908 near the post hospital. A frame guardhouse and firehouse, and a brick pumphouse, transformer station, and Engineer Signal Corps storehouse (later service club) were also part of the initial development. At the southwest end of the Main Post, a cluster of seven small houses for civilian employees was developed between 1899 and 1910. The Quartermaster Area buildings were one-story with gable roofs and clapboard siding, and housed a bakery, coal shed, three storehouses, stables, a wagon shed, and workshops for carpenters, blacksmiths, and painters.

Outside of these developed areas were a number of Army utility buildings, including a gatehouse on East Road at the Sausalito entrance built in ca. 1901 and rebuilt in ca. 1906; eight steel water tanks on the hillsides west of the Main Post and others above Batteries Duncan, Kirby, and Orlando Wagner installed between 1905 and 1915; a pumphouse north of the Main Post built in 1909; and two wharves. The old Engineer Department wharf erected in 1867 was rebuilt in 1893, and a Quartermaster wharf was built on the southwest side of Horseshoe Cove in 1903.

A cluster of small buildings, probably part of a ranch operated by troops, was in a side valley northwest of Battery Kirby.

World Wars I–II, 1917–45

Building construction at Fort Baker from World War I through the 1920s included a YMCA along the parade ground in 1918, a new storehouse in the Quartermaster Area in 1918, the Baker-Barry tunnel with sentry stations at either end in 1918, a service station at the Quartermaster Area in 1921, two garages at the Main Post in 1925, along with a Mission Revival-style telephone switchboard room in ca. 1928. During the mid-1930s, a number of new building and structures were erected, most with the help of federal work-relief programs. These included seven new garages, stone retaining walls along Kober Street and McReynolds Road, and CCC Camp Spurr at the Fort Barry boundary (see Fort Barry). It was also during this time that the Golden Gate Bridge was built, including the Waldo Tunnel beneath Wolfback Ridge. In ca. 1935, the Coast Guard erected an electric beacon at Yellow Bluff, probably positioned on a small frame shed.

Between 1937 and 1945, the number of buildings in the Main Post, Quartermaster Area, and Horseshoe Cove waterfront increased dramatically, from approximately 48 to 100. These included a wharf, mine cable tank building, and four dug-in storerooms and magazines for the Mine Depot along Horseshoe Cove; two Series 700 storehouses in the Quartermaster Area; 12 Series 700 buildings in the Main Post, including a chapel, barracks, family housing, garage, and searchlight storage building, along with a mine storehouse that was part of the Mine Depot; and two marine maintenance facilities on Horseshoe Cove with marine railways, docks, and maintenance shops. A wood air-raid siren tower was erected behind the YMCA at the Main Post in ca. 1942. The single largest construction project during World War II was the Station Hospital, a complex of twenty-eight Series 700 one-story buildings completed in 1941 that were connected by covered breezeways.

Elsewhere in Fort Baker, World War II saw the construction of new reservoirs near Battery Duncan and Battery Spencer, and a PSR room for Battery Construction 129 near the boundary of Fort Barry. Anti-aircraft positions were built north of Duncan Hill and on Slaker Ridge, and portable searchlights were emplaced north of Duncan Hill, at Kirby Cove, and at Cavallo Point. Three minor gun batteries, consisting of two gun emplacements each, were built at Kirby Cove and Horseshoe Cove: AMTB Battery Gravelly Beach and Battery Kirby Beach in 1943, and AMTB Battery Cavallo in 1944, which had two positions, one on the Mine wharf and the other at Cavallo Point.

Removal of buildings and structures during this period included the East Road gatehouse in ca. 1937, the Engineer Camp buildings beneath the viaduct of the Golden Gate Bridge by ca. 1933, fire-control station B1 Duncan in ca. 1940, and several of the former civilian employee houses at the Main Post.

Cold War, 1945–66

The major new construction project of the Cold War period at Fort Baker was the Capehart housing, a complex of twenty-one California ranch-style houses along the northern and eastern periphery of the Main Post completed in 1959. Other new construction included a service station, paint shed, and two gas stations at the Quartermaster Area between 1950 and 1961, and several concrete transformer huts around the Main Post in the 1950s. A rest room building was constructed by the state at the Vista Point scenic overlook on US 101 in 1964. In 1952, construction began on a municipal sewage treatment complex along San Francisco Bay off East Road.

Removals during this period included the stables in the Quartermaster Area, fire-control station B4 Spencer at Kirby Cove, three civilian employee houses at the Main Post, and all but the fog signal building at Lime Point in 1961. Widening of US 101 completed in 1954 required removal of a wood water tank and sentry station at the East Portal of the Baker-Barry Tunnel. In the 1950s, the Army removed the two-story porches on the Endicott-era barracks along the parade ground.

Evaluation

Since the end of the historic period in 1966, buildings and structures have undergone substantial changes within the Main Post, Quartermaster Area, and Horseshoe Cove waterfront. These include demolition of the YMCA building in ca. 1972; removal of World War II-era barracks, bachelor officers' quarters, garage, and searchlight storage building between 1980 and 2009; removal of the paint storage building, storehouse, gas station, stable, and coal shed in the Quartermaster Area and construction of two buildings for the Bay Area Discovery Museum between 1991 and 2003; demolition of the Station Hospital by 1983 and construction of the US Coast Guard Station Golden Gate on the west part of the site in 1990; and demolition of the Capehart houses in 2008 and replacement with thirteen CavalloPoint Lodge buildings. At Horseshoe Cove, changes include extension and replacement of the timber bulkhead and addition of rubble rip-rap after 1966, removal of the Quartermaster wharf in ca. 1980, and removal of the World War II-era boat slips along the breakwaters. At Kirby Cove, toilet and maintenance sheds were added as part of the campground. Deterioration and vandalism have led to damage and collapse of several small abandoned buildings and structures, including water tanks, fire-control stations and utility buildings. Battery Orlando Wagner became heavily covered in graffiti.

Overall, individual buildings and structures of the Fort Baker Military Reservation retain historic character from the end of the historic period in 1966, but as collection there has been loss of historic character through demolition and new construction. Extant historic features range in age from defensive structures at Ridge Battery and Gravelly Beach Battery completed in 1874, to marine repair facilities at Horseshoe Cove built during the early 1940s, reflecting development from the post-Civil War period through World War II (there are also the Cold-

War era Capehart houses built in 1959 on the Fort Barry boundary). Demolitions and building rehabilitation after 1966 have returned the Main Post to more of its pre-World War II character, although a number of World War II-era buildings remain, including barracks, family housing, a chapel, Mine Depot buildings, and a marine repair facility. The new buildings of the CavalloPoint Lodge employ a contemporary design intended to be inconspicuous against the backdrop of the surrounding natural hillside, while the new Bay Area Discovery Museum buildings maintain the overall massing, materials, and color scheme of the historic buildings. The Coast Guard station building has its own distinct character that reflects a vernacular wood-frame style, while comfort stations and a maintenance shed at Kirby Cove reflect a rustic park aesthetic, all of which do not relate to the historic military context of the landscape.

Views and Vistas

Views and vistas in the Fort Baker Military Reservation historically included strategic lines of fire from batteries, sight lines from fire-control stations, nighttime views from navigational beacons and military searchlights, panoramic scenic views along roads and trails, and directed vistas within the Main Post.

Post-Civil War, 1866–90

During this period, the open grasslands of Fort Baker provided panoramic scenic views across the Golden Gate and San Francisco Bay that were limited only by topography and native oak woods along the shoreline of the bay. With completion of the first batteries between 1873 and 1876, strategic lines of fire were introduced from the gun positions outward across the inner Golden Gate and San Francisco Bay. There were also panoramic views along the military roads to Gravelly Beach (Conzelman Road and Roth Road), Moore Road, and the road to Cavallo Battery (Center Road and East Road).

Endicott-Taft, 1890–1917

Open grasslands maintained in part through grazing retained the panoramic views across the military reservation during this period. With the completion of the Endicott batteries between 1897 and 1905, strategic lines of fire were expanded, but all still were directed across the inner Golden Gate and San Francisco Bay. The addition of seven fire-control stations at Kirby Cove, Lime Point Ridge, and Duncan Hill between 1900 and 1910 created sight lines that were coordinated with sight lines from other fire-control stations or the batteries. Searchlights established at Cavallo Point and Lime Point in 1911 created directed nighttime views across the waters. Development of the Main Post between 1902 and 1909 defined a view from the parade ground to San Francisco Bay that was partially obscured with the planting of trees along Center Road in 1915. Open space allowed for views of the flagstaff from all parts of the parade ground. A gap in the trees around the perimeter of the parade ground maintained a view from the Commanding Officer Quarters (Building 604) across the parade ground.

World Wars I–II, 1917–45

The panoramic views across the grasslands and low scrub of the Fort Baker military reservation remained throughout this period. Growth of forest plantations planted in ca. 1915 in the valley around Battery Kirby were beginning to obstruct some of these views, along with eucalyptus on the hill surrounding Battery Duncan planted prior to World War I. Construction of new defensive works at Fort Baker during World War II, including AMTB Battery Gravelly Beach, Battery Kirby Beach, and AMTB Battery Cavallo, introduced new strategic lines of fire across the inner Golden Gate and San Francisco Bay. Lines of fire from batteries Kirby, Spencer, and Duncan, disarmed between 1917 and 1943, remained, but became obsolete. Within the Main Post, the growth of Monterey pine and eucalyptus windbreaks were limiting views from the parade ground toward the surrounding hillsides. Construction of the Golden Gate Bridge added a substantial new element to the viewshed of the Main Post and surrounding areas. Views of San Francisco Bay from the parade ground were obstructed in part by growth of trees along Center Road planted in ca. 1915; removal of the trees in ca. 1938 reopened this view, but it was once again partially obstructed by development of the Station Hospital in 1941. The one-story height of the buildings in the complex preserved outward views from the upper part of the parade ground.

Cold War, 1945–66

The grasslands at Fort Baker continued to convert to scrub and tree cover during this period, leading to loss in areas of the once panoramic views. With abandonment of the harbor defenses after World War II, the lines of fire and strategic sight lines from the batteries and secondary defensive works became obsolete. Those at Battery Duncan, which was disarmed during World War I, became obstructed by eucalyptus woods. The lines of fire at Battery Cavallo, obsolete since before World War I, were lost to trees and heavy brush that grew on the earthworks. Straightening of East Road in ca. 1945 created areas to pull off the road and enjoy views across San Francisco Bay. In 1962, the state established a scenic overlook along US 101 known as Vista Point for motorists to take in the view of the Golden Gate Bridge and San Francisco Bay area, with the Main Post in the foreground.

Evaluation

Since the end of the historic period in 1966, changes to views and vistas have occurred largely through the continued conversion of grassland to scrub and woods composed mostly of volunteer exotic trees. Scenic overlooks were formalized beginning in the late 1960s as part of conversion of west Fort Baker to public park use, including at Battery Spencer and several pull-offs along Conzelman Road. Lines of fire from Battery Duncan and Cavallo Battery were partially reopened with clearing of trees and brush, but those at Battery Orlando Wagner became obstructed by growth of Monterey pine. Within the Main Post, demolition of the Station Hospital, completed by 1983, opened ground-level views from the lower parade ground across San Francisco Bay. Rehabilitation of the parade ground in

2009 retained the gap in the perimeter trees at the view from the Commanding Officer Quarters (Building 604) and introduced street trees along Center Road, reestablishing character that existed prior to World War II.

Overall, views and vistas in the Fort Baker Military Reservation retain historic character from the end of the historic period in 1966. Strategic views, which were critical to harbor defenses but had become obsolete prior to 1966, remain with some exceptions, but now serve as scenic overlooks. Some of the panoramic views across the landscape and surrounding waters have become obstructed due to growth of trees and high scrub.

Constructed Water Features

Constructed water features, which are areas of open water for utilitarian or ornamental purposes, included just one known feature in the Fort Baker Military Reservation during the historic period. Enclosed reservoirs, tanks, cisterns, and other water systems (addressed under Buildings and Structures) were an important part of the utility systems at Fort Baker, but were not characterized by open or visible water.

Post-Civil War, 1866–90

In ca. 1883, the US Lighthouse Board built a water flume as part of the development of the Lime Point Fog Signal Station. This was an open wood trough that carried water from holding tanks south of the Engineer Department Area (Engineer Camp) to the steam boilers in the fog signal building.

Endicott-Taft, 1890–1917

The fog signal station flume was removed in ca. 1910. There is no record of other constructed water features at Fort Baker during the rest of the historic period.

Evaluation

Constructed water features, historically a minor characteristic of the Fort Baker Military Reservation, disappeared from the landscape prior 1966.

Small-Scale Features

Small-scale features in the Fort Baker Military Reservation historically included fences, gates, entrance posts, wood utility poles, street lights, military artifacts used as ornament, signs, flagpoles, and recreational apparatus. Armament ranged from post-Civil War Rodman guns and Endicott seacoast guns in the batteries, to World War II-era AMTB (Anti-Motor Torpedo Boat) guns and field emplacements of anti-aircraft machine guns.

Post-Civil War, 1866–90

Small-scale features during this period included a wood plank fence along the northern boundary of the Lime Point Military Reservation erected in ca. 1866.

The batteries may have been enclosed by fences to keep cattle off the earthworks. Development of the Engineer Camp beginning in 1866 included wood utility poles that most likely carried telegraph lines to the batteries. Wood fences of undetermined type that predated military ownership enclosed corrals in Old Ranch Valley (Main Post).

Endicott-Taft, 1890–1917

Construction of the Endicott batteries and support buildings at the Main Post and Quartermaster Area included a variety of small-scale features that served utilitarian and aesthetic purposes. The most common were fences, which included a woven wire and wood-post fence that replaced the original boundary fence in ca. 1903, and fences around the defensive works that demarcated maintained areas and kept out grazing cattle. White-painted wood-plank fences enclosed corrals in the northeastern part of the Quartermaster Area, and a single-plank fence surrounded the perimeter of the Main Post by 1915. Another fence was erected along Lime Point Ridge, and East Road was lined in part by a rustic cross-tie fence installed in ca. 1901 and replaced with white-painted plank fence in ca. 1907.

Most of the communications and power lines for the batteries were underground, but overhead cables on wood poles were installed to service electrification of the Main Post and Quartermaster Area in ca. 1909. The line was also extended west through Rodeo Valley to Fort Barry. A commercial overhead telephone line was installed from the landing of a submarine cable at Horseshoe Cove north toward Sausalito in ca. 1908. There were Army signs at the entrances and borders of the military reservation. Billboard-sized signs were maintained near cable terminals along Horseshoe Cove and on San Francisco Bay shoreline to warn mariners about submarine cable crossings.

Ornamental small-scale features at Fort Baker included a standard 75-foot-tall sectional iron flagstaff with guy wires in the upper center of the parade ground that served as the symbolic focal point of the post. Murray Circle was lit by gas lights on turned wood posts installed in ca. 1903; these were replaced with bishop's-crook-style iron standards with electric lights in ca. 1909. Ornamental shot lined the sidewalk in front of the Commanding Officer quarters (Building 604) and administration building (605). A wood stockade fence enclosed the tennis court built in ca. 1905, and stands and a backstop were installed at the baseball field near the Quartermaster Area in ca. 1905. Concrete entrance posts topped by stacks of shot and with a swinging iron picket gate installed in ca. 1910 marked the entrance to the reservation on East Road near the Sausalito line. These replaced a wood gate from ca. 1901. Similar concrete posts were erected on Moore Road near the Quartermaster wharf marking the south entrance into the reservation, and at the entrance to Battery Spencer and the nearby entrance of Roth Road to Battery Kirby.

World Wars I–II, 1917–45

From World War I through the mid-1930s, change in small-scale features at Fort Baker included addition and/or replacement of the bishop's-crook streetlights in ca. 1920 with ornamental bracketed-arm lights mounted on iron poles or wood utility poles. In ca. 1920, shell casings were placed along the sidewalk in front of the barracks, and these were removed along with the shot in front of the Commanding Officer quarters and administration building in ca. 1935. The corral fence at the rear of the post hospital was removed in ca. 1920, the stockade fence around the tennis court was replaced with a stone wall in ca. 1937, and the baseball stands and backstop were removed in ca. 1935. A scale for weighing vehicles was added to the Quartermaster Area in 1922.

Completion of US 101 and Alexander Avenue in 1937 included installation of white-painted wood guiderails, wood-post fencing along the right of way, and Art Deco-style steel streetlights. The gate at the Sausalito boundary on East Road was removed with completion of Alexander Avenue, and a new gate was built to the south in 1937. Other gates were added along Drown Road at Alexander Avenue, and at Old Conzelman Road where it was cut off by US 101.

The World War II build-up that began in 1937 added no known ornamental features to the landscape. Development of the Mine Depot added two dolphins in Horseshoe Cove for the mine wharf. A cluster of recreational features such as barbecue pits and picnic tables was added along the east side of East Road near the Sausalito boundary in ca. 1938, presumably as an unofficial recreation area for the increasing number of soldiers at Fort Baker. US entry into World War II in December 1941 led to an array of temporary small-scale defensive features in the landscape, including barbed-wire entanglements along the beaches to guard against enemy invasion, and anti-aircraft guns set in sandbagged emplacements.

Cold War, 1945–66

Soon after the end of World War II, field armament, entanglements, portable searchlights, and other temporary defensive features were removed. Increased security during the Cold War led to extension of chain-link and barbed-wire security fences along the bridge permit area, batteries, US 101/Alexander Avenue rights of way, and other reservation boundaries. In ca. 1950 concrete gate posts were removed from near the Quartermaster wharf and on Roth Road. Within the Main Post, cast-stone posts with acorn-style luminaires replaced the iron streetlights in ca. 1950. The flagstaff with guy wires was replaced with a shorter steel pole in 1951. At the Station Hospital, an armament display was set up in the island at the Station Hospital entrance in ca. 1960. Street signs were most likely installed soon after World War II as each of the streets was named in honor of fallen soldiers.

Evaluation

Since the end of the historic period in 1966, small-scale features have changed throughout Fort Baker. Army signs and many of the security fences along the

boundaries and around the batteries were removed as the area was opened for public access between the late 1960s and 2000s. Security fences were retained around Battery Duncan and Cavallo Battery. Safety railings were added at Battery Spencer and Battery Kirby that were accessible to the public. Picnic tables, fire rings, gates, and signs were added on and around Battery Kirby in its reuse as a public campground and day-use area beginning in the late 1960s. In the 1980s, the park installed streetlights and safety railings in conversion of the Mine Depot to a public fishing area. Adaptive reuse of the Quartermaster Area as the Bay Area Discovery Museum in 1991 introduced a wide variety of small-scale features, including fences, picnic tables, signs, flags, lights, and outdoor learning equipment. Within the Main Post, an Army bicentennial monument and a fir tree were added at the north end of the parade ground in 1975–76. Rehabilitation of the area as the CavalloPoint Lodge in 2008 included replacement of the cast-stone streetlights, removal of overhead power lines, new railings along steps, addition of bollards and entrance signs, and use of a variety of contemporary seating and tables in outdoor gathering areas. Throughout Fort Baker, Army signs were removed except for building number signs on buildings, and many traffic and directional signs were added along the roads. Large park-unit signs designating entrances into the Fort Baker Main Post were installed along Bunker Road and East Road. Most recently, reconstruction of Conzelman Road, McCullough Road, East Road, and Bunker Road have introduced new guiderails and safety railings.

Overall, small-scale features in the Fort Baker Military Reservation have lost historic character since the end of the historic period in 1966. Removal of security fences, replacement of Army signs with park signs, addition of safety railings and guiderails, and installation of new ornamental lights, fences, and furniture in the Main Post and Quartermaster Area have altered the military character of the landscape. All of the armament had been removed from the batteries and field emplacements by 1966. The only remaining historic small-scale features not part of larger buildings or structures are the parade ground flagstaff and chain-link security fences along US 101/Alexander Avenue and around Battery Duncan and Cavallo Battery.[39] The loss in character of small-scale features has altered the military feeling of the landscape.

Archeological Sites

Built features in the Fort Baker Military Reservation that had fallen into ruin by the end of the historic period in 1966 or remained only as a trace included the powerhouse for Battery Kirby, latrines for Batteries Kirby and Duncan, a road that led to the Baker-McDowell cable terminal from East Road, the unofficial recreation area off East Road near the Sausalito boundary, the foundations of the Lime Point Fog Signal Station keeper's dwelling and outbuildings, and the sites of World War II temporary searchlights and anti-aircraft machine gun emplacements. Other ruins and traces visible in the landscape today, such as the Quartermaster wharf

and several building sites, are the result of abandonment and decay since 1966 and do not contribute to the historic character of the landscape.

Fort Baker Landscape Feature Inventory (Table 2.1)

Landscape features associated with landscape characteristics of the Fort Baker Military Reservation are inventoried and evaluated in the following table, which is organized by the Fort Baker Outlying Areas (landscape outside of developed areas), Main Post, Quartermaster Area, Horseshoe Cove Waterfront, Horseshoe Cove Defenses, Lime Point Ridge Defenses, and Gravelly Beach Defenses. SF-88C (Hawk Hill/BC 129) and the Fort Barry Capehart Housing Area that straddle the Baker-Barry boundary are inventoried under Fort Barry. Features are evaluated as Contributing (C), Non-contributing (N-C), or Unevaluated (U) due to insufficient documentation. Features in italics are those not owned or managed by the National Park Service.

Features associated with the Golden Gate Bridge and its approaches (US 101, Vista Point scenic overlook, Alexander Avenue) are not evaluated because they are part of a larger resource that extends beyond the limits of Fort Baker, were not owned or built by the Army or used as navigational aids, and are not managed by the NPS. In addition, features associated with the Sausalito-Marin City sewage treatment plant are also not evaluated for similar reasons. These features are evaluated as "n/a" (not applicable). Most are, however, part of the historic setting of the Fort Baker cultural landscape because they were built during the historic period.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION					
FEATURE NAME	**OTHER RESOUCE INVENTORY**	**FMSS LOCATION**	**EVAL-UATION**	**HISTORIC PERIOD**	**HISTORICAL DATA**
FORT BAKER OUTLYING AREAS (DRAWING 1.1)					
Spatial Organization					
Nike SF-87C (Hawk Hill)	ASMIS: GOGA00450		C	Cold War	See Diablo Ridge Defenses, Fort Barry.
West Portal Transformer Station Area			N-C	WW I-II	Area on north side of Bunker Road near West Portal containing electrical transformer within chain-link fence, built ca. 1941; transformers removed ca. 1990. Station included a transformer shed, building 271, on north side of West Portal, built 1941 and removed ca. 1990 (271 now for generator building at East Portal). Chain-link fence remains, along with unpaved access road.
Land Use					
Bridge Permit Area			*n/a*	*WW I-II*	*Secured area beneath and alongside Golden Gate Bridge permitted to the Golden Gate Bridge Authority in 1931, bordered by chain-link fence. Contains short roads built for the bridge, bridge construction area, and earlier Army features. See also Lime Point Ridge Defenses.*
Sausalito-Marin City Sewage Treatment Plant			*n/a*	*Cold War/non-historic*	*Group of buildings and sewage treatment facilities operated by Sausalito-Marin City Sanitary District through a NPS outgrant. Approximately 5 acres between East Road and San Francisco Bay. Surrounded by woods and not conspicuous in the larger landscape; one building along East Road. Developed beginning in 1952; existing resources reflect significant post-1966 changes. Facilities not owned or managed by NPS.*
Vista Point Scenic Overlook	*CLI: 95430*		*n/a*	*Cold War/non-historic*	*Freeway rest area and scenic overlook, built 1962 by state, expanded 1975, 1985. Contributes to historic setting of the landscape; post-1966 features within area are non-C. Within state right-of-way; not owned or managed by NPS.*
Circulation					
Alexander Ave (Sausalito Lateral)	*LCS: 369463 FBR0715 CLI: 96598*		*n/a*	*WWI-II*	*Two-lane arterial highway, completed 1937 as part of the Golden Gate Bridge development. Within state right-of-way; not owned or managed by NPS.*
Anchorage Road			*n/a*	*WW I-II*	*Short paved road from Old Conzelman Road below viaduct to anchorage of Golden Gate Bridge, completed as part of the bridge development in ca. 1937. In Bridge Permit Area; not managed by NPS.*
Bluff Road			*n/a*	*WW I-II*	*Paved road from Bridge Road south along Lime Point Ridge beneath and alongside Golden Gate Bridge, completed as part of the bridge in ca. 1937. In Bridge Permit Area; not managed by NPS.*
Bridge Construction Wharf Landing			*N-C*	*WW I-II*	*Wharf landing along Moore Road, redeveloped in 1933 from old Engineer Wharf built in 1868, as a construction delivery and staging area for the Golden Gate Bridge. Pier removed ca. 1950, and bulkhead removed ca. 2000. Location of temporary trailers associated with the bridge seismic retrofit project. Site has historic association with Fort Baker, but lacks historic integrity. In Bridge Permit Area and not managed by NPS.*

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Bridge Road			*n/a*	*WW I-II*	*Paved road from Old Conzelman Road along west side of Golden Gate Bridge, completed as part of the bridge in ca.1937. In Bridge Permit Area; not managed by NPS.*
Bunker Road (East Bunker Road, West Bunker Road)	LCS: 058050 FBR/FAR105	40733	C	WW I-II	Third road to connect Forts Baker and Barry, completed ca. 1918; concrete paved with asphalt. Section at tunnel realigned in 1937 with construction of Alexander Avenue; intersection with Danes Drive (Alexander Ave onramp) realigned 1942; intersection redesigned 1990.
Coastal Trail (Marin Co. Section 32)	CLI: 96585		N-C	Non-historic	Foot trail; section between Dillingham Lot and Wolfback Ridge Road built ca.1990; other sections in Fort Baker on historic roads.
Conzelman Road	LCS: 058044, 058006 FB0710 FAR109 CLI: 96602	40734	C	Post-Civil War, Endicott-Taft, WW I-II	Eastern section part of original first road between Forts Baker and Barry begun in 1875 and completed in 1901. Realigned in 1930s with construction of Golden Gate Bridge. Extended west of McCullough Road in 1942 to access BC 129 (Hawk Hill). Scenic overlooks added ca. 1975; rebuilt in 2011 with widened shoulders, concrete curbs, changed alignment and intersections, guiderails, and pull-offs. Stone rubble drainage swale added along section west of Conzelman Road. Also within Fort Barry.
Conzelman Road Traffic Circle			N-C	Non-historic	Curbed traffic rotary intersection of Conzelman Road with McCullough Road, built 2011. Island has wide concrete shoulders and three roads intersect rotary with curbed triangular islands. On site of historic three-legged intersection built in 1942.
Danes Drive (Bunker Road Ramp)	RN268 CLI: 96603	43283	N-C	WW I-II	Completed in 1937 as ramp from Alexander Avenue to Bunker Road; realigned post-1966 to align with Bunker Road into tunnel. N-C due to loss of integrity (change in design, setting)
Danes Drive Parking Area	CLI: 96604		N-C	Non-historic	At intersection of Bunker Road and Danes Drive, built ca. 1990, redesigned 2011.
Dillingham Parking Area	RN975 CLI: 95428	89875	N-C	Non-historic	Lot adjoining US 1010 along portion of Old Conzelman Road, built ca. 1990, redesigned 2011.
Dubois Road	LCS: 369523 FBR0719 CLI: 96606	108242	C	Endicott-Taft	See Fort Barry Reservation. Only traces of road within Fort Baker remain (removed as part of quarry operation).
East Road (Fort Baker Road)	LCS: 056290 FB0708 CLI: 96607	43285	C	Endicott-Taft, WW I-II	Paved road from Sausalito to the Main Post of For Baker; southern part constructed in ca. 1872 as part of original access road between Engineer Camp and Cavallo Battery; extended to Sausalito in 1903; section at Quartermaster Area straightened, ca. 1937. Straightened, paved, and scenic pull-offs added in 1945. Reconstructed in 2011 with marked shoulders, concrete curbs, redesigned pull-offs, and gravel-surfaced surfaced trail (Bay Trail) with post and cable fence along east side.
Julian Road	LCS: 058007 FAT032 CLI: 96612	41953	C	Post-Civil War, Endicott-Taft	Unpaved road from Conzelman Road at McCullough Road to Bunker Road at the rifle range; part of 1st Baker-Barry road begun in 1874 and completed in 1901. Extends into Fort Barry. Vegetation has encroached onto the roadbed. (Part of Coastal Trail)
Julian Road - Coastal Trail Trailhead Parking			N-C	Non-historic	Unpaved parking area at intersection of Julian Road, Conzelman Road, and McCullough Road, built ca. 1990, redesigned 2011.
Lamoraux Drive			C	Cold War	See Fort Barry Capehart Housing Area.
McCullough Road	LCS: 058045 FBR0107	40912	C	WW I-II	Paved road around Diablo Ridge from Conzelman Road to Bunker Road, completed 1943. Intersections at either end redesigned 2011. Extends into Ft. Barry.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Moore Road	LCS: 056285 FBR0711 RN419 CLI: 95417	43286	C	Post-Civil War	Road along east side of Lime Point, built ca. 1867 as access between Engineer Camp and site of Third System fort at Lime Point; railway or cartway added in ca. 1883 for Lime Point fog signal, removed ca. 1910; road widened 1933 as part of Golden Gate Bridge construction; timber trestles added by Coast Guard to support eroding roadbed, ca. 1950. Portion within Bridge Permit Area that is not presently managed by NPS.
Old Conzelman Road			C	Post-Civil War, WW I-II	Paved Road from Conzelman Road at US 101, through Dillingham parking lot, and under bridge viaduct to Moore Road. See also Vista Point Road.
Pumphouse Road			C	Endicott-Taft	Unpaved road from East Bunker Road to pump houses (FB0577, FB0578) built ca. 1919. West end altered with construction of parking area. Unmaintained; southern third inaccessible due to washout. Extends into Alexander Avenue right-of-way.
San Francisco Bay Trail	CLI: 96585		N-C	Non-historic	Foot path paralleling East Road and extending south to Satterlee Road, begun ca. 1996. Rebuilt 2011 as part of East Road reconstruction as gravel shoulder with cable and post fence. Continues south along Somerville Road, Moore Road, and Old Conzelman Road to the Golden Gate Bridge.
Slacker Road (Slacker Trail, Slacker Ridge Trail)	CLI: 95424	237323 41959	C	WW I-II, Cold War	Jeep road to access 40 MM AA AW #12, later Nike SF-87C T, built ca. 1942. Vegetation has encroached on roadbed. (Part of Coastal Trail)
Shiley Street			C	Cold War	See Fort Barry Capehart Housing Area.
US 101 (Redwood Highway)			*n/a*	*Cold War*	*Multi-lane freeway, completed 1937 and widened 1954; extends beyond Fort Baker. Portion within Fort Baker contributes to the historic setting of the district. In state right-of-way; not owned or managed by NPS.*
Vista Point Road (Old Conzelman Road)			C	Post-Civil War	Unpaved road from Old Conzelman Road to US 101, around Vista Point scenic overlook, built 1870. Part of original road to Gravelly Beach; cut off from Old Conzelman Road by construction of US 101, completed 1937.
Wolfback Ridge Road (SCA Trail)		41958	C	WW I-II	Jeep Road from Slacker Road north to Sausalito built ca. 1942. Vegetation has encroached on roadbed.
Topography					
Fort Baker Conzelman Road Cuts			U	Undetermined	Two cuts along east side of road/west side of Lime Point Ridge, north of Kirby Cove. May be red chert quarries used for road construction (1875) or later surfacing; or result of landslides.
McCullough Road Quarry			C	WW I-II	Small excavated area in hillside along McCullough Road; probably used to supply red chert for construction and paving of road, 1942–43.
Vegetation					
Kirby Cove Forest Plantations			C	Endicott-Taft	See Gravelly Beach Defenses

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Buildings and Structures					
Alexander Ave. Overpass/Bunker Road	*LCS: 05058 FB0576 CLI: 96609*		*n/a*	*WW I-II*	*Concrete bridge, part of Alexander Ave (Sausalito Lateral), built 1937; within state right-of-way. Contributes to the historic setting of the district. In state right-of-way; not owned or managed by NPS.*
Alexander Ave. Overpass/East Road	*LCS: 370231 FB0576B CLI: 95422*		*n/a*	*WW I-II*	*Concrete bridge, part of Alexander Ave (Sausalito Lateral), built 1937; within state right-of-way. Contributes to the historic setting of the district. In state right-of-way; not owned or managed by NPS.*
Baker-Barry Tunnel	LCS: 010119 FB0268	42090	C	WW I-II	Single-lane tunnel along third Baker-Barry road (Bunker Road), completed 1918. Rebuilt 1937 and extended at East Portal in 1954 for widening of US 101.
BC 129 PSR Room	LCS: 010121 FB0770	42091	C	WW I-II	See Diablo Ridge Defenses, Fort Barry
Drown Road Electrical Substation	LCS: 058046 FB0526 CLI: 101989	42105	C	WW I-II	Concrete flat-roof building on Drown Road within state right-of-way along Alexander Avenue, completed 1941.
East Portal Electrical Substation	FB0271	109249	N-C	Non-historic	Small shed near East Portal, built ca. 1990; Building 271 formerly substation at West Portal, built 1961, removed ca. 1990. .
East Road Bus Shelter			*N-C*	*Non-historic*	*Small frame shelter at intersection of East Road and Alexander Avenue, built post-1966. Within state right-of-way; not owned or maintained by NPS.*
East Road Sewage Lift Station	FB0506		C	WW I-II	Small frame building on East Road near Alexander Avenue overpass, with a shed roof and ventilator, built ca. 1940.
Fort Baker Bunker Road Retaining Wall	LCS: 058059 FB0401 CLI: 101978		C	WW I-II	Mortared stone retaining wall on approaches to Sausalito Lateral overpass, built 1937.
Fort Baker Pumphouse 577	LCS: 058056 FB0577 CLI: 96591	43307	C	WW I-II	Frame shed for a water pump along Pumphouse Road, built 1919. (Vacant)
Fort Baker Pumphouse 578	LCS: 058057 FB0578 CLI: 96592	43308	C	Endicott-Taft	Frame shed for a water pump along Pumphouse Road, built 1909. Holes in roof. Located within right-of-way for Alexander Avenue. (Abandoned)
Fort Barry Capehart Houses	FB0810–FB870		C	Cold War	See Fort Barry Capehart Housing Area; 13 houses within Fort Baker.
Golden Gate Bridge			*C*	*WW I-II*	*The Golden Gate Bridge, completed in 1937, is part of the historic setting of Fort Baker. In Bridge Permit Area and not owned or managed by NPS.*
Golden Gate Bridge Bike Bridge			*n/a*	*Non-historic*	*Short bridge providing bike and pedestrian access from Golden Gate Bridge to Bluff Road and Old Conzelman Road, built ca. 1970. In Bridge Permit Area; not owned or managed by NPS.*
Nike SF-87C T Radar Footing, Slaker Hill			C	Cold War	Concrete footing for temporary Nike SF-87 radar installation, constructed ca. 1952; radar tower removed ca. 1954.
Old Conzelman Road Pumphouse	LCS: 370221 FB0418 CLI: 96590	108210	C	WW I-II	Frame shed for a water pump along Old Conzelman Road near Golden Gate Bridge viaduct, built 1932 (maintained archaeological site).
Vista Point Water Tank 421	LCS: 058051 FB0421 CLI: 96594	43310	C	Endicott-Taft	30,000-gallon steel tank on concrete foundation on Vista Point Road, built 1913.
Vista Point Water Tank 422	LCS: 058052 FB0422 CLI: 96595	43311	C	Endicott-Taft	30,000-gallon steel tank on concrete foundation on Vista Point Road, built 1913.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Vista Point Water Tank 423	LCS: 058053 FB0423 CLI: 96596	43312	C	Endicott-Taft	100,000-gallon steel tank on concrete foundation on Vista Point Road, built 1913.
Waldo Tunnel			*n/a*	*WW I-II, Cold War*	*Dual-bore tunnel for US 101 beneath Wolfback Ridge within state right-of-way, built 1937, northbound tunnel completed 1952. Portion within Fort Baker contributes to the historic setting. Not owned or managed by NPS.*
West Portal Sentry Station	LCS: 010120 FB0272 CLI: 105516		C	WW I-II	Concrete building with hipped roof on Bunker Road, completed 1919; sentry station for West Portal of Baker-Barry tunnel. Windows boarded. Companion East Portal sentry station (FB0406) relocated to Danes Drive in ca. 1950 and demolished after 1972. (Vacant)
Views and Vistas					
Conzelman Road Overlooks			N-C	Non-historic	Three overlook pull-offs with views across the Golden Gate, built ca. 1975 and reconstructed 2011. Panoramic views along Conzelman Road are historic, but designated overlooks are not.
Small-Scale Features					
Alexander Avenue Perimeter Fences	*LCS: 370406 CLI: 102788*		*C*	*WW I-II*	*Chain-link and barbed-wire security fences marking boundary between Alexander Avenue and Army areas. Painted bridge red; sections knocked down and others replaced. Within state right-of-way and not maintained by NPS. Includes Gate #6 (see below).*
Bridge Permit Area Perimeter Fences			*C*	*WW I-II or Cold War*	*Chain link and barbed wire security fences along east (Moore Road), west and north perimeters of Bridge Permit Area, granted 1931. Fence painted color of bridge. Separates F1G1 Baker from Battery Spencer; see Lime Point Ridge Defenses. Presumed not to be within Bridge Permit Area and not maintained by NPS.*
Fort Baker Overhead Utility Lines			C	Endicott-Taft through Cold War	System of telephone and later power lines on wood poles laid out from Sausalito to the Fort Baker Main Post, and west to Fort Barry through Rodeo Valley, ca. 1901. Updated and relocated at undetermined times. Lines in Main Post removed, ca. 2008. Age of individual poles undetermined.
Cable-crossing Sign, Baker-McDowell Cable Terminal			C	Unknown (pre-1966)	Large wood sign on raised posts with deteriorated sign paint, construction date unknown. A sign may have existed here since construction of terminal in 1895. Currently hidden by vegetation.
Drown Road Entrance Gate #6			*C*	*WW I-II*	*Entrance Gate in chain-link and barbed-wire boundary fence at Drown Road and Alexander Avenue, built ca. 1937 and designated as Gate #6. Existing gate posts are historic, but gate appears to be an in-kind replacement. May be only surviving Army gate in the headlands. In state right-of-way and not managed by NPS.*
US 101 Fences	*LCS: 370406 CLI: 102788*		*U*	*WW I-II, Cold War*	*Chain-link fences along US 101 and Vista Point that may date to original highway construction in 1937 and Vista Point development in the 1960s.Age of existing fences needs to be determined. May be within state right-of-way and not managed by NPS.*
Archeological Sites					
East Road Recreation Area Remnants	ASMIS: GOGA00452		U	WW I-II	Unofficial recreation area probably developed in the 1930s with remnants of walks, footbridges, and barbecue pits. Does not appear on any Army maps. Partially within state right-of-way for Alexander Avenue, but area managed by NPS.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Lime Point (Fort Baker) Engineer Department Area	ASMIS: GOGA00451		U	Post-Civil War, WW I-II	Sheltered valley beneath Golden Gate Bridge viaduct, site of Engineer Camp complex completed 1868, later known as Engineer Department Area; included wharf. Last buildings demolished ca. 1935; Old Conzelman Road only remaining above-ground feature. Eastern section (former wharf) within bridge permit area and not managed by NPS.
Golden Gate Bridge Construction Pier Remnants			*U*	*WW I-II*	*Rubble remnants (rip-rap) along Moore Road from pier and bulkhead, built 1933 for construction of the Golden Gate Bridge. Pier removed ca. 1955. Site of Engineer Wharf (1869-1933). Area contains temporary trailers for current bridge seismic retrofit project. In Bridge Permit Area; not managed by NPS.*
MAIN POST OF FORT BAKER (DRAWING 1.2)					
Spatial Organization					
Kober Street Lawn Area (Tennis Court)	LCS: 058216 FB0537 CLI: 96583	108223	C	Endicott-Taft	Space created with construction of tennis court and perimeter fence, ca. 1905; fence replaced by low stone walls, 1937. Tennis court pavement replaced with lawn and perimeter walk, 2008.
Mission Blue Lawn Area		108223	N-C	Non-historic	Gathering area, built 2008 as part of Cavallo Point Lodge; site of Capehart house FB0521, 1959–2008. Includes seating wall, walk, and turf.
Murray Circle Lawn Area		108223	C	Endicott-Taft	Open space in Officers Row between COQ and FB0605 established in initial development of the Main Post, ca. 1904. Site of proposed quarters that was never built. Named Murray Circle Lawn, ca. 2008.
Fort Baker Parade Ground	LCS: 217463 FB600 CLI: 105503	43255	C	Endicott-Taft	Central space of Fort Baker Main Post, built 1903. Space formed by mown ground enclosed by Murray Circle and ring of buildings, with opening to south; further enclosed by perimeter trees along Murray Circle planted between 1901 and 1905. South side enclosed through planting of trees along Center Road, 1915; trees removed with construction of Station Hospital, 1941; reopened with demolition of Station Hospital, 1983; trees replanted 2008.
Fort Baker YMCA Space		108223	N-C	Non-historic	Open space at the southeast side of the parade grounds between barracks FB0636 and the guard house where the YMCA building stood (1918–ca.1972). Building removed after the historic period; existing space is break in historic enclosure of parade ground.
Land Use					
Cavallo Point Lodge Patios		108223	N-C	Non-historic	Areas between and behind barracks 601/602 and Post Exchange-gymnasium used as dining and gathering areas, developed 2008. Includes seating, tables, paving, and plantings. .
Circulation (Minor parking areas not inventoried)					
Bunker Road	LCS: 058050 FBR105 CLI: 96608		C	WW I-II	See Fort Baker Reservation
Center Street (Center Road)	LCS: 369492 FBR0717 CLI: 96600	108241	C	Post-Civil War, Endicott-Taft	Two-lane road, constructed ca. 1872 as part of original access road between Engineer Camp and Cavallo Battery; incorporated into Main Post roads ca. 1900. Paved and curbed, ca. 1930. Rebuilt 2008 with new curbing, pavement. Also identified as part of East Road or Murray Circle.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Chapel Trail		86617	N-C	Non-historic	Earthen trail with steps from chapel parking lot to Drown Road, built ca. 2008.
Fort Baker Chapel Parking Lot			N-C	Cold War	Small parking lot off Seitler Road, built ca. 1958. Reconfigured and ramp to chapel added 2008. N-C due to loss of historic integrity.
Fort Baker Entrance Walks and Steps			C	Endicott-Taft	Concrete walks and steps to officer quarters and barracks along Murray Circle and Kober Street, built ca. 1903–09; probably rebuilt ca. 1930. Most rebuilt in-kind with added pipe railings, 2008.
Fort Baker Main Post Sidewalks			C	WW I-II	Concrete sidewalks along Murray Circle, McReynolds Road, and Kober Street. Rebuilt ca. 1937 as part of paving and curbing of roads. Planting bed between curb and sidewalk along Murray Circle removed ca. 1965. Sections of sidewalk replaced in-kind, 2008.
Fort Baker Motor Repair Shop Drives			C	WW I-II	Access drives at either side of the former mine storehouse FB0407.
Fort Baker NCO Quarters Driveways			C	Cold War	Short asphalt driveways at sides and rear of buildings 523 and 527 off Kober Street and Swain Road, built ca. 1950.
Fort Baker Parade Ground Walk			N-C	Non-historic	Concrete walk from Officers' Row to guardhouse along southern part of parade grounds, built 2008.
Fort Baker Post Hospital Parking Lot			C	Cold War	Asphalt lot along west side of post hospital, built as expansion of Kober Street loop around building, ca. 1958. Surrounds ambulance garage, FB0556.
Fort Baker Staff Parking Area (FB 405 Parking Area)	RN938B	105857	N-C	Non-historic	Parking lot off Bunker Road behind NPS motor repair shop Building 407, built in 2008; in area used informally for parking prior to 1972. Parking lot islands planted with Monterey cypress.
Kober Street	LCS: 369535 FBR0720 RN422 CLI: 96613	79908	C	Endicott-Taft	Main road in rear of post with loop around post hospital, completed ca. 1902; paved and concrete curbs added, ca. 1930; loop widening into parking area, ca. 1958. Sections rebuilt in-kind, 2008.
McReynolds Road	058045 FBR012 RN420 CLI: 96617	43989	C	Endicott-Taft	Service drive to Murray Circle, completed ca. 1902, paved and curbed, ca.1930. Gutter-curb on uphill west section. Two legs at southeast end. Sections rebuilt in-kind, 2008.
McReynolds Road Parking Lot			N-C	Non-historic	Three-section parking lot at southeast end of McReynolds Road built 2011 on location of earlier drives. On site of BOQ buildings 509, 1941–ca.1980, and 511, later post library, 1941–2009.
Merrill Street	RB423 CLI: 95416	79910	C	Cold War	Access road to eastern part of Capehart Housing, asphalt with concrete gutter curbs, built ca. 1958. East end altered through removal of cul-de-sac and extension for Cavallo Point lodge buildings, 2008.
Murray Circle	LCS: 056292 FB0709 RN417 CLI: 95418	43287	C	Endicott-Taft	Main road around parade ground built 1902 with mortared stone gutters; paved and concrete curbs added ca. 1930. Sections rebuilt in-kind, 2008.
Seitler Road	RN421 CLI: 95423	79906	C	WW I-II, Cold War	West section completed ca. 1941 as part of development of enlisted family duplexes. Section east of post hospital as part of Capehart housing, ca. 1958. Asphalt with concrete gutter curbs; no sidewalks.
Seitler Road Parking Lots			N-C	Non-historic	Eight rectangular small gravel and paved parking lots with access drives, built 2008. At sites of 8 Capehart houses (1959–2006).
Swain Road	LCS: 369547 FBR0721 RN424 CLI: 95427	407924	C	Endicott-Taft	East service drive to Kober Street, built ca. 1902, paved ca. 1930. Retains aprons to demolished garage and firehouse on west side.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Umia Street Parking Area	RN-P944 CLI: 95429	80105	N-C	Endicott-Taft	Umia Street built ca. 1902 as west service drive to Kober Street; reconfigured as a parking area in 2008. Small section of original road remains as entrance to parking area. N-C due to loss of integrity.
Topography					
Fort Baker Main Post Sandstone Quarry			C	Endicott-Taft, WWI-II	Large quarry east of parade ground (west face of Duncan Hill), begun 1913; new section to the north, ca. 1940.
Fort Baker Main Post Chert Quarry	SSU-6-LL		C	Endicott-Taft	Small quarry north of post hospital and Seitler Road, begun ca. 1910. Presently tree covered.
McReynolds Road Stone Revetment			C	WW I-II	Steep slope lined by stone slabs at southeast end of McReynolds Road; probably built in 1941 with BOQ (509) barracks on top of slope. Building demolished ca. 1980.
Vegetation					
Bunker Road Eucalyptus		108223	C	WW I-II	Roadside eucalyptus trees along the lower part of Bunker Road near Murray Circle, planted ca. 1920.
Center Road Trees		43255	N-C	Non-historic	Single rows of mixed trees, including eucalyptus, pine, and cypress, to either side of Center Road, planted ca. 1915. Trees removed in 1938. Replanted using only eucalyptus, as continuation of parade ground perimeter trees, 2008.
Fort Baker Bicentennial Fir		43255	N-C	Non-historic	Fir tree at north end of parade ground, planted ca. 1976. Part of Army bicentennial monument, built 1975.
Fort Baker Main Eucalyptus Windbreak, West		108223	C	Endicott-Taft, Cold War	Remnants of a eucalyptus windbreak west of Kober Street, planted ca. 1905; additional eucalyptus planted ca. 1958 as part of Capehart housing.
Fort Baker Main Post Foundation Plantings, Cavallo Point		108223	N-C	Non-historic	Shrub and herbaceous plantings along foundations of officer quarters, gymnasium, and frame barracks, planted ca. 2008 as part of Cavallo Point project, in character of historic foundation plantings. Barracks 636 and post hospital retain foundation plantings that may date to the historic period.
Fort Baker Main Post Building Lawns		108223	N-C	Non-historic	Mown turf grass established ca. 1903–10 around post buildings. Reestablished with dwarf grass mix that is seldom mown, 2008.
Fort Baker Main Post Eucalyptus Windbreak, East		108223	C	Endicott-Taft	Remnants of a linear eucalyptus windbreak on the hillside above McReynolds Road, planted ca. 1915; only scattered trees remain.
Fort Baker Main Post Monterey Cypress Windbreak		108223	C	Endicott-Taft	Long windbreak of Monterey cypress from Seitler Road south to Moore Road on steep slope along McReynolds Road, planted ca.1905. Windbreak has thinned and understory has lifted.
Fort Baker Main Post Specimen Trees		108223	C	WWI-II, Cold War	Collection of individual and small groves of trees around buildings, including demolished Capehart houses. Notable historic specimens include Monterey pine at FB0636, Acacia at FB0601 and 522, cryptomeria at FB605, and Canary Island date palm at 606, tennis court, and the post hospital. Also new specimen trees planted 2008 as part of Cavallo Point. Overall, specimen trees reflect historic character; additional research needed to determine contribution of other individual specimens.
Fort Baker NCO-Civilian Housing Area Grove			C	Endicott-Taft through Cold War	Grove of eucalyptus planted ca. 1910, and mixed Canary Island pine, cryptomeria, and redwood planted in the 1950s and 60s. Cape ivy and calla lily in the understory.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Fort Baker Parade Ground Lawn		43255	C	Endicott-Taft	Mown turf grass, originally planted with rye grass in ca. 1903 and later mixed perennial and annual grasses and weeds; reestablished 2009 using drought-tolerate species with character of turf.
Fort Baker Parade Ground Perimeter Trees		43255	C	Endicott-Taft	Single row of bluegum eucalyptus trees, most planted 2008; several historic specimens remain at south ends of Murray Circle. Historic plantings, ca. 1905, featured an irregular spacing of eucalyptus mixed with black acacia; acacia not returned in the 2008 replanting.
Fort Baker Post Chapel Windbreak		108223	C	WW I-II	Line of Monterey cypress along east side of chapel, planted ca. 1941.
Fort Baker Post Hospital Bank Plantings		108223	U	Undetermined	Mass of Pride of Madeira and dracaena on the bank south of the post hospital. May date to WW I-II era when adjoining greenhouse was built.
Buildings and Structures					
Bunker Road Drainage Ditch	LCS: 370240 FB0850 CLI: 101987		C	Cold War	Concrete drainage ditch along bend in Bunker Road and NCO mess (FB 405) and south, built ca. 1958.
Cavallo Point Lodge Buildings, New	FB1550–1562	226092–226105	N-C	Non-historic	Thirteen contemporary-style two-story buildings completed 2008. Replaced 8 Capehart houses (FB0505–FB0528)
Cavallo Point Lodge Welcome Booth			N-C	Non-historic	Small booth on Murray Circle installed 2008.
Fort Baker Air Raid Siren Tower Footings	CLI: 105507		n/a	WW I-II	Wood-frame tower on east side of Main Post, built 1942; dismantled and put in storage, 2008; planned for reconstruction on existing concrete foundation.
Fort Baker Artillery Barracks	LCS: 058213 FB0636	42108	C	Endicott-Taft	Brick two-story building on Murray Circle, completed 1907; porch removed ca. 1950. (Cavallo Point Lodge offices)
Fort Baker Artillery Barracks	LCS: 058209 FB0601 CLI: 96541	42106	C	Endicott-Taft	Frame three-story building on Murray Circle, completed 1903, porch removed ca. 1950, reconstructed 2010. (Cavallo Point reception)
Fort Baker Artillery Barracks	LCS: 058210 FB0602 CLI: 96542		C	Endicott-Taft	Frame two-story building on Murray Circle, completed 1903; porch removed ca. 1950, reconstructed 2010. (Murray Circle Restaurant, Cavallo Point meeting space)
Fort Baker Capehart Crib wall			N-C	Cold War	Concrete crib wall on hillside east of Post Chapel built as part of the Capehart housing, ca. 1959. N-C due to loss of integrity (loss of associated Capehart housing).
Fort Baker Commanding Officer's Quarters	LCS: 058202 FB0604 CLI: 101984	42102	C	Endicott-Taft	Frame two and one-half story building, completed 1903. (Cavallo Point guest lodge)
Fort Baker COQ Garage	LCS: 217431 FB0541 CLI: 103598	100405	C	WW I-II	Frame 2-car garage on McReynolds Road built 1935, WPA.
Fort Baker Main Post Enlisted Family Housing	LCS: 058071 FB0546 CLI: 105491	43274	C	WW I-II	Series 700 one-story frame and stucco house on Seitler Road, built 1941. (Institute at the Golden Gate)
Fort Baker Main Post Enlisted Family Housing	LCS: 058073 FB0549 CLI: 105492	43276	C	WW I-II	Series 700 one-story frame and stucco house on Seitler Road, built 1941. (Fitness Center)
Fort Baker Main Post Enlisted Family Housings	LCS: 058072 FB0547 CLI: 105493	43275	C	WW I-II	Series 700 one-story frame and stucco house on Seitler Road, built 1941. (NPS offices)

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Fort Baker Main Post Fort Baker Administration Building	LCS: 058211 FB0603 CLI: 96533		C	Endicott-Taft	Frame two-story building on Murray Circle, completed 1903. (Cavallo Point guest lodge)
Fort Baker Main Post Guard House	LCS: 056283 FB0615 CLI: 103603	43211	C	Endicott-Taft	Frame one-story building at Murray Circle and East Road, completed 1902.
Fort Baker Main Post Pump House	LCS: 056295 FB0671 CLI: 105505	43302	C	Endicott-Taft	One-story brick building on Center Road, built 1902. (Vacant)
Fort Baker Main Post Storage Building	LCS: 058067 FB0408 CLI: 96534	42078	C	WW I-II	Mission-style building on Murray Circle, built ca. 1928 as ab electrical vault, later as storage (mistakenly identified as a magazine in LCS/FMSS).
Fort Baker Main Post Tennis Court Retaining Wall	LCS: 058121 FB0538 CLI: 96584, 103597		C	WW I-II	Mortared stone wall, built ca. 1937. Replaced wood fence.
Fort Baker Main Post Transformer Substation	LCS: 058215 FB0502 CLI: 96586	43298	C	Endicott-Taft	One-story brick building on McReynolds Road, built 1909.
Fort Baker Main Post Utility Vaults	LCS: 370212, LCS: 058101 FB0404 CLI: 96587, 96588 FB0542 FB0564	43303	C	Cold War	Concrete above-ground vaults for distribution transformers built in 1950; 404 off Bunker Road behind Service Club (FB0405); two along McReynolds Road; 542 features a concrete stairway from McReynolds Road. FB0510 removed ca. 2011; concrete footing remains.
Fort Baker NCO Quarters Duplex	LCS: 058218 FB0530 CLI: 105490	43243	C	Endicott-Taft	Brick two-story duplex on Kober Street, built 1909. (Cavallo Point guest lodge)
Fort Baker NCO Quarters Duplex	LCS: 058219 FB0531 CLI: 105336	43245	C	Endicott-Taft	Brick two-story duplex on Kober Street, built 1909. (Cavallo Point guest lodge)
Fort Baker NCO Quarters Duplex	LCS: 058220 FB0523 CLI: 105487	43239	C	Endicott-Taft	Frame two-story duplex on Kober Street with cross-gable, built 1904. (Cavallo Point guest lodge)
Fort Baker NCO Quarters Duplex	LCS: 058221 FB0527 CLI: 105488	43241	C	Endicott-Taft	Frame two-story duplex on Kober Street with cross-gable, built 1904. (Cavallo Point guest lodge)
Fort Baker NCO Quarters Duplex	LCS: 058222 FB0529 CLI: 105489	43242	C	Endicott-Taft	Frame two-story duplex on Kober Street with cross-gable, built 1904. (Cavallo Point guest lodge)
Fort Baker NCO Quarters Garage	LCS: 397329 FB0534	42116	C	WW I-II	Frame 2-car garage on Swain Road, built 1935, WPA.
Fort Baker NCO-Civilian Housing Area Utility Pit			C	Un-determined	Concrete utility pit between Gibson Drive remnant and Bunker Road that may be a remnant of the NOC and civilian housing that existed here between 1899 and 1980.
Fort Baker Officer Quarters Duplex	LCS: 058203 FB0605 CLI: 105496	43248	C	Endicott-Taft	Frame two-and-one-half story cross-gable house on Murray Circle, built 1902. Part of Officers Row. (Cavallo Point guest lodge)
Fort Baker Officer Quarters Duplex	LCS: 058204 FB0606 CLI: 105497	43249	C	Endicott-Taft	Frame two-story cross-gable house on Murray Circle, built 1902. Part of Officers Row. (Cavallo Point guest lodge)
Fort Baker Officer Quarters Duplex	LCS: 058205 FB0607 CLI: 105498	43277	C	Endicott-Taft	Frame two-and-one-half story cross-gable house on Murray Circle, built 1903. Part of Officers Row. (Cavallo Point guest lodge)
Fort Baker Officer Quarters Duplex	LCS: 058206 FB0629 CLI: 105499	43251	C	Endicott-Taft	Frame two-story cross-gable house, on Murray Circle, built 1904. Part of Officers Row. (Cavallo Point guest lodge)

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Fort Baker Officer Quarters Duplex	LCS: 058207 FB0631 CLI: 105500	42087	C	Endicott-Taft	Frame two-story cross-gable house, on Murray Circle, built 1904. Part of Officers Row. (Used by BADM)
Fort Baker Officer Row Garage 543	LCS: 058225 FB0543 CLI: 103599	42117	C	WW I-II	Frame 4-car garage on McReynolds Road, built 1935, WPA. Concrete retaining wall added ca. 1939.
Fort Baker Officer Row Garage 545	LCS: 058226 FB0545 CLI: 103600	42118	C	WW I-II	Frame 6-car garage on McReynolds Road, built 1935, WPA. Concrete retaining wall added ca. 1939.
Fort Baker Officer Row Garage 564	LCS: 058224 FB0564 CLI: 103601	42119	C	WW I-II	Frame 4-car garage on McReynolds Road, built 1935, WPA. Concrete retaining wall added ca. 1939.
Fort Baker Post Chapel	LCS: 058214 FB0519 CLI: 101983	42100	C	WW I-II	Series 700 frame chapel with low steeple, constructed 1941. (Cavallo Point Mission Blue Chapel)
Fort Baker Post Chapel Terrace and Retaining Walls			N-C	WW I-II	Terrace with stone retaining walls at front of building, built 1941; rebuilt with new materials and dimensions, 2008. N-C due to loss of integrity. Integrity of stone walls on sides of buildings unevaluated.
Fort Baker Post Exchange and Gymnasium	LCS: 58212 FB0623 CLI: 103604	43256	C	Endicott-Taft	Brick one-story building on Murray Circle, completed 1904. (Cavallo Point theater)
Fort Baker Post Hospital	LCS: 058208 FB0533 CLI: 103606	43214	C	Endicott-Taft	Frame two and one-half story building at top of Kober Street, completed1902. Porches altered ca. 1950. (Proposed Cavallo Point administration)
Fort Baker Post Hospital Garage	LCS: 058122 FB0556 CLI: 103607	43258	C	WW I-II	Two-bay frame garage at rear of Post Hospital, built 1925 for ambulances.
Fort Baker Post Hospital Retaining Walls			C	WW I-II	Low concrete retaining walls along south and east sides of building, constructed ca. 1930.
Fort Baker Post Hospital Steward's Quarters (NCO Quarters)	LCS: 058217 FB0522 CLI: 105495	43216	C	Endicott-Taft	Frame two-story house on Kober St., completed (Cavallo Point, The Frank House guest lodge)
Fort Baker Series 700 Barrack (LE Office)	FB0507	42107	C	WW I-II	Two-story gable and pent-roof Series 700 building, built 1941. (NPS offices)
Fort Baker Service Club (NCO Mess)	LCS: 058201 FB0405 CLI: 105494	43238	C	Endicott-Taft	Frame one-story building along Bunker Road, built 1910, enlarged 1930.
Healing Center and Spa	FB0563 FB0568 CLI: 102769 CLI: 102770	226106	N-C	Non-historic	Two, one-story frame contemporary-style buildings, built ca. 2008 as part of Cavallo Point Lodge. Replaced Capehart house FB0568 (1959–2006) Includes contemporary fenced area at back with pool.
Kober Street Retaining Walls	LCS: 058120 FB0520 CLI: 103608		C	WW I-II	Mortared stone retaining walls along sidewalk on east side of lower Kober Street, and on south side of hospital turn-around, built under the WPA, 1937.
McReynolds Road Refuse Containers			C	WW I-II	Four concrete enclosures built ca. 1937; behind barracks within stone retaining wall built 1937; two behind Officer's Row set into slope.
McReynolds Road Retaining Wall	LCS: 058119 FB0521 CLI: 103612		C	WW I-II	Mortared stone retaining walls along east side of McReynolds Road, built under the WPA, 1937. Opening for walk to Cavallo Point lodge buildings added 2008.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Mine Storehouse	LCS: 055354 FB0407	43219	C	WW I-II	Large concrete building with banks of steel casement windows and side garage doors, completed 1941. Part of the Mine Depot. (Cavallo Point Lodge laundry)
Seiter Road Drainage Ditch	LCS: 370240 FB0850 CLI: 101987		C	Cold War	Concrete drainage ditch from Seiter Road to McReynolds Road built ca. 1958, probably as part of Capehart housing development.
Views and Vistas					
Fort Baker COQ View of Parade Grounds		43255	C	Endicott-Taft	View part of original post landscape from porch of Commanding Officer Quarters, ca. 1903. Opening in parade ground perimeter trees (ca. 1910, replanted 2008) maintained view.
Fort Baker Upper Parade Ground View of San Francisco		43255	C	Endicott-Taft	View part of original post landscape, ca. 1903. View from lower parade ground blocked by Center Road trees (ca. 1915–41) and Station Hospital complex (1941–83). Demolition of Station Hospital by 1983 reopened view from lower parade ground; view will become obscured once new Center Road eucalyptus trees (2008) mature.
Small-Scale Features					
Army Bicentennial Monument	LCS: 370244 FB0810 CLI: 103613, 105504	43255	N-C	n/a	Small marble and concrete marker with bronze plaque commemorating Army bicentennial, 1775–1975; dated June 14, 1975. Includes concrete approach walk and adjoining fir tree.
Fort Baker Main Post Directional and Identification Signs			N-C	Non-historic	Cavallo Point Lodge and NPS signs located throughout the Main Post. No historic Army signs exist, except building number signs mounted on buildings.
Fort Baker Main Post Street Lights			N-C	Non-historic	Ornamental mast-arm standards with pendant luminaires along Murray Circle, Kober Street, and Center Road, added 2008. Replaced Cold-War vintage concrete standards.
Fort Baker Main Post Street Signs		108223	U	Un-determined	White signs with black lettering on steel posts. History of design and individual signs not determined.
Fort Baker Murray Circle Bollards		108223	N-C	Non-historic	Black-painted metal bollards that block vehicles on Murray Circle, added 2008.
Fort Baker Parade Ground Flagstaff	LCS: 058049 FB0648 CLI: 102794	43255	C	Cold War	Steel flagstaff installed in 1951; replaced original sectional 75′ iron flagstaff with guy wires installed in 1905.
Seitler Road Parking Lot Lights		108223	N-C	Non-historic	Utilitarian lights on Seitler Road parking lots, added 2008.
Archeological Sites					
Gibson Drive Trace	SSU-7-A (Stewart et al 2001) CLI: 96610		U	Cold War	Traces of road built ca. 1918 within civilian housing area off Bunker Road; only trace remains.
Fort Baker Greenhouse Foundation	SSU-44 (Stewart et al 2001)		C	WW I-II	Concrete foundation slab from wood-sash greenhouse built 1939; superstructure removed ca. 1950.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
FORT BAKER QUARTERMASTER AREA (DRAWINGS 1.1, 1.2)					
Spatial Organization					
Satterlee Road Corridor			C	Endicott-Taft	Space along Satterlee Road framed on north and south sides by Quartermaster buildings, established ca. 1902. Character of space altered ca. 1991 with conversion into Bay Area Discovery Museum (BADM) pedestrian zone through closing of east and west ends with fences, removal of road section at east end, and addition of decks between buildings.
Land Use					
Bay Area Discovery Museum Outdoor Learning Lab			N-C	Non-historic	Area east of the Quartermaster buildings where children connect with native plants and natural elements, developed ca. 2004. Area historically undeveloped land east of Quartermaster warehouse, 562, 1941–ca.1990.
Bay Area Discovery Museum Lookout Cove			N-C	Non-historic	Playground east of Wagon Shed, FB0561, built 2004 on site of Series 700 9,364 square-foot warehouse, 562, 1941–ca.1990.
Bay Area Discovery Museum Festival Plaza			N-C	Non-historic	Open paved area between wagon shed and Discovery Hall on site of Quartermaster corrals, ca.1902–70.
Fort Baker Grounds Maintenance and Storage Area			N-C	Non-historic	Area between Quartermaster buildings and Cavallo Battery used as a grounds maintenance and storage area, established ca. 1990. On site of 8,309-square-foot Series 700 storage building, 570, 1942–ca.1990.
Circulation					
Bay Area Discovery Museum Entrance Drive Loop			N-C	Non-historic	Entrance loop built on site of Station Hospital circular entrance drive, 2008.
Bay Area Discovery Museum Parking Lots		79954, 79956 80133	N-C	Non-historic	Four-section asphalt and gravel parking lot accessed from New Breitung Road, built ca. 1991 and expanded 2002. On site of Breitung Road and part of Station Hospital complex (1941–83).
Maintenance Storage Building Road and Parking		104005	C	WW I-II	Paved access road off East Road to and around Quartermaster storage building, FB0513, built ca. 1941.
Building 570 Road			C	WW I-II	Unpaved road off Satterlee Road to and around the site of building 570, a Series 700 8,309 square-foot Series 700 warehouse, 1942–ca.1990. (Maintenance and Storage Area)
New Breitung Road			N-C	Non-historic	Entrance road to BADM and parking lots built ca. 2008. Extends south to Somerville Road. Partly on alignment of Breitung Road, built as part of Station Hospital complex (1941–ca.1983).
Satterlee Road	LCS: 369560 FBR0722 CLI: 95421		C	Endicott-Taft	Main road through Quartermaster Area and to Battery Yates, completed ca. 1902; followed general alignment of ca. 1872 road to Cavallo Battery outwork. Reconstructed within Quartermaster Area as pedestrian zone for BADM with new concrete gutter-curbs, drainage, ca. 1991; work included removal of connection to lower Satterlee Road at east end of Quartermaster Area. Section east of BADM planned for reconstruction and realignment.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Bay Area Discovery Museum Sidewalks			N-C	Non-historic	Concrete sidewalks at BADM entrance drive loop and along south side of Quartermaster buildings, built ca. 2008.
Topography					
Building 570 Cut			C	WW I-II	Large cut in hillside west of Cavallo Battery, built 1942 to create terrace for building 570, a large Series 700 warehouse, 1942–ca.1990. (Maintenance and Storage Area)
Vegetation					
East Road Eucalyptus Trees			C	WW I-II	N-continuous line of eucalyptus trees along south side of East Road in Quartermaster Area, planted ca. 1937 following road realignment. Several trees missing, notably at west end; and trees have spread down embankment.
Fort Baker Quartermaster Area Foundation Plantings			N-C	Non-historic	Variety of herbaceous plants and shrubs, primarily along south side of south row of buildings; planting beds along Satterlee Road sides of buildings, added ca. 1937, are empty or removed.
Fort Baker Quartermaster Area Specimen Trees			C	Cold War	A Canary Island date palm at the bakery and a Monterey pine east of the wagon shed, planted ca. 1950; older eucalyptus north of FB0559.
Buildings and Structures					
Bay Area Discovery Museum Discovery Hall	FB0562	42084	N-C	Non-historic	Two-story contemporary-style frame building, built 1991 on site of Quartermaster stables, 619, 1902–70.
Bay Area Discovery Museum Entry Building	FB0558		N-C	Non-historic	Two-story contemporary-style double-gable frame building, built 2003 on site of Quartermaster coal shed, 617, 1902–ca.1970.
Bay Area Discovery Museum Picnic Area Deck			N-C	Non-historic	Large raised wood deck east of wagon shed on historic access drive to Quartermaster stables.
Fort Baker Bakery	LCS: 056278 FB0557 CLI: 97216	42079	C	Endicott-Taft	One-story frame building on brick piers, built 1910, rehabilitated ca. 1991. (BADM offices)
Fort Baker Blacksmith Shop	LCS: 056279 FB0644 CLI: 101976	42080	C	Endicott-Taft	One-story frame building on brick piers, built 1910, rehabilitated and deck/ramp added at either end, ca. 1991. (BADM café)
Fort Baker Carpenter-Paint Shop	LCS: 056280 FB0645 CLI: 101979	42081	C	Endicott-Taft	One-story frame building on brick piers, built 1910, rehabilitated and deck/ramp added at either end, ca. 1991. (BADM Wave Workshop)
Fort Baker Commissary Storehouse	LCS: 056291 FB0637 CLI: 101985	42082	C	Endicott-Taft	One-story brick building, built 1908, rehabilitated ca. 1991. HVAC utilities along south side. (BADM offices)
Fort Baker Exchange Service Station, New	FB0567	42086	N-C	Cold War	Gas station, built 1965, rehabilitated and enlarged ca. 1991. N-C due to loss of integrity. (BADM restrooms)
Fort Baker Exchange Service Station, Old	LCS: 058200 FB0566 CLI: 101990	42085	C	WW I-II	Stucco-clad gas station with drive-through portico, built 1921; connection to Satterlee Road removed ca.1991. (BADM space)

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Fort Baker Flammable Storage Shed	FB0569	108469	C	Cold War	Small shed-roof building with corrugated siding, on Satterlee Road, built 1950. Once part of cluster of automobile-related buildings that included the Quartermaster garage, 689, 1940–2002, and the existing service stations, FB0566, 567. (Vacant)
Fort Baker Ordnance Storehouse	LCS: 056281 FB0666 CLI: 105502	43252	C	WW I-II	One-story frame building on brick piers, built 1918, rehabilitated and deck/ramp added on south and east sides, ca. 1991. (BADM Bay Hall)
Fort Baker Quartermaster Storage	FB0513		C	WW I-II	Large Series 700 frame building with low-pitched roof, on north side of East Road, built 1942. (Park maintenance)
Fort Baker Quartermaster-Subsistence Storehouse	LCS: 056289 FB0559 CLI: 105506	42088	C	Endicott-Taft	One-story frame building on brick foundation with historic loading dock along south side, built 1902, rehabilitated ca. 1991. (BADM Tot Spot)
Fort Baker Wagon Shed	LCS: 056282 FB0561 CLI: 96589	42089	C	Endicott-Taft	One-story frame building on brick foundation, built 1904, rehabilitated and large deck added at east end of building, ca. 1991. (BADM art studios)
Views and Vistas					
No associated features					
Small-Scale Features					
BADM Fences			N-C	Non-historic	Painted wood-plank fences enclosing Satterlee Road and museum entrance, installed ca. 1991.
BADM Signs and Furnishings			N-C	Non-historic	Variety of signs, outdoor seating, and play equipment through BADM outdoor areas, added beginning in 1991.
Archeological Sites					
No associated above-ground features.					
HORSESHOE COVE WATERFRONT (DRAWING 1.3)					
Spatial Organization					
Lower Field			N-C	Non-historic	Field between Center Road and Horseshoe Cove, site of Station Hospital; reflects non-historic changes from demolition of the 1941 hospital complex in ca. 1983 and construction of the Coast Guard Station in 1990. Prior to 1941, site was open field; prior to 1903, marsh.
Large Boat Basin			C	WW I-II	Area on east side of Horseshoe Cove defined by the Satterlee Breakwater, FB630, completed in 1943. Associated with the Mine Depot and Marine Repair Facility. Now used as part of the Travis Marina.
Small Boat Basin			C	WW I-II	Area on west side of Horseshoe Cove defined by the Moore Breakwater, FB632, completed in 1942. Associated with the Mine Depot and Marine Repair Facility. Now used as part of the US Coast Guard Station Golden Gate.
US Coast Guard Station Grounds (Permit Area)			*N-C*	*Non-historic*	*Fenced grounds surrounding the Coast Guard station building, east of the Mine Tank Building and between Center and Somerville Roads, established 1990 and expanded to the east, 2008. On site of Station Hospital, 1941–83. Not managed by NPS.*

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Land Use					
Fort Baker Mine Depot			C	WW I-II, Cold War	Facilities related to the support of the North Channel submarine mine field in the Pacific, located along west side of Horseshoe Cove and extending north along Moore Road into the Main Post; developed between 1937 and 1941. Mine operations transferred to the Navy in 1949, and continued until ca. 1962.
Fort Baker Marine Repair Facility			C	WW I-II, Cold War	Marine maintenance facilities related to the support of the Mine Depot and other marine functions located around Horseshoe Cove and developed between 1941 and 1946. Includes facilities for the repair of small craft in the west side of the cove, and facilitates for the repair of large craft in the east side of the cove. Military marine maintenance uses ceased ca. 1960.
Travis Marina (Presidio Yacht Club)			N-C	Non-historic	Facilities, both historic and non-historic, used by the Travis Marina along the east side of Horseshoe Cove, from the Marine Repair Facility to the Satterlee Breakwater. Use dates to late historic period (Presidio Yacht Club, est. ca. 1960), but does not reflect any club-developed features from the historic period.
US Coast Guard Station Golden Gate			*n/a*	*Non-historic*	*Facilities, both historic and non-historic, used by the Coast Guard through a NPS permit, including a portion of the Station Hospital site, small boat basin, and Moore Breakwater. Does not contribute to the historic setting of Fort Baker.*
Circulation					
Boat Load Ramp	FB0634 CLI: 102771	42096	C	Cold War	Concrete boat ramp in small boat basin of Horseshoe Cove, built 1958; adjoins site of marine railway built 1941, removed ca. 1958.
Marina Road (Lower Satterlee Road)	CLI: 96615		C	Cold War	Unpaved road along east shoreline of Horseshoe Cove, built ca. 1954 to access ferry pier to Angel Island; required excavation of cliff and placement of rubble along shoreline. Planned for reconstruction and realignment.
Moore Road	LCS: 056285 FBR0711		C	Post-Civil War, WW I-II	Paved road along west shore of Horseshoe Cove, built ca. 1867 and improved ca. 1935. Forms spine of Mine Depot and access to Mine Wharf and Moore Breakwater. See also Fort Baker Reservation.
Somerville Road (Sommerville Road)	LCS: 369575 RN425 CLI: 95426	43288	C	WW I-II, Cold War	Paved road along north shore of Horseshoe Cove, built ca. 1941 as part of Station Hospital complex; extended east to Satterlee Road in ca. 1955. Informal unpaved roadside parking areas existed by 1965 on south side; those on north side added after 1983. Parking areas lined by timber stops. Central section has lost integrity.
US Coast Guard Station Entry Drive and Parking Lot		*103976*	*N-C*	*Non-historic*	*Asphalt entrance drive off Center Road and parking lot between station building and mine cable tank building, built 1990.*
US Coast Guard Station Walks			*N-C*	*Non-historic*	*Concrete walks at front (south side) of station building with circular plaza around flagpole, built ca. 1990. In permit area; not owned or managed by NPS.*
Topography					
Marina Road Rip-rap			C	Cold War	Stone rip-rap on Horseshoe Cove shoreline below Lower Satterlee Road (Marina Road), added as part of road construction ca. 1954.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Marina Road Cut			C	Cold War	Cut in hillside along east side of Horseshoe Cove from construction of Lower Satterlee Road (Marina Road) in ca. 1954.
Moore Breakwater	LCS: 058080 FB0632 CLI: 103625	42097	C	WW I-II	Rubble stone breakwater along west side of Horseshoe Cove, built 1942 as part of the Mine Depot and Marine Repair Facility. Original boat slips and timber piles removed. Paved walk on top with non-historic railings. Non-historic floating dock and bosun's shed along the north side. (US Coast Guard Station Golden Gate). Used by Coast Guard.
Needles Breakwater (Moore Road Breakwater)	LCS: 370214 FB0711C CLI: 103626		C	Post-Civil War	Rubble stone breakwater between Moore Road and the Needles built in 1867 to shelter the Engineer Wharf at the Engineer Camp. Today visible only at low tide.
Satterlee Breakwater	LCS: 058079 FB0630 CLI 105513	42098	C	WW I-II	Rubble stone breakwater along east side of Horseshoe Cove completed in 1943 as part of the Mine Depot and Marine Repair Facility. Concrete access road on top. Original boat slips and wood piers along north side removed; adjoining non-historic floating dock. (Part of Travis Marina)
Vegetation					
Lower field Monterey Pine and Cypress			N-C	WW I-II, Cold War	Two trees that are remnant plantings from the demolished Station Hospital complex (1941–ca.1983). N-C due to loss of integrity.
Marine Repair Shop (Travis Marina Lodge) Plantings			N-C	Non-historic	Variety of ornamental plantings along east side of building and in front of PT&T building, including a dracaena tree, post-1966.[1] Most likely established by Presidio Yacht Club to hide telephone terminal building and associated concrete manhole structures. Iceplant on adjoining slopes may date to historic period.
Moore Road Eucalyptus Trees			C	Endicott-Taft	Eucalyptus trees along east side of road at Somerville Road intersection, planted ca. 1905 as part of perimeter trees around parade ground. Single tree along seawall may be later. Trees to north along mine cable tank building are missing.
Buildings and Structures					
Cable Hut Baker-Scott	LCS: 058069 FB0627 CLI: 101986	42103	C	Endicott-Taft	Subsurface concrete structure built in 1904 as terminal for communications cable between Forts Baker and Scott. Features small above-ground rectangular concrete projection, ventilator, and access hatch.
Fort Baker Main Post Pump House	LCS: 056295 FB0671		C	Endicott-Taft	See Fort Baker Main Post.
Fort Baker Mine Cable Tank Building	LCS: 055364 FB0670 CLI: 103615	43220	C	WW I-II	One-story corrugated transite-clad building completed 1941. Used to store submarine mine cables in saltwater. Later used as USAR training facility. Part of Mine Depot. (BADM)
Fort Baker Mine Depot and Cable Terminal Seawall	LCS: 058081 LCS: 058128 FB0662 CLI: 105515 FB0509 CLI: 105514	59457	C	WW I-II	Concrete seawall along west side of Horseshoe Cove, 1,479 linear feet, built 1932. Includes section in front of cable hut Baker-Scott with drainage outlets.[2]
Fort Baker Mine Depot Powerhouse	LCS: 055355 FB0409 CLI: 103616	43230	C	WW I-II	Cut-and-cover concrete one-bay structure, completed 1941. Part of Mine Depot.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Fort Baker Mine Depot TNT Storage Magazine	LCS: 055356 FB0411 CLI: 103617	43227	C	WW I-II	Cut-and-cover concrete one-bay structure, completed 1941. Part of Mine Depot.
Fort Baker Mine Detonator Magazine	LCS: 058068 FB0410 CLI: 103623	43223	C	WW I-II	Cut-and-cover concrete one-bay structure, completed 1941. Part of Mine Depot.
Fort Baker Mine Loading Rooms	LCS: 055357 FB0412 CLI 103618	43228	C	WW I-II	Cut-and-cover concrete structure with two sets of three garage bays, completed 1941. Part of Mine Depot.
Fort Baker Mine Storehouse	LCS: 055354 FB0407 CLI: 103621		C	WW I-II	See Fort Baker Main Post (located off southwest side of parade ground). (Cavallo Point Lodge laundry)
Fort Baker Mine Wharf (Berthing Pier)	LCS: 055358 FB0415 CLI: 103622	43232	C	WW I-II	L-shaped wharf with concrete piles, asphalt deck, and wood fenders, completed 1937. Retains cast-iron bollards and cleats; non-historic perimeter safety railing. Part of the Mine Depot. Adjoining Quartermaster Wharf, built 1903, removed ca. 1980. (Public fishing pier)
Fort Baker Mine Wharf Mooring Dolphins	LCS: 370203 LCS: 370207 FB0416, CLI: 103620 FB0417, CLI: 103619		C	WW I-II	Pyramidal-shaped navigational markers on wood piles north and south of the mine wharf, built in ca. 1938. Part of the Mine Depot.
Fort Baker Quartermaster Fuel Oil Pump House	LCS: 370217 FB0413 CLI: 105501	108209	C	WW I-II	Small frame shed, built 1945 (probably to replace earlier shed, ca. 1913). Housed mechanism that pumped oil up a pipeline from the Quartermaster Wharf to the adjoining fuel oil tank.
Fort Baker Quartermaster Fuel Oil Tank	FB0414 CLI: 103605	43212	U	Endicott-Taft	Underground 100,000-gallon concrete tank, built 1913. On hillside above Mine Wharf; not visible in the landscape. Above-ground pipe extends toward mine wharf. (NPS heating fuel storage tank)
Fort Baker Seawall, Sectional			C	Cold War	Sectional concrete seawall west of boat load ramp on north shore of Horseshoe Cove, built ca. 1958 at same time as Boat Load Ramp.[3] Modern concrete stairs added ca.2005.
Fort Baker Telephone Cable Terminal Building and Vaults	CLI: 96582		C	Cold War	Flat-roofed concrete building constructed by Pacific Bell at the terminus of a submarine communications cable, 1950. A cable terminal existed here since ca.1910. The adjoining concrete utility vaults may date to this earlier period. Not associated with military context of the district, but part of the landscape character of the Cold War.
Launchway House (Marine Maintenance Shop, Boathouse)	LCS: 056296 FB0633 CLI: 103611	43300	C	WW I-II	Frame building containing winch for the adjoining marine railway (non-existing) and a marine repair shop, completed 1941. Part of small-craft marine repair facility on northwest side of Horseshoe Cove; later used as boat house. Paved area to west. Windows removed and non-historic garage door installed.
Marina Road Utility Vault			U	WW I-II	Concrete utility vault with sloped access hatch, probably part of Satterlee Breakwater, built 1943; may have been replaced in 1970.
Marine Repair Facility Flammable Storage Building	LCS: 058077 FB0664 CLI: 102795	42115	C	WW I-II, Cold War	Small frame shed built 1918 in undetermined location and relocated to existing site at the Marine Repair Facility in ca. 1944.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Marine Repair Facility Fuel and Berthing Dock with Derrick (Marine Hoist and Dock)	LCS: 370209 FB0657 CLI: 103610		C	WW I-II	Wood dock with a 10-ton steel derrick on a concrete foundation, built 1944 as part of the Marine Repair Facility (east part of Horseshoe Cove). Existing pier is a remnant; southern extension removed in 1973; northern extension to shore and boom for derrick removed ca. 1990.
Marine Repair Facility Machine Shop (Maintenance Shop)	LCS: 217443 FB0665 CLI: 103609	85571	C	Cold War	Corrugated iron building, built 1946 at the marine repair facility area as a machine shop; later used as a maintenance shop.
Marine Repair Facility 6-Ton Marine Railway and Walkway	FB0668 CLI: 105509	43280	C	WW I-II	Inclined marine railway, approximately 105' long, on wood pilings with wood deck and steel rails, built 1943. Part of the Marine Repair Facility. Adjoining wood walkway, built 1943 and later rebuilt; Contiguous wood deck walkway. A floating "guest dock" added in ca. 1961 is at the end of the walkway. Adjoining 100-ton marine railway removed ca. 1965. (Used and maintained by Travis Marina/DOD).
Marine Repair Facility Welding Shop	LCS: 058075 FB0699 CLI: 91839		C	WW I-II	Frame building with corrugated transite (asbestos cement) siding, built 1944. Part of the Marine Repair Facility.
Marine Repair Shop (Travis Marina Lodge)	LCS: 058074 FB0679 CLI: 101977		C	WW I-II	Frame two-story building, completed 1943 as part of Marine Repair Facility on the east side of Horseshoe Cove; expanded later that year. Renovated into lodge for Presidio Yacht Club ca. 1960; current lodge for Travis Marina.
Marine Repair Shop Drainage Ditch			C	WW I-II	Concrete drainage ditch at base of slope north of Marine Repair Shop, built ca. 1944.
Marine Repair Shop Retaining Wall			C	WW I-II	Concrete retaining wall at northeast corner of built constructed with building addition, 1944.
New Breitung Road Sewage Pump Station	LCS: 217438 FB0659 CLI: 96581		N-C	Non-historic	Contemporary one-story sewage utility building on New Breitung Road north of the Marine Shop building (FB665), built in ca. 1990
Satterlee Road Retaining Wall			C	WW I-II	Concrete retaining wall along west side of Satterlee Road north of the marine repair shop, built 1941 as part of grading for the Station Hospital.
Station Hospital Timber Bulkhead	CLI: 96597		N-C	WW I-II, Cold War	Timber bulkhead along north shore of Horseshoe Cove; west section built ca. 1944 to replace strip of stone rip-rap installed ca. 1941; extended east ca. 1955. Reconstructed in different alignment with rubble rip-rap, ca. 1975.[4] Non-contributing due to loss of integrity.
Travis Marina Floating Docks			N-C	Non-historic	Floating docks off Marina Road and Satterlee Breakwater, built post-1966; Marina Road dock at location of historic floating dock installed ca. 1954 for ferry to Angel Island. (Travis Marina)
Travis Marina Pedestrian Truss Bridge			N-C	Non-historic	Tubular steel Pratt-truss bridge, added after 1966.[5] Part of walkway between the Travis Marina lodge and Marina Road. (Travis Marina)
US Coast Guard Bosun's Shed			*N-C*	*Non-historic*	*Small frame shed on piles along north side of Moore Breakwater, built 2002. Does not contribute to the historic setting of Fort Baker. Not owned or managed by NPS.*
US Coast Guard Floating Dock	*FB0435* *CLI: 102796*	*43299*	*N-C*	*Non-historic*	*Floating dock on north side of Moore Breakwater, installed 1988. Does not contribute to the historic setting of Fort Baker. Replaced boat slips with timber piles dating to 1942.*

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
US Coast Guard Sheds			*N-C*	*Non-historic*	*Two small sheds east of pump house FB0671, built post-1990. Masonry shed may be earlier building relocated to this site. Do not contribute to the historic setting of Fort Baker. In permit area; not owned or managed by NPS.*
US Coast Guard Station Building			*N-C*	*Non-historic*	*Large two-story multi-wing building, completed 1990. On site of Station Hospital complex, 1941–ca.1983. Does not contribute to the historic setting of Fort Baker. In permit area; not owned or managed by NPS.*
Views and Vistas					
No associated features					
Small-Scale Features					
Horseshoe Cove Cable-Crossing Sign					See Horseshoe Cove Defenses
Marina Road Overhead Utility Line			U	Unknown	Wood utility poles and power lines along east side of road; may be contemporary with road, ca. 1954.
Moore Road-Somerville Road Street Lights			N-C	Non-historic	Metal poles with square luminaires along west side of Moore Road and south side of Somerville Road in Mine Depot, installed ca. 2000.
US Coast Guard Flagpoles			*N-C*	*Non-historic*	*Two metal flagpoles in front (south) of station building, installed ca. 1990. Does not contribute to the historic setting of Fort Baker. In permit area; not owned or managed by NPS.*
US Coast Guard Perimeter Fence			*N-C*	*Non-historic*	*White metal picket fence around perimeter of Coast Guard grounds (permit area), installed ca. 1990 and reconfigured around enlarged area, 2008. Does not contribute to the historic setting of Fort Baker. In permit area; not owned or managed by NPS.*
Archeological Sites					
Fort Baker Quartermaster Wharf Remnants	ASMIS: GOGA00455		U	Endicott-Taft	The Quartermaster Wharf was a wood-pile L-shaped dock built in 1903 and removed in ca. 1980. Remnants include concrete seawall foundation and scattered debris along shoreline.
HORSESHOE COVE DEFENSES (DRAWINGS 1.1, 1.3)					
Spatial Organization					
Cavallo Battery Parade Ground	ASMIS: GOGA00071		C	Post-Civil War	Interior two-part open space of battery enclosed by earthen parapets, traverses, and parados, completed 1876.
Land Use					
No associated features					
Circulation					
Battery Yates Road		43282	C	Endicott-Taft	Short unpaved access road from Satterlee Road to and along Battery Yates, completed ca. 1905. Originally terminus of Satterlee Road prior to extension to Cavallo Point in ca. 1941. Section of Yates Road along battery covered in vegetation.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Battery Yates Trail		237324	N-C	Non-historic	Trail from north end of Battery Yates to Cavallo Point, built ca. 1990. Includes flights of steps and cable railing.
Cavallo Battery Entrance Road (Battery Cavallo Road)	LCS: 369480 FB0716 CLI: 96599	108240	C	Post-Civil War	Short unpaved access road from East Road into battery, built ca. 1872 as part of original road from Engineer Camp to battery; became separate segment with construction of East Road, 1903. Non-historic parking area altered historic limits of road.
East Road (Fort Baker Road)	LCS: 056290 RB418 FB0708	43286	C	Endicott-Taft	See Fort Baker Reservation.
Drown Road	LCS: 369511 FBR0781 RN0421 CLI: 96605	43284	C	Endicott-Taft, WW I-II	Unpaved road to Battery Duncan, built ca.1898; extended north to Alexander Avenue, ca. 1937.
Satterlee Road (Upper Satterlee Road)	LCS: 369560 FBR0722	43282	C	Endicott-Taft	Completed ca. 1902 as main road through Quartermaster Area and to Battery Yates; followed general alignment of ca. 1872 road to Cavallo Battery outwork. Extension from Battery Yates to Cavallo Point built ca. 1942.
San Francisco Bay Trail		43297	N-C	Non-historic	Trail along East Road and west of Cavallo Battery. See Fort Baker Reservation.
Topography					
Cavallo Battery Parapets : See Cavallo Battery (Buildings and Structures					
Vegetation					
Battery Duncan Parapet Turf			C	Endicott-Taft	Mown turf grass on traverse and parapets, established 1899; turf on parapets lost to eucalyptus woods, post-1945; partially reestablished by NPS in vista clearing, ca. 1990.
Cavallo Battery Parapet Turf			C	Post-Civil War	Mown turf grass on earthen parapets, established 1876 and maintained through ca. 1945. Lost to natural succession and partially reestablished by NPS, ca. 1985. Grasses exist on portions of the parapets, but only the parade ground is regularly mown.
Duncan Hill Eucalyptus Woods			C/N-C	Endicott-Taft	Scattered groves of eucalyptus trees planted along Drown Road between 1903 and 1914; trees spread to cover most of hill surrounding Battery Duncan by 1965.[6] Additional spread occurred after this time; vista clearing from battery by NPS, ca. 1985. Unintended spread considered non-contributing.
Buildings and Structures					
40 MM AA AW No. 14	LCS: 370251 FB0820B CLI: 96531 ASMIS: GOGA00389		C	WW I-II	Anti-aircraft sandbag-type emplacement on Duncan Hill for 40-mm automatic weapon built ca. 1942.
AA .50 #38	LCS: 370249 FB0820A CLI: 96532 ASMIS: GOGA00389		C	WW I-II	Anti-aircraft sandbag-type emplacement on Duncan Hill for .50-caliber gun built ca. 1942.
AA emplacement, Battery Duncan	LCS: 370236 FB0573B ASMIS: GOGA00390		C	WW I-II	Unidentified anti-aircraft concrete sandbag-type machine gun emplacement on parapet of Battery Duncan, built ca. 1942.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
AA emplacement, Cavallo Battery	LCS: 370246 FB0575C CLI: 96538 ASMS: GOGA00071		C	WW I-II	Unidentified anti-aircraft emplacement built ca. 1942.
AA Searchlight #108 base	LCS: 370236 FB0573B CLI: 96540, 96539 ASMIS: GOGA00390		C	WW I-II	Concrete base for portable searchlight on Duncan Hill, built ca. 1942.
AMTB Battery Cavallo Platform	ASMIS: GOGA00071		C	WW I-II	Rectangular concrete platform at tip of Cavallo Point for mobile AMTB gun, built 1943. Second gun in two-gun battery was on Mine Dock.
Baker-McDowell Cable Terminal (Old Mine Casemate)	LCS: 058127 FB0508 CLI: 103614, 103315 ASMIS: GOGA00458		C	Endicott-Taft	Cut and cover structure north of Yellow Bluff built in 1895 as a mine casemate; redesignated in 1903 as a cable terminal for the submarine mine cable between Fort Baker and For McDowell (Angle Island). Concrete portal on north side. (Vacant)
Baker-McDowell Cable Terminal Road Stone Bridge	MH 102 ASMIS: GOGA00458		C	WW I-II or earlier	Rustic stone and concrete bridge on road/path trace between East Road and Baker-McDowell Cable Terminal (FB0508), built prior to 1945. Features stone parapet walls, double pipe culvert, and stone drainage channel.
Baker-McDowell Cable Terminal Seawall	LCS: 058128 FB0509 ASMIS: GOGA00458		C	Endicott-Taft	L-shaped concrete seawall on shoreline of San Francisco Bay surrounding Baker-McDowell cable terminal, built 1895. Contains openings for submarine cables.
Battery Duncan	LCS: 055362 FB0573 CLI: 101964 ASMIS: GOGA00390	42093	C	Endicott-Taft	Endicott period two-gun concrete high-elevation barbette battery designed to protect inner Golden Gate and San Francisco Bay, with earth-covered support rooms, built 1898–99, disarmed 1917.
Battery Yates	LCS: 055361 FB0571 CLI: 101966 ASMIS: GOGA00456	42095	C	Endicott-Taft	Endicott period rapid-fire six-gun reinforced-concrete barbette battery designed to protect inner Golden Gate and San Francisco Bay, built 1903–05, disarmed 1946. Similar in design to Battery O'Rorke.
Cavallo Battery	LCS: 055363 FB0575 CLI: 101980 ASMIS: GOGA00071	42092	C	Post-Civil War	Plan of 1870 arrow-shaped barbette battery designed to protect inner Golden Gate and San Francisco Bay with earthen parados and brick traverse magazines, built 1872–76; six paired gun mounts and parapet walls added 1890. Historically mown parapets today partially covered in brush.
Cavallo Point Watchtower Base	ASMIS: GOGA00457		C	WW I-II	Concrete base with tracks on edge of cliff along Battery Yates trail, possible watch tower base erected ca. 1943.
CRF Yates (Rangefinder Station at Cavallo Battery)	LCS: 058048 FB0575B CLI: 105508 ASMIS: GOGA00071	42092	C	WWI-II	Fire-control station with low concrete walls and pipe frame for canvas cover, on parapet of Cavallo Battery, completed 1919. Contained a Coincidence Range Finder (CRF) instrument. Graffiti covered; surrounding area mown.
Duncan Hill Reservoir	LCS: 058084 FB0572 CLI: 96593	43309	C	WW I-II	400,000 gallon above-ground concrete reservoir, built 1941. Modern machinery added at south side.
East Road Stone Drainage Channels	LCS: 370242 FB0708A CLI: 101988 ASMIS: GOGA00454		C	WW I-II	Series of mortared stone channels and drain inlets along road cuts; probably built in ca. 1945 as part of improvement of East Road; also possible WPA features, ca. 1937. Not shown on Drawing 1.2.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
US Coast Guard Beacon, Yellow Bluff			*n/a*	*Non-historic*	*Steel pole with day marks and light above Yellow Bluff, erected ca. 1990; replaced earlier beacon, installed ca. 1935. Operated by permit; not owned or managed by NPS.*
Views and Vistas					
Cavallo Battery Field of Fire			C	Post-Civil War	Sight lines from six gun platforms looking from southwest to northeast across San Francisco Bay, established 1876. Sight lines limited by adjoining high traverses and earthen parapets. Obscured through growth of vegetation on parapets in mid-twentieth century; reopened by NPS ca. 1985.
Battery Duncan Field of Fire			C	Endicott-Taft	Sight lines from two gun platforms directed southeast across San Francisco Bay, established 1899. Original panoramic sight lines obscured through growth of eucalyptus woods after 1945 (battery disarmed 1917); vista opening through woods cleared by NPS ca. 1985. Existing character reflects growth of woods during late historic period.
Battery Yates Field of Fire			C	Endicott-Taft	Panoramic sight lines from six gun platforms directed south to east across San Francisco Bay, established 1905. Tall shrubs currently obscure some sight lines.
East Road Overlooks			C	WW I-II, Cold War	Openings in native oak woods providing views across San Francisco Bay, formalized ca. 1945 with construction of scenic overlooks/pull-offs; location and size of openings during historic period not documented.
Small-Scale Features					
Battery Duncan Perimeter Fence			C	Cold War	Perimeter chain-link and barbed-wire fence installed by Army, ca. 1950.
Cavallo Battery Entrance Gate Post	LCS: 058047 FB0575A CLI: 101981		C	Endicott-Taft	9-foot high post inside existing cyclone perimeter fence, built after 1902; likely remnant of perimeter post and wire fence enclosure.[7]
Cavallo Battery Perimeter Fence			C	Cold War	Perimeter chain-link and barbed-wire fence installed by Army, ca. 1950.
Horseshoe Cove Cable-crossing Sign			C	Unknown (pre-1966)	Large wood sign on raised posts with deteriorated sign paint, located on south side of Cavallo Battery. A sign existed in this location by 1938.[8] Associated with communications cable terminal along Horseshoe Cove waterfront that existed by 1912.
Archeological Sites					
Cavallo Battery South Access Road Trace	SSU-7-H (Stewart et al 2001) ASMIS: GOGA00071		U	WW I-II	Trace of road that curved up south glacis of Cavallo Battery from Battery Yates that dates to World War II.
Battery Duncan Latrine Foundation	LCS: 058085 FB0573A CLI: 101965 ASMIS: GOGA00390		U	Endicott-Taft	Built ca. 1899; superstructure removed post-1966.
Road or path trace near Baker-McDowell Cable Terminal	ASMIS: GOGA00458		U	Endicott-Taft	Trace of a road or trail from East Road to near the Baker-McDowell Cable Terminal (FB0508). May be access to cable terminal, built in 1895; probably abandoned pre-1945.
Searchlight #15/59 Foundation Trace	ASMIS: GOGA00457		U	Endicott-Taft, WW I-II	Possible trace of searchlight #15 or #59, placed ca. 1943, on bluff south of Battery Yates.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Duncan Hill Trail Trace	SSU-7-1 ASMIS: GOGA00390		U	Endicott-Taft	Trail between Fort Baker Main Post and Sausalito existed here by ca. 1900 and possibly earlier. Integrity of existing trail trace north of Battery Duncan undetermined.
LIME POINT RIDGE DEFENSES (DRAWING 1.1)					
Spatial Organization					
Ridge Battery Covered Way	ASMIS: GOGA00068		C	Post-Civil War, Endicott-Taft	Corridor from Conzelman Road to Battery Spencer framed by high earthen parapets of Ridge Battery, built 1873. Served as protected access to Cliff Battery, 1873–95, and later Battery Spencer.
Land Use					
Bridge Permit Area			C	WW I-II	See Fort Baker Reservation
Battery Spencer Scenic Overlook			N-C	Non-historic	Popular overlook on concrete blast slope and adjoining area at front of Battery Spencer, for views of the Golden Gate Bridge and Bay Area, opened to the public ca. 1975. Area lined by steel cable safety railing.
Circulation					
Battery Spencer Approach Road	ASMIS: GOGA00068, 00392		C	Post-Civil War, Endicott-Taft	Unpaved road through covered way of Ridge Battery to Cliff Battery, built 1873 and altered ca. 1898 with construction of Battery Spencer. Made into public walkway ca. 1975.
Battery Spencer Overlook Trail		41951	N-C	Non-historic	Broad gravel trail along top of Ridge Battery east parapet, from Conzelman Road to Battery Spencer blast slope, built ca. 1975. Lined by post and cable fence.
Battery Spencer Parking Area		80847	N-C	Non-historic	Roadside parking area along Conzelman Road, built ca. 1975 and redesigned 2011.
Conzelman Road	LCS: 058044 FB0710		C	Post-Civil War	See Fort Baker Reservation.
Trail to Spencer Fire Control Stations	ASMIS: GOGA00459		C	Endicott-Taft	Trail from Batter Spencer blast slope to F1G1 Baker and B1 Spencer. Eroded and stairs near F1G1 Baker may have been lost. Extends into Bridge Permit Area not managed by NPS.
Topography					
Lime Point Third System Fort Excavation	SSU-13-A ASMIS: GOGA00460		C	Post-Civil War	Excavated cliffside north of Lime Point, site of proposed Third System masonry fort, excavated 1868–69.
Vegetation					
Ridge Battery Parapet Turf			N-C	Post-Civil War	Mown turf on parapets; mowing ceased after ca. 1945 and turf grass non-existing; replaced by coastal scrub. N-C due to lack of integrity.
Buildings and Structures					
B1 Spencer	055360 FB0434 CLI: 102792 ASMIS: GOGA00459	42111	C	Endicott-Taft	Flat-roofed square masonry fire-control station on ridge 400' southeast of Battery Spencer, built 1900. Roof missing. In Bridge Permit Area, but managed by NPS.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
B3 Spencer	*LCS: 370228 FB0427 CLI: 102791 ASMIS: GOGA00459*		C	*Endicott-Taft*	*Flat-roofed square masonry fog-level fire-control station along shore beneath Golden Gate Bridge, completed 1910. Original designation: F2 10th FC. In Bridge Permit Area and not managed by NPS.*
Battery Spencer	LCS: 055369 FB0705 CLI: 101969 ASMIS: GOGA00459	40788	C	Endicott-Taft	Endicott period three-gun concrete high-elevation barbette battery designed to protect inner Golden Gate, built 1893–97 on site of post-Civil War-era Cliff Battery. Disarmed 1943.
Battery Spencer Administration Building	LCS: 058060 FB0705A CLI: 101970	108224	C	Endicott-Taft	Concrete flat-roofed building within Battery Spencer completed 1900.
Battery Spencer Equipment Building	LCS: 058061 FB0705B CLI: 101972	108225	C	Endicott-Taft	Concrete flat-roofed building within Battery Spencer completed 1897.
Battery Spencer Latrine	LCS: 058062 FB0705C CLI: 101973		C	Endicott-Taft	Concrete flat-roofed building within Battery Spencer, built 1910.
Battery Spencer Sentry Station	LCS: 058063 FB0705D CLI: 101975	108227	C	Endicott-Taft	Concrete flat-roofed building within covered way, completed 1897. Originally a switchboard room.
Battery Spencer Telephone-Switchboard Room	LCS: 058064 FB0705E CLI: 101974	108226	C	Endicott-Taft	Concrete flat-roofed building at north end of covered way adjacent to the Ridge powerhouse, completed 1897.
Battery Spencer Water Tank (Ridge Water Tank)	LCS: 058055 FB0728 CLI: 105512	43313	C	WW I-II	Subsurface reservoir located on ridge north of Conzelman Road, built 1941 to service Battery Spencer.
F1 G1 Baker	LCS: 055359 FB0433 CLI: 102793 ASMIS: GOGA00459	42110	C	Endicott-Taft	Flat-roof brick half-hexagonal front fire-command station for Groupment 1, on ridge 150' southeast of Battery Spencer, completed 1903. Original designation: F1 10th FC. In Bridge Permit Area, but managed by NPS.
Fire-control Station, Incomplete	ASMIS: GOGA00167		C	Endicott-Taft	Shell of a flat-roof concrete fire-control station on ridge north of Conzelman Road, built ca. 1900. Never completed or designated.
Lime Point Fog Signal Building	ASMIS: GOGA00453		C	Post-Civil War	One-story brick building built to house steam-powered fog signal, 1883. Windows missing. Operating Coast Guard fog signal and light mounted on south side of building.
Lime Point Light Station Seawall-Terrace	ASMIS: GOGA00453		C	Post-Civil War	Whitewashed masonry seawall above rock base once known as Sugar Loaf Rock, supporting terrace for buildings and walks, built 1883. Keeper's dwelling removed 1961.
Ridge Battery	LCS: 055368 FB0704 CLI: 105510 ASMIS: GOGA00068	43281	C	Endicott-Taft	Plan of 1870 earthen barbette battery with two pairs of gun emplacements and brick parapet walls, built 1870–73, served as covered way for Cliff Battery. Armed 1893, incorporated into Battery Spencer, 1897, disarmed 1901. Non-historic protective fencing along covered way; magazine portals covered. Former turf parapets covered in scrub.
Ridge Battery (Spencer-Wagner) Powerhouse	LCS: 058066 FB0704A CLI: 105511 ASMIS: GOGA00068	92067	C	Endicott-Taft	Brick flat-roofed building at north end of covered way, constructed 1900 to provide electricity to Battery Spencer and Battery Wagner; rehabilitated as public restrooms, 2005.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Searchlight #57 [#12] Base	ASMIS: GOGA00461		C	Endicott-Taft	Large concrete base with foundation of hexagonal-front searchlight enclosure next to Lime Point fog signal building, built 1912. Matching design to searchlights at Point Bonita and Bird Island. Searchlight superstructure removed ca. 1949. Originally designated Searchlight #12 and changed to #57 during WW I-II era.
Views and Vistas					
B1 Spencer Sight Lines			C	Endicott-Taft	Fire-control sight lines across Golden Gate, established 1903; partially obstructed by Golden Gate Bridge, completed 1937. Within Bridge Permit Area, but structure managed by NPS.
B3 Spencer Sight Lines			*C*	*Endicott-Taft*	*Fog-level fire-control sight lines across Golden Gate, established 1910; substantially obstructed by Golden Gate Bridge, completed 1937. Within Bridge Permit Area; structure not managed by NPS.*
Battery Spencer Field of Fire (Scenic Overlook)			C	Endicott-Taft	Sight lines from three gun platforms directed southwest to southeast across the Golden Gate, established 1897. Unobstructed views remain.
F1G1 Baker Sight Lines			C	Endicott-Taft	Fire-control sight lines across Golden Gate, established 1900; partially obstructed by Golden Gate Bridge, completed 1937. Within Bridge Permit Area, but structure managed by NPS.
Ridge Battery Field of Fire			C	Post-Civil War	Two sight lines from paired gun platforms directed east toward San Francisco Bay and southwest across the Golden Gate, established 1873; non-strategic following disarming of Ridge Battery and completion of Battery Spencer in 1898. Views partially obstructed by high scrub.
Small-Scale Features					
Battery Spencer Benches			N-C	Non-historic	Wood benches along overlook trail and at parking area, installed ca. 1975–2011.
Battery Spencer Entry Gate	LCS: 058065 FB0705F CLI: 101971		C	Endicott-Taft	Concrete piers to either side of access road, built ca. 1910; steel gate added between 1969–75.
Bridge Permit Area Fence			C	WW I-II or Cold War	See Fort Baker Reservation.
Archeological Sites					
Lime Point Light Station Keeper's Quarters Foundation	ASMIS: GOGA00018		U	Post-Civil War	Foundations of two-story masonry residence, built 1883 and demolished 1961. Part of terrace and seawall.
Searchlight Powerhouse #57 [#12] Remnant	ASMIS: GOGA00462		U	Endicott-Taft	Foundation of powerhouse for searchlight on Lime Point, located along east side of Moore Road, built 1911. Building demolished ca. 1950.
GRAVELLY BEACH DEFENSES (DRAWINGS 1.1, 1.4)					
Spatial Organization					
Battery Kirby Parade			C	Endicott-Taft	Formation area for troops at the rear (north) of the battery, built 1899–1900; originally a rectangular area bordered by a latrine, guard room, and store rooms. These buildings removed prior to 1966; definition of area presently diminished by growth of vegetation on formerly open, earthen surface.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Kirby Cove Valley Floor		40792	C	Endicott-Taft	Open space on valley floor used historically as a tent camp encampment and post garden, enclosed on north, west, and east sides by forest plantations, ca. 1915; space altered through planting of Monterey pine in ca. 1969 as part of the state Kirby Beach Day Use Area. Monterey pine presently dying off.
Land Use					
Battery Kirby Picnic Area and Overlook			N-C	Non-historic	Area on battery concrete blast aprons and turf parapet used as a scenic overlook and picnic area since ca. 1969; contains movable picnic tables.
Kirby Cove Campground	FB1	40792	N-C	Non-historic	Recreational use of valley floor begun ca. 1969 with state's Kirby Cove Day Use Area in Marin Headlands State Park; converted by NPS to campground after 1974. Contains four sets of campgrounds.
Kirby Cove Day-use Area			N-C	Non-historic	Area at south end of Roth Road with picnic tables and barbecues, established ca. 1975. Near site of portable searchlight #55, ca. 1941–49.
Circulation					
Battery Kirby Access Road			C	Endicott-Taft	Section of road from Roth Road along back of Battery Kirby, built ca. 1899; originally terminated at parade; extended east to fire-control station F3 / B4 Spencer, ca. 1910. Non-historic spur/cul-de-sac on north side.
Battery Orlando Wagner Approach Road (Battery Wagner Trail)		75358	C	Endicott-Taft	Short unpaved spur off Roth Road to Battery Orlando Wagner, built ca. 1900. Roadbed eroded and encroached by vegetation.
Cross-Valley Road (Connector Trail?)		115028 (?)	C	WW I-II	Earthen road extending from Roth Road east and south to the left flank of Battery Kirby and AMTB battery, built ca. 1942. West end of road removed for construction of campground parking area; most of road used as trail from parking area to campsite #4.
East Hillside Road			C	WW I-II	Abandoned road along east side of valley extending from campground to water tank built ca. 1942, probably to access tent pads; later used for access to water tank, built ca. 1969.
Kirby Beach Access Trails			N-C	Non-historic	Trails to either side of Battery Kirby with wood stairs, provide access to Kirby Beach, built ca. 1969 or later; stairs recently rebuilt.
Kirby Cove Campground Parking Lot			N-C	Non-historic	Unpaved parking lot on west side of valley floor off Roth Road, built ca. 1969 as part of state Kirby Cove Day Use Area.
Kirby Cove Campground Trails		115027 115028	N-C	Non-historic	Series of unpaved trails through campground area north of Battery Kirby, built ca. 1969 and subsequently changed. Trails include three wooden bridges. Northern/eastern trail on alignment of historic cross-valley road (see above feature).
Roth Road (Kirby Cove Road/Trail)	LCS: 369584 FB0724 CLI: 95420	40910 41954	C	Post-Civil War	Built in 1870 as access road from the Engineer Camp to Battery Gravelly Beach; became separate road with completion of 1st Baker-Barry Road (Conzelman Road), 1901; concrete gutters added ca. 1900. Originally 14′ wide; widened since 1961 following transfer to state parks. Retains red chert gravel surface. Non-historic gates at Conzelman Road and campground parking lot. Masonry piers at Conzelman Road built 1910; one has fallen down slope.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Topography					
Tenting Terraces	ASMIS: GOGA00067	40792	C	Endicott-Taft	Two large terraces on valley floor north of Battery Kirby, approximately 200' x 300', built ca. 1900 as temporary tenting site by soldiers training at the battery. The upper terrace is the site of campsite #2; non-historic trees growing on and below slope between the two terraces. Extent of terraces not clear due to vegetation.
Vegetation					
Battery Kirby Ornamental Plants		40792	U	Unknown	Herbaceous ornamental plants clustered in low-lying area along stream and culvert west of Battery Kirby. Plants include calla lily, cape ivy, morning glory, and crown vetch. May trace back to post garden, which was located on the valley floor to the north.
Battery Kirby Turf			C	Endicott-Taft	Turf on parapet in front of battery; currently maintained as picnic area and overlook. Historically extended to sides of battery and traverses of Gravelly Beach Battery. Edge material added post-1975 along south side at edge of bluff.
Kirby Cove Forest Plantations (Monterey cypress, Eucalyptus)			C	Endicott-Taft	Plantations of Monterey cypress and eucalyptus on steep slopes of valley surrounding Battery Kirby, planted between ca. 1915. Spread from original limits. Interspersed with Monterey pine that most likely spread from later plantings on valley floor, ca. 1954. Unintended spread non-contributing.
Kirby Cove Campground Monterey Pine Trees		40792	N-C	Cold War	Monterey pine trees planted ca. 1954 on valley floor-tenting terraces, probably by Boy Scouts as part of beautification project in the headlands (similar to plantings on BC 129, Battery Wallace); spread from original plantings across valley and to Battery Wagner. Many of the trees are dying from pitch canker. Non-contributing due to lack of historic association with the district and maturation after the historic period.
Buildings and Structures					
AMTB Battery Gravelly Dugout / Day room (Gravelly Beach Battery Traverse F)	LCS: 055366 FB0701 ASMIS: GOGA00067	40782	C	Post-Civil War, WW I-II	One of original earthen traverse magazines for Gravelly Beach Battery, completed 1873; rebuilt as dugout or day room for AMTB Battery Gravelly with concrete vent stack and new portal, ca.1943. Portal covered with earth.
AMTB Battery Gravelly Gun Mounts #1 (west) and #2 (east)	LCS: 058042 FB702C CLI: 96537 ASMIS: GOGA00067		C	WW I-II	Circular concrete mount for 90-mm gun to either front side of Gravelly Beach Battery traverse F, built 1943. Gun mount #1 covered in duff; #2 on edge of eroded cliff. Remains of a concrete sandbag revetment span the two mounts, probably a field construction revetment erected by soldiers that protected the two guns and/or an observation post between them. Some of the sandbags are scattered on the slope below.
B1 Kirby	LCS: 055370 FB706 CLI: 102789 ASMIS: GOGA00463		C	Endicott-Taft	Concrete and wood-frame flat-roof, partially below-grade fire-control station between Roth Road and Conzelman Road, completed 1900. Protected by earth slopes on three sides. Sight lines remain unobstructed; collapsed roof.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
B1 Wagner	LCS: 055371 FB0707 CLI: 102790 ASMIS: GOGA00463		C	Endicott-Taft	Concrete and wood-frame flat-roof, partially below-grade fire-control station on slope above Battery Wagner, completed 1910. Protected by earth slopes on three sides. Retains armature for WW II-era camouflage netting. Accessed by step, eroded foot trail from Roth Road. Sight lines partially obstructed by Monterey pine trees that grew in after 1972.
Battery Kirby	LCS: 055365 FB0700 CLI: 101967 ASMIS: GOGA00067	40784	C	Endicott-Taft	Endicott period two-gun concrete water-elevation barbette battery designed to protect the inner Golden Gate, built 1899–1900; BC station added 1910. Disarmed 1934. Separate latrine building across access road removed ca. 1950. Built over middle section of Plan of 1870 Gravelly Beach Battery.
Battery Kirby Beach Gun Mount #1 (west)	LCS: 058040 FB702A CLI: 96535 ASMIS: GOGA00067		C	WW I-II	Octagonal concrete mount for 3" gun, in front of east gun of Battery Kirby, built 1943. Battery also known as Kirby II.
Battery Kirby Beach Gun Mount #2 (east)	058041 FB702B CLI: 96536 ASMIS: GOGA00067		C	WW I-II	Octagonal concrete mount for 3" gun, in front of east gun of Battery Kirby, built 1943. Battery also known as Kirby II.
Battery Orlando Wagner	LCS: 055367 FB0703 CLI: 101968 ASMIS: GOGA00463	42094	C	Endicott-Taft	Endicott period two-gun concrete mid-elevation barbette battery designed to protect the inner Golden Gate, built 1900–01; disarmed 1917. Heavy graffiti and partially surrounded by Monterey pine trees.
Battery Orlando Wagner Oil and Tool Room			C	Endicott-Taft	One-story flat-roof concrete building at left rear flank of Battery Orlando Wagner, built ca. 1901.
Gravelly Beach Battery Remnants (parapet, traverses, gun platforms, culvert)	LCS: 055366 FB0701 CLI: 103602 ASMIS: GOGA00067	40782	C	Post-Civil War	Plan of 1870 earthen water-level barbette battery designed to protect the inner Golden Gate, built 1870–73; replaced by Battery Kirby, 1899–1900. Remnants include earthen parapet; traverse magazines A, B, E, and F (F adapted as dugout/day room, 1943); brick culvert with headwalls; and two Rodman gun platforms, #1, #9. Earthen features eroded and obscured in part by vegetation; fire piton platform #1.
Kirby Powerhouse			C	Endicott-Taft	One-story concrete gable-roof building, 12' x 22', west of Roth Road, built ca. 1910. Abandoned ca. 1930; roof and windows gone, surrounded by dense vegetation.
Kirby Cove Campground Maintenance Shed			N-C	Non-historic	Small frame shed on eastern side of campground, built post-1972.
Kirby Cove Campground Toilet Buildings			N-C	Non-historic	Four small prefabricated buildings in campgrounds area containing pit toilets, installed ca. 2000.
Kirby Cove Campground Trail Bridges			N-C	Non-historic	Three wood foot bridges over streams in campground area, built post-1972.
Kirby Cove Campground Wood Water Tank			N-C	Non-historic	Wood-stave water tank on east slope of valley, built for Kirby Beach Day Use Area in Marin Headlands State Park, ca. 1969. Not in use.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Views and Vistas					
AMTB Battery Gravelly Field of Fire			C	WW I-II	Sight lines from two gun plugs, directed southwest to southeast across the Golden Gate, established 1943; overlaps with adjoining Battery Kirby Beach and Battery Kirby fields of fire. Remains unobstructed.
B1 Kirby (706) Sight Lines			C	Endicott-Taft	Fire-control sight lines across Golden Gate, established 1910. Partially obstructed by Monterey pine around Battery Orlando Wager and hillside to west that grew after 1972.
B1 Wagner (707) Sight Lines			C	Endicott-Taft	Fire-control sight lines across Golden Gate, established 1910. Partially obstructed by Monterey pine around Battery Orlando Wager that grew after 1972.
Battery Kirby Beach Field of Fire			C	WW I-II	Sight lines from two gun plugs, directed southwest to southeast across the Golden Gate, established 1943; overlaps with adjoining AMTB Battery Gravelly and Battery Kirby fields of fire. Remains unobstructed.
Battery Kirby Field of Fire			C	Endicott-Taft	Sight lines from two gun platforms directed southwest to southeast across the Golden Gate, established 1900. Unobstructed views remain.
Battery Orlando Wagner Field of Fire			C	Endicott-Taft	Sight lines from two gun platforms directed southwest to southeast across the Golden Gate, established 1901. View partly obstructed by Monterey pine trees that grew after 1972.
Constructed Water Features					
Diversion Channel			C	Endicott-Taft	Earthen channel, approximately 250' long, diverting eastern valley creek around tent encampment terrace to main creek; built ca. 1899 as part of Battery Kirby (eastern creek flowed south through Battery Gravelly Beach; culvert removed for Battery Kirby).
Small-Scale Features					
Roth Road Gate Posts	ASMIS: GOGA00464		C	Endicott-Taft	Concrete beveled-top gate post approximately 4' tall on south side of Roth Road at Conzelman Road, built ca. 1910. Iron rod on top, may have secured ornamental shot. Paired north post lying on hillside down from the gate.
Kirby Cove Campground and Day-use Furnishings		40792	N-C	Non-historic	Picnic tables, barbecues, tent pads, fire rings, signs, and trash receptacles installed after 1972.
Kirby Beach Platform	ASMIS: GOGA00067		U	Unknown	Unidentified wood and iron platform that appears to have washed on shore.
Archeological Sites					
Battery Kirby Ancillary Building Sites			U	Endicott-Taft	Foundation remnants of battery latrine and storerooms along perimeter of parade. Mostly buried or covered by vegetation. Foundations not shown on drawing 1.4.
Kirby Valley Trail Trace (Army Foot Trail)			C	Post-Civil War	Trace of trail extending through center of Kirby valley from Roth Road to campsites, probably originated following construction of Gravelly Beach Battery in 1870s; lower section replaced by road during World War II. Also provided access to post garden.

TABLE 2.1. LANDSCAPE FEATURE INVENTORY, FORT BAKER MILITARY RESERVATION					
FEATURE NAME	**OTHER RESOUCE INVENTORY**	**FMSS LOCATION**	**EVAL-UATION**	**HISTORIC PERIOD**	**HISTORICAL DATA**
Kirby Powerhouse Road Trace	ASMIS: GOGA00067		U	Post-Civil War, Endicott-Taft	Minor road from Roth Road west to Kirby Powerhouse; originally an access road to ranch buildings north of the powerhouse built ca. 1875; extended to powerhouse, 1900. Abandoned ca. 1920. Trace covered by dense vegetation.
Hillside Tent Pad Traces	ASMIS: GOGA00067		U	WW I-II	Traces of tent pad terraces along hillside east of Battery Kirby and off road to water tank, built ca. 1942. Probably used by soldiers during World War II assigned to nearby AMTB batteries. Extent of traces not known.
Post Garden Site			U	Endicott-Taft	Area on valley floor north of diversion channel (north end of campgrounds) probably used as a post garden for Fort Baker between ca. 1905 and 1920.
Unidentified Foundation at Campsite #1			U	WW I-II	A concrete foundation probably constructed during World War II as a support structure to the nearby AMTB battery. Date of superstructure's removal unknown. Foundation is partially buried.
Unidentified Foundation at Campsite #4			U	WW I-II	A concrete perimeter foundation probably constructed during World War II as a support structure for military activities in the valley. Foundation is mostly buried.
FORT BARRY CAPEHART HOUSING AREA					
See Fort Barry (Buildings 805-07, 810-12, 815-18 are within Fort Baker),					
DIABLO RIDGE DEFENSES (HAWK HILL)					
See Fort Barry (BC 129 PSR Room and eastern part of SF-87C are within Fort Baker)					

TABLE 2.1 NOTES

1 Photograph of Horseshoe Cove waterfront looking from Vista Point taken in 1965. No vegetation is visible in this area. Paul Judge Collection.
2 Photograph of Horseshoe Cove looking east, 1919, showing no seawall along cable hut Baker-Scott. . Paul Judge Collection.
3 Photograph of Horseshoe Cove looking north toward Launchway House, ca. 1942, shows no seawall in this location. GOGA PARC 1766.
4 Photograph of the timber bulkhead looking from Vista Point taken in 1965 shows a different alignment and height to the bulkhead, and a natural beach in front. Paul Judge Collection.
5 Photograph of Horseshoe Cove waterfront looking from Vista Point taken in 1965. Bridge is not visible (two small Quonset-style buildings in area). Paul Judge Collection.
6 Photograph of Horseshoe Cove and Battery Duncan from Vista Point, March 1965. Paul Judge Collection.
7 John Martini, e-mail to John Auwaerter, March 1, 2013.
8 Photograph of Horseshoe Cove from Golden Gate Bridge showing cable crossing sign, August 1938. Paul Judge Collection.

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite

Golden Gate National Recreation Area
Sausalito, California

Fort Baker
Analysis and Evaluation Plan

National Park Service
Olmsted Center for Landscape Preservation
www.nps.gov/oclp

in partnership with
Department of Landscape Architecture
SUNY College of Environmental
Science and Forestry, www.esf.edu/la/

SOURCES

1. NPS, Marin County GIS data
2. Fort Baker CLR 1945–72 period plan
3. Fort Baker CLR Existing Conditions Plan

DRAWN BY

John Auwaerter, Laura Roberts, Illustrator CS5, 2014

LEGEND

- Non-historic feature (white fill)
- Feature removed since 1966 (dashed lined)
- Property boundary
- Historic fortification boundary
- Character area boundary
- Building
- Structure, Substructure
- Wall
- Water tank, reservoir
- Post-Civil War-era battery
- Endicott-era battery
- Earth parapet of defensive work
- Temp. gun emplace.
- Road, asphalt
- Road, earth/gravel
- Trail
- Fence
- Remnant, trace (in 1966, present)
- Bridge
- Deciduous trees
- Coniferous trees
- Native woods
- Chapparal or scrub
- Grassland, lawn, or bare earth
- Wetland
- Stream
- Rock cliff
- Rip rap
- Beach
- Cut, Fill
- 50′ contours
- Power line

NOTES

1. Plan shows landscape in 2014 compared with 1966; features or extent of features added after 1966 shown in white, removed after 1966 by dashed line.
2. All features shown at approximate location and scale; vegetation represents overall character, not precise limits or specimens.
3. Plan does not show all overhead utility lines, trails, minor jeep roads, field defenses, and antiaircraft gun emplacements.
5. White mask indicates limits of Fort Baker study area.

Drawing 2.1

FORT BARRY CULTURAL LANDSCAPE CHARACTERISTICS
(DRAWING 2.2, FIGURES 2.2, 2.3)

Natural Systems and Features (see District Overview)

Spatial Organization

The spatial organization of the Fort Barry Military Reservation was characterized during the historic period in large part by natural landforms, and second by buildings, structures, fences, and planted vegetation within developed areas. Throughout the historic period, Fort Barry was largely open space characterized by grassland or low scrub, with most development in Rodeo Valley and the western end of the reservation close to the Pacific Ocean.

Prior to Army acquisition of the Lime Point Military Reservation in 1866, the US Lighthouse Board established a cluster of development in 1855 near Point Bonita, consisting of a lighthouse on Bonita Ridge and a keeper's dwelling in the more sheltered area to the east.



Figure 2.2. Overview of the Fort Barry and Fort Cronkhite landscape looking southeast showing overall character toward the end of the historic period in 1966, photographed 1961. The red lines indicate significant changes between the time of the photograph and the end of the historic period in 1966 (redevelopment of Fort Cronkhite east wing for SF-87A, redevelopment of Mendell Housing Area for SF-88A, and removal of the Coast Guard station building). (Collection of E. McKee, annotated by SUNY ESF)

Post-Civil War, 1866–90

Changes to spatial organization at Fort Barry in the early years of military ownership included demarcation of the reservation boundary through Rodeo Valley with a fence in 1867. A locked gate was maintained at the road from Sausalito to Point Bonita. The light station was expanded to the tip of Point Bonita known as Land's End, where the lighthouse was relocated and a fog signal building erected between 1872 and 1877. In the middle of the peninsula along Bonita Cove was a small cluster of lighthouse development consisting of a wharf, tramway, and storehouse built in ca. 1871. The keeper's area was expanded with construction of a second dwelling and barn in ca. 1875. Fenced yards were maintained around the two dwellings. A fenced area at the head of a sand gully to the east contained a windmill-powered well. An unofficial boundary to the lighthouse reservation within Fort Barry was demarcated in ca. 1875 with a fence, extending east of the sand gully from north of Bird Island to Bonita Cove.

Endicott-Taft, 1890–1917

In 1899 prior to onset of military development, the US Life-Saving Service built a new area within the unofficial lighthouse reservation overlooking Bonita Cove, known as the Point Bonita Life-Saving Station. The area included a prominent



Figure 2.3. Overview of the Point Bonita landscape at Fort Barry looking northeast showing overall character toward the end of the historic period in 1966, photographed 1961. The red lines indicate significant changes between the time of the photograph and the end of the historic period in 1966 (removal of Coast Guard radio tower and station building). (Golden Gate National Recreation Area, Park Archives and Records Center, GOGA 2316 77-C-26, annotated by SUNY ESF.)

station building and several support buildings within a rectangular fence-enclosed area. Boathouses were located south of Rodeo Lagoon and at the lighthouse wharf on Point Bonita.

Military development at Fort Barry that began in 1901 transformed the spatial character of the western and northern parts of the military reservation, creating five batteries and six developed areas. The earliest military space was the Engineer Department area within the unofficial lighthouse reservation, built in 1901 as work began on the batteries. As developed by 1915, the Engineer Department Area included nine one-story frame buildings enclosed by a board fence. The batteries, built between 1901 and 1905, included Battery Mendell on a cliff above the Pacific coastline north of Bonita Ridge; Batteries Alexander, Smith-Guthrie, and O'Rorke in a line facing the Pacific south of Rodeo Lagoon; and Battery Rathbone-McIndoe facing Bonita Cove on a ridge south of Rodeo Lagoon. These clusters were surrounded by fences that also kept out grazing cattle. In 1910, a cluster of fire-control stations was completed on Bonita Ridge south of Battery Mendell.

In 1904, construction began on the Departmental Rifle Range that created a 600-yard-long rectangular mown space in a side valley south of Rodeo Valley. In 1907, the range was extended to 1000 feet. Associated with the rifle range was a camp developed in the side valley to the west. As built between 1904 and 1910, the complex included rows of one-story frame officer quarters and mess halls, kitchens, and lavatories organized along a loop road that followed the natural contours of the U-shaped valley, similar to the layout of the Fort Baker Main Post. The floor of the valley served as tent grounds. To the north near Rodeo Creek was an informal cluster of buildings constructed in 1904–05 that served as civilian employee housing.

The Main Post of Fort Barry was built between 1904 and 1909 in the next U-shaped side valley to the west that opened northwest toward Rodeo Lagoon. A smaller version of the Fort Baker Main Post, it was laid out along a loop road following the natural contours of the valley, with an open parade ground in the center. Officer quarters were at the upper part of the valley along with the administration building and post hospital. The barracks were at the southwestern side of the parade ground. The non-commissioned officer houses, guard house, post exchange, and gymnasium were at the far western end of the post, which was initially the main entrance since most traffic came from the batteries and wharf to the west. The spatial enclosure of the Main Post was enhanced with growth of a bluegum eucalyptus windbreak planted on the hillsides above the officer quarters and by Monterey cypress and acacia trees planted around the parade ground in ca. 1908. A perimeter fence was added in ca. 1915. It also had a separate civilian employee housing area, located between Bunker Road and Rodeo Creek to the northeast of the Main Post, near the rifle range camp.

The Quartermaster Area for Fort Barry was located apart from the Main Post along Field Road, halfway to the Engineer Department area. As at Fort Baker, it

consisted of a cluster of one-story frame buildings on either side of the road: nine buildings and a horse corral completed in 1907, with a firehouse added in ca. 1910. As at Fort Baker, the Quartermaster wharf (formerly the Engineer Department wharf) was remote from the buildings.

World War I-II, 1917–45

During World War I, changes in spatial organization at Fort Barry included development of temporary buildings on the lower part of the Main Post, and expansion of the fire-control station clusters on Bonita Ridge. In ca. 1917, the Navy established a radio station near Bird Island that consisted of three buildings near an earlier Army searchlight and powerhouse, along with a compass house directly on Bird Island. After the war's end through the mid-1930s, Battery Wallace and Anti-Aircraft Battery #2 were added to the west end of the Rodeo Ridge Defenses in 1921 and 1925, and the rifle range camp was removed and the lower part of the valley was redeveloped with a balloon hangar and balloon landing field in 1921. In ca. 1930, the civilian employee housing area along Rodeo Creek was removed. Farther east on the boundary with Fort Baker, a new developed area was established in 1935 as a camp for the Civilian Conservation Corps, known as Camp Spurr. The complex consisting of seventeen one-story frame buildings organized in rows parallel to and south of Bunker Road.

The build-up to World War II at Fort Barry created three new spaces or clusters of development in the landscape: the Smith Housing Area built in 1941 at the site of the civilian employee housing area in Rodeo Valley, the Mendell Housing Area built along Field Road east of Battery Mendell in 1941, and Battery Construction 129 on Diablo Ridge along the Fort Baker boundary substantially completed in 1944. CCC Camp Spurr was expanded as military housing and renamed the West Portal Area. Clusters of dug-in temporary wartime barracks and mess halls known as hutments were established early in the war on hillsides north of Battery Rathbone-McIndoe and east of Battery Smith-Guthrie. Other changes in spatial organization during this time included removal of the Engineer Department area (one building was left), removal of the southern half of the Quartermaster Area (current Lower Fisherman's Lot), and replacement of the balloon hangar field with vehicle sheds for a motor pool. At the lower part of the Main Post, the site of the World War I temporary buildings, which were removed shortly after the war, was redeveloped as a new cluster with a chapel, theater, tailor shop, and motor vehicle shed in 1939–41.

Cold War, 1945–66

The overall spatial character of Fort Barry began to change after World War II with the loss of open grasslands to scrub, planting and/or spread of Monterey pine and cypress around Battery Wallace, Battery Construction 129, and Point Bonita, and growth of native woods along Rodeo Creek. Additions to the spatial organi-

zation at Fort Barry included AAA Position No. 81, a cluster of four anti-aircraft emplacements on the site of a World War II maneuvering ground north of Battery Mendell in 1952, and Nike SF-88 launch site, a fenced area with buildings and launch pads near the Quartermaster Area built in 1954. The SF-88 launch site was subdivided into two areas: the Exclusion Area containing the missile launch pad, and the Limited Area containing the rest of the site, including the support buildings and kennels. The ridge above Battery Construction 129 on Diablo Ridge was developed as the control area for Nike Site SF-87, with radar units and support facilities organized in line with the ridge. These Nike facilities consisted of buildings and structures within a chain-link perimeter fence.

Two earlier developed areas were completely rebuilt during this time: the West Portal Area along Bunker was redeveloped in 1959 as a Capehart housing area with thirty-two ranch-style houses arranged in an informal style along curving streets and cul-de-sacs. The spatial character of the area was unified through lawn, without fences dividing the individual houses. In 1965, the Mendell Housing Area was redeveloped as the administration area for Nike site SF-88, with four large one-story buildings arranged along an axis.

The Coast Guard made substantial changes to the spatial organization of the Point Bonita Light Station during the 1950s and 1960s. In ca. 1954, the Third Keeper's Dwelling built in 1908 was removed from Point Bonita where there had been buildings since the 1870s. Around the same time, the wharf, storehouse, and tramway cluster mid-way on the point was removed. In 1961, the lighthouse keeper's area near Bonita Ridge was demolished, including the two dwellings, fenced yards, and outbuildings, leaving only a grove of Monterey cypress, cistern, and a retaining wall. At the former Life-Saving Station, the Coast Guard maintained the fenced grounds, but added two ranch-style houses in 1961 and demolished the main station building the following year.

Evaluation

Since the end of the historic period in 1966, changes to the spatial character of Fort Barry include demolition of the World War II-era Smith housing in ca. 1978 and addition of a visitor parking lot on the western part of the site in 2012; and demolition of seven buildings in the lower part of the Fort Barry Main Post between 1970 and 1990. Growth of Monterey pine woods at Battery Construction 129 and SF-87C, probably planted by the Boy Scouts in the 1950s, enclosed the area during this period, but the woods were cleared in 2012. Monterey cypress woods also spread to enclose the former Life-Saving Station and lighthouse keepers' area. At the Departmental Rifle Range, construction of trailhead parking and growth of woods on the northwest end of the rifle range and adjoining pistol range have altered the historic limits of the space.

Overall, the spatial organization of the Fort Barry Military Reservation retains historic character from the end of the historic period in 1966 with exception of the

loss of the Smith Housing Area and cluster of World War II buildings at the lower part of the Main Post. Growth of woods has created greater spatial enclosure in certain areas, and loss of grassland to scrub has altered the open-space character in places throughout the reservation. Minor spatial changes have occurred within developed areas through loss of buildings and growth of trees.

Land Use

Land use at Fort Barry Military Reservation was characterized during the late nineteenth century by agriculture, navigational aids, and limited public recreation. After 1905, military uses dominated, with agriculture, navigational aids, and recreation remaining as secondary uses, along with primary education.

Navigational aids were introduced in 1855 prior to the historic period, when a lighthouse and keeper's dwelling were constructed on and near Bonita Ridge. The lighthouse keepers introduced agriculture soon after the light station was established, and the surrounding lands were used by ranchers to the north for grazing.

Post-Civil War, 1866–90

During this period, the as-yet undesignated Fort Barry occupied the mostly undeveloped western half of the Lime Point Military Reservation. The US Lighthouse Board expanded its navigational aids and support facilities at the southwestern extreme of the Headlands with construction of a fog-signal station and the second lighthouse at the tip of Point Bonita between 1872 and 1877, and addition of windmill-powered pump, barn, cisterns, and landing area north and east of Bonita Ridge during the 1870s within an area unofficially designated as a lighthouse reservation. This period also saw informal recreational use by hikers and sightseers to Point Bonita, and continued agriculture, including gardening by the lighthouse keepers and grazing by neighboring ranchers.

Endicott-Taft, 1890–1917

In 1899, the US Life-Saving Service established the Point Bonita Life-Saving Station within the unofficial lighthouse reservation to provide rescue operations to distressed ships. This service was reorganized under the US Coast Guard in 1915. The US Lighthouse Board (later Service) continued to operate the Point Bonita lighthouse and fog-signal station. In 1912, the Fort Barry school was established within the former lighthouse reservation area to serve the lighthouse keepers' children. Grazing continued throughout this period.

Military use and development of Fort Barry, officially designated in 1904, began in 1901 with construction at Bonita Cove of a wharf and buildings for the Engineer Department that oversaw construction of the batteries, and continued in earnest through 1905 with completion of the Endicott batteries that defended the outer harbor. The Engineer Department operated a rock quarry along Bonita Cove and sand quarries along the gully north of Battery Mendell to supply material for con-

structing the reinforced concrete. Taft-era improvements after 1905 led to construction of five fire-control stations and three searchlights with powerhouses that were dispersed across coastal areas, and a mine casemate near Battery Mendell that serviced the North Channel submarine minefield in the Pacific.

Operation of the defensive works required development of a post with barracks, administration building, gymnasium, guardhouse, and post hospital, and a Quartermaster area with storehouses and workshops built between 1904 and 1909. The main officer quarters were located along the upper end of the post, and a handball court built in ca. 1910 behind the barracks served active recreation. The post facilities and the defensive works required electrical, communication, and water utilities that led to building of water tanks, pumphouses, and overhead lines across the reservation, as well as submarine communications cables and submarine mine defenses with onshore terminals. Horses continued to serve as a means of transport, as evidenced by corrals and stables at the Quartermaster Area, but construction of garages in the Main Post in ca. 1915 reflected increasing use of automobiles.

World War I-II, 1917–45

The build-up to World War I through the early 1920s witnessed an increase in military use and development at Fort Barry, resulting in construction of temporary buildings at the Main Post and several other areas, addition of several fire-control stations, and construction of two batteries that reflected the new strategy of anti-aircraft defense. This period also saw the arrival of the Navy at Fort Barry, which established a radio station and a compass house on and near Bird Island in 1917. In 1921, the Army introduced balloon (dirigible) technology, used as part of fire-control systems, with construction of a balloon hangar and landing field at the site of the rifle range camp.

In 1921, the Army disbanded Fort Barry's permanent garrison and placed the reservation on inactive status for the next eighteen years, although the Departmental Rifle Range remained in use. Features such as the World War I temporary buildings and flowerbeds at the Main Post were removed. Unlike Fort Baker, however, none of the batteries were disarmed as strategy still favored Fort Barry's outer harbor defenses. Grazing continued across the quiet reservation, as did some public recreation such as hiking and picnicking at Rodeo Beach. In 1922, the US Lighthouse Service erected a beacon at Diablo Point near the Fort Baker boundary. In 1938, all lighthouse facilities came under administration of the Coast Guard, which had operated the former Life-Saving Station (Coast Guard Station #311) since 1915.

Declaration of the national emergency in 1939 and US entry into World War II in 1941 led to dramatic increases in military activity and development at Fort Barry, most notably the addition the Smith and Mendell housing areas, expansion of the West Portal area, new buildings and structures in the Main Post, new fire-control

stations, casemating of Battery Wallace, and addition of Battery Construction 129 on Diablo Ridge. Temporary hutment complexes were built near Batteries Smith-Guthrie and Rathbone-McIndoe. Numerous temporary anti-aircraft field emplacements were constructed along ridges and coastline across the reservation. The increase in military activity most likely led to the end of grazing as well as public recreation due to heightened security.

The Army managed its defenses at Fort Barry according to four clusters during this period: Diablo Ridge Defenses (Battery Construction 129) straddling the Fort Baker boundary, Rodeo Ridge Defenses along Bonita Cove (from Battery Rathbone-McIndoe to Battery Wallace), South Lagoon Defenses (Batteries Alexander, Smith-Guthrie, and O'Rorke), and the Bonita Ridge Defenses (including Battery Mendell).

Cold War, 1945–66

As at Fort Baker, the end of World War II and beginning of the Cold War at Fort Barry witnessed a dramatic change in military use and technology that led to abandonment of the seacoast gun batteries. Battery Mendell and Battery Alexander had been disarmed in 1943, and in 1948, Battery Smith-Guthrie was the last to be disarmed at Fort Barry. Most of the temporary anti-aircraft emplacements and the minor gun batteries were disarmed and abandoned. Lack of use led to deterioration and demolition of support facilities such as two battery latrines. One new anti-aircraft installation was developed during the Korean War, north of Battery Mendell (Bird Island Overlook). Introduction of Nike anti-aircraft ballistic defenses in 1954 led to the addition of three areas for missile launch, control and administration as part of Nike SF-88 and SF-87 installations near the Quartermaster Area, at Battery Construction 129, and in the Mendell Housing Area.

Throughout the Cold War, Fort Barry continued to function as a training area for the Army, notably at the Departmental Rifle Range, and as a military housing area for enlisted men and military families. The Main Post, Mendell and Smith housing areas, and the Capehart housing area completed in 1959 continued to serve military housing needs. The SF-88 administration area, which replaced the Mendell housing area in 1965, contained housing as well. The importance of recreation for military personnel was evident through the construction of multi-use courts at the Main Post and Mendell Housing Area, and a dock on Rodeo Lake. Public access for recreation was most likely restricted throughout the Cold War for security reasons.

As its land requirements diminished with abandonment of the harbor defenses and advent of Nike missile systems, the Army began to lease areas and facilities it no longer needed, notably Battery Construction 129 that was leased to the Navy in the 1950s. In 1956, the Army transferred two acres with the light station at Point Diablo to the Coast Guard.

Navigational aids at Point Bonita and Point Diablo remained functioning throughout this period, but increasing automation and enhanced communications led to demise of some of the support uses. This led to demolition of the keepers' dwellings at Point Bonita in ca. 1954 and 1961. Life-saving operations ceased when Coast Guard Station #311 (Life-Saving Station) was closed in 1947. The boathouse on Bonita Cove was removed in ca. 1955 and the station building in 1962. The Fort Barry school that had served the lighthouse keepers' families was closed around 1950.

Evaluation

Since the end of the historic period in 1966, land use at Fort Barry has witnessed a marked transformation from a secured military reservation to a public recreation area with quasi-public partner uses. This has led to physical changes in the landscape such as conversion of roads to trails, addition of public parking and scenic overlooks, removal of security fences and military signs, retrofitting of buildings and grounds for park and partner uses, and conservation of natural resources.

Military recreational use was expanded in 1966 with lease of the balloon hangar area to the Presidio Riding Club. The Army also leased out areas it did not use, including the land south of the balloon hangar to the Army Corps of Engineers for use as a dump beginning in the late 1960s. Military uses began to be phased out with decommissioning of Nike site SF-87 in 1971, and ended with decommissioning of SF-88 and termination of military training in 1974. That year, Fort Barry was officially closed, although housing continued to be used for military personnel for a while longer, and the Presidio Riding Stables remained at the motor pool (balloon hangar area).

The conversion to public recreational uses at Fort Barry began in 1967, when the Army transferred 338 acres along the Golden Gate, encompassing the most undeveloped part of reservation, to the state of California for use as a public park. The transformation to park use culminated with establishment of Golden Gate National Recreation Area in 1972, and transfer of the rest of Fort Barry to the National Park Service in 1974. The state transferred its property to the National Park Service in 1978. In 1966, the Army had transferred thirty-nine acres at Point Bonita to the Coast Guard, which opened the area to the public on a limited basis. Public recreational use was formalized and expanded there in 1982 when the Coast Guard issued the National Park Service a use permit for the property.

Park uses introduced after 1974 include camping at the Bicentennial Campground, hiking along new trails and military roads, scenic overlooks at the batteries and the Bird Island Overlook at AAA Position No. 81, and conversion of the Fort Barry chapel to the Marin Headlands visitor center. Residential uses, primarily for park staff, continued at the Capehart housing area, Main Post, and Coast Guard station. Educational and recreational partner uses at Fort Barry began in 1977 with establishment of a YMCA outdoor and conference center at the SF-88

administration area. This was followed at the Main Post with establishment of the Marin Headlands Hostel in 1978 and the Headlands Center for the Arts in 1982. In 1985, the Golden Gate Raptor Observatory was established at the Nike SF-87 control area on Diablo Ridge. The Presidio Riding Club continued to use the balloon hangar area. Park volunteers and staff helped restore and reopen the SF-88 launch area as a museum in the 1990s.

The current dominance of recreational and educational land uses in the Fort Barry Military Reservation reflects a marked change since the end of the historic period in 1966. While public recreation and education existed at Fort Barry historically, they were never dominant uses. Existing land use therefore does not contribute to the historic character of the district, with the exception of ongoing aids to navigation at Point Bonita and Point Diablo.

Circulation

Circulation in the Fort Barry Military Reservation was characterized during the historic period by a network of one- and two-lane military roads that connected defensive works, by wharves, boat ramps, and railways, and by streets and walks in the developed areas.

Prior to the historic period, roads and trails were constructed for the light station at Point Bonita. These included a road to Rodeo Beach that was the site of the original landing for the light station, and a trail toward Rodeo Lagoon headed northeast through private ranchlands to Sausalito. Other trails probably followed the present alignment of Bunker Road and Conzelman Road. There was also a path or walk between the lighthouse keepers' dwelling and the lighthouse on Bonita Ridge.

Post-Civil War, 1866–90

During this period, circulation at Fort Barry was associated primarily with the Point Bonita Light Station. The system was expanded in the 1870s with a road and trail to the tip of the point, where a fog signal was constructed in 1872. The path originally went around Point Bonita Hill on a timber gangway, and in 1876 was rerouted through a tunnel. A landing (South Landing) along the east side of the peninsula south of Point Bonita Hill provided a shipping point for supplies (primarily coal) that were hauled up the cliff by a tramway and then transported to the fog signal station and lighthouse with a railway (cartway). Another inclined tramway brought supplies up to the fog signal building. North of the peninsula, roads were extended to the North Landing on Bonita Cove in ca. 1870, and in ca. 1875, the trail to Sausalito was improved into a road.

The only military road within Fort Barry during this period may have been the incomplete road from Lime Point (Julian Road) that was begun in 1874 and abandoned in 1875. It extended to the near the later site of the rifle range, where it probably continued as a trail through Rodeo Valley (part of present Field Road).

Endicott-Taft, 1890–1917

Circulation changes at the beginning of this period were mainly in the Point Bonita Life-Saving Station established in 1899, and included a road (School Road), drive, and concrete walks.

The start of construction of the Endicott batteries in 1901 began a massive expansion of circulation at Fort Baker. This included a wharf and tramway from Bonita Cove to Bonita Ridge that Army engineers used for shipping supplies, and construction of red chert gravel or red macadam approach roads to the batteries, extending off the improved road from Sausalito to Point Bonita (Field Road). Roads adjoining the batteries or along steep grades featured concrete gutters. The first road between Forts Baker and Barry (current Conzelman, Julian, and Bunker Roads), begun in 1874, was completed in ca. 1901 and realigned in 1905 (Dubois Road) to bypass the rifle range.

Building of the Departmental Rifle Range beginning in 1904 included access roads around the perimeter of the range, and two oval loop drives through the rifle range camp in the valley to the west. Development of the Main Post and Quartermaster Area beginning in 1905 included Simmonds Road, the oval-shaped loop that served as the main road, and Rosenstock Road, the service road to the officer quarters. These were initially red-chert gravel and were surfaced in red macadam in 1907. The roads in the Main Post were bordered by temporary wood-plank sidewalks that were replaced with concrete sidewalks. A concrete sidewalk connected the buildings in the upper post, and concrete entrance walks with wood stairs extended from Simmonds Road to the officer quarters, administration building, and post hospital. Field Road served as the axis of the Quartermaster Area.

World Wars I–II, 1917-45

World War I saw one major change in circulation at Fort Barry: construction of the third Baker-Barry road (Bunker Road) through the tunnel at Fort Baker, completed in 1918 to provide a safer and more direct route between the two reservations than the twisting road over Diablo Ridge (Conzelman, Julian, and Dubois Roads). Construction of Battery Wallace beginning in 1917 included construction of an approach road (Conzelman Road) from the Quartermaster Area. Many of the roads were surfaced in red bituminous macadam in the years during and after World War I. During the 1930s, new roads were built by the Civilian Conservation Corps off Bunker Road as part of CCC Camp Spurr (including present Shiley Street).

Declaration of the Limited National Emergency in 1939 and the build-up to World War II led to major additions and alterations to circulation at Fort Barry. These included extension of Bunker Road across a causeway on Rodeo Lagoon to Fort Cronkhite in 1937; roads built as part of the Mendell and Smith housing areas in 1940; and construction of Bosworth Road in ca. 1940 to link Simmonds

Road with Bunker Road in the lower part of the Main Post. A road improvement project completed in 1942 extended Field Road through the lower part of the Main Post to link with Bunker Road, realigned Field Road near Battery Alexander, and realigned Bunker Road through the Departmental Rifle Range. In ca. 1942, Conzelman Road was extended west from Battery Construction 129 to Battery Rathbone-McIndoe as a dummy road, for camouflage purposes. The approach road to Battery Wallace (Conzelman Road) was extended west to the Coast Guard Station for this same purpose. A number of unimproved Jeep roads were created across Fort Barry to access anti-aircraft machine-gun emplacements and other temporary installations.

Cold War, 1945–66

Changes to circulation during the Cold War at Fort Barry included new and expanded roads and parking areas within the three Nike sites, including those in the SF-87 control area completed in 1954, in the SF-88 launch area in 1955, and in the SF-88 administration area in 1965. The SF-87 control area also featured an asphalt helipad. Mendell Road was extended north to AAA Position No. 81 in 1952. In the Main Post, an unsurfaced parking area and access road was created below the barracks in ca. 1960. Development of the suburban-style Capehart housing area along Bunker Road included incorporation of the CCC-era Shiley Street into a new road system composed of curving drives and cul-de-sacs completed in 1959. Each of the Capehart units was accessed by a short asphalt driveway, with concrete walks to the entrance doors. No sidewalks were included in the complex. Throughout Fort Barry, the main roads were resurfaced with black asphalt during this period, and many of the World War II-era Jeep roads were abandoned.

Evaluation

Since 1966, Fort Barry has undergone numerous changes to circulation, but only several major additions or alterations. In 1966 after transfer of Point Bonita from the Army, the Coast Guard built a public parking lot at the site of the Lighthouse Keepers' Area, and a new road from the former Life-Saving Station to the Lighthouse Trail, both of which were later abandoned. Changes through the 1990s included addition of public parking lots at the Fort Barry chapel, along Field Road near the former Lighthouse Keepers' Area, in the Quartermaster Area (Upper Fisherman's Lot), and along Conzelman Road (Lower Fisherman's Lot); extension of Conzelman Road to Field Road near the SF-88 administration area and removal of Bosworth Road in front of the Fort Barry chapel; and building of new trail segments and conversion of former military roads to trails for the Coastal Trail, Rodeo Lagoon Trail, and several other trails. Road improvements that began in 2011 for Project Headlands changed the character of Field Road and Bunker Road through widening of shoulders, removal of 'Y' intersections, and addition of concrete curbs and guiderails to address safety and universal accessibility. The terminus of Field Road at the site of the Lighthouse Keepers' Area was reconstructed into a large turn-around, Mendell Road was changed from asphalt to

red-chert that existed prior to the Cold War, the military parking area at Battery Alexander was reduced in size, and parts of Old Bunker Road at the Departmental Rifle Range and Smith Road were removed and replaced with trailhead parking. In 2014, the park narrowed the approach road to Battery Alexander to trail width.

Overall, circulation in the Fort Barry Military Reservation retains historic character from the end of the historic period in 1966. Existing intact resources range in age from the Lighthouse Trail completed in ca. 1872, to the street and parking lot in SF-88 administration area completed in 1965, reflecting development from the post-Civil War period through the Cold War.[40] Recent road work has altered historic details of main roads, and some secondary roads have been abandoned or narrowed to trails.

Topography

Topography, defined as built changes to natural landforms, was an important characteristic of the Fort Barry Military Reservation during the historic period. Topographic changes were related to development of defensive works, quarries, roads, and building sites.

Post-Civil War, 1866–90

The only major topographic change during this period was construction of the tunnel thorough Point Bonita Hill along the Lighthouse Trail in 1876. The tunnel, which was dug by hand, was 188 feet long and six feet wide. Minor topographic changes were made during this period to provide level buildings areas for the second lighthouse and fog-signal building at the tip of Point Bonita.

Endicott-Taft, 1890–1917

In 1899, prior to construction of the batteries, development of the Point Bonita Life-Saving Station included grading of the site into terraces. In 1901, Army engineers established a rock quarry in a cliff along Bonita Cove below the lighthouse keepers' dwellings, and sand pits in the gully to the north to provide raw materials for construction of the concrete batteries. Other topographic features included the earthen parapets that surrounded the massive concrete structures. Some of the parapets featured geometric contours, while others blended into the natural landforms. Most of the fire-control stations, the searchlights, and the mine casemate built between 1910 and 1917 were set below grade and surrounded by earthen parapets. In 1912, the Army began leveling hills adjacent to Battery Mendell and Battery Rathbone-McIndoe to broaden lines of fire. Other conspicuous topographic changes came from cutting and filling for the road over Diablo Ridge (Julian Road and Dubois Road), and for development of the Main Post, rifle range camp (balloon hangar area), and rifle range within three valleys. The Main Post included steeply graded slopes beneath the officer quarters, and the rifle range featured a series of earthen berms along set distance marks, and earthen backstops

behind a target trench. At the upper end of Rodeo Lagoon, an earthen dike was built in 1908 to create a reservoir that supplied flushing water for the Main Post.

World Wars I–II, 1917–45

The most notable topographic changes of this period at Fort Barry were from extension of Bunker Road in 1937 across Rodeo Lagoon on an earthen causeway, and from construction of Battery Wallace between 1917–21 and 1943, and Battery Construction 129 in 1942–44. Although both batteries were designed to blend in with the natural environment, the protective earthen cover over each involved major earth-moving. Construction of defensive field positions during World War II involved digging foxholes and trenches that were concentrated near Battery Smith-Guthrie, Battery Mendell, and Bonita Ridge. Along Conzelman Road, five cuts were made into Rodeo Hill during World War II to provide level ground for mobile radar, a day room, and other facilities for Anti-Aircraft Battery #2. Around this same time, a new quarry was opened along Bunker Road near McCullough Road. Extension of Bosworth Road and Field Road across the lower part of the Main Post between 1940 and 1942 required filling of wetlands. Along the south side of the Departmental Rifle Range, the hillside was cut back to create a pistol range in ca. 1941.

Cold War, 1945–66

Topographic changes during the Cold War were limited to construction of the Nike launch and control sites in 1954–55. For the two temporary launch sites near Battery Smith-Guthrie, earthen revetments were constructed around the portable launchers. The permanent SF-88 launch site below the Quartermaster Area required filling of the head of a low valley to create a level building site, with earthen swales along the uphill sides of the site to divert runoff. The SF-87 control area along the ridge on top of Battery Construction 129 included filling and construction of retaining walls to create terraces for the radar units, vans, and buildings.

Evaluation

Since the end of the historic period in 1966, there have been no major topographic changes to the landscape of the Fort Barry military reservation. Minor changes have occurred with establishment of dumps south of the old Quartermaster Area and motor pool (balloon hangar) area in the late 1960s, and minor cutting and filling for new trail segments beginning in the 1980s. Growth of trees and scrub on Battery Alexander, Battery Smith-Guthrie, and Battery O'Rorke has obscured the topography of the earthen parapets, although some of this vegetation began to grow in during the Cold War.

Overall, topography of the Fort Barry Military Reservation retains historic character from the end of the historic period in 1966. The most prominent topographic features are the earthworks of the batteries, the Bunker Road causeway, the rifle

range terrace and berms, and the graded slopes within the Main Post below the officer quarters. Some of the topography has become obscured by scrub and woods.

Vegetation

Vegetation, defined as planted or managed plant material, was historically used at the Fort Barry Military Reservation for sustenance, ornament and windbreaks, soil stabilization, and possibly for strategic concealment. The dominant planted species included bluegum eucalyptus, black acacia, Monterey pine, Monterey cypress, and iceplant.

Prior to establishment of the Lime Point Military Reservation in 1866, most of the vegetation at Fort Barry consisted of grasslands that were most likely the product of grazing and other agricultural practices including burning that may have dated back to the Miwok people. The lighthouse keepers at Point Bonita maintained vegetable gardens, which were necessary given the remote location far from markets, beginning in ca. 1855.

Post-Civil War, 1866–90

Managed vegetation during this time remained the gardens of the lighthouse keepers. There was also likely turf and shrubs in the yards around the houses. Species included vegetables and ornamentals such as calla lily, agave, narcissus, myoporum, red hot poker, periwinkle, Germany ivy, alyssum, and iris.

Endicott-Taft, 1890–1917

Around 1900, the first large planting of Monterey cypress trees was introduced to Fort Barry as a windbreak along the east side of the Life-Saving Station. Within a decade, a grove of Monterey cypress was planted north of the station building, and a hedge of Monterey cypress was planted around a fenced yard southwest of the head lighthouse keeper's dwelling near Bonita Ridge.

Construction of the Endicott batteries between 1901 and 1905 included turf on the earth parapets. At Battery Alexander, iceplant and other groundcover plants were established on the earth parapets around the mortar gun pits, and a line of bluegum eucalyptus trees was planted along the seaward side of the battery, perhaps for strategic concealment similar to the eucalyptus planted around Battery Duncan at Fort Baker. These eucalyptus trees may have also been intended to conceal the bright flowers of the iceplant from view at sea.

At the Main Post, the parade ground and grounds surrounding the buildings were planted in turf, and a perimeter windbreak of blue-gum eucalyptus was planted on the slopes of the upper post in ca. 1908. An irregular border of Monterey cypress and black acacia trees was planted along the perimeter of the parade ground at the same time. A shrub and flower border was planted along Simmonds Road beneath the perimeter trees in ca. 1910, along with a small hedge-enclosed garden next to the hospital steward's quarters (Building 942). Foundation plantings were added

around the officer quarters, administration building, and post hospital around this time as well.

World Wars I–II, 1917–45

During this period, there was little increase in the amount of managed vegetation at Fort Barry. Addition of earth cover to the mine casemate in 1918 included planting of iceplant to stabilize the soil. The lighthouse keepers' gardens and turf cover on the battery parapets were maintained, but after World War I, the herbaceous flower and shrub bed in the Main Post was removed as the reservation was put on caretaker status. The acacia trees around the perimeter of the parade ground disappeared, perhaps due to crowding by the Monterey cypress. With reactivation of the post in the late 1930s, new foundation plantings and specimen trees were established around the buildings of the Main Post, and two ornamental gardens were established to either side of the Commanding Officer's quarters. A pair of bluegum eucalyptus trees was planted in front of the chapel in ca. 1943. Monterey pines were planted in the West Portal Area (Capehart housing area) around the same time. Mown turf cover on the battery earthworks was likely replaced with native vegetation to provide camouflage from the new threat of aerial attack.

Cold War, 1945–66

Changes to vegetation during the Cold War occurred in the Capehart housing area along Bunker Road, where the Army planted a variety of specimen trees and foundation shrubs in the early 1960s based on an initial plan by the landscape architects Osmundson & Staley of Berkeley. Species included acacia, Norway maple, Monterey cypress, Monterey pine, and Oriental plane tree. Iceplant was established on the earthen revetments of AAA Position #81 (Bird Island Overlook) in 1952. Additional iceplant was planted at the SF-87 control site (Hawk Hill) to stabilize slopes, and turf was established at the SF-88 administration and launch areas. The Boy Scouts may have been responsible for planting Monterey pine and cypress on the parapets of BC 129 (SF-87C) and Battery Wallace in the 1940s and 1950s, while groves of eucalyptus grew up on and near the sites of World War II hutments near Battery Rathbone-McIndoe and Battery Smith-Guthrie. No trees were planted at the SF-88 administration area prior to 1966 aside from a row of acacia trees.

At the Main Post of Fort Barry, the gardens to either side of the Commanding Officer's quarters were removed after World War II, and the eucalyptus windbreak and Monterey cypress around the parade ground began to spread into surrounding grasslands. New plantings were made at the buildings where porches were removed in the early 1950s. These included a pair of Canary Island date palms at the administration building and a privet hedge at the post hospital. At the lighthouse keepers' area, the gardens were abandoned and the Monterey cypress hedge began to grow and spread. At the former Life-Saving Station, the Coast Guard

removed clipped hedges and other formal shrubs, and made new plantings with construction of the two new houses in 1961. The Monterey cypress windbreaks to the east and north began to spread.

Evaluation

Since the end of the historic period in 1966, changes in planted and managed vegetation at Fort Barry have occurred largely through volunteer spread of eucalyptus, Monterey pine, Monterey cypress, and iceplant from the earlier plantings at the batteries, mine casemate, Main Post, and Coast Guard areas. Areas of extensive spread include the valley east of Battery Wallace around the Bicentennial Campground, at the site of the Engineer Department Area and Fort Barry school northeast of the former Life-Saving Station, on Battery Smith-Guthrie and the hutment site to the east, in the sandy area west of Battery Smith-Guthrie, on the hutment site north of Battery Rathbone-McIndoe, and at BC 129 (Hawk Hill).

In the 1970s, the park planted Monterey pine trees on the Battery Alexander parade as part of conversion of the gun pits to picnic areas. More recently, the park has cut back spread of the eucalyptus windbreak at the Main Post, and removed all Monterey pine and cypress from BC 129, along with individual trees near Battery Mendell and at the Battery Wallace casemates. The park has continued to mow most of the Departmental Rifle Range, except for sections north of Bunker Road. New plantings introduced after 1966 include community gardens, foundation plantings, and trees within the SF-88 administration area and Main Post, and additional trees and shrubs within the Capehart housing area.

Overall, planted and managed vegetation in the Fort Barry Military Reservation retains historic character as displayed through the patterns and species from the end of the historic period in 1966. These patterns date in large part to the Endicott-Taft and Cold War periods. Historic patterns of vegetation have been impacted through spread of exotic invasive species in historically open areas. The historic gardens at the Main Post and lighthouse keepers' dwellings disappeared prior to the end of the historic period, but perennial plant material from the gardens remains at Point Bonita, including calla lily, red-hot poker, cabbage, and German ivy. The Monterey pine and cypress probably planted by the Boy Scouts from the 1940s through the 1960s, most of which have been removed, appear to be unrelated to the military significance of the district.

Buildings and Structures

Buildings and Structures in the Fort Barry Military Reservation were characterized historically by defensive works (batteries, control stations, anti-aircraft defenses, cable terminals), support buildings and structures (barracks, officer quarters, hospitals, Quartermaster buildings, reservoirs, retaining walls, wharfs), and navigational aids.

Prior to the establishment of Lime Point Military Reservation in 1866, there were two buildings within the future Fort Barry, both built in 1855 and no longer extant: the Point Bonita lighthouse, a 56-foot-tall round brick tower with an iron lantern on Bonita Ridge, 260 feet above sea level; and a one-story stuccoed brick keeper's dwelling in a more sheltered area to the east of the ridge, at the site of the current Field Road turn-around.

Post-Civil War, 1866–90

In the 1870s, concurrent with the boom in maritime traffic into San Francisco harbor, the US Lighthouse Board undertook a substantial expansion of the Point Bonita Light Station that included construction of a number of new buildings and structures that extended to the tip of the peninsula. These included a fog signal building built in 1872 at the southern end of the peninsula, and rebuilt in 1874 following a land slide. A water supply system for the fog signal steam boilers included construction of a windmill-powered pump southeast of Bird Island that fed two domed masonry cisterns near the keeper's dwelling. The South Landing, established in ca. 1871 mid-way on the peninsula to ship coal and supplies to the fog signal, included a wharf, derrick, tramway, and storehouse. The North Landing, established in ca. 1870 southeast of the later Life-Saving Station, also had a derrick. At the keeper's area, a frame Gothic Revival-style dwelling for the head keeper was built in ca. 1875, along with a barn. In 1877, a new fog-elevation lighthouse was built at the southwest extreme of the peninsula, using the lantern from the old lighthouse, the tower of which was retained as a daymark.

Endicott-Taft, 1890–1917

Prior to the massive military construction that began in 1901, the US Life-Saving Service built several buildings between 1899 and 1900 within the unofficial lighthouse reservation at Point Bonita. These included a Shingle-style station building with a prominent tower, and a garage. A shop and quarters building was added in ca. 1910. The station included two remote boathouses built in 1899: Boathouse A at the South Landing on Point Bonita, and Boathouse B at the south end of Rodeo Beach near Bird Island. These were replaced in 1912 by a new boathouse on Bonita Cove below the lighthouse keepers' dwellings. Boathouse B was moved to near the Life-Saving Station for use as the Fort Barry School, and Boathouse A was retained on its site as a fire-control station. At Point Bonita, a new brick fog-signal building with coal-fired steam boilers was erected below the lighthouse in 1903. It included a tall brick chimney located to the east of the lighthouse to avoid blocking the light, connected by a long brick flue to the fog-signal building. The great San Francisco fire and earthquake of 1906 damaged the old 1855 lighthouse keeper's dwelling. It was torn down and replaced in 1908 by a Craftsman-style bungalow in the same location. A dwelling of the same style was built for the Third Keeper at the site of the old fog-signal building at the tip of Point Bonita.

The Endicott Plan for the modernization of the San Francisco harbor defenses called for fortification of the outer Golden Gate and the Pacific approach in what was initially referred to as the Point Bonita Military Reservation. By 1901, Army engineers began work on the defenses with construction of support facilities within the unofficial lighthouse reservation, surrounding the lighthouse keepers' dwellings. These facilities included a wharf on Bonita Cove with a tramway up the steep cliff to Bonita Ridge (later known as the Quartermaster wharf); office and shop buildings next to the keepers' dwellings; a rock tramway and sand tramway that hauled raw materials to a concrete plant; and a complex of wood-frame one-story buildings north of the Life-Saving Station that contained the engineers' bunk houses, mess hall, and stables. Construction of the Endicott batteries, begun in 1901 and completed in 1905, included Battery Mendell on a cliff above the Pacific north of Bonita Ridge; Batteries Alexander (a mortar battery), Smith-Guthrie, and O'Rorke along a low ridge south of Rodeo Lagoon; and Battery Rathbone-McIndoe on a cliff above Bonita Cove south of the Main Post. Latrine buildings were constructed adjacent to several of the batteries. Accessory harbor defenses called for by the Taft Board beginning in 1905 included a mine casemate near Battery Mendell that serviced the North Channel submarine minefield in the Pacific; a cluster of fire-control stations on Bonita Ridge that required removal of the old lighthouse tower, and others below the Point Bonita lighthouse, at the South Landing, and below Battery Rathbone-McIndoe; and construction of searchlights below the Point Bonita lighthouse, near Bird Island, and along Bonita Cove.

In 1904, as construction was nearing completion on the batteries, a complex of officer quarters, mess halls, and kitchens were erected at the rifle range camp (balloon hangar area). These were temporary one-story wood-frame buildings with gable roofs and unpainted board-and-batten siding. Along Simmonds Road to the north were four buildings that served as temporary post facilities prior to development of the Main Post, and included an ordnance storehouse, Quartermaster storehouse, and post exchange. Behind these buildings at the later site of the Smith housing area was a group of five small houses built around the same time for civilian employees involved in construction of the post.

The largest number of buildings constructed during the Endicott-Taft period at Fort Barry was in the Main Post and Quartermaster Area. Completed between 1907 and 1909, there were thirteen Colonial Revival-style buildings in the Main Post that included officer quarters, a post hospital, hospital steward's quarters, and an administration building in the upper part of the post; two large three-story barracks in the middle of the post, and a gymnasium, post exchange, guard house, and two non-commissioned officer quarters in the lower post. A drainage system consisting of concrete inlets and outlets carried runoff beneath the terrace along the upper end of the post. In ca. 1915, four frame garages were added to the complex. The twelve buildings completed between 1907 and 1910 in the Quartermaster Area were one-story tall with gable and shed roofs and clapboard siding. These

included a bakery, coal shed, oil house, three storehouses, stables, a wagon shed, fire apparatus house, lavatory, and a carpenter-blacksmith shop.

Buildings and structures not part of defensive works or in developed areas included two pumphouses near Rodeo Creek and the later site of the Capehart housing area, trestles that carried sewer lines from the Main Post and rifle range camp, and underground reservoirs and water tanks on the ridges above the Main Post and rifle range camp. In ca. 1915, three small houses were built east and southwest of the Quartermaster Area and near the Life-Saving Station as temporary officer quarters.

World Wars I–II, 1917–45

Fort Barry saw a number of new buildings and structures constructed during World War I through the early 1920s. New defensive works included seven fire-control stations located below Bonita Ridge, on Point Bonita Hill, on Rodeo Hill, and near Battery Rathbone-McIndoe. Battery Wallace, a new style of battery designed to be widely dispersed as a defense against aerial bombardment, was built at the west end of Rodeo Hill between 1919 and 1921. At the former rifle range camp, a steel-frame balloon (dirigible) hangar associated with fire-control functions was completed in 1921, along with a building to the rear where hydrogen for the balloon was generated. During the war, temporary Series 600-type unpainted wood-frame buildings were constructed in the lower part of the Main Post, including a mess hall, lavatory, barracks, and officer quarters. A YMCA was built in 1918. Three officer quarters were added near the Quartermaster Area. These temporary buildings were all removed between 1920 and 1925 as Fort Barry was placed on caretaker status. This quiet period through the mid-1930s also saw removal of the civilian employee houses and temporary post buildings along Bunker Road near the rifle range camp.

Building projects related to federal work-relief programs in the 1930s led to development of one new complex of buildings at Fort Barry: the Civilian Conservation Corp's Camp Spurr, along Bunker Road on the Fort Baker boundary. The eighteen buildings were one-story frame construction on wood piles with asphalt gable roofs and wood novelty siding. They included a mess hall-administration building, barracks, storerooms, and showers-latrines. Other changes during this time included removal of the wagon shed and stables at the Quartermaster Area following the elimination of horse power, and construction of rustic stone walls along Rosenstock Road at the Main Post. The Coast Guard erected a steel radio tower adjacent to the Point Bonita lighthouse in 1938, soon after the agency's consolidation with the US Lighthouse Service.

Declaration of the National Emergency in 1939 through World War II witnessed massive building at Fort Barry for both defensive works and to house the great surge of enlisted men. New and improved defensive works included casemating of Battery Wallace in 1943 and construction of Battery Construction 129 on Diablo

Ridge at the Fort Baker boundary between 1942 and 1944. AMTB Battery Bonita was emplaced at the old lighthouse North Landing along with a searchlight. Secondary defense elements included a cut-and-cover switchboard room for Fort Barry to the rear of Battery Smith-Guthrie, and four cut-and-cover fire-control stations north of Battery Mendell and on Rodeo Hill. Anti-machine gun emplacements constructed of concrete sandbags were added along ridge tops throughout Fort Barry during the war.

As the US neared entry into the war, Series 700 temporary barracks, family housing, mess halls, and storage buildings were erected between 1939 and 1941 in four areas at Fort Barry. These included sixteen buildings added to Camp Spurr, which was renamed the West Portal Area; thirteen in the Smith Housing Area; and thirteen in the Mendell Housing Area. At the Main Post, a Series 700 chapel, theater, radar station, tailor shop, and motor vehicle shed were built. The former balloon field was converted to the main motor pool for Fort Barry with two large Series 700 motor vehicle sheds. Other support buildings included two hutment complexes near Battery Smith-Guthrie and Battery Rathbone-McIndoe. These consisted of temporary frame barracks and mess halls that were built into slopes and partially underground. An indoor rifle range and target house were added in 1941 at the site of the former pistol range.

Cold War, 1945–66

The major new construction projects of the Cold War period at Fort Barry were the three Nike sites developed between 1955 and 1965 and the Fort Barry Capehart housing area built in 1959. The Nike SF-88 launch area featured two massive underground concrete missile storage shelters with elevators that raised missiles to the launch pad on top. The site had two sentry stations, four support buildings, a concrete pad for parking of radar vans, and dog kennels. The buildings were utilitarian concrete block or sheet metal with flat or low-sloped shed roofs. The SF-87 control site on top of Battery Construction 129 included concrete retaining walls, circular concrete pads and a raised steel platform for the radar antennae, concrete-block support buildings for generators and equipment, and concrete pads for parking portable vans that contained radar control equipment. The SF-88 administration area (present YMCA), the last building project of the historic period at Fort Barry, replaced the Series 700 frame buildings of the Mendell Housing Area with four one-story concrete-block buildings with low-pitched shed roofs. The Capehart housing that replaced the West Portal Area contained thirty-three California ranch-style houses. These were one-story buildings with low gable roofs and stucco siding designed by San Francisco architect Angus McSweeney.

Other notable new buildings and structures of the Cold War period included white-painted wood air-raid siren towers at the Mendell Housing Area and West Portal Area erected in 1950; two steel radio towers added by the Navy and Coast Guard on Bonita Ridge in 1957 and 1962; and a multi-use tennis and basketball

court in the parade ground of the Main Post. At the former Life-Saving Station, the Coast Guard built two new ranch-style houses in 1961. These were one-story buildings with low-sloped gable roofs, sliding windows, and shingle siding. In 1954, the Coast Guard erected a cable-suspension pedestrian bridge to the Point Bonita lighthouse after a landslide destroyed the narrow land bridge.

Aside from the Series 700 buildings in the Mendell and West Portal housing areas, demolitions during the Cold War prior to 1966 included three buildings in the Quartermaster Area, and two Series 700 buildings in the Main Post. The Coast Guard undertook a major demolition program from the mid-1950s through the early 1960s that removed the boathouse, three keepers' dwellings and associated outbuildings, and the shop-quarters building at the former Life-Saving Station.

Evaluation

Since the end of the historic period in 1966, there have been several major changes to buildings and structures at Fort Barry. Most notable was the demolition of all thirteen buildings in the Smith Housing Area in ca. 1978, removal of four World War II-era Series 700 buildings and four earlier garages and a pumphouse at the Main Post, and all buildings at the SF-87 control area (Hawk Hill), including two generator buildings, the interconnected corridor building, and a shed. The radar pads and pedestals and retaining walls were left intact. The Shingle-style main station building at the Life-Saving Station with its prominent tower was demolished in 1966 at the end of the historic period. Other changes included removal of the indoor target range and ready magazine buildings at the rifle range, loss of the carpenter-blacksmith shop and firehouse at the Quartermaster Area, removal of the Fort Barry school and the last building from the Engineer Department area, and removal of radio and radar towers from Point Bonita and Bonita Ridge. Buildings and structures that have become ruins or deteriorated significantly since 1966 include two fire-control stations on Bonita Ridge and one at Point Bonita, and the Mendell radio room at the mine casemate. New buildings and structures since 1966 are limited to a Coast Guard tower at Bonita Ridge on the site of the Engineer Department tramway engine house; several sewage pump station buildings along Bunker Road; public restrooms near the Fort Barry chapel, Battery Wallace picnic area, and Field Road turn-around; and four minor bridges along the Lighthouse Trail built in response to landslides. The suspension bridge at Point Bonita was accurately reconstructed, and the buildings and structures at Nike site SF-88 launch area were restored. Significant alterations are limited to conversion of the motor vehicle sheds to stables at the balloon hangar area.

Overall, buildings and structures in the Fort Barry Military Reservation retain historic character from the end of the historic period in 1966, although deterioration and demolition have altered the historic character of several parts of the landscape. Fort Barry has not witnessed the extensive building rehabilitation and new construction that Fort Baker has. Extant historic buildings and structures range in age from the Point Bonita tunnel (1876) and lighthouse (1877) to the Nike site

SF-88 administration buildings (1965), reflecting development from the post-Civil War period through the Cold War.

Views and Vistas

Views and vistas in the Fort Barry Military Reservation historically included strategic lines of fire from batteries, sight lines from fire-control stations, nighttime views from navigational beacons and military searchlights, views between Nike control and launch sites, panoramic scenic views along roads and trails, and directed vistas within the Main Post.

Prior to establishment of the Lime Point Military Reservation in 1866, a panoramic view was maintained from the Point Bonita lighthouse, built in 1855 on Bonita Ridge 306 feet above the Pacific (not extant), across the Pacific and entrance to the Golden Gate. Due to heavy summer fogs, this view was often obscured.

Post-Civil War, 1866–90

During this period, the wide-open panoramic views remained little changed. The view from the lighthouse on Bonita Ridge remained until 1877, when a new lighthouse was built at the tip of Point Bonita, 140 feet above sea level. This lower elevation allowed the light to be seen beneath high fog. The light was visible up to eighteen nautical miles at sea.

Endicott-Taft, 1890–1917

Prior to military development that began in 1901, a new view was formalized at the Life-Saving Station, from the tower in the station building completed in 1899. From this tower, panoramic views across the Pacific entrance to the Golden Gate allowed station personnel to spot ships in distress.

Open grasslands maintained in part through grazing retained the panoramic views across the military reservation during this period. At the Departmental Rifle Range completed in 1905, there was a 600-yard-long vista along the mown field of the rifle range, and 300-yard-long vista along the shorter pistol range. Extensions to the rifle range in 1907 increased the vista to 1000 feet. At batteries Mendell, Smith-Guthrie, O'Rorke, and Rathbone-McIndoe completed between 1903 and 1905, strategic lines of fire were established across the outer Golden Gate and the Pacific Ocean.[41] The addition of eight fire-control stations at Point Bonita, Bonita Ridge, and Bonita Cove between 1910 and 1917 created strategic sight lines that were coordinated with sight lines from other fire-control stations or the batteries. Searchlights established at Bonita Cove, Point Bonita, and Bird Island in 1911 created directed nighttime views across the waters. Development of the Main Post between 1904 and 1910 defined a view from the parade ground northwest across Rodeo Lagoon toward Wolf Ridge and the Pacific Ocean. From the Commanding Officer's quarters (Building 936) there was a vista across the parade ground. Open

space and the immature size of the trees around the parade ground allowed the 75-foot-tall flagstaff to be visible from all parts of the parade ground.

World Wars I–II, 1917–45

The panoramic views across the grasslands and increasing scrub remained throughout this period. Growth of windbreaks and other trees at the Main Post, along the front of Battery Alexander, around the Life-Saving Station, and at the lighthouse keeper's area began to limit some views. The addition of a beacon at Point Diablo created a new navigational sight line in 1922. Completion of Battery Wallace in 1921 created new strategic lines of fire across the Pacific Ocean and entrance to the Golden Gate. During World War II, new lines of fire were established from the two-gun emplacements of AMTB Battery Bonita near the Life-Saving Station, and Battery Construction 129, although the latter was never armed. Lines of fire from batteries Mendell and Wallace became non-functional with their disarming in 1943 and 1944. Within the Main Post, the growth of Monterey cypress around the parade ground were limiting views of the flagstaff. It was probably for this reason that it was relocated to a small assembly area next to the administration building in 1942.

Cold War, 1945–66

Throughout Fort Barry, panoramic views remained largely intact during this period, except where woods grew up along Rodeo Creek and where windbreaks at the Main Post and Point Bonita matured and spread. With abandonment of the remaining active seacoast gun batteries after World War II, all lines of fire and strategic sight lines from the batteries and fire-control stations became obsolete. Most remained intact where grassland and scrub remained low, although those at Battery Wallace and Battery Construction 129 became limited during the 1960s from Monterey pine and cypress around the casemates. With development of the Nike sites in 1954–55, two new vistas were established: one looking northwest from SF-87 control area at Battery Construction 129 to the SF-87 launch area at Fort Cronkhite; and one from the SF-88 launch area looking north to the SF-88 control area on Wolf Ridge. These vistas were necessary for visual connections between the sites and the alignment of radar using bore sight masts.

Evaluation

Since the end of the historic period in 1966, changes to views and vistas at Fort Barry have occurred largely through the continued conversion of grassland to scrub and woods composed mostly of volunteer exotic trees. Along Rodeo Creek and Rodeo Lake, growth of native woods partially obscured interior views across the valley. Growth of Monterey pine on Battery Construction 129 blocked the vista from SF-87 control area to the SF-87 launch area at Fort Cronkhite, but this vista was reestablished with clearing of the trees in 2012. Growth of eucalyptus woods near Battery Smith-Guthrie and Battery Rathbone-McIndoe, and continued spread of Monterey cypress at Point Bonita restricted panoramic views.

Scenic views were formalized beginning in the mid-1970s with the establishment of the Bird Island Overlook at the site of AAA Position No. 81. The parapets and gun pits of Batteries Rathbone-McIndoe, Smith-Guthrie, O'Rorke, and Wallace, and Battery Construction 129 were opened to the public and served as scenic overlooks. The SF-87 control area (Hawk Hill) was also opened to the public and became a popular overlook for scenic views to the Golden Gate Bridge and across the San Francisco Bay Area. The east end of the site became home to the Golden Gate Raptor Observatory in 1985.

Overall, views and vistas in the Fort Barry Military Reservation retain historic character from the end of the historic period in 1966. Strategic views were critical to harbor defenses, although they had become obsolete prior to 1966. These remain, but now serve as scenic overlooks. Panoramic views of the Golden Gate, Pacific Ocean, and Rodeo Valley, and across the reservation remain, except in limited areas where scrub and trees have grown up, notably near Battery Smith-Guthrie, Battery Rathbone-McIndoe, Battery Wallace, the Point Bonita Light Station, and along Rodeo Creek.

Constructed Water Features

Constructed water features, which are areas of open water for utilitarian or ornamental purposes, included two features in the Fort Barry Military Reservation during the historic period. Enclosed reservoirs, tanks, cisterns, and other water systems (addressed under Buildings and Structures) were an important part of the utility systems at Fort Barry, but were not characterized by open or visible water.

Post-Civil War, 1866–90

There is no record of constructed water features in the landscape during this period. Several enclosed masonry and wood cisterns existed at the Point Bonita Light Station. A small lagoon, most likely a natural feature, existed within the lighthouse reservation, at the later site of the Engineer Department Area that was built in ca. 1901.

Endicott-Taft, 1890–1917

In ca. 1909, the Army built an open reservoir at the east end of Rodeo Lagoon, south of the property boundary through the middle of the lagoon, to store water for the sanitary flushing system in the Main Post. This reservoir was enclosed by an earthen dike built through the open water of the lagoon. An opening with a gate at the east end of the reservoir allowed water from Rodeo Creek to fill the reservoir. A pumphouse (Building 928) between the reservoir and Bunker Road pumped water through underground pipes to an underground flushing reservoir (Building 929) on a ridge near Conzelman Road south of the Main Post.

World Wars I–II, 1917–45

In ca. 1920, the US Coast Guard installed an ornamental, circular concrete fountain in the middle of the lawn of the Life-Saving Stationg, where a water tank had stood since 1899. The Army abandoned its flushing reservoir in Rodeo Lagoon in ca. 1925, and it soon began to fill with silt.

Cold War, 1945–66

The Coast Guard removed the fountain from the former Life-Saving Station in ca. 1962. The Rodeo Lake reservoir largely disappeared as a water feature in the landscape by 1966, by which time woods surrounded it and only a small area of open water remained.

Evaluation

Constructed water features, historically a minor characteristic of the Fort Barry Military Reservation, disappeared from the landscape by 1966. Only remnants of the reservoir in Rodeo Lake remain today, as a small marsh opening in a wooded area.

Small-Scale Features

Small-scale features in the Fort Barry Military Reservation historically included fences, gates, entrance posts, wood utility poles, signs, flagpoles, and recreational apparatus. Armament ranged from large caliber Endicott-period seacoast guns and World War II-era seacoast guns, AMTB guns, and field emplaced anti-aircraft machine guns, to Cold War anti-aircraft guns and Nike missiles.

Prior to 1866, there were two known small-scale features associated with the Point Bonita Light Station, both installed in ca. 1855: a fog cannon on the edge of the cliff south of the later site of Battery Mendell, and a fog bell next to the lighthouse on Bonita Ridge. There may have been a fence around the lighthouse keeper's dwelling.

Post-Civil War, 1866–90

Small-scale features during this period included a wood plank fence along the northern boundary of the Lime Point Military Reservation through Rodeo Valley erected in ca. 1866. The fog bell was probably removed after establishment of the fog signal at Point Bonita in 1872. In ca. 1875, the US Lighthouse Board erected a four-plank fence along the unofficial boundary of its Point Bonita reservation, and white-painted picket fences enclosed the yards around the two keepers' dwellings. Derricks for hauling freight off ships were installed at the North Landing in ca. 1870 and the South Landing in ca. 1871, and white-painted plank fences lined the inclined tramways at the South Landing and fog-signal station.

Endicott-Taft, 1890–1917

Development of the Life-Saving Station in 1899 introduced a picket fence around the rectangular perimeter of the station grounds. A pit for an anchor was built at the southeast corner of the site in ca. 1900. The lighthouse fog cannon near the site of Battery Mendell was probably removed with the start of military development in ca. 1901.

Construction of the Endicott batteries and support buildings at the Main Post and Quartermaster Area included a variety of small-scale features. Fences were the most common type and included a woven-wire and wood post boundary fence through Rodeo Valley that replaced the earlier wood-plank fence in ca. 1903. White-painted single-rail wood fences were erected in ca. 1905 around the defensive works the delineated limits of the maintained areas and also to keep out grazing cattle. Similar fences enclosed the perimeter of the Main Post by 1915. Four-plank wood fences enclosed the Engineer Department area and corrals in the northeastern part of the Quartermaster Area.

Most of the communications and power lines for the batteries were underground, but overhead cables on wood poles were installed through Rodeo Valley from Fort Baker to service electrification of the Main Post and Quartermaster Area in ca. 1909. There may have been Army signs at the entrances and borders of the military reservation. A billboard-sized sign was probably maintained above the Barry-Scott cable terminal on Bonita Cove near the wharf to warn mariners of the submarine cable crossing. Movable signs served as targets at the rifle and pistol ranges.

Ornamental small-scale features at Fort Barry included a standard 75-foot-tall sectional iron flagstaff with guy wires installed in 1909 at the northeast side of the parade ground, which served as the symbolic focal point of the Main Post. Nearby on Simmonds Road were ornamental concrete entrance posts topped by stacks of shot installed in ca. 1910 using the same design as the gateposts at Fort Baker. A guide rail with concrete posts was installed along the steep drop-off along Simmonds Road on the approach to the Main Post. Wood utility poles lined the slopes above the post. There is no record that the Fort Barry Main Post was ornamented with shot as found along the front of the Commanding Officer's quarters and administration building at Fort Baker. For Barry was not outfitted with light standards along the streets, although there were street lights mounted on some of the wood utility poles.

World Wars I–II, 1917–45

From World War I through the mid-1930s, change in small-scale features at Fort Barry included addition of a scale to the Quartermaster Area in ca. 1921. At CCC Camp Spurr (present Capehart area), a flagstaff was installed north of Bunker Road in ca. 1935. The Coast Guard added a flagpole to the center of the former Life-Saving Station grounds in ca. 1938.

Declaration of the National Emergency in 1939 and subsequent build-up to World War II added new targets at the rifle range in 1941 with rebuilding of the target trench, and targets were probably added for the new pistol range to the south built in ca. 1941. Gas pumps were added to the balloon hangar field as part of its conversion into the Barry Motor Pool in 1940. Fences were removed from around the former Engineer Department Area and rebuilt around the defensive works. US entry into World War II in December 1941 led to an array of temporary small-scale defensive features in the landscape, including barbed-wire entanglements around defensive works and possible attack routes from Rodeo Beach, notably near Battery Mendell and the approach to Bonita Ridge; and installation of numerous anti-aircraft guns set in sandbagged emplacements. Vans for mobile radar were stationed along Conzelman Road as part of AA Battery #2, and two portable searchlights were positioned along Bonita Cove. A chain-link security fence was probably installed along the reservation boundary through Rodeo Valley. In the Main Post, the flagstaff was relocated in ca. 1942 from the parade ground to a new assembly area between the administration building and post hospital. Concrete anchors from the old flagstaff pole and guywires were left in place.

Cold War, 1945–66

Soon after the end of World War II, field armament, mobile radar vans, entanglements and other defensive features were removed. Across Fort Barry, street signs were most likely installed soon after the war as each of the streets was named in honor of fallen soldiers. Within the Main Post, one of the concrete gate posts was removed from Simmonds road in ca. 1950, the flagstaff near the administration building was removed in ca. 1960, and chain-link backstops were installed as part of the multi-use court in the parade ground in 1959. Within the Coast Guard Station (former Life-Saving Station), a bell, possibly from the demolished station building, was installed on a wood frame in ca. 1966, and wood privacy fences were added at the three residences built or enlarged in 1961.

At the Nike sites developed between 1955 and 1965, the most prevalent small-scale features were chain-link fences and gates with barbed wire. At the Nike SF-88 launch site, these fences enclosed both the Limited and Exclusion Areas, and the dog kennels. The interior of the site was outfitted with a variety of small-scale features including signs, a flight simulator group mast, a control van, and dog-training course obstacles. Troops built an ornamental gravel bed with Nike and battalion symbols in front of the missile assembly test building. At the SF-87 control site (Hawk Hill), troops used white-painted concrete sandbags removed from the World War II field emplacements as ornamental edging along the entrance road. At the Nike SF-88 administration area (YMCA), a chain-link perimeter fence and flagpole were installed in ca. 1965.

Evaluation

Since the end of the historic period in 1966, small-scale features have changed throughout the Fort Barry Military Reservation as military use was replaced by public recreation. Most of the security fences around the batteries and along the reservation boundary in Rodeo Valley were removed. Safety railings and fences were added to the defensive works open for public viewing, notably at Battery Construction 129 and AAA Position No. 81 (Bird Island Overlook). Picnic tables, tent pads, and fire rings were installed in the Bicentennial Campground, and picnic tables were added at the Fort Barry chapel (visitor center) and picnic area near Battery Wallace. At the Main Post, rustic and informal picnic tables, signs, log curbs, and garden fences were added as part of the use of the area by the Marin Headlands Hostel and Headlands Center for the Arts. Throughout Fort Barry, Army signs were removed except for small building number signs, and many traffic and directional signs were added along the roads. No signs were maintained to identify the Fort Barry military reservation.

In the Nike SF-88 launch area, radar units and control vans were moved to the site for interpretive purposes from the abandoned SF-88 control area on Wolf Ridge, and control vans and radar units were removed from the SF-87 control area at Battery Construction 129. Security fences were retained around the Nike SF-88 launch site. The SF-88 administration area saw replacement of the perimeter chain-link fence with a wood fence, removal of the flagstaff and the addition of a new flagstaff, and installation of amphitheater seating and a fence around a new garden.

Overall, small-scale features in the Fort Barry Military Reservation have lost historic character since the end of the historic period in 1966. The only remaining historic small-scale features not part of larger buildings or structures are the flagstaff, bell, and perimeter fence at the Coast Guard Station (Life-Saving Station), a gate post at the Main Post, and chain-link backstops at the multi-use courts at the Main Post and SF-88 administration area. Inert Nike missiles at the SF-88 launch site display recall the only armament that remained in the landscape in 1966. The loss in character of small-scale features has altered the military feeling of the landscape.

Archeological Features

Built features in the Fort Barry Military Reservation that had fallen into ruin by the end of the historic period in 1966 or remained only as a trace included the hutments at Battery Rathbone-McIndoe and Battery Smith-Guthrie, latrines near Battery O'Rorke and Rathbone-McIndoe, B1 McIndoe that slid down the cliff toward Bonita Cove, the reservoir in Rodeo Lake, a day room associated with AA Battery #2, the sites of World War II temporary searchlights and anti-aircraft machine gun emplacements, and several abandoned roads. Other ruins and traces visible in the landscape today, such as the building and van sites at SF-87 control area (Hawk Hill), are the result of abandonment and decay since 1966 and do not

contribute to the historic character of the landscape. No above-ground traces remain from military buildings removed since 1966, such as at the Smith and Mendell housing areas. Retaining walls and cisterns remain to indicate the sites of the lighthouse keeper's dwellings at Point Bonita.

Fort Barry Landscape Feature Inventory (Table 2.2)

Landscape features associated with landscape characteristics of the Fort Barry Military Reservation are inventoried and evaluated in the following table, which is organized by the Fort Barry Outlying Areas (landscape outside of developed areas), Main Post, Quartermaster Area, Barry Motor Pool (balloon hangar area), Departmental Rifle Range, Fort Barry Capehart Housing Area, Diablo Ridge Defenses (including SF-87 control area), Rodeo Ridge Defenses, SF-88L Nike Missile Launch Site, SF-88A Nike Administration Area, South Lagoon Defenses, Bonita Ridge Defenses, and Point Bonita Light Station (including former Life-Saving Station). Features are evaluated as Contributing (C), Non-contributing (N-C), or Unevaluated (U) due to insufficient documentation. Features in italics are those not owned or managed by the National Park Service.

All features within the Point Bonita Light Station remain under the jurisdiction of the US Coast Guard, but are managed in part by the National Park Service through a use agreement.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
FORT BARRY OUTLYING AREAS (DRAWING 1.5)					
Spatial Organization					
No associated features					
Land Use					
Debris Disposal Site (Former Army Corps Dump)			N-C	Non-historic	Area south of balloon hangar to Conzelman Road used through an outgrant by the Army Corps of Engineers for disposal of debris, 1968–ca.1974. Actual dump area was just south of balloon hangar. Area presently scrub covered. Partly on site of rife range camp, ca. 1904–25.
Circulation					
Bunker Road (West Bunker Road)	LCS: 058019 FAR0105	40733	C	Endicott-Taft, WW I-II	Main two-lane paved road across Forts Baker, Barry, and Cronkhite, built in sections between 1901 and 1937. Section near Main Post on alignment of earlier road from Point Bonita to Sausalito, built ca. 1875. Portion west of Departmental Rifle Range built 1901 as 1st Baker-Barry Road; section east of Rifle Range completed 1918 as 3rd Baker-Barry road; extended and improved west of Simmonds road to Fort Cronkhite, 1937. Realigned through Rifle Range, ca. 1942. Old section around north end of Rifle Range removed 2011. See also Fort Baker Reservation and Fort Cronkhite Reservation.
AA .50 Jeep Road			C	WW I-II	Jeep road along ridge north of Conzelman Road and west of BC 129, built ca. 1942 to access AA .50 #32. Roadbed eroded and encroached by vegetation. (Coastal Trail)
Conzelman Road	LCS: 058006 FAR109		C	Endicott-Taft, WW I-II	Main paved road; portion within Fort Barry from Quartermaster Area to Battery Rathbone-McIndoe built ca. 1902; section from Quartermaster Area to Battery Wallace built ca. 1917; sections from Battery Wallace to Coast Guard station and from Rathbone-McIndoe eat to BC 129 built ca. 1942 as dummy roads. Connector to Field Road near SF-88A built ca.1990, and intersection with Field Road in Quartermaster Area reconfigured ca. 1990. Rebuilt with widened shoulders, changed alignment and intersections, and guiderails in 2011.
Dubois Road	LCS: 369523 FBR0719 CLI: 96606		C	Endicott-Taft	Road built in 1905 as 2nd Baker-Barry road; connected to McCullough Road ca.1943; western part removed for borrow pit, post-1945; remainder abandoned post-1972. Extends into Fort Baker.
Field Road	447463	40909	C	Pre-Civil War, Endicott-Taft, WW I-II	Paved main road to Point Bonita from Bunker Road at the Fort Barry Main Post, built in sections between ca. 1855 and 1942. Section from near Battery Alexander south built ca. 1855 as part of road between lighthouse keeper's dwelling and first lighthouse landing on Rodeo Beach; section adjoining Battery Alexander built ca. 1875 as road between Point Bonita and Sausalito; section from Battery Alexander north to Simmonds Road built ca. 1904; tight curve near Battery Alexander bypassed ca. 1941; section from Simmonds Road to Bunker Road built ca. 1942. Road reconstructed with new turn-around west terminus at lighthouse keeper's area, 2011.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Fort Barry Motor Pool South Access Road (Debris Disposal Road)	RN430	79912	C	WW I-II	Unpaved road that winds up ridge from balloon hangar southwest to Conzelman Road, built 1940 as rear access to Fort Barry Motor Pool; southern part serves as access road to reservoir FA930. Currently used as part of Coastal Trail; roadbed eroded and encroached by vegetation
Julian Road (Julian Trail)	LCS: 058007 FAT032 CLI: 96612	232925	C	Endicott-Taft	Unpaved road from Conzelman Road to Bunker Road, part of 1st Baker-Barry road begun in 1875 and completed 1901. Forms western boundary of Departmental Rifle Range. Vegetation growing onto roadbed. Extends into Fort Baker. (Part of Coastal Trail)
McCullough Road	LCS: 058045 FBR0107		C	WW I-II	Paved road around Diablo Ridge from Conzelman Road to Bunker Road, completed 1943. Forms southwestern boundary of Fort Barry Capehart Housing Area. Intersections at either end redesigned 2011. Extends into Fort Baker.
Old Bunker Road	LCS: 058009 FAR105A		C	Endicott-Taft	Short road around northwest end of Departmental Rifle Range, built as 2nd Baker-Barry road in 1905; bypassed with realignment of Bunker Road through rifle range in 1942. Pavement removed from eastern section, 2011; western section remains as access to trailhead parking on northwest end of rifle range.
Point Diablo Lighthouse Stairs and Ladder			*n/a*	*WW I-II*	*Long flight of stairs from shoreline to Point Diablo lighthouse, built ca. 1922; replaced with metal stairs, probably after 1966. Wood ladder up cliff at rear of lighthouse that may have been part of a trail to Conzelman Road. Owned by Coast Guard.*
Rodeo Lagoon Trail (Lagoon Loop Trail)		40739	N-C	Non-historic	Trail bordering southern shoreline of Rodeo Lagoon and on Rodeo Beach (part of Coastal Trail), developed ca. 1980; part of a complete loop around Rodeo Lagoon. Eastern section on alignment of Point Bonita-Sausalito road built ca. 1875 (see Archeological Sites); middle section on access road for SF-88L T Group 2 site, initially built as an access road to a septic tank in ca. 1905 (see next row). See also Fort Cronkhite Reservation.
SF-88L T Group 2 Access Road			C	Cold War	Unpaved road from visitor center parking lot west to site of SF_88L T (1954), built ca. 1905 as access road to septic tank, Building 1350. East half of road on alignment of Point Bonita-Sausalito road built ca. 1875. (Part of Rodeo Lagoon Trail / Coastal Trail).
Simmonds Road	LCS: 058020 FAR413	40917	C	Endicott-Taft	Paved road to Fort Barry Main Post from Bunker Road built on cut and fill along steep hillside, ca. 1904; originally gravel with concrete gutter-curb; paved in red macadam, ca. 1935; black asphalt, ca. 1955. Presently one-way headed east from Main Post. See also Fort Barry Main Post.
Smith Street (Smith Road, Smith Trail)	RN431	40919 110643	C	WW I-II	Paved loop road north of Bunker Road in Rodeo Valley, built in 1941 as spine of Smith Housing Area. Houses demolished ca. 1978; western part of road removed for trailhead parking, 2012.
Smith Street Trailhead Parking		110646	N-C	Non-historic	Unpaved parking lot on western part of former Smith Housing Area off Bunker Road, built 2012, with connecting trail to Rodeo Valley Trail.
Upper Fisherman's Lot		40837	N-C	Non-historic	Unsurfaced trailhead parking lot on Conzelman Road, built ca. 1990 and redesigned 2011.
Upper Fisherman's-Black Sands Beach Trail		41961	N-C	Non-historic	Unsurfaced trail with steps, from Upper Fisherman's Lot to Black Sands Beach, built ca. 1990.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Road from Rifle Range to Conzelman Road			C	Post-Civil War	Minor road from Rifle Range south to Conzelman Road at Upper Fisherman's Lot, built prior to 1890. Roadbed eroded and encroached by vegetation. (Trail)
Topography					
Dubois Road Borrow Pit			C	Cold War	Deep rectangular pit within Dubois Road quarry, begun ca. 1955.
Bunker Road Causeway			C	WW I-II	Earthen causeway across Rodeo Lagoon supporting Bunker Road, built 1937. Divides Rodeo Lagoon from Rodeo Lake. Original sides of causeway obscured by siltation. See also Fort Cronkhite Reservation.
Dubois Road Quarry			C	WW I-II	Quarry south of Bunker Road along lower part of Dubois Road (gone), begun ca. 1942. Bush covered.
Excavated Hillside Near Balloon Hangar			U	Undetermined	Excavated south-facing hillside east of Balloon Hangar and north of motor pool south access road; origin not determined.
Vegetation					
No associated features					
Buildings and Structures					
40MM AA #11	ASMIS: GOGA00466		U	WW I-II	Anti-aircraft sandbag-type emplacement on ridge north of BC 129 for 40-mm automatic weapon, built ca.1942. Integrity of emplacement not known; given remote location, sandbags likely remain intact.
40MM AA #8	ASMIS: GOGA00407		C	WW I-II	Anti-aircraft sandbag-type emplacement on ridge northeast of Main Post for 40-mm automatic weapon, built ca. 1942. Sandbags remain intact.
AA .50 #20	ASMIS: GOGA00405		U	WW I-II	Anti-aircraft sandbag-type emplacement northwest of Battery O'Rorke for .50-caliber gun, built ca. 1942. No remains visible; may be beneath heavy vegetation.
AA .50 #26	ASMIS: GOGA00169		C	WW I-II	Anti-aircraft sandbag-type emplacement on ridge southwest of Main Post for .50-caliber gun, built ca. 1942; adjacent to UAA-1.
AA .50 #27			C	WW I-II	Anti-aircraft sandbag-type emplacement on Rodeo Hill between B1S1 Wallace and AA Battery #2, built ca. 1942;
AA .50 #29	ASMIS: GOGA00407		C	WW I-II	Anti-aircraft sandbag-type emplacement on ridge northeast of Main Post for .50-caliber gun, built ca. 1942.
AA .50 #32	ASMIS: GOGA00467		C	WW I-II	Anti-aircraft sandbag-type emplacement on ridge west of BC 129 for .50-caliber gun, built ca. 1942. Access jeep road now part of Coastal Trail.
UAA-1, Unidentified 40-mm AA	FA UAA-1		C	WW I-II	Unidentified 40-mm anti-aircraft sandbag-type emplacement on ridge southwest of Main Post, built ca. 1942; adjacent to AA .50 #26.
Bunker Road Causeway Bridge (Rodeo Lagoon Bridge)		40921	N-C	WW I-II	Steel-beam and concrete deck bridge over outlet of Rodeo Lake, built ca. 1995; replaced original timber bridge, built 1937. Extends into Fort Cronkhite.
Cable Mine Hut Mines I	ASMIS: GOGA00468		U	WW I-II	Underground concrete structure with above-ground portal at south end of Rodeo Beach, built 1943. Not visible; may be beneath sand and vegetation.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Fort Barry Reservoir 929			C	Endicott-Taft	Concrete 100,000-gallon underground reservoir for flushing water on ridge south of Main Post, built 1910. Held water pumped from reservoir in Rodeo Lake. Originally contained above-grade metal vents and cable supports, removed ca. 1950. Built-up grade around reservoir only visible component; scrub-covered. (Abandoned)
Fort Barry Reservoir 930	FA0930		N-C	Endicott-Taft	Concrete 200,000-gallon underground reservoir for potable water, located on hilltop southeast of Main Post, built 1907. Field emplacement AA.50 #30 located on top of reservoir, ca. 1942–48. Chain-link perimeter fenced installed ca. 1950. At-grade top of reservoir rebuilt post-1966. (Functioning reservoir)
Point Diablo Beacon Tower			*C*	*Non-historic*	*Steel tower with crow's nest and electric beacon at rear of lighthouse, built post-1966. Similar to beacon tower at Yellow Bluff in Fort Baker. Owned by US Coast Guard and not managed by NPS.*
Point Diablo Lighthouse			*C*	*WW I-II*	*Small, white-painted frame building with gable roof, located on cliff above shoreline, built 1922. Doors and windows missing; solar panels mounted on roof.[1] Owned by US Coast Guard and not managed by NPS.*
Smith Street Water Valve Shed	FA0904	64647	C	WW I-II	Low frame gabled shed with concrete block walls and slab foundation, between Bunker Road and Smith Street, built 1936. (Also designated FA900?)
Views and Vistas					
No associated features					
Small-Scale Features					
Fort Barry Overhead Utility Lines			C	Endicott-Taft through Cold War	System of telephone and later power lines on wood poles laid out from Fort Baker west to Fort Barry through Rodeo Valley, southeast through Main Post and along Field Road to Point Bonita, ca. 1901; extended north to Fort Cronkhite, ca. 1937. Updated and relocated at undetermined times. Age of individual poles undetermined.
Point Diablo Overhead Utility Lines			U	WW I-II	System of abandoned telephone and power lines on wood poles from Conzelman Road to the Point Diablo Lighthouse, erected ca. 1922. Extent of existing poles not know. Beacon now solar powered. Extends into US Coast Guard Point Diablo Light Station.
Archeological Sites					
Battery O'Rorke-Rodeo Beach Jeep Road Trace			U	WW I-II	Trace of road from South Lagoon Defenses main approach road northwest to Rodeo Beach, built ca. 1942. Accessed cable hut Mines I and AA.50 #20. Roadbed heavily eroded, covered by vegetation, and crossed by numerous informal trails.
Bird Island Compass House Remnants	ASMIS: GOGA00394		U	WW I-II	Remains of frame Navy compass house on Bird Island, built 1917, abandoned ca. 1960. Guano covered. Also included an Army datum point, established 1941.
Boathouse B Road Trace			U	Endicott-Taft	Trace of road from Battery Alexander parking area through sand gully to south Rodeo Beach, built ca. 1899 to access Point Bonita Life-Saving Station Boathouse B; later used to access Engineer Department pumphouse, ca. 1901–12, and septic tank 1357, 1910–ca.1990. Trail follows trace.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Smith Housing Area			N-C	WW I-II	Land on both sides of Smith Street developed as housing area with 13 Series 700 buildings, 1941; houses demolished ca. 1978. Road, remnant driveways, and open space remain. Site earlier was civilian employee housing area for Fort Barry, begun ca. 1904.
Point Bonita-Sausalito Road Trace			U	Post-Civil War	Trace of Point Bonita-Sausalito Road northwest of SF-88L, built ca. 1875, realigned 1901, abandoned ca.1955 with construction of SF-88L. Part of road to the east used as Rodeo Lagoon Trail.
Sand Gully Masonry Remnants	ASMIS: GOGA00469		U	Undetermined	Scattered concrete and other masonry remnants in sand gully, along trail between Battery Alexander and south Rodeo Beach. May be remnants of septic tank, 1910–ca.1990, or Engineer Dept. pumphouse, ca. 1901–12.
Sand Pit Remnants	ASMIS: GOGA00469		C	Endicott-Taft	Series of pits along south side of sand gully west of Battery Alexander, developed ca. 1901 to supply sand for construction of Endicott batteries; abandoned ca. 1905.
Searchlight #12 Access Trace			U	Endicott-Taft	Trace of access road/trail from Upper Fisherman's Lot to site of Searchlight #13 along Bonita Cove, built ca. 1914; maintained through ca. 1945 to access Searchlight #12, installed ca. 1942. Minor trail follows trace. No known remains of the searchlight.
MAIN POST OF FORT BARRY (DRAWING 1.6)					
Spatial Organization					
Fort Barry Artillery Barracks Terraces			C	Endicott-Taft	Rectangular spaces along fronts of barracks 944 and 945, paved in concrete, created ca. 1907; tie into sidewalks extending east and west. Concrete broken up and earth covered in sections.
Fort Barry Hospital Steward's Garden Space			C	Endicott-Taft	Garden space on east side of hospital steward quarters 942, established ca. 1910 as hedge-enclosed garden; hedge removed ca. 1940. Space presently lawn with non-historic split-rail fence along north side; ornamental plantings along building foundation.
Fort Barry Lower Post Field			N-C	Non-historic	Mown field east of gymnasium 952, between Simmonds and Field Road, that was historically part of the lower post cluster of buildings developed between World Wars I and II. The field space corresponds to sites of the post exchange, ca. 1917–25 and YMCA, ca. 1918–25; and to Series 700 theater, 1941–ca.1990.
Fort Barry Lower Post Meadow			C	Endicott-Taft	Marshy lower elevation of Main Post valley between the parade ground and the Fort Barry chapel; native landscape that was incorporated into the Main Post in 1907 and allowed for views from the parade ground and upper post toward Rodeo Lagoon and the Pacific Ocean. Bisected by Field Road in ca. 1942. Open space obstructed after 1966 by growth of trees and scrub.
Fort Barry Main Post Chapel Entry Courtyard			C	WW I-II	Small space at entrance to Fort Barry post chapel (visitor center) defined by low perimeter stone walls between building and Bosworth Road, established ca. 1943. Overhead plan framed by two large eucalyptus trees. Bosworth Road frontage removed ca. 1992. (Picnic area)

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Fort Barry Main Post WW II-Era Assembly Area			C	WW I-II	Open area between administration building (940) and post hospital (941) defined as formal assembly area with relocation of post flagstaff there, ca. 1942. Converted to parking area and flagstaff removed ca. 1960. Line of Monterey pine trees planted ca. 1942 defined eastern edge of space; last of pines removed 2010. Sheds and concrete containment wall added to center of space, ca. 1980.
Fort Barry Parade Ground			C	Endicott-Taft	Central space of Fort Barry Main Post built on filled and graded upper part of valley, 1907. Space formed by mown ground enclosed by natural landform, Simmonds Road, and ring of buildings, with opening to northwest. Space further defined through planting of perimeter Monterey cypress and black acacia trees, ca. 1908. Space open west to Rodeo Lagoon; partially framed by buildings constructed between World Wars I and II; most demolished except post chapel. Multi-use court built in parade ground, 1959.
Utility Area, Rosenstock Road			C	WW I-II	Area cut into hillside at rear of Commanding Officer Quarters and enclosed by stone retaining wall (Rosenstock Road retaining wall), created ca. 1939. Contained frame garage for COQ, built 1939, demolished ca. 1980. Area probably used for refuse storage for officer quarters.
Land Use					
Fort Barry Main Post Community Garden			N-C	Non-historic	Fence-enclosed community vegetable garden between Commanding Officer quarters (936) and officer quarters 937, established ca. 1980. Chairs, barbecues, pots, mulch piles, etc. in surrounding lawn. A flower garden with axial paths established ca. 1939 and maintained through ca. 1946 occupied the same approximate site.
Marin Headlands Hostel Picnic Area			N-C	Non-historic	Mulched area west of post hospital between sidewalk and Simmonds Road used as picnic area, established ca. 1980. Contains five wood picnic tables, with logs and wood planters along edge of road. Area historically lawn.
Circulation					
Bosworth Road (Bodsworth Road)	RN429	79911	C	Endicott-Taft	Road between Simmonds Road and Bunker Road, built ca. 1910; formed spine of World War II temporary building cluster; realigned, ca. 1940; paved ca. 1942. Section between Field Road and Bunker Road past post chapel removed ca. 1992.
Bunker Road (West Bunker Road)	LCS: 058050 FBR105 CLI: 96608	40733	C	Post-Civil War, WW I-II	Two-lane asphalt road along northern border of Main Post; section from trail to Miwok Trail west built ca.1875 as part of road between Sausalito and Point Bonita. Road widened and extended to Fort Cronkhite across Rodeo Lagoon, 1937; segment to west abandoned (became Rodeo Lake Trail). See also Fort Barry Reservation.
Coastal Trail (Rosenstock Trail section)	CLI: 96601	115037	N-C	Non-historic	Section from balloon hangar area east and south of Fort Barry Main Post built ca.1980. See also Rodeo Lake Trail.
Field Road	LCS: 447463		C	WW I-II	Section through Main Post from Simmonds Road east to Bunker Road built and paved ca. 1942. 'Y' intersection with Bunker road realigned into 'T' intersection, curbs and accessible bus stop added, 2011. See also Fort Barry Reservation.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Fort Barry Artillery Barracks Steps			N-C	Non-historic	Two sets of wood steps at north entrances to barracks 944 and 945, built ca. 1982; replaced single set of steps between barracks built ca. 1907, removed ca. 1930; and set of woods steps in front of barracks 944 built ca. 1930, removed ca. 1970.
Fort Barry Commanding Officer Quarters 936 Parking Area			C	WW I-II	Small rectangular unpaved lot for approximately 4 cars, framed by low rustic stone wall, built ca. 1939.
Fort Barry Guardhouse Approach Drive			N-C	Endicott-Taft	Unsurfaced remnants north of Simmonds Road of approach drive to guard house, built ca. 1907; made into loop with planting of tree in center, ca. 1925; abandoned with demolition of building, ca. 1960. Drive west of tree grass-covered; unpaved pull-off east of tree partly on location of historic drive and sidewalk. N-C due to lack of integrity (reversible).
Fort Barry Main Post Building Entrance Walks			C	Endicott-Taft, WW I-II	Concrete entrance walks from sidewalks to building entrances and along sides of buildings, built ca. 1907; entrance walk to post chapel from Bosworth Road built ca. 1941.
Fort Barry Main Post Informal Parking Areas			N-C	Non-historic	Informal, unsurfaced parking areas along Simmonds Road, Rosenstock Road, and Bunker Road, created or realigned, post-1966. The parking area along Bunker Road on approach to causeway was open area used for temporary parking and staging beginning in 1938. Parking area near NCO quarters is part of former drive to garage 954, 1940–ca.1980; parking area east of administration building 940 site of garage 943, ca.1942–80; parking area between quarters 937 and 939 site of garage 938, 1915–ca.1980. Parking on site of post firehouse, 1918–ca.1960, developed after ca. 1960.
Fort Barry Main Post Parade Ground Social Trail			N-C	Non-historic	Social trail that cuts diagonally across the parade ground from the barracks toward the north intersection of Simmonds and Rosenstock Roads, developed post-1972.
Fort Barry Main Post Sidewalks	PL-SI1		C	Endicott-Taft	Concrete sidewalks paralleling upper side of Simmonds Road from officer quarters 934 to post hospital, and along lower side from administration building 940 to barracks, and west to non-commissioned officer quarters 956, built ca. 1907–10. Western section replaced wood plank walks built 1907. Section between officer quarters 939 and administration building 940 removed ca. 1990 and replaced by gravel; section west of barracks to NCO quarters broken up and partly covered in asphalt or earth.
Fort Barry Main Post Two-track Road			C	Cold War	Unpaved access road from Field Road to parking area north of barracks, built ca. 1960. Parking area removed ca. 1974.
Fort Barry Officer Quarters 934 Parking Area			C	WW I-II	Small rectangular unpaved lot for approximately 4 cars, framed by low rustic stone wall, built ca. 1939.
Marin Headlands Visitor Center Driveway			N-C	Non-historic	Unpaved road from Bunker Road to north side of visitor center (chapel), built ca. 1992. Partly on alignment of Bosworth Road, built ca. 1940 and removed ca. 1992.
Marin Headlands Visitor Center Parking Lot and Walk to Visitor Center	RN-P950	80093	N-C	Non-historic	Paved parking lot built ca.1990 on site of motor vehicle shed, ca.1939–70); includes concrete sidewalk along perimeter and ramped accessible walk to visitor center (post chapel) entrance.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Rosenstock Road	FA933 RN-416	40915	C	Endicott-Taft	Service road loop at rear of officer quarters, built ca. 1905; widened and realigned with addition of retaining wall, concrete curbs, red macadam, and gutters, ca.1939; repaved in black asphalt, post-1945.
Simmonds Road	LCS: 058020 FAR413	40917	C	Endicott-Taft	Main road through Main Post, built ca. 1905; concrete gutter-curbs on uphill side and paved in red macadam, ca. 1910; repaved in black asphalt, post-1945. See also Fort Barry Reservation.
Simmons Road Steps			N-C	Endicott-Taft	Wood stairs on embankment between Simmonds Road and buildings, built ca. 1910; stairs had either no railings, or railings with balusters and decorative end posts. Replaced with wood and metal stairs with simple railings, post-1966. Four current sets of stairs; stairs and entrance walks to administration building (940) and officer quarters 939 removed ca. 1990. Concrete footings at base of stairs to quarters 934 appear to be from end posts of historic railings. N-C due to loss of integrity.
Trail from Fort Barry Main Post to Battery Rathbone-McIndoe			C	Endicott-Taft, WW I-II	Trail from Rosenstock Road over ridge to Battery Rathbone-McIndoe, established ca. 1907; steps and opening in Rosenstock Road wall, ca. 1939; second branch probably built ca. 1941 with development of hutment at battery. Today serves as link to Coastal Trail, built ca. 1980; direct access to Rathbone-McIndoe lost.
Topography					
Fort Barry NCO Quarters Cut			C	Endicott-Taft	Steep cut in hillside along Simmonds Road adjoining NCO quarters 955 and 956, created ca. 1907.
Fort Barry World War I Quarters Cut			C	WW I-II	Cut in hillside along Simmonds Road across from gymnasium 952, created ca. 1917 to provide space for two temporary officer quarters, 1917–25. Area presently tree covered.
Rodeo Lagoon Reservoir Dike			C	Endicott-Taft	Linear earthen mound used to impound water within Rodeo Lagoon for use in Main Post flushing system, built ca.1909; contained gate at upstream side. Reservoir abandoned ca. 1925. Dike presently covered in trees and scrub, and eroded with several breaks; informal trail on western part.
Simmonds Road Quarry			C	WW I-II	Cut in hillside south of Simmonds Road between barracks and post hospital, quarried ca. 1937–45; used subsequently as parking area. Eucalyptus and Monterey cypress trees growing on and along cut.
Vegetation					
Fort Barry Main Post Building Lawns			C	Endicott-Taft	Mown turf grass established around post buildings of upper post and NCO quarters in lower post, ca. 1907. Portions no longer maintained as regularly mown lawn include steep slope along Simmonds Road, triangular area west of post hospital (current hostel picnic area), area between administration building 940 and officer quarters 939.
Fort Barry main Post Eucalyptus Windbreak			C	Endicott-Taft	Windbreak of eucalyptus trees along hillside surrounding upper post, planted ca. 1908. Spread from original planting; post-1966 spread cleared in part, 2010. Calla lily and French broom in understory; probably spread from nearby gardens and foundation plantings.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Fort Barry Main Post Foundation Plantings			U	Endicott-Taft through Cold War, non-historic	Shrubs and herbaceous plants around building foundations and adjoining areas, initially established ca. 1910. Existing plants probably date mostly to Cold War period and later. Two California coffeeberry shrubs between officer quarters 934 and Commanding Officer quarters 936 may be remnants of a shrub mass within a circular walk established ca. 1939. Privet and pittosporum shrubs along front of administration building 940 and post hospital 941 most likely planted after 1955, when porches were removed. Additional research needed to determine historic character of plantings, and contribution of existing plants.
Fort Barry Main Post Specimen Trees			C	Endicott-Taft through Cold War	Collection of individual and small groves of trees around buildings, established ca. 1908 and later. Notable historic specimens include Monterey pine at officer quarters 934, a pair of eucalyptus near the Commanding Officer Quarters 936, Canary Island date palm flanking the entrance to the administration building 940, a Monterey cypress in the island of the guardhouse entrance drive, Monterey pine north of the NCO quarters 956, 955, and eucalyptus flanking the entrance to the post chapel (visitor center). Overall, specimen trees reflect historic character; additional research needed to determine contribution of other individual specimens.
Fort Barry Parade Ground Lawn			C	Endicott-Taft	Mown turf grass, probably originally planted with rye, ca. 1907; naturalized with variety of grasses and forbs. Maintained area decreased during Cold War along lower and eastern parts of parade ground.
Fort Barry Parade Ground Monterey Cypress Border			C	Endicott-Taft	Border of Monterey cypress trees along inside edge of Simmonds Road surrounding parade ground, planted as informal mix with black acacia trees, ca. 1908; acacia trees removed by ca. 1930. Monterey cypress spread after ca. 1960 beyond original planting near entrance gates and location of first flagstaff, and on adjoining hillside.
Buildings and Structures					
Bosworth Road Island Concrete Curb/Wall			C	WW I-II	Concrete curb-like structure across island from Simmonds Road north toward concrete valve box, built ca. 1942. Original function of feature not known.
Fort Barry Administration Building	LCS: 010131 FA0940	40815	C	Endicott-Taft	Frame two-story side-gable building, completed 1907; full-width front porch removed ca. 1955 and replaced with small entrance porch. Same design as Fort Baker administration building. (Headlands Center for the Arts)
Fort Barry Artillery Barracks	LCS: 010134 FA0944	40816	C	Endicott-Taft	Frame three-story side-gable building, completed 1907; full-width front porch removed ca. 1955 and replaced with small entrance porch. (Headlands Center for the Arts)
Fort Barry Artillery Barracks	LCS: 010135 FA0945	40817	C	Endicott-Taft	Frame three-story side-gable building, completed 1907; full-width front porch removed ca. 1955 and replaced with small entrance porch. (Headlands Center for the Arts)
Fort Barry Commanding Officer Quarters	LCS: 010127 FA0936	40822	C	Endicott-Taft	Frame two-and-one-half story cross-gable single-family house, completed 1907. (Headlands Center for the Arts housing)

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Fort Barry Commanding Officer Quarters 936 Parking Area Stone Wall			C	WW I-II	Rustic random-course mortared stone wall, approximately 18" high surrounding unpaved parking area, with crenelated-like stone coping, built ca. 1939.
Fort Barry Firehouse Retaining Walls and Foundation Piers			C	WW I-II, Cold War	Concrete retaining walls and foundation piers from post firehouse, built 1918, removed ca. 1960. Building terrace presently used for parking.
Fort Barry Gymnasium	LCS: 010137 FA0952	40818	C	Endicott-Taft	Frame two-story hip-roof building at intersection Simmonds Road and Bosworth Road, built 1909; second-floor bridge to Simmonds Road added ca. 1938. (Headlands Center for the Arts studios)
Fort Barry Main Post Drainage Structures			C	Endicott-Taft, WW I-II	Concrete headwalls, drainage inlets, and valve boxes along Simmonds Road at uphill sides of parade ground, and north of barracks and in Bosworth Road island, built ca. 1907
Fort Barry Main Post Electrical Substation			C	Cold War	Open-air concrete structure built to enclose electrical equipment, built 1950.
Fort Barry Main Post Multi-Use Court	FA0932	41895 (Removed)	C	Cold War	Concrete athletic court along lower end of parade ground with chain-link backstops and basketball hoops, built 1959. Similar to multi-use courts at SF-88 administrative area and Fort Cronkhite cantonment.
Fort Barry NCO Quarters Duplex	LCS: 010138 FA0955	88000	C	Endicott-Taft	Frame two-story cross-gable house with east and west porches, on west end of Simmonds Road, completed 1907. (Park staff housing)
Fort Barry NCO Quarters Duplex	LCS: 010139 FA0956	88003	C	Endicott-Taft	Frame two-story cross-gable house with east and west porches, on west end of Simmonds Road, completed 1907. (Park staff housing)
Fort Barry Officer Quarters 934 Parking Area Stone Wall			C	WW I-II	Rustic random-course mortared stone wall, approximately 18" high surrounding unpaved parking area, built ca. 1939.
Fort Barry Officer Quarters Duplex	LCS: 010126 FA0934 (934A, 934B)	88886 (40811, 40812)	C	Endicott-Taft	Frame two-and-one-half story cross-gable house at east end of row, completed 1907. (Headlands Center for the Arts housing)
Fort Barry Officer Quarters Duplex	LCS: 010129 FA0937	40774	C	Endicott-Taft	Frame two-and-one-half story cross-gable house at east end of row, completed 1907. (Marin Headlands Hostel)
Fort Barry Officer Quarters Duplex	LCS: 010130 FA0939	88887	C	Endicott-Taft	Frame two-and-one-half story cross-gable house at east end of row, completed 1907. (Headlands Center for the Arts housing)
Fort Barry Post Chapel	LCS: 010136 FA0948	41963	C	WW I-II	Series 700 frame chapel with low steeple, built 1941 as post chapel for Fort Cronkhite. Only remaining Series 700 building at the Fort Barry Main Post. Same design as Fort Baker post chapel. (Marin Headlands Visitor Center)
Fort Barry Post Hospital	LCS: 010132 FA0941	40772	C	Endicott-Taft	Frame two-story gable-front and wing building, completed 1907; full-width front porch and porch around wing removed ca. 1955 and replaced with small entrance porch. Same design as Fort Baker post hospital. (Marin/American Youth Hotel)
Fort Barry Post Hospital Steward Quarters	LCS: 010133 FA0942	59437	C	Endicott-Taft	Frame one and one-half story gable-front house with rear porch, completed 1907 for hospital steward; later used as NCO quarters. (Headlands Center for the Arts private residence) Same design as Fort Baker post hospital steward quarters.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
HCA Storage Sheds			N-C	Non-historic	Two small pre-fabricated sheds, north of building 942, and hazardous material shed surrounded by concrete wall with two flanking storage cabinets between administration building and post hospital, added ca. 1990.
Marin Headlands Visitor Center Restroom Building	FA1383	42059	N-C	Non-historic	One-story gabled building at west end of visitor center parking lot, built ca. 1992.
Rodeo Lake Sewage Pump Station	FA0931	40825	N-C	Non-historic	Sewage pump station on north side of Bunker Road opposite Field Road, built ca. 1990. Replaced sewage lift station to north, 1948–ca.1980. Adjacent to site of 1909 pump house (928) associated with Rodeo Lagoon reservoir.
Refuse Containers, Simmonds Road			C	WW I-II	Concrete enclosures in hillside along Simmonds road, one behind each barracks, built ca. 1939 to serve mess halls. Painted safety yellow at undetermined time. Matching design to containers along McReynolds Road at Fort Baker.
Rosenstock Road Retaining Wall	LCS: 058003 FA0933		C	WW I-II	Rustic retaining wall of quarried multi-hued stone with wide convex mortar joints, parged concrete cap, and a concrete curb, along uphill side of Rosenstock Road, built ca. 1939. Wall extends around a utility area at rear of Commanding Officer quarters (936) and at fire hydrants, and has opening at trail to the Coastal Trail.
Stone Walls, Fort Barry Post Chapel Stone Walls			C	WW I-II	Low, random-course rustic field stone walls with parged concrete cap around perimeter of chapel entry courtyard, built ca. 1943. Opening for entrance walk to Bosworth Road.
West Portal Transformer Shed (241)	FA0954		N-C	WW I-II	Board-and-batten gabled shed east of NCO quarters 955, relocated to existing site, ca. 1980. Sign on side identifies as building 271, a transformer shed built 1941 at the West Portal of the Baker-Barry Tunnel.
Views and Vistas					
Fort Barry COQ View of Parade Ground			C	Endicott-Taft	View part of original post landscape from porch of Commanding Officer Quarters, ca. 1907. Due to elevation of building, parade ground perimeter Monterey cypress trees, planted ca. 1908, did not begin to obstruct the view until ca. 1950. View today is filtered through thinning canopy of Monterey cypress.
Fort Barry Parade Ground View			C	Endicott-Taft	View north and west from parade ground toward Wolf Ridge and Pacific Ocean, established ca. 1907. View toward Pacific obscured by trees in lower post area that have grown up since 1966.
Simmonds Road View of Pacific			C	Endicott-Taft	Panoramic view at crest of hill on Simmonds Road just east of Main Post, aligned with length of Rodeo Lagoon looking west to Pacific Ocean. Not currently visible to drivers due to one-way traffic headed east. No pull-off.
Small-Scale Features					
Building 955 Propane Tank			N-C	Non-historic	Above-ground steel tank east of NCO quarters 955, installed ca. 1990.
Fort Barry Main Post Entrance Gate	LCS: 058130 FA0949		C	Endicott-Taft	Cast concrete beveled piers with lower side piers and walls, along Simmonds Road at eastern entrance to Main Post, built ca. 1910. Main piers featured stack of five shot each; lower piers had single shot; main piers had words "Fort" and "Barry." Shot and west section removed ca. 1950.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION					
FEATURE NAME	**OTHER RESOUCE INVENTORY**	**FMSS LOCATION**	**EVAL-UATION**	**HISTORIC PERIOD**	**HISTORICAL DATA**
Fort Barry Main Post First Flagstaff Base	LCS: 058131 FA0950		C	Endicott-Taft	Concrete footing for 75' flagstaff and four concrete pylons for flagstaff guywires, built 1909; flagstaff removed ca. 1942.
Fort Barry Main Post Overhead Utility Lines			C	Endicott-Taft through Cold War	System of power lines on wood poles along eastern and southern perimeter of Main Post, installed ca. 1908; feeder line from east along Bunker Road relocated ca. 1950, 1990. Line around southern perimeter remains in approximate historic location. Age of individual poles undetermined.
Fort Barry Main Post Second Flagstaff Base			C	WW I-II	Square concrete base for second flagstaff in assembly area between post hospital and administration building, built ca. 1942; flagstaff removed ca. 1960. Partly obscured by HCA hazardous material shed and containment wall.
Fort Barry Main Post Street Signs			U	Un-determined	White signs with black lettering on steel posts. History of design and individual signs not determined. Not on Drawing 1.6.
Archeological Sites					
Dock Road Remnant			U	Cold War	Remnant of road from parking area off Bunker Road toward Rodeo Lake, built ca.1950 to access dock. Dock removed ca. 1980. (Minor trail).
Rodeo Lagoon Reservoir Remnant			C	Endicott-Taft	Remnant of a reservoir built within Rodeo Lagoon to impound water for flushing system at Main Post, ca. 1908; abandoned ca. 1925. Former open water largely transitioned to wetlands by ca. 1960. Presently tree and scrub covered. Associated with pump house 928 along Bunker Road, 1909–ca.1990.
FORT BARRY QUARTERMASTER AREA (DRAWING 1.5)					
Spatial Organization					
Fort Barry Quartermaster Area Field Road Corridor			C	Endicott-Taft	Space along Field Road framed on north and south sides by building set close to road, established ca. 1907. Existing space reflects removal of removal of buildings between 1938 and 1966. Space altered by removal of two buildings after 1966.
Land Use					
No associated features					
Circulation					
Conzelman Road	LCS: 058006 FAR109		C	Endicott-Taft, WW I-II	Road section within Quartermaster Area east to Battery Rathbone-McIndoe built ca. 1902; section from Quartermaster Area to Battery Wallace built ca. 1917. Intersection with Field Road reconfigured ca. 1994. Rebuilt with widened shoulders, changed alignment and intersections, and guiderails, 2011. See also Fort Barry Reservation.
Building 960 Delivery-Loading Areas			C	Endicott-Taft	Unpaved areas at the north and south ends of Quartermaster storehouse, building 960, used for delivery and loading of materials; south area contained scale (see archeological sites).

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Field Road	LCS: 447463		C	Endicott-Taft	Main road through Quartermaster Area, built ca. 1904, paved and concrete gutters added ca. 1930. Third leg with Conzelman Road, site of coal shed (1907–1994), removed 1994. See also Fort Barry Reservation.
Lower Fisherman's Lot		40836	N-C	Non-historic	Unpaved parking lot south of Conzelman Road, built ca. 1980, redesigned 2011. On site of lower Quartermaster Area; wagon shed and stables (1907–ca.1938) were along east side of lot, firehouse (1907–70) on west side.
Topography					
No associated features					
Vegetation					
Fort Barry Quartermaster Area Monterey Cypress Tree			N-C	Non-historic	Monterey cypress tree between buildings 961, 962, post-1972.
Buildings and Structures					
Fort Barry Bakery (Artillery Engineering Storehouse)	LCS: 010142 FA0962	40821	C	Endicott-Taft	Frame one-story gable-roof building on brick foundation, built 1907. Remodeled 1959 to serve as day room and security office for Nike SF-88L. (Headlands Center for the Arts)
Fort Barry Ordnance Storehouse	LCS: 010141 FA0961	40820	C	Endicott-Taft	Frame one-story gable-roof building on concrete piers with loading dock along Conzelman Road, built 1907. (Headlands Center for the Arts)
Fort Barry Quartermaster Storehouse	LCS: 010140 FA0960	40819	C	Endicott-Taft	Frame one-story gable-roof building on cast-stone foundation with loading dock along Conzelman Road, built 1907. Dormers added ca. 1912. Rear deck and skylights added ca. 1990. (Headland Center for the Arts)
Views and Vistas					
No associated features					
Small-Scale Features					
Fort Barry Quartermaster Area Utility Lines			U	Endicott-Taft and later	Overhead power and communications lines on wood poles, initially installed ca. 1907. Age of existing poles undetermined. See also Fort Barry Reservation.
Archeological Sites					
Fort Barry Quartermaster Scales Remnant			U	Endicott-Taft	Concrete pad south of Quartermaster storehouse, building 960, on site of scales, installed ca. 1907. Removed after 1972.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION					
FEATURE NAME	**OTHER RESOUCE INVENTORY**	**FMSS LOCATION**	**EVAL-UATION**	**HISTORIC PERIOD**	**HISTORICAL DATA**
BARRY MOTOR POOL (BALLOON HANGAR AREA) (DRAWING 1.5)					
Spatial Organization					
Presidio Riding Club Corrals			N-C	Non-historic	Four areas enclosed by pipe fences between and at the sides of the stable buildings (motor vehicle sheds), and on the north side of the balloon hangar, built 1966 and later. On site of former balloon landing field, 1921–40, and roads/parking areas associated with Fort Barry Motor Pool, 1940–66.
Presidio Riding Club Riding Ring			N-C	Non-historic	Area enclosed by pipe-rail fence west of stable buildings, built ca. 1966.
Land Use					
Army Corps Dump			N-C	Non-historic	Area south of balloon hangar used as a dump by the Army Corps of Engineers under an outgrant, ca. 1968–74. Located on site of rifle range camp (1904–ca.1925) and hydrogen generator building (1921-ca.1950) associated with the balloon hangar. Area presently brush and tree covered with road traces.
Circulation					
Presidio Riding Club Parking Area			N-C	WW I-II	Unsurfaced parking area between Bunker Road and stables (motor vehicle sheds), part of motor pool roads and parking areas, built 1940. Center of lot was site of gas station associated with motor pool, built ca. 1940 and removed 1966. N-C due to lack of integrity: removal of adjoining parking/access areas.
Fort Barry Motor Pool South Access Road			C	WW I-II	Road from balloon hangar to Conzelman Road, built 1940. See also Fort Barry Reservation.
Rifle Range Camp Road			C	Endicott-Taft	Paved road from Bunker Road to south of balloon hangar, built ca. 1904 as west leg of loop road through rifle range camp. Paved ca. 1968 as access road to Army Corps debris disposal area. East leg of rifle range camp road abandoned between 1925 and 1940. Only remnant of rifle range camp aside from terraced landform.
Balloon Hangar Access Road			N-C	Non-historic	Paved road from Bunker Road to near balloon hangar along eastern edge of former motor pool parking area, built ca. 1970.
Topography					
Rifle Range Camp Terrace			U	Endicott-Taft	Semi-circular terrace at south end of U-shaped valley, built 1904 as location of frame buildings and loop road of camp associated with the rifle range. Camp buildings removed ca. 1925; area site of Army Corp dump, ca. 1968–74. Bush covered. Integrity of terrace undetermined.
Vegetation					
Balloon Hangar Trees			N-C	Non-historic	Volunteer and planted specimens and groves of trees, including Monterey pine and acacia, post-1966. No trees existed in the area historically.
Buildings and Structures					
Balloon Hangar	LCS: 010125 FA0905	40778	C	WW I-II	Standard-design steel-frame galvanized sheet iron-sheathed dirigible hangar with sloping sides and

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
					gable roof, ridge ventilators, and sliding 44' high doors, built 1921. Converted to motor pool use with replacement of rolling doors with smaller garage doors, 1943; rehabilitated with smaller front door, corrugated fiberglass sheets on window openings, and corrugated asbestos cement sheets on sides, for AAA maintenance facility, 1953; Nike missile assembly use, 1954–ca 1959; USAR motor pool use, ca. 1960–66. Converted to riding ring for Presidio Riding Stables, 1966. (Stables)
Fort Barry Motor Pool Compressor Building	FA0907		C	Cold War	Small concrete shed on south side of balloon hangar, built 1962. Probably associated with use of balloon hangar as USAR motor pool. (Vacant)
Fort Barry Motor Pool Distribution Transformer Building	FA0906	64649	C	Cold War	Small concrete shed on west side of balloon hangar built for 45 KV transformer, 1962. Probably associated with use of balloon hangar as USAR motor pool. (Vacant)
Fort Barry Motor Pool Vehicle Shed #1 (West Shed)	LCS: 058004 FA0901	41882	C	WW I-II	Series 700 wood-frame low-pitched gable-roof building on concrete piers with board-and-batten end walls, built as open-air vehicle shed for Fort Barry Motor Pool, 1940. Altered into stables and tack rooms for Presidio Riding Club, ca. 1966–70. Overall form of building remains. (Stables)
Fort Barry Motor Pool Vehicle Shed #2 (East Shed)	LCS: 058005 FA0902	41879	C	WW I-II	Series 700 Wood-frame low-pitched gable-roof building on concrete piers with board-and-batten end walls, built as open-air vehicle shed for Fort Barry Motor Pool, 1940. Altered into stables and tack rooms for Presidio Riding Club, ca. 1966–70. Overall form of building remains; northern third retains open bay configuration. (Stables)
Fort Barry Motor Pool Storage Building 814	FA0814		C	Cold War	One-story frame storage building with corrugated iron siding, built 1962, probably for USAR motor pool. Roof missing. (Vacant)
Balloon Hangar Sewage Pump Station	FA0841	40824	N-C	Non-historic	One-story sewage pump station, built ca. 1990.
Views and Vistas					
No associated features					
Small-Scale Features					
Presidio Riding Club Corral and Riding Ring Fences			N-C	Non-historic	Steel pipe railing, installed post-1966.
Presidio Riding Club Furnishings			N-C	Non-historic	Benches, picnic tables, trash cans, log stops, riding apparatus, and signs, installed post-1966. (Not on Drawing 1.5).
Archeological Sites					
No associated features					

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
DEPARTMENTAL RIFLE RANGE (DRAWING 1.5)					
Spatial Organization					
Revolver Range Field	ASMIS: GOGA00374		C	Endicott-Taft	Field north of the rifle range where a revolver range was maintained between 1904 and ca.1941; remained open field or low scrub after 1941. Portion of range north of Bunker Road became wooded after 1966.
Pistol Range	FA0831 ASMIS: GOGA00374	40794	C	Cold War	Small (approximately 50' x 200') mown, level area along Julian Road south of rifle range 200-yard and 300-yard berms, built ca. 1942 and redesigned as 1,000-inch rifle range in 1965. Space enclosed on south side by adjoining hillside, which served as the backstop. (Picnic area)
Rifle Range	LCS: 010123 FA0830 ASMIS: GOGA00374	40795	C	Endicott-Taft, WW I-II	Known-distance firing range of 600 yards framed by valley walls to the north, east, and south, and bordered by Julian Road and Bunker Road, built 1905. Long-range extension with 800 and 1,000-yard firing lines built north of Bunker Road, 1907, fell out of use by World War II. Army use ceased 1974. Park continues to mow, except north of Bunker Road, where open space lost due to encroachment of scrub and trees. Trailhead parking area constructed at the northwest end of the rifle range, ca. 1990. (Special Events Area)
Land Use					
No associated features					
Circulation					
250-yard Road			C	WW I-II	Shortcut across the rifle range between the 200 and 300 yard marks; probably developed as informal access from the target house to the second pistol range built in ca. 1941.
Bunker Road (West Bunker Road)	LCS: 058019 FAR0105		C	Endicott-Taft, WW I-II	Main two-lane paved road across rifle range; current alignment built 1942, replaced earlier 1905 alignment around rifle range to the north. See also Fort Barry Reservation.
Julian Road (South Rifle Range Road)	LCS: 058007 FAT032 T32	41953	C	Endicott-Taft	Unpaved red-chert road bordering south side of rifle range, built as 1st Baker-Barry Road, 1901; probably realigned with construction of rifle range, 1905. Non-historic locked gate near target trench. See also Fort Barry Reservation. (Coastal Trail)
New Rifle Range Road (Main entrance road)			N-C	Non-historic	Gravel road from Bunker Road across former revolver range to north rifle range road, developed post-1972.
North Rifle Range Road			C	Endicott-Taft through Cold War	Unpaved road from Bunker Road through former revolver range, past target house, and along north side of eastern half of rifle range to Julian Road, developed ca.1905 or later.[2] Section along rifle range shifted alignment since historic period and has encroached onto rifle range.
Old Bunker Road	LCS: 058009 FAR105A		C	Endicott-Taft	See Fort Barry Reservation.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Topography					
Rifle Range Distance Berms	MH93		C	WW I-II	Long turf mounds at the 100, 200, 300, and 500 yard lines, built ca. 1941; 500 yard berm bisected by Bunker Road, 1942. 600 yard berm altered or removed for trailhead parking, ca. 1990. Berms are approximately 6' tall, except for 100- and 500-yard berms that are 3' tall. Corrugated metal culverts carry ditch beneath south ends. Berms are kept in high grass.
Rifle Range Backstops			U	Endicott-Taft	Two parallel embankments with terraces and berms east of (behind) target trench, built 1911 to prevent bullets from ricocheting southeast toward Battery Kirby. Surrounding area wet and presently brush covered; berms not visible.
Rifle Range Ditches			U	Endicott-Taft	Earthen ditches along south perimeter of rifle range, built ca. 1905. Contained culverts at cross roads.[3] A section of open ditch along south side near Bunker Road remains; others appear filled. There may also be a buried ditch along the north side of the rifle range.
Rifle Range Long-Distance Firing Line Cut			C	Endicott-Taft	Straight cut in red-chert hillside at northwest side of the rifle range, approximately 600 feet long, built ca. 1907 to create sight-lines to the long-distance extension of the rifle range north of Bunker Road. Long-distance range abandoned ca. 1941.
Vegetation					
Rifle Range Turf			C	Endicott-Taft	Turf on rifle range and adjoining revolver range, and on berms, probably established with rye grass, 1905, and later intermixed with annual and perennial grasses and weeds. Historic extent of turf diminished by addition of north rifle range road, trailhead parking, and cessation of mowing north of Bunker Road, where successional scrub and woods have replaced the turf. Two patches between the 0 and 200-yard marks are not mown because of wet conditions. Turf is mown less frequently on berms.
Rifle Range Trees			N-C	Non-historic	Two groves of Monterey cypress trees, one east of target house and one along pistol range, that grew after 1966. Rifle range and adjoining hillsides were historically turf, grass, or scrub, except along Rodeo Creek.
Buildings and Structures					
Rifle Range Target Pit	FA0830		C	WW I-II	Concrete target pit with wood scaffolding for mounting targets, built 1941 on site of earlier target pit built 1905. Includes wood access stairs and a wood-frame latrine building. Surrounded by non-historic cyclone fencing added after 1974; wood targets and scaffolding deteriorated, and entire area covered with vegetation and debris.
Rifle Range Berm Culverts			C	WW I-II	Pipe culverts with stone and concrete headwalls carrying drainage ditch along Julian Road beneath rifle range berms, built ca. 1941. Ditch is partially filled and not functioning. See Rurik, 2010, for inventory of culverts (not shown on drawing 1.5)

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Rifle Range Target House (Range Building)	LCS: 058010 FA0828	40905	C	WW I-II	One-story frame, gabled building on concrete piers, built 1941 to store targets. On former revolver range. Windows boarded up. Adjoining indoor target range building and ready magazine, also built 1941, demolished ca. 1975. (Storage)
Views and Vistas					
Rifle Range Field of Fire			C	Endicott-Taft	Vistas from firing lines across field to targets, established 1905. Vista from 600-yard line altered through growth of successional vegetation. View diminished when grass not mown.
Pistol Range Field of Fire			C	WW I-II	Vista from firing line across short field to targets placed in front of backstop on hillside, established 1941. Non-historic Monterey cypress trees on hillside block part of the vista.
Small-Scale Features					
Rifle Range Target Trench Fence			N-C	Non-historic	Chain-link security fence around perimeter of target trench, installed after 1974.
Archeological Sites					
Long Distance Range	ASMIS: GOGA00374			Endicott-Taft	Wooded site of long-distance extension of the rifle range to 1,000 yards north of Bunker Road, built 1907. Abandoned ca. 1941; section between 800 and 1,000 yard marks redeveloped for Smith Housing Area, 1941. 800-yard berm may remain in woods east of Smith Street.
Long Distance Range Backstop Remnant	ASMIS: GOGA00374		U	Endicott-Taft	Remains of a backstop berm on the hillside north and east of target trench, built as part of the 800 and1,000-yard long-range extension of the rifle range, ca. 1907. Abandoned ca. 1941. Berm covered with brush; integrity undetermined.
Rifle Range Concrete Drainage Features	MH81–92 ASMIS: GOGA00374		U	Endicott-Taft	Series of concrete drainage features along north and south perimeter of rifle range, probably built 1905 as part of drainage system for rifle range. System abandoned at undetermined date. Include drainage boxes, culverts, and concrete ditch fragments. Not readily visible in landscape. Not on drawing 1.5.
Pistol Range Backstop	ASMIS: GOGA00374		C	WW I-II	Hillside along south side of pistol range used as backstop for pistol range, built 1941. In use until ca. 1974.
Revolver Range Backstop	ASMIS: GOGA00374		C	Endicott-Taft	Hillside adjoining the Target House used as backstop for revolver range built in 1905 and abandoned ca. 1941. Brush covered; has scars and likely bullets from target use.
Revolver Range Butts Remnants	MH77, 78 ASMIS: GOGA00374		U	Endicott-Taft	Fragments of butts (front firing wall) of revolver range, built 1905.
FORT BARRY CAPEHART HOUSING AREA					
Spatial Organization					
No associated features					

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Land Use					
No associated features					
Circulation					
Bottoms Drive	FAR105 RN105	79953	C	Cold War	Asphalt road with concrete gutter-curbs, extends north of Bunker Road and ends in a cul-de-sac, built as part of the Capehart housing, 1959.
Bunker Road	LCS: 058050, LCS: 058019 FBR0105 FBR0105		C	WW I-II	Asphalt main road through Capehart Housing Area, section built as part of 3rd Baker-Barry Road, 1918. See also Fort Barry Reservation.
Capehart Driveways			C	Cold War	Short asphalt driveways without curbs that access each Capehart unit from the adjoining road, built 1959. Most contain concrete parking aprons next to the houses.
Capehart Entrance Walks			C	Cold War	Concrete walks from driveways to entrances, built 1959.
Capehart Trailhead			N-C	Non-historic	Unsurfaced parking area along Bunker Road and trail headed north to Rodeo Valley Trail, built 2011.
Lamoraux Drive	CLI: 96614 RN-427	40911	C	Cold War	Asphalt road with concrete gutter-curbs, extends south of Bunker Road and ends in a cul-de-sac, built as part of the Capehart housing, 1959. Section between Shiley Street and Bunker Road on approximate alignment of West Portal Area road, built 1935.
McCullough Road	FBR0107 CLI: 96616	40912	C	WW I-II	Asphalt road from Conzelman Road to Bunker Road, built 1943; forms southwestern boundary of Capehart Housing Area. See also Fort Baker Reservation.
Menges Street	RN-426 CLI: 91840	40913	C	Cold War	Asphalt road with concrete gutter-curbs, extends south and south of Bunker Road and ends in a cul-de-sac, built as part of the Capehart housing, 1959.
Shiley Street [aka Smiley Street]	RN428 CLI: 95425	40918	C	WW I-II	Asphalt road between Menges Street and Lamoraux Drive, originally built as part of CCC Camp Spurr (later West Portal Area), 1935. Has concrete curbs and concrete drainage ditch that may date to West Portal development.
Topography					
No associated features					
Vegetation					
Capehart Foundation Plantings		233192	U	Cold War	Variety of plantings along building foundations and in adjoining areas, including jade, dracaena, agapanthus, juniper, and oleander, established ca. 1960 and later. Plantings are not continuous and some units have no foundation plantings. Further research needed to document historic planting design and changes after 1966.
Capehart Housing Lawns		233192	C	Cold War	Turf grass surrounding houses and throughout Capehart Housing Area, established ca. 1959. Changes in limits of lawn not determined.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Capehart Specimen Trees		233192	C	WW I-II, Cold War	Informal arrangement of specimen trees throughout area, planted ca. 1939–41 as part of the West Portal Area, and ca. 1960 as part of the Capehart development, by the Army based on plans by landscape architects Osmundson & Staley of Berkeley. Existing species include Monterrey pine, Monterrey cypress, Norway maple, Bailey acacia, Oriental plane tree, holly, and bay laurel. Trees dating to the West Portal Area appear to be several Monterey pines north and south of Shiley Street. Further research needed to document changes to individual specimens after 1966.
Buildings and Structures					
Air Raid Siren Tower	FA0819		C	Cold War	Wood tower on concrete footings, approximately 15′ high, on hillside south of Shiley Street, built 1950 to service the West Portal Housing Area. Circular metal siren on top. Retained during redevelopment for the Capehart Housing Area. Deteriorated condition with missing braces.
Bunker Road Bus Shelter	FA0802		C	Cold War	Wood frame shed-roof shelter on south side of Bunker Road, built 1962.
Bunker Road Culvert Headwall			C	WW I-II	Concrete headwall at natural drainage through area, south side of Bunker Road, built ca. 1942 probably as part of improvement of Bunker Road.
Capehart Housing Units	FA0800–FA0870; FB0805–FB0818 CLI: 102776-102784	40847, 40854, 40899; 89153-89167; 89195	C	Cold War	Thirty-two, one-story ranch-style duplex houses with low-sloped gable composition roofs and stucco siding, built 1959. Designed by San Francisco architect Angus McSweeney under the Department of Defense Capehart Housing program. FB0803 on Shiley Street removed ca. 1990. Exterior alterations appear limited to non-in-kind replacement of windows on several units. (Park staff housing)
Storage Sheds			N-C	Non-historic	Frame flat-roof sheds for refuse storage, located one per unit, built ca. 1970.[4] (Not on Drawing 1.5)
Capehart Sewage Pump Station	FA0840	40823	N-C	Non-historic	Sewage pump station on north side of Bunker Road opposite McCullough Road, built ca. 1990.
Views and Vistas					
No associated features					
Small-Scale Features					
Capehart Area Street Signs			U	Unknown	Signs with white face and black lettering on steel poles with finials; date of installation not known. Standard design used throughout most of the headlands. Not on Drawing 1.5.
Capehart Area Fire Hydrants			U	Unknown	Fire hydrants scattered throughout area (not directly along streets). Date of origin not determined.
Capehart Outdoor Domestic Furnishings			U	Unknown	Permanent furnishings include street-side mailboxes, pole-mounted clotheslines, lattice fences, and satellite dishes. Clotheslines may date to historic period. Most units have a variety of temporary outdoor furnishings, ranging from patio chairs and tables to potted plants. Not on Drawing 1.5.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Capehart Overhead Utility Lines			C	Cold War	System of power and communications lines on wood utility poles along streets, with steel curved single-arm streetlights, installed ca. 1959. Streetlights have non-historic replacement luminaires. Age of individual poles undetermined.
Archeological Sites					
No associated features					
DIABLO RIDGE DEFENSES (DRAWINGS 1.5, 1.7)					
Spatial Organization					
SF-87C Secured Area			C	Cold War c	Ridge-top space with open character originally defined by perimeter security fence, and series of internal retaining walls, buildings, and structures, established 1954. Spatial character changed after 1971 with removal of perimeter fence, generator building, vans, and radar domes. Space defined by retaining walls, terraces, radar platforms, and open character remains.
Land Use					
Golden Gate Raptor Observatory			N-C	Non-historic	Eastern end of SF-87C used since1985 for observing and recording raptors. Area consists of informal unsurfaced paths and gathering areas between concrete pads from SF-87C facilities.
Circulation					
Conzelman Road	LCS: 058044 LCS: 058006 FB0710 FAR109		C	WW I-II	Section along BC 129 built 1942 as access to battery site; narrow one-way section west of Gun 2 tunnel built ca. 1942 as dummy road. Road widened to create parking area, ca. 1985. Road rebuilt 2011. See also Fort Baker and Fort Barry Reservation.
Conzelman Road Parking Area and Overlook			N-C	Non-historic	Roadside parking extending from Gun 2 tunnel to north tunnel, built ca. 1985; reconstructed with new gabion retaining wall, railings, benches, signage, and pavement, 2011.
SF-87C Access Road (Hawk Hill Trail)		100913	C	WW I-II, Cold War	Paved access road from Conzelman Road to top of hill, initially built to access BC129 battery commander station, 1944; extended and paved as access road for SF-87C, ca. 1954.
SF-87C Internal Roads			C	Cold War	Asphalt paved and unpaved circulation within SF-87 site, built ca. 1954. Includes paved road along south terrace, irregular paved and unpaved road to north terrace, and unpaved road through east end of site. Unpaved section between BC129 BC station and TTR pedestal appears to be non-historic addition; circulation at east end appears to be largely pedestrian desireway developed post-1985.
BC129 Gun 1 Access Road			C	WW I-II	Paved and unpaved road from Conzelman Road to BC129 Gun 1, completed 1944. Extends through north tunnel and valley to Gun 1 tunnel. Open for pedestrian traffic.
BC129 Gun 2 Access Road			C	WW I-II	Short paved road from Conzelman Road to BC129 Gun 2 through tunnel, completed 1944. Open for pedestrian traffic.
Hawk Hill Trail (Coastal Trail)			N-C	Non-historic	Trail from west to BC 129 guns and Hawk Hill (SC-87C), built ca. 1985, section west of BC 129 realigned 2010.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Topography					
SF-87C Upper Terrace			C	Cold War	Terrace along south side of ridge overlooking Golden Gate for three Nike radar units, supported by concrete retaining walls, built ca. 1954. Grade dips between LOPAR and TTR pads. Used today as public overlook.
SF-87C Lower Terrace			C	Cold War	Terrace along north side of ridge for support facilities (control vans, generator building), contained by concrete retaining walls, built ca. 1954.
Vegetation					
No associated features					
Buildings and Structures					
SF-87C Battery Control Van Pad	FA0795		C	Cold War	One of three concrete pads on lower terrace used for stationing vans with radar control equipment, built 1954. Vans removed 1971.
Battery Construction 129	LCS: 010122 FA0773	40780	C	WW I-II	Plan of 1937 concrete, cut-and-cover high-elevation battery with two dispersed, casemated gun emplacements designed to protect Pacific approach to Golden Gate, built 1942–44; never armed or officially named. Highest coastal battery in the Bay Area. Includes two short tunnels on approach to gun pits. Tunnels feature concrete portals with camouflage net covers and iron picket gates. Pedestrian access tunnel extends north of battery and has tunnel hatch structure along north access road. Similar design to Battery Townsley at Fort Cronkhite. (Gun pits open for public access)
BC 129 North Tunnel	LCS: 058029 FA0773A	40781	C	WW I-II	Concrete barrel-vaulted tunnel, built 1942–44 to provide access from Conzelman Road to Gun 1. Concrete portals at either end with iron picket gates; east portal has rustic mortared stone revetments along the slopes adjoining the portal cheek walls. Camouflage paint and net anchors remain at portals. (Public pedestrian access)
BC 129 PSR (Plotting, Switchboard, Radio) Room	FB0770 CLI: 101963		C	WW I-II	Concrete cut-and-cover structure along Conzelman Road east of BC129, built 1944, but never activated. Retains steel plate doors and camouflage net anchors along portal cheek walls. Used by Navy during Cold War. Approach roadbed covered in vegetation, and connection to Conzelman Road obstructed by rubble-lined swale built 2011. (Vacant)
BC129 Reservoir	FA0778		U	Cold War	20,000-gallon underground concrete potable water reservoir for BC 129 located downhill from northeast end of SF-87C, built 1950 when battery was used by the Navy. Area scrub covered; unknown if any above-ground components.
BC129 Septic Tank	FA0775		U	WW I-II	Concrete 10,0000-gallon septic tank with sludge disposal box, built 1944. Area scrub covered; unknown if any above-ground components.
SF-87C Bore Site Mast Footing	FA0780		C	Cold War	Square concrete pad for radar bore site mast (columnation tower) located in valley between tunnels along Gun 1 access road, built 1954. Tower removed ca. 1971.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
SF-87C Concrete Retaining Walls			C	Cold War	Concrete retaining walls along lower and upper terraces, built to create level ground for radar and support equipment, 1954. Lower terrace supported by two wall sections; upper terrace by two sections along south side, and two along north side at MTR and LOPAR radar pads. Wall at LOPAR pad features Army mural.
SF-87C FUIF (Fire Unit Integration Facility) Antennae Tower Base	LCS: 058030 FA0774	40793 (removed)	C	Cold War	Square concrete footing for 50' high steel tower north of BC129 Gun 1, built 1962; tower with electromagnetic wave antenna (BSM) removed ca. 1974. Includes 'L'-shaped concrete wall that protected the antennae base against stray bullets from the rifle range located to the northwest.
SF-87C FUIF (Fire Unit Integration Facility) Pad	FA0798		C	Cold War	One of three concrete pads on lower terrace used for stationing vans with radar control equipment, built 1954. Vans removed 1971.
SF-87C Fuel Tank Pad	FA0785		C	Cold War	Rectangular concrete pad for 275-gallon steel tank at northeast end of SF-87C, built 1957. Tank removed ca. 1971.
BC 129 Gun 2 Portal Manhole			C	WW I-II	Hexagonal concrete utility structure, approximately 4' high, along Conzelman Road at BC 129 Gun 2 portal, built ca. 1944.
SF-87C LOPAR (Low Power Acquisition Radar) Pad	FA0787		C	Cold War	Circular concrete pad with anchor remnants for dome-covered radar unit, with low concrete wall along south side that took up dip in grade to west, built 1954; radar equipment and dome removed 1971.
SF-87C MCX Utility Pad	FA0768		C	Cold War	Rectangular concrete pad for utility associated with MCX poles at the northeast end of SF-87C, built ca. 1960. Utility and poles removed ca. 1961.
SF-87C MTR (Missile Tracking Radar) Pad	FA0786		C	Cold War	Circular concrete pad with anchor remnants for dome-covered radar unit, with low concrete wall along south side, built 1954; radar equipment and dome removed 1971.
SF-87C RC (Radar Control) Van Pad	FA-0794		C	Cold War	One of three concrete pads on lower terrace used for stationing vans with radar control equipment, built 1954. Vans removed 1971.
SF-87C Ready Room / BC 129 Battery Commander Station	LCS: 058031 FA0792	40810	C	WW I-II	Concrete cut-and-cover fire-control station with circular sighting room and camouflage cover, built 1942–44; never activated. Redesignated as ready room for SC-88C, 1954; original grade at front and north sides of building probably changed in construction of SF-87C. Camouflage earth and rock cover approximately 75% gone from sighting room roof. Vacant.
SF-87C Reservoir	FA0776		C	WW I-II, Cold War	50,000-gallon underground concrete potable water reservoir in center of northeast end of SF-87C, built 1944 for BC 129 and later used for SF-87C. Access hatch with "1944" visible above ground.
SF-87C Standby Generator Pad	FA0784		C	Cold War	Rectangular concrete pad for 12.5-KV standby generator at northeast end of SF-87C, built 1961. Generator removed ca. 1971.
SF-87C TRR (Target Ranging Radar) Pedestal	FA0772		C	Cold War	Raised steel hexagonal platform on central column with secondary outer posts, for dome-covered radar unit, built 1963; radar equipment and dome removed 1971.
SF-87C TTR (Target Tracking Radar) Pad	LCS: 058033 FA0788	41839	C	Cold War	Circular concrete pad with anchor remnants for dome-covered radar unit, built 1954; radar equipment and dome removed 1971.
SF-87C Transformer Pad	FA0781		C	Cold War	Rectangular concrete pad for 50-KV transformer at northeast end of SF-87C, built 1961. Transformer removed ca. 1971.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Views and Vistas					
BC129 Battery Commander Station Field of Fire			N-C	WW I-II, Cold War	Fire-control sight lines from fire-command station west toward Pacific, established 1944; sight lines obsolete with redevelopment of SF-87C, 1954. Partly obscured by TTR radar platform, built 1963, and
BC129 Field of Fire			C	WW I-II	Panoramic sight lines from two gun positions directed west across Fort Barry toward the Pacific, established 1944. Obscured by vegetation post-1966, reopened 2011.
BC129 Gun 1 Casemate Scenic Overview			N-C	Non-historic	Scenic overview from top of Gun 1 casemate, along Hawk Hill Trail with pipe railing along edge of casemate, established ca. 1985. Panoramic view looking west toward Pacific existed historically, but not designated viewing area.
SF-87C Sight Line to SF-87L			C	Cold War	Communication sight line from SF-87 control site to SF-87 launch site (Marine Mammal Center), established 1954. Obscured by woods, post-1966; sight line reestablished through clearing of woods, 2011.
Small-Scale Features					
BC129 Casemate Railings			N-C	Non-historic	Unpainted pipe railings around gun pits and at top of casemate, installed ca. 1990.
Hawk Hill Benches			N-C	Non-historic	Pipe-frame and wood plank benches along south terrace, installed post-1985.
Hawk Hill Fencing			N-C	Non-historic	Temporary wire and stake fencing around Golden Gate Observatory area at northeast end of SF-87C, installed post-1985. Partially replaced cyclone security fence that enclosed the entire SF-87C area.
SF-87C Retaining Wall Railings			C	Cold War	Welded pipe railings along concrete retaining walls on north and south terraces, historically painted ochre, installed ca. 1955. Railing at LOPAR pad non-historic (historically location of steel balcony).
Archeological Sites					
SF-87C Standby Generator Building Remnant			U	Cold War	Remnants of concrete slab foundation of standby generator building on lower terrace, built 1954. Building removed ca. 1971.
SF-87C Alternate Battery Acquisition Radar Shed Pad Trace			U	Cold War	Remnants of concrete slab foundation of shed housing equipment for ABAR antennae located on west side of building, built 1960. Building removed ca. 1971.
SF-87C Helipad Remnants	FA0750		U	Cold War	Remnants of concrete and asphalt helipad at northwest end of SF-87C, built ca.1957, possibly rebuilt 1970.
RODEO RIDGE DEFENSES (DRAWING 1.5)					
Spatial Organization					
No associated features					
Land Use					
AA Battery #2	ASMIS: GOGA00473		C	WW I-II	Large area on Rodeo Hill used for anti-aircraft defenses, containing dispersed collection of gun emplacements and support structures, in use between 1925 and ca.1946.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Battery Wallace Picnic Area			N-C	Non-historic	Mown area beneath Monterey cypress trees used as picnic and day-use area with picnic tables and barbecue grills, established ca. 1976. Area historically undeveloped; Monterey cypress date to historic period.
Bicentennial Campgrounds	FA2	40791	N-C	Non-historic	Valley east of Battery Wallace developed as campground, 1976. Located at site of WW I-era officer quarters built ca. 1915 and removed 1921; access road originally extended south to a quarry.
Fort Barry Sanitary Fill Area			N-C	Non-historic	Large area south of Lower Fisherman's Lot (former Quartermaster Area) used as a dump beginning in 1968. Traces of access roads and uneven topography throughout. Adjoining cliff along Bonita Cove used as a dump during the historic period.
Circulation					
AA Battery #2 Access Road (Lower Fisherman's Trail ?)		41955 (?)	C	WW I-II	Unpaved road from Lower Fisherman's Lot (former Quartermaster Area) east to AA Battery #2, built ca. 1925; part of Rodeo Ridge trail. Roadbed eroded.
B4 Alexander Trail			U	Undetermined	Narrow, twisting trail from Conzelman Road down steep cliff to B4 Alexander on shore of Bonita Cove; unknown if Army access trail, built ca. 1910, or contemporary desire way.
Bicentennial Campground Access Road			C	WW I-II	Unpaved road built ca. 1915 to provide access to WW I-era temporary officer quarters; road also used as access to quarry farther south. Section of road south of campground and between Conzelman Road and Field Road lost.
Conzelman Road	LCS: 058006 FAR109		C	Endicott-Taft, WW I-II	Paved road that is spine of Rodeo Ridge Defenses, built in stages: section from Lower Fisherman's Lot to Battery Rathbone-McIndoe built ca. 1902; section from Lower Fisherman's Lot west built ca. 1919 as access road to Battery Wallace; section west of Battery Wallace to Coast Guard station and section east of Battery Rathbone-McIndoe built c. 1942 as dummy roads. Paved ca. 1950. Section west of Rathbone-McIndoe has concrete gutter; section along Wallace has concrete gutter curbs.
Rodeo Ridge Trail			N-C	Non-historic	Unofficial unimproved trail from Upper Fisherman's Lot west to Lower Fisherman's Lot, roughly paralleling Conzelman Road, developed post-1975; section from AA Battery #2 to Lower Fisherman's Lot on AA Battery #2 Access Road.
Topography					
AA Battery #2 Cuts, Conzelman Road	MH23, 27, 29		C	WW I-II	Five cuts in hillside on north side of Rodeo Hill along Conzelman Road built to provide level ground for uses associated with AA Battery #2. Cut 1, built ca. 1942: unknown use; Cut 2, built ca. 1942: site of three mobile radar units; Cut 3: site of AA Battery #2 day room, built ca. 1942; Cut 4, built ca. 1942: unknown; Cut 5, built ca. 1925: generator storage.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Vegetation					
Battery Wallace Trees			C	Cold War	Monterey pine and cypress planted around casemates and rear of Battery Wallace and along Conzelman Road shortly after WW II, ca. 1946. Purpose of planting not known. Trees spread into adjoining areas, post-1966. Trees removed from around casemates, ca. 2010.
Bicentennial Campground Grove			N-C	WW I-II, non-historic	Grove of Monterey pine and cypress initially planted as a few trees around a WW I-era temporary officer quarters, ca. 1915. N-C due to significant spread, post-1966.
Battery Rathbone-McIndoe Hutment Eucalyptus Groves			N-C	Non-historic	Two large groves of eucalyptus trees on disturbed ground of the Rathbone-McIndoe Hutment that grew in after 1966.
Buildings and Structures					
40MM AA AW #9	LCS: 058018 FA0911B ASMIS: GOGA00474		C	WW I-II	Concrete sandbag-type field emplacement located between Battery Rathbone-McIndoe and Upper Fisherman's Lot, built 1942.
AA Battery #2 Bunker	ASMIS: GOGA00473		C	WW I-II	Underground corrugated metal enclosure with corrugated metal vent stack, located south of gun #1, built ca. 1942. Includes excavated area at entrance to bunker. Covered by vegetation.
AA Battery #2 Director's Pit	ASMIS: GOGA00473		C	WW I-II	Two adjoining square open concrete pits with covers on Rodeo Hill west of gun blocks, built ca. 1940; covers removed ca. 1946. Stone revetment on slope to west, possibly part of hutment.
AA Battery #2 Gun Platforms	LCS: 021304 LCS: 021305 FA1380 FA1381(1–3) ASMIS: GOGA00473	40776 40777 40796 40805	C	WW I-II	Three dispersed circular concrete platforms for anti-aircraft guns on top of Rodeo Hill: Block 1 and Block 2 built 1925 as "Fort Barry Anti-Aircraft Battery;" Block 3 built 1940 as part of battery expansion. Covered in brush.
AA Battery #2 Height Finder	ASMIS: GOGA00473		C	WW I-II	Square concrete base for height finder instrument on Rodeo Hill west of gun blocks , built ca. 1940.
AA Battery #2 Junction Manhole	ASMIS: GOGA00473		U	WW I-II	Manhole between gun blocks 1 and 2 for junction of communications and power cables between gun blocks, director's pit, and storeroom-power room, as shown on 1940 plan of AA Battery #2. Not visible; may be covered by earth or vegetation.
AA Battery #2 Magazine	LCS: 010068 FA0991 ASMIS: GOGA00473	40827	C	WW I-II	Concrete cut-and-cover structure along Conzelman Road side of Rodeo Hill, with two sets of iron doors, built 1940. Approach apron scrub covered. (Storage)
AA Battery #2 Platform	MH24 ASMIS: GOGA00473		C	WW I-II	Concrete platform with cheek walls along Conzelman Road between cuts 3 and 4, built ca. 1942, possibly as loading dock.
AA Battery #2 Reservoir	FA0950 ASMIS: GOGA00473		C	WW I-II	Above-ground cone-shaped concrete water reservoir, built ca. 1940. Large crack through entire structure.
AA Battery #2 Storeroom-Powerhouse	LCS: 01006 FA0993 ASMIS: GOGA00473	41889	C	WW I-II	Cut-and-cover concrete structure along Conzelman Road side of Rodeo Hill, with deeply recessed entryway, built 1940. Manhole in approach apron. (Storage)
AA Emplacement, Unidentified	FA UAA-2 ASMIS: GOGA00473		C	WW I-II	Concrete sandbag-type field emplacement for .50-caliber position, at northwestern side of Rodeo Hill above cut 2 associated with AA Battery #2, built ca. 1942. Retains wood roofing over "keyhole" extension.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
AA Emplacement, Unidentified	FA UAA-3 ASMIS: GOGA00473		C	WW I-II	Concrete sandbag-type field emplacement on southwestern side of Rodeo Hill south of BC Wallace, built ca. 1942.
B1 Rathbone	ASMIS: GOGA00411		C	WW I-II	Cut-and-cover hexagonal-front concrete fire-control station west of Battery Rathbone-McIndoe with partially intact rock and iceplant camouflage and net anchors above sighting room, built ca.1919, camouflage added ca. 1942. (Vacant)
B1S1 Wallace	LCS: 010149 FA0989 ASMIS: GOGA00475	40807	C	WW I-II	Cut-and-cover hexagonal-front concrete fire-control station on southwest slope of Rodeo Hill, with largely intact rock camouflage above and alongside sighting room, built 1921, camouflage added ca. 1942. (Vacant)
B4 Alexander	ASMIS: GOGA00476		C	Endicott-Taft	Square flat-roof concrete fog-level fire-control station located along Bonita Cove shoreline south of Battery Rathbone-McIndoe, built 1910. Originally designated as the third station of the 3rd Fire Command; redesignated as B4 Alexander. (Vacant)
Battery Rathbone-McIndoe	LCS: 010126 FA0911 ASMIS: GOGA00477	40787		Endicott-Taft	Endicott period four-gun rapid-fire concrete mid-elevation barbette battery designed to protect outer Golden Gate, built 1904–05. Earth-covered traverses with support rooms. Two BC stations added ca. 1942. Disarmed 1948. Similar in design to Battery Smith-Guthrie. (Storage; public overlook)
Battery Rathbone-McIndoe Bunker			C	WW I-II	Underground corrugated metal enclosure with corrugated metal vent stack, located off right flank of battery, built ca. 1942. Includes excavated area at entrance to bunker. Covered by vegetation.
Battery Wallace	LCS: 010070 FA0999 ASMIS: GOGA00410		C	WW I-II	Plan of 1937 earth-covered casemated two-gun concrete battery, built 1943 as modernization of World War I-era open firing platforms, built 1917–21. Disarmed 1948. (Public access to gun platforms)
Battery Wallace Stone Retaining Walls	ASMIS: GOGA00410		C	WW I-II	Mortared rubble wall along Conzelman Road at rear of battery, and around utility vaults, built ca. 1942.
BC Wallace	LCS: 010148 FA985 ASMIS: GOGA00410	40789	C	WW I-II	Pillbox-type cut-and-cover fire-control station on southwest slope of Rodeo Hill, with camouflage brackets on steel sighting room roof, built 1943. Camouflage cover gone. (Vacant)
BC Wallace Powerhouse (BC Wallace Generator Hut)	LCS: 058129 FA0985A ASMIS: GOGA00410	40806	C	WW I-II	Concrete cut-and-cover flat-roofed structure on southwest slope of Rodeo Hill, with square ventilation tower, built 1944. Earth cover partially eroded. (Vacant)
Rodeo Ridge Machine Gun Pit	FA MG-1 ASMIS: GOGA00478		C	WW I-II	Steel pipe on concrete post east of Battery Rathbone-McIndoe, for .30-caliber AA machine gun, built ca. 1942. Concrete sandbags at rear.
Views and Vistas					
AA Battery #2 Field of Fire			C	WW I-II	360-degree panoramic views from three anti-aircraft gun mounts, established 1925, 1940. Remain unobstructed; gun blocks covered in low brush.
B1 Rathbone Sight Lines			C	WW I-II	Fire-control sight lines south across Bonita Cove and Golden Gate, established 1919. Remain unobstructed.
B1S1 Wallace (989) Sight Lines			C	WW I-II	Fire-control sight lines across Bonita Cove and Golden Gate, established 1921. Remain unobstructed.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Battery Rathbone-McIndoe Field of Fire			C	Endicott-Taft	Panoramic sight lines from four gun positions directed south across Bonita Cove and Golden Gate, established 1905. Remain unobstructed. Battery parapet maintained as scenic overlook.
BC Wallace (985) Sight Lines			C	WW I-II	Fire-control sight lines across Bonita Cove and Golden Gate, established 1943. Remain unobstructed.
Battery Wallace Field of Fire			C	WW I-II	Panoramic sight lines from two gun positions, established 1921 as 360-degree panorama; restricted to westward sight lines across Fort Barry toward the Pacific with casemating of battery, 1944. Remain unobstructed.
F3 (B4 Alexander) Sight Lines			C	Endicott-Taft	Fire-control fog-level sight lines across Bonita Cove, established 1910. Remain unobstructed.
Small-Scale Features					
Battery Rathbone-McIndoe Bench			N-C	Non-historic	Wood bench at scenic overlook on battery parapet, installed ca. 1980.
Archeological Sites					
AA Battery #2 Dayroom Remnants	MH25 ASMIS: GOGA00473		C	WW I-II	Remnants of stone and concrete building, including fireplace and chimney, built along Conzelman Road in cut 3, ca. 1942, abandoned ca. 1945.
AA Battery #2 Generator Storage Site	ASMIS: GOGA00473		C	WW I-II	Remnants of concrete retaining walls and pad in cut #5 along Conzelman Road between AA Battery #2 magazine and storeroom-powerhouse built as storage area for portable generator. Cut built ca. 1925; walls of mortared concrete sandbags built ca. 1942; sandbags removed ca. 1955 probably for reuse as ornamental features at Nike sites.
B1 McIndoe Shell	ASMIS: GOGA00473		C	WW I-II	Hexagonal-front concrete fire-control station east of Battery Rathbone-McIndoe, built ca.1919. Dislocated by landslide, ca. 1950; about half-way down slope, facing up. Structure appears intact.
Rathbone-McIndoe Hutment Remnants	MH18 MH19 ASMIS: GOGA00471		U	WW I-II	Remnants of hutment north of Battery Rathbone-McIndoe, consisting of dug-in frame buildings, built 1942, abandoned ca.1945. Site covered in brush and eucalyptus trees; remnants not visible except concrete foundation pad and retaining wall near Conzelman Road.
Rathbone-McIndoe Lavatory Ruins	FA0959, MH17		N-C	Endicott-Taft	Concrete foundation slab from latrine for Battery Rathbone-McIndoe, built 1905, demolished post-1971.
SF-88L NIKE MISSILE LAUNCH SITE (DRAWING 1.5)					
Spatial Organization					
SF-88L Exclusion Area		89050	C	Cold War	Fence-enclosed secured launch site area of SF-88L in south half of larger Limited Area, established 1955.
SF-88L Generator Building Transformer Compound		89050	C	Cold War	Fence-enclosed area on north side of Generator Building, built between 1955 and 1965 to enclose transformers and other equipment.
SF-88L Kennel Pen		89050	C	Cold War	Fence-enclosed pen surrounding kennels, measuring 50′ by 60′, established 1959.
SF-88L Kennel Training Area		89050	C	Cold War	Fence-enclosed secured area at lower west corner of SF-88L Limited Area used to train guard dogs, measuring 125′ by 250′, established 1959. Area is mown grass, except for kennel pen.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
SF-88L Limited Area		89050	C	Cold War	Fence-enclosed secured area of SF-88L site established 1955, excluding the Exclusion Area. Space further defined by steep bank to east and south, and limits of mown grass and scrub along fence line. Existing scrub within site reflects decrease of mowing after 1974.
SF-88L Support Building Cluster		89050	C	Cold War	Area at north end of SF-88L Limited Area defined by cluster of buildings along the main access road and warhead building berm within open area, including warhead building, standby generator building, missile assembly building, and several small sheds, developed between 1955 and 1962.
Land Use					
SF-88L Museum Control Area Display			N-C	Non-historic	Outdoor interpretive display near generator building containing 2 radar antennae and 2 control vans from SF-88C on Wolf Ridge, established ca. 1995. Radar antennas and control vans are historic objects, but were not historically located within SF-88L.
Circulation					
Battery Alexander Approach Road			C	Endicott-Taft	Unsurfaced road from Exclusion Area west to Battery Alexander, built c.1902 and terminated by SF-88C, 1954.Narrowed to trail width, 2014; roadbed unmaintained and covered in vegetation within SF-88L.See also South Lagoon Defenses.
SF-88L Generator Building Parking Area (Picnic Area)			C	Cold War	Asphalt-paved area in front of (east side) of generator building (966), built ca. 1955. Asphalt has painting of Army Corps of Engineers shield. Presently used as picnic area, with four picnic tables.
SF-88L Kennel Access Walk			C	Cold War	Asphalt-paved walk from Exclusion Area to kennel, built ca. 1959. Spurs leads to Battery Alexander approach road, and along north side of Exclusion Area fence.
SF-88L Launch Pad			C	Cold War	Expansive asphalt-paved apron surrounding Launchers A and B, built 1955.
SF-88L Access Road			C	Cold War	Asphalt-paved uncurbed road from main gate to Exclusion Area, built 1955. Widens in front of generator building (966) and LCT control van.
SF-88L Missile Warhead Building Road			C	Cold War	Asphalt-paved uncurbed loop road off main road leading through and along east side of Missile Warhead Building (967). Section adjoining building is missile fueling station.
SF-88L Day Room Path			C	Cold War	Unsurfaced path from Limited Area up steep slope to Fort Barry Quartermaster Area and SF-88L day room in former bakery (962), built 1959. Contains wood deck bridge over drainage ditch, and flight of steps up steep slope below Building 960, reconstructed ca. 2005. New metal railings along stairs.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Topography					
SF-88L Diversion Ditch		89050	C	Cold War	Earth ditch along uphill perimeter of SF-88L site, from Battery Alexander gate to north end of Exclusion Area, built ca. 1957; extended to near main gate, ca. 1965.[5]
SF-88L Warhead Building Berm		89050	C	Cold War	Teardrop-shaped mown berm, approximately 8' high, to the north of the warhead building, built 1959 to shield rest of site from possible explosion. Slope and ridge to the south of the building also served the same purpose; not mown.
Vegetation					
SF-88L Acacia Grove		89050	N-C	Cold War	Grove of black acacia south of main gate that grew up after 1966. Area historically was mown or low scrub. Blocks historically open sight lines to the north.
SF-88L Mown Grass		89050	C	Cold War	Mown grass within SF-88L site perimeter fence, established ca. 1955; mown area decreased on steep slopes with growth of coyote brush and cypress, post-1975; return to historic limits underway, 2014.
Buildings and Structures					
SF-88L Kennel Storage Building	LCS: 058026 FA0974	40830	C	Cold War	Prefabricated one-story gable-roof metal building on concrete foundation outside of kennel pens, built 1965. Replaced temporary plywood storage building constructed 1959. (Storage; aka Kennel Office)
SF-88L A Section Launcher	LCS: 010145 FA0969	41846	C	Cold War	Underground 3,976-square-foot missile storage shelter (magazine), and above-ground paved launch pad with ventilator caps, double elevator doors, and M36 launcher assemblies, built 1955. Personnel staircases added 1964. Hercules missile displayed on launch pad. Non-historic moveable railings close off certain parts of the launch pad. (Open for guided tours)
SF-88L B Section Launcher	LCS: 010146 FA0971	41850	C	Cold War	Underground 3,976-square-foot missile storage shelter (magazine), and above-ground paved launch pad with ventilator caps, double elevator door, and M36 launcher assemblies, built 1955. Personnel staircases added 1964. Non-historic moveable railings close off certain parts of the launch pad. (Storage)
SF-88L Entrance Sign Base (Retaining Wall)		40907 (removed)	C	Cold War	Low (1-2' high), trapezoidal yellow-painted concrete retaining wall at intersection of Field Road and entrance to SF-87L that served as a planter or base to the SF-88L entrance sign.
SF-88L Exclusion Area Sentry Station	LCS: 010147 FA0976	41857	C	Cold War	Wood-frame flat-roof building with continuous windows, located between two gates to Exclusion Area, built 1959. (Vacant, maintained)
SF-88L Fire Cache			C	Cold War	Small, red-painted wood shed (bin) with shed roof along west side of road near main gate, built ca. 1960. Held hoses, shovels, and other firefighting tools.[6]
SF-88L Flammable Materials Storehouse	FA0972	40831	C	Cold War	Small concrete-block flat-roof building between generator building and missile test building, built 1955; spill containment wing added 1961. (Paint Storage)

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
SF-88L Generator Building (Standby Generator Plant)	LCS: 010143 FA0966	41852	C	Cold War	One-story shed-roof concrete-block building with small front wing, built 1965 to replace sheet-metal generator building on same site, 1955–65. (Storage)
SF-88L Kennels	LCS: 058027 FA0975	40833 (removed)	C	Cold War	Four adjoining chain-link fence enclosures and wood dog houses on concrete pad, built 1959; fiberglass and metal panels added to roof and sides of pens, ca. 1965.
SF-88L LCT Pad	FA0899		C	Cold War	Concrete pad for Launch Control (LCT) van, with asphalt access walk, built 1962. Original LCT van removed ca. 1974.
SF-88L Main Gate Sentry Station	LCS: 058023 FA0970	40832	C	Cold War	Small concrete-block flat-roof building with wide eaves, inside main gate at Field Road, built 1959 as part of redesign of main gate. (Interpretive display)
SF-88L Missile Test Building	LCS: 021292 FA0963	40771	C	Cold War	Prefabricated Army "Butler"-type one-story gable-roof building with concrete foundation, sheet metal siding, and wood roof, built 1962. Also contained break room. (Nike museum)
SF-88L Missile Warhead Building	LCS: 010144 FA0967	41861	C	Cold War	One-story concrete-block low-pitched (flat) roof building with roller doors at either end, built 1955 to assemble and test nuclear warheads for missiles. Adjoining tank is a missile shipping container for display purposes and not part of the building. [7] (Storage)
SF-88L Propellant Fueling Facility (Acid Fuel Station)	FA0992		C	Cold War	Outdoor station adjoining Warhead Building for fueling missiles, built 1955. Consists of sloped concrete pad for parking missile trailer at specific angle for fueling, tall floodlight standards, and a striped steel davit for holding fueling equipment. Movable hoist is for display purposes and not part of the station.[8]
SF-88L Ready Room	LCS: 010142 FA0962		C	Endicott-Taft	Former Quartermaster bakery and storehouse built 1907, converted to ready room and office for SF-88L, 1959. (Vacant) See also Fort Barry Quartermaster Area.
Views and Vistas					
SF-88L Sight Line to SF-88C		89050	C	Cold War	Sight line between SF-88L LCT van (899) and flight simulator group mast (979) to SF-88C control site on Wolf Ridge, established 1955. Sight line blocked by acacia grove to the north that has grown up since 1966.
Small-Scale Features					
SF-88L Flight Simulator Group Mast	LCS: 058024 FA0979	40829 (removed)	C	Cold War	Aluminum pole on steel and concrete footing near LCT van (899), used for hoisting electronic target to calibrate radars at SF-88C on Wolf Ridge, built 1955. Converted after 1995 into flagpole.
SF-88L Ornamental Gravel Beds		89050	C	Cold War	Rectangular beds in front of Missile Assembly Test Building (963), built ca. 1962; contain concrete profile of second stage of a Nike Hercules missile, a concrete shield with the unit's designation, and two restored small square tablets date and unit's proficiency score (numbers and dates not historically accurate). Rest of bed filled with red gravel and edged by white-painted concrete curbs. Southern part of bed contains battalion number "51" in white gravel.[9] Not on Drawing 1.5.
SF-88L Entry Sign	LCS: 058022 FA0964 (FA0892)	41842	N-C	Cold War	A 4' x 8' painted plywood sign on wood posts at main Field Road entrance, built 1992 as replica of original sign, ca. 1955–75. Not on Drawing 1.5.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
SF-88L LCT Launch Control Van			N-C	Cold War	Rectangular white-painted steel van housing equipment used to communicate with Nike control site, installed at SF-88L by Army, ca. 1974. Original ICT van removed prior to this time.
SF-88L Dog Training Course Obstacles		89050	N-C	Non-historic	Two replica wide corrugated pipes in kennel area on display as part of dog training course, similar to those used historically, installed after 1995.[10]
SF-88C Radar Control Vans and Antennae		89050	N-C	Cold War	Two historic radar control vans on wheels and two antennae in interpretive display area near generator building (966); two vans along west side (rear) and one north of missile test building (963). Communications cables in metal pipes on concrete blocks connect vans and radar units. Vans and antennae originally stationed at SF-88C on Wolf Ridge, ca. 1955–95, moved to SF-88L for interpretive purposes, ca. 1995.
SF-88L Limited Area Fence		89050	C	Cold War	Chain-link and barbed-wire 7'-high fence around perimeter of SF-88L site, with main gate at Field Road and secondary gate at Battery Alexander approach road, installed 1955; realigned at main gate, 1959, raised a foot (to 7'), ca. 1961; realigned along west side, ca. 1970. Gates are paired, side-hinged swing gates with pipe posts and ball finials. Personnel gate added at path to ready room in Quartermaster bakery (962), 1959.
SF-88L Exclusion Area Fence		89050	C	Cold War	Chain-link and barbed-wire fence around perimeter of Exclusion Area, with two gates at north side and one gate on south side, installed 1958. North gates are roller type; south is a swing gate.
SF-88L Kennel Pen Fence		89050	C	Cold War	Chain-link fence enclosing grass pen and kennels, installed 1959. Personnel gate on east side.
SF-88L Kennel Training Area Fence		89050	C	Cold War	Chain-link fence enclosing dog training area around kennel pen, installed 1959. Personnel gate on south side.
SF-88L Overhead Power Lines		89050	C	Cold War	Wood poles and overhead power lines extending from Field Road to generator building (966), installed ca. 1955. Age of existing poles not determined.
NPS Weather Station Box at SF-88L			U	Undetermined	Louvered metal box on stand west of control area display, probably installed by NPS.[11] Not on Drawing 1.5
Archeological Sites					
SF-88L Flammable Material Storage Shed Foundation (Emergency Wash Station/Shower)	LCS: 058025 FA0968	40798 (removed)	U	Cold War	Concrete pad near entrance to Exclusion Area built for acid storage shed, 1955. Three-sided open shed with corrugated sheet metal walls and exterior shower (wash station); converted to flammable storage building, 1959. Superstructure removed due to poor condition, 1996.[12]
SF-88A, NIKE ADMINISTRATION AREA (DRAWING 1.8)					
Spatial Organization					
Building 983 Service Area			N-C	Non-historic	Fenced area at east end of FA 983 building, established ca. 1980.
San Francisco Rotary Club Camp Fire Site			N-C	Non-historic	Depressed amphitheater north of building 984 with timber benches around a central gathering area and fireplace oriented toward views of the Pacific coast, built ca. 1980.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
YMCA Garden			N-C	Non-historic	Fence-enclosed vegetable garden at rear of Building 981, established ca. 1990.
Land Use					
YMCA Lawn Court			N-C	Non-historic	Area of lawn between buildings 984, 986 used for lawn games.
Circulation					
Pump Station Road, SF-88A			N-C	Non-historic	Unsurfaced road from Battery Alexander parking area entrance drive to sewage pump station at north end of SF-88A, built ca. 1965.
SF-88A Parking Lots	RN-P918	40838	C	Cold War	Large asphalt lot in south center of complex, and small secondary lot between buildings 981 and 983, built 1965.
SF-88A Roads			C	Cold War	Asphalt-paved roads with concrete gutter-curbs running north-south and east-west through the area, built 1965. The north-south road is on the approximate alignment of the secondary road or walk through the Mendell Housing Area, built 1940 and demolished 1964. The east-west road serves as the current entrances; the north-south road closed at the north end by a wood gate.
SF-88A Sidewalks			C	Cold War	Concrete sidewalks paralleling the roads and buildings, with concrete entrance walks between building entrances and the streets, built 1966. Entrance walks to building 984 have concrete steps and non-historic wood railings.
SF-88A Trails			N-C	Non-historic	Unsurfaced foot trails from the north end of the complex toward Battery Alexander, and from the south end toward Battery Mendell, established ca. 1980.
Topography					
No associated features					
Vegetation					
SF-88A Black Acacia Trees			C	Cold War	Two lines of black acacia trees north of building 994, planted ca. 1965. Only known plantings at SF-88A dating from historic period; trees have spread since historic period.
SF-88A Lawn			C	Cold War	Small areas of mown turf grass around buildings, streets, and parking areas, established 1966. Turf along east side of complex lost to scrub; portions of turf around buildings replaced with planting beds, post-1966.
YMCA Foundation Plantings			N-C	Non-historic	Mix of shrub and herbaceous plantings along portions of building foundations, established post-1977.
YMCA Monterey Pine and Cypress Trees			N-C	Non-historic	Specimens and groves of Monterey pine along east entrance road and around building 986, planted ca. 1980.
Buildings and Structures					
Sewage Pump Station YMCA Area	FA0990	40826	N-C	Non-historic	Sewage pump station north of amphitheater, built ca. 1990; replaced pump station built 1966.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
SF-88A Administration Building	LCS: 021293 FA0981	41970	C	Cold War	One-story standard Army-design concrete-block building at north end of complex, with low-pitched shed roof and concrete block screens at entrances, built 1965. Windows replaced ca. 2000. (YMCA Meeting Rooms)
SF-88A Barracks	LCS: 021296 FA0986	41967	C	Cold War	One-story standard Army-design concrete-block building at south end of complex with low-pitched shed roof and entrance porches, built 1965. Windows replaced ca. 2000. (YMCA Dormitory South)
SF-88A Barracks	LCS: 021295 FA0984	41966	C	Cold War	One-story standard Army-design concrete-block building in middle of complex with low-pitched shed roof and entrance porches, built 1965. Windows replaced ca. 2000. (YMCA Dormitory West)
SF-88A Mess Hall	LCS: 021294 FA0983	41969	C	Cold War	One-story standard Army-design concrete-block building in middle of complex with low-pitched gable roof, built 1965. Addition on north side, ca. 1980, and windows replaced ca. 2000. (YMCA Dining Hall)
SF-88A Multi-Use Court	LCS: 021297 FA0998	41899 (removed)	C	Cold War	Concrete athletic court west of building 984, built 1961 as part of Mendell Housing Area. Similar to multi-use courts at Fort Barry Main Post and Fort Cronkhite cantonment.
Views and Vistas					
No associated features.					
Small-Scale Features					
SF-88A Flagpole Base			C	Cold War	Concrete pad in front of Administration Building 981, site of flagpole, 1965–ca.1975.
SF-88A Utility Lines			C	Cold War	Overhead power and communication lines on wood utility poles, along north-south road, installed 1965. Short curved-arm streetlights mounted to pole, with replacement luminaires. Age of individual poles not determined.
YMCA Fence			N-C	Non-historic	Two-plank white-painted wood fence along Field Road, installed ca. 1977; replaced chain-link security fence around entire perimeter of complex installed 1965.
YMCA Flagpole			N-C	Non-historic	Metal flagpole at amphitheater, installed ca. 1980.
YMCA Propane Tank			N-C	Non-historic	Above-ground white propane tank south of YMCA entrance, installed ca. 1980.
YMCA Site Furnishings			N-C	Non-historic	Signs, benches, picnic tables, fire place, and other miscellaneous features installed ca. 1977 to present. (not on Drawing 1.8)
Archeological Sites					
No associated features					

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
SOUTH LAGOON DEFENSES (DRAWING 1.5)					
Spatial Organization					
Battery Alexander Parade			C	Endicott-Taft	Open unpaved area along rear length of battery defined by curbs and parados (slopes), built 1905. Included mown turf east of curbs. Non-historic vegetation (primarily iceplant) covers edges and northern part of area, and two Monterey pine trees occupy west side of parade.
Land Use					
No associated features					
Circulation					
Battery Alexander Approach Road (Battery Alexander Trail)		232007	C	Endicott-Taft	Unpaved road with concrete gutter curbs from Battery Alexander parking area to battery parade and SF-88L, built ca. 1901; section east of battery was realignment of ca. 1875 road from Point Bonita to Sausalito. Eastern section terminated at SF-88L in 1955. Roadbed narrowed to trail width, 2014.
Battery Alexander Field Road Stairs			U	Endicott-Taft	Long flight of stairs from battery parade up steep parapet to Field Road, built ca. 1905. Existing wood stairs with metal railing are in historic location, but appear to be modern materials; appearance of historic stairs not determined.
Battery Alexander Parking Area		40834	N-C	WW I-II	Unpaved parking area west of Battery Alexander built ca. 1940; redesigned as smaller lot and entrance realigned, 2011 (old alignment of Field Road removed). N-C due to lack of integrity.
Battery Smith-Guthrie Approach Spur (Smith-Guthrie Trail)		41960	C	Endicott-Taft	Unpaved spur off Battery O'Rorke approach road to rear of Battery Smith-Guthrie, built ca. 1903. No gutters discernible. Retains gravel surface and little vegetation encroachment; presently used as trail.
Field Road	LCS: 447463		C	Endicott-Taft	Paved main access road to South Lagoon Defenses; section in character area built ca. 1855 as part of the old road between Point Bonita and Rodeo Beach, and ca.1875 as part of road from Point Bonita to Sausalito. Tight curve south of Battery Alexander parking area bypassed ca. 1941; curve (parking lot entrance drives) removed 2011.
Hutment-Switchboard Room Access Road			C	WW I-II	Unpaved road along slope east of batteries, built ca.1942; section north of radio-switchboard room to hutment site abandoned ca. 1945. Road not in use and largely brush covered; integrity of north section not determined.
South Lagoon Defenses Main Approach Road (Battery O'Rorke Trail)		115532	C	Endicott-Taft	Unpaved road from Battery Alexander parking area north to Battery O'Rorke, built ca. 1903. Section south of Battery Smith-Guthrie retains intact roadbed with minimal vegetation encroachment; section north to Battery O'Rorke covered in vegetation and reads as a trail; trail extends west of batteries along alignment of Army road to SF-88L T sites (see below)
SSF-88L T Access Road (Battery Loop Trail)	MH64	115533	C	Cold War	Unpaved road west of Batteries Smith-Guthrie and O'Rorke built ca. 1954 to access temporary launch sites for SF-88L. Follows in part alignment of road from Point Bonita to Rodeo Beach, built ca. 1855 and abandoned ca. 1900. Roadbed eroded and partially covered by vegetation. (Smith-Guthrie Loop Trail, west section)

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Topography					
No associated features					
Vegetation					
Battery Alexander Eucalyptus Row			C	Endicott-Taft	Line of eucalyptus trees along front (west) side of Battery Alexander, planted ca. 1905, probably as concealment or a windbreak. Oldest stand of eucalyptus at Fort Barry.
Battery Alexander Monterey Pines			N-C	Non-historic	Three large specimen Monterey pines planted on the battery parade by SF-88L personnel when Alexander was used as a motor pool in the 1960s; matured after the historic period.[13] Northern specimen in decline.
Battery Smith-Guthrie Eucalyptus Groves			N-C	Non-historic	Volunteer groves of eucalyptus on the south side of the battery and on site of hutment to the rear, grew in after 1966.
South Lagoon Batteries Groundcover			C	Endicott-Taft	Iceplant and turf groundcover on parapets and traverses of Batteries Alexander and Smith-Guthrie, planted ca. 1903–05. Extensive spread of iceplant into sandy areas to the west.
Buildings and Structures					
Battery Alexander	LCS: 010075 FA1356	40779	C	Endicott-Taft	Endicott-period concrete mortar battery with two emplacements of four mortar guns designed to protect the Pacific north approach to the Golden Gate, built 1901–03. Steep earthen parapets and earth-covered support rooms planted in iceplant and other vegetation. Disarmed 1943. (Vacant, maintained; Mortar Pit B used as picnic area)
Battery Alexander Latrine	LCS: 058014 FA1356A		C	Endicott-Taft	One-story flat-roof concrete building at south end of parade, built ca. 1902. One of two remaining Endicott battery latrines in the district. (Vacant)
Battery Alexander Mortar Booth Pit A	LCS: 010072 FA1353	40808	C	Endicott-Taft	Square one-story flat-roof concrete building at edge of parade with window slots toward mortar pit, built 1902. (Vacant)
Battery Alexander Mortar Booth Pit B	LCS: 010074 FA1355	40809	C	Endicott-Taft	Square one-story flat-roof concrete building at edge of parade with window slots toward mortar pit, built 1902. (Vacant)
Battery Alexander Sentry Booth	FA1356B		C	Endicott-Taft	Small one-story flat-roof concrete building at north end of parade, built ca. 1902. (Vacant)
Battery O'Rorke	LCS: 010071 FA1351	40786	C	Endicott-Taft	Endicott period rapid-fire four-gun concrete mid-elevation barbette battery designed to protect Rodeo Beach from enemy landing, built 1903–04. Parade enclosed by parados. Disarmed ca. 1945. Similar in design to Battery Yates. (Vacant, maintained)
Battery Smith-Guthrie	LCS: 010073 FA1354 ASMIS: GOGA00408	40783	C	Endicott-Taft	Endicott period rapid-fire four-gun concrete mid-elevation barbette battery designed to protect the north Pacific approach to the Golden Gate, built 1904–05. Earth and grass/iceplant-covered traverses with support rooms, and parade enclosed by parados. Two BC stations added ca. 1942, disarmed ca.1948. Similar in design to Battery Rathbone-McIndoe. (Vacant, maintained)
Battery Smith-Guthrie Refuse Container	LCS: 058028 FA1354C		C	WW I-II	Rectangular roofless concrete structure along road to Battery O'Rorke across from latrine, built ca. 1942.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
CRF O'Rorke			C	WW I-II	Fire-control station with low concrete walls and pipe frame for canvas cover, on south parapet of Battery O'Rorke, completed 1920. Contained a Coincidence Range Finder (CRF) instrument. Pipe frame removed ca. 1940.
Radio-Switchboard Room, Smith-Guthrie	LCS: 058011 FA1352 ASMIS: GOGA00470		C	WW I-II	Cut-and-cover concrete structure on slope east of Battery Smith-Guthrie built 1943 to house combined radio and telephone switchboard equipment. Covered by eucalyptus woods. (Abandoned)
Views and Vistas					
Battery Smith-Guthrie Field of Fire			C	Endicott-Taft	Panoramic sight lines from four gun positions directed west to the Pacific, established 1905. Partially obstructed by eucalyptus trees that grew in after 1966.
Battery O'Rorke Field of Fire			C	Endicott-Taft	Panoramic sight lines from four gun positions directed west to the Pacific and north to Rodeo Beach, established 1904. Remains unobstructed.
Small-Scale Features					
Smith-Guthrie Loop Trail Bench			N-C	Non-historic	Wood bench facing view of the Pacific along the SF-88L T access road (Smith-Guthrie Loop Trail), installed ca. 1980.
Archeological Sites					
AA .50 #21 Access Tunnel and Trench	ASMIS: GOGA00408		U	WW I-II	Trench and tunnel leading to AA emplacement between Batteries Smith-Guthrie and Alexander, built ca. 1942. Heavy brush cover; integrity undetermined. AA emplacement may remain beneath brush.
Battery Smith-Guthrie Latrine Foundation	LCS: 058011 FA1354A		C	WW I-II	Concrete foundation slab with sewer/toilet pipes; latrine built ca. 1942, superstructure removed ca. 1960.[14]
SF-88L T Group 1 Remnants	MH66–70		U	WW I-II	Three berms (traverses) and four terraces west of Battery Smith-Guthrie from temporary emplacement of 4 Nike missile launchers, built 1954, abandoned 1955. Also included concrete pad and square hole with posts. Integrity undetermined; topography eroded, covered in vegetation, and crossed by trails.
SF-88L T Group 2 Remnants			U	WW I-II	Central berm (traverse) and two terraces east of Battery O'Rorke and south of Rodeo Lake Trail from temporary emplacement of 2 Nike missile launchers, built 1954, abandoned 1955. Integrity undetermined; topography eroded and concealed by vegetation. Adjoining strip of bare earth from access road.
Smith-Guthrie Hutment Remnants	LCS: 058013 FA1354B ASMIS: GOGA00470		U	WW I-II	Remnants of hutment on slope east of Battery Smith-Guthrie, built 1942, abandoned ca.1945. Complex included three barracks, mess hall, and bathhouse along access road past Smith-Guthrie Switchboard-Radio Room. Existing concrete slab foundation from mess hall (FA1354B), which stood until ca. 1970.[15] Site covered in brush and eucalyptus trees; integrity undetermined.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION					
FEATURE NAME	**OTHER RESOUCE INVENTORY**	**FMSS LOCATION**	**EVAL-UATION**	**HISTORIC PERIOD**	**HISTORICAL DATA**
BONITA RIDGE DEFENSES (DRAWINGS 1.5, 1.8)					
Spatial Organization					
No associated features					
Land Use					
AAA Position No. 81	ASMIS: GOGA00391		C	Cold War	Area from Battery Mendell north containing dispersed gun emplacements and support facilities in battery and adjoining fire-control stations, in use ca. 1951–55. Perimeter security fence removed ca. 1960. Partly maintained as Bird Island Overlook; portion of site to east of overlook, containing one of four gun emplacements and site of generator, abandoned and scrub covered.
Bird Island Overlook			N-C	Non-historic	Public scenic overlook of Bird island and the Pacific Ocean on portion of AAA Position No. 81, established ca. 1975. Pedestrian access only since 2011. Overlook includes red-chert paths, garbage cans, an interpretive wayside, and post-and-cable safety railing along the cliff edge.
Circulation					
AAA Position No. 81 Concrete Walk			U	Undetermined	Concrete sidewalk from AAA Position No. 81 emplacement 1 south. Other emplacements do not appear to have such walks.
Battery Mendell Parade			C	Endicott-Taft	Red-chert surfaced rectangular area lined by concrete curbs along the rear length of Battery Mendell, built 1902. Originally end of approach road. Separated from battery by turf islands.
Battery Mendell Road (Mendell Road)	LCS: 322949 RN-432 CLI: 102010	40913	C	Endicott-Taft	Approach road to Battery Mendell from Field Road, built ca. 1901; extended north for AAA Position No. 81 and paved, ca. 1951. Pavement removed and resurfaced in red chert, 2011.
Bonita Ridge Access Road	*LCS: 447410 CLI: 102012*		*C*	*Endicott-Taft*	*Unpaved road from Field Road to fire-control stations on Bonita Ridge, built ca. 1901 possibly along alignment of earlier trail to first lighthouse on Bonita Ridge. Widens into parking/turn-around at south end. North end realigned and reconstructed with asphalt and curbs, 2011. On Coast Guard property (NPS use permit)*
Bonita Ridge Cluster Walks, Steps, and Tunnels			*C*	*Endicott-Taft*	*System of concrete sidewalks and stairs providing access from the access road up and through the fire-control stations, and signal tower, built ca. 1910; extended to SCR tower, ca. 1944. Walks and steps between fire-control stations in concrete tunnels.*
Bonita Ridge Trail (Social Trails)	CLI: 102020		C	WW I-II	Trail connecting fire-control stations on Bonita Ridge along cliff to machine gun pit, Battery Mendell, and Bird Island Overlook (AA maneuvering grounds), initially developed ca. 1941. Probably abandoned post-1945.Revived as recreational trail, post-1975. Sections heavily eroded. Extends onto Coast Guard property (NPS use permit).
Field Road Turn-Around			N-C	Non-historic	Large oval bus and car paved and curbed turn-around with accessible parking, built 2011 on realigned sections of Bonita Ridge access road and Field Road. Extends into former light station keepers area and Coast Guard property (NPS use permit).

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Mendell Road Spur			C	WW I-II	Short unpaved road (cut-off) from south part of Mendell Road to Bonita Ridge access road, built ca. 1940. Connection to Bonita Ridge access road removed and road abandoned, 2011.
Topography					
AAA Position No. 81 Emplacement Parapets			C	Cold War	Four circular 'C'-shaped earth mounds with iceplant cover surrounding emplacements for M1A1 90-mm anti-aircraft artillery, built ca.1951; guns removed ca. 1955. Parapets 1, 2, and 3 part of Bird Island overlook; parapet 4 covered in scrub in unmaintained area to the east. All appear to be eroded and lower than original height.
Bonita Ridge Fire Control Station Pits			*C*	*Endicott-Taft*	*Rectangular pits around three groups of fire-control stations on Bonita Ridge, with surrounding earth parapets (berms), built 1910 to protect structures on exposed site. Parapets originally turf-covered; now eroded and mostly covered in scrub. On Coast Guard property (NPS use permit)*
Searchlight #9 Powerhouse Parapet			C	Endicott-Taft	Protective earthen parapet along north (downhill) side of powerhouse, built 1911. Powerhouse original designation:
Vegetation					
AAA Position No. 81 Iceplant Groundcover			C	Cold War	Iceplant on circular earth parapets, planted ca. 1951. Largely intact on emplacements 1 and 3; mixed with other vegetation on emplacements 2 and 4. Iceplant spread to adjoining areas.
Bonita Ridge Monterey Cypress Groves			*N-C*	*Non-historic*	*Volunteer groves of Monterey cypress on ridge north of signal station (1376), grew in largely after 1972. A few small trees may have existed in 1966. See also Lighthouse Keepers Area Monterey Cypress Grove, Point Bonita Light Station. On Coast Guard property (NPS use permit)*
Fort Barry Mine Casemate Iceplant Groundcover			C	Endicott-Taft, WW I-II	Planted ca.1918 as part of addition of earth cover on 1908 casemate; possibly replanted when casemate rebuilt in 1941. Remains intact as uniform cover on casemate; has spread into adjoining areas.
Buildings and Structures					
B1S1 Smith	LCS: 010077 FA1359	40803	C	WW I-II	Flat-roof cut-and-cover concrete fire-control station with roof hatch, in cliff face below Bird Island Overlook, built 1941. (Vacant)
B2S2 Chamberlin	LCS: 010079 FA1363	40801	C	WW I-II	Pillbox-type cut-and-cover concrete fire-control station near Bird Island overlook, with steel dome on sighting room, built 1941. Used as magazine for AAA Position No. 81, 1952–55. Earth cover eroded. (Vacant)
Battery Mendell	010080 FA1364	40785	C	Endicott-Taft	Endicott period two-gun concrete mid-elevation barbette battery designed to protect the north Pacific approach to the Golden Gate, built 1900–02. First battery constructed at Fort Barry. Disarmed 1943. Served as command post for AAA Position No. 81, 1952–55. Retains latrine on rear south corner (not historically inventoried as separate building). (Vacant)

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
BC B1S1 Alexander	*LCS: 021303 FA1377 CLI: 95447*	*40804*	*C*	*Endicott-Taft*	*North building of a pair of concrete one-story flat-roof below-grade fire-control stations in Bonita Ridge cluster, with angled front wall, completed 1910. Original designation: B1 Mendell. Remodeled as support building for Coast Guard VTS tower, with corrugated metal siding and new roof, ca.1962; siding removed 2017. Pit surrounded by concrete wall. (Coast Guard property, NPS use permit; vacant)*
Bonita Ridge Access Road Retaining Wall	*CLI: 95435*		*N-C*	*Endicott-Taft*	*Concrete retaining wall built ca. 1901 to allow for widened road area that accessed Quartermaster wharf tramway (1901–ca.1928). Wall reconstructed for new VTS tower, 2006. N-C due to loss of integrity. (Coast Guard property, NPS use permit; vacant)*
Bonita Ridge Fire-Control Station Retaining Walls			*C*	*Endicott-Taft, WW I-II*	*Concrete retaining walls surrounding fire-control station pits, built ca. 1908; raised or reinforced with concrete sand-bags, ca. 1942. Concrete walls around fire-control station 1379 not visible due to erosion of parapets. (Coast Guard property, NPS use permit)*
Coast Guard VTS Tower Complex	*CLI: 102008*		*N-C*	*Non-historic*	*Tall steel tower with Vessel Traffic Service antenna in Bonita Ridge cluster, and fence-enclosed transmitter building on Bonita Ridge access road, built 2006. Replaced 1962 VTS tower between fire-control stations 1378 and 1379. Tower located on site of engine house for tramway from Quartermaster wharf on Bonita Cove, 1901–ca.1917; transmitter building for SCR #5 on same spot, 1944–ca.1965. (Operating Coast Guard facility)*
Field Road Turn-around Comfort Station	CLI 102000		N-C	Non-historic	Prefabricated comfort station installed in 2012 following construction of Field Road turn-around.
Fort Barry Mine Casemate	LCS: 010081 FA1365	40828	C	Endicott-Taft, WW I-II	Earth-covered concrete structure at intersection of Field Road and Mendell Road, built 1908, turned over to troops, 1910. Contained electrical equipment for North Channel minefield. Originally flat-roofed building set below grade with adjoining switchboard room/radio station; remodeled with earth cover and parapet wall, 1918; remodeled 1941 with interior changes and new vents above earth cover. Includes flight of stairs and walk from Field Road. (Vacant)
G2 Barry	*LCS: FA1378*		*C*	*Endicott-Taft*	*South building of a pair of concrete one-story flat-roof below-grade fire-control stations in Bonita Ridge cluster, with angled front wall, completed 1910. Original designation: F1 4th Fire Command. Remodeled as support building for Coast Guard VTS tower, with corrugated metal siding and new roof, ca.1962; siding removed 2017. Pit surrounded by concrete wall. (Coast Guard property, NPS use permit; vacant, unmaintained)*
Harbor Defenses Signal Tower #2	*LCS: 447530 FA1376 CLI: 101992*		*C*	*WW I-II*	*Two-story flat-roof concrete building in Bonita Ridge cluster, with top sighting room, built 1943 as Harbor Defenses-Navy Signal Station #2 (lookout tower). Roof collapsed into sighting window slot, graffiti covered. (Coast Guard property, NPS use permit; vacant)*
M1 Mines	*LCS: 021299 FA1385 CLI: 95449*	*40802*	*C*	*Endicott-Taft*	*Two-room one-story flat-roof concrete below-grade fire-control station at southern end of Bonita Ridge cluster, completed 1910. Taller sighting room. Original designation: M1 Barry. Roof removed after 1966; building shell graffiti covered. (Coast Guard property, NPS use permit; vacant)*

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
M4 Mines II	LCS: 010078 FA1362	40800	C	WW I-II	Pillbox-type cut-and-cover concrete fire-control station near Bird Island overlook, with steel dome on sighting room, built 1943. Used as magazine for AAA Position No. 81, 1952–55. Earth cover eroded. (Vacant)
Machine Gun Pit	*FA MG-3 ASMIS: GOGA00480*		*C*	*WW I-II*	*Hexagonal concrete pit with pipe gun anchor, in Bonita Ridge cluster between 1379 and 1385, built ca. 1942. (Coast Guard property, NPS use permit)*
Machine Gun Pit	*FA MG-2 ASMIS: GOGA00480*		*C*	*WW I-II*	*Hexagonal concrete pit with pipe gun anchor, along Bonita Ridge trail north of VTS tower, built ca. 1942. (Coast Guard property, NPS use permit)*
Mendell Radio-Switchboard Room (Radio Station)	FA1366	40904	C	Endicott-Taft	One-story flat-roof concrete below-grade building adjacent to Barry mine casemate, built 1908 as switchboard room for 4th Fire Command that included Battery Mendell; remodeled 1943 to serve as radio station. Roof lost after 1971; building presently a shell. Surrounded by terrace defined by concrete retaining walls and earth parapets; currently obscured by vegetation. (Vacant)
Mine Groupment	LCS: 021300 *FA1379 CLI: 95448*	*40799*	*C*	*Endicott-Taft*	*Two-room one-story concrete below-grade fire-control station with flat wood roof, completed 1910. Taller sighting room. Original designation: F1 3rd Fire Command. Wood roof collapsing; graffiti covered. (Coast Guard property, NPS use permit; vacant)*
Searchlight #9 (#15) Powerhouse	LCS: 010076 FA1358 ASMIS: GOGA00481	41865	C	Endicott-Taft	One-story concrete building east of Bird Island, with low-pitched hipped roof, built 1911 to house generators for nearby Searchlight #9. Original designation: #15. (Vacant)
Searchlight Shelter #9	LCS: 010076 FA1360 ASMIS: GOGA00481		C	Endicott-Taft	Octagonal-front searchlight shelter east of Bird Island, built 1911. Original designation: Searchlight #15. Same design as Searchlight #10 at Point Bonita. Graffiti covered and missing windows; retains roof. (Vacant)
Shoran Transmitter Building	*FA1382*		*C*	*Cold War*	*One-story shed-roof building with sheet-metal siding and roof at south end of Bonita Ridge cluster, built ca.1957 to house transmitter building for Navy Shoran (short-range navigational system) radio ground station. Radio tower was to the south. (Coast Guard property, NPS use permit; vacant)*
Fort Barry Quartermaster Tramway Engine House Wall	*ASMIS: GOGA00480*		*C*	*Endicott-Taft*	*Concrete retaining wall along uphill side of Coast Guard VTS tower, built 1901 to create level ground for engine house that powered tramway up the slope from Quartermaster wharf on Bonita Cove. VTS tower on site of engine house. (Part of operating Coast Guard facility)*
Views and Vistas					
AAA Position No. 81 Field of Fire			C	Cold War	360-degree sightlines from four gun emplacements, established 1952. Sight lines remain unobstructed.
B1S1 Smith Sight Lines			C	WW I-II	Fire-control sight lines across the Pacific, established 1941. Remain unobstructed.
B2S2 Chamberlin Sight Lines			C	WW I-II	Fire-control sight lines across the Pacific, established 1941. Minor obstruction from post and cable railing along Bonita Ridge trail.
Battery Mendell Field of Fire			C	Endicott-Taft	Panoramic sight lines from two gun positions west across the Pacific and entrance to the Golden Gate, established 1905. Remain unobstructed.
BC B1S1 Alexander Sight Lines			C	Endicott-Taft	*Fire-control sight lines across Pacific, established 1910. View from within building obstructed by covering on buildings and surrounding chain-link fence.*

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
G2 Barry Sight Lines			C	Endicott-Taft	*Fire-control sight lines across Pacific, established 1910. View from within building obstructed by covering on buildings and surrounding chain-link fence.*
M1 Mines Sight Lines			C	Endicott-Taft	*Fire-control sight lines to North Channel and Main Channel minefields in the Pacific, established 1910. Remain unobstructed.*
M4 Mines II Sight Lines			C	WW I-II	Fire-control sight lines across the North Channel minefield in the Pacific, established 1943 Minor obstruction from post and cable railing along Bonita Ridge trail.
Mine Groupment Sight Lines			C	Endicott-Taft	*Fire-control sight lines to North Channel and Main Channel minefields in the Pacific, established 1910. Remain unobstructed; sight line window collapsing.*
Searchlight #9 Field of Vision			C	Endicott-Taft	Panoramic sight lines across the North Channel minefield in the Pacific, established 1911. Remain unobstructed.
Small-Scale Features					
Bonita Ridge Trail-Bird Island Overlook Railing			N-C	Non-historic	Wood post and steel cable railing along edge of cliff from south of Battery Mendell to Bird Island Overlook, installed ca. 1975.
Old VTS Complex Fence			*N-C*	*Cold War*	*Chain-link and barbed-wire security fence surrounding G2 Barry/BC B1S1 Alexander (1377, 1378) and VTS tower foundation, installed ca. 1962. N-C due to lack of historic significance. On Coast Guard property (NPS use permit).*
Bonita Ridge Overhead Utility Lines			C	Endicott-Taft	System of overhead power and telephone lines on wood poles extending across Barry mine casemate toward Point Bonita, initially built ca. 1901 and later modified. Age of existing poles not determined. See also Fort Barry Overhead Utility Lines, Fort Barry Reservation.
Shoran Ground Station Fence			*C*	*Cold War*	*Chain-link and barbed-wire fence at south end of Bonita Ridge cluster enclosing transmitter building and tower for Navy Shoran radio ground station, installed ca. 1957. Fence defines boundaries of Shoran facility.*
Archeological Sites					
AA .50 #23 Trace	*ASMIS: GOGA00480*		*C*	*WW I-II*	*Trace of anti-aircraft sandbag emplacement between fire-control stations 1379 and 1385 in Bonita Ridge cluster, built ca. 1942, removed ca. 1946. On Coast Guard property (NPS use permit).*
B2S2 Chester Trace	*ASMIS: GOGA00482*		*C*	*Endicott-Taft*	*Trace in rock cliff at base of Bonita Ridge of fog-level fire-control station, built 1917, destroyed ca. 1960. Original designation: B2 Chester & Livingston.*
B2S2 Springer Trace	*ASMIS: GOGA00482*		*C*	*Endicott-Taft*	*Trace in rock cliff at base of Bonita Ridge of fog-level fire-control station, built 1917, destroyed ca. 1960. Original designation: B2 Springer.*
Coast Guard VTS Tower Foundation			*N-C*	*Cold War*	*Concrete base of steel tower in Bonita Ridge cluster between 1378 and 1379, erected ca.1962, removed 2006. N-C due to loss of integrity and lack of information potential. On Coast Guard property (NPS use permit).*
Navy Radio Station Remnants			U	WW I-II	Traces of frame building near Searchlight #9 powerhouse east of Bird Island, built 1917, abandoned ca. 1950.

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Road to Searchlight #9 Remnants			U	Endicott-Taft	Traces of road to Searchlight #9 (#15) between YMCA and Bird Island, built 1911, and Navy radio station, built 1917; north section abandoned ca. 1952 (cut off by development of AAA Position No. 81SF-88A), south section abandoned ca. 1965 (cut off by development of SF-88A).
SCR 296 #5 Tower Footings	*CLI: 97217*		*C*	*WW I-II*	*Three concrete pylons along northern edge of Bonita Ridge from SCR (Surface Craft Radar) steel tower built 1944; tower removed ca.1965. Cliff eroding; southwest pylon lost. On Coast Guard property (NPS use permit).*
Shoran Tower Footings	*FA1383*		*U*	*Cold War*	*Concrete pylons from steel tower for Navy Shoran radio grounds station, built ca. 1957; tower removed ca. 1975. Within fenced area. On Coast Guard property (NPS use permit).FA1383 also assigned to Marin Headlands Visitor Center restroom building.*
POINT BONITA LIGHT STATION (ALL FEATURES ON COAST GUARD PROPERTY, NPS USE PERMIT)					
Spatial Organization					
Suspension Bridge Landing Area			*C*	*Post-Civil War, Cold War*	*Level area at east landing of suspension bridge and south end of Lighthouse Trail enclosed by cliff walls and three-plank fence; established 1872 to provide space for first fog-signal building; site of terminus of cartway (ca.1871), second fog signal building (1874–ca.1907), Third Assistant Keeper's dwelling (1908–ca. 1955), and east landing of suspension bridge (1954). Today used as gathering area, non-contributing benches and interpretive waysides.*
Coast Guard Station (Life-Saving Station, Coast Guard Housing Area)			*C*	*Endicott-Taft*	*Fenced enclosure with cluster of buildings overlooking Bonita Cove, established 1899 as Point Bonita Life-Saving Station; redesignated Coast Guard Station Point Bonita #311, 1915. Enclosure enhanced with growth of Monterey cypress row along east side planted ca. 1900, and cypress windbreak to northwest, planted ca. 1910. East side enclosure increased with volunteer growth of Monterey cypress, post-1966.*
Land Use					
No associated features					
Circulation					
Coast Guard Visitor Parking Area			*N-C*	*Non-historic*	*Unpaved parking area in former Lighthouse Keepers Area, built ca. 1966 after transfer of property to Coast Guard; closed to public use.*
Conzelman Road	*LCS: 058006 FAR109 CLI: 102013*		*C*	*WW I-II*	*Paved road built 1870–1943; section from Battery Wallace to Coast Guard Station (School Road intersection) built 1943 as dummy road. Paved 1970.*
Field Road Parking near Fog Signal Cisterns	*CLI: 102018*		*N-C*	*Non-historic*	*Roadside parking area along southeast side of Field Road near fog signal cisterns, built ca. 1980.*

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Field Road Turn-Around	*LCS: 447463 CLI: 102015*		*N-C*	*Non-historic*	*Large oval bus and car paved and curbed turn-around with accessible parking, built 2011 on realigned sections of Bonita Ridge access road and Field Road. Southern part of loop extends into former Lighthouse Keepers Area (site of Assistant Keepers duplex and garage). Includes comfort station on south side of loop. See also Bonita Ridge Defenses.*
Coast Guard Station Entrance Drive	*LCS: 447493 CLI: 102014*		*C*	*Endicott-Taft*	*Wide, partially paved road from School Road west along northern edge of Coast Guard Station, built ca. 1899; extended west, 1911 (see Boathouse Trail). Extension abandoned ca. 1980 following landslide).*
Coast Guard Station Garage Driveway	*LCS: 447493*		*C*	*Cold War*	*Paved loop around south and east sides of garage, built 1962.* *Extended to School Road, post-1972.*
Coast Guard Station Sidewalks	*LCS: 447498 CLI: 102019*		*C*	*Endicott-Taft, Cold War*	*Concrete sidewalk along upper terrace wall built as part of initial development of Coast Guard Station, ca. 1899; axial walks to flagpole and Quarters A and B, including steps from upper to lower terraces, built 1961.*
Lighthouse Trail	*LCS: 447365 CLI: 102017*		*C*	*Post-Civil War*	*Access road to Point Bonita lighthouse from Field Road; northern section along former Lighthouse Keepers Area built ca. 1855; section south to point, built 1871 with gangway walk around Point Bonita Hill; realigned through tunnel, 1876. Section north of tunnel paved and accommodates automobiles; pedestrian section from tunnel south features a concrete walk with an asphalt-covered utility trench in the center built by the Army in ca. 1911, along the alignment of the 1871 lighthouse railway tracks [trail surface incorrectly inventoried in LCS and CLI as "cartway tracks," LCS 058108, PB 0054]. Five bridges along route, two historic. Road realigned at landslide north of tunnel, ca. 1985.*
Point Bonita Searchlight-Fire Control Station Stairs			*C*	*Endicott-Taft*	*Three flights of concrete steps leading from the fog signal building to searchlight shelter and fire-control station, built ca. 1911, 1917. Lined by pipe handrails added after 1967.*[16]
School Road (School House Access Road)	*LCS: 447485 RN-206 CLI: 102016*	*40916*	*C*	*Post-Civil War*	*Unpaved road from Field Road to Coast Guard housing area, built ca. 1870 as access road to the light station North Landing on Bonita Cove; served as main entrance road to Coast Guard Station beginning 1899, and as main access road to Engineer Department Area, built ca. 1901. Section east of Conzelman Road abandoned ca.1960.*
Topography					
Engineer Quarry, Bonita Cove			*C*	*Endicott-Taft*	*Quarry in cliff along north side of Bonita Cove along Coast Guard Boathouse Trail that supplied rock for construction of Endicott batteries, 1901–05.*
Vegetation					
Coast Guard Station Herbaceous Plantings			*U*	*Un-determined*	*Borders and scattered clumps of ornamental herbaceous plants, include crocosmia near fire hose shed, iceplant on slope above entrance drive wall, and assorted plants along fences, walls, and buildings. No beds or plantings along upper terrace wall, 1962.*
Coast Guard Station Pine Tree			*N-C*	*Non-historic*	*Specimen pine tree near flagpole, planted post-1966.*[17] *Obstructs flagpole.*

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Coast Guard Station Monterey Cypress East Windbreak			*C*	*Endicott-Taft*	*Rows of Monterey cypress trees along east perimeter of Coast Guard Station, planted ca. 1900; several trees remaining. Lower trunks painted white historically to serve as day marks. Extensive spread east and south, post-1966; volunteer trees non-contributing*
Coast Guard Station West Windbreak			*C*	*Endicott-Taft*	*Grove of Monterey cypress northwest of station building site, planted ca. 1910. Eucalyptus also planted or self-seeded. Existing limits reflect post-1966 spread; volunteers trees non-contributing.*
Coast Guard Station Myoporum Row			*C*	*Cold War*	*Row of myoporum trees between upper terrace wall and perimeter fence, planted ca. 1965. On site of clipped hedges probably maintained as windbreak for station building, ca. 1920–50.*[18]
Keepers Yard Cypress Grove			*C*	*Endicott-Taft*	*Large grove of Monterey cypress, originally planted as hedge around yard of Keepers house, ca. 1910; grew into large trees by ca. 1930. Extensive spread after 1961 demolition of house; volunteers trees non-contributing.*
Buildings and Structures					
40MM AA AW #6	*ASMIS: GOGA00483*		*C*	*WW I-II*	*Anti-aircraft sandbag-type emplacement on top of Point Bonita Hill for 40-mm automatic weapon, built ca. 1942. Brush covered, access trail not evident.*
B2S2 Crosby	*ASMIS: GOGA00483*		*C*	*WW I-II*	*Hexagonal-front cut-and-cover fire-control station on top of Point Bonita Hill, built 1921.Original designation: B1 Wallace. Similar to B1S1 Wallace on Rodeo Hill. access trail not evident. (Abandoned)*
BC2 B4S4 Alexander-B1S1 Mendell	*ASMIS: GOGA00483*		*C*	*WW I-II*	*Concrete flat-roof dual-designated fire-control station below Point Bonita Lighthouse, built 1917. Leveled rock terrace in front of station. Original designation: B3 Mendell and Alexander. (Abandoned)*
Cable Terminal Barry-Lands End-Scott			*U*	*Endicott-Taft*	*Below-grade concrete structure housing terminal for communications cable from Fort Scott and Lands End, built 1910. Existing sub-grade structure to west of Coast Guard wharf remnants/tramway site with opening on uphill side may be cable terminal. (Abandoned)*
Coast Guard Quarters A (17)	*LCS: 447941 PB1346*		*C*	*Cold War*	*One-story frame ranch-style house with clapboard siding and wood shingle gable roof, on lower terrace of Coast Guard Station, built 1961. Vinyl windows installed ca. 2010. (Park staff housing)*
Coast Guard Quarters B (18)	*LCS: 447939 PB1344*		*C*	*Cold War*	*One-story frame ranch-style house with clapboard siding and wood shingle gable roof, on lower terrace of Coast Guard Station, built 1961. Vinyl windows installed ca. 2010. (Park staff housing)*
Coast Guard Quarters D (19)	*LCS: 447924 PB1343 CLI: 95439*		*C*	*WW I-II, Cold War*	*One-story frame house with clapboard siding and wood-shingle gable roof, on upper terrace south of garage, built 1938 as quarters; expanded on west side, side, 1961. (Park staff housing)*
Coast Guard Radio Tower Footings	*LCS: 447946 PB1393*		*C*	*WW I-II*	*Four trapezoidal concrete footings, approximately 5 feet tall, arranged in a square on the east side of the Point Bonita lighthouse, built 1938; tower removed ca.1965. Supports part of the maintained terrace surrounding the lighthouse.*

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Coast Guard Station Drainage Ditch			*C*	*Endicott-Taft*	*Concrete ditch from beneath Garage apron to School Road, built ca. 1900.*
Coast Guard Station Entrance Drive Wall	*LCS: 058093 PB0021 CLI: 101994*		*C*	*Endicott-Taft*	*Random-course stone wall, approximately 4 feet high, with parged concrete top along curved intersection of Coast Guard Station entrance drive and School Road, built ca.1900.*
Coast Guard Station Fire Hose Shed	*LCS: 058090 PB0012 CLI: 95444*		*C*	*Endicott-Taft*	*Small shingled building with convex roof at center of upper terrace wall, built ca. 1900. (Vacant)*
Coast Guard Station Garage	*LCS: 058088 PB1342 PB0006 CLI: 95450*		*C*	*Endicott-Taft*	*One-story three-bay garage with wood shingle siding and wood shingle hipped roof, built ca. 1900; enlarged to west, ca. 1942. Apron on steel-frame and wood deck bridge, with concrete retaining wall beneath. (Garage)*
Coast Guard Station Lower (South) Terrace Wall	*LCS: 058095 PB0023 CLI: 95436*		*C*	*Cold War*	*Rubble ashlar stone wall, approximately 4 feet high, along lower and western edges of lower terrace, built ca. 1961 to raise grade for Quarters A and B; combined grade of two original lower sloping terraces.*
Coast Guard Station Paint Shed (Storage Shed)	*LCS: 058089 PB0019 CLI: 102003*		*C*	*WW I-II*	*Small frame building with shed roof and shingle siding, on east side of School Road, built ca. 1920. Later addition on east side, date of construction not known. (Storage)*
Coast Guard Station Upper (North) Terrace Wall	*LCS: 058094 PB0022 CLI: 95441*		*C*	*Endicott-Taft, Cold War*	*Rubble ashlar stone wall, approximately 2 feet tall, with concrete cap along north side of upper terrace, built ca. 1900; angled north side built ca. 1961 on site of Shop and Quarters building (ca. 1910–61). Opening for entrance walk to Station Building removed ca. 1961.*
Fog Signal Cisterns (A, B)	*LCS: 058111 FA1348, FA1349 PB0020 CLI: 95438*		*C*	*Post-Civil War*	*Two brick cisterns with above-ground parged domes south of Field Road turn-around, built ca.1871 to store water for steam-powered fog signal on Point Bonita. Water pumped to cisterns by windmill from springs in sand gully northwest of cisterns, and gravity fed to Point Bonita. Cisterns probably abandoned in 1926 when fog signal electrified.*
Keeper's Dwelling Cistern (C)	*LCS: 058111 PB0020 ASMIS: GOGA00133*		*C*	*Post-Civil War*	*Masonry cistern with low above-ground parged dome in Monterey cypress woods at rear of Keeper's dwelling site (ca.1875–1961), built ca. 1910.*
Keeper's Dwelling Retaining Wall	*ASMIS: GOGA00130*		*C*	*Post-Civil War*	*Low masonry retaining wall at rear of Keeper's dwelling (ca. 1875-1961) site, built ca. 1875 to create level terrace. East section of wall removed 1961.*
Lighthouse and Fog Signal Building Terraces	*ASMIS: GOGA00130*		*C*	*Post-Civil War*	*Concrete terraces built on rock, 1876, 1903. Includes stairs from lighthouse to fog signal terraces. Lined by non-historic railings.*
Lighthouse Trail Bridge #1			*N-C*	*Non-historic*	*Girder bridge, northernmost one along Lighthouse trail, east of Bonita Ridge, approximately 50 feet long, built ca. 1984 in response to ongoing erosion/landslide. Replaced earlier trestle that existed in part by 1929.19*
Lighthouse Trail Bridge #2			*N-C*	*Non-historic*	*Girder bridge, between Bridge #1 and tunnel bridge, approximately 200 feet long with approaches, built ca. 1984 in response to loss of road by a landslide. Remnants of old road beneath and east of bridge. Lined by wood plank railings. Replaced in part earlier trestle that existed by 1929.*

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Lighthouse Trail Truss Bridge #1	*CLI: 102005*		*N-C*	*Non-historic*	*White-painted steel pony-truss 35-foot-long bridge with wood deck, north of Searchlight #10 powerhouse, built 1984.Beneath bridge are remnants of earlier concrete retaining walls along trail.*
Lighthouse Trail Truss Bridge #2	*CLI: 102006*		*N-C*	*Non-historic*	*White-painted steel pony-truss 70-foot-long bridge with wood deck, south of Searchlight #10 powerhouse, built 1984.Beneath bridge are remnants of earlier concrete retaining walls along trail.*
Lighthouse Trail Tunnel Bridge			*U*	*Pre-1984*	*Steel girder and concrete-deck 34-foot-long bridge with pipe railings, at north portal of Point Bonita tunnel, built prior to 1984. Replaced similar bridge built ca. 1910; replaced original wood Queen-post truss bridge built 1876. Additional research needed to determine age and integrity of bridge.*
Point Bonita Fog Signal Building	*LCS: 058104 PB0002 ASMIS: GOGA00128*		*C*	*Endicott-Taft*	*One-story brick building below lighthouse, with red slate hipped roof and dormers, built 1903; replaced fog signal building at south end of point built 1874. Contemporary fog signal apparatus on west side of building, installed post-1966, (site of original fog horns (Coast Guard storage).*
Point Bonita Lighthouse	*LCS: 058103 PB1393 PB0001 ASMIS: GOGA00128*		*C*	*Post-Civil War*	*Brick lighthouse with low tower, built 1877; lantern relocated from original 1855 tower on Bonita Ridge. (Operating Coast Guard beacon; park interpretive space open to public)*
Point Bonita Suspension Bridge	*LCS: 058105 PB0003*		*C*	*Cold War*	*Pedestrian cable suspension bridge with wood truss towers, built 1954 to replace eroded walk along land bridge to lighthouse. Bridge reconstructed in-kind, 2012.*
Point Bonita Tunnel	*LCS: 058110 PB0040*		*C*	*Post-Civil War*	*Pedestrian tunnel through Point Bonita Hill along Lighthouse Trail, built 1876; measures 118 feet long, 6 feet wide, and 6 feet 4 inches tall; concrete portals and iron-plate gate at north portal added ca. 1900.*
Searchlight #10 Powerhouse	*LCS: 058002 FA1382A CLI 102001*	*41869*	*C*	*Endicott-Taft*	*One-story flat-roof concrete building along Lighthouse Trail, built 1911 to house generators for Searchlight #10 (#14) at Point Bonita. Probably painted white and windows boarded after 1966. (Storage).*
Searchlight Shelter #10	*LCS: 021306 FA1382 CLI: 95440 ASMIS: GOGA00128*		*C*	*Endicott-Taft*	*Octagonal-front searchlight shelter below Point Bonita fog signal building, built 1911. Original designation: Searchlight #14; redesignated Searchlight #10. Same design as Searchlight #9 near Bird Island. Window glass lost after 1967.20.(Vacant)*
Lighthouse Keeper's Area Utility Pit			*C*	*Endicott-Taft*	*Concrete pit near Keepers house site south of Bonita Ridge access road, possibly for Army communications cable, built ca. 1910.21 Not conspicuous in the landscape, but may be part of communications cable system that includes cable terminal Barry-Lands End-Scott near Bonita Cove.*
Views and Vistas					
BC B4S4 Alexander-B1S1 Mendell Sight Lines			*C*	*Endicott-Taft*	*Fire-control sight lines across the Pacific and approach to the Golden Gate, established 1917. Unobstructed.*
Searchlight #10 Field of Vision			*C*	*Endicott-Taft*	*Panoramic sight lines across North Channel and Main Channel minefields in the Pacific, established 1911. Unobstructed.*

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Point Bonita Lighthouse Field of Vision			*C*	*Post-Civil War*	*Panoramic field of vision across the Golden Gate and Pacific Ocean, established 1876. Unobstructed.*
Small-Scale Features					
Coast Guard Quarters Privacy Fences	*LCS: 447892*		*C*	*Cold War*	*Vertical plank fences enclosing yards at rear of Quarters A, B, and D, installed ca. 1961. Existing fences appear to be a later in-kind replacement.*
Coast Guard Station Bell	*LCS: 058090 PB0012 CLI: 95444*		*C*	*Cold War*	*Bell hung on cast-iron swing mount, positioned on wood posts, installed ca. 1962. Bell probably from Station Building (1899–1962).*
Coast Guard Station Fire Hydrant	*LCS: 447902 CLI: 95443*		*C*	*Cold War*	*Iron fire hydrant, Greenberg Model 76, installed ca. 1965; in former Life-Saving Station (not on Drawing 1.8)*
Coast Guard Station Flagpole	*LCS: 058091 PB0013 CLI: 95445*		*C*	*Cold War*	*White-painted steel 40-foot pole with ball finial in center of Coast Guard Station, erected ca. 1962. Replaced relocated sectional flagpole in same location, installed ca. 1938.*[22]
Coast Guard Station Perimeter Fences	*LCS: 058092 PB0024 CLI: 95436, 95437*		*C*	*Endicott-Taft*	*Redwood picket fence with chamfered posts, northern side on concrete footings/foundation wall, built ca. 1899; painted white along with station building, post-1910; western side extended ca. 1940; southern side realigned 1961. Sections presumably replaced in-kind post-1966.*
Lighthouse and Fog Signal Building Terraces Railings	*CLI: 101999*		*N-C*	*Non-historic*	*Two-rail aluminum pipe railings along edge of terraces, installed ca.1990; replaced three-railing pipe railings installed prior to 1910.*[23]
Lower Lighthouse Trail Railings	*CLI: 101999*		*N-C*	*Non-historic*	*Composite wood three-plank railings, installed ca. 1995; replaced white-painted wood railings, installed prior to 1972.*
Point Bonita Utility Poles	*LCS: 447723 CLI: 102007*		*U*	*Endicott-Taft*	*System of overhead power and communication lines on wood utility poles; appear to follow non-historic alignment over Point Bonita Hill. Original lines followed Lighthouse Trail. Poles also extend to Coast Guard Station; historic alignment undetermined.*
Archeological Sites					
Bridge Landing Area Cliff Wall Remnants	*LCS: 058106 PB0052 ASMIS: GOGA00130*		*C*	*Post-Civil War, Cold War*	*Parged white surface of cliff face around bridge landing area, built ca. 1871 to create space for Lighthouse Trail and fog-signal building, and later Third Keeper's dwelling. Building removed ca. 1954. Cliff wall eroded and much of the white parged surface is gone.*
Coast Guard Boathouse and Launchway Remnants	*LCS: 375971 ASC71-07-16H ASMIS: GOGA00131*		*C*	*WW I-II*	*Concrete foundation, apron, and steel rails on Bonita Cove from second Coast Guard boathouse and boat launch built 1930 on site of earlier boathouse, 1912–28; boathouse demolished ca.1955.*
Coast Guard Boathouse Trail Remnants	*LCS: 447396 CLI: 102011*		*U*	*Endicott-Taft*	*Paved and unpaved remnants of road from Coast Guard Station entrance drive southwest to site of Coast Guard boathouse on Bonita Cove, built 1911.West end above boathouse lost to landslide, ca. 1928, and replaced by stairs. East end lost to landslide, and additional loss at west end, post-1966.*

TABLE 2.2. LANDSCAPE FEATURE INVENTORY, FORT BARRY MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Coast Guard Dock Remnants	*ASMIS: GOGA00131*		*C*	*Endicott-Taft, WW I-II*	*Timber piles and dock section on Bonita Cove remaining from Coast Guard dock, built ca. 1930; incorporated portion of Quartermaster wharf, built 1901. Dock abandoned following demolition of adjoining 2nd Coast Guard boathouse, ca. 1955. Dock section is remnant of walkway between boathouse and main section of dock.*
Former Lighthouse Keeper's Area	*ASMIS: GOGA00132*		*C*	*Pre-Civil War through WW I-II*	*Area bordered by Lighthouse Trail, Bonita Ridge access road, and Field Road turn-around containing remnant structures and plants associated with lighthouse Keeper's dwelling, and Assistant Keepers' duplex, established ca. 1855; buildings removed ca. 1961.*
Keeper's dwelling Wood Water Tank Remnants	*ASMIS: GOGA00125*		*U*	*Post-Civil War or later*	*Remnants of collapsed wood-stave banded water tank at rear of Keeper's dwelling near masonry cistern; tank installed ca.1875 and possibly rebuilt before 1960; collapsed after demolition of dwelling, 1961.*
Lighthouse Access Road Remnants			*N-C*	*Non-historic*	*Paved remnants of road between Coast Guard Station and Lighthouse Trail (Keeper's dwelling site), built 1966 to bypass Army's Field Road. East and west ends lost to landslides.*
Searchlight #52 Site	*ASMIS: GOGA00129*		*C*	*WW I-II*	*Remnants of surface or pad built for Searchlight #52 along edge of cliff overlooking Bonita Cove east of Coast Guard Station, built ca. 1943, searchlight removed ca. 1945.*
South Landing Oil Tank Remnants	*PB1387 ASMIS: GOGA00129*		*C*	*Endicott-Taft*	*Remnants of a 5,000-gallon oil tank on Point Bonita Hill, built 1903 to store oil shipped to South Landing for use in fog-signal boilers; includes remnant pipes to South Landing and fog-signal building; abandoned ca. 1955.*
South Landing Storehouse Foundation	*ASMIS: GOGA00124*		*C*	*Post-Civil War*	*12' long section of brick foundation along Lighthouse Trail from frame storehouse that served South Landing, built ca. 1871, superstructure removed ca. 1955.*
South Landing Tramway Winch Footings	*LCS: 447944 CLI: 102009 ASMIS: GOGA00124*		*C*	*Post-Civil War*	*Concrete footings of winch mechanism at uphill terminus of tramway to South Landing (lighthouse wharf), built ca. 1871 and possibly rebuilt early 20th century.*
South Landing Tramway-Wharf Remnants	*LCS: 058109 PB0055 ASMIS: GOGA00124*		*C*	*Post-Civil War*	*Cut in rock cliff along route of inclined tramway, and leveled rock area at base at site of lighthouse wharf, built ca. 1871. Tramway and wharf removed ca. 1955.*
Third Assistant Keeper's Dwelling Foundations	*LCS: 058107 PB0053 ASMIS: GOGA00130*		*C*	*Endicott-Taft*	*Foundation and retaining wall remnants from Third Assistant Keeper's dwelling, built 1908, demolished ca. 1955. Remnants may also be from fog signal building on same site, 1874–ca. 1907.*
Walkway Trace, Point Bonita Hill	*ASMIS: GOGA00388*		*C*	*Post-Civil War*	*Cut in rock cliff along east side of Point Bonita Hill for wood walkway that provided access to Point Bonita prior to construction of tunnel, built 1871; walk removed ca. 1876.Iron walkway support ring remains in rock near north tunnel portal.*

TABLE 2.2 NOTES

[1] Photos of Point Diablo Lighthouse, ca. 2005, "Point Diablo, CA," Lighthousefriends.com (accessed March 15, 2013).
[2] Road shown on US Army, Fort Barry General Site Map, 1966.
[3] Map of Departmental Rifle Range, 1908 updated to 1963, GOGA PARC, D212 F3.
[4] Sheds are not shown on US Army, "Fort Barry General Site Map"(1966); sheds are shown on US Army, "Fort Barry Master Plan, General Site Map" (1971).
[5] John Martini and Stephen Haller, *What We Have, We Shall Defend* (National Park Service, 1998), 75.
[6] Martini to Auwaerter, April 8, 2013. Date of construction not known; was there when NPS took over in 1974.
[7] Martini to Auwaerter, April 8, 2013.
[8] John Martini, e-mail to John Auwaerter, April 8, 2013.
[9] Martini and Haller, 88.
[10] Martini to Auwaerter, April 8, 2013.
[11] Martini to Auwaerter, April 8, 2013.
[12] Martini and Haller, 94.
[13] John Martini, comment on draft report, 2014, referencing oral history from Nike personnel; trees inventoried on 1971 Fort Barry tree cover map, GOGA 2372.
[14] Latrine not shown on Fort Barry General Site Map (1966).
[15] Mess hall shown on Fort Barry General Site Map (1966).
[16] US Coast Guard photo, 1967, in National Park Service, "Point Bonita Cultural Landscape Inventory," (2005), History figure #6.
[17] Pine tree not evident in ca.1962 photograph, GOGA 17738/18487.
[18] Aerial photograph of Coast Guard station showing clipped hedges, 1938, National Archives, RG499 E118; photo of station building, August 12, 1960, showing no myoporum trees or hedge (GOGA16512).
[19] US Lighthouse Society photograph of Lighthouse Trail with trestles at or near sites of brides #1 and #2, June 2, 1929, GOGA PARC 18498.010.
[20] US Coast Guard photo, 1967.
[21] Utility pit is along corridor of underground communications cable shown on plan securing Army easement through property to be transferred to Coast Guard, 1966, Drawer 216, folder 3, GOGA PARC.
[22] Flagpole shown in ca. 1960 photograph (GOGA 18482.001) was a sectional pole with a larger diameter lower section and no ball finial; photo from 1962 (GOGA 17738/GOGA 18487) with new dwellings shows different flagpole with ball finial.
[23] US Coast Guard photo, ca. 1910, in CLI, History #3 photograph.



Cultural Landscape Report Forts Baker, Barry, and Cronkhite

Golden Gate National Recreation Area
Sausalito, California

Fort Barry

Analysis and Evaluation Plan

National Park Service
Olmsted Center for Landscape Preservation
www.nps.gov/oclp

in partnership with
Department of Landscape Architecture
SUNY College of Environmental
Science and Forestry, www.esf.edu/la/

SOURCES

1. NPS, Marin County GIS data
2. Fort Barry CLR 1945–72 period plan
3. Fort Barry CLR Existing Conditions Plan

DRAWN BY

John Auwaerter, Laura Roberts, Illustrator CS5, 2014

LEGEND

- Non-historic feature (white fill)
- Feature removed since 1966
- Property boundary
- Historic fortification boundary
- Character area boundary
- Building
- Structure, Substructure
- Wall
- Water tank, reservoir
- Endicott-era battery
- WWII-era casemated battery
- Earth parapet of defensive work
- Temp. gun emplace., machine gut pit
- Road, asphalt
- Road, earth/gravel
- Trail
- Fence
- Remnant, trace (in 1966, present)
- Bridge
- Deciduous trees
- Coniferous trees
- Native woods
- Chapparal or scrub
- Grassland, lawn, or bare earth
- Wetland
- Stream
- Rock cliff
- Rip rap
- Beach
- Cut, Fill
- 50' contours
- Power line

NOTES

1. Plan shows landscape in 2014 compared with 1966; features or extent of features added after 1966 shown in white, removed after 1966 by dashed line.
2. All features shown at approximate location and scale; vegetation represents overall character, not precise limits or specimens.
3. Plan does not show all overhead utility lines, trails, minor jeep roads, field defenses, and antiaircraft gun emplacements.
5. White mask indicates limits of Fort Barry study area.

Drawing 2.2

FORT CRONKHITE CULTURAL LANDSCAPE CHARACTERISTICS
(DRAWING 2.3, FIGURE 2.4; SEE ALSO FIGURE 2.2)

Natural Systems and Features (see District Overview)

Spatial Organization

The spatial organization of the Fort Cronkhite Military Reservation was characterized during the historic period in large part by natural landforms, and second by buildings, structures, fences, and planted vegetation within developed areas. Throughout the historic period, Fort Cronkhite was largely open space characterized by grassland or low scrub, with development concentrated north of Rodeo Lagoon, in Little Ranch Valley, on Wolf Ridge, and along the Pacific coast.



Figure 2.4. Overview of the Fort Cronkhite landscape looking north toward Wolf Ridge and Tennessee Valley showing overall character toward the end of the historic period in 1966, photographed 1961. The red lines indicate significant changes between the time of the photograph and the end of the historic period in 1966 (redevelopment of the Fort Cronkhite cantonment east wing for SF-87A). (Collection of E. McKee, annotated by SUNY ESF)

Post-Civil War, 1866–90

When the Army acquired the Lime Point Military Reservation in 1866, Fort Cronkhite was part of Samuel Throckmorton's Rancho Sausalito, and probably contained two separate ranches leased to tenant dairy farmers, one south of Wolf Ridge and the other in Tennessee Valley. The southern ranch, acquired by J. B. Haggin in 1881 and later known as the Gioli Ranch and Silva Little Ranch, contained a cluster of ranch buildings in a valley northwest of Rodeo Lagoon. The ranch in Tennessee Valley did not contain buildings.

Endicott-Taft, 1890–1917

The spatial organization of Fort Cronkhite remained little changed from the earlier period until 1915, when the federal government acquired 5.5 acres at Tennessee Point as the Tennessee Point Military Reservation, which was separated from the adjoining ranch by a boundary fence. By World War I, there were five fenced grain fields in the Gioli Ranch, three in the valley with the ranch buildings, and two to the east. In Tennessee Valley, there was a fenced field or pasture identified as Ranch I that enclosed the upper part of the valley floor and extended into the adjoining Ranch H, both of which were numerous ranches leased by the Tamalpais Land and Water Company.

World War I-II, 1917–45

Federal acquisition of 803 acres of ranchland in 1937, extending from Rodeo Lagoon north to Tennessee Valley including the Silva Little Ranch and Ranch I tract, began a period of dramatic reorganization of the landscape as part of the build-up to World War II. The fences that delineated the ranch fields were removed along with the boundary fence of the Tennessee Point Military Reservation. The limits of Fort Cronkhite were defined by a perimeter fence that extended north from Rodeo Lake along the east property line, and northwest along the property line to the northern foot of Wolf Ridge. Tennessee Valley, although part of Fort Cronkhite, was not within this fenced area, and had no separate perimeter fence of its own. The Army referred to this area by its earlier name, Elk Valley.

The Army created four new areas of development within the former ranchlands: a cantonment occupying the land north of Rodeo Lagoon, Battery Townsley and associated works on Hill 417 (later known as Townsley Hill) above Tennessee Point, a dispersed cluster of fire-control stations and Anti-Aircraft Battery #1 on the western part of Wolf Ridge, and a small cluster of defensive works at Elk Valley (Tennessee Cove). The clusters of defensive works did not form well-defined spaces in the landscape, reflecting the Army's intent to camouflage them from both sea and air. The Silva Little Ranch buildings remained through the war although fences and several buildings were removed. To the north, a commando training area was developed with frame buildings that served as props.

Unlike the Endicott-era U-shaped organization of the main posts at Forts Baker and Barry, the Fort Cronkhite Cantonment was organized into three areas laid out

parallel to and facing the shoreline of Rodeo Lagoon: a triangular-shaped central area containing the administrative functions of the post, and two wings to the east and west that contained the housing areas. The parade ground was not a central space, but was rather located on a terraced hillside northeast of the east wing, overlooking the entire Cantonment. At the west end of the west wing was another open space used for parking 155-mm guns and tractors.

Cold War, 1945–66

The overall spatial character of Fort Cronkhite remained little changed for the first decade after World War II, with the exception of removal of all but one of the buildings in the Silva Little Ranch building cluster. The Korean War saw development of a new defensive work, Anti-Aircraft Artillery Position No. 10, but it was built within the earlier cluster of development on Wolf Ridge associated with AA Battery #1.

Development of the Nike missile system in the mid-1950s brought about three major changes to the spatial organization of Fort Cronkhite: establishment of the Nike SF-88 control area on the eastern part of Wolf Ridge in 1954, the SF-87 launch area northeast of the Cantonment in 1955, and redevelopment of the east wing for the SF-87 administration area in 1966. Each of these areas consisted of a compact collection of buildings and structures with little enclosure except for a chain-link perimeter security fence. The SF-87 launch area was subdivided into two areas: the Exclusion Area containing the missile launch pad, and the Limited Area containing the rest of the site, including the support buildings. The SF-87 administration area removed the inner buildings of the east wing, leaving rows of Series 700 buildings to the north and south that retained the overall limits of the earlier Cantonment area. A training area with prop buildings known as Vietnam Village was built in Little Ranch Valley in ca. 1962, south of the World War II commando training area.

Evaluation

Since the end of the historic period in 1966, the spatial character of Fort Cronkhite has been altered through removal of security fences along the boundary of Fort Cronkhite, redevelopment of the Cantonment parade ground as a visitor parking lot and park vehicle storage area, demolition of the outer rows of buildings around the SF-87 administration area in the east wing of the Cantonment, and loss of the Exclusion Area within the SF-87 launch site for development of the Marine Mammal Center. Vietnam Village was removed by the early 1970s. Growth of Monterey cypress and pine woods have increased enclosure around the Limited Area of the SF-87 launch site (park maintenance area), the Townsley PSR Room, and along the shoreline of Rodeo Lagoon. The World War II-era 155-mm gun and tractor park at the west end of the Cantonment was partially removed in 2012 with restoration of the natural wetlands in the area at the former Surfer Lot.

Overall, the spatial organization of the Fort Cronkhite Military Reservation retains historic character from the end of the historic period in 1966. Growth of woods has created greater spatial enclosure in certain areas, and loss of grassland to scrub has altered the open-space character in places throughout the reservation. Spatial changes have occurred within developed areas through loss of buildings, new construction, growth of trees, and restoration of natural ecosystems, notably in the SF-87 launch site, east wing, parade ground, and 155-mm gun and tractor park.

Land Use

Land use at Fort Cronkhite Military Reservation was characterized during the historic period by agriculture up until 1914, when military uses were introduced and then greatly expanded after 1937. Limited recreational uses existed during the historic period, primarily at Rodeo Beach. There were no navigational aids maintained within Fort Cronkhite, despite that the major shipwreck of the *Tennessee* occurred off its shores in 1853.

Post-Civil War, 1866–90

During this period, Fort Cronkhite was private property that was initially owned by Samuel Throckmorton as part of his Rancho Sausalito, and leased to dairy ranchers. In 1881, he sold the southern tenant ranch north of Rodeo Lagoon, encompassing 540 acres, to J. B. Haggin, who continued to rent the ranch. In 1885, the tenant was a Swiss immigrant named Louis Gioli, who maintained a cluster of ranch buildings northwest of Rodeo Lagoon. In 1889, Throckmorton sold his land to the north, including the Tennessee Valley section of Fort Cronkhite, to the Tamalpais Land and Water Company, which continued to rent the land to tenant ranchers. The ranch buildings associated with the Fort Cronkhite land were located upvalley to the east.

Endicott-Taft, 1890–1917

In 1892, J. B. Haggin sold the 540-acre Gioli ranch to Antoine Borel, who owned the ranch to the east (Silva Ranch), and the Tamalpais Land and Water Company subdivided its lands into lettered ranch plots. The Fort Cronkhite part of Tennessee Valley became Ranch I, but continued to be used as part of the adjoining ranchlands later belonging to the Simas family.

In 1914, the US government acquired 5.5 acres at Tennessee Point from Antoine Borel, along with a right-of-way through Borel's property along the approach road and ranch roads leading to Fort Barry. The Army acquired the land to implement recommendations of the Taft Board, including addition of fire-control stations and searchlights. The reservation had its own water and electrical supply systems, but no housing or other support facilities.

World War I-II, 1917–45

From World War I through the mid-1930s, most of Fort Cronkhite remained an agricultural landscape. Manuel Silva and his partner Antonio Nunes Bello acquired the 550-acre Gioli Ranch and the bigger ranch to the east from Grace Borel in 1924 following Antoine Borel's death. They operated a commercial dairy, and improved the smaller Gioli property, which they named "Little Ranch," with a new dairy, garage, and milk barn in ca. 1925. In the 1930s, after Antonia Bello's death, Silva incorporated his ranching operations as the Marin Land and Cattle Company. The company also acquired Ranch I to the north, and adjoining ranchland in Tennessee Valley.

Based on the recommendations of the 1937 Project for the modernization of the San Francisco Harbor Defenses, the US government acquired the Silva Little Ranch and Ranch I from the Marin Land and Cattle Company in 1937. The two tracts were consolidated with the Tennessee Military Reservation to form an 808-acre property designated as the Fort Cronkhite Military Reservation in 1938. The Army acquired the land primarily to construct Battery Townsley, as massive sixteen-inch gun battery completed in 1940 that was the counterpart to Battery Davis at Fort Funston south of the Golden Gate. Military uses continued with construction of AA Battery #1 on Wolf Ridge in 1940. Declaration of the National Emergency in 1939 and US entry into World War II in 1941 led to dramatic increases in military activity at Fort Cronkhite that included construction of a large cantonment (temporary post) along Rodeo Lagoon, continued work on secondary defense elements, and addition of numerous defensive positions across the reservation. The increase in military activity led to the end of grazing as well as public recreational use due to heightened security.

The Army managed its defenses at Fort Cronkhite during this period according to four clusters: Tennessee Point Defenses, Townsley Hill Defenses, Wolf Ridge Defenses, and Elk Valley Defenses.

Cold War, 1945–66

As at forts Baker and Barry, the end of World War II and beginning of the Cold War witnessed a dramatic change in military use and technology that led to abandonment of the harbor defenses. Anti-Aircraft Battery #1 was disarmed in 1946, followed by Battery Townsley in 1948, and all fire-control stations were abandoned or put to other uses. Part of Anti-Aircraft Battery #1 was redeveloped as a new anti-aircraft battery during the Korean War, named AAA Position No. 10. Nike missile facilities were developed in 1954 at the east end of Wolf Ridge as a control area for Nike site SF-88, and northeast of the Cantonment as the launch site for Nike site SF-87. The administration area for SF-87 was housed in Series 700 buildings within the east wing of the Cantonment.

Throughout the Cold War, Fort Cronkhite also functioned as a training area and housing facility for the Army. A mock training village was established in ca. 1962

during the Vietnam War north of the Little Ranch site, and the old harbor defenses and open grasslands served as training areas as well. The Cantonment was used as military housing area for enlisted men and military families. The Nike SF-87 administration area, which replaced part of the east wing of the Cantonment in 1966, contained housing as well. The importance of recreation for military personnel stationed at Fort Cronkhite was evident through the construction of a multi-use tennis and basketball court at the Cantonment in 1959. Public access for recreation was most likely restricted throughout the Cold War for security reasons.

With advent of the Nike missile defense systems, the Army no longer needed the acreage required for harbor defenses. In 1956, it transferred 192 acres comprising most of the Tennessee Valley section of Fort Cronkhite to the Navy; the Navy in turn leased the property to Dean Witter, owner of a well-known brokerage firm who used the property as a hunting preserve. Witter built a lagoon and road on the property. This lease remained until ca. 1961, when the Navy sold most of the property, except for thirty acres on Tennessee Cove with the fire-control stations for the North Channel submarine minefield, to Marin County as part of Marin Headlands State Park. In 1964, the Navy sold its remaining Tennessee Cove property to the state park system. The state did not make any improvements to the property.

In 1963, the Army transferred 222 acres on the western half of Wolf Ridge to the Coast Guard, which used the property as a primary radio receiver station based at the AA Battery #1 power house-magazine and storeroom. Aside from possibly erecting a radio tower, the Coast Guard did not make changes to the property. The Army retained a right-of-way through the property along Bunker Road to reach the Nike SF-88 control site.

Evaluation

Since the end of the historic period in 1966, land use at Fort Cronkhite has witnessed a marked transformation from a secured military reservation to a public recreation area with quasi-public partner uses. This has led to physical changes in the landscape such as conversion of roads to trails, addition of public parking, removal of security fences and military signs, retrofitting of buildings and grounds for park and partner uses, and conservation of natural resources.

Prior to the establishment of Golden Gate National Recreation Area in 1972, the Army leased Battery Townsley and Tennessee Point to the URS Research Corporation in ca. 1970 as an ammunition destruction facility. Military uses at Fort Cronkhite were phased out with closure of the SF-87 launch site in 1971 and the SF-88 control site in 1974. Fort Cronkhite was officially closed in 1974 and Army land was subsequently transferred to the National Park Service. In ca. 1978, the 192 acres of state park land in Tennessee Valley, and the 222 acres of Coast Guard property on Wolf Ridge were transferred to the National Park Service.

The conversion to public recreational and partner uses at Fort Cronkhite began soon after closure of Fort Cronkhite in 1974. That year, the park opened a visitor center in Building 1050 in the west wing of the Cantonment, near Rodeo Beach, and established a visitor parking lot. In 1975, the Marine Mammal Center, a mammal rescue and rehabilitation facility, was established at the former SF-87 launch site, and in 1977, the SF-87 administration area became the campus of the Headlands Institute (today, Nature Bridge at Golden Gate), an environmental education organization. Access to the SF-88 control site on Wolf Ridge, which had been abandoned in 1974, was blocked with destruction of the access road by a landslide in the 1980s. The Coastal Trail was extended through Fort Cronkhite in ca. 1985, following in part military roads.

The current dominance of recreational and educational land uses within the Fort Cronkhite Military Reservation reflects a marked change since the end of the historic period in 1966. While public recreation existed at Fort Barry historically, it was never a dominant use. Existing land use therefore does not contribute to the historic character of the district.

Circulation

Circulation in the Fort Cronkhite Military Reservation was characterized during the historic period by a network of old ranch roads and one- and two-lane military roads that connected defensive works and support facilities. These roads generally followed the natural topography with minimal cutting and filling.

Post-Civil War, 1866–90

During this period, circulation at Fort Cronkhite consisted of a ranch road that paralleled the north shore of Rodeo Lagoon to the cluster of ranch buildings, following the general alignment of today's Bunker Road, Mitchell Road, and the Miwok Trail. This road was probably formalized with construction of the ranch buildings on the property in ca. 1885, but may have followed a much earlier trail. In the Tennessee Valley section of Fort Cronkhite, the ranch road (Tennessee Valley Trail) stopped at the ranch buildings east of the Fort Cronkhite boundary. There was probably a trail through the valley to Tennessee Cove.

Endicott-Taft, 1890–1917

Up until 1914, ranch roads and trails characterized circulation at Fort Cronkhite. That year, military acquisition of Tennessee Point introduced a military access road that extended from Bunker Road at Fort Barry near the rifle range camp (Presidio Riding Stables), crossed Rodeo Creek into the Silva Ranch, and extended west along the main ranch road to Rodeo Beach. Here, a new road was constructed along the coast as the access road to the Tennessee Point defenses (present trail to Tennessee Point). This gravel road followed a US right-of-way through the Borel property.

World Wars I–II, 1917-45

US acquisition of the Silva Little Ranch and Ranch I in Tennessee Valley in 1937 began a massive road construction program at Fort Cronkhite that extended red bituminous macadam-surfaced roads around the Little Ranch Valley and up Wolf Ridge, but not across Wolf Ridge to Tennessee Valley. The new main road, Battery Road (renamed Bunker Road after the war), was extended from the Fort Barry Main Post across Rodeo Lagoon on an earthen causeway, and then looped north and west around Little Ranch Valley to Battery Townsley. The road was cut into the steep hillsides and suffered from landslides and washouts early on. In ca. 1939, Bunker Road was extended north up Wolf Ridge to AA Battery #1. The old main ranch road, renamed the Lower Road (Mitchell Road) was improved and extended to the Townsley PSR room in ca. 1938; extension to Battery Townsley was probably completed in 1939 to conceal the location of the battery, forming a complete loop with Bunker Road. Short access ways were built to Battery Townsley and the Townsley reserve magazine.

Declaration of the National Emergency in 1939 and the build-up to World War II led to further road construction at Fort Cronkhite. The Cantonment featured a series of roads parallel to Mitchell Road within the east and west wings, and two curving roads that defined the triangular-shaped central administration area. These roads had no curbs and were surfaced in red bituminous macadam with concrete gutters on the uphill sides. The Cantonment was built with a network of orthogonal concrete walks that linked the buildings and streets. These walks, which may have been originally built in asphalt, featured wood steps up the slopes between the building terraces. Near Battery Townsley and on Wolf Ridge, new road spurs were built to access radar installations, hutments, and anti-aircraft gun emplacements, and also to serve as dummy roads, for aerial camouflage purposes. Bunker Road was extended to the eastern end of Wolf Ridge in ca. 1942. In Tennessee Valley, the old ranch road was extended west to Tennessee Cove in 1944 to access a new fire-control station and cable terminal. A series of unimproved Jeep roads crisscrossed the landscape. The only direct access across Wolf Ridge between lower Fort Cronkhite and the upper part in Tennessee Valley were two trails from near AA Battery #1.

Cold War, 1945–66

During the Cold War, there were mostly minor changes and additions to circulation at Fort Cronkhite. In 1954, the terminus of Bunker Road on Wolf Ridge became the site of the control area for Nike SF-88, and a new road was extended north from Bunker Road along the west side of the parade ground to the Nike SF-87 launch area. Asphalt-paved drives, parking lots, van pads, and walks were incorporated into these areas. The SF-88 control area also featured two asphalt helipads. Redevelopment of the interior of the east wing for SF-87 administration area in 1966 included removal of Edison Street and most of the sidewalks, and realignment of Stennis Street. The area included one large parking lot and

two smaller ones that were paved in black asphalt and lined by concrete curbs. Concrete sidewalks connected the buildings and extended parallel to the street. Throughout Fort Cronkhite, the main roads were resurfaced with black asphalt during this period, and most of the World War II-era Jeep roads were abandoned.

Evaluation

Since 1966, Fort Cronkhite has undergone several changes to circulation, most notably the establishment of a network of hiking trails along old military roads, and across new segments around Rodeo Lagoon and connecting with Tennessee Valley and park lands to the north and east. A new segment for the Coastal Trail was built in ca. 1985 to bypass the major landslide on the west face of Wolf Ridge that began in the 1980s. This landslide destroyed two sections of Bunker Road, making Wolf Ridge inaccessible from the lower reservation. The main part of Bunker Road and the west part of Mitchell Road were closed to vehicles. Several abandoned unpaved secondary roads became traces, such as the access roads to the SCR-296 #4 and SCR-584 radar sites. Within the Cantonment, a visitor parking area was built at the west side of the Cantonment in ca. 1975, and an unpaved lot for surfers was created to the west, both on the site of the World War II-era 155-mm gun and tractor park. Conversion of the SF-87 administration area to the Headlands Institute campus replaced the central road, Stennis Street, with a pedestrian zone. Redevelopment of the Exclusion Area of the SF-87 launch site as the Marine Mammal Center included construction of a new access road in ca. 1975 that cut through the Fort Cronkhite parade ground. Drives and parking areas were built within the Exclusion Area in 2009.

Overall, circulation in the Fort Cronkhite Military Reservation retains historic character from the end of the historic period in 1966 and dates in large part to the World War II era. Existing intact resources range in age from the road to Tennessee Point built in ca. 1914 and Bunker (Battery) Road built in 1937, to sections of Stennis Street in the Nike SF-87 administration area completed in 1966, reflecting development from the Endicott period through the Cold War. There are also traces of ranch roads northwest of the Cantonment that may date back to the 1880s.

Topography

Topography, defined as built changes to natural landforms, was an important characteristic of the Fort Cronkhite Military Reservation during the historic period. Topographic changes were related to construction of defensive works, quarries, roads, and building sites.

Post-Civil War, 1866–90

There are no recorded topographic changes from this period. Ranching operations may have required minor grading for roads and buildings.

Endicott-Taft, 1890–1917

Development of the Tennessee Point Military Reservation between 1914 and 1917 included grading for the access road, creating a level terrace at the tip of the point for searchlights, and construction of an earthen parapet to protect the powerhouse for the searchlights.

World Wars I–II, 1917–45

Military development of Fort Cronkhite during the World War II era involved numerous topographic changes related to the cut-and-cover design for defensive works that blended with the natural environment for camouflage and protection from aerial bombardment. The greatest topographic change occurred with construction of Battery Townsley between 1937 and 1940, which cut off the top of the prominent hill above Tennessee Point that the Army named Hill 417, the number referring to its elevation. After construction of the concrete battery structure, the top was filled to reestablish contours. Less dramatic topographic changes resulted from construction of the cut-and-cover secondary defensive works, including the Townsley Plotting, Spotting, and Radio (PSR) room along Mitchell Road, and the storage magazine north of the Cantonment, both completed in 1940. The fire-control stations and powerhouses on Wolf Ridge and at Tennessee Point, and the storeroom and powerhouse-magazine for AA Battery #1, were also cut-and-cover structures. During the war, construction of a hutment of underground structures at AA Battery #1 also created subtle topographic changes in the landscape. The construction of numerous defensive field positions including foxholes, trenches, and anti-aircraft machine gun emplacements created many small topographic features throughout the landscape. A large concentration of such defensive positions was dug into the hillside above the Cantonment, probably as practice positions. Within the Cantonment, letter trenches were dug between the buildings, probably in anticipation of fighting an enemy landing on Rodeo Beach.

Other topographic changes during the World War II years included extension of Bunker Road in 1937, which crossed Rodeo Lagoon on an earthen causeway, and required cut and fill along the hillsides above the Silva Little Ranch. Quarries were created on the hill east of the Cantonment to supply red chert for road construction. Development of the Fort Cronkhite Cantonment in 1941 created a series of terraces that stepped up the gently sloping hillside north of Rodeo Lagoon. Construction of these terraces required placement of two streams in underground pipes. The parade ground was a large terrace graded into the hillside off the northeast side of the Cantonment. Another area of fill was in the wetlands on the west end of the Cantonment for a 155-mm gun and tractor park. This required piping of the stream that ran through Little Ranch Valley.

Cold War, 1945–66

Topographic changes during the Cold War included construction of an array of earthen traverses and terraces for temporary Nike missile launchers in 1954.

These included a group of eight launchers in a valley east of the Cantonment, and a smaller line of four launchers southeast of Battery Townsley. Construction of the permanent launch site in 1954–55 required cutting and filling of the hillsides north of the parade ground. A long earthen ditch above the cut diverted runoff away from the launch site. The SF-88 control site on Wolf Ridge created a large terrace supporting the radar units, requiring concrete retaining walls on the north and south sides, and a lower terrace for the ready room. The new SF-87 administration area in the east wing of the Cantonment completed in 1966 altered two of the Cantonment terraces into a single, larger terrace for the new buildings.

A topographic change unrelated to military development of the landscape was the addition of an earthen dam on Tennessee Creek that created Tennessee Lagoon in ca. 1957. This dam was built as part of the Dean Witter hunting preserve on property that the Army had transferred to the Navy in 1956.

Evaluation

Since the end of the historic period in 1966, there have been no major topographic changes to the landscape of the Fort Cronkhite military reservation, with the exception of the landslides on Wolf Ridge. Minor changes have occurred through erosion of earthen cover on fire-control stations on Wolf Ridge and at Tennessee Cove, and erosion of earthen World War II defensive positions.

Overall, topography of the Fort Cronkhite Military Reservation retains historic character from the end of the historic period in 1966. The most prominent topographic features are the earthworks of Battery Townsley, the Bunker Road causeway, and the terraces of the Cantonment dating to World War II and the Cold War.

Vegetation

Vegetation, defined as planted or managed plant material, was historically used in the Fort Cronkhite Military Reservation for agriculture, ornament, windbreaks, and soil stabilization. The dominant planted species associated with the Army included Monterey pine, Monterey cypress, and iceplant.

Prior to establishment of the Lime Point Military Reservation in 1866, most of the vegetation at Fort Cronkhite consisted of grasslands that were most likely the product of grazing and other agricultural practices that may have dated back to in part to the Miwoks. Tenant ranchers, who arrived beginning in the 1850s, also planted grain.

Post-Civil War, 1866–90

Managed vegetation during this time remained grassland pastures and cultivated grain fields. The Gioli family may have maintained flower and vegetable gardens near their ranch house northwest of Rodeo Lagoon.

Endicott-Taft, 1890–1917

Managed vegetation during this time remained grassland pastures and cultivated grain fields. Development of the Tennessee Point Military Reservation included planting of turf and possibly iceplant on the earthen parapets surrounding the searchlight powerhouse, built in 1915.

World Wars I–II, 1917–45

Military acquisition of Fort Cronkhite in 1937 led to the loss of planted grain fields and most likely the end of grazing. Construction of defensive works, beginning with Battery Townsley in 1937 and including fire-control stations, powerhouses, and other cut-and-cover works, included establishment of native grass and shrubs to stabilize soils and provide camouflage from the sea and air. Development of the Cantonment initially included only turf around the buildings. Toward the end of the war in ca. 1943, Monterey pine and Monterey cypress trees were planted around the central administration area of the Cantonment.

Cold War, 1945–66

From the early 1950s through the mid-1960s, Monterey pine and Monterey cypress were planted at the casemates and cover of Battery Townsley, on the Townsley PSR room, at AA Battery #1, and at the east end of the Cantonment, most likely by the Boy Scouts as conservation projects. The Army planted Monterey pine in the western part of the Limited Area of the SF-87 launch site in the late 1950s, and Monterey pine along Stennis Street in the SF-87 administration area in ca. 1966, along with iceplant to stabilize banks. The lack of grazing led to growth of native woods along stream corridors and along the shores of Rodeo Lagoon, and ornamental herbaceous plants, most likely from ranch gardens, became naturalized in Little Ranch Valley.

Evaluation

Since the end of the historic period in 1966, changes in planted and managed vegetation have occurred largely through growth and volunteer spread of Monterey pine and cypress at Battery Townsley, the Townsley PSR Room, AA Battery #1, and the SF-87 launch site Limited Area extending west to the Townsley storage magazine and east to the Exclusion Area. In the 2000s, the park removed the trees from Battery Townsley and AA Battery #1. In the Cantonment, the Army commissioned landscape architect Prentiss French in 1970 to develop a planting plan for the SF-87 administration area, but this was apparently not implemented. In the mid-1980s, the Headlands Institute planted a variety of trees and shrubs as part of its transformation of the area into its campus. The Monterey pine and cypress trees around the administration building island were removed, while groves of Monterey cypress and pine to the north and at the east end of the Cantonment spread. Clumps of calla lily, crocosmia, and red-hot poker were established around some of the buildings in the west wing, and a large grove of acacia trees grew above Building 1077, which was once used by the Boy Scouts. Mowing in

the Cantonment was reduced, allowing turf to convert to scrub and meadow. In ca. 2000, the Golden Gate National Parks Conservancy established a native plant nursery in the east wing of the Cantonment.

Overall, planted and managed vegetation in the Fort Cronkhite Military Reservation was a minor characteristic of the landscape during the historic period. Historic patterns of vegetation have been impacted through spread of exotic invasive species in historically open spaces. Aside from native material planted on the defensive works around World War II, vegetation was historically limited to turf and Monterey pine and cypress trees in the central area of the Cantonment. The Monterey pine and cypress at the SF-87 launch site have spread extensively since 1966 and do not reflect their intended character, with the exception of those on the berm and immediately surrounding the Limited Area (park maintenance area). Ornamental plants, including calla lily and red-hot poker in the Little Ranch Valley near the Townsley PSR room may be remnants of gardens maintained by the ranch tenants prior to 1937. The Monterey pine and cypress probably planted by the Boy Scouts around defensive works in the 1950s and 1960s were relatively immature in 1966, and their introduction appears to have been unrelated to the military significance of the district.

Buildings and Structures

Buildings and Structures in the Fort Cronkhite Military Reservation were characterized during the historic period by ranch buildings, defensive works (batteries, fire-control stations, anti-aircraft defenses, cable terminals), and support buildings and structures (barracks, officer quarters, mess halls, recreation buildings, reservoirs, headwalls, retaining walls).

Post-Civil War, 1866–90

By 1885, there were two buildings within the future Fort Cronkhite: a frame barn and small one-story house in the sheltered valley northwest of Rodeo Lagoon. These were occupied by Gioli family, who were tenant dairy ranchers. A bridge carried the main ranch road over a small creek south of the buildings. There were no buildings in the Tennessee Valley section of Fort Cronkhite.

Endicott-Taft, 1890–1917

Up until 1915, the Gioli ranch buildings remained the only buildings and structures within the future Fort Cronkhite. The Giolis, or the later tenants, the Silva family, built a new frame hay barn north of the old barn at some point between 1890 and 1913. This barn had a large, steeply-pitched gable roof and hay loft doors in the gables.

Between 1915 and 1917, twelve new buildings and structures were constructed by the Army at the Tennessee Point Military Reservation in response to modernization plans recommended by the Taft Board. These included a dam, powerhouse,

and water tank at the mouth of a small creek; a water storage tank at the highest point in the reservation on the boundary with the ranch property; two concrete fire-control stations designated B2 Alexander and B2 Mendell built into the cliff along the shoreline; two 60-inch diameter searchlights in disappearing shelters that lowered into the ground; a flat-roof concrete powerhouse that serviced the searchlights, built into a protective depression; and a searchlight controller booth.

World Wars I–II, 1917–45

During World War I, the Army constructed three temporary frame emergency fire-control stations sited in a row along the upper slopes of the Tennessee Point Military Reservation, initially designated E2 Mendell, E2 Alexander, and E3 Wallace. These were dismantled in ca. 1920 and replaced with two new cut-and-cover concrete fire control stations with half-hexagon fronted sighting rooms designated E2 Mendell (later changed to B3S3 Battery Construction 243), and E3 Wallace (later changed to M2 Mines 1).

Following their purchase of the Gioli ranch in 1924, Manuel Silva and his partner Antonio Nunes Bello improved the ranch facilities at their so-called Little Ranch. They removed the old barn built by ca. 1885, and constructed a concrete dairy building, frame garage, and long frame milk barn with a concrete slab foundation, open sides, and a low-pitched gable roof and monitor. The small ranch house by this period had several small additions on its west side. A small gable-roof shed was built to the south of the main ranch complex. Improvements also included construction of a reservoir at the north end of the valley that collected water from springs on the adjoining hillsides.

Army acquisition of the Silva Little Ranch and Ranch I in 1937 began a massive building program that by 1944 included two major defensive works, fifteen secondary defensive works, three radar stations, two major reservoirs, three hutment complexes, and approximately eighty-eight cantonment buildings. At least fourteen emplacements for anti-aircraft guns constructed of concrete sandbags were built during the war on ridge tops, along the Pacific coastline, and at other strategic places. A vast array of defensive field positions, including foxholes, trenches, and concrete machine gut pits were located in areas that protected the approaches to the major defensive works. This amount of defensive development reflected Fort Cronkhite's strategic position at the front line of the harbor defenses, and its high altitude terrain on Wolf Ridge that was well suited for sighting and radar. Most of the Little Ranch buildings were retained through the war, probably for camouflage.

The largest single construction of this period was Battery Townsley, a Plan of 1937 defensive work completed in 1940. The design was similar to Battery Construction 129 at Fort Barry, with two casemates for sixteen-inch guns and two main access portals off Mitchell and Bunker Roads. Two sub-caliber mounts were installed between the casemates, and concrete test firing blocks were placed to the north-

west. Townsley had two associated cut-and-cover works: a Plotting-Spotting-Radio (PSR) room to the south along Mitchell Road, and a large storage magazine across Little Ranch Valley and north of the Cantonment. AA Battery #1 on Wolf Ridge was, like AA Battery #2 at Fort Barry, a dispersed complex of structures, including three gun platforms with underground ammunition bunkers, a cut-and-cover storeroom and powerhouse-magazine, above-ground fuel tanks on concrete stands, and a height finder and director's pit on the top of the ridge to the east.

Fire-control stations, built between 1940 and 1943, included a pillbox-type structure east of the old Tennessee Point Military Reservation designated B2S2 Rathbone, and a cluster of five on the west face of Wolf Ridge below AA Battery #1: three rectangular-front concrete stations designated B4S4 Davis, BC Townsley, and B1S1 Townsley, and two pillbox-type stations designated B1S1 BC 129 and G1 Cronkhite. There was also a cut-and-cover powerhouse for the fire-control stations. At Tennessee Cove, a circular-front concrete fire-control station designated M4 Mines I (North Channel Minefield) was built high atop the ridge north of the beach, along with a cut-and-cover powerhouse to its rear. At the beach, there was a cable manhole for Mines I and a terminal for a communications cable between Elk Valley and the main part of Fort Cronkhite.

The three radar stations at Fort Cronkhite included SCR-584 near Battery Townsley on the site of the firing blocks that was just a trailer with a radar antenna; and SCR-296 #4 west of AA Battery #1 and SCR 682 #2 east of AA Battery #1, both of which featured a steel antenna tower, powerhouse, and transmitter building.

The largest development within Fort Cronkhite was the Cantonment, built of standardized Series 700 temporary one- and two-story buildings. These included barracks, officer quarters, mess halls, recreation buildings, and combination storehouse-administration buildings in the east and west wings. Small board-and-batten sided sheds, known as spud bins, were built after the initial development as storage sheds for the mess halls. The building types repeated in a regular pattern, with the two-story barracks along the interior rows except along Kirkpatrick Street in the east wing. The center area of the Cantonment featured a two-story administration building, and one-story post exchange and fire station that were different in style from the other Series 700 buildings in the east and west wings. A small Series 700 house for the Commanding Officer was built along Bunker Road facing the parade ground, and another small building was erected to the south as a guest house. A rustic stone retaining wall was built along a portion of Kirkpatrick Street in the west wing, and poured concrete headwalls and inlets were built as part of the drainage system that connected to the road gutters.

Given the remote location of Wolf Ridge and the need for round-the-clock surveillance, hutments of underground wood and corrugated metal structures were built in the early days of the war. These were used as barracks, battery offices, and mess halls. The largest complex surrounded the AA Battery #1 director's pit and height finder, and smaller hutments of one or two structures were at the nearby

SCR-682 radar station and at Tennessee Point. A series of temporary mock buildings was erected at the northern part of Little Ranch Valley in 1944 as a commando training village.

Cold War, 1945–66

Soon after the end of World War II, the Army removed the SCR-682 and SCR-296 radar stations on Wolf Ridge and the mock training village, and abandoned the hutments.

The major new construction projects of the Cold War period at Fort Cronkhite were the three Nike sites developed between 1955 and 1966. The SF-87 launch area featured two massive underground concrete missile storage shelters with elevators that raised missiles to the launch pad on top. The site had two sentry stations, six support buildings, and dog kennels. The buildings were utilitarian concrete block with flat or low-sloped shed roofs. The SF-88 control site on Wolf Ridge included concrete retaining walls, concrete pads and two raised steel platforms for the radar antennae, concrete-block support buildings for generators and equipment, and concrete pads for parking portable vans containing radar control equipment. The SF-87 administration area (NatureBridge campus), the last building project of the historic period at Fort Cronkhite, replaced twenty-eight Series 700 frame buildings in the east wing of the Cantonment with four one-story concrete-block buildings with low-pitched shed roofs. Series 700 buildings along Mitchell Road and Kirkpatrick Road were left standing. The Nike buildings were painted light green with dark green trim.

Other notable new buildings and structures of the Cold War period included addition of a white-painted wood air-raid siren tower north of the central area of the Cantonment in 1950; a multi-use tennis and basketball court in the east wing in 1959; and a sewer-line trestle across Rodeo Lagoon built in ca. 1966. In ca. 1957, a large acid storage warehouse on a massive concrete foundation was built near AA Battery #1 on Wolf Ridge, near where a World War II dummy warehouse had stood. AAA Position No. 10 built on Wolf Ridge in ca. 1951 included three large gun emplacements with revetments built of concrete and concrete sandbags, and extension of the AA Battery #1 underground shelters. In Little Ranch Valley, building props were set up in ca. 1962 as part of a Vietnam War commando training facility, near where the World War II-era commando village had stood.

Evaluation

Since the end of the historic period in 1966, there have been several major changes to buildings and structures at Fort Cronkhite. Within the Cantonment, these included demolition of seven Series 700 buildings in the east wing along Mitchell Road and five along Kirkpatrick Street between ca. 1967 and 1980; demolition of four Series 700 buildings along Mitchell Road in the west wing in ca. 1974; and demolition of the infirmary and air-raid tower north of the central area between 1970 and 1975. Three small Series 700 utility buildings were also removed from

the south side of Mitchell Road, along with the incinerator building east of the Cantonment. New construction included a sewage pump station in the central area of the Cantonment; a potting shed, office, greenhouse, and two shade houses in the Headlands Nursery in the east wing; and a comfort station and shower structure in the public parking area west of the west wing. The sewage line trestle across Rodeo Lagoon was rebuilt as a pedestrian bridge for access to Rodeo Beach.

Outside of the Cantonment, the training village props in Little Ranch Valley were removed in ca. 1972, and the last remaining ranch building, the dairy, was removed in ca. 1975. The superstructure of the acid storage warehouse on Wolf Ridge was removed, leaving a massive concrete pad, and two of the fire-control stations (B4S4 Davis and B1S1 BC 129) were dislocated by the major landslide on Wolf Ridge. Many of the hutment structures collapsed. At Tennessee Point, the searchlights and several small secondary structures were removed, probably when the area became used for ammunition destruction in ca. 1970. Most of B2 Mendell fell into the sea. Concrete walls of the original pumphouse remained standing.

At the Nike sites, the sentry stations were removed from the SF-87 launch site, and a large complex of buildings was constructed on the launch pads for the Marine Mammal Center between ca. 1975 and 2009. The Headlands Institute (NatureBridge) built an addition to the mess hall building at the SF-87 administration area, and changed the building colors from green to white. The buildings and structures in the SF-88 control area on Wolf Ridge were abandoned, but have recently been sealed and painted.

Overall, buildings and structures in the Fort Cronkhite Military Reservation retain historic character from the end of the historic period in 1966, although deterioration and demolition have altered a significant number. The loss of Series 700 buildings along Mitchell Road and Kirkpatrick Street has altered the extent of the Cantonment. Development of the Marine Mammal Center has introduced a large and prominent building complex to the landscape, and has obscured the Nike missile launch pads. Extant historic buildings and structures range in age from the pumphouse shell built in ca. 1915 and fire-control stations B3S3 BC 243 and M2 Mines I built in 1921 at Tennessee Point, to the Nike site SF-88 administration buildings built in 1966, reflecting development from the Endicott-Taft period through the Cold War. Only archeological remains exist from the nineteenth- and early twentieth-century ranch buildings.

Views and Vistas

Views and vistas in the Fort Cronkhite Military Reservation historically included strategic lines of fire from batteries, sight lines from fire-control stations, nighttime views from military searchlights, views between Nike control and launch sites, views within the Cantonment, and panoramic scenic views along roads and trails.

Post-Civil War, 1866–90

During this period, the open grasslands of Fort Cronkhite provided panoramic scenic views across the Pacific Ocean and interior hills that were limited only by topography.

Endicott-Taft, 1890–1917

Open grasslands maintained through grazing retained the panoramic views across the landscape during this period. Development of the Tennessee Point Military Reservation in 1914 introduced defined strategic views across the Pacific Ocean. These included nighttime views from two searchlights, and sightlines from two fire-control stations that were coordinated with sight lines from other fire-control stations or batteries.

World Wars I–II, 1917–45

Panoramic views across the open grasslands and scrub remained during this period. Additional strategic sight lines across the Pacific were introduced with construction of three temporary fire-control stations at Tennessee Point in 1917, which were replaced by two permanent stations in 1921. Development of Fort Cronkhite beginning in 1937 introduced a number of strategic military views directed across the Pacific. These included lines of fire from the two gun emplacements of Battery Townsley, and sight lines from a third fire-control station at Tennessee Point, five on the west face of Wolf Ridge, and one at Tennessee Cove. The fire-control stations M2 Mines 1 at Tennessee Point and M4 Mines I at Tennessee Cove covered the North Channel submarine minefield in the Pacific. The sight line from one of the five fire control stations on Wolf Ridge was never functional because it was part of the fire-control system for the unarmed Battery Construction 129. In addition to these views across the Pacific, AA Battery #1 on Wolf Ridge featured 360-degree views across the sky from its three gun platforms.

Within the Cantonment, the arrangement of buildings in the east and west wings created directed views down the streets to the central administration building and flagstaff in front. The commanding officer may have had a view of the parade ground from his house along Bunker Road.

Cold War, 1945–66

Throughout Fort Cronkhite, panoramic views remained largely intact during this period, except in isolated places where woods grew up along stream corridors. With abandonment of the harbor defenses after World War II, the lines of fire and strategic sight lines from the batteries and secondary defensive works became obsolete. Most remained intact where grassland and scrub remained low, although those at Battery Townsley, AA Battery #1 began to become obstructed by the 1960s from Monterey cypress and pine trees planted by the early 1950s. With development of the Nike sites in 1954–55, two new vistas were established: one looking southeast from the SF-87 launch area (control van and bore sight mast at

southeast end of site) to the SF-87 control area at BC 129 in Fort Barry; and one from the SF-88 control area on Wolf Ridge looking south to the SF-88 launch site in Fort Barry. These vistas were necessary for visual connections between the sites and the alignment of radar using bore sight masts.

In the Cantonment, the flagstaff in front of the administration building was removed around 1955 for an undetermined reason. Redevelopment of the east wing for the Nike SF-87 administration area in 1966 introduced a new flagstaff in front of the Nike administration building.

Evaluation

Since the end of the historic period in 1966, changes to views and vistas have occurred largely through spread of Monterey pine and cypress in and near the Cantonment and SF-87 launch site, and on Battery Townsley, the Townsley PSR Room, and AA Battery #1. Views were reestablished with removal of these trees on Battery Townsley and AA Battery #1. Growth of native woods along lower stream corridors and the Rodeo Lagoon shoreline also restricted views. Sightlines were lost with dislocation of two fire-control stations on Wolf Ridge due to the large landslide. The object of the view from the SF-87 control site to the SF-87 launch site, the bore site mast, was removed, and development of the Marine Mammal Center obscured the launch pads. While no scenic viewing areas were established at Fort Cronkhite as they were at Forts Baker and Barry, the trails to Tennessee Point, Wolf Ridge, and Tennessee Cove provided hikers with many opportunities for panoramic scenic views.

Overall, views and vistas in the Fort Cronkhite Military Reservation retain historic character from the end of the historic period in 1966. Most strategic views remain from the harbor defenses, although they had become obsolete prior to 1966. Removal of Monterey pine woods at SF-87 control site (Hawk Hill) have reestablished views to the SF-87 launch site. Panoramic views of the Pacific Ocean and across the Headlands remain, especially on Wolf Ridge, which retains much of its historic grassland and low scrub cover.

Constructed Water Features

Constructed water features, which are areas of open water for utilitarian or ornamental purposes, included two features in the Fort Cronkhite Military Reservation during the historic period. Enclosed reservoirs, tanks, cisterns, and other water systems (addressed under Buildings and Structures) were an important part of the utility systems at Fort Cronkhite, but were not characterized by open or visible water.

Post-Civil War, 1866–90

The Gioli ranch may have contained open water for the cattle, and sumps at springs on the hillsides.

Endicott-Taft, 1890–1917

Development of the Tennessee Point Military Reservation included construction of a concrete dam in ca. 1915 that created an open reservoir in a small ravine at the southeastern corner of the reservation. This was part of the reservation's water supply system.

World Wars I–II, 1917–45

At the Silva Little Ranch (Gioli ranch), improvements during the 1920s included addition of an open concrete cistern, and construction of an underground collecting reservoir at the north end of the valley that was fed by concrete spring sumps on the hillsides. The Army maintained the open reservoir at Tennessee Point until ca. 1938, when the reservation was most likely tied into the water-supply system for Battery Townsley that included underground collecting and storage reservoirs. No open constructed water features were maintained in Fort Cronkhite after ca. 1938.

Cold War, 1945–66

In ca. 1957, Dean Witter, owner of a well-known brokerage firm, built an earthen dam on Tennessee Creek that created a large lagoon for his private hunting preserve in Tennessee Valley. The lagoon was located on land that the Army had transferred to the Navy in 1956, and which the Navy in turn leased to Witter. Witter used the lagoon until ca. 1961, when the property was transferred to Marin County as part of Marin Headlands State Park.

Evaluation

Since the end of the historic period in 1966, Tennessee Lagoon has been managed as a natural resource, and has diminished to about half its original size.

Constructed water features, historically a minor characteristic of the Fort Cronkhite landscape, included only Tennessee Lagoon by the end of the historic period in 1966. The privately-built water feature is unrelated to the historic military significance of the district, and was built at a time when the northern part of Fort Cronkhite had fallen out of military use.

Small-Scale Features

Small-scale features in the Fort Cronkhite Military Reservation historically included fences, wood utility poles, signs, flagpoles, and recreational apparatus. Armament ranged from large caliber World War II-era seacoast guns and field emplaced anti-aircraft machine guns, to Cold War anti-aircraft guns and Nike missiles.

Post-Civil War, 1866–90

Small-scale features at Fort Cronkhite during this period included a fence of undetermined type that was built after ca. 1860 to enclose a cultivated field or pasture at a tenant dairy ranch in Tennessee Valley. The fence extended east across

the future Fort Cronkhite boundary. Other fences may have existed at the Gioli ranch to the south. Small-scale features around the Gioli ranch buildings probably included wagons, milk cans, and ranching implements.

Endicott-Taft, 1890–1917

During this period, there were five grain fields at the Silva Little Ranch (Gioli ranch) that were enclosed by fences of undetermined type. The fence around the field in Tennessee Valley most likely remained. There were probably small-scale features around the Little Ranch buildings, such as wagons, milk cans, and tools.

Development of the Tennessee Point Military Reservation beginning in 1914 introduced a fence along the boundary with the Silva Little Ranch. This was probably a wood plank fence.

World Wars I–II, 1917–45

Following their purchase of the Gioli ranch in 1924, Manuel Silva and his partner Antonio Nunes Bello improved the ranch facilities at their so-called Little Ranch. In ca. 1925, they brought in electric service by installing overhead lines on wood utility poles that roughly bordered the main ranch road (Mitchell Road), and probably extended from the main Silva ranch in Gerbode Valley. They also built a concrete cattle trough and a concrete cistern. Unpainted four-rail fences enclosed corrals surrounding three sides of the milk barn built in ca. 1925.

Military development of Fort Cronkhite that began with construction of Bunker Road in 1937 included utilitarian small-scale features, the most conspicuous of which were chain-link security fences and wood utility poles. Chain-link fences were erected along the east and north boundaries of Fort Cronkhite to the northern foot of Wolf Ridge in Tennessee Valley. The part of Fort Cronkhite to the north was not fenced. Chain-link fences were also erected by 1942 around AA Battery #1, the Townsley PSR Room, a broad perimeter of the Cantonment, and around the reservoir to the north. The fence along the perimeter of the old Tennessee Point reservation was removed. Wood utility poles were extended from Fort Barry along Bunker Road to the Cantonment, where they multiplied into a grid running parallel and perpendicular to the buildings. As a temporary facility, the Cantonment was not outfitted with any ornamental small-scale features during this period, aside from a 50-foot-tall wood flagpole erected in front of the central administration building. There was no permanent flagstaff at the parade ground.

Following US entry into the war, troops built numerous small-scale defensive features across Fort Cronkhite, including barbed-wire entanglements at Rodeo Beach and at key access points to defensive works, along with sandbags stacked at defensive positions, anti-aircraft machines guns, and portable radar vans. Troops also set up tents near the defensive works.

Cold War, 1945–66

Soon after the end of World War II, the Army removed field armament, mobile radar vans, entanglements and other defensive small-scale features. The chain-link security fence was removed from the perimeter of the Cantonment. Three new anti-aircraft guns were installed at AAA Position No. 10 on Wolf Ridge in ca. 1951.

At the Nike sites developed between 1955 and 1966, the most prevalent small-scale features were chain-link fences and gates with barbed wire. The Nike SF-87 launch site had these fences around the perimeters of the Limited and Exclusion Areas, and around the dog kennels. The site also had signs, a flight simulator group mast, a control van, and dog-training course obstacles. Troops used white-painted concrete sandbags removed from the World War II field emplacements as ornamental edging along the access road, and to outline a giant "B" (for B Battery) in the slope above the parade ground. The SF-88 control area on Wolf Ridge was enclosed by a chain-link fence, and troops painted Nike battalion symbols and a profile of the Golden Gate Bridge on a low concrete-block wall near the entrance that had a brick-edge planter in front. At the Nike SF-88 administration area within the Cantonment, a chain-link perimeter fence and flagpole were installed in ca. 1965.

Street signs were most likely installed in the Cantonment soon after World War II as the streets were renamed in honor of fallen soldiers. Aside from Bunker Road and Mitchell Road, no other roads at Fort Cronkhite outside of the Cantonment received honorary names. Some ornamental small-scale features were installed during this period in the Cantonment, including short white picket fences around the front lawn of the administration building. A free-standing headquarters sign was maintained in front of the building.

Evaluation

Since the end of the historic period in 1966, small-scale features have changed throughout the Fort Cronkhite Reservation as military use was replaced by public recreation and partner uses. Prior to Army departure, the URS Corporation reestablished a boundary fence along the former Tennessee Point Military Reservation to secure the area as an ammunition disposal site.

Following opening of Fort Cronkhite to the public in 1974, most security fences along the boundaries and around the batteries were removed. Rustic split-rail fences were added along Tennessee Point Road, and gates closed off the western parts of Bunker Road and Mitchell Road to cars. Throughout Fort Cronkhite, Army signs were removed except for building number signs on buildings, and many traffic and directional signs were added along the roads. An ornamental park sign identifying Fort Cronkhite was added off Mitchell Road. Within the Cantonment, steel propane tanks were installed and picnic tables were add west of the west wing and along Rodeo Lagoon. Volunteers installed a new flagstaff in a new location as a history prop. A circle of log seats was added in the central Canton-

ment area, and a whale skeleton was placed along Kirkpatrick Street as part of outdoor classrooms for NatureBridge.

In the Nike SF-88 control area on Wolf Ridge, radar units and control vans were moved to SF-88 launch area at Fort Barry for interpretive purposes. The perimeter security fence was retained. At the SF-87 launch site, the Exclusion Area fence was removed along with all above-ground features on the launch pads. A variety of fences, holding tanks, and other features were installed as part of the Marine Mammal Center. Conversion of the SF-87 administration area to the campus of the Headlands Institute (NatureBridge) beginning in the late 1970s included removal of the perimeter security fence and military flagpole, installation of a smaller flagpole flying the earth flag, and addition of signs, picnic tables, timber seat-walls, and benches.

Overall, small-scale features in the Fort Cronkhite Military Reservation have lost historic character since the end of the historic period in 1966. Significant changes include removal of security fences, replacement of Army signs with park signs, and addition of picnic tables, benches, flagstaffs, and other recreational and educational features. The only remaining historic small-scale features not part of larger buildings or structures are the chain-link backstops at the multi-use court and wood utility poles. While many of the poles have been replaced, overall they reflect the character of the historic system. The loss in character of small-scale features has altered the military feeling of the landscape. The concrete cattle trough and cistern associated with the Silva Little Ranch, although currently obscured by vegetation, are the only tangible reminders of the agriculture landscape that long dominated Fort Cronkhite.

Archeological Features

Built features in the Fort Cronkhite Military Reservation that had fallen into ruin by the end of the historic period in 1966 or remained only as a trace include the hutments at Wolf Ridge and Tennessee Point, the dug-in World War II defensive positions, all but one building at the Silva Little Ranch, the SCR-682 and SCR-296 radar stations on Wolf Ridge, the temporary Nike launch sites, and the hutments, searchlights, and water-supply system at Tennessee Point. Other ruins and traces visible in the landscape today, such as the two fire-control stations that were dislocated by the landslide on Wolf Ridge, are the result of abandonment and decay since 1966 and do not contribute to the historic character of the landscape. Most buildings removed since 1966, such as the Cantonment buildings along Mitchell Road and Kirkpatrick Street, left no above-ground trace.

Fort Cronkhite Landscape Feature Inventory (Table 2.3)

Landscape features associated with landscape characteristics of the Fort Cronkhite Military Reservation are inventoried and evaluated in the following table, which is organized by the Fort Cronkhite Outlying Areas (landscape outside of developed areas), Cantonment, SF-87A Nike Administration Area, SF-87L Nike Missile Launch Site, SF-88C Nike Missile Control Site, Townsley Hill Defenses, Tennessee Point Defenses, Wolf Ridge Defenses, and Elk Valley Defenses. Features are evaluated as Contributing (C), Non-contributing (N-C), or Unevaluated (U) due to insufficient documentation.

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
FORT CRONKHITE OUTLYING AREAS (DRAWING 1.5)					
Spatial Organization					
No associated features					
Land Use					
No associated features					
Circulation					
Bunker Road (Battery Road/Old Bunker Road)	LCS: 057508 FCR105	40737	C	WW I-II	Fort Cronkhite segment to Battery Townsley built 1937; extended to AA Battery No. 1 1940; to SCR682 #2, ca.1944; and to SF-88C, 1954. Red macadam surface, repaved in black asphalt, ca. 1954.Two sections on lower Wolf Ridge lost to landslides after 1980.
Coastal Fire Road (Coastal Trail, Tennessee Valley)			N-C	Cold War	Unpaved road from Tennessee Valley Road up Coyote Ridge toward Muir Beach, built ca. 1957 for Dean Witter hunting preserve. N-C because feature does not relate to areas of significance (built for use of property as private hunting preserve after military ownership).
Coastal Trail (Bunker Road Bypass)			N-C	Non-historic	Foot trail with rock and timer steps and pipe railings up steep slope between Bunker Road near Battery Townsley to near AA Position No. 1, built ca. 1985 to bypass section of Bunker Road destroyed by landslide.
Mitchell Road	LCS: 057505 FCR104	42061	C	Post-Civil War, WW I-II	Road from Bunker Road at the Fort Cronkhite Cantonment west to Bunker Road at Battery Townsley; along part of early Gioli ranch road developed by ca. 1880; partly within Army right-of-way to Tennessee Point, 1914–1937; extended to Townsley PSR Room, ca. 1938, and as dummy road to Battery Townsley, ca. 1940; improved as main road to Fort Cronkhite Cantonment (East and West Main Streets), 1941. See also Fort Cronkhite Cantonment, Townsley Hill Defenses.
Fort Cronkhite Reservoir Access Road		40737	C	WW I-II	Dead-end unpaved, single-lane road from Bunker Road to Fort Cronkhite reservoir, built 1941. Trace of abandoned spur to Battery Townsley reserve magazine. Closed to public vehicles.
Rodeo Lagoon Trail (Lagoon Loop Trail)		40739	N-C	Non-historic	Unpaved footpath bordering lagoon side of Mitchell Road, crosses lagoon on footbridge, and extends along Rodeo Beach (part of Coastal Trail), built ca. 1980; part of a complete loop around Rodeo Lagoon.
Tennessee Point Road (Tennessee Point Trail)			C	Endicott-Taft	Unpaved road from Mitchell Road to Tennessee Point, built ca. 1914 as access road to searchlights at Tennessee Point. Road outside of Tennessee Point Military Reservation originally on right-of-way through private property, 1914–37. Includes spur to fire-control stations at Tennessee Point. Roadbed narrowed and eroded in places.
Tennessee Valley Road (Tennessee Valley Trail)			C	WW I-II	Access road through Tennessee Valley to Elk Valley Defenses, partially paved in red macadam, built 1944; east of Fort Cronkhite, road followed old ranch roads from Route 1 along Army right-of-way.

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Topography					
Bunker Road Causeway			C	WW I-II	Earthen causeway across Rodeo Lagoon supporting Bunker Road, built 1937. Divides Rodeo Lagoon from Rodeo Lake. Original sides of causeway obscured by siltation. See also Fort Barry Reservation.
Tennessee Lagoon Dam			N-C	Cold War	Earthen dam and spillway built ca. 1957 to create pond for Dean Witter hunting preserve. N-C because feature does not relate to areas of significance (built for use of property as private hunting preserve after end of military ownership).
Vegetation					
No associated features					
Buildings and Structures					
AA .50 #15	ASMIS: GOGA00449		U	WW I-II	Anti-aircraft sandbag-type emplacement on ridge near coastline south of Tennessee Beach for .50-caliber gun, built ca. 1942. Integrity of emplacement not determined; accessed by desire trails.
Bunker Road Causeway Bridge			N-C	WW I-II	Steel-beam and concrete deck bridge over outlet of Rodeo Lake, built ca. 1995; replaced original timber bridge, built 1937. Extends into Fort Barry.
Fort Cronkhite Reservoir	LCS: 058100 FC1110		C	WW I-II	Rectangular 400,000-gallong above-ground concrete reservoir on hill north of Fort Cronkhite Cantonment, built 1941.
Rodeo Lagoon Trail Bridge			N-C	Non-historic	See Fort Cronkhite Cantonment.
Views and Vistas					
No associated features					
Constructed Water Features					
Tennessee Lagoon			N-C	Cold War	Impounded water body on Tennessee Creek, built ca. 1957 as part of Dean Witter hunting preserve. N-C because feature does not relate to areas of significance (built for use of property as private hunting preserve after end of military ownership).
Small-Scale Features					
Fort Cronkhite Reservoir Fence			C	WW I-II	Chain-link fence around rectangular perimeter of Fort Cronkhite reservoir, installed ca. 1941.
Fort Cronkhite Security Fence			C	WW I-II	Chain-link and barbed-wire security fence along northern foot of Wolf Ridge in Tennessee Valley, built 1937 as part of perimeter fence around northern and eastern perimeter of Fort Cronkhite (excluding Tennessee Valley). Existing section marked boundary of property transferred to Coast Guard, 1965. Fence removed except for existing section, ca. 1975.
Scotty's Bluff Mounting Block			U	Unknown	Circular concrete mounting block on top of ground at Scotty's Bluff north of Rodeo Beach, at south end of three excavated terraces. May be WW II-era relocated mounting block. Purpose and date moved to site not known.

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Archeological Sites					
40MM AA AW #4 Trace	ASMIS: GOGA00488		C	WW I-II	Trace of anti-aircraft sandbag-type emplacement near Scotty's Bluff north of Rodeo Beach for 40-mm automatic weapon, built ca.1942. Sandbags probably removed ca. 1950.
AA .50 #18 Trace and Magazine #18	FC1000 ASMIS: GOGA00489	41975	C	WW I-II	Trace of anti-aircraft sandbag-type emplacement on ridge immediately north of Rodeo Beach for .50-caliber gun, with adjoining cut-and-cover magazine, built ca. 1942. Sandbags probably removed ca. 1950; magazine concrete walls remain.
AA Emplacement Trace, Unidentified	FC UAA-5 ASMIS: GOGA00485		C	WW I-II	Unidentified anti-aircraft sandbag-type emplacement on hilltop north of Fort Cronkhite reservoir, built ca. 1942. Sandbags removed ca. 1950.
SF-87L T1 Remnants	ASMIS: GOGA00493		C	Cold War	A row of four terraces separated by berms (traverses) southwest of Battery Townsley from temporary emplacement of 4 Nike missile launchers, built 1954, abandoned 1955.
SF-87L T2 Remnants	ASMIS: GOGA00492		C	Cold War	Two rows of four terraces separated by berms (traverses) south of SF-87L Exclusion Area (Marine Mammal Center) from temporary emplacement of 8 Nike missile launchers, built 1954, abandoned 1955. Topography eroded and brush covered.
Scotty's Bluff Excavations			U	Cold War	Three excavated terraces on Scotty's Bluff north of Rodeo Beach, with access road off Tennessee Point Road, built between 1945 and 1970. Purpose of excavations not known.
FORT CRONKHITE CANTONMENT (DRAWINGS 1.10, 1.11)					
Spatial Organization					
155MM Gun and Tractor Park (Surfer Lot, Cronkhite Public Parking Lot)			N-C	WW I-II	Open space at west end of Fort Cronkhite Cantonment, established 1941 as 155-mm gun and tractor park; construction included fill and placement of stream in underground culvert (see 155MM gun and tractor park headwall). Surfer Lot on western part of gun and tractor park, ca. 1980; paved visitor parking lot on eastern part, built ca. 1975; surfer lot removed and area restored to native wetlands, 2012. Restroom, showers, and picnic area between two lots. N-C due to loss of integrity.
Fort Cronkhite Center Cantonment Area		242890	C	WW I-II	Triangular center area of Cantonment with administration building, post exchange, fire station, and guardhouse, defined by Mitchell Road, Hagget Street, and Glassburn Street, established 1941. Historically included infirmary building 1072 (1941–70), at north end.
Fort Cronkhite East Wing Area			N-C	WW I-II, Cold War	Eastern area of Cantonment between Kirkpatrick Street, Glassburn Street, Bunker Road, and Mitchell Road, developed 1941; spatial character changed through redevelopment of SF-87A in center of area, 1966. Removal of 7 buildings along Mitchell Road in ca. 1967 and 6 of 10 buildings along Kirkpatrick Street in1980 substantially altered Cold War spatial character of east wing. N-C due to loss of integrity; remaining historic built features within area are contributing.
Fort Cronkhite Parade Ground			N-C	WW I-II	Open unsurfaced area on graded terrace northeast of central Cantonment, built 1941; in military use through ca. 1974. Subdivided for use as park grounds and vehicle

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
					storage area, ca. 1975; divided by construction of Marine Mammal entrance road, ca. 1975; eastern two-thirds paved for visitor parking lot, 2013. N-C due to division of space and change in surfaces; terraced landform remains along with overall open space.
Fort Cronkhite West Wing Area			C	WW I-II	Western area of Cantonment between Hagget Street, Kirkpatrick Street, Rodeo Beach visitor parking lot, and Mitchell Road, established 1941. Spatial character altered through loss of 4 of 6 buildings along Mitchell Road, ca. 1974.
Nature Bridge Campus Pedestrian Zone			N-C	Non-historic	Central space between SF-87A building formerly occupied by Stennis Street, built ca. 1985; space broken up by trees and raised areas with timber seat walls.
SF-87A Area			N-C	Cold War	Rectangular area in center of East Wing of Fort Cronkhite Cantonment containing SF-87 administration buildings, defined by chain-link and barbed-wire perimeter fence and central corridor along Stennis Street, established 1965. Boundaries of space blurred by removal of perimeter fence ca. 1978, and removal of Stennis Street, changes in mowing, and addition of trees and shrubs, ca. 1985. N-C due to loss of integrity.
Land Use					
Headlands Nursery			N-C	Non-historic	Area used as native plant nursery operated by the Golden Gate Parks Conservancy, established ca. 2000 on site of service club building 1041, 1941–ca.1974, and adjoining parking lots, ca. 1941/59–1975/2000. Area includes two shade houses, greenhouse, potting shed, and office.
Nature Bridge Campus			N-C	Non-historic	Portions of the Fort Cronkhite Cantonment used as a campus for NatureBridge (formerly Headlands Institute), centered at the SF-87 administration area and established in 1977. Includes outdoor gathering areas along Kirkpatrick Street in west wing on sites of buildings 1037, 1038, 1039, and 1040 (1941–ca.1980), and in Monterey cypress grove between Stennis Street and Kirkpatrick Street. Whale skeleton on site of building 1038.
Park Maintenance Area			N-C	Non-historic	See SF-88L; extends onto former Fort Cronkhite parade ground.
Rodeo Beach Visitor Parking Lot Picnic Area			N-C	Non-historic	Picnic area with four picnic tables along paved accessible walkway, built ca. 1990. Adjoining restroom and shower buildings. On part of 155MM Gun and Tractor Park, built 1941.
Rodeo Lagoon Picnic Area			N-C	Non-historic	Mown area with picnic tables on south side of Mitchell Road across from center Cantonment, established ca. 1980.
Circulation					
Administration Building Entrance Walks			C	WW I-II	Four parallel concrete walks in front lawn of Administration Building 1033, built 1941; two center walks lead to front entrance doors with open-tread wood stairs; two outer walks lead to 2nd floor side entrances. East outer walk continues north of building.
Building 1042 Access Road			C	WW I-II	Paved road from Kirkpatrick Street south along north side of officer quarters-mess building 1042, built ca. 1941; parking lot at south end, built ca. 1941 and expanded to second lot uphill, ca. 1959, upper lot

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
					removed and lower lot reduced in size, ca. 2000. Parking area non-contributing due to loss of integrity.
Bunker Road (Battery Road)	LCS: 057508 FCR105		C	WW I-II	Paved, uncurbed road; segment within Fort Cronkhite Cantonment built 1937 as road to Battery Townsley; served as access between central cantonment and parade ground; red macadam pavement changed to black asphalt, ca. 1950. See also Fort Cronkhite Reservation.
Commanding Officer Quarters Drive			C	WW I-II	Unpaved drive and parking area on northwest side of house, built 1941 as diagonal drives on both sides of house. East half of drive abandoned post-1966.
East and West Wing Walks			C (system)	WW I-II, Cold War	System of concrete sidewalks and entrance walks parallel and perpendicular to Series 700 buildings, built 1941; originally with asphalt surface and wood open tread steps up terraces; replaced with concrete between ca. 1945 and 1955; most walks in east wing removed ca. 1965. Wood steps rebuilt with variety of materials after 1966; additional walks removed or abandoned with pot-1966 building demolitions. Further documentation necessary to determine integrity of individual walks and steps
Edison Street	RN608	79927	C	WW I-II	Paved road with concrete gutter along north edges, first road north of Mitchell Road in west wing, built 1941; originally named West First Street and East First Street; red macadam pavement changed to black asphalt, ca. 1955. East Edison Street removed for development of SF-87A, 1965.
Fort Cronkhite Warehouse Road			C	WW I-II	Unpaved road around perimeter of warehouse, built 1941 to transport goods to and from building; extends to edge of Bunker Road.
Glassburn Street	RN611	79932	C	WW I-II	Paved, curving road with concrete gutters on both sides, along east side of center cantonment area, built 1941; red macadam pavement changed to black asphalt, ca. 1955.
Hagget Street	RN611	79932	C	WW I-II	Paved, curving road with concrete gutters on both sides, along west side of center cantonment area, built 1941; red macadam pavement changed to black asphalt, ca. 1955.
Headlands Nursery South Access Roads and Parking		104007	N-C	WW I-II, non-historic	Unpaved road off Kirkpatrick Street to nursery shade houses, partly on alignment of WW II-era access road to officer quarters-mess building 1041, 1941–ca.1974.
Kirkpatrick Street	RN610	79931	C	WW I-II	Paved road with concrete gutter along north edges, second road north of Mitchell Road in east and west wings, built 1941; originally named West Second Street in west wing, and East Third Street in east wing; red macadam pavement changed to black asphalt, ca. 1955.
Marine Mammal Center Entrance Drive			N-C	Non-historic	Asphalt-paved road from Bunker Road through Fort Cronkhite parade ground to SF-87L access road, built ca. 1975.
Mitchell Road	LCS: 057505 FCR104		C	Post-Civil War, WW I-II	Paved uncurbed access road to Fort Cronkhite Cantonment, originally named East Main Street and West Main Street; on Gioli ranch road alignment, developed by ca. 1880; part of Army right-of-way to Tennessee Point, 1914–37; widened and paved in red macadam, 1941; pavement changed to black asphalt, ca. 1955. Drainage ditch on north side.
Mitchell Road Roadside Parking			C	WW I-II	Unpaved south shoulder of Mitchell Road used for parking, established ca. 1941. Log-stops added ca. 1980; western end removed post-1990.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Nature Bridge Campus Sidewalks			N-C	Non-historic	Straight and curved concrete sidewalks along perimeter of central pedestrian zone (site of Stennis Street) and to building entrances, built ca. 1985. Replaced concrete sidewalks that aligned with buildings and Stennis Street, 1965–ca.1985.
Nature Bridge Service Drive			N-C	Non-historic	Asphalt drive from east parking lot along south side of building 1011 to parking area at building 1012 (mess hall), built ca. 1985. Parking area on site of SF-87A center parking lot, 1965–ca.1985.
Post Exchange-Firehouse Drive and Parking		103969	C	WW I-II	Partially paved, wide road along south side of Fort Cronkhite post exchange 1046 and firehouse 1045 edged in part by concrete curbs/retaining wall and gutter, built ca. 1941 for access and parking. Sewage pumphouse built in drive, ca. 1990; adjoining portions of road grass covered.
Parade Ground Parking Lot (Marine Mammal Center Parking Lot, Maintenance Parking)	RN-P931 RN-P926	79969 79988	N-C	Non-historic	Asphalt-paved parking on eastern two-thirds of the Fort Cronkhite parade ground, built 2013; replaced NPS ground maintenance yards that replaced the parade ground, ca. 1975.
Rodeo Lake Trail			N-C	Non-historic	Unsurfaced trail along south side of Mitchell Road, built ca. 1980. See also Fort Cronkhite Reservation.
Rodeo Beach Parking Lot	RN-P918	42064	N-C	Cold War, non-historic	Asphalt-paved parking lot at west end of west wing, built ca. 1960; on site of 155MM gun and tractor park built 1941. Lot expanded and redesigned, ca. 1990. N-C due to lack of integrity.
Service Club Entrance Drive			C	Cold War	Paved drive from Kirkpatrick Street to east end of building 1077, built ca.1950 along alignment of walk built 1941.
SF-87A West Parking Lot	RN919D		N-C	Cold War	Rectangular paved and curbed parking area with three access drives at west end of SF-87A area, built 1965. East half of lot removed for construction of Nature Bridge amphitheater, ca. 1985. N-C due to loss of integrity.
SF-87A East Parking Lot	RN919A	79994	N-C	Cold War	Square paved and curbed parking area with one access drive at east end of SF-87A area. Service drive added off west side of lot, ca. 1985. N-C due loss of integrity, notably larger setting of SF-87A area.
Stennis Street			C	WW I-II, Cold War	Paved road, first road north of Mitchell Road in east wing, built 1941; originally named East Second Street; red macadam pavement changed to black asphalt, ca. 1955; realigned 1965 as access road through SF-87A. Central part removed for creation of pedestrian zone in Nature Bridge (Headlands Institute) campus, ca. 1985 (within SF-87A). Section within Fort Cronkhite Cantonment remains intact from Cold War period.
Surfer Lot			N-C	Non-historic	Unpaved lot at west end of Fort Cronkhite Cantonment, built ca. 1980; on western part of 155MM Gun and Tractor Park, built 1941.
West Wing Street Parking			U	Un-determined	Three small, unsurfaced parking areas off Kirkpatrick Street. Date of construction not determined.
Topography					
Cronkhite Chert Quarry #1			C	WW I-II	Large red-chert quarry on northeast side of hill along Bunker Road near warehouse 1111, established ca. 1937 to supply material for Fort Cronkhite roads. Lower east part of quarry site of incinerator, 1942–ca.1980.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
SF-87A Terrace			C	Cold War	Terrace approximately 650' long and 275' wide containing the four SF-88A buildings and parking lots, redeveloped from earlier building terraces constructed as part of the Fort Cronkhite Cantonment in 1941. Only discernable side slope is along the south side.
Upper Cantonment Drainage Ditch			C	WW I-II	Dug trench extending along hillside above Cantonment for approximately 1,200 feet, from near 155MM Gun and Tractor Park headwall (near Little Ranch site) to center cantonment, built ca. 1941. Section in middle lost to landslide that began ca. 1942. Original function probably to divert runoff away from the Cantonment.
Vegetation					
Fort Cronkhite Cantonment Ornamental Plantings		242890	U	Un-determined	Ornamental plants around buildings, including naturalized beds of calla lily, crocosmia, and red-hot poker, and agave (century plant), primarily in west wing around and near buildings 1042, 1044, 1060, 1077, and 1071. Date of planting not determined; inventory of plants not complete.
Fort Cronkhite Center Cantonment Trees		242890	C, N-C	WW I-II Non-historic	Specimen Monterey pine and cypress trees planted in rows around perimeter of Administration Building lawn, and along Edison Street at post exchange 1046 and firehouse 1045; large grove to the north at site of infirmary building 1072 that spread from row along south side of building, post-1966. Monterey pines around Administration Building removed. Volunteer trees non-contributing.
Fort Cronkhite West Wing Trees		242890	C, N-C	Cold War, Non-historic	Large Monterey cypress tree along Edison Street at building 1061, and at intersection of Hagget Street, planted ca. 1950 (contributing). Grove of black acacia north of service club building 1077, Monterey cypress at building 1071, and oak at building 1060, planted after 1966 (non-contributing).[1]
Fort Cronkhite East Wing Trees		242890	C, N-C	Cold War, Non-historic	Groves of Monterey cypress at east end of Cantonment near Bunker Road, planted ca. 1955 (contributing). Groves of Monterey cypress and pine near Commanding Officer Quarters building 1073, planted as a few specimens, ca. 1965; extensive spread post-1966 (non-contributing). Two Monterey cypress specimens near building 1034, 1035 planted post-1970, replaced Monterey pine planted ca. 1955 (non-contributing).[2]
Fort Cronkhite Administration Building Shrubs		242890	C, U	Un-determined	Informal assortment of shrubs at front and west side of Administration building; dracaena in center of front existed by ca. 1953 (contributing).[3] Origin of other shrubs, including myoporum and oleander, not known; no documentation found on original plantings, which may have been established during World War II.
Fort Cronkhite Cantonment Turf		242890	C	WW I-II	Turf grass surrounding buildings, with largest extent around Administration Building 1033, established ca. 1942/45. Current extent reflects abandonment of approximately half of original mown areas since 1966, primarily on steep terrace slopes in west wing, and on sites of removed buildings in east wing. Abandoned turf areas covered in scrub, high grass, and herbaceous plants.

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Nature Bridge Campus Trees and Shrubs		242890	N-C	Non-historic	Variety of informally-placed trees and shrubs in central pedestrian zone, around campfire circle, and along perimeter of former SF-87A area, planted between ca. 1970 and 1985. Monterey pine along front of 1013 and 1010 planted by Army, ca. 1970; other trees and shrubs, including Monterey pine, Monterey cypress, black acacia, and myoporum planted ca. 1985. Complete plant inventory not documented.
Buildings and Structures					
Fort Cronkhite Building 1050 Patio			N-C	Non-historic	Concrete patio with picnic tables, built ca. 1992 when as part of NPS training facility.
Fort Cronkhite Administration Building (Post Headquarters)	LCS: 057501 FC1033	41983	C	WW I-II	Two-story side-gable Series 700 building on concrete piers with window hoods, in center of Cantonment, built 1941. (Nature Bridge classrooms)
Fort Cronkhite BOQ & Mess	LCS: 010092 FC1042	42050	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in east wing on Kirkpatrick Street, built 1941. (Park housing)
Fort Cronkhite Cantonment Drainage Structures			C	WW I-II	Concrete ditches and culvert headwalls to either side of Hagget Street, and concrete headwalls at two streams north of Kirkpatrick Street, built 1941. May also be headwalls at culvert outlets south of Mitchell Road (not documented).
Fort Cronkhite Center Cantonment Waste Tank Cover			C	WW I-II	Concrete slab with manhole in lawn at rear of Administration Building 1033, built 1941.[4]
Fort Cronkhite Commanding Officer's Quarters	LCS: 058264 FC1073	42007	C	WW I-II	Small, one-story gable-roof Series 700 house on slab foundation, on Bunker Road across from parade ground, built 1941. Porch and ramp added on south and west sides, post-1966. (Beach House, A Home Away from Homelessness)
Fort Cronkhite EM Barracks	LCS: 010084 FC1034	41984	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in east wing on Kirkpatrick Street, built 1941.
Fort Cronkhite EM Barracks	LCS: 010085 FC1035	41985	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in east wing on Kirkpatrick Street, built 1941. (Nature Bridge Raven Building)
Fort Cronkhite EM Barracks	LCS: 010094 FC1054	41989	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in west wing on Edison Street, built 1941. (Nature Bridge Sunset Building)
Fort Cronkhite EM Barracks	LCS: 010095 FC1055	41990	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in west wing on Edison Street, built 1941. (Nature Bridge offices)
Fort Cronkhite EM Barracks	LCS: 010096 FC1056	41991	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in west wing on Edison Street, built 1941. (NPS parkwide law enforcement office)
Fort Cronkhite EM Barracks	LCS: 010097 FC1057	41992	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in west wing on Edison Street, built 1941. (Antennae Theater)
Fort Cronkhite EM Barracks	LCS: 010098 FC1058	41993	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in west wing on Edison Street, built 1941. (Antennae Theater)
Fort Cronkhite EM Barracks	LCS: 010099 FC1059	41994	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in west wing on Edison Street, built 1941. (NPS Barracks museum)

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FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Fort Cronkhite EM Barracks	LCS: 010100 FC1061	41995	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in west wing on Edison Street, built 1941. (NPS Natural Resources office)
Fort Cronkhite EM Barracks	LCS: 010101 FC1062	41996	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in west wing on Edison Street, built 1941. (Foundation for Deep Ecology)
Fort Cronkhite EM Barracks	LCS: 010102 FC1063	41997	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in west wing on Edison Street, built 1941. (USGS offices)
Fort Cronkhite EM Barracks	LCS: 010103 FC1064	41998	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in west wing on Edison Street, built 1941. (NPS-GGNPC shared space)
Fort Cronkhite EM Barracks	LCS: 010104 FC1065	42000	C	WW I-II	Two-story gable and pent-roof Series 700 building on concrete piers, in west wing on Edison Street, built 1941. (NPS Maintenance)
Fort Cronkhite EM Mess	LCS: 010106 FC1067	42002	C	WW I-II	One-story gable and pent-roof Series 700 building on concrete piers, in west wing on Kirkpatrick Street, built 1941. (Antenna Theater)
Fort Cronkhite EM Mess	LCS: 010109 FC1070	42005	C	WW I-II	One-story gable and pent-roof Series 700 building on concrete piers, in west wing on Kirkpatrick Street, built 1941. (NPS Marin Headlands Buildings & Grounds)
Fort Cronkhite EM Mess	LCS: 010093 FC1049	41987	C	WW I-II	One-story gable and pent-roof Series 700 building on concrete piers, in west wing on Mitchell Road, built 1941. Served as temporary Marine Mammal Center visitor center, ca. 2000–09.
Fort Cronkhite Fire Station	LCS: 057503 FC1045	41986	C	WW I-II	One-story gabled Series 700 building on concrete slab and concrete pier foundation, with three garage bays facing Hagget Street and perpendicular rear wing, in center area, built 1941. Garage doors replaced post-1966.
Fort Cronkhite Guard House	LCS: 057500 FC1044	42013	C	WW I-II	One-story side-gable Series 700 building on concrete piers in center cantonment at intersection of Kirkpatrick Street and Hagget Street, built 1941. Area across Kirkpatrick Street never built upon, probably to maintain views. Front walks to building covered in vegetation.
Fort Cronkhite Guest House	LCS: 058263 FC1076	42008	C	WW I-II	One-story Series 700 building on concrete piers in east wing at intersection of Kirkpatrick Street and Bunker Road, built 1941. Non-historic deck on west side. (Beach House, A Home Away from Homelessness)
Fort Cronkhite Kirkpatrick Street Wall	LCS: 058097 FC1047		C	WW I-II	Random-course rubble stone retaining wall without capstones, ranging from 2-feet to 4-feet high, section from Hagget Street to middle of Kirkpatrick Street built ca. 1941; west section to end of Kirkpatrick Street built ca. 1945. Wall has openings for walks and drive, and indents for drain inlets.
Fort Cronkhite Multi-Use Court	LCS: 057604 FC1078	42070	C	Cold War	Concrete athletic court along hillside above east wing, with chain-link backstops and basketball hoops, built 1959. Similar to multi-use courts at SF-88 administrative area and Fort Barry main post.
Fort Cronkhite Post Exchange	LCS: 057504 FC1046	42042	C	WW I-II	One-story gable-roof Series 700 building on concrete piers with small entrance wing on east side, in center cantonment between Edison Street and Mitchell Road, built 1941. (NPS maintenance)
Fort Cronkhite Recreation Building	LCS: 010105 FC1066	42001	C	WW I-II	One-story gable-roof Series 700 building on concrete piers in west wing on Kirkpatrick Street, built 1941.

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Fort Cronkhite Recreation Building	LCS: 010110 FC1071	42006	C	WW I-II	One-story gable-roof Series 700 building on concrete piers in west wing on Kirkpatrick Street, built 1941. (Marine Mammal Center)
Fort Cronkhite Service Club	LCS: 057502 FC1077	42067	C	WW I-II	Large, one-story gable-roof Series 700 building on concrete foundation, in west wing on Kirkpatrick Street, built 1941. Later served as Boy Scout building. (NPS Archeology Lab)
Fort Cronkhite Sewage Pump Station	LCS: FC1043	42039	N-C	Non-historic	Small one-story gabled building south of Fort Cronkhite post exchange, built ca. 1990; located within post exchange-firehouse roadbed/parking area. Replaced sewage pump station building 1047 across Mitchell Road, 1943–ca.1990.
Fort Cronkhite Mess Hall Storage Building (Spud bin)	LCS: 057515 FC1084		C	WW I-II	Small gable-roof shed on concrete foundation with board-and-batten siding, in west wing on Kirkpatrick Street next to mess hall 1070, built ca. 1942.
Fort Cronkhite Mess Hall Storage Building (Spud bin)	LCS: 057507 FC1085		C	WW I-II	Small gable-roof shed on concrete foundation with board-and-batten siding, in west wing on Kirkpatrick Street next to mess hall 1067, built ca. 1942.
Fort Cronkhite Storehouse-Administration Building	LCS: 021307 FC1050	41988	C	WW I-II	One-story gable-roof Series 700 building on concrete slab foundation, in west wing on Mitchell Road, built 1941. Served as first Marin Headlands visitor center, 1974–92. (NPS training building)
Fort Cronkhite Storehouse-Administration Bldg.	LCS: 021308 FC1060	41999	C	WW I-II	One-story gable-roof Series 700 building on concrete slab foundation, in west wing on Edison Street, built 1941. (Nature Bridge)
Fort Cronkhite Storehouse-Administration Building	LCS: 010107 FC1068	42003	C	WW I-II	One-story gable-roof Series 700 building on concrete slab foundation, in west wing on Kirkpatrick Street, built 1941. (NPS fire management program)
Fort Cronkhite Storehouse-Administration Building	LCS: 010108 FC1069	42004	C	WW I-II	One-story gable-roof Series 700 building on concrete slab foundation, in west wing on Kirkpatrick Street, built 1941. (NPS fire management cache)
Fort Cronkhite Warehouse	LCS: 057506 FC1111	42016	C	WW I-II	One-story 18,708-square-foot gable-roof Series 700 building with asbestos shingle siding, on Bunker Road north of causeway, built 1941. Sliding garage doors with pent roof canopies on north and south sides, some retaining loading docks. (NPS Maintenance)
Headlands Nursery Buildings		42033 85264 64650 64653 64652	N-C	Non-historic	Two frame buildings, glass greenhouse, and two shade houses in east wing along Kirkpatrick Street, built 2000 and later on site of Bachelor Officer Quarters and mess building 1041 (later Cold War service club), 1941–ca.1974.
Nature Bridge Badminton Court			N-C	Non-historic	Rectangular sand area in lawn along former perimeter of SF-87A area, built ca. 1985.
Nature Bridge Campfire Circle			N-C	Non-historic	Depressed amphitheater with timber retaining walls/seats, mulched ground, rock rip-rap, and central fire pit on site of west parking lot, built ca. 1985. Includes trail to parking lot lined by post and cable railings.
Nature Bridge Campus Timber Retaining Walls			N-C	Non-historic	Series of timber retaining walls and planter boxes in pedestrian zone on site of Stennis Street, built ca. 1985.
Nature Bridge Shelter			N-C	Non-historic	Open-sided wood shelter with shed roof, at rear of building 1010 (Pelican Dorm), built ca. 1985.
Rodeo Beach Restroom	FC1276A	42060	N-C	Non-historic	Prefabricated building on west side of parking lot, built ca. 1990. On site of 155MM Gun and Tractor Park, built 1941.

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Rodeo Beach Shower	FC1276B	42065	N-C	Non-historic	Roofless building on west side of parking lot, built ca. 1990 to serve visitors to Rodeo Beach. On site of 155MM Gun and Tractor Park, built 1941.
Rodeo Lagoon Trail Bridge			N-C	Non-historic	Timber footbridge on concrete piles across narrow west end of Rodeo Lagoon, built ca. 2000 on site of sewer-line trestle, 1966–2000.
SF-87A Barracks	LCS: 057600 FC1010	41979	C	Cold War	One-story standard Army-design concrete-block building at northeast side of complex with low-pitched shed roof and entrance porch, built 1965. (Nature Bridge Pelican Dorm)
SF-87A Administration Building (Battery B Headquarters)	LCS: 057601 FC1011	41980	C	Cold War	One-story standard Army-design concrete-block building at southeast side of complex, with low-pitched shed roof, built 1965. Pyramidal skylights and enclosed patios added on south side, ca. 1985. (Nature Bridge Lab)
SF-87A Mess Hall	LCS: 057602 FC1012	41981	C	Cold War	One-story standard Army-design concrete-block building southwest side of complex with low-pitched gable roof and entry porch, built 1965. Addition on south side and outdoor dining area on west side added ca. 1985. (Nature Bridge Houston Dining Hall)
SF-87A Barracks	LCS: 057603 FC1013	41982	C	Cold War	One-story standard Army-design concrete-block building at northwest side of complex with low-pitched shed roof and entrance porch, built 1965. Second front entrance porch added ca. 1985. (Nature Bridge Raven Building)
Views and Vistas					
No associated features					
Small-Scale Features					
Fort Cronkhite Cantonment Flagpole Base	FC1075 MH63		C	WW I-II	Round concrete base of 50-foot-tall cantonment flagpole in front of Administration Building 1033 at edge of road, built 1941; flagpole removed ca.1955.
Fort Cronkhite Flagpole			N-C	Non-historic	White wood flagpole with ball finial near intersection of Mitchell Road and Hagget Street in west wing, installed by volunteers in 1997 as a prop for Living History program.
Fort Cronkhite Cantonment Propane Tanks			N-C	Non-historic	White-painted above-ground steel tanks located throughout Cantonment next to buildings, installed after 1975.
Fort Cronkhite Street Signs			U	Un-determined	Signs with white face and black lettering on wood posts; date of installation not known. Standard design used throughout most of the headlands.
Fort Cronkhite Cantonment Overhead Utility Lines			C	WW I-II	System of power and communications lines on wood utility poles between buildings in grid pattern through east and west wings, installed 1941. Poles along Mitchell Road have streetlights. Age of individual poles undetermined, but of same character as originals.
Fort Cronkhite Cantonment Birdbath			U	Un-determined	Cast concrete and pebble birdbath in lawn south of fire station. Origin not known.
Fort Cronkhite Park Sign			N-C	Non-historic	Golden Gate National Recreation Area sign on Mitchell Road at east entrance to Fort Cronkhite, installed ca. 2000.
Nature Bridge Flagpole			N-C	Non-historic	White-painted metal flagpole on concrete base in center of Nature Bridge pedestrian zone, installed ca. 1985. SF-87A flagpole 1017 stood in front of administration building 1011, 1965–ca.1985.

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Nature Bridge Campus Furnishings			N-C	Non-historic	Variety of site furnishings within campus pedestrian zone and outer sides of buildings, including wood post and cable barriers, benches, picnic tables, signs, dumpsters, and rocks, installed ca. 1985. Not on drawing 1.11.
Archeological Sites					
AA .50 #19 Trace	ASMIS: GOGA00398		C	WW I-II	Anti-aircraft sandbag-type emplacement on hilltop between Cantonment and warehouse 1111 for .50-caliber gun, built ca. 1942; sandbags removed ca. 1954.
Fort Cronkhite Air Raid Siren Tower Footings	FC1081 ASMIS: GOGA00491		U	Cold War	Concrete piers from wood air-raid siren tower at north end of center cantonment east of guardhouse, built 1950; tower removed ca. 1975. Same design as tower at Fort Barry Capehart Housing Area.
Fort Cronkhite Cantonment Defensive Positions	ASMIS: GOGA00487		C	WW I-II	Three 'V' shaped trenches and a 'Y' shaped trench on hillside immediately above Kirkpatrick Street at building 1068, built ca.1941/42; lower part of three trenches removed due to grading for extension of Kirkpatrick Street wall, ca. 1945. Only known unfilled letter trenches at Fort Cronkhite. Traces of filled trenches between Edison Street and Mitchell Road visible in lawn during periods of drought, built 1941/42. Large V-shaped dug defensive position on hillside above building 1044, built ca. 1941/42; eroded and crossed by paths. Hillside field above west wing may contain remnants of large number of defensive positions most likely used for practice, currently hidden by vegetation.
TENNESSEE POINT DEFENSES (DRAWING 1.10)					
Spatial Organization					
No associated features					
Land Use					
No associated features					
Circulation					
Tennessee Point Road			C	Endicott-Taft	Unpaved access road to Tennessee Point surfaced in red chert and without curbs, built ca. 1914; section within Tennessee Point terminates in area near point that originally contained Searchlights #7 and 8; spur built ca. 1915 to access water tank, and later fire-control stations. See also Fort Cronkhite Reservation.
Topography					
Searchlight #8 Powerhouse Parapet			C	Endicott-Taft	Protective earthen parapet along south (downhill) side of powerhouse, built 1915. Powerhouse original designation: #16. Powerhouse demolished ca. 1960.
Vegetation					
Searchlight #8 Powerhouse Monterey Cypress			N-C	Non-historic	Grove of Monterey cypress in valley and parapet of Powerhouse #8 (1915–ca.1960). Grew up post-1972, following abandonment of site.
Buildings and Structures					
B2S2 Rathbone					Pillbox-type cut-and-cover concrete fire-control station uphill from old Tennessee Point Military

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
					Reservation boundary, with steel dome on sighting room, built ca. 1940. (Vacant)
B3S2 BC 243			C	WW I-II	Cut-and-cover hexagonal-front concrete fire-control station on hillside within former Tennessee Point Military Reservation, with camouflage net anchors and remnants of rock camouflage above and alongside sighting room, built ca. 1921, camouflage added ca. 1942. Original designation: E2 Mendell. (Vacant)
M2 Mines I			C	WW I-II	Cut-and-cover hexagonal-front concrete fire-control station hillside within former Tennessee Point Military Reservation, with remnants of camouflage net anchors and rock camouflage above and alongside sighting room, built 1921, camouflage added ca. 1942. (Vacant)
M2 Mines I Stone Wall			C	WW I-II	Dry-laid rubble stone wall extending south from M2 Mines I, built ca. 1942, presumably as part of addition of camouflage and construction of hutment (underground shelter).
B2S2 Guthrie			C	WW I-II	Flat-roof concrete fire-control station with roof hatch, in cliff face of Tennessee Point, built 1941. Replaced earlier fire-control station on same site built 1917, designated B2 Alexander. (Vacant)
Views and Vistas					
B2S2 Rathbone Sight Lines			C	WW I-II	Fire-control sight lines across the Pacific, established 1943. Remain unobstructed.
B3S2 BC 243 Sight Lines			C	WW I-II	Fire-control sight lines across the Pacific, established ca. 1921. Remain unobstructed
M2 Mines I Sight Lines			C	WW I-II	Fire-control sight lines across the Pacific, established ca. 1921. Remain unobstructed
B2S2 Guthrie Sight Lines			C	WW I-II	Fire-control sight lines across the Pacific, established ca. 1917. Remain unobstructed
Small-Scale Features					
Ammunition Destruction Area Security Fence			N-C	Non-historic	Chain-link and barbed-wire fence along boundary of area leased to URS Research Corporation as Tennessee Point Ammunition Destruction Area, installed ca. 1970. Follows approximate boundary of former Tennessee Point Military Reservation, 1914–37.
Archeological Sites					
B2 Mendell Remnant	ASMIS: GOGA00173		U	Endicott-Taft	Remnant of concrete fire-control station in cliff face of Tennessee Point, built 1917; redesignated as searchlight controller booth, ca. 1941. Structure abandoned ca. 1960, and partially collapsed due to erosion of cliff, post 1972.
Tennessee Point Pumphouse and Dam Remnants	ASC71-07-06H ASMIS: GOGA00179		C	Endicott-Taft	Remnants of concrete pumphouse walls and concrete dam on creek at southeast side of Tennessee Point; structures built 1915, abandoned ca. 1940 following development water supply system for Battery Townsley. Site included water tank below pumphouse (no trace documented).
Tennessee Point Searchlight Controller Booth #1 Remnant	ASMIS: GOGA00173		C	Endicott-Taft	Subsurface concrete structure most likely built as original controller booth for Searchlights #16 and 17, located to the northeast, built ca. 1915; abandoned post-1945.

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Tennessee Point Searchlight Controller Booth #2 Trace	ASMIS: GOGA00173		U	WW I-II	Square concrete pad, possibly footing for second controller booth, located south of searchlights, built 1917; superstructure removed ca.1960.
Searchlight #7, 8 Powerhouse Site	ASMIS: GOGA00173		U	Endicott-Taft	Possible remnant of concrete building constructed 1915 to house generators for Searchlights #16 and 17 (later redesignated #7 and 8); building demolished ca. 1960. Covered by vegetation; site not inspected for remains.
Searchlight #7 Trace	ASMIS: GOGA00173		U	Endicott-Taft	Trace of foundation slab, probably from Searchlight #7 along northern side of lower Tennessee Point; site of Searchlight #17 built 1915; superstructure probably replaced ca. 1941 with Searchlight #7; superstructure removed ca. 1960.
Tennessee Point Hutment Remnants	ASMIS: GOGA00173		C	WW I-II	Remains of two frame dug-in/underground rooms near M2 Mines 1, built ca. 1942, abandoned ca. 1945.
Tennessee Point Water Tank Trace	ASMIS: GOGA00173		C	Endicott-Taft	Trace of circular water tank located uphill from M2 Mines I, built 1915 to store water pumped from dam lower on site, removed ca. 1960.
TOWNSLEY HILL DEFENSES (DRAWING 1.10)					
Spatial Organization					
No associated features					
Land Use					
No associated features					
Circulation					
AA .50 #17 Access Road			C	WW I-II	Unpaved jeep road from Bunker Road to AA 50 #17 gun emplacement and magazine on top of Battery Townsley, built ca. 1941. Trail extended south to gun #2, post-1966.
Battery Townsley Gun 1 Access Road			C	WW I-II	Paved road between Bunker Road and Battery Townsley Gun #1 tunnel, paved in red macadam and without curbs, built ca.1937; repaved in black asphalt ca. 1954. Road eroded and encroached by vegetation.
Battery Townsley Gun 2 Access Road			C	WW I-II	Short paved road between Mitchell Road and Battery Townsley Gun #2 tunnel, paved in red macadam and without curbs, built ca.1937; repaved in black asphalt ca. 1954; resurfaced in concrete post-1966.
Bunker Road (Battery Road)	LCS: 057508 FCR105		C	WW I-II	Main access road to Battery Townsley from Fort Barry, paved in red macadam and without gutters, built 1937; extended north to AA Battery #1 ca. 1938; repaved in black asphalt, ca. 1954. See also Fort Cronkhite Reservation.
Mitchell Road	LCS: 057505 FCR104		C	WW I-II	South access road to Battery Townsley, paved in red macadam and without curbs; section within Townsley Hill Defenses built ca. 1937; repaved in black asphalt, ca. 1954. See also Fort Cronkhite Cantonment.
SF-87L T1 Access Road			C	Cold War	Unpaved road from Mitchell Road to Tennessee Point Road, built ca. 1953 to access temporary Nike missile launchers SF-87L T1. Roadbed eroded and encroached by vegetation; in use as trail.

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Townsley Reserve Magazine Approach Road and Parking	RN-P956	79990	C	WW I-II	Dead-end paved road from Bunker Road to reserve magazine, with parking area in front of magazine, built 1940.
Topography					
No associated features					
Vegetation					
Townsley PSR Room Grove			N-C	Cold War, non-historic	Monterey cypress planted around portals to PSR Room, ca. 1950; significant spread post-1966. N-C due to lack of integrity; unknown if original trees remain.
Buildings and Structures					
Bunker Road Headwall			C	WW I-II	'L'-shaped concrete headwall at inlet for culvert beneath Bunker Road north of Battery Townsley, built ca. 1938.
Battery Townsley	LCS: 010083 FC1014 ASMIS: GOGA00180	41977	C	WW I-II	Plan of 1937 reinforced concrete, cut-and-cover high-elevation battery with two dispersed, casemated gun emplacements designed to protect Pacific approach to Golden Gate, built 1938–40. Location known as Hill 417. Separate tunnels to each gun, with concrete portals. Secondary pedestrian portal in center of work along Mitchell Road. Similar design to BC 129 at Fort Barry. Partially restored, 2008. Used by URS Research Corporation, ca. 1965–84.
Battery Townsley Sub-caliber Gun Mounts	ASMIS: GOGA00180		C	WW I-II	Two round concrete gun mounts between Battery Townsley guns 1 and 2, for practice firing, built ca. 1940. One mount not visible; covered in earth or vegetation.
Little Ranch Cattle Trough	ASC71-07-02H ASMIS: GOGA00175		C	WW I-II	Concrete trough, 12' x 41" wide and 25" deep, located north of ranch building sites, built ca. 1925 by Antonio Bello and Manuel Silva as part of improvements to ranch following acquisition from Grace Borel in 1924. Pipe leads into the side of trough; trough covered in algae and scrub.
Little Ranch Cistern	ASC71-07-02H ASMIS: GOGA004175		C	WW I-II	Open concrete cistern south of ranch building sites and near creek headwall, 134" long, 72" wide, 22" deep, built ca. 1925 by Antonio Bello and Manuel Silva as part of improvements to ranch following acquisition from Grace Borel in 1924. Steel pipe leads into structure.
Little Ranch Valley Collecting Reservoir	FC1015A ASMIS: GOGA00486		U	WW I-II	Underground reservoir built ca. 1934 as part of ranch water supply system, rebuilt by Army ca. 1938. Integrity and above-ground component not determined.
Little Ranch Valley Pumphouse	FC1015 ASMIS: GOGA00486		U	WW I-II	Frame building on concrete slab foundation, built 1934 as part of ranch water supply system. Presumably pumped water from adjoining spring-fed streams; after 1938, from three spring sumps north of Bunker Road. Integrity not determined.
Little Ranch Valley Spring Sumps	FC1015B FC1015C ASMIS: GOGA00486		U	WW I-II	Three spring sumps on hillside north of pumphouse and Bunker Road, built by Army ca. 1938 to capture spring water and divert from Bunker Road. Two sumps remain; integrity not determined.
Townsley Approach Machine Gun Pit	FC MG-1		C	WW I-II	Square concrete machine gun pit on slope north of Mitchell Road, for protection of approach to Battery Townsley, built ca. 1942. See also Townsley approach defensive positions (Archeological Sites)

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Townsley PSR (Plotting, Switchboard, Radio) Room	LCS: 010082 FC1008	42049	C	WW I-II	Plan of 1937 cut-and-cover concrete structure facing Mitchell Road, with two concrete portals and numerous vent stacks, built 1940. Approaches to portals covered in debris and vegetation. Earthwork covered in Monterey pine and cypress grove. (Vacant)
Townsley Reserve Magazine (Central Reserve Magazine)	LCS: 010116 FC1130		C	WW I-II	Cut-and-cover concrete structure with parapet wall and five bays with steel doors and overhead trolleys, on hillside north of Fort Cronkhite Cantonment, built 1940. Interior and outside parking area presently used for storage.
Views and Vistas					
Battery Townsley Field of Fire			C	WW I-II	Panoramic sight lines from two gun positions directed west across the Pacific approach to the Golden Gate, established 1940.
Small-Scale Features					
Townsley PSR Room Fence			U	Cold War	Chain-link fence around rear perimeter of Townsley PSR Room, installed ca. 1955. Undetermined if still extant.
Archeological Sites					
AA .50 #17	ASMIS: GOGA00180		U	WW I-II	Anti-aircraft sandbag-type emplacement on top of Battery Townsley for .50-caliber gun, built ca. 1942. Remains beneath vegetation.
SCR-584 Radar Access Road Trace			U	WW I-II	Trace of unpaved road extending west from Bunker Road north of Battery Townsley, built ca.1941 to access concrete test firing blocks; reused or improved as access road to SCR-584 radar trailer that supported AA Battery #1, ca. 1944.
Little Ranch Building Remnants	ASC71-07-02H ASMIS: GOGA00175		C	Post-Civil War through WW I, II	Remnants of milk barn concrete slab, ca.1925–46, and dairy building, ca.1925–75. Remnants may also exist from ranch house (ca.1885–1945), garage (ca.1925–45), hay barn (ca.1910–40), and old barn (ca.1885–1925); not visible due to heavy vegetation.
Little Ranch Road Trace	ASC71-08-13H ASMIS: GOGA00175		U	Post-Civil War, WW I-II	Trace of road through Little Ranch Valley, part of Gioli Ranch by ca.1881; improved by Army, ca. 1938; lower section realigned, ca. 1960 due to flooding from blocked culvert or ditch. Road abandoned ca. 1972; lower section south of ranch building sites removed as part of wetlands restoration project in 2012. Overall integrity of road not determined.
Townsley Approach Defensive Positions	ASMIS: GOGA 00493, GOGA 00494		C	WW I-II	Large and dispersed cluster of hand-dug defensive field positions (foxholes, trenches), wood revetments, and tent sites at head of Mitchell Road and in Little Ranch Valley dating to outbreak of World War II, 1941–42; intended to protect rear flank of Battery Townsley from anticipated enemy landing on Rodeo Beach. Documentation on location and integrity not complete. Most are concealed by scrub and are inconspicuous in the landscape. See also Townsley Approach machine gun pit (Buildings and Structures).
Vietnam Village Site	ASMIS: GOGA00487		U	Cold War	Site along northeastern part of Little Ranch Valley used as a commando training area known as Vietnam Village, in use ca. 1962–72; probably south of WW II commando training site. Area converted to wetlands from blocked drainage; undetermined if remains survive. Historic limits of site not determined.

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
World War II Commando Training Area Site	ASMIS: GOGA00487		U	WW I-II	Site at northeast end of Little Ranch Valley used as commando training area, with mock village of prop buildings, built ca. 1944; in use through ca. 1948. Little Valley Ranch Road served as primary access. Undetermined if remains survive beneath heavy scrub. Historic limits of site not determined.
WOLF RIDGE DEFENSES (DRAWING 1.10)					
Spatial Organization					
No associated features					
Land Use					
AA Battery #1	ASC71-07-11H		C	WW I-II	Large area on two hills in western Wolf Ridge used for anti-aircraft defenses, containing dispersed facilities including three gun emplacements, magazine, powerhouse-storeroom, director's pit, hutment, and other support structures, in use 1940–46. Partly reused for AAA Position No. 10, ca. 1952–54. Fence enclosed western part containing gun platforms and magazine-storehouse between ca. 1940–75.
AAA Position No. 10			C	Cold War	Area on western Wolf Ridge partly within AA Battery #1 containing three gun emplacements and underground shelters, in use ca.1951–55.
Circulation					
AA Battery #1 Gun Platform Access Road			C	WW I-II	Unpaved road from upper AA Battery #1 road near magazine 1274 west toward AA Battery #1 gun platform #3 and AAA Position #10 gun pits, built ca. 1941; used as an unmanaged trail.
Bunker Road	LCS: 057508 FCR105		C	WW I-II, Cold War	Main access road through Fort Cronkhite, built between 1937 and 1954; section within Wolf Ridge Defenses built ca.1938 as access road to AA Battery #1, paved in red macadam and without curbs; extended east to SCR-682 #2 radar complex, ca. 1944. Two sections destroyed by landslides, post-1980; inaccessible by vehicles.
Lower AA Battery #1 Road			C	WW I-II	Unpaved dead-end road from Bunker Road north to AA #1 fuel tanks, built ca. 1941; also accessed SCR-296 #4 radar site and acid storage warehouse foundation. Trail continues southeast up and across AA Battery #1; origin of trail not known. Southern part of road destroyed by post-1980 landslide; inaccessible by vehicles.
SCR-296 #4 Access Road			C	WW I-II	Unpaved access road off lower AA Battery #1 road consisting of loop around central rock outcrop, built ca.1943. Roadbed eroded and encroached by vegetation; inaccessible by vehicles due to landslide.
SCR-682 #2 Stepping-Stone Walks			C	WW I-II	Short walk of concrete stepping stones built from SCR-682 #2 access road west to powerhouse, and from powerhouse down slope to hutment, built ca. 1944.
SCR-682 #2 Access Road			C	WW I-II	Unpaved access road to SCR-682 #2 radar site, originally built as eastern extension of Bunker Road from AA Battery #1 with "red rock" surface, ca. 1943; lower section extended to SF-88C and paved in black asphalt, ca. 1954; upper section to SCR-682 #2 site abandoned. Trail continues west to AA Battery #1. Roadbed eroded and inaccessible due to landslide.

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Upper AA Battery #1 Road			C	WW I-II	Unpaved dead-end road from Bunker Road north to near AA Battery #1 director's pit, built ca. 1940; also accessed AA Battery #1 powerhouse-storeroom and magazine. Trail continues east toSCR-682 #2 access road. Road inaccessible by vehicle due to landslide.
Topography					
No associated features					
Vegetation					
No associated features					
Buildings and Structures					
40MM AA AW #2	ASMIS: GOGA00022		C	WW I-II	Anti-aircraft sandbag-type keyhole-shaped emplacement on hillside east of AA Battery #1 magazine and powerhouse-storeroom for 40-mm automatic weapon, built ca.1942.
AA Battery #1 Height Finder	LCS: 057612 FC1200A ASMIS: GOGA00022	41974	C	WW I-II	Square concrete base for height finder instrument on highpoint of Wolf Ridge east of director's pit, consisting of approximately 3-foot-high concrete walls, built ca. 1940.
AA Battery #1 Magazine	LCS: 057610 FC1274 ASMIS: GOGA00022	41971	C	WW I-II	Cut-and-cover concrete structure with single-bay portal, asphalt approach, and two vent stacks, built ca. 1940. Adjoins AA Battery #1 Powerhouse-Storeroom. Used by Coast guard as part of Primary Radio Receiver Station, ca. 1966–-78. Earth cover eroded from south side.
AA Battery #1 Powerhouse-Storeroom	LCS: 057611 FC1275 ASMIS: GOGA00022	41972	C	WW I-II	Cut-and-cover concrete structure with two-bay portal, concrete approach, and two vent/exhaust stacks, built ca. 1940. Adjoins AA Battery #1 Powerhouse-Storeroom. Used by Coast guard as part of Primary Radio Receiver Station, ca. 1966–-78.
AA Battery #1 Director's Pit	LCS: 057612 FC1200A ASMIS: GOGA00022	41974	C	WW I-II	Open square concrete pit with cover, east of gun blocks on highpoint of western Wolf Ridge, built ca. 1940; cover removed ca. 1946.
AA Battery #1 Office, Day Room-Mess	FC1200B ASMIS: GOGA00022	42023	C	WW I-II	Two separate dug-in frame structures on ridge below AA Battery #1 director's pit and height finder, built 1942, abandoned ca. 1946. Day room-mess fully collapsed.
AA Battery #1 Hutment / Anteroom	FC1200C ASMIS: GOGA00022	42024	C	WW II	Dug-in frame structures on ridge connected by wood tunnels to AA Battery #1 director's pit / height finder, built 1942, and abandoned ca. 1946. Partially collapsed.
AA Battery #1 Quonset-Storeroom	FC1200D ASMIS: GOGA00022	42025	C	WW II	Dug-in frame and metal Quonset-type structures on ridge connected to adjoining hutment-anteroom by wood tunnels, built 1942 and abandoned ca. 1946. Quonset-type bunk room intact with concrete bomb-proof burster slab; frame structures partially collapsed.
AA Battery #1 Gun Platforms (Gun Blocks)	LCS: 021331 FC1200E (1-3) ASMIS: GOGA00022	42026	C, U	WW I-II	Three dispersed circular concrete platforms for anti-aircraft guns on ridge west of AA Battery #1 magazine and storeroom, built 1940. Block 1 visible; blocks 2 and 3 removed or possibly buried during construction of adjoining AAA Position No. 10 gun emplacements.
AA Emplacement, Unidentified	FC UAA-1 ASMIS: GOGA00022		C	WW I-II	Unidentified anti-aircraft sandbag-type emplacement on hillside west of A Battery #1 director's pit, built ca. 1942.

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
AA Emplacement, Unidentified	FC UAA-2 ASMIS: GOGA00022		C	WW I-II	Unidentified anti-aircraft sandbag-type emplacement on hillside west of A Battery #1 director's pit, built ca. 1942.
AA Emplacement, Unidentified	FC UAA-3 ASMIS: GOGA00022		C	WW I-II	Unidentified anti-aircraft sandbag-type keyhole-shaped emplacement on ridge between AA Battery #1 height finder and SCR-682 #2 radar site, built 1944 (per graffiti in concrete).
AAA Position #10 Gun Emplacements (4–6)	LCS: 058124 FC1200G ASMIS: GOGA00022		C	Cold War	Three large Korean War-era concrete and concrete sandbag gun pits for 120-mm anti-aircraft guns, built ca. 1951, abandoned ca. 1954. Many concrete sandbags removed ca. 1954, probably for use as ornament at Nike sites built 1954–55, notably SF-87L. Concrete parapets broken up and gun pits eroded and partially covered in vegetation.
AA Battery #1-AAA Position # 10 Shelters	LCS: 057607 FC1200F ASMIS: GOGA00022	42027	C	WW I-II, Cold War	Three underground Quonset-type corrugated steel structures near AA #1 gun platforms, built ca. 1940 as ammunition bunkers; trenches to AAA Position No. 10 gun pits added to shelters near platforms 2 and 3, ca. 1951.Original Quonset structures have bomb-proof burster courses and concrete portals.
B1S1 Townsley	LCS 021337 FC1273 ASMIS: GOGA00497	42032	C	WW I-II	Cut-and-cover rectangular-front concrete fire-control station in Wolf Ridge cluster of fire-control stations, with camouflage rock cover, dry-laid stone retaining walls, and manhole to west, built 1941. Largely intact rock and earth cover. (Vacant)
BC Townsley	LCS: 021336 FC1271 ASMIS: GOGA00497	41976	C	WW I-II	Cut-and-cover rectangular-front concrete fire-control station in Wolf Ridge cluster of fire-control stations, with camouflage rock cover, dry-laid rock retaining walls, and concrete portal and manhole on south side, built as Battery Commander station for Battery Townsley, 1940. Eroded rock and earth cover; on edge of landslide. (Vacant)
G1 Cronkhite	LCS: 021334 FC1272 ASMIS: GOGA00497	42031	C	WW I-II	Pillbox-type cut-and-cover concrete fire-control station in Wolf Ridge cluster of fire-control stations, with steel dome on sighting room, built 1941. Remains of wood cable hut at rear. On edge of landslide. (Vacant)
Machine Gun Pit	FC MG-2 ASMIS: GOGA00022		C	WW I-II	Concrete gun pit west of AA Battery #1 director's pit with 2" pipe post, built ca. 1941. One of a pair.
Machine Gun Pit	FC MG-3 ASMIS: GOGA00022		C	WW I-II	Concrete gun pit west of AA Battery #1 director's pit with 2" pipe post, built ca. 1941. One of a pair.
Wolf Ridge Powerhouse (Telephone Switchboard Room)	LCS: 021336 FC1269 ASMIS: GOGA00022	42077	C	WW I-II	Cut-and-cover square concrete building southeast of BC Townsley, with roof hatch and door on west side, built as powerhouse for fire-control stations, 1944; later used as switchboard room. Earth cover heavily eroded.
Views and Vistas					
AA Battery #1 Field of Fire			C	WW I-II	360-degree panoramic views from three anti-aircraft gun mounts, established 1940. Remain unobstructed.
AAA Position #10 Field of Fire			C	Cold War	360-degree panoramic view from three anti-aircraft emplacements, established 1951. Remain unobstructed, but center of viewpoint not clear due to ruined state of emplacements.
B1S1 Townsley Sight Lines			C	WW I-II	Fire-control sight lines south west across Pacific, established 1941. Remain unobstructed.
BC Townsley Sight Lines			C	WW I-II	Fire-control sight lines south west across Pacific, established 1940. Remain unobstructed.

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
G1 Cronkhite Sight Lines			C	WW I-II	Fire-control sight lines south west across Pacific, established 1941. Remain unobstructed.
Small-Scale Features					
No associated features					
Archeological Sites					
AA Battery #1 Cable Trench			C	WW I-II	Remains of narrow concrete trench on eroded face of steep slope across from AA Battery #1 storeroom-powerhouse and magazine, built ca. 1940; probably contained communications or electrical cable to director's pit and hutment. Cables gone.
AA Battery #1 Fuel Tank Stands	LCS: 058099 FA1261 ASMIS: GOGA00022	42075	U	WW I-II	Concrete footings from 3 fuel tanks at upper end of lower AA Battery #1 road, built 1941; tanks removed ca. 1985.
AA Battery #1 Ready Room Foundation	FC1275A ASMIS: GOGA00022		C	WW I-II	Rectangular concrete foundation slab and rock cut north of AA Battery #1 powerhouse-storeroom, built ca. 1941; used by 120mm gun crews, ca. 1951–55; superstructure probably removed soon after.
AA Emplacement Trace, Unidentified	FC UAA-4 ASMIS: GOGA00022		C	WW I-II	Remains of unidentified anti-aircraft sandbag-type emplacement on ridge above B1 S1 Townsley, built ca. 1942. Sandbags removed ca. 1951, most likely for AAA Position No. 10.
Acid Storage Warehouse Foundation Slab	LCS: 058098 FC1260 ASMIS: GOGA00022	42076	U	WW I-II	Massive solid rectangular concrete foundation on sloping site, with steps to former center entrance, built ca.1957 adjacent to site of dummy warehouse, ca. 1941– 57. Foundation slab of dummy warehouse appears to be part of concrete approach drive. Warehouse superstructure removed ca. 1985.
B1S1 BC 129 Shell	FC1263 ASMIS: GOGA00497	42030	U	WW I-II	Rectangular-front concrete cut-and-cover fire-control station in Wolf Ridge cluster of fire-control stations, built 1943. Dislocated by landslide approximately 150′ southwest, ca. 1995; structure appears intact and is standing upright.
B4S4 Davis Shell	FC1262 ASMIS: GOGA00497	42029	U	WW I-II	Circular-front concrete cut-and-cover fire-control station in Wolf Ridge cluster of fire-control stations, built 1943. Dislocated by landslide approximately 150′ southwest, ca. 1995; structure appears intact and is standing upright.
SCR-296 #4 Radar Complex Remnants	ASMIS: GOGA00495		C	WW I-II	Collection of building and structure remnants on loop road off lower AA Battery #1 access road, built ca.1943, abandoned and superstructures removed ca. 1948. Remnants include concrete pylon footings from radar tower, concrete foundation with floor tiles from transmitter building, concrete foundations from two power houses, and concrete-sandbag-paved area between tower footings and transmitter building.
SCR-682 #2 Radar Complex Remnants	ASMIS: GOGA00496		C	WW I-II	Concrete building and structure remnants on ridge east of AA Battery #1 director's pit, built ca.1944, abandoned and superstructures removed ca. 1948. Remnants include square concrete footings from radar antenna tower, concrete foundation and retaining walls and steps from transmitter building, concrete foundation of powerhouse, collapsed dug-in hutment on slope to north, and concrete stepping-stone walks to transmitter building from access road and to hutment.

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Wolf Ridge Foxholes	ASMIS: GOGA00487		C	WW I-II	Series of foxholes at upper (east) approach to AA Battery #1, west of SCR-682 #2 radar complex. Foxholes are scrub-covered and inconspicuous in the landscape.
ELK VALLEY DEFENSES (DRAWING 1.10)					
Spatial Organization					
No associated features					
Land Use					
No associated features					
Circulation					
Tennessee Valley Road (Lower Tennessee Valley Trail)			C	WW I-II	Unpaved road through Tennessee Valley to Elk Valley Defenses, built 1944; section within Elk Valley Defenses terminates in red-macadam-paved loop at Tennessee Beach in front of cable manhole Mines I. Half of loop terminus lost to erosion. See also Fort Cronkhite Reservation. (Public trail)
M4 Mines I Access Road			C	WW I-II	Unpaved switch-back road up ridge north of Tennessee Beach to fire-control station M4 Mine 1, built 1944. (Trail to scenic overlook)
Trail to M4 Mines 1			N-C	Non-historic	Short trail from Cable Manhole Mines 1/Tennessee Valley Road to M4 Mines I Access Road, built after 1974.
Topography					
No associated features					
Vegetation					
No associated features					
Buildings and Structures					
M4 Mines 1	LCS: 055348 FC1206 ASMIS: GOGA00498	42028	C	WW I-II	Cut-and-cover round-front concrete fire-control station with access portal and stack, on high ridge north of Tennessee Beach, built 1944, abandoned ca. 1959. Similar design to BC 129 BC station, Fort Barry. Portion of front wall lost. Surrounding area heavily eroded; most of earth cover and rock camouflage lost. Stone retaining wall remains near portal. (Vacant and open to public access; graffiti-covered)
Mines I Powerhouse	LCS: 055349 FC1206A ASMIS: GOGA00498		C	WW I-II	Cut-and-cover concrete building with access portal and vent tower, built 1944, abandoned ca. 1959. (Vacant and open to public access; graffiti-covered)
Cable Manhole Mine I	LCS: 055350 FC1206B ASMIS: GOGA00498		C	WW I-II	Concrete cut-and-cover sub-grade structure with access hatch along north side of Tennessee Valley Road terminus, built ca. 1940, abandoned ca. 1959. Earth cover eroded; serves as viewing platform.
Elk Valley-Cronkhite Cable Hut	ASMIS: GOGA00498		U	WW I-II	Concrete cut-and-cover sub-grade structure on south side of Tennessee Beach, built 1944, abandoned ca. 1959. Not located/not visible (probably covered by sand and vegetation).

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Views and Vistas					
M4 Mines 1 Sight Lines			C	WW I-II	Fire-control sight lines across North Channel Minefield in the Pacific, established 1944. Remain unobstructed.
Small-Scale Features					
Tennessee Beach Overlook Bench			N-C	Non-historic	Wood bench near Cable manhole Mines I, installed ca. 1980.
Archeological Sites					
No associated features					
SF-87L NIKE MISSILE LAUNCH SITE (DRAWINGS 1.10, 1.11)					
Spatial Organization					
SF-87L Exclusion Area (Marine Mammal Center)			N-C	Cold War	Fence-enclosed secured launch site area of SF-87L in east half of larger Limited Area, established 1955. Fence removed and area redeveloped beyond historic limits as Marine Mammal Center, 1975–2009. N-C per SHPO DOE.
SF-87L Limited Area			N-C	Cold War	Fence-enclosed secured area of SF-87L site excluding the Exclusion Area, established 1955. Space still defined by perimeter fence; altered through growth of trees at west end and by redevelopment of Marine Mammal Center. N-C per SHPO DOE.
SF-87L Kennel Pen			N-C	Cold War	Fence-enclosed pen surrounding SF-87L kennels, measuring approximately 50′ by 60′, established 1960. N-C per SHPO DOE.
SF-87L Kennel Training Area			N-C	Cold War	Fence-enclosed secured area at lower west corner of SF-87L Limited Area used to train guard dogs, measuring approximately 125′ by 250′, established 1960. Area historically mown or open ground; presently scrub covered. N-C per SHPO DOE.
SF-87L Support Building Cluster			N-C	Cold War	Area at west side of SF-87L Limited Area containing the warhead building, standby generator building, missile assembly building, and several small sheds, organized along a loop road and a central berm, developed between 1955 and 1965. Space became enclosed post-1966 with growth of surrounding Monterey pine and cypress woods. Space includes two post-1966 buildings, along with vehicle and equipment stored along loop road. N-C per SHPO DOE.
Land Use					
Marine Mammal Center			N-C	Non-historic	Institutional use and redevelopment of former SF-87L Exclusion Area and adjoining portions of SF-87L Limited Area, established ca. 1975 and expanded 2009.
Park Maintenance Area			N-C	Non-historic	Park roads, trails, and other grounds maintenance activities housed in cluster of SF-87L support buildings in west part of Limited Area; includes vehicle storage yards to the southeast on former Fort Cronkhite parade ground.
Circulation					
Marine Mammal Center Drive and			N-C	Cold War, Non-	Asphalt-paved entrance road to and around Marine Mammal Center, partly on alignment of Nike access

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Parking				historic	road within SF-87L site, built ca. 1975, 2009. Includes road-side parking area. Extends across parade ground to Bunker Road.
SF-87L Access Road			N-C	Cold War	Asphalt-paved uncurbed road from Bunker Road to Exclusion Area (Marine Mammal Center), built 1955. Section in center removed and east end altered as entrance road for Marine Mammal Center, ca. 1975. West end retains historic alignment. N-C due to loss of integrity. N-C per SHPO DOE.
SF-87L Kennel Walk			N-C	Cold War	Concrete walk from access road to kennel pen, built ca. 1960. N-C per SHPO DOE.
SF-87L LCT and Kennel Access Road			N-C	Cold War	Paved road from SF-87L access road to kennels and LCT van pad, built ca. 1960/62. Paved pull-off at south end (possible parking area) and unpaved approach to kennels. N-C per SHPO DOE.
SF-87L Support Buildings Loop Road			N-C	Cold War	Paved loop road off SF-87L access road connecting three Nike support buildings (present park maintenance area), built ca. 1955. N-C per SHPO DOE.
Topography					
SF-87L Diversion Ditch			N-C	Cold War	Unpaved ditch in hillside above SF-87L, built ca. 1954 to divert runoff. N-C per SHPO DOE.
SF-87L Exclusion Area Cut			N-C	Cold War	Large cut in hillside, built ca. 1954 to create level terrace for SF-87L Exclusion Area (Marine Mammal Center). N-C per SHPO DOE.
SF-87L Warhead Building Berm			N-C	Cold War	Oval-shaped berm, approximately 8′ high, south of warhead building 1109, built 1959 to shield nearby buildings from possible explosion. Historically mown turf with several Monterey pine and cypress on top; presently covered in trees. N-C per SHPO DOE.
Vegetation					
SF-87L Warhead Building Berm Grove			N-C	Cold War	Monterey cypress and pine trees on berm in complex of SF-87L support buildings (park maintenance area), planted ca. 1960. Spread to cover most of berm, post-1966. N-C per SHPO DOE.
SF-87L Limited Area Perimeter Groves			N-C	Cold War	Large groves of Monterey pine and cypress; initially planted as two small groups of trees in the western part of Limited Area, ca. 1960. Extensive spread post-1966. N-C due to major change in extent of planting; undetermined whether original trees remain. N-C per SHPO DOE.
Buildings and Structures					
Marine Mammal Center Complex	FC1132	59438	N-C	Non-historic	Complex of outdoor holding tanks, pens, three frame support buildings, and multi-wing Research Hospital and Educational Center in former SF-87L Exclusion Area (launch pads), developed between ca. 1975 and 2009. Complex also includes tanks, solar panels, fences, and a variety of equipment.
Park Maintenance Area Equipment Shed			N-C	Non-historic	Long equipment shed with open sides and corrugated metal shed roof in park maintenance area across from Missile Warhead Building, built ca. 1980.
Park Storage Shed			N-C	Non-historic	Frame shed north of building 1107 in park maintenance area, built ca. 2000.
SF-87L Flammable Storage Building	FC1120	42017 56654	N-C	Cold War	Small, square concrete block building with shed roof, in cluster of SF-87L support buildings, built 1959. N-C per SHPO DOE. (NPS Marin Roads and Trails maintenance)

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
SF-87L Kennel Storage Shed	FC1125	42019	N-C	Cold War	Prefabricated metal building on concrete slab near kennels, built 1965. N-C per SHPO DOE. (Marine Mammal Center)
SF-87L Kennels	FC1123	42018	N-C	Cold War	Four adjoining chain-link fence enclosures and wood dog houses on concrete pad, built 1960. N-C per SHPO DOE. (Marine Mammal Center)
SF-87L LCT Pad			N-C	Cold War	Reinforced concrete pad south of Exclusion Area for Launch Control (LCT) van, with asphalt access walk, built 1962. LCT van removed ca. 1971. N-C per SHPO DOE.
SF-87L Missile Assembly-Test Building	FC1106	42014	N-C	Cold War	One-story concrete-block shed-roof building with garage doors at either end and lower wing on south side, in cluster of SF-87L support buildings, built 1955. N-C per SHPO DOE. (NPS Marin Roads & Trails maintenance)
SF-87L Missile Warhead Building	FC1109	42048	N-C	Cold War	One-story concrete-block building with low-pitched gable roof and large roll-up garage doors at either end, built 1959. Originally known as Acid Fuel Station. N-C per SHPO DOE. (NPS Marin Roads & Trails maintenance)
SF-87L Propellant Fueling Facility (Acid Fuel Station)	FC1121	42051	N-C	Cold War	Outdoor station on north side of Warhead Building for fueling missiles, built 1955. Consists of sloped concrete pad for parking missile trailer at specific angle for fueling; steel davit for holding fueling equipment removed ca. 1971. N-C per SHPO DOE. (NPA Marin Roads and Trails hazmat storage)
SF-87L Ready Room	FC1104	42012	N-C	Cold War	One-story standard Army-design concrete block building south of Exclusion Area, built 1965, with non-historic addition. Used by Marine Mammal Center N-C per SHPO DOE.
SF-87L Section A Launcher	FC1101	42010	N-C	Cold War	Underground 3,981-square-foot missile storage shelter (magazine), and above-ground paved launch pad, built 1955. Redeveloped as site of Marine Mammal Center, 1975–2009. N-C per SHPO DOE.
SF-87L Section B Launcher	FC1100	42009	N-C	Cold War	Underground 3,976-square-foot missile storage shelter (magazine), and above-ground paved launch pad, built 1955. Redeveloped as site of Marine Mammal Center, 1975–2009. N-C per SHPO DOE.
SF-87L Standby Generator Building	FC1107	42015	N-C	Cold War	One-story shed-roof concrete-block building with small front wing, in cluster of SF-87L support buildings, built 1965. N-C per SHPO DOE. (NPS Marin Roads and Trails Office)
Views and Vistas					
SF-87L Sight Line to SF-87C			C	Cold War	Sight line between SF-87L LCT van (1128) and flight simulator group mast (gone) to SF-87C control site on Hawk Hill (BC 129). Contributes to larger district, although object of view (SF-87L) has been altered.
Small-Scale Features					
Marine Mammal Center Fence			N-C	Non-historic	Chain-link fence around Marine Mammal Center perimeter, added post-1975. Replaced Exclusion Area fence, 1955-ca.1975, but in different location. N-C per SHPO DOE.
SF-87L Kennel Pen Fence			N-C	Cold War	Chain-link fence enclosing pen and kennels, installed 1960. N-C per SHPO DOE.
SF-87L Kennel Training Area Fence			N-C	Cold War	Chain-link fence enclosing dog training area around kennel pen, installed 1960. N-C per SHPO DOE.
SF-87L Limited Area Fence			N-C	Cold War	Chain-link and barbed-wire fence around perimeter of SF-87L, installed ca.1955; encompasses Exclusion

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
					Area (Marine Mammal Center). Remains except for new openings to park maintenance yard (parade ground) and at Marine Mammal Center Entrance Drive. N-C per SHPO DOE.
SF-87L Utility Lines			N-C	Cold War	Overhead power lines on wood poles along SF-87L access road, installed ca. 1955; and street light on wood pole in SF-87L support building cluster, date of installation not known. Utility line appears to be on new alignment to Marine Mammal Center. N-C per SHPO DOE.
Archeological Sites					
SF-87L Sentry Station Foundation Slab	FC1102	42022	N-C	Cold War	Rectangular concrete pad from sentry station at entrance to SF-87L along Bunker Road, building constructed ca. 1959, removed ca. 1975. N-C per SHPO DOE.
SF-87L Sign Footing			N-C	Cold War	Rectangular concrete footing of entrance sign planter for SF-87L, located at Bunker Road and SF-87L access road, sign erected ca. 1955, removed ca. 1972. N-C per SHPO DOE.
SF-88C NIKE MISSILE CONTROL SITE (DRAWING 1.10)					
Spatial Organization					
SF-88C Secured Area			C	Cold War	Ridge-top space with open character defined by perimeter security fence, and series of internal retaining walls, buildings, and structures, established 1954. Space remains largely intact.
Land Use					
No associated features					
Circulation					
Bunker Road	LCS: 057508 FCR105		C	Cold War	Paved access road to SF-88C, extended east from SCR-682 #2 radar site, 1954. Landslides on western part of Wolf Ridge beginning in ca. 1980 destroyed portions of Bunker Road; vehicular access to SCR-682 blocked. See also Fort Cronkhite Reservation.
SF-88C Access Road			C	Cold War	Paved road connecting buildings and radar sites within SF-88C, from Bunker Road on west to ready room 1186 on east, built 1954 with alterations through 1962. Includes aprons and parking areas.
SF-88C Bore Site Mast Access Road			C	Cold War	Unpaved road from ready room 1186 to bore site mast at east end of SF-87C, built ca.1962. Roadbed eroded and encroached by vegetation.
Ready Room Walk			C	Cold War	Concrete walk and long flight of concrete steps with pipe railings between ready room 1186 and standby generator building 1185, built ca. 1955. North set of stair railings partly destroyed. Walk at top of stairs appears to be covered in vegetation.
SF-88C Helipad North	LCS: 021311 FC1171	42035	C	Cold War	Asphalt pad on western side of SF-88C complex, built 1961. Concealed by vegetation.
SF-88C Helipad South	LCS: 021315 FC1178	42034	C	Cold War	Asphalt pad on western side of SF-88C complex with painted 'H', built 1961.
Topography					
No associated features					

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
Vegetation					
SF-87C Iceplant Groundcover			C	Cold War	Iceplant groundcover east of standby generator building 1185, planted ca. 1955 most likely to stabilize steep slope to ready room building 1186. Original extent of planting not known; likely spread after 1966. Not on drawing 1.10.
Buildings and Structures					
SF-88C Sentry Station	LCS: 021316 FC1179	42063	C	Cold War	Small concrete-block flat-roof building with wide eaves, inside main gate at Bunker Road, built 1959. Holes in roof, doors and windows missing. (Vacant)
SF-88C HIPAR (High Power Acquisition Radar) Building	LCS: 021317 FC1180	42036	C	Cold War	Large one-story concrete-block shed-roof building on north side of SF-88C built to house HIPAR equipment, 1962. Doors missing. (Vacant)
SF-88C Concrete Pad	LCS: 021318 FC1181	42052	C	Cold War	Rectangular concrete pad north of Interconnecting Corridor building 1183, built 1959; probably for parking radar van.
SF-88C FUIF (Fire Unit Integration Facility) Pad	LCS: 021319 FC1190	42054	C	Cold War	'T'-shaped concrete pad north of Interconnecting Corridor Building 1183, for parking FUIF van, built 1962.
SF-88C Interconnecting Corridor Building (Integrated Control Center)	LCS: 021320 FC1183	42038	C	Cold War	'T'-shaped concrete-block flat-roof building with concrete pads and openings for BC and RC vans on west side (1188, 1189), built 1957. (Vacant)
SF-88C Old LOPAR Pad	LCS: 021319 FC1182	42053	C	Cold War	Square concrete pad west of Interconnecting Corridor Building, built 1957 as base for Low Power Acquisition Radar; LOPAR removed to new site to southeast (1195), 1962.
SF-88C Standby Generator Building	LCS: 021322 FC1185	42066 42069	C	Cold War	One-story concrete-block flat-roof building with three garage bays and two roof levels, built 1957. Has three exterior bays divided by concrete walls at rear. Taller section has collapsed roof; doors missing and graffiti covered. (Vacant)
SF-88C Ready Room	LCS: 021323 FC1186	42058	C	Cold War	One-story flat-roof building at east end of SF-87C complex, built 1955; later plywood entrance shelters on south side. Doors and windows missing; graffiti covered. (Vacant)
SF-88C HIPAR Radar Pad	LCS: 021324 FC1187	42037	C	Cold War	Large hexagonal concrete pad west of HIPAR building 1180, built 1962 with trussed steel radar pedestal; pedestal and radar unit removed ca. 1977.
SF-88C BC Van Pad	LCS: 021325 FC1188	42056	C	Cold War	Concrete pad next to Interconnecting Corridor Building for parking BC van, built 1957.
SF-88C RC (Radar Control) Van Pad	LCS: 021326 FC1189	42057	C	Cold War	Concrete pad next to Interconnecting Corridor Building for parking RC van, built 1957.
SF-88C TRR (Target Ranging Radar) Pedestal	LCS: 010117 FC1194	42046	C	Cold War	Concrete and steel 10-foot-tall tower in center of SF-87C complex, built 1962. Radar unit removed ca. 1977. Steel platform removed 2013, leaving concrete column.
SF-88C LOPAR (Low Power Acquisition Radar) Pad	LCS: 021329 FC1195	41973	C	Cold War	Raised circular concrete pad with pipe railing, located on south-central side of SF-87C complex, built 1962 as replacement for first LOPAR pad 1882 west of Interconnecting Corridor Building, built 1957.
SF-88C MTR (Missile Tracking Radar) Pad	LCS: 021330 FC1196	42043	C	Cold War	Concrete pad on edge of slope at south side of SF-87C complex, on terrace supported by concrete retaining walls and with pipe railings, built 1962; replaced earlier MTR pad near same site, built 1954.

TABLE 2.3. LANDSCAPE FEATURE INVENTORY, FORT CRONKHITE MILITARY RESERVATION

FEATURE NAME	OTHER RESOUCE INVENTORY	FMSS LOCATION	EVAL-UATION	HISTORIC PERIOD	HISTORICAL DATA
SF-88C TTR (Target Tracking Radar) Pedestal	LCS: 010118 FC1197	42047	C	Cold War	Concrete and steel 20-foot-tall tower in center of SF-87C complex, built 1962. Radar unit removed ca. 1977. Steel platform collapsed ca. 2010 and removed in 2013, leaving the concrete column.
NPS Radio Tower			N-C	Non-historic	Steel tower and chain-link fence in center of SF-88C complex, installed ca. 1975.
SF-88C HIPAR Building Retaining Wall			C	Cold War	Concrete retaining wall along north and east sides of HIPAR building terrace, with pipe railings, built 1962.
Views and Vistas					
SF-88C Sight Line to SF-88L			C	Cold War	Sight line between SF-88L to SF-88C bore site mast (1193) on Wolf Ridge, established 1955. Sight lines from SF-88C remain unobstructed; partially obstructed within SF-88L site.
Small-Scale Features					
SF-88C Battalion Sign	LCS: 021309 FC1161	42044	C	Cold War	Freestanding 4-foot-high concrete-block wall painted with battalion insignia and profile of Golden Gate Bridge, with brick-edged bed in front, built 1965. Located along access road south of sentry station. Painting faded.
SF-88C Perimeter Security Fence and Entrance Gates	LCS: 021310 FC1167	42021	C	Cold War	Chain-link and barbed-wire fence along perimeter of SF-88C site, installed ca. 1954; fence extended along Bunker Road at entrance, ca. 1959.
SF-88C Water Tank	FC1173		C	Cold War	Cylindrical high-pressure tank south of Interconnecting Corridor Building, installed 1959; adjoining concrete footing from redwood holding tank, installed 1959, tank removed after 1974.
SF-88C Lightning Mast Base	LCS: 021312 FC1176	42040	C	Cold War	Concrete base for 30-foot tall telescopic aluminum pole north of MTR pad, built 1955.
SF-88C Lightning Mast Base	LCS: 021314 FC1177	42041	C	Cold War	Concrete base for 30-foot tall telescopic aluminum pole north of MTR pad, built 1955.
SF-88C Bore Sight Mast (Columnation Mast) Base	LCS: 021328 FC1193	41978	C	Cold War	14-foot-tall concrete post for bore sight mast, and adjoining access platform at east end of SF-87C site, built 1962; mast removed after 1974.
SF-88C Standby Generator Plant Fence			C	Cold War	Chain-link and barbed-wire fence on east side of standby generator building 1185, built ca. 1962; function not determined.
Archeological Sites					
SF-88C Day Room Building Remnant	LCS: 021321 FC1184	42020	U	Cold War	Concrete slab foundation from one-story building on east side of Interconnecting Corridor building 1183, built 1961. Purportedly built for use by Olympic Golf Club. Superstructure removed post-1974.

TABLE 2.3 NOTES

1 Monterey cypress at east end of Cantonment visible in 1960 aerial looking southeast.
2 Monterey cypress at east end of Cantonment visible in 1960 aerial looking southeast.
3 Jack Brown photograph of Fort Cronkhite administration building, ca. 1953, showing dracaena in center of lawn.
4 Tank cover ("WMB") shown on US Army, "Fort Cronkhite, Calif, Sidewalks for Temp Housing," July 23, 1941, GOGA 20380.

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite

Golden Gate National Recreation Area
Sausalito, California

Fort Cronkhite
Analysis and Evaluation Plan

National Park Service
Olmsted Center for Landscape Preservation
www.nps.gov/oclp

in partnership with
Department of Landscape Architecture
SUNY College of Environmental
Science and Forestry, www.esf.edu/la/

SOURCES

1. NPS, Marin County GIS data
2. Fort Cronkhite CLR 1945–72 period plan
3. Fort Cronkhite CLR Existing Conditions Plan

DRAWN BY

John Auwaerter, Laura Roberts, Illustrator CS5, 2014

LEGEND

- Non-historic feature (white fill)
- Feature removed since 1966
- Property boundary
- Historic fortification boundary
- Character area boundary
- Building
- Structure, Substructure
- Wall
- Water tank, reservoir
- WWII-era casemated battery
- Earth parapet of defensive work
- Temp. gun emplace., machine gut pit
- WW II defensive position
- Road, asphalt
- Road, earth/gravel
- Trail
- Fence
- Remnant, trace (in 1966, present)
- Bridge
- Deciduous trees
- Coniferous trees
- Native woods
- Chapparal or scrub
- Grassland, lawn, or bare earth
- Wetland
- Stream
- Rock cliff
- Rip rap
- Beach
- Cut, Fill
- 50' contours
- Power line

NOTES

1. Plan shows landscape in 2014 compared with 1966; features or extent of features added after 1966 shown in white, removed after 1966 by dashed line.
2. All features shown at approximate location and scale; vegetation represents overall character, not precise limits or specimens.
3. Plan does not show all overhead utility lines, trails, minor jeep roads, field defenses, and antiaircraft gun emplacements.
5. White mask indicates limits of Fort Cronkhite study area.

Drawing 2.3

CHAPTER 2 ENDNOTES

1 John Brinckerhoff Jackson, "Landscape as Seen by the Military," in *Discovering the Vernacular Landscape* (New Haven: Yale University Press, 1984), 135.

2 Steamship Tennessee Remains, listed April 15, 1981, National Register #81000102.

3 Forts Baker, Barry, and Cronkhite, National Register Information System, 73000255; Thomas Lile, Architect, National Register of Historic Places Inventory-Nomination Form, "Forts Baker, Barry and Cronkhite" (Unpublished National Register form prepared for the National Park Service, March 26, 1973.

4 National Register form, 1973. A typed addendum at the bottom of the first page states that Batteries Spencer, Wagner, Gravelly, and Kirby are "on State of California Property," thus indicating the nomination included state park land. The district boundaries were roughly identified by four point that corresponded to a rectangle drawn on a USGS map, which excluded Point Bonita, Tennessee Valley, and Point Diablo.

5 Erwin N. Thompson, National Register of Historic Places Inventory-Nomination Form, "Rancho Sausalito; Lime Point Military Reservation; Forts Baker, Barry and Cronkhite; Marin Headlands" (Unpublished National Register form prepared for the National Park Service, January 11, 1979); Steve Haller, Historian, Golden Gate National Recreation Area, e-mail to John Auwaerter, February 8, 2013.

6 "Amendment to National Register Nomination, Forts Baker, Barry and Cronkhite Historic District" (Draft National Register form section 8, December 1996.

7 James P. Delgado and Anne Coxe Toogood, National Register of Historic Places Inventory-Nomination Form, "Point Bonita Light Station" (Draft National Register form prepared for the National Park Service, March 25, 1980).

8 National Park Service(author not identified), National Register of Historic Places Inventory-Nomination Form, "Point Bonita Life Saving Station Complex" (Draft National Register form prepared for the National Park Service, n.d.).

9 Point Bonita Light station, National Register Information System, 91001099; Jack Bookwalter, National Register of Historic Places Inventory-Nomination Form, "Point Bonita Light station" (Unpublished report, October 6, 1989).

10 State of California Office of Historic Preservation (SHPO) to Mai-Liis Artling, Acting General Superintendent, Golden Gate National Recreation Area, June 30, 2003; Golden Gate National Recreation Area, "Amendment to the National Register Nomination for the Forts Baker, Barry, and Cronkhite Historic District" (draft National Register form, 2002).

11 National Park Service Pacific West Region, "Cultural Landscape Inventory: Fort Baker" (Unpublished report, 2004). This CLI was a conversion of a draft Cultural Landscape Report for Fort Baker completed in 2002.

12 National Park Service, "Fort Baker Plan Final Environmental Impact Statement" (National Park Service report, 1999), Summary, iii.

13 California SHPO Eligibility Determination in Fort Baker CLI, September 14, 2004, front matter.

14 Cathy Gilbert, Michael Hankinson, Amy Hoke, Erica Owens, Barbara Judy, Jessica Shors, Kimball Koch, and Len Warner, "Cultural Landscape Report for Fort Baker" (Unpublished National Park Service report, 2005), 4-5. This report suggests 1939 as an end date for the period of significance for Fort Baker.

15 The Fort Barry Capehart housing is recommended for re-evaluation as contributing resources in the district. See the following "National Register Recommendations" section.

16 National Park Service Pacific West Region, "Cultural Landscape Inventory: Point Bonita Historic District, Golden Gate National Recreation Area" (Unpublished report, 2005). The CLI identified a larger area for the district because it included surrounding waters to 300 feet from shore.

17 California SHPO Eligibility Determination in Point Bonita CLI, September 28, 2005, front matter.

18 Point Bonita CLI, Site Map, 9.

19 Point Bonita CLI, 7.

20 List of Classified Structures (LCS) database search for Forts Baker, Barry, and Cronkhite (accessed February 11, 2013).

21 Paul Scolari, Historian, Golden Gate National Recreation Area (former), telephone conversation with John Auwaerter, February 14, 2013.

22 Advisory Council on Historic Preservation, "Program Comment for Capehart and Wherry Era Army Family Housing and Associated Structures and Landscape Features (1949-1962)," *Federal Register*, vol. 67, no. 110 (June 7, 2002), 39332.

23 *Federal Register* (June 7, 2002), 39334-39335.

24 "Golden Gate Bridge Project Specific Recognitions, Golden Gate Bridge Landmark Designations and Other Distinctions," unpublished paper, ca. 2007, http://www.ggbsuicidebarrier.org/docs/GGB-recognitions-for-barrier-website.pdf (accessed July 9, 2014).

25 Golden Gate Bridge Highway & Transportation District, "Memorandum of Agreement with Historic Preservation Agencies for the Golden Gate Bridge Suicide Project," http://goldengatebridge.org/projects/sb/bo090521_moa.php (accessed February 8, 2013); Gilbert et al, *Cultural Landscape Report for Fort Baker*, 3; National Register map, Forts Baker, Barry, and Cronkhite National Register district, 1973; Golden Gate National Recreation Area List of Classified Structures, Alexander Avenue, LCS 369463 (accessed February 11, 2013).

26 Golden Gate National Recreation Area, draft National Historic Landmark multiple property submission files, historian's office, Fort Mason.

27 Military uses—primarily training and administration—continued on portions of the property as late as 2001 (and navigational uses still continue). However, such continued use alone does not justify extending the period of significance beyond 1974. Military uses after this date reflect a dwindling Army presence in the Headlands that is not presently known to be significant in national, state, or local contexts. National Register Bulletin *How to Complete the National Register Registration Form* (Washington, D.C.: National Park Service, 1977 revised 1997), 42.

28 Sections of Field Road, the Lighthouse Trail, and Rodeo Lagoon Trail may date to ca. 1855 as part of the road from Sausalito to Point Bonita, but overall these resources do not retain integrity from the period prior to 1866.

29 The need to meeting Criteria Consideration G (properties less than 50 years old that must exhibit exceptional significance) does not need to be met for continuation of periods of significance in a district. National Register Bulletin, *How to Apply the National Register Criteria for Evaluation* (Washington, D.C.: National Park Service, 1990 revised 1997), 43.

30 A portion of this tract was leased to Dean Witter as a private hunting preserve; the Tennessee Lagoon and Coastal Fire Road were constructed as part of the hunting preserve and therefore have no association with the military significance of the district.

31 California SHPO, determination of eligibility opinion on SF-87L, June 30, 2003. Park Historian Steve Haller, e-mail to John Auwaerter, July 25, 2014, recommending that the CLR concur with the SHPO eligibility determination for SF-87L.

32 National Park Service, National Register Bulletin, *How to Apply the National Register Criteria for Evaluation*, 44. Retention of the aspects is necessary for a property to convey significance; however, not all seven must be present for a property to retain integrity.

33 All information in the characteristics narratives is from the Site History, unless otherwise noted.

34 Notes on Feature Inventory:

- Feature names are based on latest Army designations as depicted on the "Building Information Schedule" for Forts Baker, Barry, and Cronkhite (April 1, 1971), where applicable. Alternate or current names are indicated in parentheses.
- A complete and accurate record of small-scale features and archeological sites was not documented for this project. Minor trails, drainage structures, and underground utilities are also not inventoried.
- Features are listed under Archeological Sites if the original form is no longer recognizable. For example, if only the foundation remnants of a building exist, it is inventoried under Archeological Sites, but if the four walls remain, the features is inventoried under Buildings and Structures. Likewise, if a road remains as a narrowed trail, it is inventoried under Circulation; if the road is no longer used for circulation and only traces are visible, it is inventoried under Archeological Sites.

35 Other factors may have been involved in the conversion of grassland to scrub. Additional research would be needed to determine these factors.

36 The history of public recreational use and access in the Headlands was not researched for this report.

37 A similar ditch or trench was built on the hillside above the Fort Cronkhite Cantonment in ca. 1941.

38 No documentation was found on the plantings with the post garden.

39 A comprehensive inventory of all small-scale features was not completed for this project.

40 Sections of Field Road may date to ca. 1855 as part of the road from Sausalito to Point Bonita, but overall the road reflects character of the Endicott through World War II periods. The Rodeo Lagoon Trail also follows a portion of the ca. 1855 road.

41 As a mortar battery, the lines of fire from Battery Alexander were not based on views from the mortar guns, which were set in deep pits.

3. Treatment Recommendations

For over four decades, the National Park Service has managed the cultural landscape of Forts Baker, Barry, and Cronkhite in keeping with its mission to preserve natural and cultural resources unimpaired for the enjoyment, education, and inspiration of current and future generations. The recommendations in this chapter build on this long history of stewardship by providing a renewed vision for the cultural landscape based on the research and analysis for this report that addresses the district as a whole.

The overall recommended treatment is to manage Forts Baker, Barry, and Cronkhite to preserve and reveal the historic Cold War-era character of the landscape at the end of military development in the Marin Headlands. This and the more specific treatment recommendations in this chapter are based on the overall goal of preserving and enhancing the landscape's historic character within the context of other resource values and contemporary park uses. The recommendations have been developed based on multi-disciplinary input from park and partner staff at a workshop held at Fort Mason on May 20, 2014 (see Appendix D for list of participants), and on the management direction of the 2014 Golden Gate National Recreation Area General Management Plan (GMP). The recommendations will help achieve the following GMP goals:

Maximize adaptive reuse and rehabilitation of cultural resources to support visitor enjoyment, understanding, and community connections. Recommendations support this goal by preserving and revealing landscape resources that are presently obscured and inaccessible, and by providing guidance for adaptive reuse.

Preserve and protect cultural resources so that visitors can connect with and appreciate these resources and their stories. Recommendations support this goal by stabilizing and restoring features that are deteriorating, reestablishing historic trails and roads, expanding interpretation, and enhancing the identify of historic military places and features.

Maintain the integrity and diversity of natural resources and systems. Recommendations support this goal by addressing preservation of the natural environment that was a key characteristic of the historic landscape.[1]

To advance these treatment recommendations toward implementation, the park will have to undertake additional planning through an integrated management approach that addresses all park values, in particular the protection of natural resources, along with costs and many other limiting factors. Thus, some of the more expansive recommendations may not be feasible given present constraints, but are nevertheless presented for the record. These recommendations reflect both ideal conditions, as well as incremental steps that could be taken in order to allow the cultural landscape of Forts Baker, Barry, and Cronkhite to reach its full potential as not only a nationally significant historic landscape, but a scenic, natural, recreational, and learning landscape as well.

TREATMENT FRAMEWORK

A treatment framework provides a philosophical basis for the treatment recommendations that follow, based on park legislation, policies, and planning. It articulates a guiding vision for the management of the Forts Baker, Barry, and Cronkhite cultural landscape, including a treatment date that serves as a benchmark for managing landscape character.

LEGISLATION, POLICIES, AND PLANNING

In 1972, Congress passed legislation establishing Golden Gate National Recreation Area, which began the transfer of Army, other federal, and state lands at Forts Baker, Barry, and Cronkhite to the management of the National Park Service. The purpose of the park as written in the legislation is to "preserve for public use and enjoyment certain areas of Marin and San Francisco Counties, possessing outstanding natural historic, scenic and recreational values. . .the Secretary [of the Interior] shall preserve the recreation area, as far as possible, in its natural setting, and protect it from development and uses which would destroy the scenic beauty and natural character of the area."[2]

The park legislation reflects the conservation mission of the National Park Service, defined in the Organic Act of 1916. The application of this mission to historic preservation (cultural resources) is articulated in *The Secretary of the Interior's Standards for the Treatment of Historic Properties*, which in turn informs a hierarchy of National Park Service regulations and policies that comply with the National Historic Preservation Act of 1966.[3] The application of these regulations and policies to cultural landscapes is contained within *National Park Service Management Policies* (2006), *Director's Order #28: Cultural Resource Management*, and *NPS-28: Cultural Resource Management Guideline*.[4]

PARK PLANNING

Cultural landscape reports are the implementation document for landscape treatment based on a park's General Management Plan (GMP). In 1980, Golden Gate National Recreation Area adopted its first GMP, which called for the preservation and restoration of natural and cultural resources, and making the park readily available to the broadest variety of park users. Forts Baker, Barry, and Cronkhite constituted two management units of the park: Fort Baker, containing the former East Fort Baker east of US 101 and south of Alexander Avenue, which in 1980 was still under Army control; and the Marin Headlands, which included West Fort Baker, Fort Barry, Fort Cronkhite, and a large area to the north including Tennessee Valley, Gerbode Valley, and Oakwood Valley. This GMP was supplemented by a plan applicable to the redevelopment of East Fort Baker adopted in 2000, and has been superseded by a new GMP adopted in 2014. The park and its partners

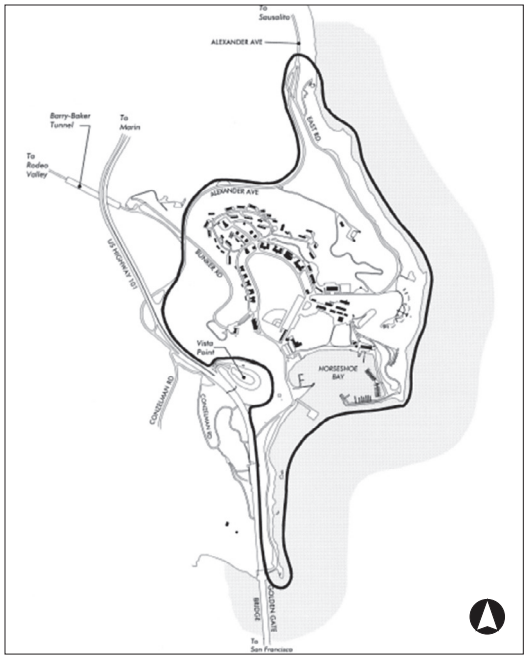


Figure 3.1. Map of the portion of Fort Baker east of US 101 and south of Alexander Avenue covered under the Fort Baker Plan adopted in 2000. ("Fort Baker Plan Final Environmental Impact Statement," October 1999)

have also developed a number of planning documents for the management of specific sites within Forts Baker, Barry, and Cronkhite.

Fort Baker Plan

In 1995, the park began work on a plan for the adaptive reuse of the East Fort Baker military reservation, which was scheduled for closure and transfer to the National Park Service (fig. 3.1). Based on the direction provided by the 1980 GMP, the Fort Baker Plan provided details and an environmental impact assessment for the conversion of the historic buildings of the Main Post into a retreat and conference center (CavalloPoint Lodge); removal of the adjoining Cold War-era Capehart housing and construction of new buildings for the retreat and conference center; retention of the Bay Area Discovery Museum in the former Quartermaster Area and the Coast Guard station along the Horseshoe Cove waterfront; and addition of a ferry landing, among other details (fig. 3.2) The plan also called for removal of the Station Hospital wooden bulkhead and return of the site to a beach, and preservation and interpretation of the fortifications, except for Cavallo Battery, which would be subject to a separate plan and environmental analysis. The Fort Baker Plan was adopted in 2000, and a CLR for Fort Baker was completed in 2005. Treatment of the Main Post was implemented in the CavalloPoint Lodge project through a partnership with the Fort Baker Retreat Group, LLC, and restoration of the parade ground by the park, between 2006 and 2008.

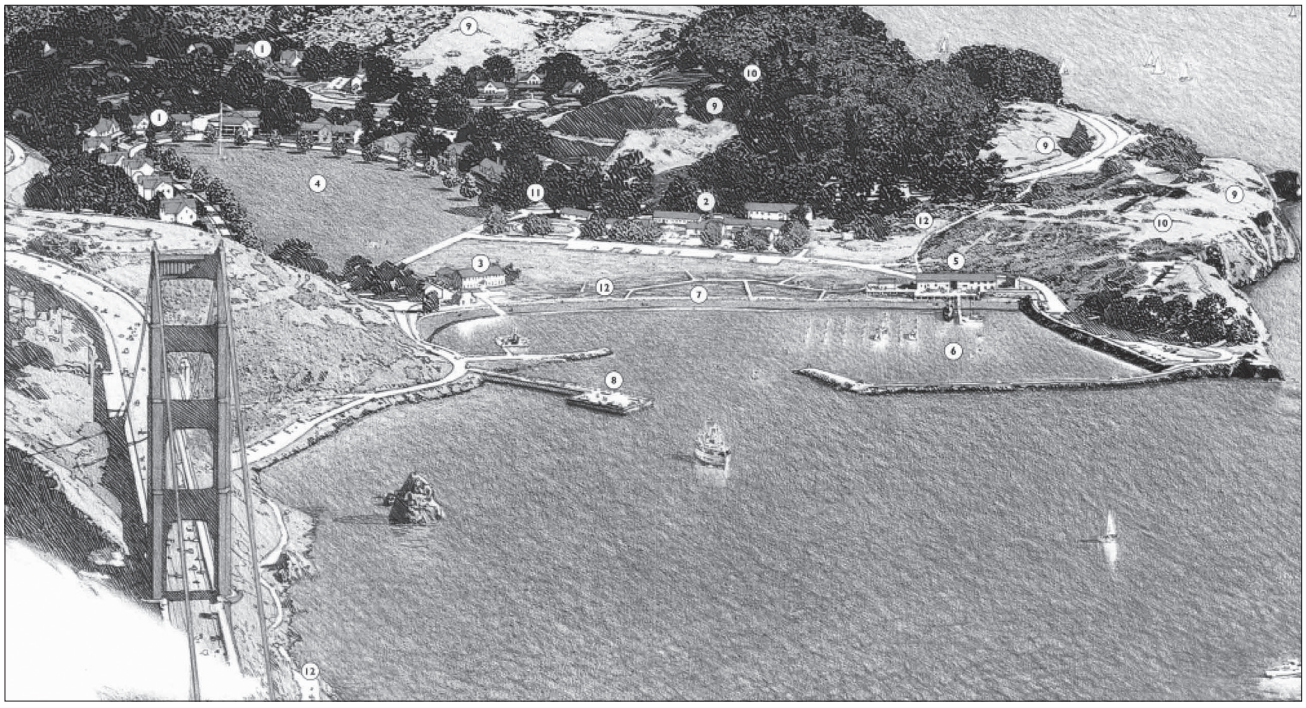


Figure 3.2. Perspective of Fort Baker looking north showing intended conditions as implemented under the Baker Plan adopted in 2000. The numbers refer to specific actions recommended in the plan. ("Fort Baker Plan Final Environmental Impact Statement," October 1999, figure 2-3)

General Management Plan

The new GMP adopted by the park in 2014 was based on a selected alternative named "Connecting People with the Parks." Much like the 1980 GMP, the new plan outlined broad concepts for management of the Marin County park lands that include Forts Baker, Barry, and Cronkhite, excluding the area east of US 101 and south of Alexander Avenue covered under the Fort Baker Plan. The GMP called for preservation of natural, cultural, scenic, and recreational qualities, improved access to the park for all visitors, and enhancement of visitor facilities and the national park identity. The plan emphasizes the importance of outdoor recreation, use of sustainable approaches to rehabilitation, improvement of trailheads, trails, roads, parking lots, camp sites, picnic areas, and restrooms at popular destinations, and addition of some new facilities to improve visitor services and support stewardship programs. The plan also called for retaining and improving existing park operational uses, and continuing to rely on partners to assist in preserving resources and offering programs and services to park visitors.[5]

The 2014 GMP established management zones that provide more detailed management direction to specific areas of the park. At the Marin Headlands, the GMP identified seven different management zones (fig. 3.3). These zones do not correspond with historic Army organization of the landscape and the landscape character areas in this CLR, but rather were defined by a combination of resource values and operational needs. From the largest to the smallest (excluding off-shore zones), these include the following, along with specific actions called out in the GMP:[6]

Natural Zone

This area covers the Tennessee Valley section of Fort Cronkhite, most of the Golden Gate frontage, and the interior portions of Fort Barry and Fort Baker, including Diablo Ridge, Lime Point Ridge, Wolfback Ridge, and portions of Rodeo Valley. Major cultural resources within this zone include AA Battery #2 and Battery Orlando Wagner.

The intent of this zone is to emphasize protection and restoration of habitat for threatened and endangered species. The Capehart houses north of Bunker Road are included in this zone and are identified for removal to provide for creek restoration and to create a more natural and scenic entrance to Rodeo Valley. Cultural resource objectives would be pursued in collaboration with, and where they complement, natural resource objectives. Cultural resources could be stabilized and preserved to maintain their historical integrity.

Evolved Cultural Landscape Zone

This area covers the areas with concentrations of defensive works at Wolf Ridge, Townsley Hill, Tennessee Point, South Lagoon, the western part of Rodeo Ridge, Bonita Ridge, and Kirby Cove. The major cultural resources within this zone

include most of the Endicott batteries, Battery Townsley, the former Coast Guard housing area (Life-Saving Station) near Point Bonita, and the secondary defensive works, AA Battery #1, World War II field defenses, and SF-88 control site on Wolf Ridge.

The intent of this zone is to preserve significant historic, archeological, architectural, and landscape features while being adapted for contemporary park and partner needs. This zone acknowledges that natural processes, which are often integral to the landscape, should be left unimpeded to the extent possible. In the headlands, this zone would be managed for the enjoyment of the beach, trails, and other outdoor recreation and educational opportunities, and to preserve and interpret the significant military features and structures while protecting natural resources. At Kirby Cove, beach access and camping would be maintained along with potential addition of cabins and access from the San Francisco Bay Water Trail. In addition, the historic forest plantations would be maintained and non-historic spread removed.

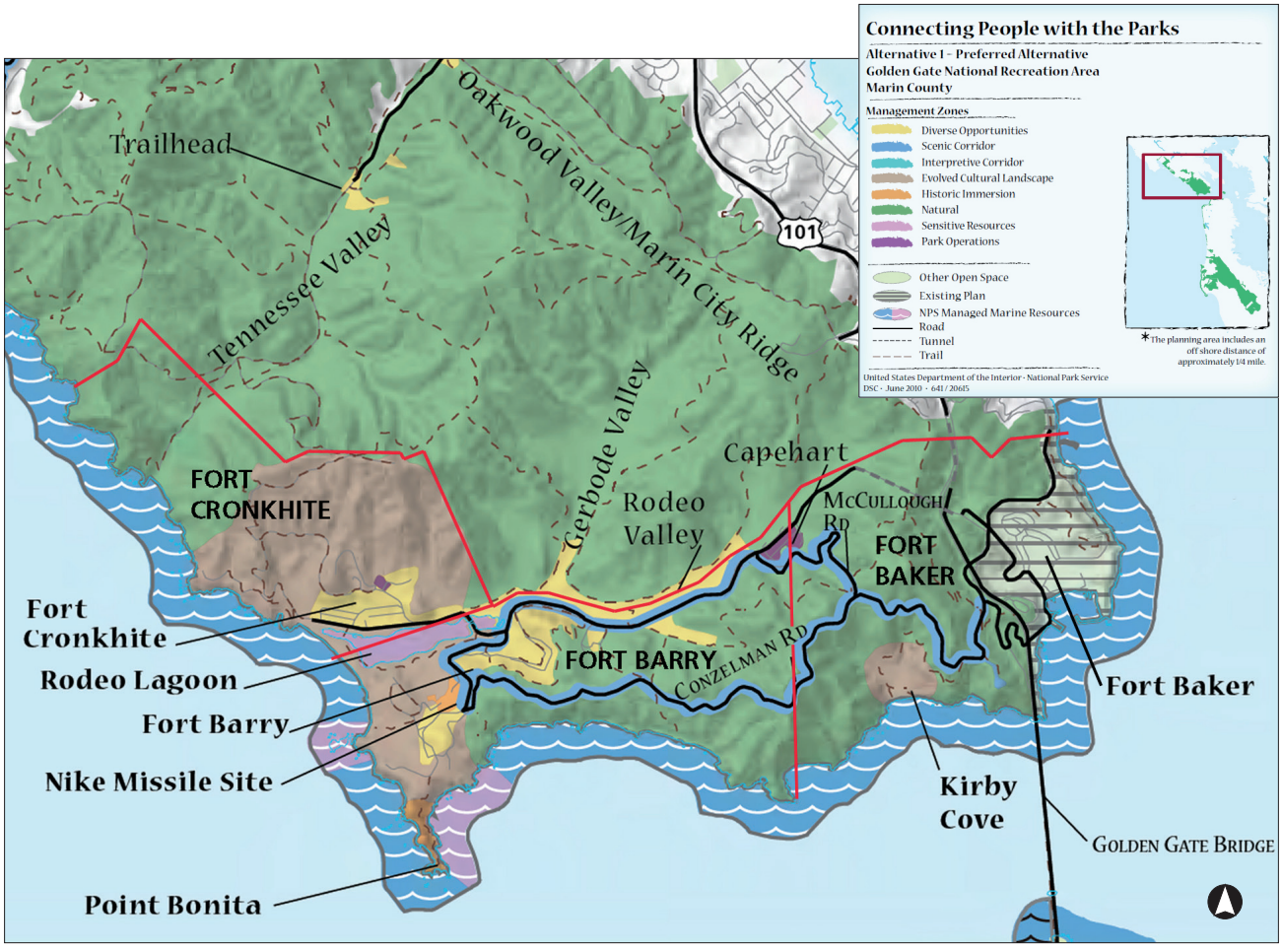


Figure 3.3. Detail of the 2014 General Management Plan management zones map for Marin County lands, with the historic limits of Forts Baker, Barry, and Cronkhite shown by the red line. Fort Baker is excluded from the GMP management zones because it is covered by the Fort Baker Plan. ("Golden Gate National Recreation Area / Muir Woods National Monument Draft General Management Plan/Environmental Impact Statement, Summary Edition," 2011, annotated by SUNY ESF)

Diverse Opportunities Zone

This zone covers the historic military support areas of Fort Barry and Fort Cronkhite along with contemporary recreational facilities, including the Cronkhite Cantonment, the Marine Mammal Center (SF-87 launch site/exclusion area), the Main Post of Fort Barry, the lower part of Bunker Road west of the Capehart housing area (including the Fort Barry Motor Pool/Presidio Stables and the rifle range), and the SF-88 administration area (YMCA) and Bicentennial picnic area and campground.

The intent of this zone is to provide visitors with a wide range of educational, interpretive, and recreational opportunities. Significance resources would be preserved while different levels of visitor use would be accommodated. At Forts Barry and Cronkhite, visitor amenities could be expanded to include improved trailheads, accessible trails, camping, picnicking, and orientation. Fort Cronkhite would become the visitor portal to the Headlands. Park facilities in these areas would support the concept of a "Center for the Environment," that in collaboration with park partners would expand programs on environmental education, science, history, culture, recreation, healthy lifestyle activities, and special events. A new visitor contact facility would be established at Fort Cronkhite to replace the existing visitor center in the Fort Barry chapel. Preservation of the historic scene at Fort Cronkhite would be emphasized, and the Fort Barry Main Post would continue to support programs provided by the park and its partners consistent with the Center for the Environment. Equestrian facilities would remain at the Fort Barry Motor Pool (balloon hangar). The zone would also continue to support park operational needs and a native plant nursery.

Scenic Corridor Zone

This zone follows Conzelman, Bunker, and McCullough Roads, and includes the popular scenic overlooks at Battery Spencer and Hawk Hill (SF-88 control site/BC 129), and Battery Rathbone-McIndoe. The intent is to manage these areas to provide sightseeing and related recreational opportunities to highland enhance natural, cultural, and scenic values, as well as provide for a safe tour route. At Forts Baker, Barry, and Cronkhite, safe motor vehicle, pedestrian, and bike access to overlooks would be maintained, and some would be improved with amenities such as interpretive signs, restrooms, and benches.

Historic Immersion Zone

This zone includes the Nike SF-88 control site, and Point Bonita beyond the Field Road terminus. The intent of this zone is to preserve historic sites, structures, and landscapes that are evocative of their period of significance. The intent is for visitors to have opportunities to become immersed in historic settings with direct contact to cultural resources. Visitors would continue to have access to restored compound of the SF-88 control site, and at Point Bonita, the park would continue

to preserve the historic structures and interpret the site's maritime and military history. The coastal environment and sensitive marine habitat would be protected.

Sensitive Resources Zone

This zone includes Rodeo Lagoon and Rodeo Lake, along with the offshore areas at Bird Rock and Bonita Cove. The intent is to provide natural resources with the highest level of protection. Access to Rodeo Lagoon and Rodeo Lake, and presumably the remains of the Coast Guard boathouse and wharf on Bonita Cove, would be highly controlled and restricted to designated trails. Cultural resources may be preserved and stabilized in collaboration with, and where they complement, natural resource values.

Park Operations Zone

This zone includes the limited area of the Nike SF-87 launch site presently used as a park maintenance facility, and the Capehart housing area south of Bunker Road. The intent of this zone is to support park and partner operations and maintenance functions. Visitor access to these areas would be limited. At the Capehart housing area, a new park operational facility would be constructed, requiring removal of housing units. Sustainable workforce housing could be constructed in the area.

Park Partner Planning

The Golden Gate National Park Conservancy and several park partners based at the Marin Headlands are developing improvement plans for portions of the Forts Baker, Barry, and Cronkhite landscape. This CLR does not directly address these plans, but rather provides general treatment recommendations that should be considered in their design and planning, depending on the stage of the project. Several are well advanced, while others are not. Because planning for these projects is well underway or completed, this CLR generally does not provide recommendations for these features or areas. The following is a list of projects by partner (as of 2014).

Golden Gate National Parks Conservancy

Bay Trail at Fort Baker: Phase one of this project, an improved trail along the shoulder of East Road, was begun in 2009 as part of the Project Headlands transportation improvement project. Plans are for extending the trail to the Horseshoe Cove waterfront and Golden Gate Bridge.

Horseshoe Cove Beach Restoration: The concept for replacement of the Station Hospital fill and bulkhead with a natural beach and meadow was approved in the *Fort Baker Plan*. The project is being advanced by the Conservancy.[7]

Rehabilitation of Travis Marina Lodge Area: Rehabilitation of the marine repair shop (FB679), presently the Travis Marina Lodge, into a public facility was ap-

proved in the *Fort Baker Plan*. The Conservancy has included the adjoining deck and historic marine repair facilities in the project scope.[8]

Hawk Hill/Battery Construction 129 Restoration and Trail Improvement Project: Phase one of this project, removal of Monterey pine and cypress woods and restoration of native coastal prairie vegetation, was completed in 2012. Planning is continuing for trail improvements and visitor amenities, with improvement of the Hawk Hill Trail underway in 2017.[9]

Rodeo Valley Stables

Golden Gate National Recreation Area completed an Environmental Assessment in 2011 for the Marin Equestrian Stables Plan, which includes the Rodeo Valley Stables presently operated by the Presidio Riding Club at the Fort Barry Motor Pool (balloon hangar) area. The objectives of the plan included the identification of facility improvements and desired resource conditions.[10]

Headlands Center for the Arts (HCA)

Fort Barry Entryway Project: In 2013, HCA completed schematic design for site improvements around the two barracks at Fort Barry, which serve as the entryway into the Main Post and HCA campus.

Campus Improvement Plan: Planning was initiated as of 2014 on a five-year process to plan improvements to the Main Post of Fort Barry that serves as the campus of the HCA. Aside from the site improvements planned for the entryway project, no specific objectives except for interior life safety improvements have been identified.[11]

Point Bonita YMCA

The Point Bonita YMCA and Conference Center has identified preliminary concepts for a campus improvement plan for its space in the Nike administration area at Fort Barry (SF-88A) to create a "Center for Wellness in Nature."[12]

NatureBridge Golden Gate (Formerly Headlands Institute)

NatureBridge occupies the Nike administration buildings (SF-87A) and portions of the surrounding World War II Cantonment at Fort Cronkhite. A Final Environmental Assessment was completed in 2009 for a campus improvement and expansion plan that included new construction, new walks and roads, building rehabilitation, and natural restoration of a stream corridor.[13]

LANDSCAPE TREATMENT PHILOSOPHY

The recommended landscape treatment philosophy for the Forts Baker, Barry, and Cronkhite landscape is to preserve, reveal, and enhance its Cold War-era character that resulted from a century of military use and development, from the post-Civil War works such as Ridge Battery (1873) and Cavallo Battery (1876)

through the Nike anti-ballistic missile installations and administration complexes (1954–1966), and including the historic abandonment and redevelopment of seacoast defenses and navigational aids (see figs. 2.1–2.4). In general, this philosophy seeks to preserve history that remains evident in the landscape, while allowing for the continuation of natural processes and contemporary use of the cultural landscape.

An integrated management approach is essential to the implementation of this treatment philosophy and the continuing adaptive reuse of the former military reservations as public parkland. Change inherent in the landscape should be managed in a way that reinforces the district's historic sense of place defined by the three military reservations, while respecting change inherent in natural systems. Treatment of particular areas of the district may depend on the level of historical integrity in the landscape and need to address other park values.

In general, features would not be returned under this philosophy to a character that predates the Cold War, unless necessary to enhance interpretation or address other management issues. However, there are two exceptions within the district: East Fort Baker and the Main Post of Fort Barry (see following sections). These areas are recommended for treatment to enhance their World War II-era character based on their level of historical integrity, other planning directives, and for interpretive purposes. Such treatment in these areas does not conflict with the overall Cold War-era character of the district, or require removal or alteration of significant Cold War-era features. Overall, landscape treatment should not return to a pre-1941 character of the landscape, since most developed areas of the district were extensively modified during World War II.

In terms of introduced vegetation, treatment may return to the original limits of the planting, even if that predates the treatment periods (Cold War, or World War II for the Main Posts of Fort Baker and Fort Barry). The spread of non-native vegetation, primarily blue gum eucalyptus and Monterey pine and cypress at Battery Duncan, Kirby Cove, the Main Post of Fort Barry, and Bonita Ridge among other places, is not an intentional, cultural change in the landscape, but rather a result of the invasive character of these plants that poses a threat to the natural ecology of the Headlands.

Application to East Fort Baker

The recommended treatment philosophy to manage the former East Fort Baker (Main Post, Quartermaster Area, Horseshoe Cove waterfront, and Horseshoe Cove Defenses) for its World War II-era character recognizes the historic role that the area played at the time and the historical integrity of the landscape. While the Main Post area has lost the large World War II-era Station Hospital complex and several barracks surrounding the parade ground, there remain significant World War II-era resources. The only substantial Cold War-era resource was the Capehart housing in the Main Post, which was demolished in 2006. In addition, the

officer quarters, barracks, and parade ground were restored to their pre-Cold War appearance as part of the CavalloPoint Lodge redevelopment.

This treatment philosophy is a modification of the guidance in the *Fort Baker CLR* (2005), which recommended that the landscape be managed for its pre-World War II character (ca. 1939). The CavalloPoint Lodge redevelopment was undertaken according to this previous treatment philosophy. However, continuing to adaptively manage for a pre-World War II character would be inconsistent with preservation of numerous surviving World War II-era resources associated with the Mine Depot, the breakwaters, and two marine repair facilities along Horseshoe Cove, along with World War II-era housing north and east of the parade ground. Battery Duncan, Battery Yates, and Cavallo Battery (Horseshoe Cove Defenses) are part of the setting of the Main Post, Quartermaster Area, and waterfront, and therefore deserve similar treatment to the World War II era. None of these defensive works underwent historically significant changes following World War II.

Application to Main Post of Fort Barry

The recommended treatment philosophy to manage the Fort Barry Main Post for its World War II-era character is recommended because it provides continuity with the similar development of the Fort Baker Main Post, and most of the existing resources at Fort Barry predate 1945; the only significant Cold War feature is the multi-use court on the parade ground. The administration building, post hospital, and two barracks underwent architectural alterations during the Cold War that resulted in loss of character-defining front porches. In terms of historic use, the Fort Barry Main Post served a less important role in the Army's operations at the Headlands during the Cold War following the loss of permanent Coast Artillery garrisons.

Application to the Fort Cronkhite Cantonment and SF-87A

The Fort Cronkhite Cantonment, including the west wing, central administration area, and the SF-87 administration area, should be managed for its Cold War-era character, consistent with the district as a whole. While significant as a well-preserved collection of World War II Series 700 barracks, treatment of the Cantonment to an earlier World War II character is not appropriate due to substantial Cold War-era changes to the setting in the east wing with development of SF-87A (administration area), completed in 1966. Despite this, the Cold War character of the earlier Cantonment buildings and roads is not substantially different from their World War II character, with the exception of changes in paint colors.

Relationship to the General Management Plan

In general, the recommended treatment philosophy to manage the landscape for its Cold War-era character is compatible with the purpose of Golden Gate National Recreation Area. As stated in the park's GMP, the purpose of park is "to offer national park experiences to a large and diverse urban population while

preserving and interpreting the park's outstanding natural, historic, scenic, and recreational values."[14] However, the secure and enclosed Cold War character, historically evident by chain-link boundary fences and security checkpoints, will not be reestablished due to the park's mission that requires public access, recreational uses, and protection of natural resources.[15] A primary objective of this treatment philosophy, to perpetuate the historic military identity of each of the three military reservations within the current park management units of Fort Baker and the Marin Headlands, can be undertaken consistent with the park's mission.

The prescriptions of the GMP's management zones allow for flexibility in balancing natural resource conservation, cultural resource preservation, and visitor use. Within the boundaries of the Natural Zone there are three areas in particular where it will be important pursue collaboration, so that cultural resource treatment objectives can be achieved in a manner that is at least not in conflict with, and preferably complimentary to, the natural resource objectives of the broader zone. These include AA Battery #2 on Rodeo Hill, Battery Orlando Wagner and two adjoining fire-control stations above Kirby Cove, and the Elk Valley cluster of defensive works at Tennessee Cove.

TREATMENT DATE

A treatment date is based on the landscape treatment philosophy and serves as a benchmark for assessing and managing historic landscape character. For the overall Forts Baker, Barry, and Cronkhite district, the recommended treatment date is 1966, when the Army completed its last major military development in the Headlands: the Nike administration area at Fort Cronkhite (SF-87A), which followed the completion of the Nike administration area at Fort Barry (SF-88A, present YMCA) the year before. Completion of these two facilities marked the final phase of Army defense development at the Headlands; defense activities continued in part until 1974.[16]

The recommended treatment date for the former East Fort Baker (Main Post, Quartermaster Area, Horseshoe Cove waterfront, and Horseshoe Cove Defenses) and the Main Post of Fort Barry is 1945, the year that World War II ended. This date reflects the height of significant war-time use and development in these areas. The East Fort Baker treatment date is a change from the 1939 date recommended in the *Fort Baker CLR* (2005).

PRIMARY TREATMENT

To implement this landscape treatment philosophy and the intent of the GMP, the recommended primary (overall) treatment for the Forts Baker, Barry, and Cronkhite landscape is *Rehabilitation*, one of four treatments defined under the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. *Rehabilitation* is defined under the standards as "the act or process of making possible a compat-

ible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values."[17] *Restoration*, which calls for returning a property to a prior appearance, is not consistent with the recommended treatment philosophy and GMP, nor is *Preservation*, which would maintain the existing character of the landscape. *Reconstruction* deals with reestablishment of a historic property, which is not applicable to Forts Baker, Barry, and Cronkhite as an overall treatment.

Rehabilitation includes the following ten standards:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize the property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right shall be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration required replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatment, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.[18]

Through *Rehabilitation* as a primary treatment, individual historic features may be adaptively reused, restored, reconstructed, and also demolished. In keeping with the GMP and the Fort Baker Plan, contemporary park operations and partner uses will be developed in accordance with GMP management zones to preserve historic features, remove or alter incompatible non-historic additions, and manage change in a way that is compatible with the historic character of the landscape.

TREATMENT GUIDELINES

This section provides guidelines for the treatment of the Forts Baker, Barry, and Cronkhite district, focused on preserving and enhancing the landscape's historic character. These guidelines provide general management direction to inform future landscape planning and design that is not at a level to inform specific tasks, and will require consideration in the context of other park resources and values, such as natural resources, archaeology, sustainability, climate change, safety, visitor use, and costs. The guidelines are based on the *Secretary of the Interior's Standards* that inform an overall strategy to preserve all historic (contributing) landscape resources and associated features, to prioritize repair over replacement, and to ensure that new additions and alterations are compatible with the historic character of the landscape, but distinguishable as modern additions. The guidelines are grouped by issues followed by landscape characteristics. Additional guidelines specific to individual character areas are provided in the treatment tasks section of the chapter.

HISTORIC LANDSCAPE IDENTITY AND INTERPRETATION

The intent of the following set of treatment guidelines is to retain and reestablish the historic military identity of Forts Baker, Barry, and Cronkhite in order to enhance interpretation and park management. These recommendations should be coordinated with the GGNRA Signage and Graphic Guidelines, interpretive plans, and other related planning initiatives.

Most of the named features and places in the district were assigned by the Army for commemorative purposes. In addition to the following guidelines, consideration should be given to creating an interpretive display at the Marin Headlands visitor center that would provide information on soldiers who have been commemorated through naming of reservations, defensive works, and roads.[19]

Historic Place Names

Forts Baker, Barry, and Cronkhite were historically managed as three distinct but related military reservations. As the properties transferred to public park use after 1972, the historic identity of the three reservations and places within them became obscured as the district was folded into the Marin Headlands unit of Golden Gate National Recreation Area. The identity of the larger reservations and other developed areas with the exception of the Fort Cronkhite Cantonment and Fort Baker Main Post has disappeared or been replaced with new identities based on new uses. For example, there are no signs identifying the historic boundaries and entrances into the Forts Baker, Barry, and Cronkhite military reservations; the Fort Baker name is preserved only for the former East Fort Baker, while the Marin Headlands name has replaced both Forts Barry and Cronkhite in terms of named park areas. In addition, the SF-87 control site is today known as Hawk Hill, the



Figure 3.4. Historic (top, ca. 1940) and existing (2011) views of the former entrance to the Main Post of Fort Barry showing loss of historic place identity. There are no existing signs that identify the historic identity of this area. (Baylis, *Historical and Pictorial Review of the Harbor Defenses of San Francisco*, 1941; SUNY ESF)

SF-88 administration area is known as the Point Bonita YMCA, and the Fort Barry Main Post has no identification signs, only the remnants of its ornamental gate (figs. 3.4).

Army signs were typically simple painted boards with a white face and black lettering and borders (or sometime the reverse) that identified entrances into the reservations, building numbers, and building names or occupants (fig. 3.5). In contrast, the Nike launch and control sites featured larger, colorful, and more graphic signs at the entrances the complexes. Not all areas and features were signed historically. For example, the Army's clusters of defensive works, such as the Townsley Hill Defenses and Horseshoe Cove Defenses, were not historically identified by signs according to available documentation. Today, however, signage and other means of wayfinding are necessary to convey historic identity to visitors and perpetuate the historic sense of place of Forts Baker, Barry, and Cronkhite within Golden Gate National Recreation Area. To accomplish this, it is recommended that the historic place names be preserved within park planning, interpretation, and wayfinding. The following are recommendations for implementing this general treatment guideline:

Identify the limits of the three historic military reservations and the historic names of developed (support) areas such as the Main Posts. See district-wide treatment task BBC-1 for specific recommendations on the design and locations of these signs.

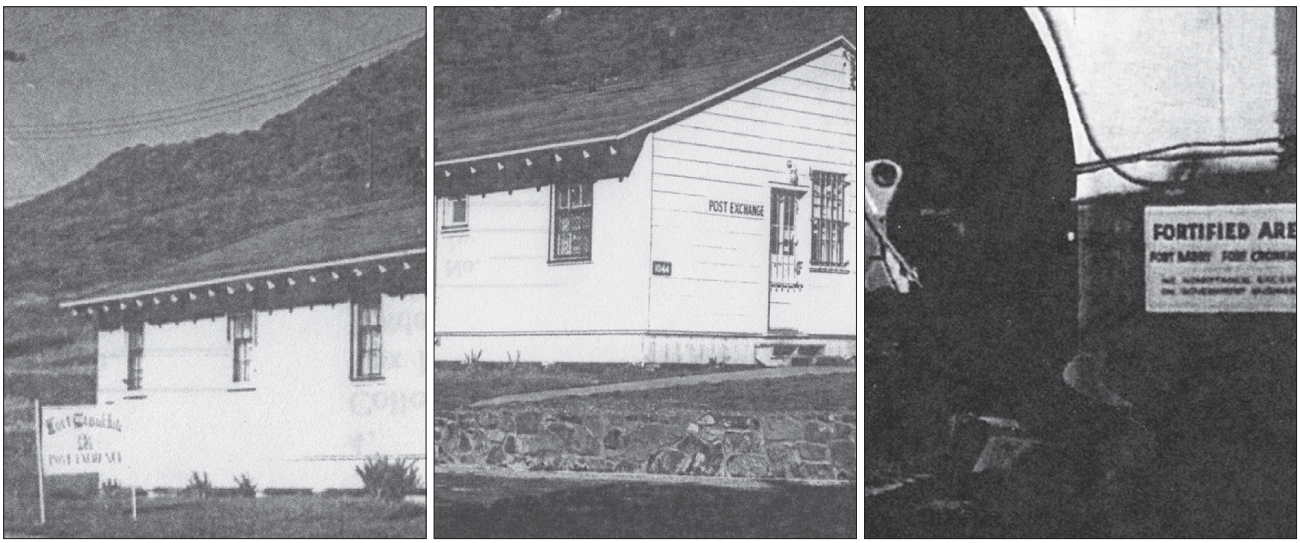


Figure 3.6. Typical Army free-standing and building-mounted signs in use during the World War II and Cold War eras. Left two images: Building 1066, the Fort Cronkhite Post Exchange, 1962; Right: Army sign at entrance to Forts Barry and Cronkhite at the East Portal in Fort Baker, 1939. (Golden Gate National Recreation Area, Park Archives and Records Center, PAM Print Collection, GOGA 1766, and GOGA 18017)

Reinforce the use of the Baker, Barry, and Cronkhite names for the three military reservations. Currently, many associate these three names only with the main posts and cantonment, not with the larger reservations.

Identify the names of Forts Baker, Barry, and Cronkhite in current park signage and wayfinding (GGNRA Signage and Graphic Guidelines) to reinforce historic identity of each of the three military reservations. For example, the military reservation name should be included on primary, secondary, and tertiary facility identification signs (fig. 3.6).



Figure 3.6. Example of a current standard park sign modified to reinforce historic place identity through the addition of "Fort Barry" in the top "Building 960" banner. (*GGNRA Signage and Graphic Guidelines,* 2014, modified by SUNY ESF)

Identify Point Bonita as part of the Fort Barry military reservation in park signage and wayfinding. The identification of Point Bonita as a distinct Coast Guard reservation occurred after the end of the historic period in 1966. Its historic identity as part of Fort Barry will help interpret the overlapping military and navigational uses of the area, and avoid disassociation of military features at Bonita Ridge, Point Bonita Hill, and near the lighthouse from the rest of Fort Barry.

Identify the Tennessee Cove area, managed as part of the Marin Headlands and Tennessee Valley area, as part of the historic Fort Cronkhite military reservation.

Commemorative Road Names

As with the reservations and major defensive works, the Army named all of the major roads in the district to commemorate fallen soldiers or those with distinguished service (fig. 3.7). Since the transfer of the district to the Golden Gate National Recreation Area, the collective military memory of these names has been lost in large part. For example, many do not realize that East Road is named not for the compass direction, but rather to honor Major Joe C. East who began his service at Fort Baker prior to World War II and was taken prisoner by the Japanese and died on a prison ship in January 1945.

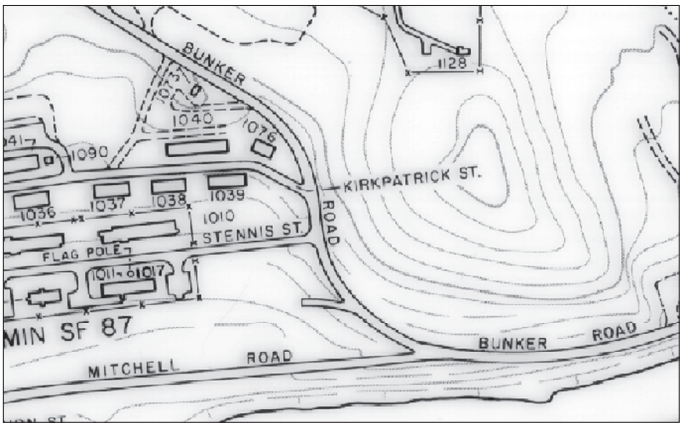


Figure 3.7. Detail of a 1970 Army map of Fort Cronkhite showing road names that were given for commemorative purposes. (Golden Gate National Recreation Area, Park Archives and Records Center, GOGA D191 F1)

In some instances, changes in use—such as from vehicular roads to trails—have led to replacement of historic commemorative names. For example, Roth Road—named to honor Second Lieutenant Frederick J. Roth, who was killed in the bombing of a Japanese prisoner of war ship in December 1944—is currently known as the Kirby Cove Trail. Stennis Street in Fort Cronkhite, which has been partially redeveloped as a pedestrian zone in the NatureBridge campus, has no signs, although it is still officially Stennis Street. It was named to honor Colonel Will K. Stennis who was killed in the bombing of a Japanese prisoner of war transport in December 1944.

To perpetuate the commemorative intent of the district's road names, it is recommended that the commemorative namesakes be conveyed in park wayfinding and

interpretive materials. All roads with commemorative names should be marked by road signs, which could be redesigned to include information about the namesake, as is done at the Presidio (see treatment task BBC-1 for specific recommendations). If a road has been renamed, it is recommended that the historic commemorative name be reinstated as the primary name.

Secondary Defensive Works

While the names of most of the major seacoast gun batteries are well documented in current park planning and interpretation, the associated secondary works (fire-control stations, PSR rooms, powerhouses, etc.), anti-aircraft batteries, radar installations, mining facilities, and World War II field positions and hutments are not. In most cases, visitors and even park staff have little to help them identify these often remote structures, which were critical to the military development and use of the Headlands. For example, the rectangular concrete foundations of the SCR (Surface Craft Radar) installation #2 on Wolf Ridge has no signs or other means to indicate its historic identity and function (fig. 3.8). Such identification could provide visitors with a much deeper understanding and appreciation of the historic landscape and how it functioned, while also providing park management with inventory control necessary for maintenance and interpretation.



Figure 3.8. The unmarked remains of the World War II-era SCR installation #2 on Wolf Ridge, 2009. Interpretation and park management would benefit from adding small signs to these structures indicating their historic building number, name, and dates of construction. (SUNY ESF)

Suggested treatment includes addition of consistent identification signs on all military works that would include the building number, date of construction and service, and the feature name. The signs could also include links to online sources for additional information (see treatment task BBC-1 for more detailed recommendations). Interpretive media at the batteries should be updated and expanded to include links to associated secondary works, such as fire-control stations, to help visitors understand the historic function of the defensive works as a system. This may include traditional waysides, brochures, or electronic media with text and maps showing the locations of the associated secondary works, in place of the small metal plaques presently mounted on most of the batteries.

THREATENED LANDSCAPE FEATURES

A program of documentation, such as through the Historic American Building Survey, Historic American Engineering Record, Historic American Landscape Record, and/or an archaeological survey should be undertaken in the near future for historic resources and areas of the district that are in imminent threat due to deterioration, erosion, sea-level rise, vandalism, or redevelopment. This documentation should be planned in a multi-disciplinary manner to address all resource

values associated with the threatened resources, and to meet the *Secretary of the Interior's Standards* for archeological, historical, architectural, and engineering documentation. If resources do not allow for full, detailed documentation, then at a minimum a detailed photographic record, location map, and sketch plan of the resource should be completed.

Based on existing conditions documentation for this CLR and proposed project work, the following is a preliminary list of threatened historic resources that may warrant this documentation:

Fort Baker

Fuel and berthing dock, and 6-ton marine railway (Horseshoe Cove)

Quartermaster storage building, FB 513 (East Road)

Water reservoir FB572 (Duncan Hill)

Fuel oil tank and pump house, FB 413, 414 (Mine Depot)

AMTB Battery Gravelly (Kirby Cove)

B1 Kirby and B1 Wagner (above Battery Orlando Wagner)

Baker-McDowell cable terminal and seawall (on San Francisco Bay)

Pumphouses FB 577, 578 (near East Portal)

Fort Baker Main Post Monterey cypress windbreak

Kirby Cove forest plantations

Fort Barry

Capehart Housing Area (buildings, roads, vegetation, small-scale features north of Bunker Road)

B4 Alexander, B1 McIndoe shell (below Battery Rathbone-McIndoe)

Bonita Ridge: fire-control stations FA 1377, 1379, 1385; traces of fog-level stations B2S2 Spring, B2S2 Chester; Signal Tower #2 FA 1376; SCR 296 #5 tower footings; Engineer tramway engine house wall; Shoran transmitter building and tower footings, FA 1382, 1383.

Searchlight #9 shelter and powerhouse, FA 1356, 1360 (near Bird Island)

Coast Guard access road, boathouse, and launchway remnants (Bonita Cove)

South Landing wharf oil tank and pipe FB1387 (Point Bonita Hill)

B2S2 Crosby (Point Bonita Hill)

BC2 B4S4 Alexander, Searchlight #10 Shelter, FA 1382, 1389 (Point Bonita)

Fort Barry Main Post eucalyptus windbreak, Monterey cypress trees

Fort Cronkhite

Wolf Ridge fire-control stations and other works near landslide, FC 1260, 1262, 1263, 1271, 1272, 1273

AA Battery #1 and AAA Position No. 10, including hutment, FC 1200, 1275 (Wolf Ridge)

Tennessee Point hutment (continued)

B2 Mendell, B2S2 Guthrie (cliff-side stations at Tennessee Point)

Fort Cronkhite security fence (Tennessee Valley)

Cable manhole Mines 1 FC 1206B and access road (Tennessee Valley)

LANDSCAPE MAINTENANCE

For much of its history at the headlands, the Army maintained a well-tended character in the developed areas of Forts Baker, Barry, and Cronkhite, especially at the two main posts. In general, the Army managed the landscape to elicit respect, authority, and power, and the facilitate operations. This character was reflected in many aspects of Army life according to what was termed "military bearing," which the US Army Field Manual defined as "…projecting a commanding presence, a professional image of authority" for personal grooming, dress, and deportment.[20] During the Cold War, levels of maintenance were curtailed around obsolete seacoast batteries and secondary works, and in certain support areas such as temporary housing areas.



Figure 3.9. Simmonds Road in the Main Post of Fort Barry showing deteriorated roadbed and high grass and scrub on historically mown slopes, looking south, 2011. These conditions are a change from the historically more well-tended character of the landscape. (SUNY ESF)

Today, the NPS has fewer resources than the Army to commit to maintenance, and preferences are often for a more rustic or natural aesthetic than what existed historically (fig. 3.9). While a high level of maintenance may be possible in certain areas with the assistance of park partners, such as has been done with CavalloPoint Lodge at Fort Baker, in general historic levels of maintenance may not be feasible to sustain. In certain areas, historic levels of maintenance may also conflict with natural resource management objectives. .

Despite current limitations, the objective of park management should be to maintain all developed areas, roads, and other features that were maintained at the end of the historic period and retain integrity at a level consistent with a so-called military bearing. Most all of these areas fall within the Evolved Cultural Landscape Zone, Scenic Corridor, and Diverse Opportunities Zone, outside of the Natural Zone and Sensitive Resource Zone where priority is placed on natural resource conservation. For example, the Departmental Rifle Range, which was a well-mown and actively used practice field in 1966, should be maintained at a level that reflects its historic active use, with regular mowing and brush clearing in the field and target trench. In contrast, the SF-88 control site at Hill 88 (Wolf Ridge) and SF-87 control site at Hawk Hill are examples of historically maintained areas that have lost integrity since 1966 through removal of buildings, structures, and radar equipment. Therefore, treating these areas consistent with the historic level

of maintenance would not be necessary given the changes in the landscape. Such areas should be stabilized and maintained at a level sufficient to preserve remaining features and allow for their interpretation.

CENTRAL MAINTENANCE FACILITY

The GMP identified the Fort Barry Capehart Housing Area south of Bunker Road as a site for development of a central maintenance facility for the Marin Headlands, to replace existing facilities at the SF-87 launch site at Fort Cronkhite and elsewhere. If an alternate site needs to be considered in the future, an appropriate site in terms of preserving and enhancing historic landscape character would be the former Army Corps of Engineers dump site (established 1968) south of the balloon hangar, which in part was the rifle range camp established in 1904 during the initial development of Fort Barry. New development on this site could be appropriate to the historic character of the landscape because the site was disturbed after the historic period, historically contained buildings and roads, and would be inconspicuous since it is behind the Balloon Hangar. Development of a maintenance facility could also tie into plans to rehabilitate the balloon hangar as a maintenance building.

A park maintenance facility here could also build on the need to clean up the site and document archeological resources remaining from the rifle range camp. The new maintenance buildings could be built on the footprints of the hydrogen generator building (921) or the rifle range camp buildings, and circulation could reestablish the historic rifle range camp road and make use of the existing historic road that extends south to Conzelman Road. Additional investigation and planning would be necessary to ensure that the new maintenance facilities would not impact the historic, scenic, and natural values of the area.

NATURAL SYSTEMS AND FEATURES

Natural systems and features were historically the dominant characteristic of the landscape outside of the main posts, defensive works, roads, and other developed areas. In general, natural resource values are compatible with recommended cultural landscape treatment goals. A list of the park's natural resources projects planned for the next five years is in Appendix I.

Balancing Natural and Cultural Resource Values

The GMP established a framework for balancing natural and cultural resource values through the system of management zones. The Natural Zone and Sensitive Resource Zone—the two zones where natural resource values are prioritized—correlate in large part to the historically undeveloped portions of the landscape. The Evolved Cultural Landscape and Historic Immersion Zones also recognize that cultural resources should be managed in harmony with natural resources. In many



Figure 3.10. Battery O'Rorke, looking north toward Fort Cronkhite, 2009. Protecting and restoring the native scrub on the battery parapets surrounding the concrete structure addresses both natural and cultural resource objectives. (SUNY ESF)

cases, natural and cultural resource values share the same objectives, such as removing invasive trees that block historic battery lines of fire, or enhancing native scrub on battery parapets historically maintained as camouflage (fig. 3.10). Where non-native vegetation is historic, such as the line of eucalyptus at Battery Alexander, these cultural features should be preserved rather than be removed, unless there is a threat to the surrounding native ecosystem.

A priority for management is the protection of habitat for endangered species, particularly Mission Blue Butterfly (*Icaricia icarioides missionensis*). This species is in danger of extinction throughout all or a significant portion of its range, which includes much of Forts Baker, Barry, and Cronkhite. The habitat of Mission Blue Butterfly is coastal chaparral and grasslands, and the female lays eggs on lupine. The park has made protection of lupine colonies a priority for management.[21]

Overall, resource management in the Headlands should follow an integrated approach where natural and cultural resources are considered together. In general, cultural resource values are most evident in the developed support areas of the district, along with the Nike launch and control sites, which were historically distinct from the surrounding natural setting. Altering these areas to reestablish natural conditions would blur this historic distinction and is generally not recommended in terms of preserving and enhancing historic landscape character. The seacoast batteries and secondary defensive works, in contrast, were designed to blend in the natural environment, and more so with World War II-era camouflage practices. With a few exceptions, such as the mown parapets of Cavallo Battery, preservation of historic landscape character on and surrounding the batteries should be compatible with natural resource values.

Loss of Grasslands

One of the most pervasive changes in the cultural landscape across Forts Baker, Barry, and Cronkhite has been the conversion of grassland to coastal scrub and other woody vegetation. Grassland had long dominated the Headlands due in part to grazing and perhaps burning, but had begun to slowly decline after 1866 with military development, and more so after World War II with the total loss of grazing. Today, patches of grassland exist on dry, exposed slopes.

While the loss of grassland has impacted the historic character of the landscape, it is overall a subtle change in the context of Cold War-era conditions, and its replacement by low coastal scrub has not altered the historic open spatial character in most areas. Because this change has been largely a natural process and is

occurring in areas to be managed for natural resources, returning grassland solely to enhance cultural resource values is not recommended. Restoration of grassland may be appropriate for other natural resource values in certain areas.

Response to Climate Change

The GMP addresses the potential impacts of climate change based upon NPS policy, current science, and the park's "Climate Action Plan." The goals are to reduce CO_2 emissions, educate and interpret the processes for visitors, and assess and respond to changing conditions. In terms of natural systems and features, the plan calls for reconnecting fragmented habitat to strengthen the resiliency of coastal ecosystem to respond to climate change and urban pressures. The NPS is currently developing a cultural resources climate change response strategy that addresses climate science in historic preservation planning. [22]

The traditional historic preservation response to unknown disasters and potential loss of cultural resources is documentation. Drawings, photographs, and historical research should be completed on all landscape features that are in danger of being lost or altered due to rising sea levels and other anticipated impacts from climate change. As with other losses, creative strategies should be developed to enhance interpretation and understanding of historic conditions. If possible, remnants of features impacted by climate change should be retained in the landscape to interpret history. Retention of such features would need to be assessed in the context of potential adverse impacts on evolving natural resources.

It may be possible to alter some features to preserve them in the face of climate change impacts, but solutions should be sustainable. If the alteration can be accomplished without substantial loss of historic integrity, this should be a preferred response over removal of the feature. Buildings and structures along the Horseshoe Cove waterfront, or on the lower terrace of the Fort Cronkhite Cantonment, for example, could be raised on pilings above flood stage, or moved to nearby higher ground if historic relationships in the landscape can be maintained. Landslides and coastal erosion generally are difficult to address without substantial costs and impacts to landscape character. Such subsidence was common during the historic period, and was treated either through abandonment of impacted features, or in the case of roads, addition of bridges.

Strategies to reduce carbon emissions may also impact the character of the landscape in the form of reduced maintenance involving fossil-fuel burning machinery, such as tractors, lawn mowers, blowers, and trimmers. It is recommended that alternative strategies be addressed prior to reducing or eliminating landscape maintenance, such as through use of manual labor, animal grazing, and non-CO_2 emitting machinery.

Stormwater Management and Surface Drainage

Across most of the Headlands, the Army historically dealt with stormwater through surface runoff, except within highly developed areas such as the main posts and battery parades, where engineered drainage structures were built. Drainage tile was also installed in areas where runoff from road cuts and other features were causing erosion, such as along Bunker Road in Fort Cronkhite.

Application of best practices in stormwater management should be compatible with the historic character of the landscape and not require removal or alteration of historic features. Generally, these applications should be considered only outside the developed areas. For example, creating infiltration beds at drain outfalls along the natural wooded corridor following Rodeo Creek could be added in a manner that is consistent with the overall natural character of the landscape. In contrast, replacement of historic concrete gutter-curbs and drainage structures along Simmonds Road in the Fort Barry Main Post with infiltration beds or earthen swales would be inconsistent with the historic character of the landscape.

SPATIAL ORGANIZATION

The spatial organization of the Forts Baker, Barry, and Cronkhite landscape was historically defined by natural landforms, road corridors, building organization, vegetation, and clusters of developed areas set amid open grasslands and chaparral. Historic landscape spaces, akin to rooms in a building, have been lost or altered through encroachment of vegetation, and removal of fences, buildings, and roads.



Figure 3.11. Non-historic scrub surrounding the chapel (visitor center) at the Main Post of Fort Barry, looking southwest, 2014. Removal of the scrub in this historically mown area would enhance the historic open spatial character of the landscape, but would require planning to avoid impacts to sensitive natural resources. (SUNY ESF)

Where the definition of historic spaces has been altered, then consideration should be given to restoring or enhancing the space by reestablishing historic mowing and planting patterns, removing spread of woods, and clearing historic circulation corridors, where compatible with natural resource values. For example, clearing of woody vegetation that has encroached onto the north end of the historic rifle range would allow visitors to understand its historic 600-yard length. Removal of high brush around the Fort Barry chapel would likewise reestablish the historic open spatial character and enhance the historic maintained grounds around the building, but would need to be undertaken in a way that avoids adverse impacts to natural resources (fig. 3.11).

CIRCULATION

Circulation in Forts Baker, Barry, and Cronkhite was historically characterized by engineered roads and parking areas within the developed areas and leading to batteries, often with a paved surface, curbs, and drainage. In undeveloped areas, roads were often less engineered, and included both paved and gravel roads with surface drainage and no curbs. In the main posts and other developed areas, concrete walks with concrete or wood steps connected buildings, while trails provided shortcuts between defensive works and developed areas.

The general treatment guideline for historic circulation features is to preserve the historic alignment and width, associated structures such as culverts, and surface materials, and to minimize addition of conspicuous traffic signage and safety features. Roads that remained in use by the close of the historic period during the Cold War should be treated for the appearance of active use (even if closed to vehicular use) to preserve and enhance the historic character of the landscape.



Figure 3.12. Change in character of Conzelman Road resulting from Project Headlands: Historic view of Conzelman Road looking east from Hawk Hill Historic ca. 1962 (top); and a 2011 view of the intersection with McCullough Road showing addition of a rotary, steel guiderails, curbs/closed drainage, widening, road striping, and additional cutting of the banks. This was historically a Y intersection. (Personal collection of Paul Petrosky; SUNY ESF)

Rehabilitation of Historic Roads

The Project Headlands road project (*Marin Headlands and Fort Baker Transportation Infrastructure and Management Plan*) completed in 2014 had an adverse effect on the historical integrity of the Forts Baker, Barry, and Cronkhite historic district.[23] The project substantially upgraded the main roads according to federal highway standards with realigned intersections and termini, changed alignments, addition of accessible bus stops, upgraded overlooks and parking areas, and new asphalt pavement, concrete curbs and drainage systems, traffic markings, signs, and guardrails. While the improvements have enhanced accessibility, vehicular use, and safety, the many small changes have led to a cumulative loss of historic landscape character in some areas (fig. 3.12).[24]

To reduce additional impacts, it is recommended that alternative details be explored for future road rehabilitation work. The following is general guidance that should be considered, with additional guidance available in a park report entitled "Design Guidelines for the Marin Headlands and Ft. Baker Transportation Infrastructure and Management Plan" (2009).

Alignment and Width

Maintain the historic alignment and width; minor widening and realignment may be possible without impacting historic character. Shoulders should not be paved unless they were paved

historically. If a surfaced way along the road edge is required for pedestrians or bikes, use a material that blends with the native earth or vegetation of the shoulder.

Road Intersections

Maintain historic intersection alignments (T or Y intersections), rather than introduce new types such as rotaries.

Drainage and Curbs

Retain historic curbs and drainage components or replace in-kind if deteriorated beyond repair. Avoid introducing new curbs and piped drainage systems where none existed historically. If new concrete curbs and other features are necessary, consideration should be given to tinting the concrete a color similar to the surrounding soil or rock to reduce visibility. Addition of curbs can dramatically change historic character and separate a road from its surrounding rural and natural context. If surface drainage pipes are introduced on visible slopes, they should be of an inconspicuous material and be covered by vegetation. Current best practices in stormwater management recommend eliminating curbs and not concentrating runoff in engineered structures.[25]

Swales

If stabilized rubble swales are necessary along road shoulders to address drainage and erosion, they should use native stone that blends with the existing ground. Concrete swales and mountable curbs should be avoided because of their conspicuous appearance.

Guardrails

Consider use of white concrete post and cable or W guiderail systems in places where they were used historically, such as on Simmonds Road and the entrance road to SF-87 control site (Hawk Hill), provided they meet current standards. Where no guiderails existed historically, use a design with an inconspicuous appearance. A Cor-Ten post and cable/rail system would blend in with the native red chert and chaparral surroundings found in most areas of the Headlands. Galvanized steel W-beam guardrails on heavy wood posts used for Project Headlands are not recommended due to their conspicuous appearance. [26]

Retaining Walls

In general, introduction of new retaining walls along roads should be avoided. The traditional approach used by the Army was to cut back a slope, so this would be a more appropriate treatment than adding new structures to the landscape. If for natural resource or other values retaining walls are necessary, they should be designed to blend with the natural environment using native chert stone, or be compatible with adjoining developed areas, such as through use of poured

concrete rather than new materials such a gabions or interlocking concrete blocks. New walls should be minimized in length and height to reduce visibility.

Surface Material

Black asphalt is an appropriate surface for roads that were paved in black asphalt by the end of the historic period (previously they were surfaced in red macadam). If a road has a gravel surface, such as the Kirby Cove Trail (Roth Road), it should be retained. If for maintenance reasons a more durable surface is required, consideration should be given to using soil solidifiers and natural soil pavements sold under brand names that include PolyPavement, NaturalPave, and GraniteCrete. Asphalt with a red chert chip-seal surface may also be appropriate.

Lighting

Maintain historic street lights (primarily in developed areas), and avoid adding street lights where none existed historically. Consider in-pavement reflectors instead to address safety. If new street lights are necessary, use an inconspicuous design, such as utilitarian fixtures mounted to existing wood utility poles, that reduce glare and impacts to the night sky. The only known historic use of ornamental street lights is in the Main Post of Fort Baker.



Figure 3.13. Old Bunker Road, a closed road looking northwest from Bunker Road near the rifle range, 2014. The installation of bollards and maintenance of the historic road width is an appropriate treatment for abandoned roads in the district. This road will require periodic removal of vegetation and maintenance of the earth surface to retain its historic character. (SUNY ESF)

Abandoned and Closed Roads

All historic military roads in the district are significant for conveying the historic structure and organization of the landscape. If roads are abandoned or closed for contemporary vehicular use, such as Old Bunker Road at the rifle range, a preferred treatment in terms of historic landscape character is to retain the roads, and if feasible, maintain a circulation function through use as trails or as limited-use service or fire roads. This treatment may be accomplished through installation of gates or bollards to restrict vehicular access, retention of the road surface, and periodic removal of encroaching vegetation to retain the historic circulation corridor (fig. 3.13). If only a portion of an abandoned historic road remains, such as Dubois Road on the Baker-Barry boundary, it is recommended that the remnant be preserved to the extent feasible.

Removal of the surface and restoration to natural conditions is not recommended in terms of preserving historic landscape character, unless the road is negatively impacting natural systems.

Roads Managed as Trails

A number of historic military roads in the district are currently used and managed as trails. The most historically significant are Julian Road (part of the Coastal



Figure 3.14. Julian Road (Coastal Trail) looking northwest from the Conzelman Road trailhead showing loss of historic character due to narrowed roadbed and encroachment of vegetation, 2014. (SUNY ESF)

Trail), which was the first road between Forts Baker and Barry begun in 1874 and completed in 1901; and the approach roads to batteries and secondary defensive works that are central to understanding their historic military function. Through management as trails, these roads have lost historic character due to narrowing of the roadbed and encroachment of vegetation, which gives them the character of trails rather than roads (fig. 3.14). Portions have lost roadbed due to erosion and resulting repairs and diversions. Addition of trailhead parking areas has also severed the historic connection to other roads, such as at the east end of Julian Road at Conzelman Road.[27]

To maintain active trails for their historic road character may present a number of challenges for park management. Park standards call for trails with a wide surface suitable for vehicles to be classified as a road (even if closed to vehicles), which could have funding and design ramifications. Wider trails may not be recognizable to park users as trails and are also more expensive to maintain than narrow foot trails, especially when a trail requires repair from washouts and erosion. Maintaining historic road character could also impact threatened and endangered species if critical habitat is disturbed through required maintenance, construction, and repair, or impacts to hydrology. Operational benefits of maintaining historic road character including retaining options for shared use (pedestrians, emergency vehicles, park maintenance vehicles), and providing routes that meet requirements of the Americans with Disabilities Act (ADA).

Rehabilitation of historic roads presently maintained as trails should be planned through integrated management between natural and cultural resources. The roads that are a treatment priority in terms of enhancing historic road character include Julian Road, the road to Tennessee Point, and the access roads to batteries Alexander, Smith-Guthrie, O'Rorke, Mendell/AA Position No. 81, Kirby (Roth Road), and Yates. Enhancing the historic character of these roads would include maintaining the historic roadbed width with curbs and gutters if extant; removal of encroaching vegetation; and maintenance of the earthen/gravel surfaces through regular grading with equipment such as a DR Power Grader that can be attached to a park truck.[28] Repairs should maintain the historic alignment, but minor relocations that retain the overall character may be appropriate to address maintenance and natural resource protection. At trailheads, the historic road alignment should be reestablished by making the roadbed separate from the parking area. In addition, names of the roads should be maintained to preserve their historic



Figure 3.15. Social trail through a World War II-era anti-aircraft machine gun emplacement, looking east toward Battery Rathbone-McIndoe, 2011. (SUNY ESF)

identity (see previous guideline, "Historic Landscape Identity and Interpretation").

Social Trails

The popularity of the Marin Headlands for hiking and scenic views has led to many social trails (also known as desire paths) created by visitors going off maintained trails toward scenic points. Often, these points are historic defensive works and anti-aircraft emplacements. As unplanned and unmaintained trails, these can cause erosion and trampling of natural vegetation, landforms, and historic features (fig. 3.15).

The park is well aware of these issues, and is testing the use of plantings, signs, and fences to deter use. Another possible strategy may be to create managed trails to meet the demand, but on alignments that do not impact natural and cultural resources. Since many of the defensive works did have historic vehicular and/or foot access, these could be reestablished as managed trails to deter use of social trails.

TOPOGRAPHY

The Army altered the natural landform of the Headlands to create building terraces, parade grounds, road corridors, drainage ditches, wharfs, quarries, defensive works, and World War II field positions such as foxholes and trenches. The seacoast defensive works used topography to conceal the built structures from view at sea and protect them from bombardment. Today, topographic features are being impacted through erosion, landslides, social trails, and encroachment of vegetation (fig. 3.16).

In general, the historic topographic features of the district should be preserved unless there are conflicting natural resource values or operations issues that warrant consideration. For example, quarries may not be considered scenic attractions, but they should be preserved because they reflect the historic development of the district and the Army's use of native stone for roadwork and other construction.



Figure 3.16. World War II-era letter trenches on a failing slope, looking northwest along Kirkpatrick Street in the west wing of the Fort Cronkhite cantonment, 2011. These significant topographic features should be stabilized. (SUNY ESF)

Treatment of topographic features may involve removal of non-historic vegetation that is concealing or damaging a feature, and repairing erosion. Social trails that are impacting historic topographic features should be prevented. Where topographic features remain as remnants, such as the parapet from the searchlight powerhouse at Tennessee Point, it should be preserved as a remnant to interpret the historic development and use of the landscape. Likewise, the terraces from buildings removed within the Fort Cronkhite Cantonment help to convey the historic development of the site. Use of such terraces, parade grounds,

and other historic features for parking is generally not recommended, given the likely impact to overall historic landscape character.

VEGETATION

Planted and managed vegetation at Forts Baker, Barry, and Cronkhite historically included features such as groundcover, specimen trees, foundation shrubs, cultivated gardens, windbreaks, and forest plantations that were established for both ornament and for utilitarian purposes such as food production, slope stabilization, wind protection, screening, and camouflage.

In general, historic vegetation features, such as the eucalyptus windbreak and Monterey cypress at the Main Post of Fort Barry should be preserved. For vegetation, the idea of preservation is about perpetuating the feature through cycles of growth and decline, including its location, species, and form. Where possible, the historic plant material should be retained for as long as possible, as aged trees and shrubs express history and time passage. Intent should also be considered in vegetation management; if the plant material was clipped into a hedge historically and its existing condition is a tree form, then it is generally appropriate to return to the historic form.

To preserve and perpetuate vegetation features will require eventual replacement. The preferred treatment is to replace the plant material in-kind, in the same location. If issues such as disease, pests, or an invasive habit do not permit this, alternative species with a similar character should be used. If there is lack of documentation on the historic character of the vegetation, such as for the foundation plantings around the Fort Barry officer quarters, then species that maintain the overall character based on similar types may be used. The plant list for Fort Baker (2006) is the approved reference for selecting appropriate plant material for developed areas that historically had ornamental vegetation (Appendix E). These plants in general are appropriate for use at places such as the Fort Barry Main Post, the central administration area of the Fort Cronkhite Cantonment, and the Nike administration areas.

Vegetation Inventory

Detailed information on historic and existing introduced and managed vegetation, including species, varieties, locations and dates of plantings, was not comprehensively documented for this CLR. To ensure adequate information for future vegetation management, a vegetation inventory that identifies the location, genus and species, variety, age, and size of all plantings in developed areas should be undertaken, along with research to confirm the age and intent where necessary. The inventory could include coring to date the age of trees. Priority areas for such a vegetation inventory would be battery parapets (turf, iceplant, and other groundcover); concealment plantings such as the eucalyptus at Battery Duncan

and Battery Alexander; camouflage plantings on World War II-era battery control stations and other secondary defensive works, such as on Wolf Ridge and Rodeo Ridge; windbreaks and plantations such as at Kirby Cove and the Main Post of Fort Barry; and ornamental herbaceous plants, shrubs, and specimen trees at the Main Posts of Fort Baker (outside of CavalloPoint Lodge) and Fort Barry, the Fort Cronkhite Cantonment, the Nike administration areas, the Life-Saving Station, and Point Bonita. The inventory could include a more detailed evaluation of historic conditions than provided in this CLR (through the more detailed inventory), and could provide a database to track maintenance of significant vegetation features through the NPS Facility Management Software System (FMSS).

Non-native Invasive Vegetation

Planted and managed vegetation at Forts Baker, Barry, and Cronkhite historically included exotic and invasive species that spread beyond their original planted limits into surrounding undeveloped, natural areas. Examples include the area around Battery Duncan, Kirby Cove, and Bonita Ridge.

Historic planted exotic vegetation should be retained if it contributes to the historic character of the landscape. Notable examples include acacia, blue gum eucalyptus, Monterey pine, Monterey cypress and myoporum trees used as windbreaks, plantations, groves, and specimens; and groundcover such as certain grasses, iceplant, and cape ivy used to stabilize battery parapets. There was also a large variety of non-native invasive species used by the Army and Coast Guard as ornamental and utilitarian plantings in gardens and foundation plantings (see Appendix F). Some of these may have been introduced from surrounding areas; their historic use within the Headlands has not been fully documented.



Figure 3.17. Spread of non-native Monterey pine, Monterey cypress, and other exotic vegetation in the native scrub surrounding the Fort Barry Motor Pool (balloon hangar), looking northwest, 2009. This area was treeless during the historic period. (SUNY ESF)

In general, it is appropriate to remove non-native vegetation that has spread from its original planting sites because the spread reflects the unintended invasive habit of the plants, rather than a specific management intent by the Army. While some spread occurred during the historic period prior to 1966, much of it occurred afterwards. Removal of non-native spread is important for natural resource management, since it has often overtaken native plant communities. In many instances, removal of non-historic spread can also enhance the historic character of the landscape. For example, the Monterey pine and cypress trees that have self-seeded in the hillsides around the Fort Barry motor pool (balloon hangar area) and rife range alter the historic open spatial character, while also impacting the native scrub community, which is also under threat from a host of other invasive plants (fig. 3.17). Another notable example is the spread of iceplant west of batteries Smith-Guthrie and O'Rorke from its original location on the parapets into the surrounding sensitive dune ecology.

Cold War-era Tree Plantings

From around 1950 through the 1960s, non-native trees, primarily Monterey pine and cypress, were planted on and around the defensive works and in other areas of the Headlands, such as north of the Fort Baker Main Post and on the valley floor north of Battery Kirby. Based on available documentation, most of these plantings were probably undertaken by the Boy Scouts as beautification and conservation projects. In general, the trees, such as those at BC 129 (Hawk Hill) and AA Battery #1 on Wolf Ridge, were not mature by the end of the landscape's historic period in 1966, so did not have a marked impact on the landscape. Many plantings have already been removed to reduce impacts on the native ecology. The main plantings that remain are at Battery Wallace, the Townsley PSR Room, and north of the Fort Baker Main Post.

Due to lack of association with the historic significance of the district and limited impact on landscape character by 1966, it is generally appropriate to remove these trees. Some plantings, particularly at Battery Wallace picnic area, may have value for other park uses. Trees and shrubs planted by the Army during the Cold War, such as in the Capehart housing area and Main Post of Fort Baker, are part of the historic military development of the landscape and should be retained.

Historic Turf

Areas that the Army historically kept as mown turf by the 1960s, primarily in the support areas, Nike installations, and along roads, should be maintained to preserve and enhance the historic character of the landscape. These areas correspond primarily to the GMP Diverse Opportunities Zone, Historic Immersion Zone, and Evolved Cultural Landscape Zone.

Turf that is cut infrequently and matures into high grass can impart a feeling of abandonment or lack of care. If left uncut, turf will convert through natural succession into scrub in most areas of the district, which can disrupt historic open spaces, views, circulation corridors, and topography (fig. 3.18). Maintaining and expanding mown areas of turf poses a maintenance burden for the park, and returning overgrown areas to mown turf may impact habitat. Elimination of mowing for natural resource values should be considered in the context of significant natural resources, such as protection of rare or endangered species.



Figure 3.18. Unmaintained area of historic turf at the Fort Cronkhite cantonment, looking north, 2014. The tall grass and scrub on the upper terrace detract from the historic well-tended appearance of the landscape. The lower terrace maintains its historic mown turf. (SUNY ESF)

Maintaining a high level of turf condition, which could require use of pesticides and fertilizers, is generally not necessary in most areas to retain the overall historic character of the landscape. In addition, the Army did not irrigate lawns in the Headlands. Therefore, it is appropri-

ate to allow turf to brown during dormant periods, rather than to maintain green throughout the year.

The priority areas for maintaining historic turf are the main posts of Forts Baker and Barry, the Fort Cronkhite Cantonment, the Nike SF-87 launch site, and the Departmental Rifle Range, along with road shoulders. If it is not feasible to maintain well-trimmed turf due to maintenance, staffing, or natural resource values, then less-intensive mowing regimens or low/slow-growth turf species should be considered instead of eliminating mowing altogether (for list of approved turf species, see Appendix E). Reduced mowing regimens may be appropriate if they maintain a uniform appearance and open spatial character that prevents growth of woody plants.

BUILDINGS AND STRUCTURES

Historic buildings and structures are character-defining features of the Forts Baker, Barry, and Cronkhite cultural landscape. The following general treatment guidelines pertain to exterior rather than interior architectural character.

The overall treatment recommendation is to preserve and enhance buildings and structures to their Cold War-era character. Most of the support buildings, from those at the main posts to the Nike administration areas, were actively used and maintained during this time. In contrast, seacoast defensive works, from batteries to fire-control stations and gun pits, were either shuttered or abandoned during the Cold War. Despite this, most remained intact through the mid-1960s. Overall, defensive works should be managed to convey their historic disarmament, but not be left to ruin. Their historic use should be interpreted through surviving resources, rather than through restoration to active military appearance, although certain features such as guns may be returned to enhance interpretation provided there is not a conflict with the Cold War-era character of the district. Treatment should also preserve the setting of the works, including access roads, earth cover and camouflage traces, and strategic and functional views.



Figure 3.19. Abandoned fire-control station B1S1 Townsley on Wolf Ridge near the Coastal Trail showing deterioration of steel and concrete, erosion, and graffiti on the interior, 2009. At a minimum, props should be installed at the window opening to support the upper cantilevered structure, and openings should be sealed to prevent vandalism and visitor injury. The rare-surviving rock, earth, and vegetation camouflage should be stabilized. (SUNY ESF)

Abandoned Defensive Works

Preservation of the vast array of defensive works in the Headlands poses a significant burden for facilities maintenance, especially since many cannot be readily adapted for new uses. While the primary batteries, magazines, and storehouses are maintained, the numerous permanent secondary works, such as fire-control stations, powerhouses, and searchlight shelters are not maintained (fig. 3.19). Many are not readily accessible, are not routinely inspected, and are deteriorating due to vandalism, fire, erosion,

landslides, and weather. Interior components that could be used to tell the story of their historic function have been stolen, covered in graffiti, or damaged beyond repair. In addition, the temporary field construction built during World War II, notably the partially underground hutments on Wolf Ridge, are collapsing.

While restoration of all defensive works would be a massive undertaking, protection and stabilization measures may be more achievable in the short term and may provide volunteer and partnership stewardship opportunities, in keeping with the goals of the GMP. Detailed guidelines on assessing condition, determining the level of treatment (stabilization/preservation, or restoration), and identifying safety and security issues, as well as specific conservation measures for building components, are found in "Seacoast Fortifications Preservation Manual, Golden Gate National Recreation Area" (NPS and KEA Environmental, July 1999).

The following is a preliminary list of measures that should be considered in the short term to preserve the cultural landscape through protection and stabilization of abandoned defensive works:

Seal building openings to prevent access; ensure there is adequate ventilation to prevent moisture build-up.

Reinforce weakened structural components, notably cantilevered roofs on fire-control stations and battery commander stations.

Place tarps or other temporary repairs on failing roofs.

Install erosion-control matting to preserve earthworks.

Reassemble rock camouflage and dry-laid stone retaining walls where materials remain.

Protect camouflage plantings and remove competing non-native vegetation.

Install perimeter fences to discourage access from works threatened by vandalism that do not serve contemporary park purposes, such as scenic overlooks. Most of the major defensive works were enclosed by fences during the historic period. New fences should follow the historic fence types and locations.



Figure 3.20. A World War II-era anti-aircraft gun emplacement on Rodeo Hill at Fort Barry, looking west, 2009. Scrub and grasses are concealing most of the structure and should be removed. Collapsed or dislocated concrete sandbags should be restacked. (John Martini)

Install surveillance cameras at the works under greatest threat from vandalism; continue an aggressive and punitive police presence.[29]

It is recommended that the park develop a preservation and stabilization strategy for all secondary defensive works and associated structures in the district. Priority for preservation should be based on level of historic integrity, including associated camouflage components; location, including safety and public access; threat of destruction; and overall historic significance, such as for early or rare works. The potential for interpretation should also be considered for structures that could be part of an interpreted system, such as fire-control stations associated with Battery Townsley. Building shells and ruins, such as

the Kirby powerhouse or the radio station next to the Barry mine casemate, would be appropriate to include on this list.

Concealed Buildings and Structures

Some abandoned buildings and structures in the district are largely invisible in the landscape due to overgrowth by trees, scrub, vines, grass, and other vegetation. Examples include the Mendell radio room (adjoining the Barry casemate), the cistern behind the site of the lighthouse keeper's house, the Townsley PSR room, and low-lying anti-aircraft emplacements (fig. 3.20). This overgrowth detracts from the historic character of the landscape, prevents interpretation of significant resources, and may be accelerating deterioration of built materials.

The general recommendation is to remove the concealing vegetation, unless there are significant impacts to sensitive natural resources, or if public access is not desired due to safety issues or sensitivity of the resource (building conservation issues should still be addressed). Priority should be given to buildings and structures accessible to the public, and those deteriorating due to vegetation overgrowth. Such work could provide opportunities for volunteer and partnership projects.

New Construction

New construction can result in substantial changes to the character of a cultural landscape, such as the development of the Marine Mammal Center complex completed in 2009. While the buildings are a contemporary design that is distinguishable from the historic buildings at Fort Cronkhite following one aspect of the *Secretary of the Interior's Standards*, their introduction into the historically open space of the Nike SF-87 launch site significantly altered the historic spatial character of the landscape, and changed viewsheds. The materials of the complex generally have little relationship to those used historically at the Nike sites, and stand out against the natural environment of the adjoining hillside. In contrast, the new lodge buildings at CavalloPoint in the Fort Baker Main Post are distinguishable, but are compatible in the sense they blend in with the surrounding natural hillside, and are located on or near historic building sites and thereby maintain historic spatial organization in the landscape. The materials and form of the new lodge buildings, however, have little in common with the neighboring historic buildings.

The recommended treatment guidance is to reuse existing historic buildings and structures, rather than introduce new construction in the landscape, provided the historic integrity of the feature can be preserved. A good example is the adaptive reuse of the Ridge Battery powerhouse as a pubic comfort station. If new construction is required, preference should be given to reusing historic building sites, provided the proposed new construction is of a similar size and scale as the historic building or structure, and that significant archeological issues can be mitigated.



Figure 3.21. A new comfort station erected in 2013 at the picnic area at the rear of Battery Wallace (left of photograph), looking northeast, 2014. This poured-concrete building relates to the historic utilitarian design and construction of the battery. (SUNY ESF)



Figure 3.22. A comfort station erected in 2011 at the Coastal Trail trailhead parking area on Conzelman Road, looking north, 2011. The location of this building interrupts the historic open spatial character and views to Rodeo Valley. Other locations could have provided similar access without the visual and spatial intrusion. (SUNY ESF)

In the design of new construction, it is recommended that a balance be achieved between distinguishable and compatible objectives within the *Secretary of the Interior's Standards*. Such an approach could involve use of overall historic forms, materials, and materials for compatibility, and distinctions in details to distinguish from historic features. Depending on the context, design details should reflect either a utilitarian character or Colonial Revival style, and materials should be based on the historic palette of poured concrete, concrete block, or painted wood. For example, the new public comfort station in the picnic area near Battery Wallace, although new in form and massing, refers to its historic context by using a simple utilitarian form and poured concrete walls that refer to the character of the battery (fig. 3.21). If a new building were proposed for the SF-88 administration area (YMCA), an appropriate design may maintain a utilitarian, one-story flat-roof form and concrete block construction used historically in the complex, with similar window openings but different sash configurations.

Where new construction is planned in historically undeveloped areas, it should be inconspicuous in location and design to avoid altering historic natural systems, spatial organization, circulation, and views and vistas (fig. 3.26). Historic techniques used by the Army to conceal defensive works could be applied to new construction to minimize visual impacts in the cultural landscape. This could include use of planted green roofs or building cut-and-cover structures where the topography allows.

VIEWS AND VISTAS

Views and vistas in the Forts Baker, Barry, and Cronkhite cultural landscape historically consisted of broad panoramic views across the district, strategic views from and between defensive works, and discrete views within the developed areas, such as views of parade grounds and flagstaffs. Since the end of the historic

period, views and vistas have lost historic character due primarily to overgrowth of trees and scrub.

The recommended overall guidance for views and vistas is to reopen those that have become obscured since the end of the historic period, or that have been lost to unintended vegetation growth during the late historic period. If incompatible new development is within a historic viewshed, it may be appropriate not to reestablish a historic view. If contemporary features are obscuring a historic view, consideration should be given to removing the feature. Historic features that are within a natural scenic viewshed, such as utility lines, should not be removed solely for contemporary aesthetic values.

Historic Military Views

A key historic characteristic of the Forts Baker, Barry, and Cronkhite landscape was the panoramic views from harbor defenses that were critical to strategic firing lines at sea and later in the air, and allowed for lines of communication between fire-control stations. The interrelated Nike sites also featured sight lines between the control sites and launch sites.



Figure 3.23. The strategic view from a gun platform at Battery Smith-Guthrie showing obstruction by eucalyptus trees, looking west, 2009. (SUNY ESF)

While the strategic views from the seacoast defense works became obsolete between World War I and the early Cold War period, they remained largely intact through the remainder of the historic period. Monterey pine, Monterey cypress, eucalyptus, and scrub, both planted and volunteer, began to obscure these historic views beginning in the 1960s and continuing into the present. Some of the trees have been removed, but many remain (fig. 3.23). These trees and scrub should be removed and managed to reestablish the panoramic views from the gun platforms of the batteries and the open sight lines from fire-control stations and other defensive works. Because much of this vegetation is not native, removal may often achieve both cultural and natural resource objectives.

Exceptions to these guidelines include the line of historic eucalyptus trees along the west side of Battery Alexander, which was intentionally planted in ca. 1905, most likely as concealment. As a mortar battery, Alexander did not historically have firing lines from the gun pits. These trees should be maintained and perpetuated. At Battery Duncan, the original plantings of eucalyptus groves that date to the 1910s should be retained, while unintentional spread should be removed.

SMALL-SCALE FEATURES

Small-scale features, such as fences, railings, flagpoles, signs, light standards, manhole covers, and utility poles, historically varied in design and type, but most shared a utilitarian character common to military installations. A large percentage of historic small-scale features, primarily fences and signs, have been removed since the end of the historic period. Surviving historic small-scale features outside of buildings include pipe railing at the SF-87 control site (Hawk Hill), the flagstaff at the Main Post of Fort Baker, wood utility poles, and manhole covers (part of larger structures).[30]

Historic Small-Scale Features

Although not historically a dominant characteristic of the Forts Baker, Barry, and Cronkhite district, small-scale features contribute a distinctive quality to the landscape and therefore should be preserved and enhanced.

In general, it is not appropriate to reconstruct small-scale features that were removed prior to the end of the historic period, such as cannonballs around the Main Post of Fort Baker removed prior to World War II, or the East Road gates to Fort Baker. If remnants of the feature remain, such as the concrete gate posts on Simmonds Road at the Main Post of Fort Barry, it would be appropriate to restore the missing components. It may be appropriate to reestablish small-scale features for interpretive purposes (such as a gun in a battery), provided it does not alter the overall Cold War-era character of the landscape.

Historic utilitarian small-scale features, such as wood utility poles above-ground components of underground utility systems, should be preserved because they are part of the landscape's historic character and have interpretive value for telling the story of how the military operated at the Headlands. If there are significant natural resource impacts, then removal or relocation may be appropriate. These impacts may not be direct; for example, active utility lines through a natural area require access for maintenance, which requires roads. Abandoned utility lines, such as the line to Point Diablo that serviced the light station, should be retained as remnants of the historic development of the landscape.

Contemporary Site Furnishings

Given the large number of site furnishing introduced into the landscape since the historic period, they have had a cumulative and sometimes negative impact on the historic character of the landscape. These furnishings include railings, gates, benches, signs, interpretive waysides, and light standards in a wide variety of types and styles. In general, contemporary small-scale features should be consistent with park-wide guidance in the draft *Site Furnishings Standards, Golden Gate National Recreation Area*.[31]



Figure 3.24. Historic fence at SF-87C (Hawk Hill), ca. 1962 (left), and contemporary fence (railing) along Conzelman Road below SF-87C showing an appropriate compatible and distinguishable design, 2011. New features such as the railing and walk at right should also be inconspicuous in the historic landscape. (Left: Collection of Paul Petrosky; right: SUNY ESF)

Forts Baker, Barry, and Cronkhite correspond to two design zones in the standards. In the "Rustic Design Zone," which covers the undeveloped areas, roads, and clusters of defensive works, "…furnishings must blend with the natural colors and rugged scale of the environment. They should be timeless, simple and economical. Durability without maintenance is a primary goal."[32] The standards acknowledge that the context of historic military works within this zone should be considered. The "Historic Post Design Zone" corresponds with the Main Posts of Forts Baker and Barry, and the Fort Cronkhite Cantonment, as well as other developed support areas in the Headlands such as the SF-88 administration area (YMCA). According to the standards, "Furnishings in the Historic Post zone reflect historic architectural styles and are more refined in scale, materials, and details than in rustic areas. They convey the well-maintained, polished but functional look that probably existed under military management."[33]



Figure 3.25. Rustic split-rail fences along Tennessee Point trail (in background), and more recent rustic fencing along Mitchell Road at right, looking northwest, 2014. These fences are not compatible with the historic military character of the landscape. The multiple types and styles of fences also detract from the landscape's historic character. (SUNY ESF)

While the draft *Site Furnishing Standards* provide sound overall guidance for the design of contemporary small-scale features at Forts Baker, Barry, and Cronkhite, they do not address the specific contexts of the three military reservations and their historic limits beyond the main posts. The standards should acknowledge the entire 2,700-acre district as a historic cultural landscape. The following are guidelines specific to this landscape, which should be addressed in future editions of the *Site Furnishing Standards*.

Contemporary site furnishings should be compatible with the historic Cold War-era military character of the landscape, and be distinguishable from historic small-scale features (fig. 3.24). In general, traditional NPS rustic design is not appropriate to the landscape of Forts Baker, Barry, and Cronkhite, nor is design that evokes earlier uses and



Figure 3.26. Contemporary benches and stair railings in front of officers' quarters at the Main Post of Fort Barry, looking east, 2011. These features are incompatible with the historically more refined character of the post landscape. (SUNY ESF)

periods in the district's history, such as dairy ranching, or highly ornamented Victorian-period design. For example, the split-rail fences along the trail to Tennessee Point, which are evocative of either the rustic style or the area's ranching history, are not consistent with the district's historic military character as it developed through the Cold War period (fig. 3.25).

New site furnishings and signs, whether in the developed areas or not, should be inconspicuous to minimize change to historic landscape character and avoid clutter, unless they are reestablishing features that existed historically. New features should not interrupt historic spatial organization, circulation, or views and vistas (see fig. 3.24). Traffic, parking, and wayfinding signs should be kept to a minimum necessary for safety.

Contemporary site furnishings should be treated uniformly to reinforce the historic continuity among the three military reservations. Multiple designs and types can reinforce visual clutter and detract from the landscape's historic identity (see fig. 3.25). Minor variations among developed areas, former Coast Guard areas, and undeveloped areas, may be appropriate, but district-wide design relationships should be maintained. In keeping with the *Site Furnishing Standards,* small-scale feature in the main posts should have a more refined character that those in undeveloped natural areas. For example, utilitarian park benches and stair railings at the Main Post of Fort Barry are incompatible with the historic character of the landscape (fig. 3.26).

Addition of site furnishings should reestablish small-scale features that have been removed since the end of the historic period, if sufficient documentation exists. For example, if guiderails are warranted along the approach road to SF-87 control site (Hawk Hill), they should reestablish the white-painted "W"-type guiderail that existed historically (see fig. 3.24). Certain historic site furnishings, such as barbed-wire chain-link security fences, may not be compatible with current park operations.

Historic small-scale features should be used as design precedent for site furnishings where possible. For example, if new railings are being proposed for steps in the Main Post of Fort Barry, they should recall the historic railings, or reconstruct them if documentation allows, rather than introduce a distinctly new design (see fig. 3.26). The park archives contain plans of Army railings, fences, and other small-scale features that provide necessary documentation.

Signs

A standardized system of park signs, including wayfinding, traffic, and interpretive signs, has recently been updated in the *GGNRA Signage and Graphic Guidelines*

(2014). These are appropriate as compatible new additions to the landscape, but care should be taken to avoid visual clutter in the landscape. A distinct system of historical-style signs identifying developed areas, commemorative street names, and defensive works should be developed (see district-wide task BBC-1).

ARCHEOLOGICAL SITES

Archeological sites with above-ground resources—landscape features that are traces and ruins—may contribute to the historic character of the landscape. Below-ground resources generally do not contribute to the historic character of the landscape, but may be significant for information potential under National Register Criterion D.

The overall recommendation for treatment of above-ground archeological landscape features is to preserve those that contribute to the historic character of the landscape (identified in Chapter 2: Analysis and Evaluation). These are generally features that were removed during the historic period (prior to 1966). For example, the foundation remnants of the ca. 1917 firehouse at the Main Post of Fort Barry, a building that was removed in ca. 1960 during the historic period, should be retained in future improvement plans (fig. 3.27). Likewise, the many remnants of World War II field defenses should be preserved. In terms of historic character, these features generally do not require restoration to their original condition, unless required for interpretive purposes.

In addition, above-ground archaeological landscape features that became ruins after the historic period (and therefore lack historical integrity), such a structural footprints at the SF-87C site on Hawk Hill, may require preservation or data retrieval due to historical significance under National Register Criterion D.



Figure 3.27. Foundation remains of the ca. 1917 firehouse at the Main Post of Fort Barry, looking west, 2011. Archeological landscape features such as this should be preserved as evidence of the historic development of the landscape. For significant resources such as this, addition of a wayside would enhance interpretation. (SUNY ESF)

When existing archaeological landscape features—whether dating to the historic period or not—must be removed for reasons such as ecological protection or park operations, they should be fully documented prior to removal. Where feasible, traces should be retained for interpretive purposes. Removing traces of historical development to enhance contemporary aesthetics and scenic values is not recommended, unless the archeological landscape features are threatening ecosystems or pose risks to health and safety.

District-Wide Archeological Survey

A district-wide archeological survey (overview and assessment) should be completed to update existing inventory and document unsurveyed sites, both above and below ground. Much of Fort Baker has been inventoried, but

little data exists on Fort Barry and Fort Cronkhite. Such a survey will enhance knowledge of the history of the landscape, and would include assessment of prehistoric resources and resources related to the district's pre-military agricultural history.

Based on research for this CLR, the following is a preliminary list of resources and areas that should be prioritized for survey because of insufficient existing data and the likelihood of historically significant remains. Resources that have existing inventory data are indicated by ASMIS numbers.

District-wide

Underground utility lines and trenches between batteries, fire-control stations, powerhouses, and submarine defenses, including submarine cable terminal structures that have not been located at Tennessee Cove, Rodeo Beach, and Bonita Cove.

World War II-era field positions (foxholes, trenches, tent sites, etc.).

Fort Baker

Remnants of the unofficial recreation area along East Road north of the Alexander Avenue interchange that was developed in ca. 1938 (ASMIS: GOGA00452).

Traces of World War II-era tent sites and other military development on the hillside east of Battery Kirby (ASMIS: GOGA00067).

Possible traces of the post garden that was north of Battery Kirby between ca. 1902 and 1930.

Possible traces of the ranch that existed northwest of Battery Kirby between ca. 1875 and 1920, and the adjacent Army powerhouse and water tanks, including the access road (ASMIS: GOGA00067).

Stone bridge and road remnants near the Baker-McDowell cable terminal off East Road that may date prior to World War I (ASMIS: GOGA00458).

Remnants of buildings and structures at the Lime Point fog signal station developed beginning in 1883 (ASMIS: GOGA00453, 00018).

Remnants of the Engineer Department area below the Golden Gate Bridge viaduct that existed between 1869 and ca. 1935 (ASMIS: GOGA00451).

Fort Barry

Rifle Range camp remains south of the balloon hangar developed in ca. 1904.

Rifle Range long-distance range north of Bunker Road, and hillside backstops.

The World War II hutments near Battery Smith-Guthrie and Battery Rathbone-McIndoe, and at Tennessee Point.

Remnants of the Navy radio station and Army searchlight complex near Bird Island developed between 1911 and 1917.

Remains of the Engineer Department Area and Fort Barry school building and yard northwest of the Life-Saving Station developed beginning in 1901.

Possible traces of the Engineer sand tramway, sand and rock bins, and sand pits northwest of Battery Mendell, together with a rock quarry above Bonita Cove, developed in 1901 for construction of the Endicott batteries.

Possible remains of the lighthouse windmill and well in the sand gully west of SF-88 administration area (YMCA), built in ca. 1871.

Remains of the lighthouse keepers' area near Point Bonita developed beginning in 1855.

Remnants of the Coast Guard boathouse and dock on Bonita Cove, together with trace of Engineer tramway to Bonita Ridge, developed beginning in 1901.

Point Bonita lighthouse wharf (South Landing) and associated winch, tram, and oil tank developed beginning in ca. 1871.

Fire-control stations and AA machine gun emplacement on Point Bonita Hill dating to World Wars I and II.

Traces of the old fog signal station and Third Assistant Keeper's dwelling at Point Bonita developed beginning in 1872.

Nike SF-88L T1 and T2 remnants dating to 1954.

Fort Cronkhite

The concentration of World War II field positions (foxholes, trenches, tent sites, etc.) near Battery Townsley, from the Little Ranch valley north to Wolf Ridge.

Remnants of the Gioli ranch/Silva Little Ranch at Fort Cronkhite that operated between ca. 1885 and 1938.

The AA Battery #1 hutment on Wolf Ridge.

The concentration of World War II-era field positions—probably practice positions—on the hillside above the Fort Cronkhite Cantonment.

Remnants of searchlights, powerhouse, controller both, fire-control stations, and water supply system (pumphouse, dam, pipes) at Tennessee Point developed between 1914 and ca. 1942.

Nike SF-87L T1 and T2 remnants dating to 1954.

DISTRICT-WIDE TREATMENT TASK RECOMMENDATIONS (DRAWINGS 3.1—3.5)

Treatment tasks are specific actions recommended to enhance the historic character of the Forts Baker, Barry, and Cronkhite landscape within the context of park operations and other resource values, according to the broad planning directive of the park's General Management Plan.[34] The recommendations also include treatment considerations, which are more general recommendations where park planning is not at a level necessary to inform specific treatment tasks. These considerations are also presently not priorities for park management. The recommendations are presented at a broad, conceptual level and will thus require additional park planning through an integrated management approach to ensure that all park values and needs are addressed.

This section provides recommendations for district-wide landscape characteristics and features, identified by the abbreviation BBC followed by a number, listed in order of suggested priority based on issues such as historic preservation, inter-

pretation, and relationship to fundamental resources and GMP goals. Table 3.1 at the end of the chapter provides a summary list of the recommended treatment tasks. The default treatment for all landscape features that are not addressed in specific tasks and management considerations is *Preservation*, "the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property," to prevent the loss of historic materials and/or spatial relationships, and ensure that historic features are protected in place."[35]

Task BBC-1. Install System of Historical Signage

As discussed under the General Treatment Guidelines, the historic military place and feature names should be reinforced and reestablished through the park's sign standards to aid interpretation, wayfinding, and park management, and to perpetuate the Army's historic commemorative intent in naming places, defensive works, and roads. Implementation of this task is consistent with the GMP's management goals to "preserve and protect cultural resources so that visitors can connect with and appreciate these resources and their stories."[36]

The following are preliminary recommendations for the historical signage that should be incorporated into the *GGNRA Signage and Graphic Guidelines*. Further planning would be necessary to identify individual sign locations, and their design, scale, and materials.

The recommended design theme for the historical signs is a simple white painted signboard with a black border and black lettering that has a character similar to the standard Army signage dating to the period of harbor defenses through World War II, and maintained in large part through the Cold War (fig. 3.28 see also fig. 3.5). The simple black and white design is similar to the sign standards used by the Presidio Trust to identify historic places and features within the Presidio. The recommended historical signs should be visually distinct from historic signs and other standard park signage conveying contemporary resources, wayfinding, and interpretation in a way that avoids clutter in the landscape. However, if there is sufficient documentation available, it may be appropriate to reconstruct (reproduce) a historic sign, especially if it was a distinctive design, such as the colorful signs at the Nike launch and control sites. Any surviving historic signs should be preserved.



Figure 3.28. Simulation of suggested design for historical place and feature signs, showing sign identifying the western approach to the Main Post of Fort Barry, looking east along Field Road, 2011. (SUNY ESF)

These historical place and feature signs should be kept simple to convey that they are a contemporary addition to the landscape, with additional information linked to brochures or on-line content. However, for commemorative names, the name, rank, and dates of service of the honored soldier should be included on the sign. The signs should be made of durable materials to reduce maintenance, such as thick-gauge aluminum with a durable paint or other finish,

and be employed consistently throughout the district to reinforce the historic unity between the three military reservations.

The following is a suggested design hierarchy for this historical signage (fig. 3.29):

Historic Military Reservation Identification

Free-standing signs off road shoulders at military reservation borders with the name of the military reservation, dates of establishment and decommissioning, and namesake. For example, signs identifying the entrance into the historic Fort Barry Military Reservation could be installed on Bunker Road at the Capehart

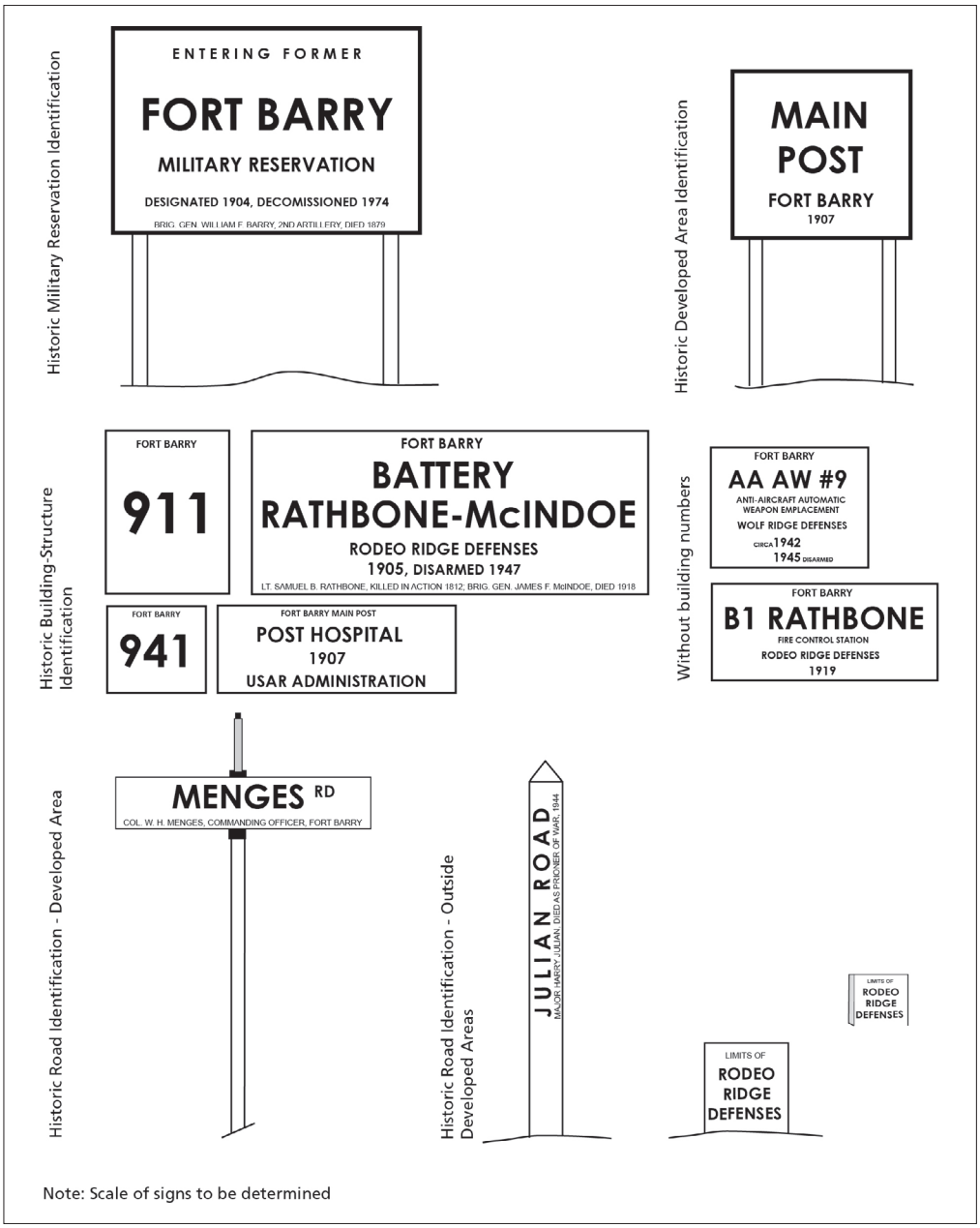


Figure 3.33. Suggested design hierarchy for historical signs based on place and feature types, from entrances to the historic military reservations to signs at streets and trails, as recommended under task BBC-1. For commemorative names, the design includes biographical information on the honored soldier, a detail also used on historical-style signage at the Presidio. (SUNY ESF)

Housing Area, near Hawk Hill on Conzelman Road, and at the causeway from Fort Cronkhite.

Historic Developed Area Identification

Free-standing signs off road shoulders in front of, or at entrances to, developed support areas, such as the Main Posts, rifle range, motor pool, SF-88 administration area, and Capehart housing area. These signs could state the name of the developed area, its date of establishment, and the name of the military reservation. In some cases, these signs may replace existing "Park Identification" signs. For example, the Fort Cronkhite park identification sign (type V210) on Mitchell Road identifies the entrance into the historic Cantonment, not a contemporary unit of the park. It should be replaced with a historic developed area sign that includes the text "Fort Cronkhite Cantonment 1941."

Defensive Works Identification

Batteries and secondary defensive works should be marked by small signs that show the building number (the historic building number sign, if extant, should be retained), and an adjoining sign indicating the name of the work, the dates of its completion and disarmament or obsolescence, and the commemorative namesake, if applicable. The signs should be affixed to the structure, and be of a size that is visible to visitors, but does not alter the character of the work. The Nike launch and control sites should have their own signage based on their distinctive historic signs.

Building Identification

Buildings should be marked by signs similar to those on the defensive works, including a small sign with the building number (the historic building number, if extant, should be retained), and an adjoining sign indicating the historic name and/or use of the building, and its date of construction. Another line of text with smaller type could be used to indicate later historic names or uses of the building.

Road Identification

In developed areas, such as the Fort Cronkhite Cantonment, the existing black and white street signs on wood posts are consistent with the recommended historic signage design.[37] This design, however, should be modified to include information about the commemorative namesake, as is done at the Presidio. Standard MUTCD highway signs (green with white type), such as the street signs at the Fort Barry Main Post, should be replaced with the black and white historical standard. Street signs should be installed where missing, such as at Stennis Street and Edison Street in the Fort Cronkhite Cantonment, and at Umia Street in the Main Post of Fort Baker, to reestablish the commemorative intent.[38] For secondary roads outside the developed areas, such as Julian Road that is maintained as part of the Coastal Trail, an appropriate design would be a simple white painted post with the

road name and smaller text for the commemorative namesake. This design would be distinct from contemporary trail signs that may have different names for the road (such as Roth Road that is currently identified as the Kirby Cove Trail). The current name should be maintained on the sign (in smaller text) to avoid confusion. Additional research is needed to identify several roads (including Dubois Road and Gibson Drive) where no information on the subject soldiers was found during research for the CLR (refer to Appendix B in CLR Volume I).

Ruins and Archeological Site Identification

On ruins, such as the SCR-682 #2 radar station remains on Wolf Ridge, a building number sign should be mounted on foundations or other remains. Free-standing signs may be necessary for certain features without structures on which to mount signs, such as anti-aircraft field emplacements, but should be inconspicuous and designed to withstand vandalism. For non-sensitive archaeological sites without above-ground remains, it may be appropriate to install a historical identification sign for a developed area, defensive work, or building if the feature existed during the treatment period (Cold War). For example, a historical sign could be installed at the site of the Smith Housing Area off Bunker Road in Fort Barry, noting the name of the area, its date of development, and its date of removal. If a feature disappeared prior to 1966 or was not associated with the military, such as the Silva Little Ranch, then a standard park wayside would be the appropriate signage.

Task BBC-2. Remove Volunteer Non-Native Trees

As discussed under Treatment Guidelines, the volunteer (self-seeded) spread of non-native trees since the end of the historic period, primarily Monterey pine and cypress, blue gum eucalyptus, and acacia, has altered the historic spatial character, views, and natural systems across the Forts Baker, Barry, and Cronkhite landscape. All volunteer individual trees, groves, and larger woods that are not associated with an intentional planting should be cleared and the land restored to its coastal scrub, grassland, or other native vegetation (see Drawings 3.1—3.5). This treatment is currently being implemented by the park and its partners, and is consistent with the GMP's goals to preserve and protect cultural resources, and to maintain the integrity and diversity of natural resources and systems.

Areas with concentrations of non-native volunteer trees that warrant removal include Wolfback Ridge near the Waldo Tunnel (some within the state right-of-way), along Bunker Road near the East Portal, near the Dillingham commuter parking lot, on the slopes east and west of Batteries Smith-Guthrie and O'Rorke, and on the hillsides above the Capehart Housing Area, Fort Barry Motor Pool (balloon hangar area), Rifle Range, and Fort Cronkhite warehouse (Building FC111).

Clearing spread of non-native trees from historic plantings is addressed as site-specific tasks. See tasks for Duncan Hill eucalyptus groves (HCD-2), Kirby Cove plantations (GBD-3), Bicentennial campground (RRD-4), Bonita Ridge (BRD-1), the Fort Barry Main Post (FAMP-3), and the SF-87 Limited Area (SF87L-1).

Task BBC-3. Remove Non-Military Cold-War Era Tree Plantings

As discussed under the Treatment Guidelines, tree plantings made during the Cold War by others, most likely by the Boy Scouts as conservation projects, have altered the historic military character of the Forts Baker, Barry, and Cronkhite landscape and introduced additional non-native and invasive species. Most of these trees appear to have matured after the landscape treatment date of the mid-1960s, and have no association with the military history of the landscape. In keeping with the GMP goals of preserving and protecting natural and cultural resources, the park and its partners have been removing these plantings in recent years, most notably around AA Battery #1 on Wolf Ridge, on Battery Townsley, and on Hawk Hill (BC 129/SF-87 control site). It is recommended that the park continue this program of tree removals to address the following sites (see Drawings 3.1—3.5):

Trees along Alexander Avenue

The Boy Scouts received a permit to plant trees in this area in 1965. The species and locations have not been documented, but appear to extend to the north and south to an old quarry above Seitler Road. The line of eucalyptus in a gully north of Alexander Avenue may have been an earlier planting by the Boy Scouts and should be removed, and the land returned to native vegetation.

Trees along former Gibson Drive off Bunker Road (Fort Baker Main Post)

Canary Island pine, cryptomeria (Japanese cypress), and Monterey cypress were planted in this former civilian housing area in ca. 1960, probably by the Boy Scouts, adjacent to older plantings of eucalyptus and Monterey cypress dating to ca. 1910. The newer plantings and non-historic spread should be removed and the older plantings retained.

Kirby Campground Monterey Pines

These trees on the valley floor north of Battery Kirby were planted in the early 1950s, possibly by the Boy Scouts. The trees are dying and should be removed and not replanted to reestablish the open space of the tenting terraces.

Eucalyptus Groves at Rathbone-McIndoe Hutment and Smith-Guthrie Hutment

These groves of eucalyptus were probably planted after 1966, or possibly brought in on fill. An archeological survey of the hutments should be undertaken prior to or during tree removals. Any remains and the surrounding banks should be protected and stabilized.

Battery Wallace Monterey Cypress

These trees may have been one of the Boy Scouts' earliest plantings, made in the late 1940s. Most of those around the casemates have been removed. The remaining trees on the top and rear parapets should be removed to enhance the military

character of Battery Wallace and protect the parapets in the event of a blow-down. Removal of the woods would probably also deter deer from eroding trails across the parapets. Native grasses and scrub should be established following Army camouflage guidance from World War II. The Monterey cypress trees in the adjoining picnic area to the east across Conzelman Road should be retained to provide shade and shelter.

Townsley PSR Room Monterey Pine and Cypress

These trees on the earthen cover of the structure were probably planted in the 1950s. Removal would enhance the historic military character of the structure and protect the parapets in the event of a blow-down. Clearing should address removal of other non-native and invasive vegetation, which includes cape ivy and acacia, and reestablish native grasses and scrub following Army camouflage guidance from World War II.

Searchlight #7 Powerhouse Monterey Cypress, Tennessee Point

These trees were most likely planted after 1966 behind the earthen parapet on the site of the Searchlight #7 powerhouse. Native grasses should be reestablished to keep the form and remains of the powerhouse site visible for interpretive purposes. The parapet and any building remains should be retained and protected during the tree removals.

Task BBC-4. Preserve and Reveal Anti-Aircraft Gun Emplacements

As discussed under Treatment Guidelines for Buildings and Structures, many of the concrete sandbag-type World War II-era anti-aircraft gun emplacements scattered throughout Forts Baker, Barry, and Cronkhite have been concealed by soil and scrub, or are being impacted by foot traffic and vandalism. Because these are historically significant features and part of the landscape's historic character, they should be documented, stabilized, and revealed through removal of scrub and accumulated soil. Social trails that cut across the emplacements should be removed, with access directed toward the historic entry routes. Priority for treatment should be given to the emplacements that are most threatened by visitor impacts or other forces, and are easily accessible from trails and roads. The following is a preliminary list of the emplacements in order of priority for treatment based on location, historical integrity, and physical condition; additional survey and inventory is required to assess integrity and physical condition.

Fort Baker

AA.50 #38 and AA AW #14 (Duncan Hill)

Battery Duncan AA gun emplacement

Cavallo Battery AA gun emplacement

Fort Barry

40 mm AA AW #9, near Rathbone-McIndoe
AA.50 #32 west of BC 129
AA .50 #20, near Rodeo Beach
AA .50 #21,near Battery Smith-Guthrie (includes tunnel)
AA .50 #25, Unidentified AA (UAA-3), Rodeo Hill
40 mm AA AW #8, AA.50 #29, northeast of Main Post
40 mm AA #11 (south of Julian Road)
AA.50 #28, Unidentified AA (UAA-1), southwest of Main Post
40 mm AA AW #6, Point Bonita Hill

Fort Cronkhite

Unidentified AAs (UAA-1, 2, 3, 4), AA Battery #1
AA.50 #15, south of Tennessee Beach
Unidentified AA (UAA-5), Fort Cronkhite reservoir
AA.50 #19, east of Cantonment

FORT BAKER TREATMENT TASK RECOMMENDATIONS

The overall objectives of landscape treatment for the Fort Baker Military Reservation are to enhance its historic identity, preserve the character and identity of historic roads, remove the spread of non-native trees to reestablish historic spatial organization and views, stabilize and protect defensive works, and manage visitor access to interpret and preserve historic features. The default treatment for all landscape features that are not addressed in specific tasks and management considerations should be guided by the Secretary of the Interior's Standards for *Preservation*. Tasks are identified according to an abbreviation of the area (FB for Fort Baker outlying areas, LRD for Lime Ridge Defenses, etc.) listed in order of suggested priority based on issues such as historic preservation, interpretation, and relationship to fundamental resources and GMP goals. Table 3.1 at the end of the chapter provides a summary list of the recommended treatment tasks.

FORT BAKER OUTLYING AREAS (DRAWING 3.1)

Task FB-1. Repair Water Tanks FB 420–422

The three large steel water tanks along Vista Point Road southwest of the Main Post should be repaired and painted white to preserve the structures and reflect the recommended World War II-era treatment date for the Main Post. These three structures have been a conspicuous part of the setting of the Main Post since their completion between 1904 and 1908, and convey the utilitarian systems that were necessary for operation of the post. The existing rusted and abandoned appear-

ance is not in keeping with their well-maintained character during the historic period.

Treatment Considerations

Golden Gate Bridge Wharf Area

Once bridge construction is completed and the temporary trailers are removed, the Fort Baker Plan calls for returning public access to this area as part of the San Francisco Bay Trail. The plan identified the area along the existing bulkhead as a public parking area. Such a use would detract from the interpretive value of what was the earliest developed area of Fort Baker. This plan should be reconsidered in favor of use as a scenic and interpretive overlook that maintains the historic circulation patterns, including the old alignment of Moore Road and Conzelman Road (identified as an "interpretive trail" in the plan) and the bridge wharf area. Building sites from the Engineer Camp could be identified through waysides and/or posts marking the building corners.

US 101 and Alexander Avenue Fences

The existing chain-link fences along US 101 and Alexander Avenue are remnants of the Army security fences that once extended along the perimeter of Forts Baker, Barry, and Cronkhite. They include Gate #6 at Drown Road and Alexander Avenue, which is the last remaining Army gate in the district. The fences reflect the historic military character of the district and therefore should be maintained. However, the fences are within the rights of way of the Golden Gate Bridge authority and Caltrans, and are therefore not managed by NPS. Overall, the fences are inconspicuous in the landscape.

West Portal Sentry Station

The small concrete building near the West Portal of the Baker-Barry tunnel (Building FB272) was constructed in 1919 and reflects the secured military character of the district. The building, which is currently boarded up and surrounded by heavy vegetation, should have a use to ensure its long-term preservation. If no use can be found, it should remain secured and the roof weather-tight. A mown perimeter would help keep vegetation off the building and enhance its historic maintained appearance.

MAIN POST OF FORT BAKER (DRAWING 3.1)

As described in the Treatment Framework, the recommended treatment for the Main Post of Fort Baker is to preserve and enhance its World War II-era character to address its significant role during the war and the existence of significant World War II-era resources.

The following treatment recommendations for the Main Post of Fort Baker are limited in scope, since detailed guidance and specific tasks are in the *Fort Baker CLR*, based on the direction of *The Fort Baker Plan*. Treatment was implemented in large part through the CavalloPoint Lodge project and by NPS between 2006 and 2009. The following tasks and management considerations are updates and additions based on the findings of this CLR.

Task FBMP-1. Reconstruct World War II Air-Raid Siren Tower

The white-painted wooden air-raid siren tower at the Main Post of Fort Baker, built in 1942 at the rear of the YMCA building (gone) and removed in 2008, was a long-standing part of the Main Post and reflected the war-time legacy of the landscape and the subsequent continual Cold War-era state of preparedness. The park currently has begun planning to reconstruct this tower on the existing historic footings. A historic plan, most likely available at the park archives, should be used to guide the work; if this is not available, the reconstruction should be based on historic photos. If these are not sufficient, the extant Cold War-era air-raid siren tower at the Fort Barry Capehart housing, which was most likely a similar design, could be used as a model.

Treatment Considerations

Windbreaks

The *Fort Baker CLR* provides recommendations for preserving and reestablishing the Monterey cypress and eucalyptus windbreaks at Fort Baker, including transitioning the windbreaks to uneven-age stands. Consideration should be given to maintaining an even-age character to the stands, since uniformity is an important historic characteristic of the windbreaks. Uneven age was recommended to avoid replacement of the entire stand, but such long-term periodic replacement (once a majority of the historic trees have been lost) would be an appropriate treatment to perpetuate historic cycles of growth. In addition, consideration should be given to reestablishing the linear windbreak of eucalyptus trees east of McReynolds Road (above the barracks) to screen the contemporary lodge development on the hillside above. Only a few mature trees remain.

Infill Construction

The *Fort Baker Plan* identified the space between officer quarters FB605 and the Commanding Officer's quarters FB604 as space for future building. Officer quarters were proposed here and south of quarters FB631 during the initial development of the Main Post in 1902, but the buildings were never constructed. It is recommended that buildings not be constructed at these sites because none existed historically. In contrast, construction of a building at the site of the YMCA adjoining barracks FB636 would be appropriate (if of a similar size and massing),

because a building existed there historically. The YMCA was built 1918 and torn down in ca. 1972.

Center Road Trees

The rows of eucalyptus trees planted to either side of Center Road at the foot of the parade ground in 2008 should be considered for removal or replacement because they will eventually block historic views of San Francisco Bay. The historic rows of trees along this road (a mix of eucalyptus and Monterey pine and cypress) were removed in 1938 prior to the treatment period, most likely to reopen the views. Replacement with small trees that do not reach more than 15-20 feet tall (the approximate height of the former Station Hospital one-story buildings) would preserve the views and also maintain the spatial limits of the parade ground, which was bordered by the Station Hospital complex between 1941 and ca. 1983.

Post Hospital (FB533) and Barracks (FB636)

In keeping with the World War II-era treatment date, consideration should be given to reconstructing the porches that were removed from these two buildings during the Cold War, consistent with completed treatment of buildings surrounding the parade ground. It would also be appropriate to remove the concrete block wall in front of FB636, which was added in ca. 1955, and restore the original turf slope. This wall was added during the overall recommended period of significance for the district (to 1966), but does not appear to be significant in the context of the landscape's military use and design, and is inconsistent with completed treatment that has rehabilitated the landscape's pre-World War II-era character.

Gibson Drive (Former Civilian Housing Area)

The former civilian housing area along Gibson Drive off Bunker Road, developed between 1899 and 1910, was an important part of the historic development of Fort Baker. While three of the six houses had been removed by 1945, the area still reflected a distinct character apart from, but adjacent to, the Main Post. Consideration should be given to reestablishing Gibson Drive as an interpretive trail, where the history of this area could be told through waysides and landscape remnants. The commemorative intent of the road should also be researched and signed according to district-wide task BBC-1 (information on soldier Gibson was not found during CLR research). The eucalyptus, Monterey cypress, and other trees in the area should be removed back to the limits of the original plantings in keeping with district-wide tasks BBC-2 and BBC-3. The eucalyptus have spread from their original plantings, and the Canary Island pine, cryptomeria, and Monterey cypress were most likely planted by the Boy Scouts in ca. 1960. Additional survey and inventory would be necessary to identify the historic limits of the trees and remnant built features in addition to the one visible concrete utility vault.

FORT BAKER QUARTERMASTER AREA (DRAWING 3.1)

As described in the Treatment Framework, the recommended treatment for the Fort Baker Quartermaster Area is to preserve and enhance its World War II-era character to be consistent with the adjoining Main Post and waterfront areas, and to address its significant role during the war.

The following treatment recommendations for the Quartermaster Area of Fort Baker are limited in scope because treatment for most of the area has been completed through rehabilitation as the Bay Area Discovery Museum, based on *The Fort Baker Plan* and museum planning. All extant World War II-era features should be preserved.

Treatment Considerations

Satterlee Road

Satterlee Road, the historic spine of the Quartermaster Area that presently serves as a pedestrian zone for the Bay Area Discovery Museum, no longer reads as a continuous road due to addition of fences and changes in pavement. Consideration should be given to redesigning the wood-plank fences at the northwest end of Satterlee Road within the museum's pedestrian zone so that the road corridor is emphasized. The current fences create a larger rectangular corral-like space that cuts off the continuity of the road. A less conspicuous fence using pipe posts and cable railings and gates would allow the historic road corridor to read more clearly.

At the southeast end of the Quartermaster Area, the removal of pavement, planting of shrubs, and addition of a wood-plank fence near the 1921 service station (Building FB566) has cut off the continuation of Satterlee Road toward Battery Yates and Cavallo Point. Consideration should be given to reestablishing the continuity of the road through restoration of the paved roadbed, replacement of fences with a less conspicuous design, and removal of vegetation. The Satterlee Road reconstruction project undertaken in 2014 realigned Satterlee Road south of the Quartermaster Area to align with the museum parking lots. The abandoned section of the historic road should be retained or reestablished to preserve the historic circulation between the Quartermaster Area and Cavallo Point.

Quartermaster Storage Warehouse (Building FB513)

This large building on the north side of East Road, built in 1942 as Quartermaster storage and presently used by park maintenance, reflects the World War II-era expansion of the Quartermaster Area. Consideration should be given to its preservation and adaptive reuse, rather than removal and replacement with parking. The building could be rehabilitated as covered parking space.

East Road Eucalyptus Trees

The large blue gum eucalyptus trees along the south side of East Road through the Quartermaster Area date to the ca. 1937 realignment of East Road. These trees, which were planted in a non-continuous row from Drown Road to near Center Road, should be preserved and perpetuated. If the existing trees must be removed, they may be replanted with a non-invasive variety to perpetuate the feature, as has been done around the parade ground. The existing trees on the north side are either volunteers or post-date World War II and therefore may be removed. Volunteer exotic and native trees and high scrub that have grown in along the bank below the trees should be cleared to reopen views toward the waterfront.

HORSESHOE COVE WATERFRONT (DRAWING 3.1)

As described in the Treatment Framework, the recommended treatment for the Horseshoe Cove waterfront is to preserve and enhance its World War II-era character for consistency with the adjoining Main Post and Quartermaster Area, and to address the area's significant development and role during World War II. The addition of Marina Road and the timber bulkhead along the Station Hospital were the only major additions in the area during the Cold War. Treatment identified in the *Fort Baker Plan* for this area includes conversion of the Station Hospital site to a beach and meadow, conversion of the Travis Sailing Center lodge to a public facility, and improvement of the mine dock as a public fishing pier.

Task HCW-1. Restore Marine Railway and Fuel-Berthing Dock

The marine railway (FB668) with its walkway and the fuel-berthing dock (FB657) with its steel 10-ton derrick are significant vestiges of the industrial character of Horseshoe Cove dating to development as a marine maintenance facility during World War II. Both features warrant incorporation into plans for rehabilitation of the marine repair shop (FB679 Travis Sailing Center lodge) into a public facility. The derrick and surrounding dock should be repaired and the missing sections of the dock to the north and south be reconstructed as shown in historic plans and photos. In keeping with treatment to the World War II era, the 6-ton marine railway should be restored through removal of the non-historic deck extension with its wood picket railings, and the floating "guest" dock, which were added by the Presidio Yacht Club in ca. 1961. A new dock could be constructed along the alignment of the 100-ton marine railway between the fuel-berthing dock and 6-ton railway, which was removed in ca. 1965. Refer to Martini, "Fort Baker Waterfront Historic Structure Report, 1A" (2008) for details on these historic structures.

Task HCW-2. Protect and Reestablish Moore Road Eucalyptus Trees

The triangular intersection of Moore Road and Somerville Road near the cable tank building (FB670) has been enlarged over the years so that the asphalt currently is up against two historic eucalyptus trees in the island of the intersection. To protect these trees, the pavement should be pulled back from the trunks;

addition of curb is not recommended due to the potential for damage to the root systems. Two eucalyptus trees should be planted to the north along the east side of Moore Road to replace historic specimens removed after 1972. The alternative eucalyptus species used around the parade ground (*Eucalyptus saligna* or *E. maculata*) would be appropriate in these locations.

Task HCW-3. Reconstruct Conzelman Road Entry Piers

The concrete piers on Conzelman Road, approximately fifty feet south of the Quartermaster wharf (mine dock), historically marked the entrance into the main developed area of Fort Baker. The posts were built in ca. 1910 removed around 1950. In keeping with the World War II-era treatment date for the Horseshoe Cove waterfront, it is recommended that these posts be reconstructed, based on historic photographs or the existing posts at Battery Spencer and Roth Road that are the same design. Undertake archeological testing to identify the historic footings and the precise location. While it is not known whether these posts had any text on them, it is recommended that they be signed with uppercase text "Fort" on one post and "Baker" on the other, similar to what was on the gates on East Road; also include the date of reconstruction on the back sides. Reconstructing these posts will aid in enhancing the historic identity of Fort Baker.

The companion gates on the East Road entrance into Fort Baker near the Sausalito boundary are not recommended for reconstruction because they were removed in 1937 prior to World War II as part of the construction of Alexander Avenue.

Treatment Considerations

Proposed Beach Restoration

The Fort Baker Plan proposes removal of the timber bulkhead and fill associated with the Station Hospital (1941–ca. 1983), and construction of a natural beach and meadow on the site, with parking on the north side of the area. Boardwalks are proposed to crisscross the meadow to link with the Bay Trail. Given that the natural beach was removed at the same time that the adjoining World War II-era Mine Depot and marine repair facilities (Travis marina, breakwaters) were constructed, the proposal represents a contemporary addition to the landscape, rather than a restoration to historic conditions. Design development is needed to address how the meadow and beach would transition to the adjoining historic areas.

Consideration should be given to retaining the alignment of Somerville Road above the beach, rather than relocating it to the north of the site as proposed in the *Fort Baker Plan*. Retaining Somerville Road would provide continuity between the remaining road section at the Coast Guard Station and the marine repair facility on the east, while also retaining the road as a commemorative feature. This road/trail could also serve as the connector through the proposed beach area for the San Francisco Bay Trail. Use of pervious asphalt would provide an ecologi-

cally sensitive surface that retains the continuity of this historic circulation feature. In addition, the boardwalks through the proposed meadow could be aligned in an orthogonal manner, rather than in diagonals, to recall the walks and building arrangement of the Station Hospital. Construction of additional parking on the north side of the Station Hospital site, as recommended in the *Fort Baker Plan,* is not recommended due to potential impacts to the historic viewshed and scenery from the parade ground.

BADM Parking Lots

The parking lots south of the Bay Area Discovery Museum are a conspicuous modern addition that detracts from both the historic and scenic qualities of the Horseshoe Cove waterfront. Consideration should be given to maintaining high grass and scrub, to a height of approximately 6-8 feet, along the borders of the parking lots, to reduce the visibility of the lots from the waterfront and adjoining areas.

Coast Guard Station Golden Gate

Station Golden Gate is managed under permit by the Coast Guard, but is an integral part of the Fort Baker landscape. While buildings existed in this location during the historic period, the massing of the existing buildings and limits of the property do not correspond with the area's historic spatial organization. The existing white metal picket fence emphasizes the non-historic property and does not relate to the historic character of the landscape. Consider replacing the existing fence with a more utilitarian and less conspicuous design, or painting the fence a color that recedes in the landscape. The fence should also not be a boundary for landscape maintenance. Consider allowing the existing turf to be managed consistently with the meadow outside of the fence; reduce the amount of mown turf to the minimum area required.

Mine Wharf

The *Fort Baker Plan* calls for improvement of the Mine Wharf, built as part of the Mine Depot in 1938, to improve its contemporary use as a public fishing pier. Treatment of the wharf should return its historic identity as part of the Mine Depot, and maintain its working character. The seawall to the south should be rebuilt, the historic bollards retained, and features that detract from the historic open deck of the dock should be avoided. In particular, railings should be inconspicuously designed, such a through use of a pipe post-and-cable system that is also compatible with the historic military and maritime setting. .

If additional dock space is required, such as for a possible ferry service to Fort Baker, consideration should be given to reconstructing the adjoining Quartermaster wharf, which was taken down in ca. 1980. This timber wharf, a historically significant feature built in 1903 as the primary shipping facility for Fort Baker, could improve circulation on the fishing pier, and reconstructing its two small

buildings (a storehouse and a waiting room) could provide public shelter or the fish-cleaning station identified as a need in the *Fort Baker Plan*. Visitor services could be provided in the adjoining mine loading rooms (FB 412).

Marine Repair Shop Area

The Fort Baker Plan calls for rehabilitation of the marine repair shop (FB679, Travis Marina Lodge), into a public center for the Horseshoe Cove waterfront. As recommended in the Fort Baker CLR, rehabilitation should retain the historic industrial character of the landscape, including preservation of the associated fuel and berthing dock and six-ton marine railway as discussed under task HCW-1, and the nearby support buildings (FB665, FB669, FB664). Consideration should be given to reestablishing the historic extent of the deck and its connection to the docks in front of the repair shop, as documented in the Fort Baker Waterfront Historic Structures Report (Martini, 2008). The pedestrian truss bridge and ornamental plantings on the east side of the lodge building are most likely non-historic features added by the Presidio Yacht Club and do not relate to the World War II-era character of the waterfront.

Mine Depot Structures

Future rehabilitation of the four cut-and-cover mine depot structures (FB409-412), including the possible reuse of the mine loading rooms as public restrooms, should restore the original concrete surfaces (some have been painted to cover over graffiti) to return a uniform character, and incorporate existing historic light fixtures and signs. In addition, the approaches should be kept clear of weeds and soil, and the window and door opening on the mine loading rooms, which are covered or have replacement doors and windows, should be restored. The existing grass and scrub on the earthen cover of the structures is appropriate. The oil tank and pumphouse (FB413, FB414) above the mine loading rooms should be documented if preservation is not feasible.

HORSESHOE COVE DEFENSES (DRAWING 3.1)

As described in the Treatment Framework, the recommended treatment for the Horseshoe Cove Defenses is to preserve and enhance its World War II-era character for consistency with the adjoining Main Post, Quartermaster Area, and waterfront, and to reflect the lack of historic use and development in the area after World War II. Treatment identified in the *Fort Baker Plan* for this area includes preservation and interpretation of the defensive works, and accommodation of public access along the San Francisco Bay Trail. Treatment includes conserving the native oak-madrone woods along the bay front, with limited pruning to maintain existing scenic overlooks from East Road; removing non-historic non-native trees as described under task BBC-3; and preserving and revealing anti-aircraft gun emplacements on Duncan Hill (AA .50 #38 and AA AW #14) as discussed under task BBC-4.

Task HCD-1. Restore Cavallo Battery

Since World War II, and more particularly since the 1970s, the historic character of Cavallo Battery has been altered through the growth of scrub and woods on its turf parapets, by graffiti on its masonry, and by deterioration of access roads. By World War II, the battery was long obsolete, but still retained its post-Civil War character with several later modifications. As a rare-surviving example of its type, restoration of Cavallo Battery should be a priority for treatment.

The primary work needed to enhance the overall historic character of Battery Cavallo is to remove all scrub and trees on the earthen parapets, extending to the outer edge of the glacis, to restore the historic grass cover that was still predominant through World War II. Unlike other defensive works that were active during World War II, Cavallo Battery did not undergo camouflage that included planting of native scrub and other vegetation to conceal the work within the natural setting. Removal of the existing woody vegetation will reveal the character-defining topography of the battery. The grass should be kept cut on a regular basis to maintain a well-tended appearance and to prevent the regrowth of woody vegetation. If lupine (endangered Mission Blue Butterfly host plants) are on the outer battery parapets proposed for mowing, consideration should be given to less frequent mowing, after the bloom period; or reestablishing and expanding lupine colonies outside of the battery as mitigation.

In addition to clearing the parapets, the following actions should be undertaken:

Repair brick and concrete masonry (magazine portals, gun platforms, etc.), and remove graffiti.

Clear soil and vegetation from gun platforms.

Repair CRF Yates, a secondary defensive work dating from the Taft era, including its pipe-frame canopy.

Clear and resurface the entry road from East Road; further research would be necessary to determine the alignment and width of the unpaved road.

Perimeter chain-link fence and south access road: Although these features were added in ca. 1950 after World War II, they date to the historic period and should be retained. Retention of the fence, which is inconspicuous, would help manage access and prevent social trails across the parapets.

Task HCD-2. Reestablish Original Limits of Duncan Hill Eucalyptus Groves

The eucalyptus trees on Duncan Hill were planted prior to World War I as scattered specimens and groves west and north of Battery Duncan. Through World War II and into the 1960s, there was little spread to the trees. Today, however, the eucalyptus trees have spread across a much larger area and into the oak-madrone woods along the bay front, although the park has maintained a narrow clearing along the historic firing line from Battery Duncan. To reestablish the historic World War II-era character of the eucalyptus and the lines of fire of Battery Duncan, it is recommended that all trees beyond the historic World War II-era limits of the grove be removed, using the 1945 aerial in the park archives as a guide (Ap-

pendix H). The remaining groves should also be thinned to reestablish the historic scattering of trees. Ground between the individual trees should be maintained in native grass and lupine colonies to expand mission blue butterfly habitat. Existing lupine colonies would require protection during removal of eucalyptus.

Replacement of the entire grove with a non-invasive variety of eucalyptus of a similar character would also be appropriate if warranted to address natural resource issues.

Task HCD-3. Enhance Historic Character of Battery Yates

The historic circulation and grass parapets of Battery Yates have lost historic character due to lack of maintenance and encroachment of vegetation. The short access road known as Yates Road, including the parade immediately adjoining the work, is eroded, partially covered in vegetation, and has expanded beyond its historic limits. To enhance the historic character of this much-visited battery, the road and parade should be returned to its historic limits and red-chert surface as evident in a 1945 aerial photograph (Appendix H). The scrub on the rear slopes (adjoining Satterlee Road) and in front of the blast aprons of Battery Yates grew in following World War II. Unlike batteries at Forts Barry and Cronkhite, Yates most likely did not receive native camouflage plantings during the war. In keeping with the World War II-era treatment of East Fort Baker, the scrub on the rear parapets and in front of the blast aprons of Battery Yates should be removed and maintained in grass, as evident on the 1945 aerial (Appendix H). If there are natural resource concerns with removing the scrub, such as due to the presence of lupine host for mission blue butterfly, at a minimum the taller woody scrub in front of the blast aprons should be removed or cut back to maintain the historic firing lines from the gun emplacements.

Task HCD-4. Document and Stabilize Baker-McDowell Cable Terminal

The Baker-McDowell cable terminal (FB508), built in 1895 as the first submarine mine casemate in the Headlands, converted to a cable terminal in 1903, and abandoned after World War II, is a significant defensive work that is the counterpart to the iceplant-covered mine casemate at Fort Barry. The work is presently inaccessible to visitors or park maintenance, and is partially covered in trees.

Sketches of the work completed by L. Guidry in 1993 should be supplemented with photographic documentation and additional drawings. To ensure the preservation of this historic work, the trees growing on the earthen parapet should be removed to prevent damage that could occur in the case of a blow-down. The parapet should be maintained in turf and/or native cover including ferns (which currently cover the eastern slope). In addition, the entry portal should be secured and the surrounding seawall assessed for condition and vulnerability to sea-level rise. Vehicular access to the work from East Road should be reestablished, possibly reusing the historic access road, to allow for park maintenance and inspection. See also following management considerations for providing public access.

Treatment Considerations

Cable-Crossing Signs

The large painted wooden signboard on the southern parapet of Cavallo Battery, built prior to 1966 to notify mariners and military operations of a submarine cable crossing that existed since 1912, is in poor condition. While the cable crossing is not Army infrastructure, the sign warrants preservation because it was historically a conspicuous part of the landscape and reflects long-standing use of Fort Baker as a terminal for submarine communications cables. The sign should be documented, repaired, and repainted. Restoration of the sign will also provide a practical purpose for identifying the still extant submarine communications cables related to the terminal building near the Travis Marina Lodge (FB679).

Another wooden cable-crossing sign at the Baker-McDowell cable terminal (FB508) along the San Francisco Bay waterfront should also be documented. It is likewise in poor condition with its painted lettering mostly gone. Restoration of the sign could be undertaken as part of the preservation of the Baker-McDowell cable terminal (task HCD-5). Restoration of the sign would enhance the historic character of the cable terminal as viewed from the water, and could serve a practical purpose of identifying the still extant but obsolete military submarine cable.

Battery Yates Trail

As part of the restoration of Cavallo Battery (task HCD-1), consideration should be given to extending the Battery Yates Trail north through Cavallo Battery. This trail could follow the abandoned Cold War-period south access road into Cavallo Battery and exit at the main access road to East Road, where it would join the San Francisco Bay Trail. Providing an actively used trail through Cavallo Battery would not only provide an interpretive and scenic enhancement for hikers, but most likely also help reduce vandalism within Cavallo Battery, since activity generally discourages such antisocial behavior. Maintenance of the perimeter fence as recommended under HCD-1 would help deter creation of social trails across the parapets.

Public Access to Baker-McDowell Cable Terminal

As an early and unique defensive work at Fort Baker, consideration should be given to providing public access to the Baker-McDowell cable terminal (FB508). Access could be provided by reopening the historic road from East Road, which includes a small stone bridge (also recommended under task HCD-5). Additional research and archaeological investigation would be necessary to document the route of this road, since it is not clearly evident in the landscape or shown on historic maps. This route could serve as a spur of the San Francisco Bay Trail that follows East Road, and would thus provide the only shoreline access north of Cavallo Point. Public access would need to be closely monitored to control vandalism, and may also require the installation of safety railings along the seawall.

LIME POINT RIDGE DEFENSES (DRAWING 3.1)

The recommended treatment of the Lime Point Ridge Defenses landscape involves preservation of existing resources and enhancement of the Cold War-era character of the landscape through vegetation management and redesign of park features. The area is within the GMP Scenic Corridor Zone, which emphasizes sightseeing and related recreational opportunities, and the Natural Zone, where natural resource protection is emphasized. Lime Point is covered under the *Fort Baker Plan*. The GMP identified the need for improvement of scenic overlooks and providing safe visitor access, while protecting natural and cultural resources. The *Fort Baker Plan* calls for improvement of Moore Road to Lime Point as part of the San Francisco Bay Trail.

Task LPRD-1. Document and Stabilize F1G1, B1 Spencer, B3 Spencer

The three fire-control stations in the Lime Point Ridge Defenses (FB427, FB433, FB434) reflect the early concentration of Endicott and Taft defenses at the inner harbor. They include one of the two earliest surviving fire-control station at the Headlands, B1 Spencer built in 1900.[39] The three stations are in areas that are difficult to access on steep slopes below Battery Spencer. All are vacant, vandalized, and open to the elements, and B1 Spencer has lost its roof. B3 Spencer, a fog-level station below the Golden Gate Bridge, was not inspected for this report. F1G1 and B1 Spencer are visible from the bridge; their condition reflects poorly on the park. All three structures are within the Bridge Permit Area.

In conjunction with the Golden Gate Bridge Authority, all three fire-control stations should be documented before further deterioration occurs, including a conditions inspection to provide a baseline for preservation. F1G1 Spencer should be sealed and its roof repaired to prevent further deterioration and vandalism. Given its historical significance, B1 Spencer warrants repairs to preserve the structure, notably reconstruction of the roof. If this is not feasible, then the remaining shell should be stabilized to prevent continued deterioration.

The historic access path from Battery Spencer should be improved to allow for inspection and maintenance. A gate or fence is needed to prevent public access and discourage vandalism.

Task LPRD-2. Restrict Overlook Area to Spencer Blast Aprons

The heavily-used scenic overlook at Battery Spencer currently extends approximately twenty to thirty feet beyond the concrete blast aprons across bare ground, bordered by a timber post and cable fence. This ground is becoming heavily eroded. To enhance the historic character of Battery Spencer and protect the blast aprons and the natural environment, it is recommended that the scenic overlook be restricted to the concrete surface of the blast apron by moving the fence to the outer edge of the concrete. A less conspicuous fence with thinner metal posts and

cable railing would enhance the historic character of the battery. Soil that has accumulated on the blast aprons should also be removed.

Task LPRD-3. Redesign Battery Spencer Overlook Trail

The wide trail on the top of the east parapet of Ridge Battery currently provides the primary circulation between Conzelman Road and the scenic overlook on the blast aprons of Battery Spencer. Entire removal of this trail is not feasible because use of the historic circulation—the covered way to the front of Battery Spencer—would require installation of an elevator within the battery to provide accessible route to the scenic overlook.[40]

While complete removal of this trail is not feasible, it is recommended that the northern half be removed and that the route of access follow the covered way south to the historic (World War II-era) access road at the southern part of Ridge Battery, where the route will then rejoin the existing trail to the scenic overlook on the blast aprons. This historic road exists today as a wide and low-sloped cut-through from the covered way just south of the south set of Ridge Battery gun platforms. Removing the northern part of the path, including the wood steps facing Conzelman Road, would enhance the historic character of Ridge Battery while also providing visitors with access that better reflects historic circulation through the batteries. Removal of the northern section of the trail would also prevent many of the social trails that currently crisscross the Ridge Battery parapets.

Task LPRD-4. Rehabilitate Ridge Battery

Ridge Battery, one of two largely intact post-Civil War-era works in the Headlands, is today largely unrecognizable due to growth of scrub, concealment of its gun platforms and magazine portals, and addition of contemporary fences and paths. While the outer parapets had become scrubby by the Cold War, the sharply angled interior parapets were still clearly visible in 1951.[41] It is recommended that Ridge Battery be rehabilitated to reflect this character by undertaking the following:

Remove northern portion of overlook access walk along the east parapet, as recommended under task LPRD-3.

Clear vegetation from the base plane of the covered way and maintain a smooth, red chert surface.

Remove scrub from the interior and tops of the parapets and maintain turf.

Cut back high scrub on the outer parapet slopes, to a maximum of approximately three feet in height.

Repair eroded parapets and remove the dozen or more social trails along the east parapet once the northern half of the current access walk is removed per task LPRD-3 (the wide trail up the east parapet south of the gun platforms is part of a historic World War II-era road and should be retained).

Clear and repair the gun platforms and brick parapets.

Remove fill to reveal the granite linteled doorways of the brick ready room/magazines; seal doorways while maintaining historic character of the openings.

Replace the contemporary rustic wood post and plastic mesh fences along the covered way and contemporary path with metal pipe and cable railings that would be less conspicuous and more compatible with the historic military character of the batteries.

Treatment Considerations

Lime Point

Lime Point, also known today as Lime Rock, has been the site of important navigational aids since 1883, when the Lime Point Fog Signal Station was established, and also had significant strategic importance when defenses concentrated on the inner part of the Golden Gate. A cut remains from efforts to build a Third System fort here in the late 1860s.

The *Fort Baker Plan* identified that public access to Lime Point would be returned upon completion of bridge construction, via an extension of the San Francisco Bay Trail along Moore Road. Return of public access should include maintaining the identity and character of Moore Road as a road, rather than converting it to a foot trail.

Lime Point and the surrounding area should be interpreted as a counterpart to Fort Point beneath the south bridge landing. Here, the early Third System of military fortifications and navigational aids could be interpreted through existing remnants, as well as the history of Endicott-Taft defensive works, including the existing B3 Spencer fire-control station and the Searchlight #12 base. An archeological survey should be undertaken to document and assess resources from the fog-signal station and military works, including searchlight #57 powerhouse.

Bridge Permit Area Fence

The chain-link fence along the Bridge Permit Area near Battery Spencer was erected in ca. 1937, probably by the Army as boundary security. Sections are presently in poor condition. Currently, the fence restricts visitors from walking down the steep slope toward the bridge. While a historic feature, it is largely inconspicuous in the scrubby surroundings and its removal would not impact the overall character of the landscape. Another fence runs at a diagonal down the slope from the boundary fence; the origin of this fence is not known. Replacement of the historic fence with taller and more conspicuous contemporary fences would not be compatible with the historic character of the landscape.

Incomplete Fire Control Station

The shell of an incomplete fire-control station, built in ca. 1910 on the top of Lime Point Ridge well north of Ridge Battery should be preserved. Although it is on an unofficial, unmaintained path off a spur from Slacker Road and the Coastal Trail, the site could provide hikers with a spectacular overlook while also informing

about the history of Fort Baker's defenses. An interpretive wayside should also be considered near Ridge Battery to inform the public about this little-known historic feature in the Lime Point Ridge Defenses.

GRAVELLY BEACH DEFENSES (DRAWING 3.1)

The recommended treatment for the Gravelly Beach Defenses landscape involves preservation of existing historic resources and enhancement of Cold War-era character through vegetation management and redesign of contemporary park features. The area is within the GMP Evolved Cultural Landscape Zone, which is to be managed to provide visitors with a variety of recreational, educational, and stewardship activities consistent with the protection of the nationally significant cultural resources in the area. The GMP calls for retention of the Kirby Cove campground and potential for developing rustic cabin accommodations, removal of invasive non-native vegetation, and additional use by visitors on the new San Francisco Bay Water Trail. It is not anticipated that any new facilities would be necessary to accommodate this trail, which would involve beach landing of non-motorized craft. The park has recently made improvements to the Kirby Cove campground to provide an accessible camping site, and has relocated a day-use area that was impacting a battery traverse.[42]

Task GBD-1. Document and Stabilize B1 Wagner and B1 Kirby

The two fire-control stations above Battery Orlando Wagner (FB706, FB707) reflect the early concentration of Endicott and Taft defenses on the inner entrance of the Golden Gate. They include one of the two earliest surviving fire-control stations at the Headlands, B1 Kirby built in 1900.[43] Unlike the fire-control stations near Battery Spencer, these two are in relatively accessible locations off Roth Road (Kirby Cove Trail). Both are vacant, vandalized, and open to the elements, and B1 Kirby has lost its roof.

These two fire-control stations should be documented before further deterioration occurs to provide a baseline for preservation. B1 Wagner should be sealed and its roof repaired to prevent further deterioration and vandalism, and the shell of B1 Kirby should be stabilized. Additional research and inspection should be undertaken to identify the historic access paths to these fire-control stations. These should be reestablished to allow for inspection, maintenance, and potential public access. Non-historic social trails should be removed.

Consideration should be given to reconstructing the hipped roof of B1 Kirby not only to help preserve the structure, but also to enhance the historic character of the landscape. Given the physical and visual accessibility of these two fire-control stations to Battery Orlando Wagner and Kirby Cove Trail (Roth Road), repair and restoration should be strongly considered to enhance the visitor experience in the GMP Evolved Cultural Landscape zone.

Task GBD-2. Protect Defensive Works from Beach Erosion

Erosion of the soft cliffs along Kirby Cove is threatening the gun mounts of AMTB Battery Gravelly, the gun mounts from Battery Kirby Beach, and the front of Battery Kirby, including the brick culvert from Gravelly Beach Battery. To slow erosion, social trails on or near eroding cliff should be removed and prevented by installation of inconspicuous metal pipe and cable railings along the most prone areas. With anticipated rise in sea levels, accelerated erosion is likely without corrective actions. To preserve these historic works, bank stabilization should be added along the base of the cliff (edge of the beach), of a type and color that recedes visually against the stone of the cliffs. Potential impacts to natural resources, including shifting of erosion to surrounding areas, would need to be addressed in planning for installation of such stabilization measures.

If any of the defensive works fall down the cliff due to erosion (as may soon happen to the left gun, #2 of AMTB Battery Gravelly), it is recommended that the structures be left on the beach as a record of the historic military development on the site, unless the remnant presents a safety hazard or potential for adversely impacting natural resources.

Task GBD-3. Reestablish Original Limits of Forest Plantations

The forest plantations along the slopes of the Kirby Cove valley, established prior to World War I as five different groves of Monterey cypress and eucalyptus, spread little from their original limits until after the 1950s. The current limits of the plantations, along with the Monterey pine plantings on the valley floor (see following task GBD-4) have spread extensively, reaching as far east as Battery Orlando Wagner.

To enhance the historic character of the landscape and reduce loss of native grassland and scrub, it is recommended that the plantation trees which have spread beyond the original limits of the plantations be removed, and the ground returned to native scrub and grass. These removals will also restore the strategic firing and sight lines from Battery Orlando Wagner and fire-control station B1 Wagner. All trees should be removed from the Gravelly Beach Battery traverses. Where healthy trees are helping to stabilize steep ground or providing other valuable natural or operational functions, they may be retained.

Removal should also include Monterey pines that were planted on the valley floor in ca. 1952, possibly as a beautification project by the Boy Scouts. The valley floor was historically open space that served as tenting terraces and location of the Fort Baker post garden. These trees subsequently spread and are presently dying off due to pitch canker. In addition to trees, volunteer trees and scrub have grown up on the tenting terraces and other parts of the valley floor.

To restore the historic open spatial character of Kirby Valley floor, it is recommended that all Monterey pine trees be removed (as also recommended under

district-wide task BBC-3), and the scrub and other high vegetation on the tenting terraces and elsewhere be cleared. This clearing will reestablish views across the valley floor toward Battery Kirby, and also remove shade for campsites #2 and #3 (see following management considerations for the Kirby Cove campground).

Task GBD-4. Preserve and Enhance Gravelly Beach Battery Remnants

Four traverse magazine, along with at least two gun platforms were retained from the post-Civil War Gravelly Beach Battery during construction of Battery Kirby in 1900, along with one of the brick culverts that carried a stream beneath the work. During World War II, Traverse F of Gravelly Beach Battery was modified into a dugout-day room as part of AMTB Battery Gravelly. Today, these works are deteriorating and have lost historic character due to erosion, foot traffic, and lack of vegetation management.

To preserve and enhance the historic character of the Gravelly Beach Battery remnants, the following treatment is recommended:

Remove all trees and tall scrub from the earthworks (traverses, parapets), and maintain grass that is cut on a semi-annual basis to prevent growth of woody vegetation.

Remove soil that has collected or been placed over Rodman gun platforms.

Remove fill that has been placed over magazine portals; repair and preserve portal structures.

Restore the World War II-era topography of the battery by repairing areas eroded by natural forces, social trails, etc. Retain modifications to Traverse F for AMTB Battery Gravelly Beach.

Repair the brick culvert, which requires repointing, brick replacement, and concrete repair. Bank stabilization should be placed around the outlet side of the culvert to prevent further erosion, to the extent feasible.

Remove and prevent social trails across the battery. This may require installation of inconspicuous post and cable railings around the perimeter of the traverses. Reroute trails east and west of Battery Kirby that are causing erosion of the traverses and gun platforms from Battery Gravelly Beach.

Task GBD-5. Preserve and Enhance Battery Kirby

Battery Kirby was constructed in 1900 and was deactivated in 1938, after which time its associated storehouse and latrine were demolished. To preserve and enhance the historic character of Battery Kirby, the following treatment is recommended:

Address potential for beach erosion impacts to the battery (see GBD-2).

Continue to mow the front parapet.

Relocate the picnic tables off the parapet/blast aprons to enhance the historic character of the battery as a defensive work.

Clear vegetation and/or fill from gun mounts/pits and structural cracks.

Undertake a structural assessment to determine building conservation needs, such concrete repairs and as support of the cantilevered window opening in the BC structure.

Remove the fill added to the parade at the rear of the battery, including the raised roadbed, and restore the drainage system. This was originally a level, depressed rectangular area surrounded by earthen berms and a storehouse along the north side, and a latrine along the west side. At some point during or after World War II, the grade of the parade and approach road was raised and the storehouse and latrine were demolished; this may have been done to correct flooding of the parade that was probably the result of a failed drainage system.[44] The raised grade, along with growth of vegetation on the rear berm, has obscured the original character of the parade and has allowed water and mud to infiltrate the battery through window and door openings along the rear side. The park has removed some of the raised grade adjacent to the battery structure, but additional removal is necessary to enhance the historic character of Battery Kirby.[45] Foundation remains of the storehouse and latrine, which were removed after World War II and covered by the fill, should be left exposed for interpretive purposes. The approach road should be restored with a red-chert surface and tied into the restored parade on the west and east sides. Additional research and archeological investigation will be required to determine the historic grade of the parade and the surrounding berms, and the integrity of the drainage system.

Task GBD-6. Preserve and Enhance Historic Character of Roth Road, Battery Orlando Wagner Approach Road

With its red-chert surface and concrete gutters, Roth Road is a rare-surviving example of an early Army road in the Headlands. Since the historic period, it has suffered minor erosion, and sections have become wider due to pull-offs along sharp bends and scenic overlooks. One of the concrete gate posts at the entrance to Roth Road, added in ca. 1910, was removed and tossed down the hillside to allow for wider turning from Conzelman Road. The spur road to Battery Orlando Wager has narrowed due to erosion and encroachment of vegetation. Reconstruction of Conzelman Road in 2011 included installation of drainage pipes that are depositing runoff into the gutters of Roth Road, which could cause significant erosion to the historic road in major storm events.

To preserve and enhance the historic character of Roth Road, the following treatment is recommended:

Return roadbed to its historic width by removing widened areas (pull-offs) at sharp bends and along informal scenic overlook at uppermost part.

Maintain evenly-graded red-chert gravel surface by removing encroaching vegetation, repairing eroded areas, and undertaking fine grading on a semi-annual basis, similar to recent work completed on Mendell Road at Fort Barry.

Clear, repair, and maintain concrete gutters and other drainage structures.

Redirect drainage from Conzelman Road away from Roth Road.

Reestablish historic width of Battery Orlando Wagner approach road, including the parade at rear of the battery.

Salvage and reinstall concrete gate post at Conzelman Road entrance; if necessary for current vehicular use, relocate both posts away from Conzelman Road to in front of the existing steel gates.

As recommended under district-wide task BBC-1, the historic identity of Roth Road, currently known as the Kirby Cove Trail and Kirby Cove Road, should be returned to honor its historic commemorative intent. Treatment of Roth Road would also need to consider potential impacts to natural resources, in particular mission blue butterfly host plants along the shoulders.[46]

Task GBD-7. Document and Stabilize Kirby Powerhouse

The powerhouse for Battery Kirby, a concrete gable-roofed building constructed in 1900 in the side valley northwest of the battery, is presently a shell that is largely inaccessible and covered by vegetation. The building should be documented before further deterioration occurs. Stabilization, including removal of encroaching vegetation, accumulated debris, and water that may be impacting the preservation of the concrete structure, should also be undertaken. Reopening of the historic access road would allow for maintenance and inspection of the building while also enhancing historic landscape character. See also following management considerations for Kirby Powerhouse and Ranch Site.

Treatment Considerations

Kirby Powerhouse and Ranch Site

The remains of the concrete Kirby powerhouse and the site of the adjoining ranch is currently overgrown, largely by exotic vegetation. Consideration should be given to undertaking an archeological survey of the area as part of removal of exotic vegetation. Such a survey could help answer questions about the location and historic use of the ranch, and the infrastructure originally developed to support Battery Kirby, which included water tanks in addition to the powerhouse.

Kirby Cove Campground

The Kirby Cove campground, established as part of the state park in ca. 1969, was laid out with little relationship to the historic spatial patterns and circulation of the landscape surrounding Battery Kirby. Recent improvements, including addition of restroom buildings, have perpetuated non-historic patterns. The campground was recently rehabilitated to satisfy an accessibility lawsuit, and additional redesign in the near future is not likely. For long-term planning, however, consideration should be given to the following concepts to enhance the historic character of the landscape (in addition to removing the non-historic Monterey pine, see GBD-4):

Maintain the World War II-era cross-valley road as the pedestrian circulation spine through the campground, and reestablish its connection with Roth Road/camping area parking lot and the Battery Kirby parade/access road.

Consider relocating campsites #1, 2, and 3 away from Battery Kirby to the shaded periphery of the valley floor (proposed removal of non-historic Monterey pine would leave #1 and 3 without shade).

Remove toilet building at southeast corner of tenting terraces/northeast corner of Battery Kirby parade; consider consolidating all toilet buildings in a new structure that could be built as a reconstruction of the Battery Kirby latrine or storehouse.

The GMP identified that new rustic cabin accommodations could be established at Kirby Cove campground through its management as a Diverse Opportunities Zone and in anticipation of increasing use that may occur in part from the San Francisco Bay Area Water Trail. As with other campground development, consideration should be given to locating cabins in unobtrusive locations outside of the recommended restored open space of the valley floor. A possible location could be the side valley northwest of Battery Kirby, where the Kirby powerhouse is located and where a ranch existed prior to World War I (see drawing 3.1). Development of the cabins could allow for restoration of the access road and open space of the side canyon. Another possible location could be in the woods south of Roth Road and east of the campground parking area. It is not recommended that cabins be developed within sight of Battery Kirby.

Exotic Vegetation near Battery Kirby

The wet area along the drainage west and north of Battery Kirby is bordered by thick growth of vegetation, much of which is exotic and some invasive, including calla lily, crown vetch, cape ivy, and morning glory. The origin of this plant material is not known for certain, but it may have originated in the nearby post garden. Given that these plants were most likely not intentionally established and are in part invasive, it would be appropriate to remove this vegetation and reestablish native plants, in keeping with GMP directive to restore native conditions. Restoration of the battery parade could reduce wet conditions that allow these plants to thrive (see task GBD-5).

FORT BARRY TREATMENT TASK RECOMMENDATIONS

The overall objectives of landscape treatment for the Fort Barry Military Reservation are to enhance its historic identity, preserve the character and identity of historic roads, remove the spread of non-native trees to reestablish natural systems, spatial organization, and views; stabilize and protect defensive works, manage visitor access to interpret and preserve historic features, and reestablish a more managed character to the Main Post and other developed areas. The default treatment for all landscape features that are not addressed in specific tasks and management considerations should be guided by the Secretary of the Interior's Standards for *Preservation*. Tasks are identified according to an abbreviation of the area (FA for Fort Barry outlying areas, FAMP for Fort Barry Main Post, etc.), listed in order

of suggested priority based on issues such as historic preservation, interpretation, and relationship to fundamental resources and GMP goals. Table 3.1 at the end of the chapter provides a summary list of the recommended treatment tasks.

FORT BARRY OUTLYING AREAS (DRAWING 3.2)

Task FA-1. Reestablish Dubois Road

Dubois Road, between Julian Road and McCullough Road, is a historic circulation feature with commemorative associations. It was built in 1905 as a realignment of Julian Road, the first road between Forts Baker and Barry, to circumvent the rifle range. It is presently abandoned and has been impacted by erosion and overgrowth of vegetation. To enhance the historic character and commemorative value of the landscape, the road should be reestablished as an active circulation route and commemorative feature. Park planning in the Final Environmental Impact Statement for Project Headlands recommended that Dubois Road could be rehabilitated as a trail for both pedestrians and bikes to connect Julian Road (Coastal Trail) with the new trailhead to the Rodeo Valley Trail near the Capehart Housing Area.

The preferred treatment in terms of enhancing historic character is to maintain the road to its historic width and with a red-chert gravel surface. If this is not feasible, maintenance to trail standards would retain it as a circulation feature. Additional investigation is needed to assess potential natural resource impacts of reestablishing the route, and the condition of the lower section of road, which is a later historic spur to McCullough Road that was not inspected for this report (the original alignment north toward Bunker Road was most likely removed for the existing borrow pit). The road, named in honor of an unidentified solider named Dubois, should be signed as recommended in task BBC-1. Additional research should be undertaken to identify this solider and the reason he was commemorated by the Army.[47]

Task FA-2. Retain and Interpret Old Bunker Road

Old Bunker Road, built in 1904 as the second Baker-Barry Road and bypassed with the present road alignment in ca. 1942 but retained as a road, was altered as part of Project Headlands road improvements in 2012. Old Bunker Road no longer reads as a continuous circulation feature because the surface of the eastern part was removed, and the asphalt was left on the western part (the center section is also presently being used for storage). It is recommended that the roadbed be maintained due to its historic relationship to the rifle range, and as access to the west end of the rifle range. Old Bunker Road could also serve as place to interpret the rifle range and where visitors could look across the full length of the range from behind the site of the 600 yard berm.

Although not presently intended for regular vehicular use, the historic width and surface should be maintained. Red-chert, the original surface that had been paved in asphalt in the latter historic period, is appropriate because it is the existing surface of the eastern part, and would address cost and natural resource issues related to run-off near a sensitive riparian corridor. If the historic road character of Old Bunker Road cannot be maintained, at a minimum it should be used as a trail to retain it as a circulation feature.

Task FA-3. Retain and Interpret Smith Street Remnant

The western part of Smith Street, built in 1941 as part of the Smith Housing Area and named in honor of World War II casualty Captain Richard S. Smith, was incorporated into a new visitor trailhead parking lot in 2013 as part of Project Headlands. To preserve the Army's commemoration of Richard Smith and historic circulation patterns, it is recommended that the remaining segment of road, which is used as a trail, be signed to perpetuate the name of Smith Street as recommended in task BBC-1. The parking lot should also be named after Richard Smith ("Smith Lot"). A wayside along Smith Street or in the parking area would help interpret the history of the Smith Housing Area, which was part of the massive World War II-era build-up in the Headlands.

Treatment Considerations

Bunker Road Causeway

The Bunker Road bridge and weir between Rodeo Lake and Rode Lagoon on the Barry-Cronkhite boundary is within the GMP Sensitive Resources Zone that places a priority on natural resource protection. The bridge is integral to the earthen causeway that carries Bunker Road across Rodeo Lagoon constructed in 1937. The existing bridge and weir are impacting the natural flow of Rodeo Lake and causing siltation. In the future, the park may consider widening the concrete bridge, which is a non-historic replacement, to improve flow and return more of the natural extent of Rodeo Lagoon and Rodeo Lake. Such a change may not adversely impact the historic character of the landscape provided the increase retains most of the historic earthen causeway. An expansion of two times the existing bridge width or less would be appropriate to the historic character of the landscape. The existing vertical alignment of the road should be maintained. Use of timber construction in the new bridge would reflect the character of the historic bridge.

Rodeo Lake

Rodeo Lake is within the GMP Sensitive Resources Zone, which places a priority on natural resource protection and limits access. Much of the sediment that has filled Rodeo Lake has been deposited since 1966. It therefore would be appropriate to the historic character of the landscape to return the lake to open water if

necessary for natural resource values. Dredging should avoid the dike and former flushing reservoir for Fort Barry at the southeast side of the lake. If the reservoir warrants alteration or removal for natural resource values, it should be fully documented prior to disturbance, including its earthen dike, gate weir, and piping to the Main Post, if extant.

Diablo Point Lighthouse

The two acres presently under the administration of the Coast Guard at Diablo Point, which is within the GMP Natural Zone, may be transferred to the National Park Service if the lighthouse becomes obsolete, as called for in the enabling legislation for Golden Gate National Recreation Area. The small wood shed of the Diablo Point Lighthouse built in 1922 should be preserved as part of the history of navigational aids at the Headlands. However, given the remote location, lack of visibility, and difficult access, there is little opportunity for interpretation, except perhaps by boat. If removal is necessary, the building and its setting should be documented prior to demolition.

MAIN POST OF FORT BARRY (DRAWING 3.3)

As described in the Treatment Framework, the recommended treatment for the Main Post of Fort Barry is to preserve and enhance its World War II-era character to reflect the height of the landscape's use and development. Treatment to this period will also allow for consistency with the Main Post of Fort Baker, which shares a similar character and history. Most of the Main Post of Fort Barry is within the Diverse Opportunities Zone of the GMP, in which visitors may be provided with a variety of recreational, educational, and stewardship activities consistent with the protection of the nationally significant cultural resources. Field Road and Bunker Road are within the GMP Scenic Corridor Zone. The GMP concept for use of the Main Post is as a "Center for the Environment," with housing and educational space provided through partner agreements. The existing visitor center is proposed for relocation from the Fort Barry chapel to the Fort Cronkhite Cantonment.

Park partners presently using the Main Post of Fort Barry include the Headlands Center for the Arts (HCA), Hostelling International that operates the Marin Headlands Hostel, and NatureBridge. The partners each have their own assigned area and each is to maintain it according to their individual agreements with the park.[48] As of 2014, HCA was working on schematic design for an "Entryway Project" that includes improvements to circulation and plantings surrounding the two barracks, FA 944 and 945. HCA began a campus improvement plan in 2014, primarily to address interior life safety issues. Hostelling International has no plan underway, but does anticipate undertaking a conditions assessment in the near future to address deferred maintenance. NatureBridge's use is limited to FA955 and FA956 for staff housing.[49]

The recommended overall landscape treatment for the Main Post of Fort Barry is to enhance its historically well-maintained military character, preserve historic features, address unintended growth and spread of vegetation, accommodate park partners who presently use the Main Post as their campus, and enhance its historic identity in keeping with task BBC-1. The Main Post landscape should be treated by the park and its partners consistently to maintain the historic uniformity in the landscape. Within this framework of overall consistency, it is recommended that the Main Post landscape be managed according to the following zones (Drawing 3.3):

Lower Zone along Simmonds Road: Treatment within this zone, which includes the parade ground, barracks, lower post field, gymnasium, and chapel, preserves and restores the historic character of the landscape to highest extent feasible.

Upper Zone along Rosenstock Road: Treatment within this zone, extending from the eucalyptus windbreak to the sidewalk in front of the buildings, provides more flexibility to allow for contemporary partner uses in the former officer quarters and post administration building and hospital, while reestablishing character-defining circulation and spatial organization. Treatment of the buildings, which are visible from the lower zone, should reflect the well-preserved and maintained character of the lower zone.

West Zone along Simmonds Road: Treatment within this zone maintains a semi-private character to accommodate partner staff housing within the two historic non-commissioned officer quarters, while preserving character-defining circulation and spatial organization.

Task FAMP-1. Remove Volunteer Trees and Conserve Monterey Cypress Border

The historic spatial character, vegetation, and views of the Fort Barry Main Post landscape have been altered through the growth of volunteer trees. The blue gum eucalyptus windbreak has been previously managed to restore its original limits. The following additional areas require treatment:

Monterey Cypress Border: The Monterey cypress trees along Simmonds Road surrounding the parade ground were planted in ca. 1908, and spread after World War II and more particularly since the 1960s. Black acacia were originally planted between the Monterey cypress, but these disappeared prior to World War II. All volunteer trees outside of the original planting area should be removed. The main areas to be cleared are at the northeast side of the parade ground surrounding the original flagstaff base and entrance gates, and on the bank above FA942 where there are also eucalyptus. These areas should be reestablished in turf (see task FAMP-4).
Although the existing trees have grown considerably since World War II, their existing aged condition contributes to the historic character of the landscape, and they should be conserved to the extent feasible. Unlike the more uniform historic character of the Monterey cypress windbreak at the Fort Baker Main Post, the Fort Barry trees are less formal in arrangement and scale, and therefore it would be appropriate to the historic character of the landscape to undertake in-kind replacement of individual trees as they are removed, rather than removing and replanting the entire stand.

Lower Parade Ground (Meadow): Remove volunteer blue gum eucalyptus and other trees on the bank and north of the barracks (FA 944, 945). Removal of

these trees will reestablish the open views from the parade ground toward the Pacific Ocean.

Lower Post: Remove Monterey pine, cypress, and acacia from the bank along the south side of Simmonds Road and the acacia grove west of the gymnasium (FA952): Leave one aged Monterey cypress that dates to the historic period and was originally within a turn-around in Simmonds Road in front of the guard house (not standing); replant in-kind if removal is necessary due to condition.

Task FAMP-2. Reestablish Historic Extent of Turf

The existing high grass and scrub on the banks of the terrace above Simmonds Road in the upper post, and on the banks below the barracks and firehouse site, detract from the historic well-maintained character of the landscape. Some of the banks, particularly west of the post hospital FA941, have also become covered in Monterey cypress and eucalyptus trees, while the banks below the barracks contain invasive plants, including cape ivy. In addition, former turf areas of the parade ground surrounding the original flagstaff site and east entrance along Simmonds Road have been lost to the spread of Monterey cypress.

The preferred treatment in terms of enhancing historic character is to maintain the banks and presently wooded areas of the parade ground as mown turf, consistent with the rest of the parade ground. This would require removal of existing volunteer trees per task FAMP-1, clearing and grubbing, and restoration of eroded areas, such as the bank below the administration building FA 940. A special mower may be required to safely mow the steepest areas. Remote-controlled cordless mowers, such as the Spider ILD01 and WORX Landroid M, are designed to mow steep slopes.[50]

If in the short-term it is not feasible to maintain mown turf on the steep banks along Simmonds Road, it would be appropriate to maintain meadow (high grass); the grass should still be cut on an annual basis to eliminate the growth of woody vegetation and maintain a uniform character. Establishment of non-turf groundcovers in these areas would not be compatible with the historic character of the landscape. Dormancy of the turf (browning) is appropriate during dry seasons, as the parade ground and other turf areas were not historically irrigated.

The added area of mown turf should be off-set in part by allowing the western area of mown turf between the barracks FA945 and Bosworth Road to revert to meadow. This area was the site of the World War II-era theater and was not historically maintained in mown turf prior to construction of the World War II-era theater in 1941. A mown margin should be maintained along the roads and sidewalk.

Task FAMP-3. Rebuild Walks and Steps

The buildings in the Fort Barry Main Post were historically linked by a continuous system of concrete sidewalks, with stairs that linked the lower and upper walks to the buildings. Today, this system is in poor condition with missing parts. Restora-

tion would enhance the historic well-maintained character of the landscape, while also facilitating contemporary use. The walks could be tied into the Coastal Trail, which presently follows a non-historic alignment on the hillside south of the Main Post, but includes an historic spur into the Main Post near the historic administration building.

Recommended actions under this task include the following:

Rebuild missing concrete sidewalk between the administration building FA940 and officer quarters FA 939, to replace the existing gravel path. This section of walk may have been lost to erosion of the adjoining steep bank. As part of the reconstruction, the grade should be stabilized and restored, as recommended under task FAMP-1.

Remove contemporary concrete brick pavers and other non-historic paving materials that have been added alongside the historic concrete walk, such as in front of the post hospital FA941. If a wider walk is necessary in such areas, it would be appropriate to extend the historic walk in concrete if only minor widening is necessary.

Repair or replace the lower concrete sidewalk that parallels Simmonds Road from below the administration building FA940 to NCO quarters FA955 in the lower post. Sections of this walk are in very poor condition, missing, covered by asphalt or turf, or blocked by vegetation. The section alongside and in front of the barracks FA 944 and 945 is being redesigned as part of the HCA Entryway Project. This design should maintain the continuity of the walk along the barracks.

Replace the five sets of wood and metal open-riser steps in front of the buildings in the upper post and reestablish the missing set in front of the administration building FA 940. The existing steps, which are replacements from the past two or three decades, have a temporary and rough character that is incompatible with the historic landscape and military architecture. Unlike the concrete stairs at Fort Baker, the historic Fort Barry stairs were built of painted wood and had solid treads and risers, no cheek walls, and no railings. Additional research would be needed to find photos and plans to support an accurate reconstruction. If this is not feasible, then a contemporary design that re-establishes the more finished character of the historic stairs should be used, and applied consistently at all locations. These stairs should be single flights without landings. Railings would be required to meet safety and accessibility standards. Since none existed historically based on available documentation, the railings should be an inconspicuous design, such as a traditional black-painted jointed pipe railing (avoid use of contemporary styles with continuous welds and curved returns).

Task FAMP-4. Enhance Historic Setting of the Post Chapel

The post chapel at Fort Barry, built in 1941, was historically a focal point looking west from the upper post across the open lawn of the parade ground and meadow to the west. The chapel and its front stone-wall enclosed yard were aligned with Bosworth Road. Along with conversion of the chapel to the park visitor center in 1992, the historic setting of the chapel was altered through the removal of Bosworth Road, addition of a parking lot and accessible ramp partly on the alignment of the road, and naturalizing of the surrounding open meadow that led to the growth of high woody vegetation. These changes detract from the historic character of the landscape and the integration of the chapel with the rest of the

Main Post. Today, the naturalized area may be possible non-breeding habitat for threatened red-legged frogs.[51]

The following actions are recommended to reestablish the historic open spatial character, views, and circulation around the chapel. These recommendations could be planned as part of new uses for the site following relocation of the visitor center to Fort Cronkhite, as recommended in the GMP. Planning would need to be undertaken through an integrated management approach to ensure other park values are addressed, in particular natural resources.

Clear or cut back high brush that is obstructing sight lines and open spatial character between Field Road and the chapel, and Bunker Road and the chapel; establish mown perimeter around the chapel and its front yard.

Reestablish Bosworth Road: There are two appropriate alternatives, each of which may incorporate part of the existing unsurfaced service road:

1. Rebuild the road and surface in asphalt pavement or similar surface to read as a continuous roadbed with the upper part of Bosworth Road. The road could serve as an accessible entrance to the chapel; or it could be maintained for pedestrian and service vehicle use only, if required for reasons of traffic safety and flow.

2. Clear the existing vegetation from the historic width and alignment of Bosworth Road to reestablish the historic circulation corridor, but do not surface in asphalt; maintain as a trail.

Redesign the east access to the visitor parking lot which is on the historic alignment of Bosworth Road. The most appropriate treatment for enhancing the historic character of the landscape is to remove the east access and maintain a single two-way entry at the west access. Another option would be to reconfigure the east access to connect with the reestablished Bosworth Road.

Redesign the existing curved ramp to the chapel, which also extends onto the historic alignment of Bosworth Road. A design that would be more appropriate to the historic character of the chapel would be a straight run off the south side of the chapel, from the sidewalk that borders the parking lot. Another option would to be remove and replace the ramp with on-street parking along a reestablished Bosworth Road that would provide for an accessible entrance into the chapel.

Conserve the existing pair of blue gum eucalyptus, which were planted in ca. 1943. Given their large size and proximity to the chapel, they should be monitored for potential weakness and windthrow threat to the building. Replacement with a non-invasive and smaller species of eucalyptus would be appropriate and would also address natural resource issues with this invasive species.

Task FAMP-5. Rehabilitate Simmonds and Rosenstock Roads

Simmonds Road, built in 1905, was historically the chief road through the Main Post (comparable to Murray Circle at Fort Baker), while Rosenstock Road, completed in 1907 and realigned in ca. 1939, was the service road (comparable to McReynolds Road at Fort Baker). The eastern part of Simmonds Road is today a seldom-used route and is in poor condition, while Rosenstock Road has been altered through expansion of adjoining parking areas.

To enhance the historic character of the Main Post, it is recommended that Simmonds Road and Rosenstock Road be rehabilitated with new asphalt and repaired concrete gutter-curbs to reestablish the well-tended character of the landscape. Certain lengths of gutter-curbs require replacement due to deterioration; these should be replaced in-kind to match the existing dimensions and concrete mix of the historic gutter-curbs. The roads should be maintained at their historic width, and shoulders worn by vehicular use should be returned to turf. Adjoining non-historic parking areas should be redesigned as recommended in task FAMP-7.

Task FAMP-6. Restore Entrance Gateway

The concrete entrance gateway to the Main Post on Simmonds Road was built in ca. 1910 at a time when the main approach of traffic was from the east. The gates remained intact through World War II. The west side of the gate was removed in ca. 1950, most likely along with the stacks of shot that stood on top and the "Fort Barry" name on the posts. These changes do not reflect historic significance, but rather the declining role of the Fort Barry Main Post and abandonment of Simmonds Road as a main approach route.

To enhance the historic World War II-era character of the Main Post, it is recommended that the Simmonds Road gate be restored through reconstruction of the missing west half of the gates (pier and adjoining wall), return of the stacks of shot and Fort Barry inscription, and repainting the concrete in white. Consideration should also be given to reversing the one-way direction of traffic on Simmonds Road to return the gate as an entrance into the Main Post (see following treatment considerations).

Task FAMP-7. Formalize Non-Historic Parking Areas

The existing unpaved parking areas that extend off Rosenstock Road between the upper post buildings are mostly on the site of garages that were removed after 1972, except for two parking areas bordered by low stone retaining walls that date to ca. 1939. In addition, there are unpaved, informal parking areas on the site of the firehouse removed in ca. 1960, and around barracks FA944 and FA945. These informal parking areas detract from the historically well-maintained character of the landscape, and its historic circulation and spatial patterns.

Retaining these parking areas is presently necessary for partner operations, and is compatible with the more flexible treatment proposed for the upper zone of the Fort Barry Main Post. However, to enhance the historic character of the landscape, it is recommended that the non-historic parking areas be treated in manner similar to the two historic parking areas by keeping the parking close to Rosenstock Road and defining the parking areas with a border to keep vehicles from encroaching onto surrounding turf. These borders could be a curb or a low stone wall that is differentiated in design and materials from the historic stone walls around the two historic parking areas.

The parking area between the post administration building, FA940 and the post hospital FA 941 should be removed and the area restored as an assembly area as recommended under task FAMP-8. See also resource management consideration below for reconstruction of historic garages.

Task FAMP-8. Reestablish Assembly Area and Flagstaff

In ca. 1942, the Army relocated the flagstaff at the Fort Barry Main Post from the north side of the parade ground to a new assembly area between the post administration building FA940 and post hospital FA941. A row of Monterey pine was planted along the north side of the area. In ca. 1960, the flagstaff was removed, after 1974 the area was converted to parking, and in 2009 the pines were cut down. The assembly area is currently used for parking and storage by the Marin Headlands Hostel under concession. Non-historic storage bins and a flammable storage area surrounded by concrete containment walls adjoin the still-extant concrete flagstaff base.

To enhance the World War II-era character of the Main Post landscape and return one of its character-defining features, it is recommended that the assembly area and flagstaff be reestablished. This area could also serve contemporary purposes as a community gathering place for the park partners.

This task will require relocation of the storage bins, removal of the existing curb, restoration of the historic flagstaff base, removal of mulch and weeds, and replanting of the pine trees along the north side. A concrete walk and terrace that extended from the flagstaff base toward the administration building, which most likely still exist beneath the mulch that covers the area, should be restored. Storage could be relocated to a new building constructed on the footprint of one of the historic garages along Rosenstock Road (see following resource management consideration for garages). A new white-painted flagstaff, consisting of a 75-foot-tall sectional steel pole on an iron base should be fabricated to match the historic flagstaff; if a reproduction is not possible, a flagstaff of similar character would be appropriate.

An archeological survey should be undertaken prior to construction to identify the historic surface material of the assembly area and any other historic features that remain beneath the existing mulch cover.

Task FAMP-9. Enhance Historic Character of Upper Post Plantings

The buildings of the upper post are bordered in part by mature specimen trees and shrubs, foundation shrubs, herbaceous plants, and groundcover. Most of the shrubs probably date to the Cold War period and later. During the treatment period of World War II, most of the buildings had no foundation plantings, while some had borders of annuals and low shrubs.

To enhance the historic character of the upper post plantings, foundation shrubs should be minimized and pruned to prevent building damage; historic shrubs that have grown out of scale should be pruned back to their historic form where possible. Invasive plants, such as broom and calla lily, may be removed and replaced with non-invasive or native plants that are compatible with the historic character of the landscape. New or replacement plantings should be based on the approved plant list for the Fort Baker Main Post (Appendix E).

In addition, the following specific actions are recommended:

Hospital Steward's Quarters FA942 (HCA): Remove young Monterey cypress tree at rear, and prune shrub at northeast corner away from the porch; rejuvenate foundation borders of groundcover and other low-growing plants.

Post Hospital FA 941 (Hostel): Remove the front privet hedges planted after ca. 1955, which are crowding the sidewalk; maintain open ground or a low ground cover.

Administration Building FA940 (HCA): Remove the two palm trees planted in ca. 1955, which have grown out of scale with the building, and remove the privet hedge planted around the same time. Remove the shrubs on the east side, or prune for a maximum height of approximately five feet.

Officer Quarters FA939 (HCA): Replace two Monterey pine trees off southwest corner, which will most likely die due to pitch canker disease, with non-invasive pines of a similar character. Remove young Monterey cypress tree and tall deciduous shrub growing along front porch. Rejuvenate other foundation shrubs and maintain at a maximum of five feet in height. Retain aged shrubs in lawn to the north. Maintain lawn up to the front and sides of the building, or a low border of groundcover or herbaceous plants.

Officer Quarters FA937 (Hostel): Remove tall shrub growing along front porch; rejuvenate other foundation shrubs and maintain at a maximum of five feet in height. Retain aged shrubs in lawn to the north. Maintain lawn up to the front and sides of the building, or a low border of groundcover or herbaceous plants.

Community Garden between FA937 and FA936: This garden is on the approximate site of a formal garden maintained during the World War II period, but is smaller. It is recommended that instead of the existing collection of fences, the garden be enclosed by a clipped deciduous or evergreen hedge to enhance the historic well-tended appearance of the landscape. Furniture and supplies should be kept within the hedge. It would be appropriate to enlarge the garden to the size of the historic garden, which was roughly a square that extended to approximately five feet from the front sidewalk and Rosenstock Road (see 1945 period plan in CLR volume I, Drawing 1.8a).

Commanding Officer Quarters FA936: The mass of shrubs along the front and south sides of the building should be removed. Retain the large pair of eucalyptus trees to the south. The aged shrub along the north porch may be retained; remove or prune the tree/shrub growing in the rear north corner. Maintain lawn up to the front and sides of the building, or a low border of groundcover or herbaceous plants.

Lawn between FA936, 934: Rejuvenate existing aged shrubs in the center of the lawn, which may be a remnant of a World War II-era massing in the center of a circular walk that is now gone.

Officer Quarters FA934: Remove or rejuvenate existing shrubs and herbs along front porch and maintain below the floor level of the porch. Maintain lawn

up to the sides of the building, or a low border of groundcover or herbaceous plants.

The gardens at the hospital steward's quarters FA942 and between officer quarters FA 934, 936, and 937 that were maintained between ca. 1939 and 1946 are not recommended for reestablishment due to lack of detailed documentation, and the unidentified need for such gardens under current partner uses.

Treatment Considerations

Vegetation Management Plan for Upper Post

Consideration should be given to developing a vegetation management plan for the upper post to inventory and map all existing ornamental plant material, identify new plantings, and prescribe detailed management guidelines, in keeping with the Treatment Guideline to develop a vegetation management plan for the entire district.[52]

Eucalyptus Windbreak

While the windbreak is a historic feature and the existing trees provide an aged character to the landscape, it may be appropriate to replant with a less invasive variety of eucalyptus to address natural resource and maintenance issues, using the approved plant list from Fort Baker (Appendix E). Further study of the condition of the existing trees is needed to inform treatment. If replanting is undertaken, it should follow the original limits and planting patterns of the windbreak, which was not continuous. There is no record of plantings in the understory; the existing exotics most likely escaped from beds around the buildings.

Multi-Use Court

Built in 1959, the multi-use court dates to the period of significance for the district and is part of the later history of the landscape, but detracts from the World War II-era character of the parade ground, and probably occupies an area traditionally used for troop exercises and parading. If there is no current need for the court, it could be made less conspicuous through removal and storage of the chain-link backstops. The court could also be covered by a reversible layer of soil and turf to reestablish the expanse of the parade ground lawn.

Outdoor Furnishings

There are a variety of types and styles of benches, picnic tables, barriers, and other outdoor furnishings in the Main Post of Fort Barry. As discussed under the Treatment Guidelines for Small-Scale Features, these should be treated uniformly and in a way that enhances the historic military character of the landscape. The existing rustic log barriers at the hostel picnic area, for example, are not compatible with the historic military character of the landscape. Consideration should be given to developing a site furnishings plan for the Main Post of Fort Barry, based on the *Site Furnishings Standards, Golden Gate National Recreation Area*. This plan

should reflect the more modest historic treatment at Fort Barry, compared with the Main Post of Fort Baker

Outdoor Lighting

The Fort Barry Main Post historically did not have ornamental light standards along its roads and walks, unlike the Main Post of Fort Baker. Existing exterior lighting consists of utilitarian building- or pole-mounted fixtures. If street and walkway lighting is necessary in the future, ornamental light standards, such as those installed at Fort Baker, should not be used. Continued use of utilitarian pole-mounted street lights and building-mounted lights would be appropriate, but should be in a traditional design that is inconspicuous and compatible with the historic character of the Main Post. Consideration should also be given to using fixtures that reduce light pollution and preserve night skies.

Drainage System

The upper post area of Fort Barry is drained by a series of inlets and outlets with concrete headwalls, and by drains within the gutters along Simmonds and Rosenstock Roads (see also task FAMP-5). While these drainage features are not conspicuous, they do contribute to the historic character of the landscape and should be preserved. An inspection of the drainage structures should be undertaken to ascertain their condition and determine needed repairs. Replacement of the system with rain gardens, drainage swales, and other bio-retention structures would not be compatible with the historic character of the landscape. The wetland at the base of the valley (west of parade ground) should serve as a natural stormwater retention area (outlet of the drainage system was not determined).

Simmonds Road Traffic Direction

The Main Post of Fort Barry was historically approached from the east along Simmonds Road, as reflected in the location of the entrance gates, but today the road is signed for one-way in the opposite direction. Thus, visitors do not experience the original formal entry into the post. Consideration should be given to reversing the one-way direction so that the main approach is once again from the east. The section of Simmonds Road between the ends of Rosenstock Road could be two-way to allow for access to buildings FA942 and FA944. Reversing the direction of Simmonds Road will also allow drivers to experience the dramatic view of the Pacific from Simmonds Road as it bends around the hillside north of the Main Post.

Building Porches

The Fort Barry administration building FA940, post hospital FA941, and barracks FA944 and FA945 were built with full-width porches. In ca. 1955, these porches were removed and replaced with small entry porches of crude construction that are incompatible with the historic architecture. Although little documentation was found for this CLR about why the porches were removed, the changes appear to

have little historic significance and occurred during a time when the Fort Barry Main Post no longer served its original function as a central administrative area for the military reservation. Consideration should be given to reconstructing the original porches as part of an overall treatment to enhance the World War II-era character of the Main Post. The foundations of the barracks porches remain. This treatment would be consistent with the Fort Baker Main Post, where similar missing porches were reconstructed as part of the CavalloPoint Lodge project.

New Building Construction

Since the end of the historic period, the Fort Barry Main Post has lost a number of buildings that had been constructed prior to or during World War II. These included four garages in the upper post along Rosenstock Road; a large Series 700 theater on Bosworth Road in the lower post; a pumphouse along Bunker Road; and a cluster of buildings between the gymnasium FA952 and chapel FA948 that were removed after 1972. The guardhouse in the lower post and firehouse near the barracks were removed in ca. 1960.

If additional building space is needed in the Main Post of Fort Barry, consideration should be given to siting new construction on these historic footprints to enhance the historic World War II-era character of the landscape. If sufficient documentation is available, the exteriors of the buildings should be accurately reconstructed; if not, then the new construction should maintain the massing, materials, and overall character of the historic buildings.

FORT BARRY QUARTERMASTER AREA (DRAWING 3.2)

The recommended treatment of the Fort Barry Quartermaster Area, which includes the buildings today known as the Three Sisters and the Lower Fisherman's Lot, involves preservation of existing resources, and reestablishing the historic identity of the area as recommended under district-wide task BBC-1. The area is within the GMP Scenic Corridor Zone (Field Road) and Natural Zone. The GMP did not provide recommendations specific to this area, but preliminary park plans are for possible conversion of one building into a Nike museum (one was used historically as a ready room for Nike personnel). There are no specific landscape treatment tasks identified for this area aside from tree removal covered under district-wide tasks BBC-2 and BBC-3.

Treatment Considerations

Quartermaster Area Interpretation

The Quartermaster Area of Fort Barry, which was the historic counterpart of the Quartermaster Area at Fort Baker (Bay Area Discovery Museum), originally extended south of Conzelman Road into the existing Lower Fisherman's Lot where the stables, firehouse, wagon shed, and corral were located, and there was a coal

bin, oil house, and sheds at the intersection of Conzelman Road and Field Road. Most of these features had been removed prior to treatment date of 1966. Two buildings have been lost since 1966, the firehouse and the carpenter-blacksmith shop south of the existing FA962.

The original development of the Quartermaster Area is difficult to understand from the existing landscape given the loss of buildings and recent realignment of roads as part of Project Headlands. Consideration should be given to placing interpretive waysides near the Three Sisters and in the Lower Fisherman's Lot with historic photographs and plans that correlate to existing conditions and relate this area with the Quartermaster Area at Fort Baker.

Pedestrian Access

There is presently no pedestrian access along Field Road through the Three Sisters. If such access is warranted in the future, consideration should be given to building a walk along the rear side of Building 960, which could connect to the walk and steps between the Nike SF-88 launch site and the Nike ready room in Building 962. The narrow shoulder of Field Road is not sufficient for a sidewalk; adding a sidewalk would break the connection of the historic loading docks with the road.

Building 960 Skylights

Building 960, originally the Quartermaster commissary, is today used by the Headlands Center for the Arts as studio space. When it was converted to this use, numerous skylights were added to the northwest-facing slope of the gable roof. These contemporary skylights are highly visible from points west and north due to the location of the building on a prominent rise above the Nike SF-88 launch site. To reduce this visual impact, consideration should be given to removing these skylights.

New Building Construction

If additional building space is needed within the Fort Barry Quartermaster Area, it would be appropriate to reconstruct the carpenter-blacksmith shop because it was removed in 1970 after the historic period. This one-story frame building was in the existing gravel-surfaced area south of building FA962. Reconstruction of this building would help reinforce the historic cluster of buildings. The firehouse to the south was also removed in 1970, but it would be problematic to reconstruct because its site is partially within the existing Lower Fisherman's Lot and the adjoining roads have been realigned. It was the lone remaining building from the southern part of the Quartermaster Area.

BARRY MOTOR POOL (DRAWING 3.2)

The Barry Motor Pool, originally the rifle range camp and then the balloon hangar field prior to its conversion into a motor pool during World War II, is today known as the Rodeo Valley Stables and is used by the Presidio Riding Club. The recommended overall treatment for the area is to preserve the two historic motor vehicle sheds and the balloon hangar, enhance historic spatial and circulation patterns, remove non-historic trees, and enhance its historic identity as recommended under task BBC-1. The area is a GMP Diverse Opportunities Zone, which allows for a wide variety of visitor opportunities while preserving fundamental park resources. The GMP called for continued use of the area as equestrian facilities.

Task BMP-1. Remove Trees from Motor Pool Area

The U-shaped valley of the Motor Pool area was historically covered in grassland and scrub. Since the end of the historic period during the Cold War, numerous trees—mostly exotic invasive species grew up in and around the area, changing the historic open spatial character and views. All trees are recommended for removal from within the Motor Pool Area, both native and exotic (in addition to those outside the developed area addressed under task BBC-2). These include acacia and other deciduous trees along the east side of the motor pool area; groves of Monterey pine, cypress, and acacia at the south (rear) and west sides of the balloon hangar; and grove of acacia and Monterey cypress between motor vehicle shed FA901 and the riding rink.

Task BMP-2. Reestablish Historic Limits of Front and West Yards

The motor vehicle sheds FA901 and FA902 were historically surrounded by open, gravel yards where Army vehicles were driven to and from the sheds and the balloon hangar. Since the end of the historic period, these areas have been partially converted to horse corrals and lawn, or have been abandoned. Reestablishment of the front yard, which is presently a mix of parking, brush, mown grass, and part of the east corral, would enhance the historic character of the motor pool area from its most visible side facing Bunker Road.

To reestablish the front yard with its open space and gravel surface, it is recommended that the east corral be shortened to align with the front of motor vehicle shed FA902; and a red chert gravel surface be maintained from the corrals and bottom of the slope along the sheds to the edge of Bunker Road, west to the road to the dump site (Coastal Trail), and east to the side road to the balloon hangar. The slope along the north walls of the sheds should be retained in turf. This reestablished rectangular front yard could serve as vehicle parking and as a gathering place for riders.

The open gravel yards surrounding the motor vehicle sheds historically extended around all sides of the buildings. The yard west of the west shed FA901 and east of the riding rink is presently a mix of grass, scrub, and trees. It is recommended that

this yard be returned to red-chert gravel. This area could serve as additional corral space or space for a proposed turn-out area, and would allow for improved access to the building.

Treatment Considerations

Marin Equestrian Stables Plan

The park completed an environmental assessment (Marin Equestrian Stables Plan) in 2011 to evaluate conceptual plans for facilities improvements at the Rodeo Valley Stables. The preferred alternative (B2) called for alteration of the two motor vehicle sheds FA901 and FA902 to accommodate covered manure storage, a residence, and a covered lunging ring. A new water tank, turn-out corral, and hay & feed storage shed were identified for the area to the south of the motor vehicle sheds. The balloon hangar was identified for long-term interim use by NPS as a maintenance facility.

The following are recommendations that should be considered in development of detailed design for this preferred alternative:

Enhance the historic character of the motor vehicle shed exteriors; place new enclosing walls behind the historic structural posts and braces to allow the historic structure to be visible from the exterior.

Locate the proposed new interim hay and feed steel container in line with the motor vehicle shed and preferably near its south wall to retain the open character of the yards.

Site the proposed new water tank against the rear wall of the east motor vehicle shed to avoid impacting the open character of the yards.

Building 814

Building 814, a vacant metal-frame building that has lost its roof, was constructed in 1962 most likely as part of the motor pool then maintained by the Army Reserve. The preferred treatments in terms of enhancing historic landscape character is preservation, restoration, or rehabilitation of the building; however, given its late date of construction, inconspicuous appearance, and deteriorated condition, it would also be appropriate to remove the building. It should be documented prior to demolition.

DEPARTMENTAL RIFLE RANGE (DRAWING 3.2)

The recommended overall treatment for the Departmental Rifle Range, established in 1905 and used through ca. 1975, is to preserve and enhance its historic Cold War-era spatial character, topography, and circulation, and to enhance its historic identity in keeping with task BBC-1. The main rifle range and adjoining first rifle range are part of the GMP Diverse Opportunities Zone, which allows for a wide variety of visitor opportunities while preserving fundamental park resources. The long-distance range north of Bunker Road to the west, which was

abandoned in 1941, is also within the Diverse Opportunities Zone. The rifle range is crossed by the GMP Scenic Corridor Zone along Bunker Road. The 1980 GMP identified the rifle range as a special events area, but the current GMP does not specify a particular use. The recommended use of the rifle range is to preserve it as a historic resource, rather than to repurpose it as a special events area. Large-scale public events and use for parking should be prohibited, although use for occasional temporary parking may be appropriate.[53]

The Army completed a FUDS (Formerly Used Defense Site) assessment of the rifle range, which identified lead contamination and the need for remediation. The potential for large-scale excavation could alter the historic topography of the range unless properly managed. No time line for this work has been set to date. The Project Headlands road work removed a non-historic trailhead parking area at the north end of the range in 2012, and altered part of Old Bunker Road that circumvents the north end of the range. This road is recommended for preservation under task FA-2, and all non-native invasive trees should be removed per district-wide task BBC-2. The hillsides northeast of the range provide habitat for endangered mission blue butterfly.

Task DRR-1. Document and Repair Drainage System

Surface drainage at the Rifle Range, located within a U-shaped valley, was historically carried through open swales and culverts along the sides of the range. These appear to be blocked or constrained. It is recommended that a survey be undertaken to document this system and its condition, and assess needed repairs. Such repairs may correct wet areas within the rifle range and the backstop area south of the target trench, as well as prevent water from collecting in the target trench. It may be appropriate to adapt the drainage system to current best practices in stormwater management, such as by constructing infiltration beds or checks to slow the flow of water, provided they do not alter the existing spatial character, topography, and vegetation of the rifle range field.

Task DRR-2. Reestablish Extent of Rifle Range

During the Cold War, the rifle range retained its extent to the 600-yard berm north of Bunker Road. After 1975, mowing in this area no longer followed the historic limits, and portions of the field grew up into scrub and woods. Failure of the drainage system also led elsewhere to wet areas where mowing ceased, allowing scrub to grow and alter the historic open space of the range. Scrub grew up around the target trench, separating it visually from the rest of the range.

To reestablish the historic Cold War-era extent of the rifle range, clear the range north of Bunker Road of scrub and trees, and reestablish mown turf to the historic limits. The clearing should align with the north and south sides of the range south of Bunker Road, and extend to Old Bunker Road. Reestablish mown turf where it has been replaced by scrub at wet areas, following repair of the drainage system per task DDR-1. In addition, the scrub should be cleared from around the

target trench, and the backstop area with its two berms should be kept mown or in low vegetation following correction of drainage problems as recommended under task DRR-1. This area was most likely historically maintained on a less intensive mowing regimen than the main field.

The original pistol range, built along with the main rifle range in 1905, fell out of use by 1941, when it was bisected by the realignment of Bunker Road. By the 1960s, its northern part was covered in scrub. Retention of the existing scrub and woods in this area is therefore appropriate.

Task DRR-3. Rehabilitate Target Trench

The target trench, rebuilt in 1941, is in poor condition resulting from abandonment over the past four decades. It is overgrown by vegetation, surrounded by a chain-link fence, and is inundated by water most likely due to failure of culverts along the sides of the rifle range. The structure should be stabilized and repaired to reestablish the object of view from the rifle range (the targets) and to allow visitors to enter and experience what it was like for soldiers to spend long days "in the butts." Restoration would entail improvement of visitor access, clearing vegetation and debris, rebuilding the target frames, and repainting the firing lane numbers.[54] Drainage problems should be corrected as discussed under task DRR-1. The non-historic chain-link perimeter fence should be removed once access and safety issues are resolved.

Task DRR-4. Enhance Historic Character of Rifle Range Roads

The roads in the rifle range originally included one along the entire south side (Julian Road), and another road along the eastern part of the north side that curved northeast through the rifle range to Bunker Road. Informal tracks crisscrossed the field in various locations and alignments during the historic period. Since 1966, the roads have lost historic character due to shifts in alignment of the north road, loss of a road between Bunker and Old Bunker Road, and addition of a new road through the pistol range off Bunker Road. To enhance the historic character of the rifle range roads, the following actions are recommended:

Straighten the north road to align with the perimeter of the rifle range; remove of areas that have widened into the rifle range.

Remove the new (western) road through the rifle range; use the historic road to the east as the main east access off Bunker Road.

Maintain all roads with an evenly graded red-chert surface.

Task DDR-5. Establish Regular Mowing Regimen

The rifle range was historically mown on a regular and frequent basis to keep the turf short. The current mowing regimen is infrequent, especially on the berms that are often obscured by high grass. To enhance the historic character of the rifle range, a regular mowing regimen should be reestablished to keep the grass at a uniform height throughout the range, including on the berms, preferably at

a height not to exceed one foot. Care should be taken that mowers do not erode the berms. The mowing regimen should extend to the adjoining pistol range to the east (only the section south of Bunker Road), and to the 1000-inch rifle range to the south. Mowing may need to be curtailed during certain seasons to address natural resource issues (breeding of threatened/endangered species).

Treatment Considerations

500-Yard and 600-Yard Berms

The berms on the rifle range, approximately five-foot high earthen mounds at set distance marks, were added in ca. 1941. The 600-yard berm at the north end of the rifle range was removed around the time a trailhead parking area was constructed along Old Bunker Road in ca. 1990. The 500-yard berm, which consisted of two sections to either side of Bunker Road, has eroded and is largely invisible. Restoration and reconstruction of these berms would enhance the historic character of the rifle range and allow visitors to better understand its full extent. They should be reconstructed to match the profile of the existing 100-, 200-, and 300-yard berms, with the 500-yard berm retaining its World War II-era division.

Archeology

An archeological survey should be undertaken before any construction or ground disturbance is undertaken on the rifle range to assess below-ground resources and address research gaps, such as the location and extent of hillside backstops; location of earthen trenches and stops in front of the target trench; remains of the ready magazine FA827 and butts in the first pistol range; remnants of the long-distance range north of Bunker Road; road locations, widths, and materials; and the extent of drainage features.

New Building Construction

The indoor rifle range FA826, a long frame building along the former pistol range, was built in 1941 and removed in ca. 1975. If interior space is needed at the rifle range, it would be appropriate to reconstruct this building, which was a character-defining feature of the landscape.

FORT BARRY CAPEHART HOUSING AREA (DRAWING 3.2)

The Fort Barry Capehart Housing area, developed between 1959 and 1961 within the period of significance for the district, reflects the popularity of suburban models of residential design and planning after World War II, and the Army's need to accommodate on-base family housing during the Cold War. While current perceptions of architecture and planning may make it difficult to see the value of preservation, in future years the Capehart area will gain increasing significance as a reflection of its period and design, and of the Cold War-era use and development of Forts Baker, Barry, and Cronkhite.

The park's GMP has identified the portion of the Capehart Housing Area north of Bunker Road for removal based on the higher need to restore the ecology of Rodeo Creek and the scenery of Rodeo Valley. This portion of the Capehart Housing Area is within the GMP Natural Zone, while the area south of Bunker Road is a Park Operations Zone intended to support visitor services and park operations. Cultural resources may be preserved here by adaptive reuse, but visitor access to this zone is anticipated to be limited. The GMP also called for development of a centralized maintenance facility and sustainable workforce housing in the Capehart Housing Area south of Bunker Road. Volunteer non-native trees should be removed from the area, particularly along McCullough Road, per district-wide task BBC-2.

Task CHA-1. Restore Air-Raid Siren Tower

The white-painted wood-frame air-raid siren tower above Shiley Street, built in 1950, is the only feature remaining from the World War II-era West Portal Housing Area, along with Shiley Street and several trees. The tower was retained in the Cold War-era Capehart development and remains a symbol of the continual Cold War state of preparedness in the Headlands. The tower is presently in poor condition. It should be restored through in-kind replacement of deteriorated wood structural members, repair of the concrete footings, repainting, and restoration of the siren unit on top. This tower is one of three that existed at the end of the historic period, along with one in the Cronkhite Cantonment and another in the Main Post of Fort Baker.

Treatment Considerations

North Capehart Area

The GMP direction to remove the Capehart Housing Area north of Bunker Road would include removal of all built and planted features, and restoration of natural conditions. Consideration should be given to retaining Bottoms Road due to its commemorative value, named in honor of Colonel Sam. F. Bottoms, the first commanding officer of Fort Barry. The road could serve as a scenic pull-off, or could be converted to a trail named Bottoms Trail. Menges Road continues south of Bunker Road, so removal of its northern section would not result in loss of the commemorative namesake.

Capehart Houses

The extent of removal or retention of existing Capehart housing south of Bunker Road was not identified in the GMP direction to establish a central maintenance facility in the complex. In terms of preserving and enhancing the historic character of the landscape, retention of the existing Cold War-era Capehart houses, including views of the complex from Bunker Road, would be the preferred treatment. Renovation would also preserve energy embodied in prior construc-

tion, and could include energy upgrades and improved stormwater management, provided historic character is maintained. Guidelines should be developed to preserve character-defining architectural features, such as roof, walls, windows, and door openings. One of the north houses proposed for demolition should be moved to the site of missing house FA803 along Shiley Street, which was demolished in ca. 1990.

Landscape Maintenance

The existing condition and level of maintenance in the Capehart Housing Area detracts from its historic character and scenic value. Condition issues include unchecked vegetation, high grass, weedy walks and gutters, and cracked asphalt, along with lack of defined areas for private furnishings. Implementation of a landscape plan could help enhance the historic character of the complex while also addressing the area's overall level of maintenance and aesthetics, in conjunction with architectural guidance for the buildings. The plan should also provide guidelines for private development of outdoor areas.

It is recommended that the Army's March 1961 plan be used as the basis for a new landscape plan, with allowance for substitution of invasive species using the approved plant list for Fort Baker (Appendix E). The existing terracing, streets, drives, walks, clothes lines, and utility poles are historic features. Further research is needed to assess the garbage sheds, and to determine the extent of historic tree and shrub specimens. Addition of a fence or other visual barrier along Bunker Road would not be compatible with the historic character of the landscape, since the housing complex was historically visible along Bunker Road.

DIABLO RIDGE DEFENSES (DRAWING 3.2)

The recommended overall treatment for the Diablo Ridge Defenses (Hawk Hill area) is to preserve and interpret the existing BC 129 structures and Nike SF-87 control site remnants, manage vegetation to prevent growth of trees and preserve views, restore native coastal scrub and grassland, and maintain Cold War-era circulation features while allowing for continued adaptive reuse. Given the high visitation to Hawk Hill, the landscape should be well maintained. The Diablo Ridge Defenses are within the GMP Scenic Corridor Zone, which emphasizes sightseeing and related recreational opportunities, and the Natural Zone, where natural resource protection is emphasized.

In 2011, the Monterey pine and cypress woods at BC 129, which were probably planted by the Boy Scouts around 1955, were removed, a treatment consistent with district-wide task BBC-3. Treatment of the scenic overlooks along Conzelman Road has been completed through Project Headlands. Treatment of the Hawk Hill scenic overlook and raptor observatory at the SF-87 control site is being addressed in the Golden Gate National Parks Conservancy's Hawk Hill/

Battery Construction 129 Restoration and Trail Improvement Project. These plans call for rehabilitation of historic circulation and structures control site, removal of non-historic vegetation, restoration of the earth cover on the battery commander station, new furnishings, and improvement of the trails to the BC 129 casemates and their connection to the Coastal Trail.

Because of the completed work and advanced development of improvement plans, there are no specific landscape treatment tasks or treatment recommendations for Hawk Hill, and only one task for the related PSR Room on Conzelman Road. District-wide task BBC-1 (Implement System of Historic Signage) should be addressed, as well as general treatment recommendations for design of park furnishings.

Task DRD-1. Restore Access Apron to BC 129 PSR Room

The BC 129 PSR room (FB770), a cut-and-cover structure with a short access apron off Conzelman Road east of Hawk Hill, was built in 1944. The access apron is today covered in debris and vegetation, and is cut off from Conzelman Road as result of a swale and pavement changes undertaken through Project Headlands. It is recommended that the access apron be cleared and reconnected to Conzelman Road. The stone rubble swale installed along the north side of Conzelman Road should be pulled back at least ten feet from either side of the edges of the PSR Room access apron. The historic surface needs to be determined.

RODEO RIDGE DEFENSES (DRAWING 3.2)

The recommended overall treatment for the Rodeo Ridge Defenses, which extend from Battery Rathbone-McIndoe to Battery Wallace, is to preserve and interpret defensive works, document, stabilize and uncover remnants of defensive works, remove non-historic trees, and enhance pedestrian circulation. The Diablo Ridge Defenses are within several GMP management zones, including the Scenic Corridor Zone along Conzelman Road including Battery Rathbone-McIndoe, which emphasizes sightseeing and related recreational opportunities; the Diverse Opportunities Zone that includes the Bicentennial campground and picnic area near Battery Wallace, which supports a wide variety of visitor opportunities; the Evolved Cultural Landscape Zone that includes Battery Wallace, which emphasizes preservation and adaptive reuse of historic features for contemporary park and partner needs; and the Natural Zone that includes all other areas, including AA Battery #2 on Rodeo Hill, where natural resource protection is emphasized. The GMP did not provide recommendations specific to this area.

Task RRD-1. Restore Earth Cover of Battery Wallace

The earth cover of Battery Wallace, added as part of the casemating of the 1921 gun platforms in 1943, was planted with Monterey cypress in the late 1940s,

probably by the Boy Scouts. These trees have altered the historic military character of the battery that was originally covered by native grass and scrub, and pose potential damage to the parapets in the event of a blow-down. The earth cover is also suffering erosion in several areas along social trails, which has exposed the underlying burster course.

To enhance the historic character of Battery Wallace and preserve its earthen parapets, the Monterey cypress should be removed as recommended under district-wide task BBC-3. Stumps from earlier removals around the casemates should be removed, eroded areas repaired, social trails and deer trails removed, and the original cover of native vegetation be reestablished. In addition, the stone walls lining utility structures along Conzelman Road should be repaired. A formal trail along the top of Battery Wallace could serve to discourage development of multiple social trails such as presently exist.

The grove of Monterey cypress trees on the adjoining picnic area across Conzelman Road, which is part of the same planting, should be retained because it provides valuable shade and shelter. If these trees require replacement due to condition, use of an alternate native species would be appropriate. The grove of Monterey cypress to the south, across from the gun #2 tunnel, should be removed in keeping with task BBC-3.

Task RRD-2. Document Rathbone-McIndoe Hutment Remnants

The hutment of temporary World War II structures on the hillside north of Battery Rathbone-McIndoe, which included barracks, a mess, and latrine, was part of the massive build-up in the Headlands during World War II. The complex was abandoned after the war and by 1971 was covered in part by two groves of blue gum eucalyptus, which have since spread over most of the site. As recommended under district-wide task BBC-2, these trees should be cleared from the site to restore the open spatial character of the landscape and remove invasive exotic vegetation within the GMP Natural Zone. Removals should avoid ground disturbance or impacts to above-ground remnants. Since little is known about the historic character of the hutment and its existing integrity, an archeological survey should be undertaken to document and evaluate the site. Installation of waysides along Conzelman Road would provide new opportunities for interpretation on the GMP Scenic Corridor.

Task RRD-3. Document, Stabilize, and Interpret AA Battery #2 Complex

Rodeo Hill is the site of AA Battery #2, a collection of dispersed features constructed in 1925 as the first anti-aircraft defensive work at the Headlands. At present, AA Battery is largely unrecognizable due in part to its historic dispersed character, as well as to deterioration, loss of access, and concealment by woody vegetation. The hilltop resources are accessible only by social trails. Since AA Battery #2 was abandoned during the Cold War and is mostly within the GMP Natural Zone, the recommended treatment is to document and stabilize the re-

maining features on Rodeo Hill, including the gun platforms, while preserving the surrounding natural environment. The area is probably host to lupine, which are host plants for mission blue butterfly.[55] Features directly along Conzelman Road should be revealed and interpreted in keeping with the Scenic Corridor zone along Conzelman Road. The following actions are recommended:

Document the collapsing underground hutment and connecting tunnels before further deterioration occurs. Consider closing off existing openings to reduce safety hazards and preserve the structures.

Clear the approach drives to the cut-and-cover structures along Conzelman Road of vegetation and debris to reestablish a maintained character and retain the connection to the road.

Clear the cuts along Conzelman Road, where mobile radar and other equipment was placed, of high brush to make them visible in the landscape.

Document and stabilize remnants of the day room and other structures in the cuts along Conzelman Road. Consider adding interpretive devices along Conzelman Road.

Mark structures as recommended under district-wide task BBC-1.

See also the following treatment consideration for trails on Rodeo Hill.

Task RRD-4. Reduce Spread of Bicentennial Campground Monterey Cypress

The groves of Monterey cypress at and around the Bicentennial Campground most likely trace back to an officer's house that was built at the site during World War I. Today, the trees have spread over a large area, but the core of the groves provides shelter and shade to the campground. All non-native trees outside of the campground should be removed in keeping with district-wide task BBC-2. Further investigation is needed to determine which trees should be retained for the benefit of the campground.

Task RRD-5. Document Rodeo Ridge Fire-Control Stations

There are five fire-control stations on Rodeo Ridge: three near Battery Rathbone-McIndoe and two plus a powerhouse on Rodeo Hill, all within the GMP Natural Zone. All of these stations should be documented before additional deterioration occurs. These include B1 Rathbone located west of the battery, which is a well-preserved example of a World War I-era fire control station with intact rock and vegetation camouflage; its companion, B1 McIndoe to the east of the battery that slide down the cliff; and fog-level Taft-era fire-control station B4 Alexander and originally designed F3 3rd Fire Command on the shoreline rocks below the battery. It will likely be increasingly impacted by wave action with rising sea levels. B1S1 Wallace, BC Wallace, and the adjoining powerhouse on the west side of Rodeo Hill are in relatively good condition, but should also be documented.

See also following treatment consideration.

Treatment Considerations

Stabilize and Interpret Rodeo Ridge Fire-Control Stations

Although within the GMP Natural Zone, consideration should be given to stabilizing and repairing the intact fire-control stations on Rodeo Ridge to ensure their long-term preservation and enhance interpretation along Conzelman Road within the GMP Scenic Corridor zone. Brush that is growing over B1 Rathbone that could impact the existing camouflage should be removed, and the work sealed to prevent vandalism and weather impacts. Visitor access to this work could be established through reopening of the historic access path from Battery Rathbone-McIndoe (archaeological investigation would be necessary to identify the route). The original site of B1 McIndoe, which slid down the cliff during the historic period, could be interpreted through addition of a wayside or marker at or near the site that references the current site of the structure. The two fire-control stations at the west side of Rodeo Hill (B1S1 Wallace, BC Wallace) are in relatively good condition, but BC Wallace should be sealed, along with the adjoining powerhouse that is open to the elements.

Trails on Rodeo Hill

Rodeo Hill is popular with visitors due to the scenic panoramas across the treeless rise, and its accessibility from Conzelman Road and the Lower Fisherman's Lot. A series of social trails crisscross the hill, generally leading to remnants of AA Battery #2 or nearby secondary defensive works, but without any clear purpose or orientation. Although the area is within the GMP Natural Zone, consideration should be given to managing the existing trails to these defensive works as an interpretive trail to better manage circulation and to enhance the visitor experience. The recommended route is along the historic access road to AA Battery #2 from the Lower Fisherman's Lot, to the gun platforms and concrete reservoir on the top of the hill, and then down to Conzelman Road, following the existing social trail. From here, the interpretive trail would turn west along the shoulder of Conzelman Road to provide access to the AA Battery #2 features along the base of the hill and then return to the Lower Fisherman's Lot. Protection of mission blue butterfly habitat would take priority over trail development in this area.

Sanitary Fill Area

The former dump south of the Lower Fisherman's Lot was created by the Army in ca. 1968 and therefore does not contribute to the historic character of the landscape. It would therefore be appropriate to restore the natural conditions of this area. An earlier dump established in ca. 1907 and in use through 1968 was located at the edge of the cliff above Bonita Cove. An archeological survey of both sites may be warranted to assess any information potential to any remains in the area.

SOUTH LAGOON DEFENSES (DRAWING 3.2)

The recommended overall treatment for the South Lagoon Defenses, which include Batteries Alexander, Smith-Guthrie, and O'Rorke, is to preserve and interpret defensive works, document, stabilize and uncover remnants of defensive works, remove non-historic trees to restore strategic views, and restore historic approach roads. The South Lagoon Defenses area is within the Evolved Cultural Landscape Zone, which is to be managed to provide visitors with a variety of recreational, educational, and stewardship activities consistent with the protection of the nationally significant cultural resources in the area. The GMP did not provide recommendations specific to this area.

In keeping with district-wide task BBC-2, volunteer exotic trees should be removed from the landscape, and AA.50 #21 and its adjoining tunnel and trenches near Battery Smith-Guthrie should be documented and uncovered, as recommended under district-wide task BBC-4.

Task SLD-1. Document Smith-Guthrie Hutment Remnants

The hutment of temporary structures on the hillside north of the Barry switchboard room and east of Battery Smith-Guthrie, which included a mess hall on a concrete foundation (FA1354B), dates to the massive World War II-build-up in the Headlands and was abandoned in ca. 1946, although the mess hall building stood until ca. 1970. Since little is known about the historic character of the hutment and its existing integrity, an archeological survey should be undertaken to document and evaluate the site. Like the hutment at Battery Rathbone-McIndoe, the site is presently covered in dense eucalyptus woods, perhaps planted by the Boy Scouts, that have grown up in large part since 1971. In keeping with district-wide task BBC-2, the trees should be cleared but in a manner that avoids ground disturbance or impacts to above-ground remnants.

Task SLD-2. Enhance Historic Character of Batteries Smith-Guthrie and O'Rorke

Batteries Smith-Guthrie and O'Rorke were completed in 1904–05 and originally maintained with mown turf parapets and possibly iceplant, but by World War II, a less conspicuous cover of native vegetation had most likely been established. The batteries were abandoned for defensive purposes after World War II, but were maintained through the Cold War period for storage. Today, both have changed due to growth of vegetation, vandalism, erosion, and structural deterioration. Much of the existing vegetation on the parapets of both batteries is low scrub and grass that is compatible with the historic character of the landscape.

To enhance the historic character of the landscape, the following actions are recommended:

Remove eucalyptus woods and high scrub from parapets of Smith-Guthrie to restore open space and firing lines, in keeping with district-wide task BBC-2.

Clear vegetation and soil (sand) that has encroached onto the concrete and gravel surfaces of the parades, blast aprons, and gun platforms.

Remove or reduce social trails on parapets of Smith-Guthrie.

The concrete battery structures require stabilization, repair, sealing of open areas, and removal of graffiti. This work should include reinforcement of the cantilevered roofs of the Smith-Guthrie battery commander stations.

Task SLD-3. Enhance Historic Character of Battery Alexander

Battery Alexander was completed in 1903 as the only mortar battery in the Headlands, and featured a line of blue gum eucalyptus in front and iceplant with other vegetation on the earthen parapets. The battery was disarmed in 1943, but maintained through the Cold War for storage. Monterey pines were planted on the parade in ca. 1965 for non-defensive purposes and the mortar pits were later used as picnic areas. Today, it is the only battery in the Headlands that retains its historic latrine building, but has lost historic character due to spread of the eucalyptus trees, growth and spread of the Monterey pines, and encroachment of vegetation and soil on the parade and adjoining areas. The existing low and spreading character of the vegetation on the battery parapets is appropriate.

To enhance the historic character of the battery, the following actions are recommended:

Remove Monterey pine trees from parade and north parapet, in keeping with district-wide task BBC-3 to restore the open spatial character of the landscape.

Remove vegetation and accumulated soil from the battery parade and gun pits, and restore the red-chert surface and concrete curbs of the parade. This work should be undertaken in conjunction with restoration of the connecting approach roads, per task SLD-4.

Restore the limits of the eucalyptus row in front of the battery by removing the spread from the original plantings. The eucalyptus trees are historic and should be perpetuated; replacement with a less invasive species of eucalyptus may be appropriate if required for natural resource reasons. The original linear planting pattern should be retained.

The concrete battery structure, latrine, and two mortar booths require stabilization, repair, sealing of open areas, and removal of graffiti.

Task SLD-4 Rehabilitate South Lagoon Defenses Battery Roads

The red-chert gravel approach roads to Batteries Alexander, Smith-Guthrie, and O'Rorke were built along with the batteries between 1901 and 1905, and featured red-chert surfaces and concrete gutters or curbs in areas. Today, the roads are used primarily as trails, although they also provide access for park maintenance to the batteries. The approach road to Battery Alexander was narrowed to trail width in 2013 according to park standards for trail maintenance. The change in character from road to trail has altered a historic feature and conveys a contemporary

recreational character to the landscape. Such narrowing may also inhibit vehicular access to the batteries for maintenance.

To enhance the historic character of these battery approach roads, the following actions are recommended:

Restore the historic width of the Battery Alexander approach road by reversing recent narrowing; restore red-chert surface and uncover historic concrete curbs and gutters.

Restore the historic width of the approach roads to Batteries Smith-Guthrie and O'Rorke by removing vegetation and soil that has encroached on this historic roadbed; uncover concrete curbs and gutters, if extant.

Maintain graded red-chert surface, similar to character of the recently rehabilitated Mendell Road.

Maintain the historic approach road between Battery Alexander and SF-88 launch site.

Treatment Considerations

Trail Loop around South Lagoon Defenses

The existing loop trail around Battery Smith Guthrie follows the main approach road on the east and remnants of minor roads to the west of the battery. Consideration should be given to expanding this trail by providing an eastern loop that would follow the access road to the Barry switchboard room and Smith-Guthrie hutment. The trail could be extended north and west to connect with Battery O'Rorke, where the spur of the current loop trail presently dead-ends. A new spur off the main approach road could provide visitors with access to the AA.50 #21 emplacement, which was one of the more developed of its type in the Headlands with a tunnel and trenches. This work is recommended to be cleared of scrub under district-wide task BBC-4.

These extensions could provide visitors with an enhanced interpretive and recreational experience, in keeping with the intent of the GMP Evolved Cultural Landscape Zone.

SF-88L T Sites

The temporary launch sites for Nike SF-88 west of Battery Smith-Guthrie and northeast of Battery O'Rorke were built as square depressions with earthen revetments. Due to the sandy dune environment and growth of vegetation, these sites are inconspicuous and have probably lost historic integrity. Nonetheless, the Smith-Guthrie Loop trail should be kept away from the launch site remnants, and social trails be removed and discouraged, to preserve the sites.

Parapet Iceplant

Iceplant, a non-native invasive, was original planted on the Battery Alexander parapets in 1905, and probably also on the parapets of Batteries Smith-Guthrie

and O'Rorke. In terms of preserving historic landscape character, the iceplant should be maintained on these structures within the areas where it was originally planted, and removed from the areas where it spread in the surrounding dune environment. If iceplant cannot be maintained within its original limits, and a natural resource assessment determines it is a threat to the native ecology, it may be appropriate to replace it with a native groundcover of similar low habit identified in the approved Fort Baker plant list (Appendix E). See also task BRD-4 for recommendations on maintaining iceplant cover on the Fort Barry mine casemate.

BONTIA RIDGE DEFENSES (DRAWING 3.2)

The recommended overall treatment for the Bonita Ridge Defenses, which includes Battery Mendell, the Bird Island Overlook (AAA Position No. 81) and the fire-control stations and Coast Guard facilities on Bonita Ridge, is to preserve and interpret defensive works, remove non-historic trees to restore strategic views and spatial character per district-wide task BBC-2, and enhance pedestrian circulation. Most of the Bonita Ridge Defenses are within the Evolved Cultural Landscape Zone, which is to be managed to provide visitors with a variety of recreational, educational, and stewardship activities consistent with the protection of the nationally significant cultural resources in the area. The GMP did not provide recommendations specific to this area; the portion on Bontia Ridge remains under Coast Guard jurisdiction.

Task BRD-1. Control Access to Fire-Control Stations Cluster

The cluster of abandoned fire-control stations on Bonita Ridge, which includes an active Coast Guard Vessel Traffic Service tower, presents a potential safety hazard due to the deteriorated condition of the buildings, presence of deep trenches, and precipitous drop-offs along the edges of the cliff. To address these issues, two alternative treatments are recommended:

1. Reroute the existing informal cliff-side trail between Battery Mendell and Bonita Ridge to avoid the fire-control station cluster. The trail could be terminated at the machine gun pit at the Coast Guard boundary, and then turn east across the access road to the lighthouse keeper's area. This alternative would provide the public with no access to Bonita Ridge.

2. Fence off the perimeter of the fire-control stations to prevent public entry to the buildings by installing fences around the entire cluster and adjoining structures (only the dual fire-control station and Shoran radio station are currently fenced). The trail should be formalized to create a complete loop around the complex. An inconspicuous railing, such as metal post and cable, should be installed along the trail, back from the edge of the cliff. This alternative would allow the public to have visual access to the fire-control stations and the spectacular views.

Task BRD-2. Document and Stabilize Fire-Control Stations

Bonita Ridge has the largest cluster of secondary defensive works and navigational aids in the Headlands, reflecting the strategic importance of the ridge with its

expansive views to the west and south. The complex on the actual ridge (Coast Guard property) is presently in poor condition with deteriorating structures, eroded ground, graffiti, and rusted/broken fences. Due to continuing deterioration, it is recommended that all four stations and the adjoining signal tower, radio station, and remnants of the Army tramway engine house be documented (some documentation has been completed by the Coast Guard). Although public access may be restricted as recommended under task BRD-1, the structures and surrounding site should be stabilized to the extent feasible to maintain the historical integrity of the district. Further research is needed to address preservation of these structures. Preliminary issues to address include:

Collapse of the cantilevered roof of the concrete signal tower (FA1376)

Advanced deterioration of the wood roof and roof supports of the Mine Groupment fire-control station (FA139)

Deterioration of the concrete shell and tunnels of fire-control station M1 Mines (FA1385)

Erosion, including loss of concrete footings from the SCR 296#5 tower

High grass and scrub in historically mown or gravel areas around the buildings

The other fire-control stations in the area, B1S1 Smith and B2S2 Chamberlin, (FA1359, FA1363) at the Bird Island Overlook, should also be documented. The are sealed and appear to be stable, but are being impacted by erosion.

Task BRD-3. Document World War II Defensive Positions

Soldiers created a cluster of defensive positions on Bonita Ridge following US entry into World War II. These were located north of the cluster of fire-control stations on the ridge and included barbed-wire entanglements, a man-proof fence, dugouts, and a slit trench. These were abandoned after the war and are presently covered by Monterey cypress woods, although several surface remnants are visible. It is recommended that an archeological survey be undertaken to identify and document these remains in conjunction with clearing of the Monterey cypress woods as recommended under task BBC-2. Based on these findings, the remains should be revealed and enhanced in conjunction with development of a trail for public access (see BRD-1). Along with the defensive positions on Wolf Ridge, these remnants could help tell the compelling story of the Headlands at the outbreak of World War II, and could be accessed off an improved or realigned cliffside trail between Battery Mendell and Bonita Ridge (see task BRD-1).

Task BRD-4. Preserve and Enhance Barry Mine Casemate

The Barry mine casemate (FA1365), with its intact earth and iceplant cover, and the adjoining shell of the Mendell radio-switchboard room (FA1366) are unique historic resources in the Headlands that are readily visible to the public. The features reflect several generations of improvements; the radio-switchboard room became a ruin at an undetermined date after 1972. The following actions are recommended to preserve and enhance the historic character of these structures:

Remove social trails that crisscross the mine casemate, and repair eroded areas of the earth cover.

Remove all competing vegetation from the casemate to restore the iceplant cover, particularly along the north and east sides.

Clear brush and vines from the radio-switchboard room and surrounding retaining walls so the structure is visible.

Reconstruct the chain-line fence around the perimeter of the casemate and radio room in the location of the fence that existed through the Cold War period. This fence would prevent social and deer trails, while allowing for the work to still be visible to the public from Mendell Road. Use of a different type of fence would also be appropriate, provided it is compatible with the military character of the landscape.

Maintain a mown perimeter to the historic fence line around the casemate and radio-switchboard room to establish a more managed appearance characteristic of the historic period, and also to prevent spread of the non-native iceplant groundcover.

Consider reconstructing the roof and other missing components of the radio room building. Such treatment would help preserve the concrete walls and complement the level of integrity of the adjoining casemate.

Maintenance of the iceplant cover on the Fort Barry mine casemate is a priority for preservation, since it is a character-defining and largely intact feature of the defensive work that is clearly visible to the visiting public. Since the work is not immediately adjacent to sensitive natural areas, the iceplant may pose less of an ecological threat than the iceplant along batteries Alexander, Smith-Guthrie, and O'Rorke. If a natural resource assessment determines it is a threat to the native ecology, it may be appropriate to replace it with a native groundcover of similar low habit identified in the approved Fort Baker plant list (Appendix E).

Task BRD-5. Restore Position No. 81 Revetments

The circular iceplant-covered earthen revetments at the Bird Island Overlook were built in 1952 as four 90-mm gun emplacements for AA Artillery Position No. 81, and were abandoned in ca. 1955 with advent of the Nike defenses, but most likely still retained integrity by the treatment period of 1966. Today, the parapets are eroded and crossed by social trails, vegetation obscures the profiles of the emplacements, and the historic alignment of the access road has been widened. The southern emplacement is entirely concealed by scrub.

Given their location at a popular scenic overlook, the gun emplacements have potential for interpreting the early Cold War era, but are also under pressure from overuse. To preserve and enhance these features, the following actions are recommended:

Reveal the southeastern revetment by removing scrub, in keeping with district-wide task BBC-4

Clear vegetation from the gun floors of the emplacements and maintain a gravel surface; retain and reveal any remnants such as concrete

Remove social trails and restore the historic topography of the revetments; additional research is needed to determine historic height and slopes.

Install low pipe-and-cable railings around the revetments to discourage social trails; install same railings along path in front of fire-control stations B2S2 Chamberlin and M4 Mines II to reduce erosion and keep visitors off the structures.

Reestablish the historic circular alignment of the red-chert access road surrounding the central revetment and its connection to the entrances to the revetments; reestablish turf or contrasting earth/gravel on areas outside of this road

The preferred treatment for the iceplant cover on the revetments is to retain and reestablish where missing. If this is not feasible due to the plant's invasive habit, then it may be appropriate to use a substitute groundcover with a similar low habit, from the approved Fort Baker Plant List (Appendix E).

Interpretation of AAA Position No. 81 would be enhanced by addition of inconspicuous signs or waysides at each of the emplacements, such as at the entrances, as well as at the two fire-control stations that served as ammunition storage. The floors of the emplacements could feature a graphic that indicates the historic locations of the guns. Installation of a M1A1 90-mm gun or facsimile as an interpretive device could enhance understanding of the military use of the site.

Task BRD-7. Document and Stabilize Searchlight #9 Shelter and Powerhouse

The abandoned searchlight shelter and powerhouse near Bird Island, constructed in 1911, is one of only two remaining of its type in the Headlands, along with those at Point Bonita. These features should be documented and stabilized to preserve the legacy of Taft-era harbor defenses at the Headlands. This work should include boarding up window and door openings, and repairing or replacing the roofs. Access should be established for park maintenance through reopening the historic access road, or providing access along an existing social trail. See also following treatment consideration for establishing a trail to the searchlight.

Treatment Considerations

Public Parking for Bird Island Overlook and Point Bonita

Visitation to the Bird Island Overlook and Point Bonita often exceeds parking at the ten-space roadside lot near the fog signal cisterns. To provide additional parking, considerations should be given directing visitors to park at the SF-88 administration area (YMCA) parking lot, which is scheduled to come back to the park and could be directly accessed by reestablishing a historic trail/road from the Bird Island Overlook (see SF-88A treatment considerations). Visitors could also be directed to the recently rebuilt parking lot at Battery Alexander.

Trail to Searchlight #9

Consideration could be given to extending a trail from the Bird Island Overlook to Searchlight #9. A trail would provide visitors with a dramatic panorama across Bird Island, as well as a more complete picture of harbor defenses in the area, in keeping with the direction of the GMP Evolved Cultural Landscape Zone. The trail could follow an existing social trail that runs parallel to the cliff, possibly partly on the historic access road, and be improved to allow park maintenance vehicle access to the historic structures.

SF-88 ADMINISTRATION AREA (DRAWING 3.2)

The SF-88 administration area (SF-88A) is presently home to the Point Bonita YMCA and is within the GMP Diverse Opportunities Zone, which supports a wide variety of visitor opportunities appropriate in the park. The area is part of the Center for the Environment concept, intended to provide visitors with a variety of recreational, educational, and stewardship activities consistent with protection of nationally significant cultural resources. The GMP did not provide recommendations specific to the SF-88A area.

The following treatment tasks and considerations should be addressed in the YMCA's ongoing efforts to develop a campus improvement plan. The recommended overall treatment is to preserve historic buildings and circulation features, manage vegetation to enhance historic spatial character and views, to allow for contemporary development that is compatible with the historic military character of the landscape, and to provide a more managed character to the landscape. The historic identity of the site should also be reestablished in keeping with task BBC-1.

It is recommended that the campus improvement plan maintain the interior core along the roads and building fronts to a higher level of preservation, and to use the less visible rear sides of the buildings for new features (such as the existing fenced garden). Maintenance of scrub around the periphery of the complex as presently exists will help to screen new additions.

Task SF88A-1. Enhance Historic Character of Field Road Frontage

The existing unmanaged vegetation and rustic wood fence along the Field Road frontage of the SF-88 administration area detracts from the site's historic military character. To enhance this character, it is recommended that a mow strip be maintained between the fence and the road, and approximately 10 feet behind the fence. The wood fence should be replaced with a metal pipe rail or pipe and cable fence that evokes the overall character of the historic chain-link security fence without conveying a feeling of exclusion that is counter to current use of the site. Propane tanks and other features should be kept out of view from the road if possible.

Task SF88A-2. Reinstate SF-88A Flagstaff

The historic flagstaff in front of the SF-88A administration building (FA981), which served as the symbolic heart of the complex, was removed after 1972, but its concrete base remains. To enhance the historic military character of the administration area, reinstall a white-painted metal flagstaff on the historic base. Additional research would be needed to fabricate an exact match (a detailed photograph of the historic flagstaff was not found during CLR research). The reconstructed flagstaff should be approximately 25 feet tall and be used to fly the US flag, along with other flags used by the YMCA if warranted. Consideration should be given to removing the non-historic flagstaff used to fly the earth flag, located near the fire ring, to avoid visual competition with the historic flagstaff.

Treatment Considerations

Plantings

The existing non-native and invasive Monterey cypress, Monterey pine, and acacia at the SF-88 administration area date primarily to after the historic period. The existing groves and specimens are compatible with the historic character of the SF-88 administration area as a developed site, but consideration should be given to replacing them with native plant material. These replacements could be addressed in a planting plan for the site as part of the proposed YMCA campus improvement plan.

Within the interior core recommended for a higher level of preservation, this plan should call for simple plantings that follow the orthogonal layout of the complex, and maintain historic areas of turf. A 1964 planting plan for SF-87A in the park archives, although never implemented, could be used as a guide (see Appendix G). Invasive exotic plants should be substituted with those on the approved Fort Baker plant list (Appendix E).[56]

Streets and Sidewalks

The existing historic alignment, materials, and open spatial corridors of the roads, parking lots, and sidewalks should be maintained. This includes the northern entrance at the intersection with Field Road. If changes to circulation are required, consider use of reversible traffic-control devices such as bollards and gates, rather than removal of historic pavement. Installation of features to create gathering areas or other spaces within the parking lots may be appropriate if they are temporary and reversible.

Furnishings

New furnishings, railings, and other small-scale features should follow a simple, contemporary design that is compatible with the military character of the landscape. Avoid rustic furnishings, such as the existing wood fences and railroad tie borders, within the core area and Field Road frontage; their use in outlying areas

may be appropriate within the more natural surroundings. Ornamental furnishings, such as Victorian-style benches, are not compatible with the Cold War-era military character of the site.

Trail to Battery Mendell and Bird Island Overlook

There is currently a non-historic social trail between the SF-88 administration area and Battery Mendell that crosses through dense scrub. If there is a need to establish a formal trail connection in this area (such as if the YMCA lot is used for visitor parking), consideration should be given to improving a trail along the road that once extended west to the Bird Island overlook (Position No. 81). The roadbed may still exist beneath the scrub.

New Building Construction

If a new building space is needed at the SF-88 administration area, consideration should be given to reconstructing the former classroom building (FA987) that was located across Field Road on the north side of School Road, in an area presently covered in Monterey cypress. This building, demolished in ca. 1980, was the lone surviving part of the Engineer Department Area developed in 1901 and was later part of the Mendell Housing Area.

SF-88 LAUNCH SITE (DRAWING 3.2)

The recommended overall treatment for the Nike SF-88 launch site is to preserve and enhance the existing restored site, which is managed as a museum. In keeping with the preservation plan for the site completed in 1998–99 and the recommendations of this CLR, the landscape should be treated to reflect the height of its development in 1965, when the last major improvements were made.[57]

Since the mid-1960s, the launch site has experienced changes in vegetation and addition of radar equipment from the SF-88 control site on Wolf Ridge for interpretive purposes. The site is a GMP Historic Immersion Zone, in which cultural sites, structures, and landscapes are treated to reflect their period of significance to allow visitors to experience these resources firsthand, and learn about their associated stories and events. The GMP did not provide recommendations specific to this site, except that it would continue to provide visitors with an experience evocative of its historic use. The treatment recommendations in the 1998–99 preservation plan, many of which have been implemented, provide guidance on treatment issues including building paint colors, signs, fences and gates, groundcover, returning features to the assembly and test area, use of the kennel area, appearance of the launcher sections, and design of an interpretive IFC area illustrating the radar/fire control systems. This document should continue to serve as the primary treatment reference for the SF-88 launch site.

Ongoing treatment implementation includes groundcover restoration through removal of successional growth in historically mown areas between the perimeter fences, primarily at the south and east sides of the site. Plans are to maintain the grass at no more than six inches high. Planning for routine mowing to maintain the historic limits of the turf is underway.[58]

Plans are also being developed to undertake the following repair and preservation actions:

Repair and restore existing site features, including missile rail systems, vents, elevator doors, and other exterior metal features.

Repair fences, with potential relocation of sections to their historic alignment.

Repair of the site drainage system of earthen swales along the uphill (east) side.

Restore historic painted traffic/movement features, such as sentry lines, and remove the non-historic Corps of Engineers symbol.

Relocate missile cans, extraneous support vehicles, and other objects presently stored outside on the site, and store them in alternative facility with improved environmental conditions.[59]

The following tasks and guidance reflect additional recommendations based on the findings of this CLR and changes in existing conditions.

Task SF88L-1. Reconstruct Shower/Flammable Storage Building

The only building that has been removed from SF-88 launch site since the mid-1960s is the shower/flammable storage building (FA968), which was located on the east side of the main access road north of the sentry station in the Exclusion Area; the concrete foundation pad remains. This was a small, standard-design Nike building consisting of corrugated metal on a light steel frame. Reconstruction should be based on drawings of this structure that may be in the park archives, and archeological investigation to determine the exact location. If such plans do not exist, then a combination of plans of similar Nike buildings from other sites (such as SF-87L) and historic photographs should be used to guide the reconstruction.

Task SF88L-2. Remove Acacia Grove near Main Entrance

A large grove of non-native black acacia has grown up since the mid-1960s outside the perimeter fence at the north entrance.[60] It should be removed to restore the open spatial character and views of the SF-88 launch site from Field Road, along with adjoining high scrub that includes laurel. In keeping with district-wide task BBC-2, the several Monterey pine and cypress trees growing in the unmanaged land surrounding the site should also be removed.

Task SF88L-3. Reconstruct Walk to Nike Ready Room

The ready room for the SF-88 launch site was located in building FA962 in the Fort Barry Quartermaster Area (Three Sisters) along Field Road. A walk and set of stairs led to this building from the middle of the launch site within the Limited Area. The stairs were recently reconstructed. It is recommended that the walk from the stairs to the central road in the launch site be reconstructed. Archeological investigation is needed to determine the alignment of this walk and its surface material (probably gravel). This walk could serve as a pedestrian connection to potential visitor uses being considered for the ready room building (the walk would not meet ADA accessibility requirements).

Treatment Considerations

IFC Area Interpretation

The 1998–99 preservation plan recommended the installation of radar and fire-control equipment (from the SF-88 Integrated Fire Control Area, aka control site) in a permanent display west of the generator building, as a way to facilitate visitation and secure the artifacts. Given the landslide on Wolf Ridge, the SF-88 control site had become inaccessible. This recommendation has been implemented, and an update to the preservation plan recommended a long-term goal of relocating the IFC area out of the historic confines of the launch site. Park staff no longer support creating a new IFC site, which would impact the historic character of other parts of the district.[61] Despite this, the long-term goal of removing the IFC interpretive area from the launch site remains valid, to restore the site to its fullest extent. The existing radar equipment lacks historic context and detracts from the historic character of the launch site.

In place of the existing exhibit of radar and fire-control equipment, consideration should be given to creating an indoor digital interpretative exhibit of the historic SF-88 control site on Wolf Ridge. This could be developed in one of the existing launch site buildings, or in one of the adjoining Quartermaster buildings along Field Road. Given advances in technology, a digital interpretive exhibit could provide visitors with a simulated experience that illustrates the historic context of the IFC area and how it functioned. Depending on the space, the existing radar equipment, or reduced-scale models, could be displayed. A live web cam could also be provided to allow visitors to "walk" through the existing site on Wolf Ridge. A similar exhibit should be set up for the third component of the SF-88 site, the administration area that is today the Point Bonita YMCA.

POINT BONITA LIGHT STATION (DRAWING 3.2)

The recommended overall treatment for the Point Bonita Light Station (area currently under a NPS use permit from the Coast Guard including the former Life-Saving Station/Coast Guard housing area, lighthouse keepers' area, and lighthouse, but not Bonita Ridge), is to preserve and interpret the landscape's history

of integrated navigational aids and military development, repair historic buildings and features, remove non-historic trees to restore views and spatial character, and enhance pedestrian circulation. The portion of the light station property from the old keeper's area south is a GMP Historic Immersion Zone, in which cultural sites, structures, and landscapes are treated to reflect their period of significance, to allow visitors to experience these resources firsthand and learn about their associated stories and events. The GMP calls for the park to continue to preserve the historic structures and interpret the site's maritime and military history, while protecting the sensitive coastal environment and marine habitat. The former Life-Saving Station grounds are within the GMP Evolved Cultural Landscape Zone, which emphasizes preservation and adaptive reuse of historic features for contemporary park and partner needs. This area is intended to remain in use as a semi-private housing area, and therefore public access and interpretation is not planned.

Task PB-1. Rehabilitate and Interpret Lighthouse Keepers' Area

The Monterey cypress groves and meadow on the approach to Point Bonita from Field Road was historically the site of two dwellings for the lighthouse keepers, along with a barn, corral, outbuildings, cisterns, fenced yards, and gardens. Most of this development was removed by the Coast Guard in ca. 1961. While the construction of the Field Road turn-around in 2011 encroached into this area, there are still remnants beneath the vegetation that could be used to enhance interpretation of the historic landscape and lives of the lighthouse keepers during the historic period, through the last years of use during the Cold War. Interpretation of this area would greatly enhance the visitor experience at Point Bonita, in keeping with the goals of the GMP Historic Immersion Zone to immerse visitors in a historic setting.

It is recommended that the lighthouse keepers' area be rehabilitated to reveal and enhance the existing remnants for interpretive purposes. This project should incorporate the following actions (see Drawings 1.8b, 1.11b in CLR Volume I for details of historic conditions):

- Undertake an archeological survey to identify and evaluate remnants of the lighthouse keeper's area.
- Remove spread of Monterey cypress trees, in keeping with district-wide task BBC-2; retain historic cypress trees that were originally planted as a hedge around the keeper's yard.
- Uncover or reestablish the historic roads and walks to the houses to reestablish the structure of the landscape; remove the remnants of the non-historic Coast Guard visitor parking area, added in 1966.
- Reveal and preserve built remnants, including the existing retaining wall and cistern behind the second keeper's dwelling.
- Interpret building locations by uncovering building foundation remnants, if extant; or mark the corners of historic buildings with posts or other devices.

Install white picket fences along the historic picket fence locations to identify the historic spatial arrangement of the landscape, and mow ground within the fences to indicate historic yards.

Retain areas of existing exotic ornamental vegetation that is probably from the keepers' gardens, including alyssum, cabbage, calla lily, periwinkle, crocosmia, and red-hot poker.

It is not possible to interpret the entire site of the assistant keeper's dwelling (1908–61) due to encroachment by the Field Road turn-around. As part of the rehabilitation of this area, a walking tour should be developed to aid interpretation.

Task PB-2. Preserve and Interpret Remnants from Third-Keeper's Dwelling

The Third Keeper's dwelling at the south tip of Point Bonita, at the east landing of the suspension bridge, was built in 1908 and demolished in ca. 1955. The concrete foundations remain visible, along with remnants of the surrounding walks and retaining walls that date in part to earlier development associated with second fog signal building and water tanks removed in ca. 1907. There is presently little to help visitors understand the historic development of this area due to lack of interpretive devices, concealment of remnants by soil, alignment of the fence that cuts across the house site, and deterioration of the retaining walls formed by white-parged cuts in the rock. To enhance the historic character and interpretation of this area as directed by the GMP, the following actions are recommended:

Undertake an archeological survey to identify and evaluate existing remnants.

Stabilize and conserve parged rock faces.

Reveal the dwelling foundation and adjoining concrete walks.

Remove the perimeter fence from across the dwelling foundation.

Install a new white picket fence along the alignment of the historic fence around the dwelling to give visitors a sense of the historic yard and its precarious location.

Task PB-3. Preserve and Interpret Remnants of South Landing Area

The South Landing area was the historic wharf where supplies were unloaded and transported up to the lighthouse and keepers' dwellings. It was developed in ca. 1871 and remained until about 1955. Today, the historic use of the area is visible in a cut in the rock from a tramway and foundations of a winch along the Lighthouse Trail. It is presently difficult to understand these remnants due to lack of interpretive devices, concealment of remains by vegetation and soil, and location of the fence along the Lighthouse Trail that severs the historic connection between the winch and the tram. To enhance the historic character and interpretation of this area as directed by the GMP, the following actions are recommended:

Undertake an archeological survey to identify and evaluate existing remnants.

Remove soil and vegetation from the tram cut and lighthouse wharf remnants.

Relocate and redesign the existing plank fence across the winch area to enhance the physical connection with the tram site; consider shifting fence outward off the circular feature, and using a more transparent type of fence, such as cable and metal post.

Mark the site of the storehouse that stood along the east side of the trail by either uncovering the foundation (if extant), or marking the corners of the building with posts.

Task PB-4. Remove Tree Spread and Retain Historic Life-Saving Station Trees

The former Life-Saving Station (Coast Guard housing area) was historically bordered by Monterey cypress windbreaks along its north and west sides. Since the 1960s, these trees have spread extensively. In keeping with district-wide task BBC-2, the north windbreak and west windbreak trees should be removed to their original limits, and historic plantings be retained.

North windbreak

This was a single row of approximately 10 trees along the inside of the station fence, with a few specimens at the southeast corner of the site. Only one tree remains. The existing trees are primarily volunteers, which have grown into a large grove that extends south to the shoreline and blocks views toward the Golden Gate Bridge. These trees should all be removed except for one or two remaining from the original windbreak row. Monterey cypress trees should be planted to re-establish the original linear windbreak and nearby specimens as shown on historic photographs.

West windbreak

This was originally a grove of Monterey cypress at the rear of the main station building. These trees have since spread north toward Field Road, across the site of the Fort Barry schoolhouse and beyond School Road. Eucalyptus trees have also grown in. All these trees, including several eucalyptus, should be removed except those within the original limits of the windbreak directly north of the station building site.

Task PB-5. Restore Searchlight #10 Shelter and Dual Fire-Control Station

The Army searchlight shelter (FFA1382) and fire-control station (FA1389) below the Point Bonita lighthouse and fog signal station have lost their windows and are deteriorating due to exposure and lack of maintenance. These two stations, along with the access stairs from the lighthouse, should be restored to preserve and enhance the history of integrated military and maritime history at Point Bonita. While not visible from the lighthouse, they feature prominently in images of the lighthouse that are often taken from sea. Both the searchlight shelter and fire-control station could be opened to public tours along with the lighthouse to address the intent of the GMP Historic Immersion Zone, provided safe access can be ensured.

Task PB-6. Redesign Lighthouse Trail Railings

The existing white tech-wood three-plank fencing along the Lighthouse Trail south of the tunnel detracts from the historic character of the landscape due to its conspicuous design and location where no fence existed historically. Recognizing that railings are necessary for public safety, the existing fence should be replaced with a less visible design. A metal pipe railing, or pipe and cable railing specified in the park-wide furnishings standards, would be more appropriate to the historic character of the landscape.

Task PB-7. Enhance Historic Character of Life-Saving Station Grounds

The fenced grounds of the former Life-Saving Station (Coast Guard housing area) do not reflect the historically well-tended character of the landscape due to deteriorating historic features, changes in paint color, and overgrown or declining vegetation. While this area is not intended for public visitation, the historic landscape should still be preserved and will become more visible once surrounding volunteer trees are removed (task PB-4). Consideration should be given to allowing public access to the road along the back of the fenced grounds so that the site may be interpreted and visitors may enjoy the spectacular views; access to the grounds could be restricted by maintenance of locked gates in the perimeter picket fence.

To enhance the historic character of the Life-Saving Station grounds, the following actions are recommended, in addition to the removal of the surrounding Monterey cypress (task PB-4) that will restore the open spatial character and views:

Repair the perimeter picket fence, repaint in white, and trim grass around it. This is the only remaining white picket fence at Point Bonita, which was the standard type of enclosure used by the Coast Guard and its predecessors.

Repaint all buildings except the fire-hose shed according to the historic Coast Guard color scheme of all white, a color used to make the buildings function as daymarks; leave the fire-hose shed red.

Remove the non-historic pine tree that is obstructing the central flagstaff.

Repair and weed concrete walks.

Renew or replant the line of *Myoporum* trees along the northwest side of the grounds.

Resurface and maintain the drive along the north side of the grounds consistent with the rest of Old Conzelman Road.

Interpret the historic continuation of the access road (now severed by a landslide) to the boathouse on Bonita Cove. This could be accomplished through installation of white-painted wood bollards across the end of the road adjacent to the Life Saving Station to denote that it once continued, and addition of an interpretive wayside.

Move the fenced rear yards to the sides and fronts of the houses to enhance the original central open space of the grounds surrounding the flagstaff. A line of shrubs could be planted in place of the fences for privacy.

To maintain the historic open spatial character of the grounds, the entire lawn should continue to be mown, and trees should not be planted around the two ranch houses, Quarters A and B (FA1344, 1346).

Treatment Considerations

Main Station Building

Aside from the lighthouse, Point Bonita's most character-defining building was the Shingle-style Life-Saving Station main building, constructed in 1899 and demolished in ca. 1966, several years after addition of the two ranch-style houses. Demolition of this building with its distinctive tower represented a particularly significant loss of historic character in the landscape. Because of its prominence and its demolition at the very end of the historic period, it would be appropriate to reconstruct the building. Reconstruction could provide a unique partner opportunity, and could make reuse of the Life-Saving Station grounds for quasi-public uses—such as a conference or educational facility— more attractive. The site offers some of the most scenic and panoramic views in the Headlands.

Fort Barry School Site

The Fort Barry school building and surrounding rectangular yard, located northwest of the Life-Saving Station, were established in 1912 and was removed in ca. 1970 after the end of the historic period. The school is part of the story of life at Point Bonita for the keepers' families. Removal of volunteer Monterey cypress woods as recommended under task PB-3 would uncover the school site. Consideration should be given to revealing and interpreting this site by installing a fence along the perimeter of the historic school yard, and marking the footprint of the school building. This could be a white picket fence that would be consistent with those recommended for interpreting the sites of the keepers' dwellings (task PB-1).

Lighthouse Trail Truss Bridges

The two white-painted metal truss bridges along the Lighthouse Trail south of the tunnel were added in ca. 1985 after the historic period in response to landslides. Due to their conspicuous appearance, these bridges detract from the historic character of the landscape, and also create breaks in the historic trail surface. Consideration should be given to replacing them with less visible bridges where the structural members are below the deck. The concrete deck and girder bridges north of the tunnel would be a more appropriate design. The decks of the bridges should interpret the continuation of the concrete trail with its utility trench. An alternative treatment could involve painting the existing truss bridges a color that recedes against the surrounding rock and earth.

Searchlight #10 Powerhouse

The concrete powerhouse (FA1382a) built in 1911 to service the searchlight below the lighthouse is a prominent feature along the Lighthouse Trail, but is presently boarded up and conveys little of its historic function. This building could provide readily accessible indoor interpretive space for the lighthouse and the defensive works on Point Bonita. The building could also serve as a shelter for visitors and place where rangers could provide visitor orientation. It should continue to be painted its historic daymark white color.

Coast Guard Boathouse and Dock Remnants

The Coast Guard boathouse and dock on Bonita Cove, initially developed in 1901 as the Quartermaster wharf for Fort Barry, was abandoned when the Life-Saving Station (Coast Guard Station #311) was closed in 1947. The boathouse was destroyed in ca. 1955, and today only the steel boat launch rails remain along with piles from the dock. These features are within the GMP Sensitive Resources Zone, and are largely inaccessible from land due to destruction of the access road by landslides. Therefore, public access is not appropriate. Consideration should be given to documenting the existing remnants, including the adjoining cable terminal Barry-Lands End-Scott and any other remnants in the area, before further loss occurs.

Point Bonita Hill Defensive Works

The cluster of defensive works on Point Bonita Hill—B2S2 Crosby and B4S4 Mendell/B2S2 Crosby, along with 40 mm AA AW #6—are in a largely inaccessible location high above the tunnel. These features should be documented and preserved. Unlike the searchlight shelter and fire-control station below the lighthouse, their location does not warrant restoration given the lack of potential for public access and the inconspicuous location.

FORT CRONKHITE TREATMENT TASK RECOMMENDATIONS

The overall objectives of landscape treatment for the Fort Cronkhite Military Reservation are to enhance its historic identity including portions within Tennessee Valley, preserve and enhance the character and identity of historic roads, document traces of military use and development, remove the spread of non-native trees to reestablish historic spatial organization and views, stabilize and protect defensive works, develop trails along historic roads to expand interpretation, and enhance the historic character of the Cantonment. The default treatment for all landscape features that are not addressed in specific tasks and treatment considerations should be guided by the Secretary of the Interior's Standards for *Preservation*. Tasks are identified according to an abbreviation of the area (FC for Fort Cronkhite outlying areas, FCC for Fort Cronkhite Cantonment, etc.), listed in

order of suggested priority based on issues such as historic preservation, interpretation, and relationship to fundamental resources and GMP goals. Table 3.1 at the end of the chapter provides a summary list of the recommended treatment tasks.

FORT CRONKHITE OUTLYING AREAS (DRAWING 3.4)

Task FC-1. Preserve and Enhance Historic Character of Tennessee Point Road

Tennessee Point Road is currently an unofficial dead-end trail that sees significant use for its scenic ocean views. Tennessee Point Road is historically significant as the first military road at Fort Cronkhite, built in 1914 from Fort Barry along a right-of-way through the Silva Little Ranch (present Miwok Trail; connection to Bunker Road removed 2012) to access the Tennessee Point Military Reservation. Within Fort Cronkhite, the road has lost historic character in areas due to its management as a trail and erosion that is threatening a section of roadbed south of the Townsley PSR room that has exposed a historic military communications cable. To enhance the historic character of this road, the following actions are recommended:

Restore and maintain the historic width of the red-chert roadbed, including the original south section that intersects Mitchell Road; archeological testing should be undertaken to determine the historic road width.

Replace the rustic split-rail fences along the southern section with an inconspicuous metal post and cable railing (park standard design) compatible with the military character of the landscape.

Maintain the Cold War-era spur to Mitchell Road along the Nike SF-87L T1 temporary launch sites, the short World War II-era spur near the Townsley PSR Room, and the widened terminus at Tennessee Point.

Move the roadbed away from the eroding cliff east of Scotty's Bluff and maintain the same general alignment and width of the historic road; conserve the exposed communications cable, which presents an opportunity for interpretation of the historic military use of Tennessee Point.

Sign the road and later spurs at the intersections with Mitchell Road to enhance its historic identity (see district-wide task BBC-1).

Task FC-2. Retain Historic Character of Tennessee Valley Road

Tennessee Valley Road, which the Army developed in 1944 to access the Elk Valley Defenses at Tennessee Cove, is within the GMP Natural Zone, but the GMP does call for enhancing the trail to support family groups and improve accessibility. Although managed as a trail, it retains much of its historic red-chert roadbed within the historic limits of Fort Cronkhite. To preserve the historic character of the landscape, it is recommended that the historic earth/gravel roadbed, including the section outside of Fort Cronkhite extending to the trailhead parking area, be preserved to the extent feasible necessary to protect surrounding natural resources.

See also task Elk Valley Defenses resource management consideration: Tennessee Valley Road Turn-Around

Task FC-3. Remove Tennessee Valley Lagoon

Tennessee Valley Lagoon was built in ca. 1957 by Dean Witter as part of his hunting preserve that he leased from the Navy after the Army transferred the property in 1956. Because the lagoon is unrelated to the military history of Fort Cronkhite, it is considered a non-historic feature. The GMP recommends that the dam and lagoon (artificial pond) be removed and native wetland and riparian habitat restored. This is consistent with recommended treatment of the cultural landscape. Draining of the lagoon and restoration of the native habitat will not impact historic landscape features.

Task FC-4. Document and Preserve SF-87L T2 Site

SF-87L T2, one of two temporary launch sites for SF-87 developed in 1954 and abandoned in 1955 with completion of the permanent launch site, today retains much of its earthworks and structure, but is concealed by vegetation. It is likely more intact that SF-87L T1 west of Battery Smith-Guthrie given its more sheltered location. The site could be used to interpret the history of the development of the Nike systems at the Headlands given its accessibility off Bunker Road just east of the Fort Cronkhite Cantonment, as well as its proximity to the SF-88 launch site museum site across Rodeo Lagoon.

It is recommended that the SF-87L T2 site be documented through an archaeological survey and evaluated so the park can plan for its stabilization and potential interpretive use.[68] This work would need to be undertaken through an integrated management approach to assess potential impacts to natural resources. The survey and potential interpretive intervention (to be determined following survey) could offset loss of integrity at the SF-87L site due to past and ongoing development of the Marine Mammal Center.

Treatment Considerations

Wolf Ridge to Tennessee Beach Trail

The Elk Valley Defenses in Tennessee Cove were historically remote from the main developed areas of Fort Cronkhite. The only vehicular access during the historic period was by the Tennessee Valley Road (current Tennessee Valley Trail) from Route 1. During World War II, there were two trails that connected Tennessee Beach with Wolf Ridge, one a straight line down Wolf Ridge, and the other a switch-back trail that began at the existing acid storage warehouse foundation. Today, the only maintained trail connection requires hikers to take a long detour outside of Fort Cronkhite on the Coastal Trail through Tennessee Valley. Within Fort Cronkhite, there is a social trail on a different alignment that extends from the SCR-296 #4 radar remains to the AA.50 #15 gun emplacement near the coast,

to Tennessee Beach. To enhance visitor use and interpretation and the historic relationship between Tennessee Cove with Fort Cronkhite, consideration should be given to reestablishing one of the two historic trails. Such a trail could be tied in with development of an interpretive trail in the Wolf Ridge Defenses (see task WRD treatment considerations), and would also allow visitors to remain near the coast with its panoramic views.

Bunker Road Causeway: See Fort Barry.

FORT CRONKHITE CANTONMENT (DRAWING 3.5)

The overall recommended treatment for the Fort Cronkhite Cantonment, which includes Nike SF-87 administration area (NatureBridge campus), is to preserve and enhance its historic Cold War-era character, consistent with the rest of the district. As described in the Treatment Framework, restoration of the World War II-era character of the Cantonment is not recommended due to significant changes that occurred during the Cold War with development of the Nike SF-87 administration area, which was completed in 1965. The Cantonment is within the GMP Diverse Opportunities Zone, in which visitors may be provided with a variety of recreational, educational, and stewardship activities consistent with the protection of the nationally significant cultural resources. The GMP concept for use of the Cantonment is as a "Center for the Environment," with housing and educational space provided through partner agreements. The GMP specifically proposes enhancement of the historic scene at the Cantonment, and for it to serve as the "visitor portal" to the Marin Headlands with relocation of the visitor center from the chapel at Fort Barry. The Cantonment would also continue to support park operations and the native plant nursery.

The recommended overall landscape treatment for the Fort Cronkhite Cantonment is to enhance its historically well-maintained military character, preserve historic features, address unintended growth and spread of vegetation, replant historic trees, accommodate park and partner uses, and enhance its historic identity in keeping with task BBC-1. The Cantonment landscape should be treated by the park and its partners consistently to maintain the historic uniformity in the landscape. Within this framework of overall consistency, it is recommended that the Cantonment landscape be managed according to the following zones:

West Wing and Center Cantonment: Treatment within this zone, which extends from Mitchell Road on the south to the field of defensive positions to the north, preserves and restores the historic character of the landscape to the highest extent feasible.

East Wing/SF-87 Administration Area: Treatment of most of this zone is addressed through the separate *NatureBridge at Golden Gate Campus Improvement and Expansion Plan*, which was based in part on preliminary CLR treatment recommendations completed in 2008, and was reviewed through an Environmental Assessment completed in 2009. While the campus plan includes the center cantonment and a portion of the west wing, these areas are included in

the recommendations for this CLR. Treatment considerations are also included below for the NatureBridge campus within the east wing/SF-87 administration area.[62]

Rodeo Beach Parking Lot: Treatment within this area, historically a 155 mm gun and tractor park, maintains existing visitor uses that include parking, showers, restrooms, and picnic facilities, and restored wetlands, consistent with the historic setting of the adjoining west wing.

Parade Ground, Warehouse, and Incinerator Site: Treatment within this zone preserves the existing character of the landscape.

An overall recommendation for the Cantonment is to reestablish a more managed and well-tended military character through removal of weeds and debris from roadside gutters (also require repair to make them functional), and maintenance of steps, sidewalks, multi-use court, and roads in good repair. Maintenance is also addressed in several of the following treatment tasks.

Task FCC-1. Reestablish Historic Character of Cantonment Trees

The center cantonment area was the only part with ornamental plantings during the World War II period. These included a row of Monterey cypress along Edison Street in front of the post exchange (Building 1046), Monterey pine and cypress around the administration building (Building 1033) island, and Monterey cypress and pine around the infirmary (Building 1072). During the Cold War period, several Monterey cypress trees were planted in the west wing, and groves of Monterey cypress were planted at the east end of the east wing (SF-87 administration area), along with specimen Monterey pines and cypress along buildings 1034 and 1035. These plantings have either been removed, or have spread beyond their historic limits. To enhance the historic character of the Cantonment, the following trees should be replanted:

Replant missing Monterey pine and cypress trees around the perimeter of the administration building island, and in back of the building; there were no trees on Edison Street directly in front of the building. Alternative non-invasive disease-resistant pine should be used; maintain even spacing and use pine at the front and sides, and cypress in the back.

Maintain existing historic Monterey cypress trees along Edison Street in front of the firehouse, and replant the Monterey cypress trees missing from the east half of the row in front of the post exchange; maintain even spacing.

In keeping with district-wide task BBC-2, volunteer non-native trees should be removed, and if there is a historic planting, returned to its original limits. The following are specific areas to clear of non-historic spread at the Fort Cronkhite Cantonment outside of the SF-87 administration area:

The large grove of acacia behind the former service club (FC1077).

The spread of Monterey cypress and pine at the site of the infirmary north of the administration building (retain original trees along the road).

Spread of Monterey cypress/pine behind (south of) the Commanding Officer's Quarters (FC1073); retain original trees, if extant.

Task FCC-2. Reestablish Historic Extent of Mown Turf

The terraced site of the Cantonment and SF-87 administration area was maintained in mown turf throughout the historic period. Since the 1970s, the lower and upper terraces of the east wing around the SF-87 administration area and the upper terrace of the west wing have not been mown, and have grown up in scrub, grass, and other herbaceous vegetation. To enhance the Cantonment's historic open spatial character and well-maintained appearance, the following actions are recommended:

West Wing: Remove scrub and reestablish mown turf on the bank below the upper terrace, from Hagget Street to Building FC1066; on the upper terrace surrounding the buildings facing Kirkpatrick Street; on the bank below and surrounding the guard house (FC1044) and service club (FC1077); and around site of the air raid siren tower. The ornamental beds around buildings FC1069 and FC1071 may be retained, but should be trimmed back to define straight beds. All other ground within the west wing should be maintained in mown turf.

East Wing: Outside of areas addressed under the *NatureBridge Campus Improvement and Expansion Plan*, strips of mown turf should be maintained along Mitchell Road, Bunker Road, and Glassburn Street to reestablish a more managed appearance The natural scrub plantings around the nursery are appropriate as a contemporary addition, since they are outside of primary viewsheds. Consideration should be given to maintaining the lower terraces between Stennis Street and Mitchell Road in low meadow cut on a regular basis to prevent growth of woody vegetation and to maintain historic open spatial character.

While reestablishment of mown turf may represent a loss of habitat, no threatened or endangered species are identified within these areas.[63] Reestablishing mown turf is consistent with the GMP's directive to enhance the historic character of the Cantonment. Mowing regiments may be reduced to allow for improved habitat or to reduce use of energy and labor, but should maintain an overall uniform character to the grasses and prevent the growth of woody plants.

Task FCC-3. Redesign Roadside Parking in West Wing

The west wing during the Cold War period had two defined parking areas, one at the west side on the former gun and tractor park, and the other a smaller lot across from the administration building on Hagget Street. There may have also been parking between the buildings along Kirkpatrick Street. Today, parking has encroached on a much larger area along the shoulder of Kirkpatrick Street and between the buildings, while the parking area on Hagget Street had been reduced in size. Cars also park along the south side of Edison Street. To enhance the historic managed character of the Cantonment, the following actions are recommended:

Redefine the limits of the informal gravel parking areas between the buildings on Kirkpatrick Street by pulling the parking closer to Kirkpatrick Street and back from the sidewalks; provide defined edges to the parking through use of inconspicuous curbing or edging. Restore turf in areas where parking is pulled back.

Remove shoulder parking along Kirkpatrick Street and reestablish turf and a defined edge to the street.

Remove roadside parking areas along Edison Street and reestablish turf.

Additional parking could be created on the site of the infirmary off Hagget Street, in the area to be cleared of the Monterey cypress spread. This lot could be screened by the remaining Monterey cypress along the road.

Task FCC-4. Enhance Historic Character of Sidewalks and Steps in West Wing

The Fort Cronkhite Cantonment historically had a system of orthogonal concrete sidewalks that connected every building, with open-riser wood steps to buildings and up the terrace banks. The steps to buildings, which were probably painted, generally had plank handrails, while the steps up the terrace banks had none. Today, some of the concrete walks are obstructed by vegetation, covered by parking, or have been removed, while the steps have been rebuilt in a variety of styles, colors, and materials. Several new sections have been added, including some with curved or diagonal alignments. To enhance the historic circulation patterns and managed character of the landscape, the following actions are recommended:

Clear sidewalks that are obstructed by brush or covered in grass and weeds, notably the walk between Edison Street and Kirkpatrick Street, the walks extending to Kirkpatrick Street, and the walks to the missing buildings along Mitchell Road.

Repair heavily cracked and deteriorated sidewalks in-kind, matching the historic concrete mix.

Remove the non-historic diagonal walk from building 1056 to Building 1050.

Reconstruct missing sidewalk sections, notably the north-south walks to Mitchell Road at the sites of missing buildings in the west wing. These walks could be used to help interpret the original layout and density of the Cantonment.

Apply consistent standards for steps and railings following the historic design of wood-plank steps with open, approximately seven-inch risers, and wood railings consisting of wood posts, wood rail, and a single plank. Finish with opaque gray stain for the steps and white stain for the railings. Avoid use of plastic lumber and do not extend railings along terrace banks.

Use ends of buildings (east and west short sides) for accessible ramps, which should be of same materials and railings (wood) as the steps. The ends of the buildings were historically used for secondary egress, with steps that went up to the second floors.

Task FCC-5. Repair Upper Cantonment Drainage Ditch and Stabilize Landslide

Development of the Fort Cronkhite Cantonment in 1941 included a long drainage ditch along the hillside from above the center cantonment west to a stream in Little Ranch Valley where it entered a culvert. Soon after construction, a section above building FC1067 was lost in a small landslide. Over the years, the landslide has expanded, most likely due to runoff from the severed ditch. To help stabilize this landslide, it is recommended that a rip-rap channel be added from the ends of the ditch down the landslide area to direct water and prevent further erosion. A drain hole may be required within the stone retaining wall along Kirkpatrick

Street. This rap-rap should use a native stone that is inconspicuous against the existing ground. Consideration should also be given to cleaning out the ditch to enhance its visibility and allow it to serve its original function as a permeable water retention/direction device. This may help with preventing runoff that may be accelerating erosion of the World War II trenches and defensive positions (see task FC-6).

The cut above the Kirkpatrick Street retaining wall to the east of the landslide should also be stabilized with the addition of native, inconspicuous rip-rap. This will help stabilize the adjoining letter trenches.

Task FCC-6. Document and Interpret Cantonment Defensive Positions

The hillside above the west wing and extending to the area around existing multi-use court was developed at the time of US entry into World War II with numerous defensive positions, including foxholes, letter trenches, and polygonal earthworks. These works remain in part today, although they are inconspicuous due to cover by vegetation and soil. Some have been impacted by landslides, and others, notably a 'V'-shaped position, are being eroded by foot traffic. An archeological survey should be undertaken to document and evaluate these features, which are an important part of Fort Cronkhite's World War II history. Based on the findings of this survey, a stabilization and interpretive plan should be developed. Possibilities for treatment and interpretation include revealing an intact collection of the positions through removal of scrub and accumulated soil; stabilizing areas prone to landslides; and creating an interpretive trail either across the hillside following the drainage ditch, or along Bunker Road. The hillside should be kept clear of scrub and trees.

Survey and interpretation should also be extended to identifying and protecting remnants of the letter trenches between the buildings in the west wing. These are visible during times of draught.

Task FCC-7. Reconstruct Air-Raid Siren Tower

Symbols of the continual Cold War state of preparedness were air-raid siren towers that were installed in several locations at Forts Baker, Barry, and Cronkhite. The one at Fort Cronkhite was built in 1950 in the center cantonment above Kirkpatrick Street. It was removed in ca. 1975, but the concrete footings were left. It is recommended that the tower be reconstructed on the existing historic footings based on historic plans, which should be available at the park archives; if these are not available, the reconstruction should be based on historic photos. If these are not sufficient, the extant Cold War-era air-raid siren tower at the Fort Barry Capehart housing, which was most likely a similar design, could be used as a model.

Task FCC-8. Move Flagstaff to Historic Location

The flagstaff of the Fort Cronkhite Cantonment was originally located on Edison Street in front of the administration building (1033), on a circular concrete base. In ca. 1955, the flagstaff was removed, but the base was left, and a new flagstaff was subsequently installed in front of the SF-87A administration building in 1965. In 1997, the park installed a new flagstaff northwest of the intersection of Mitchell Road and Hagget Street, near where building 1048 had stood up until ca. 1974. To enhance the historic military character of the Cantonment and setting of the administration building, it is recommended that the park flagstaff be moved to the historic location in front of the administration building, or be replaced with a new flagstaff that maintains the character of the historic flagstaff that was approximately 25 feet tall with a ball finial (see fig. 5.55, CLR Volume I). While it was removed during the historic period, reinstallation of a flagstaff in the original location is justified as an interpretive enhancement and as a more appropriate location than the existing site, which suggests a ceremonial aspect to that location that never existed.

Task FCC-9. Move 155-mm Gun to Cantonment

A World War II-era 155-mm gun is presently displayed in an out-of-context site within the Presidio. This gun should be moved to the Fort Cronkhite Cantonment, as recommended in the draft Interpretive Plan for the Headlands (2016). The cantonment is an appropriate location for this gun because it is of a type that was stored there historically. The Army also had a tradition of displaying armament at administrative and support areas, such as at the entrance to the Station Hospital at Fort Baker, although there is no record of such displays at Fort Cronkhite. The most appropriate location for the display of this gun is at the parking lot at the west end of the cantonment, which was a 155-mm gun and tractor park during World War II. There may be other appropriate sites. The exact location of the gun within the cantonment will be determined by park staff.

Treatment Considerations

NatureBridge Campus Expansion and Improvement Program

The following treatment guidance, based on the findings of this CLR, should be considered as NatureBridge implements its campus plan (as of 2016, the only components being implemented are the rehabilitation of three buildings, FC1034, FC1010, and FC1061). These recommendations reflect issues and concepts from the 2009 Environmental Assessment for the campus plan, and should be planned in keeping with the overall treatment of the Cantonment for its Cold War-period character (ca. 1966).[64]

> New Building Construction: Reconstructing buildings removed prior to the district-wide treatment date of 1966 is generally not recommended. Additions to historic buildings that alter the historic character of the landscape (such as a proposal for an addition to FC1046 (Post Exchange in center Cantonment) should be avoided. It may be more appropriate to construct new buildings on

the footprints of Cantonment buildings removed after 1966 (see following resource management consideration).

Restoration of Riparian Corridor: Consideration should be given to managing the lower terrace corridor (south of Stennis Street to Rodeo Lagoon) to prevent the growth of woody vegetation that could alter the historic open spatial character and views in the landscape.

Solar Panels: These should be positioned on buildings or as free-standing objects in inconspicuous locations.

Marking Footprints of Demolished Buildings: An appropriate means of marking removed buildings would be to mow the terraces where the buildings stood, or the rectangular footprints of the buildings. These spaces could then serve as gather places or recreation fields. Buildings removed prior to development of SF-87A in 1966 should not be marked.

Flagstaff: Consideration should be given to reconstructing the SF-87A flagstaff at its historic location at the core of the area, in front of building FC1010.

Plantings: Within the SF-87A site, it is recommended that the plan produced for the Army by Landscape Architect Prentiss French in March 1970 be used as a guide (Appendix G). Although this plan post-dates the historic period and was not implemented, it reflects the intent of the Army for the site. Use of substitute species with a similar character, from the approved Fort Baker plant list (Appendix E) would be appropriate. Trees and other woody vegetation should not be planted where none existed historically.

New Construction

At the treatment date of 1966, following the completion of the SF-87 administration area in 1965, original Cantonment buildings remained along Kirkpatrick Street and Mitchell Road. In ca. 1967, those along Mitchell Road in the east wing were demolished, followed by four along Mitchell Road in the west wing in ca. 1974, and six along Kirkpatrick Street in the east wing in ca. 1980. The NatureBridge campus improvement plan calls for constructing a new building at the site of Building FC1040 on Kirkpatrick Street. Consideration should be given to reconstructing other historic buildings removed after 1966. Reestablishing the lost one-story buildings along Mitchell Road would greatly enhance the historic character of the Cantonment and convey the original symmetry of the complex.

Priority should be given to reconstructing the four missing one-story buildings in the west wing along Mitchell Road (Buildings FC1048, FC1051, FC1052, and FC1053), given the west wing's higher level of historical integrity (see also following resource management consideration for a new visitor center). This could include relocation of surplus Series 700 buildings of the same type and design (storehouses, mess halls, recreation buildings) from other World War II cantonments. The location of the four building sites in a Tsunami zone may make construction compete poorly for NPS funding. Altering the historic design, such as by raising the buildings on pilings, along with the two existing buildings (FC1049, FC1050) would be appropriate in terms of landscape character.

New Visitor Center

Development of a new Marin Headlands visitor center at Fort Cronkhite, as called for in the GMP, should be considered for the lost building sites on the lower terrace of the west wing. The main part of the visitor center could be housed at the larger mess hall site (FC1052) that is close to the Rodeo Beach visitor parking lot, while the adjoining smaller recreation building site (FC1053) could serve as restrooms or other ancillary facilities and allow for removal of the non-historic rest room and shower buildings along the parking lot. New construction that maintains the exterior Series 700 design would reestablish lost historic character in the west wing, and could allow for flexible design of the structure and interior to meet current needs and building codes. Such new construction would also avoid having to make extensive renovations to existing historic buildings.

Building Additions

Priority should be given to reconstructing historic buildings removed after 1966 over constructing additions to historic buildings. If additions are necessary, they should only be placed on the ends (short sides) of the Cantonment buildings to retain the linear massing of the complex and sight lines. Additions within the center Cantonment buildings (administration building, post exchange, fire house) may be more appropriate on the rear sides (facing away from Edison Street).

Road (Trail) to Parade Ground

The Fort Cronkhite parade ground was historically connected to the Cantonment by a secondary road that ran south into the Cantonment at ended at Kirkpatrick Street. This road is today an unmanaged trail. Consideration should be given to restoring the roadbed, which exists in part, to enhance the historic integration of the parade ground, recently rebuilt as a parking lot, with the main part of the Cantonment. This road would serve as an improved walkway that would allow park visitors more direct access to the Cantonment and Rodeo Beach. Archeological testing should be undertaken to determine the historic width and surface of the road. The roadbed should be carried across Bunker Road to the parking lot. Restoration of this road should be coordinated with NatureBridge's planned restoration of the adjoining riparian corridor.

Shrubs at Administration Building (FC1033) and Building FC1042

Ornamental plantings were established around the administration building late in World War II or during the Cold War. The only documented historic shrub is a dracaena (*Dracaena spp.*) in front of the administration building that existed by 1953; insufficient historic documentation has been found on the other extant shrubs, which are compatible with the overall character of the landscape. Existing shrubs should therefore be retained. The perimeter trees should be replanted as recommended in task FCC-1.

The two century plants (*Agave americana)* in front of building 1042 in the east wing also probably date to the Cold War period and therefore should be retained.

Picnic Area

The GMP identified use of Fort Cronkhite for picnicking, presumably near the visitor center to be relocated from the Fort Barry chapel. While a few picnic tables and benches may have little visual impact, development of a larger picnic area within the west wing is not recommended because it will detract from the historic military character of the landscape within a zone recommended for the highest level of preservation. The picnic area should be retained at its existing site within the Rodeo Beach parking lot area, which is recommended for more flexible treatment given its lower level of historical integrity.

Fort Cronkhite Parade Ground

The two asphalt parking lots on the historic Fort Cronkhite parade ground were constructed in 2012, in place of park maintenance and vehicle storage yards established after 1974. The driveway to the Marine Mammal Center was built in ca. 1975 through the middle of the parade ground. If in the future parking and access needs change, consideration should be given to returning the Fort Cronkhite parade ground to its historic condition. This would involve removal of the Marine Mammal Center Drive, and restoration of the rectangular extent of the parade ground. Access would be from the original entrance road that extends through the existing park maintenance area. A restored parade ground could be used for recreation, special events, interpretation, or overflow parking.

Overhead Utility Lines

Overhead utility lines on wood poles were part of the original World War II development of the Fort Cronkhite Cantonment. Development of the SF-87 administration area required removal and relocation of the lines in the east wing. Over the years, lines have been shifted and poles replaced, but overall the system remains. It is recommended that the utility lines be retained as part of the landscape's historic utilitarian character. In-kind replacement of poles and lines is appropriate.

Outdoor Furnishings and Lighting

There were no known outdoor furnishings such as benches or picnic tables in the Cantonment and SF-87A during the historic period. Small-scale features were limited to signs, flagpoles, white posts (probably bollards) along the roads and a low picket fence that surrounded the administration building grounds for a short time during the 1950s. Furnishings necessary for contemporary uses should thus be restricted to the minimum necessary, and have a simple, utilitarian design in keeping with the military character of the landscape.

In keeping with the intended temporary construction, outdoor lighting in the Cantonment was either non-existent or limited to building and utility pole-

mounted mast-arm street lights. Outdoor lighting should thus be minimized and follow historic precedent. Ornamental and free-standing light standards are not appropriate for the Fort Cronkhite Cantonment.

Parking

As discussed under task FCC-3, addition of new parking areas on building footprints in the west wing is not recommended because of the impact to the historic character of the landscape. New visitor parking has been added on the Fort Cronkhite parade ground, and the roadside parking along Mitchell Road has been improved, while the surfer lot has been removed. Expanded uses in the Cantonment and relocation of the Marin Headlands visitor center may lead to the need for more parking. It is recommended that future parking sites be restricted to the east wing, due to its lower level of historical integrity.

Woods along Rodeo Lagoon Shoreline

Rodeo Lagoon is a GMP Sensitive Resources Zone, which prioritizes protection of the natural environment. The north shoreline of the lagoon is, however, part of the cultural landscape of the Fort Cronkhite Cantonment. The open character of the landscape historically allowed for expansive views from the Cantonment across the lagoon and toward Fort Barry and the Pacific Ocean. To preserve and enhance the historic character of the landscape, consideration should be given to managing trees and woods between the shoreline and Mitchell Road, such as by trimming to a height that maintains views and open spatial character, where there are no adverse impacts to natural resources. Removal of willows may be problematic from a natural resource perspective.[65]

TENNESSEE POINT DEFENSES (DRAWING 3.4)

The recommended overall treatment for the Tennessee Point Defenses is to preserve intact defensive works in their natural coastal scrub setting, remove volunteer non-native trees (in keeping with district-wide tasks BBC-1, BBC-2), and preserve and reveal remnants of military development. The Tennessee Point Defenses area is within the GMP Evolved Cultural Landscape Zone, which is to be managed to provide visitors with a variety of recreational, educational, and stewardship activities consistent with the protection of the nationally significant cultural resources in the area. The GMP did not provide recommendations specific to this area. As discussed under task FC-1, the Tennessee Point Trail should be improved as an official trail while enhancing its historic character as a road. The historic roadbed is largely intact within the Tennessee Point Defenses area. The broad foot of the road, where the searchlights were located, should be maintained and kept clear of vegetation.

Aside from the Tennessee Point Trail and four fire-control stations, most of the historic military development at Tennessee Point consists of remnants. Because the area is a popular hiking destination, remnants can aid interpretation. A walking tour brochure about Tennessee Point and its military development would enhance the visitor experience.

Task TPD-1. Document and Stabilize Fire-Control Stations

The four standing fire-control stations at Tennessee Point, built between 1921 and 1941, are relatively intact including much of their World War II-era camouflage, but are deteriorating due to exposure and erosion. Deterioration is being exacerbated by missing windows and doors, and foot traffic. All four structures should be documented, and to ensure that they are preserved, the openings should be sealed, social trails diverted and the ground restored, stone retaining walls repaired, and the earth/vegetation camouflage stabilized.

Task TPD-2. Document, Stabilize, and Reveal Military Remnants

The many remnants of military development at Tennessee Point should be preserved and revealed to enhance interpretation of the area's significant military history from the Taft period through World War II, in keeping with the goals of the GMP Evolved Cultural Landscape Zone. Remnants from the disappearing searchlight shelters, searchlight controller booths, a water system including a dam, pumphouse, and water tank; a World War II hutment, two cliff-side fire-control stations, and a searchlight powerhouse behind a protective earthen parapet, are concealed by vegetation or earth, are deteriorating, and/or are poorly documented in the historical record.

Due to lack of historic and existing conditions data, an archeological survey is needed to identify and evaluate these remnants. Comprehensive documentation of the site and its features was not done by the Army and was beyond the scope of this CLR. Once this has been completed, the remnants should be preserved and revealed to provide visitors along the Tennessee Point Trail with an understanding of the area's significant military history. The following are recommended actions:

Seal and protect the underground hutment, which has collapsed and presents a safety hazard.

Fill the two searchlight-control booth remnants, which are open sub-surface concrete structures that present a safety hazard; leave the top of the structures exposed.

Expose other significant surface remnants documented in the recommended archeological survey (such as from the disappearing searchlight shelters and water tank), or mark their footprints for interpretive purposes.

Remove the Monterey cypress trees to reveal the searchlight powerhouse site and restore the historic open spatial character of Tennessee Point, in keeping with district-wide tasks BBC-2 and BBC-3.

Task TPD-3. Remove URS Fence and Mark Historic Boundary

The existing chain-link fence along the northern part of the Tennessee Point Defenses area is a non-historic feature that was installed in ca. 1970 to delineate the URS Research Corporation's ammunition destruction area. Although this fence roughly follows the original boundary of the Tennessee Point Military Reservation (1914–37), it is recommended that it be removed due to its poor condition and because it separates the Tennessee Point Defenses, which after 1937 extended beyond the original boundary. The historic boundary should be marked at the road for interpretive purposes by signs or boundary posts.

Treatment Considerations

Trail to Battery Townsley

The Tennessee Point Trail is currently a dead end that requires visitors to return by the same route, unless they follow a minor social trail that leads uphill to Battery Townsley. To enhance visitor use of Tennessee Point, consideration should be given to formalizing this social trail to create a loop and another way to reach Tennessee Point. This improved trail should include consolidation and removal of the numerous social trails around the fire-control stations. The new trail could be an extension of an interpretive trail at Battery Townsley (see THD treatment considerations).

TOWNSLEY HILL DEFENSES (DRAWING 3.4)

The recommended overall treatment for the Townsley Hill Defenses is to preserve and enhance intact defensive works in their natural coastal scrub setting, remove non-historic tree plantings and spread at the Townsley PSR Room and Townsley Reserve Magazine (in keeping with district-wide tasks BBC-1, BBC-2), document and interpret the World War II defensive positions and ranch remnants, and develop trails to enhance interpretation and reduce impacts to natural and cultural features. The Townsley Hill Defenses area is within the GMP Evolved Cultural Landscape Zone, which is intended to provide visitors with a variety of recreational, educational, and stewardship activities consistent with the protection of the nationally significant cultural resources in the area. The GMP did not provide recommendations specific to this area.

Battery Townsley is undergoing restoration and is managed as a museum that is open for tours. A Navy gun is temporarily on display outside the south portal, and is planned for installation in the gun #2 casemate. The recommended treatment for the Townsley Hill Defenses landscape builds off the interpretive use of the battery and the GMP directive to provide educational and recreational activities within the Evolved Cultural Landscape zone.

Task THD-1. Document and Interpret Townsley Approach Defensive Positions

The threat of Japanese attack after Pearl Harbor on December 7, 1941 witnessed extensive development of temporary defensive positions at the Headlands, perhaps nowhere in greater concentration than along the rear approach to Battery Townsley, in anticipation of an enemy landing on Rodeo Beach. The foxholes, trenches, tent pads, wood revetments, machine gun mounts, and other defensive positions were scattered throughout Little Ranch Valley and at the head of Mitchell Road extending along the upper valley slopes above Battery Townsley,. They were abandoned after World War II, and have since become concealed by vegetation, or lost to erosion. While some of these features have been inventoried, many remain unidentified. To document and interpret these historic resources, the following actions are recommended:

Undertake an archeological survey to identify and evaluate all World War II defensive positions in Little Ranch Valley. This survey will require historic contextual material to assist with locating and determining the types of defensive positions beyond the documentation provided in this CLR. Survey in areas of substantial or varied historic use that are currently either ruinous or concealed by vegetation should be informed by the historic record. Historic details may require GIS rectification prior to focused field survey.[66]

Develop a plan for the stabilization and preservation of the defensive positions.

Identify defensive positions that warrant interpretation to the public, based on their location close to trails or roads, and historical integrity. Interpretation may include removing vegetation and debris that is concealing the work, and creating devices that visitors could use to see the extent of the defenses when looking from Battery Townsley down to Rodeo Beach. This could make use of digital technology, or subtle markers in the landscape such as flags or stakes.

Treatment Considerations

Little Ranch Valley Interpretive Trail

The valley east of Battery Townsley and northwest of the Cantonment is the only site within Forts Baker, Barry, and Cronkhite where the history of the land's transition from agriculture to military use can be interpreted based on physical remnants. The valley was the core of the Silva Little Ranch, originally the Gioli ranch established in the 1880s, which was retained by the Army through the initial development of Fort Cronkhite and was used as a decoy during World War II. Most of the buildings were removed soon after the war. During the war, numerous defensive positions were constructed in the valley to protect the rear approach to Battery Townsley from Rodeo Beach, and a mock village and commando training area were developed at the north end of the valley in 1944 and maintained through 1948. During the Vietnam War, another training village was developed mid-way in the valley and was in use between ca. 1962 and 1972. Today, this historic development is largely undocumented and concealed by heavy vegetation. The lower part of the valley was recently rehabilitated to restore natural wetland conditions.

This significant and complex history could be made accessible to visitors through addition of an interpretive trail through the valley, in keeping with the objectives of the GMP Evolved Cultural Landscape Zone. This trail could make use of remnants of the Army/ranch road that extended from Mitchell Road north through the valley to Bunker Road. The northern part of this roadbed remains visible; the southern part was removed by the recently completed wetlands restoration project, but a new alignment could be extended from the picnic area along the east side of the restored area, as long as a sufficient buffer distance from the wetlands is maintained.[67] Historic remnants along the trail, such as ranch building foundations, ornamental plants, World War II defensive positions, and the site of the mock village, could be revealed through marking and management of the surrounding vegetation. An archaeological survey would be necessary to locate and identify these remnants, and natural resources would need to be addressed to avoid or mitigate possible impacts.

Battery Townsley Interpretive Trail

During World War II, there was a jeep road on Battery Townsley that accessed the AA.50 #17 emplacement and magazine and the sub-caliber gun mounts on and adjacent to the battery. During the Cold War, some additional spurs were added. Today, social trails crisscross the work across the top and front, following in part the historic roads. These trails are eroding the earth cover and altering the historic character of the native coastal scrub and grassland. Because of the demand for accessing the top and views from the casemates, consideration should be given to formalizing a trail, similar to the trail being redesigned at BC 129 (Hawk Hill), as a means to enhance interpretation and discourage social trails. This trail would complement the current work of the park and volunteers in interpreting the interior of Battery Townsley. The trail should follow the historic roads where possible, and provide access to the remains of AA.50 #17 and the subcaliber gun mounts.

Townsley Reserve Magazine and PSR Room

The Townsley Reserve Magazine, located off Bunker Road north of the Cantonment, is presently used for park maintenance, and the PSR Room located along Mitchell Road is presently vacant. If park maintenance is relocated to a new central facility as directed by the GMP, consideration should be given to interpreting these works to the public as part of the current interpretation and tours of Battery Townsley, in order to provide a more complete understanding of the battery complex. These secondary works could be accessed from a trail system following Mitchell Road and Bunker Road. The Monterey pine and cypress growing around and near both works should be removed as recommended under task BBC-2 and BBC-3.

WOLF RIDGE DEFENSES (DRAWING 3.4)

The recommended overall treatment for the Wolf Ridge Defenses is to preserve intact defensive works in their natural coastal scrub setting, enhance pedestrian access, and preserve and reveal remnants of military development. The Wolf Ridge Defenses area is within the GMP Evolved Cultural Landscape Zone, which is to be managed to provide visitors with a variety of recreational, educational, and stewardship activities consistent with the protection of the nationally significant cultural resources in the area. The GMP did not provide recommendations specific to this area.

Much of the historic military development on Wolf Ridge consists of remnants, some of which have been impacted by the large landslide on the west face of the ridge, and a smaller one south of AA Battery #1. The hutment around AA Battery #1 remains remarkably intact for its type, due in part to the arid conditions of the ridge, but the structures are collapsing. Because Wolf Ridge is a popular hiking destination, its remote location and dominance of ruins require a level of interpretation similar to Tennessee Point. This should include preserving, revealing, and marking defensive works that would enable visitors to understand the historic military development. A walking tour brochure may be more appropriate than installation of interpretive devices. Existing remnants and intact structures should be documented and preserved to the extent feasible.

Task WRD-1. Document and Stabilize Fire-Control Station Cluster

The cluster of five fire-control stations and a powerhouse on the west slope of Wolf Ridge was one of the best collections of its type prior to loss of the two lower stations from the massive landslide that began around 1980. Two other stations, G1 Cronkhite (FC1272) and BC Townsley (FC1271) are currently on the upper edge of the landslide and face likely dislocation with further subsidence. All six structures should be documented before further damage occurs, especially the details such as camouflage and stone retaining walls that are not on Army plans.

A geologic assessment of the landslide should be undertaken to determine the likelihood of further subsidence. If the landslide is active, there is most likely little that can be done except to document features before they are lost. If the landslide is stable, retaining walls of metal, timber, or other easily installed materials should be built along the lower sides of G1 Cronkhite and BC Townsley to address erosion of the ground that could further undermine the structures.

In addition to addressing the landslide, the three intact fire-control stations and one powerhouse should be stabilized to prevent further deterioration to the structures and associated rock and vegetation camouflage, especially the excellent example at B1S1 Townsley (FC1273). This fire-control station and BC Townsley (both the same design) should also be reinforced at the window opening to prevent collapse of the cantilevered roof structure. Timber posts installed at the

corners of the window opening would provide a simple solution. Window and door openings with proper ventilation should be sealed to prevent deterioration from exposure, and to reduce vandalism. The earth cover on the powerhouse (FC1269) should be reestablished and the graffiti removed. Repair of the rock and vegetation camouflage on B1S1 Townsley in particular could serve as a volunteer stewardship opportunity.

Task WRD-2. Document, Stabilize, and Reveal AA Battery #1/Position No. 10 and Hutment

AA Battery #1 on Wolf Ridge is a sprawling collection of World War II-era defensive works and an underground hutment complex hastily built soon after US entry into the war for troops staffing the defenses around the clock. Part of the battery was redeveloped as AAA Position No. 10 during the Korean War. This remarkable history is evocatively reflected in structures that remain largely untouched since they were abandoned by the Army. Deterioration, growth of vegetation, and accumulation of soil and debris, however, has concealed many features. Despite its remote location, Wolf Ridge should be given greater planning consideration to discern the level of interpretation that is appropriate to is location and accessibility, given that is provides evidence of significant periods in the military history of the Headlands.

All features within AA Battery #1, the hutment, and AAA Position No. 10, along with anti-aircraft gun emplacements, fox holes, and other field defenses, as well as the SCR-682 radar station, should be documented through an archaeological survey. While sketches of the site and the hutment were done in 1993 by L. Guidry, comprehensive documentation of the site and its features, and in particular the hutment and field defenses, was not documented by the Army and was beyond the scope of this CLR. An archeological survey and/or historic structures reports should be undertaken as soon as possible before further deterioration or landslides claim additional features.

To preserve and enhance the features of AA Battery #1/AAA Position No. 10, the following actions re recommended following completion of documentation and evaluation:

Seal openings (portals and collapsed roofs) in the hutment to protect and stabilize the structures, prevent vandalism, and address safety issues; cordon off areas that are unsafe.

Remove vegetation and accumulated soil from the AA Battery #1 gun platforms (#1 exists; need to determine if #2 and #3 are extant), and AAA Position No. 10 gun pit remains.

Seal three underground shelters at AA Battery #1 gun platforms/AAA Position No. 10 gun pits; leave portals exposed.

Mark structures as recommended under district-wide task BBC-1.

Treatment Considerations

Bunker Road Trail

The loss of two sections of Bunker Road to landslides has not only altered historic circulation patterns, but also disrupted the historic organization and character of the Wolf Ridge Defenses. The bypass trail around the major landslide is also a difficult trail with numerous steps and steep sections.

If a geologic survey (as recommended under task WRD-1) determines the landslides are stable, consideration should be given to establishing a trail across the major landslide that follows the general alignment of Bunker Road, adjusted for the lower elevations that would shift the trail south of where the road was located. The trail around the smaller upper landslide may need to go above the landslide. Use of timber retaining walls, or boardwalks on piles, could reestablish historic circulation patterns while providing visitors with a gentler grade, easier access, and improved understanding of the significant military features on Wolf Ridge.

Wolf Ridge Interpretive Trail

The Wolf Ridge Defenses are currently crisscrossed by a maze of social trails, some of which follow historic military access roads and others that developed in response to landslides and lack of a defined route. These trails detract from the historic character of the landscape and prevent visitors from accessing the military remnants in a meaningful and coherent way. Establishing a managed trail through the Wolf Ridge Defenses would enhance interpretation and the historic identity of AA Battery #1 by linking its many dispersed and related features, in keeping with the directive of the GMP Evolved Cultural Landscape Zone. This new trail could be a spur of the Coastal Trail. It would need to be coordinated with protection of natural resource values.

The following are suggestions for this trail through the Wolf Ridge Defenses, which could be developed in conjunction with task WRD-2 to stabilize and reveal military features.

The area in front of the AA Battery #1 Storeroom/Magazine and Ready Room (FC1274, FC1275) could serve as a central node for the interpretive trail, accessed by trails reestablished along Bunker Road across the two landslides (see previous resource management consideration). One of the structures could be used as a trail shelter and interpretive space.

Develop a trail to the west to access the AA Battery #1 gun platforms, following the historic access road south of FC 1274, and looping around the AAA Position No. 10 gun pits, with a spur to the B1S1 Townsley fire-control station. Another spur could lead northwest to the acid storage warehouse foundation and SCR-296 #4 remnants.

Develop a trail to the east following the historic road around the knob of the ridge to the height finder/director's pit and hutment; continue the trail to the SCR-682 #2 radar complex remnants, beyond which the trail would reconnect with the Coastal Trail. A spur could provide access to the anti-aircraft emplacements at the edge of the ridge west of the hutment.

Remove social trails and discourage their use through signage and restoring the native topography and vegetation.

ELK VALLEY DEFENSES (DRAWING 3.4)

The recommended overall treatment for the Elk Valley Defenses is to preserve defensive works, enhance the historic natural setting, and reestablish the historic identity of the area as part of Fort Cronkhite. The Elk Valley Defenses area is within the GMP Natural Zone that extends throughout Tennessee Valley, to be managed with emphasis on the protection and restoration of habitat for threatened and endangered species, while allowing for cultural resources to be stabilized and preserved. Despite this, the GMP states that all facilities and structures within the Natural Zone of Tennessee Valley would be removed and natural processes restored, including removal of the Tennessee Valley Lagoon (non-historic, addressed under task FC-2). It is recommended that consideration be given to allow for preservation of historic development associated with Fort Cronkhite, where such treatment does not conflict with protection of natural resources.

Task EVD-1. Move Bench off Cable Manhole Mines 1

The wood park bench above Cable Manhole Mines 1 (FC1206B) is encouraging use of the historic structure as a scenic overlook, resulting in erosion of the earth cover. To reduce erosion and enhance the historic setting of the cable manhole, it is recommended that the bench be relocated to the edge of the trail (asphalt road), or at the historic turn-around if it is reconstructed (see following resource management consideration). Relocation of the bench to the edge of the road would also make it more accessible.

Treatment Considerations

Tennessee Valley Road Turn-Around

The historic asphalt-paved turn-around terminus of Tennessee Valley Road at the edge of the beach has been lost in part due to erosion. Consideration should be given to rebuilding the missing portion of the loop to enhance the historic character of the landscape. This treatment would also support the GMP concept to enhance the Tennessee Valley Trail to support family groups and improve accessibility. In particular, the turn-around could protect the upper parts of the trail from continued erosion, denote a formal end to the trail, and serve as a scenic overlook for visitors who are not able to walk on the sand beach. Fill from the Tennessee Pond removal (see task FC-3) could be used to raise the surrounding grade. Consider adding native stone along the beach edge of the road or adjoining fill to protect it from being undermined during storms, if compatible with natural dynamics of the beach. Steps may be necessary to allow and direct pedestrians to the beach. See also task FC-2 for recommended treatment of the rest of Tennessee Valley Road.

M4 Mines I Structures

The M4 Mines I fire-control station and its associated powerhouse built in 1944 on a high ridge above Tennessee Beach provided vast sight lines along the Army's North Channel mine field. Today, the site provides some of the most expansive panoramic views in the Headlands, and as a result, it is a popular destination for hikers. There are social trails that have eroded the natural and built topography and vegetation.

Because they are the two primary historic structures of the Elk Valley Defenses cluster, consideration should be given to retaining and preserving the M4 Mines I fire-control station and powerhouse as ruins, rather than removing them as called for in the GMP. Visitor impacts to the surrounding area could be addressed by restricting access to the south side and front of the fire-control station. To stabilize the structure, the missing part of the front wall should be rebuilt, and posts should be installed at the window slit to support the cantilevered roof. If beneficial to natural resources, restoration of the earth cover on and around the fire-control station would enhance the historic character of the landscape. Repair of the topography should also address the deep runoff channel that has formed along a social trail leading down the south-facing slope to the beach. Restoration of this slope to its natural topography, along with installation of an inconspicuous railing at the fire-control station, would also enhance the historic character of the landscape.

M4 Mines I Access Road

The historic access road to M4 Mines I, constructed in 1944, should be retained as a circulation feature in the landscape. The GMP calls for conversion of management roads to trails. Consideration should be given to retaining the historic roadbed and width, which would retain historic character as well as allow for maintenance vehicles to access the fire-control station and powerhouse. If this treatment is not consistent with the GMP, at a minimum the road should be maintained as a trail.

Elk Valley–Cronkhite Cable Hut

The exact location of the Elk Valley–Cronkhite cable hut—the terminus of the communications cable connecting Elk Valley with the main part of Fort Cronkhite—is not known, but it is shown on historic maps at the southeast end of Tennessee Beach. The structure is probably underground with a small above-ground projection similar to Cable Manhole Mines I. Because it was one of four military structures in the Elk Valley Defenses, consideration should be given to locating, documenting, and preserving the structure. It could be interpreted and accessible to the public if a trail is reestablished from Wolf Ridge (see previous resource management consideration).

SF-87 LAUNCH SITE (DRAWINGS 3.4, 3.5)

The overall recommended treatment for the SF-87 launch site, a non-contributing part of the Forts Baker, Barry, and Cronkhite historic district due to loss of integrity, is to remove spread of exotic trees and ensure that future development is compatible with the Cold War-era historic character of the surrounding landscape. The site is a GMP Diverse Opportunities Zone, in which visitors may be provided with a variety of recreational, educational, and stewardship activities consistent with the protection of the nationally significant cultural resources, and is part of the GMP "Center for the Environment" concept with educational space provided through partner agreements. The existing park maintenance area (former Limited Area) is a GMP Park Operations Zone, where resources could be preserved by adaptive reuse for park operations and administration. The GMP provided no specific recommendations for the SF-87 launch site, except that it would continue to house the Marine Mammal Center, and that the park maintenance function would be moved to a central facility in a new location.

While the SF-87 launch site has lost historical integrity, its immediate predecessor, the SF-87L T2 temporary launch site to the southeast, has largely been untouched since it was abandoned in ca. 1954, and should be considered a contributing site to the historic district. In addition, the entire SF-87L complex remains within the larger historic district landscape and is visible from many areas. Due to the scale of the Marine Mammal Center development and its position on a hillside above the Fort Cronkhite Cantonment, screening is not feasible. Instead, new development should be kept as inconspicuous as possible through use of materials and colors that blend with the adjoining hillside, and by maintaining straightforward and unornamented design that is in keeping with the military character of the landscape. Use of colorful awnings, signs, and ornamental plantings is generally not appropriate.

Task SF87L-1. Remove Volunteer Trees and Retain Historic Trees in Limited Area

The Limited Area of the SF-87 launch site was planted around 1960 with a small number of Monterey pine and cypress trees on the perimeter and on the berm next to the missile warhead building. These trees have spread extensively since the historic period, and many of the pines are dying. In keeping with district-wide task BBC-2, it is recommended that all volunteer non-native trees be removed in and around the SF-87 launch site and that the historic plantings be retained. Replacement with non-invasive pine and cypress would be appropriate, within the original planting areas. Because the area was not screened historically and the current maintenance uses are similar to those that existed historically, removal of the volunteer trees is compatible with the historic character of the landscape.

Treatment Considerations

SF-87L Perimeter Fence

While the SF-87 launch site has lost historic integrity, the limits of its developed area remain part of the historic development of the Fort Cronkhite landscape. To retain evidence of the historic limits of the site, consideration should be given to maintaining the perimeter chain-link security fence, added as part of the development of the site in 1954-55, and replacing missing sections where appropriate, mainly along the west and north sides of the Fort Cronkhite parade ground (visitor parking lot). The fence may serve as a useful enclosure for the Marine Mammal Center, but care would need to be taken to avoid creating a wildlife barrier.

Marine Mammal Center Access Drive

The existing drive to the Marine Mammal Center, built in ca. 1975 and reconstructed in 2012, cuts through the Fort Cronkhite parade ground. If the park maintenance area is moved out of the Limited Area in the future, consideration should be given to moving the Marine Mammal Center drive to the historic SF-87 launch site access road, and removing the modern drive to reestablish the historic extent of the parade ground.

Limited Area (Park Maintenance Area)

If in the future park operations move out of the Limited Area, existing historic buildings and other landscape features should be retained and rehabilitated for new uses. In contrast to the Exclusion Area (Marine Mammal Center), the Limited Area retains much of its historic buildings, roads, and topography. The associated non-historic parking lot is within the historic parade ground of Fort Cronkhite. This area should be reconnected with the rest of the parade grounds in future redevelopment.

B Battalion Commemoration

As a commemorative gesture to the B Battalion that operated the SF-87 Launch Site from ca. 1955 to 1971, consideration should be given to reconstructing the large “B” on the bank of the SF-87 launch site entry road (Marine Mammal Center Drive) above the parade ground, which was formed in white-painted concrete sandbags. Archaeological testing could determine the exact location and size of the B. This landscape symbol, which was removed around 1975, could be interpreted from the new visitor parking lot on the parade ground.

SF-88 CONTROL SITE (DRAWING 3.4)

The recommended overall treatment for the SF-88 control site is to preserve the circulation, structures, and limits of the site. It is within the GMP Evolved Cultural Landscape Zone, which is to be managed to provide visitors with a variety of recreational, educational, and stewardship activities consistent with the protection of

the nationally significant cultural resources in the area. The GMP did not provide recommendations specific to SF-88.

As the companion radar facility to the restored SF-88 launch site at Fort Barry, the SF-88 control site should be preserved to the extent feasible. It retains much more of its historic character than the SF-87C control site on Hawk Hill, which retains none of its buildings and is being reused for other purposes. It is recommended that the site be preserved and maintained at a level that stabilizes the built features and enhances historic character, including removal of overgrown vegetation and graffiti. Park vehicle access is possible from the Miwok Trail through Gerbode Valley. The site could be interpreted to the public from a spur off the Coastal Trail, and also be accessed remotely by video at the SF-88 launch site (see SF-88L treatment considerations).

Treatment Considerations

SF-88C Buildings

The park recently painted and sealed the SF-88C buildings and removed collapsing sections of radar pedestals. Some of the roofs were repaired or replaced. If the buildings cannot be maintained intact in the future, it is recommended that at a minimum the concrete walls be retained, such as is currently done with the south half of the Integrated Control Center (FC1183). Complete removal of buildings should be avoided. If the walls require removal for safety reasons, the foundation slab and bottom few courses of concrete block should be retained to indicate the historic footprint.

SF-88C Battalion Sign

The concrete-block wall containing the painted insignia of the battalion that operated the SF-88 control site is deteriorating. Consideration should be given to conserving and restoring this feature.

SF-88C Perimeter Fence

The perimeter fence chain-link fence and gate should be maintained to retain the historic limits of the site, as well as to secure the site. Small openings could be maintained for wildlife passage.

CHAPTER 3 ENDNOTES

1 National Park Service, "Golden Gate National Recreation Area-Muir Woods National Monument Draft General Management Plan/Environmental Impact Statement, Summary Edition" (National Park Service, 2011) [hereafter, GMP Summary Edition], 20.

2 Public Law 92-589 (Golden Gate), October 27, 1972; U.S. Code Title 16, Chapter 1, Subchapter LXXXVI, Section 460bb, "Establishment of Golden Gate National Recreation Area."

3 As a cultural resource, management of Forts Baker, Barry, and Cronkhite is defined by 36 Code of Federal Regulations: Parks Forests and Public Property, Part 2: Resource Protection, Public Use and Recreation (Preservation of Natural, Cultural and Archeological Resources).

4 National Park Service, "NPS-28: Cultural Resource Management Guideline" (NPS policy, http://www.nps.gov/history/history/online_books/nps28/28chap7.htm), Chapter 7: Management of Cultural Landscapes, D. Stewardship, 1. General Treatment. These standards also include two process-related standards: "1. A proposed treatment project is initiated by the appropriate programming document, including a scope of work and cost estimate from a CLR or ICAP. Such projects include preservation maintenance as well as major treatment. No treatment is undertaken without an approved CLR or work procedure specifying the work, and Section 106 compliance. 2. A treatment project is directed by a historical landscape architect and performed by qualified technicians."

5 GMP Summary Edition, 29. The preferred alternative was selected in 2014.

6 The text for each management zone is excerpted and paraphrased from the Draft GMP Summary Edition, 17-18 and 36-37. The *Fort Baker Plan* did not define management zones. However, based on the intent of the plan, the Main Post, Quartermaster Area, and Horseshoe Cove waterfront character areas correspond to the GMP's *Diverse Opportunities Zone*. Lime Point and the Horseshoe Cove Defenses (Cavallo Battery, Battery Duncan) correspond with the *Evolved Cultural Landscape Zone*.

7 John Skibbe, Architect, Golden Gate National Parks Conservancy, e-mail to John Auwaerter, August 15, 2014.

8 *Ibid*.

9 Golden Gate National Parks Conservancy, Park Improvements, Marin County, http://www.parksconservancy.org/park-improvements/ (accessed August 13, 2014); https://www.nps.gov/goga/learn/news/hawk-hill-improvements.htm (accessed August 10, 2017).

10 Garcia and Associates, "Marin Equestrian Stables Plan" (Unpublished report prepared for Golden Gate National Recreation Area, October 2011), ES-1.

11 Hilary Hobbs, GOGA Business Management Analyst, e-mail to John Auwaerter, July 3, 2014.

12 Hilary Hobbs, e-mail to John Auwaerter, August 15, 2014.

13 Golden Gate National Recreation Area and Headlands Institute [now NatureBridge], "Headlands Institute Campus Improvement and Expansion Plan Environmental Assessment" (Unpublished National Park Service report, August 2009); NatureBridge Campus Expansion Project, PMIS 221873, 67895, Project Review, November 9, 2016.

14 GMP Summary Edition, 6.

15 Most of these security features were removed by the park; existing historic security fences, notably at SF-88 launch site, will be preserved.

16 Extending the landscape treatment date to 1974 for the overall district is not recommended due to the demilitarization and changing uses that occurred after 1966, including transfer of large areas to the Coast Guard and state parks, the decommissioning of SF-87 sites in 1971, and early improvements associated with establishing of the national recreation area in 1972.

17 *The Secretary of the Interior's Standards for Rehabilitation,* "Introduction to the Standards," http://www.nps.gov/tps/standards/rehabilitation/rehab/stand.htm (accessed July 18, 2014).

18 *Ibid*. Although originally developed primarily for buildings, the Standards are relevant to landscapes.

19 Steve Haller, GOGA Senior Historian, comments on October 2014 draft.

20 Quoted in Christopher Beagan, *Cultural Landscape for Upper Fort Mason, Volume II: Treatment Strategy* (Boston: NPS Olmsted Center for Landscape Preservation, 2012), 32. The CLR recommends that a "military bearing" be reestablished in the Fort Mason landscape.

21 US Fish and Wildlife Service, Sacramento Fish & Wildlife Office, "Mission Blue Butterfly," https://www.fws.gov/sacramento/es_species/Accounts/Invertebrates/es_mission-blue-butterfly.htm (accessed May 11, 2017).

22 GMP Summary Edition, 12, 22; *Preserving Coastal Heritage*, https://sites.google.com/site/democlimcult/home (accessed July 24, 2014).

23 "Draft Design Guidelines for the Marin Headlands and Ft. Baker Transportation Infrastructure and Management Plan," (Unpublished National Park Service report, internal review copy, April 6, 2009).

24 In contrast, the rehabilitation of the roads in the Fort Baker Main Post as part of the CavalloPoint Lodge project took a more sensitive approach that retained historic concrete curbs and maintained road alignments and intersections (an approach made possible in part by the lower volume and speeds on these roads).

25 US Environmental Protection Agency, "Greening EPA: Stormwater Management Best Practices," http://www.epa.gov/oaintrnt/stormwater/best_practices.htm (accessed July 24, 2014).

26 This guidance differs from the Draft Design Guidelines, which recommended use of W-type galvanized guardrails. Although these are compatible with the utilitarian character of Army development, there are highly visible, and as evident in the implementation on Conzelman Road, significantly change the historic character of the road.

27 Roth Road, the approach road to Battery Kirby built in 1870, is the most intact example of an early Army road. Although designated as the Kirby Cove Trail, it still provides vehicular access to the Kirby Cove campground and day use area, and thus has maintained its historic road character.

28 DR Power Grader, http://www.drpower.com/inquiry/power-graders?src=AW94947XE3763309&gclid=CK6kq9H3nNMCFcyLswodfBMNog (accessed July 2014).

29 Amy Hoke, GOGA Historical Landscape Architect, comment on October 2014 draft.

30 A complete record of historic and existing small-scale features in the district was not documented for this CLR.

31 National Park Service and Golden Gate National Parks Conservancy, "Site Furnishings Standards, Golden Gate National Recreation Area," (Unpublished National Park Service report, draft, June 20, 2013).

32 Draft Site Furnishings Standards, 15.

33 Draft Site Furnishings Standards, 19.

34 GMP Summary Edition, 20.

35 Charles A. Birnbaum and Christine Capella Peters, editors, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Washington, D.C.: US Department of the Interior, 1996), 18-19.

36 GMP Summary Edition, 20.

37 These street signs are similar to the MUTDC standard type D3-1, except with square corners and upper case text. See FHWA, *Standard Highway Signs* (2004 online edition with 2012 Supplement), 2D3-1, Sheet 2 of 3, http://mutcd.fhwa.dot.gov/SHSe/shs_2004_2012_sup.pdf (accessed July 23, 2014).

38 Most of Umia Street (street parallel to Kober Street) was redesigned as a parking area, but the intersection with McReynolds Street could be signed. Alternatively, the parking could be named "Umia Lot" to maintain the commemorative namesake.

39 The other is B1 Kirby; B1 Duncan was also built in 1900, but was demolished in 1940.

40 Steve Haller, GOGA Senior Historian, e-mail to John Auwaerter, August 18, 2014. Use of the historic covered way as the main access to the scenic overlook on the Battery Spencer blast aprons has been ruled out because of the need for elevators to meet accessibility standards.

41 1951 aerial photograph, GOGA 3156.

42 Hoke, comments on October 2014 draft.

43 The other is B1 Spencer at Lime Ridge; B1 Duncan was also built in 1900, but was demolished in 1940.

44 John Martini, GOGA Historical Consultant, e-mail to John Auwaerter, September 8, 2014.

45 Hoke, comments on October 2014 draft.

46 Bill Merkle, GOGA Supervisory Wildlife Ecologist, comments on October 2014 draft report.

47 Research for the site history (CLR Volume I) did not uncover the identity of Soldier Dubois; Dubois Road was not included on the ca. 1960 list of commemorative road names (see Appendix B, CLR volume I), but is identified on historic Army maps of the Headlands.

48 Kim Sykes, GOGA Historical Architect, e-mail to John Auwaerter, August 15, 2014.

49 Hilary Hobbs, GOGA, e-mail to John Auwaerter, July 3, 2014; Sykes to Auwaerter, August 18, 2014.

50 Spider mowers, http://www.slope-mower.com/, WORX mowers, https://www.worx.com/landroid-robotic-lawn-mower (accessed March 30, 2017).

51 Darren Fong, GOGA Aquatic Ecologist, comments on October 2014 draft, December 2015.

52 Detailed inventory and mapping of historic and existing plantings was not within the scope of this CLR.

53 Haller, e-mail to Auwaerter, August 18, 2014.

54 Chris Rurik, "Preliminary Cultural Landscape Report, Departmental Rifle Range, Fort Barry (Unpublished report prepared for the National Park Service, Summer 2010), 51.

55 Alison Forrestel, GOGA Supervisory Vegetation Ecologist, comments on October 2014 draft report.

56 Kim Sykes, GOGA Historical Architect, comments on October 2014 draft report. The 1964 planting plan referenced by Kim was not available for this CLR.

57 John Martini and Stephen Haller, "What We Have We Shall Defend: An Interim History and Preservation Plan for Nike Site SF-88L" (Unpublished report prepared for the National Park Service, 1998, recommendations revised September 1, 1999), Part III.

58 Susan Ewing Haley, GOGA Supervisory Curator, e-mail to John Auwaerter, August 12, 2014.

59 *Ibid*.

60 The acacia grove is not visible in a 1966 aerial photograph (see fig. 2.2).

61 John Martini, e-mail to John Auwaerter, September 15, 2014, conveying opinion of Steve Haller, NPS Senior Historian.

62 John Auwaerter, "Preliminary Report on the Headlands Institute Campus Landscape" (Unpublished report, NPS Olmsted Center for Landscape Preservation, February 2008); Golden Gate National Recreation Area and Headlands Institute, "Headlands Institute Campus Improvement and Expansion Plan Environmental Assessment" (Unpublished National Park Service report, August 2009), 2-10, 2-18, 2-19; NatureBridge Campus Expansion Project, PMIS 221873, 67895, Project Review, November 9, 2016. No details were included for plantings in the EA. The parts of the improvement plan being advanced as of November 2016 are limited to the rehabilitation of three existing buildings (FC 1061, 1010, 1034) in the east wing/SF-87A and in the West Wing.

63 Natural Resource park staff, comments on October 2014 draft.

64 NatureBridge Campus Expansion Project, November 9, 2016; "Headlands Institute Campus Improvement and Expansion Plan Environmental Assessment."

65 Forrestel, comments on October 2014 draft.

66 Leo Barker, GOGA Historical Archeologist, comments on October 2014 draft.

67 Amy Hoke, e-mail to John Auwaerter conveying comments of Darren Fong, GOGA Aquatic Ecologist, March 22, 2017.

68 Barker, comments on October 2014 draft.

TABLE 3.1. SUMMARY OF RECOMMENDED LANDSCAPE TREATMENT TASKS
FORTS BAKER, BARRY, AND CRONKHITE

CLR Treatment Task	Task Overview	Related Task	FMSS Location #	Rank *
DISTRICT-WIDE				
BBC-1. Install System of Historical Signage	Design and install system of signs to identify historic military reservations, developed areas, defensive works, buildings, and roads.			Desirable
BBC-2. Remove Volunteer Non-Native Trees	Remove non-native invasive trees that have spread into natural areas.	Remove spread from historic plantings addressed under HCD-2, GBD-3, RRD-4, BRD-1, FAMP-3, SF87L-1		Essential
BBC-3. Remove Non-Military Cold-War Era Tree Planting	Remove non-native trees planted during the historic period by others (Boy Scouts), mostly Monterey pine and cypress on defensive works	GBD-3 (remove non-historic trees from Kirby valley); RRD-2 (restore earth cover of Battery Wallace)		Essential
BBC-4. Preserve and Reveal Anti-Aircraft Gun Emplacements	Document and stabilize World War II-era anti-aircraft field emplacements, remove concealing vegetation, soil, etc.			Essential
FORT BAKER MILITARY RESERVATION				
FB-1. Repair Water Tanks FB 420–422	Repair and repaint water tanks below Vista Point		43310, 43311 43312	Desirable
FBMP-1. Reconstruct World War II Air-Raid Siren Tower	Rebuild air-raid siren tower at Main Post built in 1942 and removed in 2008.	CHA-1, FCC-7 (reconstruct air-raid siren towers at Capehart Housing Area, Fort Cronkhite Cantonment)-		Desirable
HCW-1. Restore Marine Railway and Fuel-Berthing Dock	Repair derrick, replace missing sections of dock; remove non-historic deck extension from 6-ton marine railway.		43280	Desirable
HCW-2. Protect and Reestablish Moore Road Eucalyptus Tree	Remove asphalt encroachment on two historic trees near cable tank building; replace two missing trees.		43288	Desirable
HCW-3. Reconstruct Conzelman Road Entry Piers	Build concrete entry piers south of mine dock erected in ca. 1910 and removed ca. 1950.	GBD-6 (repair/reset concrete gates at Roth Road/Kirby Cove Trail); FAMP-6 (restore concrete entrance gateway to Fort Barry Main Post)		Desirable
HCD-1. Restore Cavallo Battery	Repair masonry structures; clear brush and trees from parapets and reestablish grass cover; enhance historic character of entry road.		108240 42092	Desirable
HCD-2. Reestablish Original Limits of Duncan Hill Eucalyptus Groves	Remove trees that have spread from original (pre-1917) plantings, replace with native grass and lupine.	BBC-2 (remove non-native tree spread)		Desirable
HCD-3. Enhance Historic Character of Battery Yates	Clear roadbed and parade of vegetation, reestablish red-chert surface; remove woody vegetation from parapets.		43282 42095	Desirable
HCD-4. Preserve Baker-McDowell Cable Terminal	Remove trees growing on parapet, maintain in turf or low native cover; secure entry portal and assess seawall; reestablish maintenance vehicle access to work.			Desirable

TABLE 3.1. SUMMARY OF RECOMMENDED LANDSCAPE TREATMENT TASKS
FORTS BAKER, BARRY, AND CRONKHITE

CLR Treatment Task	Task Overview	Related Task	FMSS Location #	Rank *
LPRD-1. Document and Stabilize F1G1, B1 Spencer, B3 Spencer (Bridge Permit Area)	Document three works; address missing roofs, vandalism, and deterioration, in conjunction with Bridge Authority	GBD-1, RRD-5, BRD-2, PB-5, TPD-1, WRD-1 (document and stabilize/repair other fire-control stations at Gravelly Beach, Rodeo Ridge, Bonita Ridge, Point Bonita, Tennessee Point, and Wolf Ridge)	42110 42111	Desirable
LPRD-2. Restrict Overlook Area to Spencer Blast Aprons	Limit public access to concrete blast aprons by relocating perimeter cable fence.			Desirable
LPRD-3. Redesign Battery Spencer Overlook Trail	Remove northern half of non-historic trail on Ridge Battery parapet; use WW II-era access from covered way as new access to southern part of existing path.	LPRD-4 (rehabilitate Ridge Battery)	41951 43281	Desirable
LPRD-4. Rehabilitate Ridge Battery	Reestablish base plane of covered way; clear woody vegetation and repair parapets; remove social trails; clear and repair gun platforms and brick parapets; remove fill from magazine portals; replacement existing non-historic fences.	LPRD-3 (redesign path along east parapet to overlook)	43281	Desirable
GBD-1. Document, Stabilize, and Repair B1 Wagner and B1 Kirby	Document works; repair roof of B1 Wagner; reconstruct roof of B1 Kirby; seal both to prevent public access.	LPRD-1, BRD-2, RRD-5, PB-5, TPD-1, WRD-1 (document and stabilize/repair other fire-control stations at Lime Point Ridge, Rodeo Ridge, Bonita Ridge, Point Bonita, Tennessee Point, and Wolf Ridge)		Desirable
GBD-2. Protect Defensive Works from Beach Erosion	Install compatible rip-rap at base of cliff below works; address potential natural resource issues.	GBD-4 (preserve Battery Gravelly Beach), 5 (preserve Battery Kirby)		Desirable
GBD-3. Reestablish Original Limits of Forest Plantations	Remove spread of Monterey cypress and eucalyptus beyond original limits of plantations; also remove non-historic Monterey pine on valley floor.	BBC-2 (remove non-native tree spread), BBC-3 (remove non-military tree plantings)	40792	Desirable
GBD-4. Preserve and Enhance Gravelly Beach Battery Remnants	Remove trees and scrub from earthworks; remove soil from gun platforms; repair topography and brick culvert; remove and prevent social trails.	GBD-2 (address erosion at base of battery)	40782	Desirable
GBD-5. Preserve and Enhance Battery Kirby	Relocate picnic tables off blast aprons; clear vegetation and fill from gun mounts/pits; undertake structural assessment; remove fill added to parade at rear of work and repair drainage system; and reveal foundations of latrine and storehouse; restore approach road and parade.	GBD-2 (address erosion at base of Battery Kirby), GBD-4 (preserve earthworks to either side of Battery Kirby)	40784	Desirable

TABLE 3.1. SUMMARY OF RECOMMENDED LANDSCAPE TREATMENT TASKS
FORTS BAKER, BARRY, AND CRONKHITE

CLR Treatment Task	Task Overview	Related Task	FMSS Location #	Rank *
GBD-6. Preserve and Enhance Historic Character of Roth Road, Battery Orlando Wagner Approach Road	Remove widened areas; maintain red-chert surface; clear and repair concrete gutters and other drainage structures; reestablish historic width of approach to Battery Orlando Wagner; salvage and reinstall concrete gate post at Conzelman Road entrance	HCW-3 (reconstruct entrance piers), FAMP-6 (restore concrete entrance gateway to Fort Barry Main Post)	40910 41954 75358	Desirable
GBD-7. Document and Stabilize Kirby Powerhouse	Document existing shell; remove vegetation and repair concrete; reopen historic access road.			Desirable
FORT BARRY MILITARY RESERVATION				
FA-1. Reestablish Dubois Road	Rebuild road for trail use, with red-chert surface, to connect Julian Road/Coastal Trail with Bunker Road trailhead; additional investigation needed to determine condition of lower section.		108242	Desirable
FA-2. Retain and Interpret Old Bunker Road	Maintain roadbed for its historic significance and interpretive value; maintain red-chert surface		40733	Desirable
FA-3. Retain and Interpret Smith Street Remnant	Maintain remaining section of roadbed for its commemorative and interpretive value.		40919 110643	Desirable
FAMP-1. Remove Volunteer Trees and Conserve Monterey Cypress Border	Remove spread of Monterey cypress from around Main Post; remove bluegum eucalyptus from lower parade ground.	BBC-2 (remove Monterey cypress spread on adjoining hillsides)		Desirable
FAMP-2. Reestablish Historic Extent of Turf	Reestablish historic extent of turf: in areas cleared of volunteer trees, on steep bank below upper post buildings.	FAMP-1 (reestablish grass beneath removed Monterey cypress)		Desirable
FAMP-3. Rebuild Walks and Steps	Rebuild missing section of concrete walk between FA940 and FA939; remove non-historic paving materials; repair or replace lower concrete walk from upper post to lower post/FA955; reconstruct historic wood steps to the buildings of the upper post, or replace with contemporary but compatible steps.			Desirable
FAMP-4. Enhance Historic Setting of the Post Chapel	Clear or cut back scrub around chapel; reestablish Bosworth Road; redesign access to visitor parking lot and redesign ramp to chapel; conserve pair of bluegum eucalyptus or replace with non-invasive specimens.		41963 79911 80093	Desirable
FAMP-5. Rehabilitate Simmonds and Rosenstock Roads	Resurface in black asphalt; repair concrete gutters and drainage structures or replace in-kind; restore worn turf shoulders.	FAMP-7 (redesign parking)	40917 40915	Desirable

TABLE 3.1. SUMMARY OF RECOMMENDED LANDSCAPE TREATMENT TASKS
FORTS BAKER, BARRY, AND CRONKHITE

CLR Treatment Task	Task Overview	Related Task	FMSS Location #	Rank *
FAMP-6. Restore Entrance Gateway	Reconstruct missing west half of gateway; restore shot finials and inscriptions.	HCW-3 (reconstruct entrance piers); GBD-6 (repair/reset concrete gates at Roth Road/Kirby Cove Trail)		Desirable
FAMP-7. Formalize Non-Historic Parking Areas	Define edges to parking lots to create more formal appearance and keep vehicles from encroaching onto turf	FAMP-5 (rehabilitate Rosenstock Road)		Desirable
FAMP-8. Reestablish Assembly Area and Flagstaff	Remove existing storage bins and mulched area; uncover/restore historic surface, plant line of trees, and install flagstaff on existing historic footing.	SF88A-2 (reinstate SF-88A flagstaff); FCC-8 (reinstate flagstaff in front of Cronkhite administration building)		Desirable
FAMP-9. Enhance Historic Character of Upper Post Plantings	Guidance on removal, pruning, and planting of trees, shrubs, and herbaceous plantings around upper post buildings			Desirable
BMP-1. Remove Trees from Motor Pool Area	Remove all trees and shrubs, mostly non-natives	BBC-2 (remove non-native trees in hillsides surrounding the Motor Pool)		Desirable
MP-2. Reestablish Historic Limits of Front and West Yards	Realign corrals, remove turf and scrub, establish red-chert surface			Desirable
DRR-1. Document and Repair Drainage System	Undertake assessment to determine condition of system; make repairs to correct issues at target trench, backstop area, and along roads.		40795	Essential (Document) Desirable (Repair)
DRR-2. Reestablish Extent of Rifle Range	Clear trees and scrub from historic limits of range north of Bunker Road; reestablish turf; clear woody vegetation from target trench and backstop area.	DRR-1 (correct drainage at backstop area)	40795	Desirable
DRR-3. Rehabilitate Target Trench	Stabilize and repair concrete structure; rebuild target frames, repaint firing line numbers for interpretive purposes.	DRR-1 (correct drainage at target trench); DRR-2 (clear vegetation from target trench area)	40795	Essential
DRR-4. Enhance Historic Character of Rifle Range Roads	Straighten historic roads; remove non-historic road; maintain graded red-chert surface	DRR-1 (correct drainage issues along roads)	40794 40795 41953	Desirable
DDR-5. Establish Regular Mowing Regimen	Maintain low, uniform meadow/turf on range and berms of main range and 1000-inch rifle range.		40794 40795	Desirable
CHA-1. Restore Air-Raid Siren Tower	Repair existing frame tower and siren.	FAMP-1, FCC-7 (reconstruct air-raid siren towers at Capehart Housing Area, Fort Cronkhite Cantonment)-		Desirable
DRD-1. Restore Access Apron to BC129 PSR Room	Uncover historic apron, reconnect to Conzelman Road		42091	Desirable
RRD-1. Restore Earth Cover of Battery Wallace	Remove Monterey cypress trees and stumps; remove and repair social trails, reestablish native cover of vegetation; repair stone walls.	BBC-3 (remove non-military Monterey cypress plantings)		Desirable

TABLE 3.1. SUMMARY OF RECOMMENDED LANDSCAPE TREATMENT TASKS
FORTS BAKER, BARRY, AND CRONKHITE

CLR Treatment Task	Task Overview	Related Task	FMSS Location #	Rank *
RRD-2. Document Rathbone-McIndoe Hutment Remnants	Undertake archaeological survey to document and evaluate the hutment.	BBC-2 (remove eucalyptus groves); SLD-1, BRD-3, PB-1, PB-2, PB-3, FC-4, FCC-6, TPD-2, THD-1, WRD-2 (other recommended archaeological surveys)		Desirable
RRD-3. Document and Stabilize AA Battery #2 Complex	Uncover concealed features; document hutment; remove vegetation from approaches to works along Conzelman Road; clear high brush from cuts along Conzelman Road; document structural remains of day room along Conzelman Road	BBC-1 (identify battery with signs); SLD-1 (document Smith-Guthrie hutment); RRD-2 (document Rathbone-McIndoe hutment)	40776 40777 40796 40805 40827 42889	Desirable
RRD-4. Reduce Spread of Bicentennial Campground Monterey Cypress	Remove Monterey cypress in campground area except those needed for shade and shelter.	BBC-2 (remove spread of Monterey cypress on adjoining hillsides)	40791	Desirable
RRD-5. Document and Stabilize Rodeo Ridge Fire-Control Stations	Document five fire-control stations and powerhouse; seal intact structures to reduce vandalism	LPRD-1, GBD-1, RRD-5, BRD-2, PB-5, TPD-1, WRD-1 (document and repair/stabilize other fire-control stations at Lime Point Ridge, Gravelly Beach, Bonita Ridge, Point Bonita, Tennessee Point, and Wolf Ridge)	40806 40807 40789	Desirable
SLD-1. Document Smith-Guthrie Hutment Remnants	Undertake archaeological survey to document and evaluate the hutment.	BBC-2 (remove eucalyptus groves); RRD-2, BRD-3, PB-1, PB-2, PB-3, FC-4, FCC-6, TPD-2, THD-1, WRD-2 (other recommended archaeological surveys)		Desirable
SLD-2. Enhance Historic Character of Batteries Smith-Guthrie and O'Rorke	Remove trees from parapets; clear vegetation and soil from parade, blast aprons, and gun platforms; remove or reduce social trails on parapets.	BBC-2 (remove spread of non-native trees);	40783 40786	Desirable
SLD-3. Enhance Historic Character of Battery Alexander	Remove Monterey pines from parade and north parapet; remove vegetation and soil from parade and gun pits; restore red-chert surface and concrete curbs of parade; restore limits of eucalyptus row in front of battery.	BBC-2 (remove spread of non-native trees); BBC-3 (remove Cold War-era non-military Monterey pine trees)	40779	Desirable
SLD-4 Rehabilitate South Lagoon Defenses Battery Roads	Restore historic widths of roads; maintain red-chert gravel surface		115532 232007 41960	Desirable
BRD-1. Control Access to Fire-Control Stations Cluster (Coast Guard Property	Restrict public access to cluster; or fence off fire-control stations and develop maintained trail loop.			Desirable
BRD-2. Document and Stabilize Fire-Control Stations (Coast Guard Property)	Address collapsed/roofs, concrete walks, erosion, and high grass/scrub around buildings	LPRD-1, GBD-1, RRD-5, TPD-1, WRD-1, EVD-1 (stabilize and repair other fire-control stations at Lime Point Ridge, Gravelly Beach, Rodeo Ridge, Point Bonita, Tennessee Point, and Wolf Ridge)	40799 40800 40801 40802 40803 40804	Desirable
BRD-3. Document World War II Defensive Positions (Coast Guard Property)	Undertake archaeological survey; reveal/enhance positions based on findings.	RRD-2, SLD-1, PB-1, PB-2, PB-3, FC-4, FCC-6, TPD-2, THD-1, WRD-2 (other recommended archaeological surveys)		Essential

TABLE 3.1. SUMMARY OF RECOMMENDED LANDSCAPE TREATMENT TASKS
FORTS BAKER, BARRY, AND CRONKHITE

CLR Treatment Task	Task Overview	Related Task	FMSS Location #	Rank *
BRD-4. Preserve and Enhance Barry Mine Casemate	Remove social trails and competing vegetation; maintain iceplant; clear radio-switchboard room; reconstruct perimeter chain-link fence; maintain mown perimeter; consider reconstruction of radio-switchboard room roof.		40828 40904	Desirable
BRD-5. Restore Position No. 81 Revetments	Remove non-historic vegetation, clear gun floors, remove social trails, install railings to protect and interpret works.			Desirable
BRD-7. Document and Stabilize Searchlight #9 Shelter and Powerhouse	Repair/seal roofs and windows; provide access for maintenance vehicles.	PB-5 (restore Searchlight #10 shelter)	41865	Desirable
SF88A-1. Enhance Historic Character of Field Road Frontage	Replace rustic fences, mow shoulder, remove propane tanks			Desirable
SF88A-2. Reinstate SF-88A Flagstaff	Install 25-foot-tall flagstaff on historic base at building FA981.	FAMP-8 (reinstate historic flagstaff at World War II Barry assembly area); FCC-8 (reinstate flagstaff at historic location in front of Cronkhite administration building).		Desirable
SF88L-1. Reconstruct Shower/Flammable Storage Building	Rebuild missing metal shed on existing concrete foundation pad.		40798	Desirable
SF88L-2. Remove Acacia Grove near Main Entrance	Remove non-native grove that grew up after the historic period.	BBC-2 (remove non-historic tree spread)	89050	Desirable
SF88L-3. Reconstruct Walk to Nike Ready Room	Reestablish walk from stairs to central road in launch site		89050	Essential
PB-1. Rehabilitate and Interpret Lighthouse Keepers' Area (Coast Guard Property)	Undertake archaeological survey; remove spread of Monterey cypress; uncover historic circulation and other built remnants; interpret building footprints; install fences to delineate historic yards; retain remnant garden vegetation.	PB-2, 3 (interpretive interventions at Third Keeper's Dwelling, South Landing); RRD-2, SLD-1, BRD-3, PB-2, PB-3, FC-4, FCC-6, TPD-2, THD-1, WRD-2 (other recommended archaeological surveys)		Desirable
PB-2. Preserve and Interpret Remnants from Third-Keeper's Dwelling (Coast Guard Property)	Undertaken archaeological survey; conserve parged rock faces; reveal foundation remnants; install fence to delineate historic yard.	PB-1, 3 (interpretive interventions at Keepers' Area, South Landing); RRD-2, SLD-1, BRD-3, PB-1, PB-3, FC-4, FCC-6, TPD-2, THD-1, WRD-2 (other recommended archaeological surveys)		Desirable
PB-3. Preserve and Interpret Remnants of South Landing Area (Coast Guard Property)	Undertake archaeological survey; reveal and preserve built remnants; redesign plank fence; mark site of storehouse.	PB-1, 2 (interpretive interventions at Keepers' Area and Third Keeper's Dwelling); PB-6 (redesign plank railings along Lighthouse Trail); RRD-2, SLD-1, BRD-3, PB-1, PB-2, FC-4, FCC-6, TPD-2, THD-1, WRD-2 (other recommended archaeological surveys)		Desirable
PB-4. Remove Tree Spread and Retain Historic Life-Saving Station Trees (Coast Guard Property)	Reestablish historic limits of north and west windbreaks	BBC-2 (remove spread of non-native trees)		Essential

TABLE 3.1. SUMMARY OF RECOMMENDED LANDSCAPE TREATMENT TASKS
FORTS BAKER, BARRY, AND CRONKHITE

CLR Treatment Task	Task Overview	Related Task	FMSS Location #	Rank *
PB-5. Restore Searchlight #10 Shelter and Dual Fire-Control Station (Coast Guard Property)	Stabilize structures, restore roof and window openings.	BRD-7 (stabilize searchlight #9 powerhouse); LPRD-1, GBD-1, RRD-5, BRD-2, TPD-1, WRD-1 (document and repair/stabilize other fire-control stations at Lime Point Ridge, Gravelly Beach, Rodeo Ridge, Bonita Ridge, Tennessee Point, and Wolf Ridge)		Desirable
PB-6. Redesign Lighthouse Trail Railings (Coast Guard Property)	Replace plank fence with less conspicuous fence.	PB-3 (redesign portion of fence that cuts across South Landing area)		Desirable
PB-7. Enhance Historic Character of Life-Saving Station Grounds (Coast Guard Property)	Repair perimeter fence; repaint buildings in daymark white; remove non-historic pine tree at flagstaff; repair and weed concrete walks; renew/replant border of *Myoporum* trees; resurface access road and interpret historic continuation to Bonita Cove; remove rear fences of dwellings.			Desirable
FORT CRONKHITE MILITARY RESERVATION				
FC-1. Preserve and Enhance Historic Character of Tennessee Point Road	Restore historic width and maintain red-chert surface; replace split-rail fences; maintain Cold War-era spurs; move roadbed away from eroding cliff at Scotty's Bluff.			Desirable
FC-2. Retain Historic Character of Tennessee Valley Road	Retain existing road width and red-chert surface within GMP Natural Zone.			Desirable
FC-3. Remove Tennessee Valley Lagoon	Remove non-historic constructed waterbody, restore natural flow of creek.			Desirable
FC-4. Document and Preserve SF-87L T2 Site	Document through an archaeological survey and evaluate stabilization needs and interpretive potential.	RRD-2, SLD-1, BRD-3, PB-1, PB-2, PB-3, TPD-4, FCC-6, THD-1, WRD-2 (other recommended archaeological surveys)		Desirable
FCC-1. Reestablish Historic Character of Cantonment Trees	Replant missing Monterey pine and cypress around perimeter of administration building island; maintain existing Monterey cypress along Edison Street; remove grove of acacia behind building FC1077; remove spread of Monterey cypress at infirmary site; spread of Monterey cypress and pine near building FC1073.	BBC-2 (remove spread of non-native trees on hillsides above Cantonment)	242890	Desirable
FCC-2. Reestablish Historic Extent of Mown Turf	Mow overgrown areas of historic turf in west wing and east wing.		242890	Desirable
FCC-3. Redesign Roadside Parking in West Wing	Redefine limits of parking or remove parking along Kirkpatrick Street and Edison Street;			Desirable

TABLE 3.1. SUMMARY OF RECOMMENDED LANDSCAPE TREATMENT TASKS
FORTS BAKER, BARRY, AND CRONKHITE

CLR Treatment Task	Task Overview	Related Task	FMSS Location #	Rank *
FCC-4. Enhance Historic Character of Sidewalks and Steps in West Wing	Establish uniform standards for steps based on historic plans; repair or replace in-kind deteriorated concrete walks; rebuild missing historic walks; remove non-historic walks.			Essential
FCC-5. Repair Upper Cantonment Drainage Ditch and Stabilize Landslide	Install stabilization in landslide area to reduce erosion; consider clearing trench to improve function and visibility.			Essential
FCC-6. Document and Interpret Cantonment Defensive Positions	Undertake archaeological survey to document and evaluate remains; develop stabilization and interpretive plan.	RRD-2, SLD-1, BRD-3, PB-1, PB-2, PB-3, TPD-2, THD-1, WRD-2 (other recommended archaeological surveys)		Essential (document)
FCC-7. Reconstruct Air-Raid Siren Tower	Rebuild air-raid siren tower built in 1950 and removed in ca. 1975.	FAMP-1, CHA-1 (reconstruct air-raid siren tower at Fort Baker Main Post, repair one at Capehart Housing Area)-		Desirable
FCC-8. Move Flagstaff to Historic Location	Install flagstaff at extant concrete base in front of administration building; remove park flagstaff at corner of Mitchell Road and Hagget Street.	FAMP-8 (reinstate historic Barry Main Post flagstaff); SF88A-2 (reinstate SF-88A flagstaff)	242890	Desirable
FCC-9. Move 155-mm Gun to Cantonment	Move 155-mm gun presently displayed at the Presidio to a site within the Cantonment to be determined by park staff.			Desirable
TPD-1. Document and Stabilize Fire-Control Stations	Document four structures, seal openings, divert social trails, repair retaining walls, stabilize earth/vegetation camouflage.	LPRD-1, GBD-1, RRD-5, BRD-2, PB-5, WRD-1 (document and repair/stabilize other fire-control stations at Lime Point Ridge, Gravelly Beach, Rodeo Ridge, Bonita Ridge, Point Bonita, and Wolf Ridge)		Desirable
TPD-2. Document, Stabilize, and Reveal Military Remnants	Undertake archaeological survey to identify and evaluate remnants; seal and protect underground hutment; fil searchlight-control booth remnants; expose significant surface remnants; remove Monterey cypress trees.	BBC-3 (remove non-military Cold War-era tree plantings); RRD-2, SLD-1, BRD-3, PB-1, PB-2, PB-3, FC-4, FCC-6, THD-1, WRD-2 (other recommended archaeological surveys)		Desirable
TPD-3. Remove URS Fence and Mark Historic Boundary	Remove non-historic chain-link fence; mark historic boundary.			Desirable
THD-1. Document and Interpret Townsley Approach Defensive Positions	Undertake archaeological survey to identify and evaluate positions; develop plan for stabilization and preservation; interpret positions accessible to the public.	RRD-2, SLD-1, BRD-3, PB-1, PB-2, PB-3, FCC-6, TPD-2, WRD-2, SF87L-2 (other recommended archaeological surveys)		Desirable

TABLE 3.1. SUMMARY OF RECOMMENDED LANDSCAPE TREATMENT TASKS
FORTS BAKER, BARRY, AND CRONKHITE

CLR Treatment Task	Task Overview	Related Task	FMSS Location #	Rank *
WRD-1. Document and Stabilize Fire-Control Station Cluster	Document six structures before additional subsidence occurs; undertake geologic assessment to determine stability; stabilize and seal three intact fire-control stations and one powerhouse; reinforce window openings below cantilevered structures of B11S1 Townsley and BC Townsley; reestablish earth cover on powerhouse; repair rock and vegetation camouflage on B1S1 Townsley.	LPRD-1, GBD-1, RRD-5, BRD-2, PB-5, TPD-1 (document and stabilize other fire-control stations at Lime Point Ridge, Gravelly Beach, Rodeo Ridge, Bonita Ridge, Point Bonita, and Tennessee Point)	41976 42029 42030 42031 42032 42077	Desirable
WRD-2. Document, Stabilize, and Reveal AA Battery #1/Position No. 10 and Hutment	Document complex through an archaeological survey; stabilize hutment and underground shelters and seal; reveal gun platforms, gun pits.	RRD-2, SLD-1, BRD-3, PB-1, PB-2, PB-3, FC-4, FCC-6, TPD-2, THD-1 (other recommended archaeological surveys)	41974 41971 41972 41974 42023 42024 42025 42026 42027 42075	Desirable
EVD-1. Move Bench off Cable Manhole Mines 1	Relocate bench to reduce erosion of earth cover on historic structure and enhance historic character			Desirable
SF87L-1. Remove Volunteer Trees and Retain Historic Trees in Limited Area	Remove spread of Monterey pine and cypress; retain historic plantings on center berm.	BBC-2 (remove spread of non-native trees)		Desirable

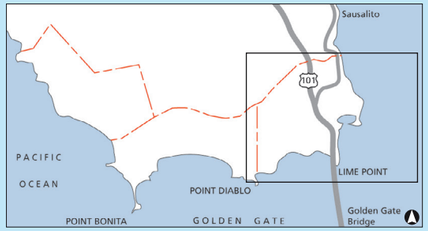
FMSS Location records were determined by Location name; the full record was not examined. Some Location record names could not be correlated to CLR features.

* Rank determined by park staff, per Amy Hoke, GOGA Historical Landscape Architect, to John Auwaerter, May 25, 2017.

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite

Golden Gate National Recreation Area
Sausalito, California

Fort Baker
Treatment Plan



National Park Service
Olmsted Center for Landscape Preservation
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Department of Landscape Architecture
SUNY College of Environmental
Science and Forestry, www.esf.edu/la/

SOURCES

1. NPS, Marin County GIS data
2. Fort Baker CLR 1945–72 period plan
3. Fort Baker CLR Existing Conditions Plan

DRAWN BY

John Auwaerter, Laura Roberts, Illustrator CS5, 2017

LEGEND

- Trees to Remove
- Other feature treatment
- Property boundary
- Historic fortification boundary
- Building
- Structure, Substructure
- Wall
- Water tank, reservoir
- Post-Civil War-era battery
- Endicott-era battery
- Earth parapet of defensive work
- Temp. gun emplace.
- Road, asphalt
- Road, earth/gravel
- Trail
- Power line
- Fence
- Remnant, trace (in 1966, present)
- Bridge
- Deciduous trees
- Coniferous trees
- Native woods
- Chapparal or scrub
- Grassland, lawn, or bare earth
- Wetland
- Stream
- Rock cliff
- Rip rap
- Beach
- Cut, Fill
- 50' contours

NOTES

1. See Existing Conditions plans (Drawings 1.2–1.4) for additional detail.
2. See 1945–1972 Period Plans (Drawings 1.10, 1.10a, CLR Vol. I) for historic conditions (treatment period) of overall district, and 1917–1945 Period Plans for historic conditions (treatment period) of East Fort Baker.
3. All features shown at approximate location and scale; vegetation represents overall character, not precise limits or specimens.
4. White mask indicates limits of Fort Baker study area.

District-Wide Treatment Tasks (not labled or only typical labeled)

BBC-1. Install System of Historical Signage
BBC-2. Remove Volunteer Non-Native Trees
BBC-3. Remove Non-Military Cold-War Era Tree Plantings
BBC-4. Preserve and Reveal Anti-Aircraft Gun Emplacements

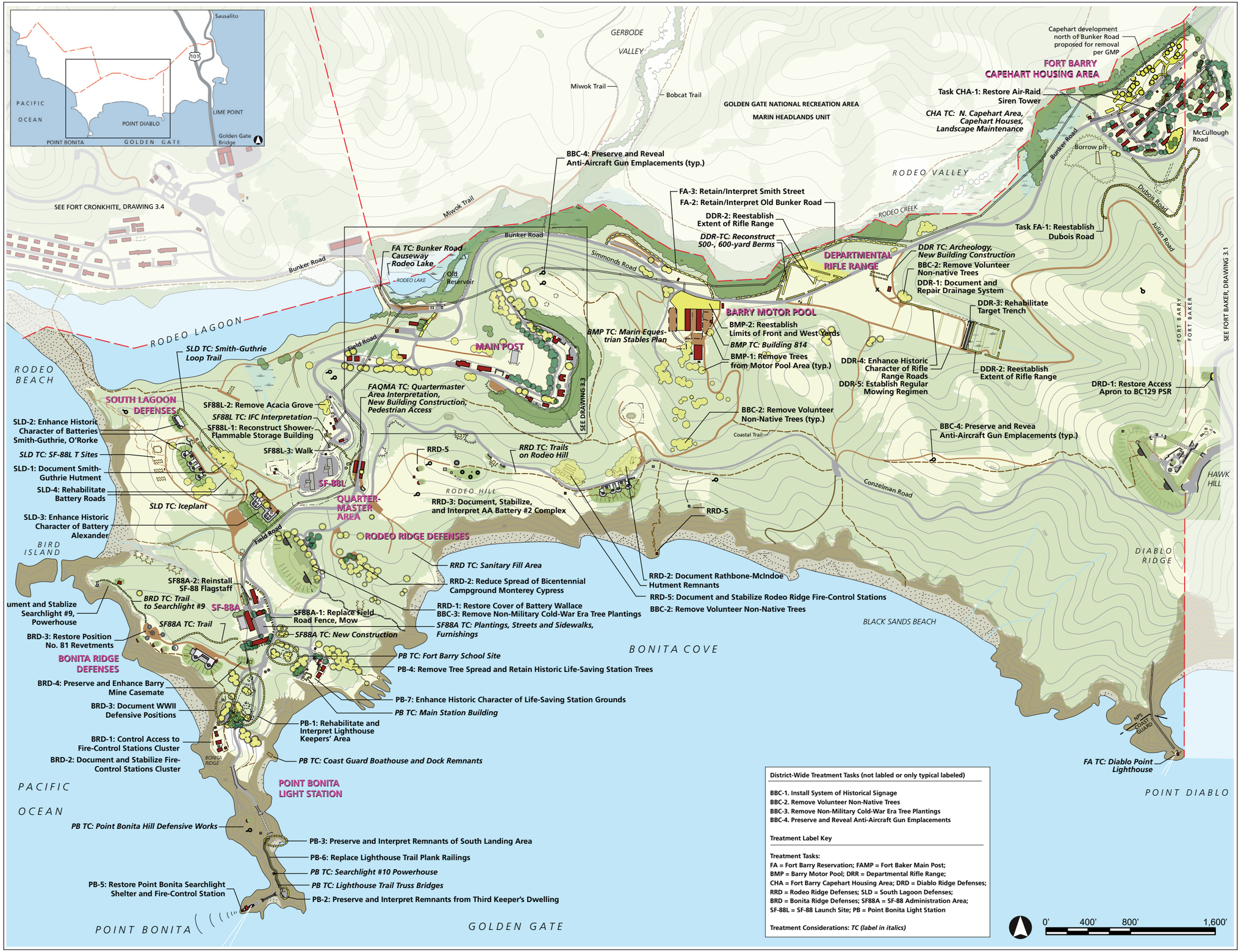
Treatment Label Key

Treatment Tasks:
FB = Fort Baker Reservation; FBMP = Fort Baker Main Post;
HCW = Horseshoe Cover Waterfront; HCD = Horseshoe Cove Defenses;
LPRD = Lime Point Ridge Defenses; GBD = Gravelly Beach Defenses

Treatment Considerations: *TC (label in italics)*

0' 400' 800' 1,600'

Drawing 3.1



Cultural Landscape Report Forts Baker, Barry, and Cronkhite

Golden Gate National Recreation Area
Sausalito, California

Fort Barry Treatment Plan

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SOURCES

1. NPS, Marin County GIS data
2. Fort Barry CLR 1945–72 period plan
3. Fort Barry CLR Existing Conditions Plan

DRAWN BY

John Auwaerter, Laura Roberts, Illustrator CS5, 2017

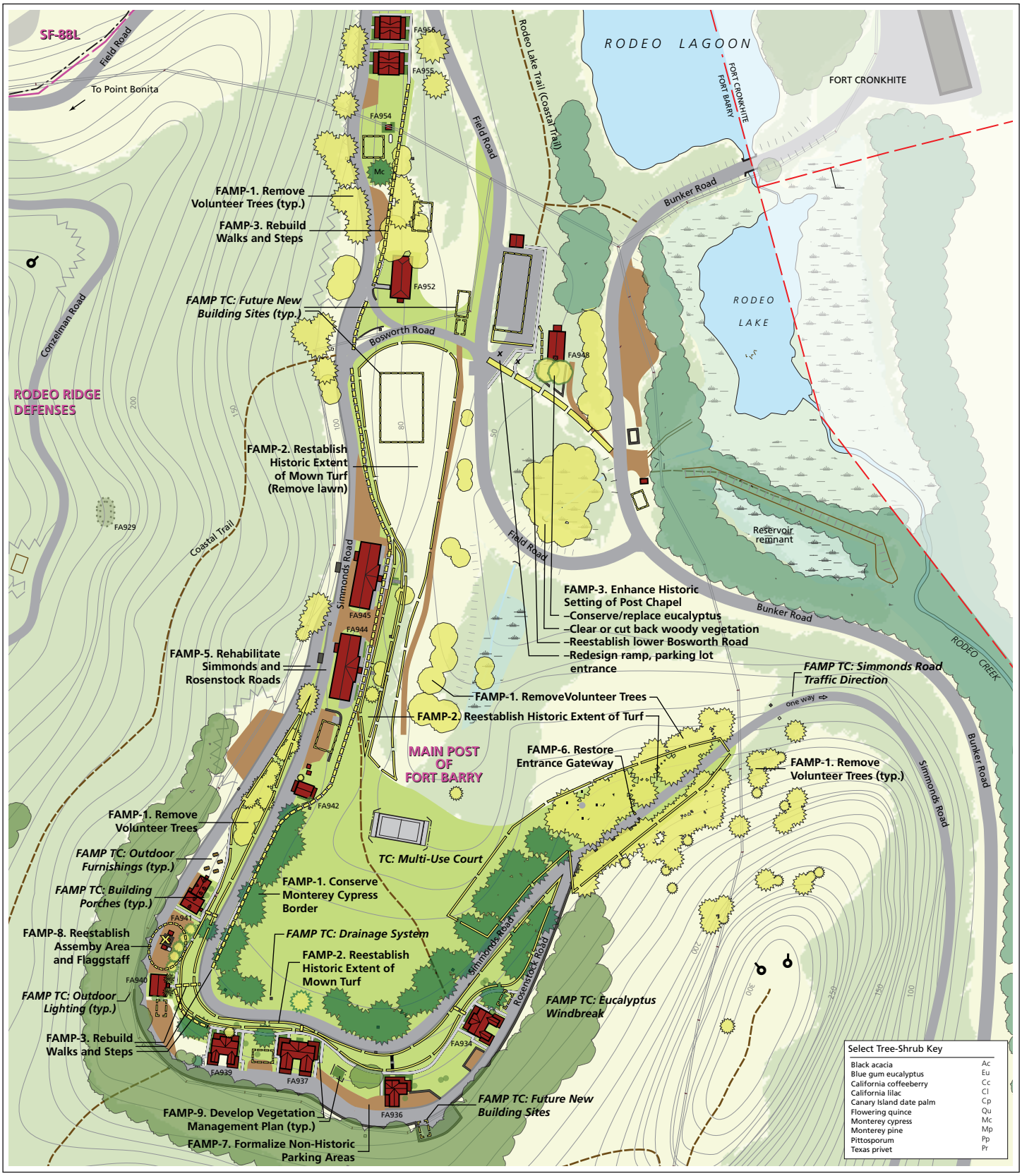
LEGEND

- Trees to Remove
- Other feature treatment
- Property boundary
- Historic fortification boundary
- Building
- Structure, Substructure
- Wall
- Water tank, reservoir
- Endicott-era battery
- WWII-era casemated battery
- Earth parapet of defensive work
- Temp. gun emplace., machine gut pit
- Road, asphalt
- Road, earth/gravel
- Trail
- Power line
- Fence
- Remnant, trace (in 1966, present)
- Bridge
- Deciduous trees
- Coniferous trees
- Native woods
- Chapparal or scrub
- Grassland, lawn, or bare earth
- Wetland
- Stream
- Rock cliff
- Rip rap
- Beach
- Cut, Fill
- 50' contours

NOTES

1. See Existing Conditions plans (Drawings 1.5–1.9) for additional detail.
2. See 1945–1972 Period Plans (Drawing 1.11, 1.11a, 1.11b, CLR Vol. I) for historic conditions (treatment period outside of main post).
3. All features shown at approximate location and scale; vegetation represents overall character, not precise limits or specimens.
4. White mask indicates limits of Fort Barry study area.

Drawing 3.2



DRAWN BY

John Auwaerter, Ella Braco
Illustrator CS 5, 2017

NOTES

1. See Existing Conditions plan (Drawings 1.6) for additional detail; TC = Treatment Consideration.
2. See 1917–1945 Period Plan (Drawing 1.8a, CLR Vol. I) for historic conditions (treatment period) of main post.
3. All features shown at approximate location and scale; vegetation represents overall character.

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LEGEND

- Trees to remove
- Other feature treatment
- Tree to replant
- Building
- Asphalt with gutter curb
- Gravel/earth
- Sidewalk, Steps
- Trail
- Wall, Fence
- Gate, Bollards
- Power line Drain inlet, outlet
- Palm, deciduous, conifer tree
- Shrub, planted bed
- Native woods, scrub
- Wetland
- Turf
- Grassland or bare earth
- Cut, fill

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite
Golden Gate National Recreation Area

Main Post of Fort Barry Treatment Plan

0′ 100′ 300′

Drawing 3.3

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite

Golden Gate National Recreation Area
Sausalito, California

Fort Cronkhite
Treatment Plan

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SOURCES

1. NPS, Marin County GIS data
2. Fort Cronkhite CLR 1945–72 period plan
3. Fort Cronkhite CLR Existing Conditions Plan

DRAWN BY

John Auwaerter, Laura Roberts, Illustrator CS5, 2017

LEGEND

- Trees to Remove
- Other feature treatment
- Property boundary
- Historic fortification boundary
- Character area boundary
- Building
- Structure, Substructure
- Wall
- Water tank, reservoir
- WWII-era casemated battery
- Earth parapet of defensive work
- Temp. gun emplace., machine gut pit
- WW II defensive position
- Road, asphalt
- Road, earth/gravel
- Trail
- Fence
- Remnant, trace
- Bridge
- Deciduous trees
- Coniferous trees
- Native woods
- Chapparal or scrub
- Grassland, lawn, or bare earth
- Wetland
- Stream
- Rock cliff
- Rip rap
- Beach
- Cut, Fill
- 50′ contours
- Power line

NOTES

1. See Existing Conditions plans (Drawings 1.10–1.11) for additional detail.
2. See 1945–1972 Period Plans (Drawing 1.12, 1.12a, CLR Vol. I) for historic conditions (treatment period).
3. All features shown at approximate location and scale; vegetation represents overall character, not precise limits or specimens.
4. White mask indicates limits of Fort Cronkhite study area.

Drawing 3.4

District-Wide Treatment Tasks (not labled or only typical labeled)

BBC-1. Install System of Historical Signage
BBC-2. Remove Volunteer Non-Native Trees
BBC-3. Remove Non-Military Cold-War Era Tree Plantings
BBC-4. Preserve and Reveal Anti-Aircraft Gun Emplacements

Treatment Label Key

Treatment Tasks:
FC = Fort Cronkhite Reservation; FCC = Fort Cronkhite Cantonment;
TPD = Tennessee Point Defenses; THD = Townsley Hill Defenses;
WRD = Wolf Ridge Defenses; DRD = Diablo Ridge Defenses;
RRD = Rodeo Ridge Defenses; SLD = South Lagoon Defenses;
BRD = Bonita Ridge Defenses; SF88A = SF-88 Administration Area;
SF-88L = SF-88 Launch Site; PB = Point Bonita Light Station

Treatment Considerations: *TC (label in italics)*

GOLDEN GATE NATIONAL RECREATION AREA
MARIN HEADLANDS UNIT

COYOTE RIDGE
TENNESSEE VALLEY
WOLF RIDGE
HILL 88
TENNESSEE BEACH
TENNESSEE COVE
TENNESSEE POINT
LITTLE RANCH VALLEY
SCOTTY'S BLUFF
HILL 417
PACIFIC OCEAN
RODEO BEACH
RODEO LAGOON

Coastal Trail
Coastal Fire Road
Old Springs Trail
Upper Tennessee Valley Trail
Tennessee Valley Road (Lower Tennessee Valley Trail)
Miwok Trail
Wolf Ridge Trail
Landslide
Coastal Trail (Bunker Road bypass)
Bunker Road
Tennessee Point Road
Mitchell Road

FC-2: Retain Historic Character of Tennessee Valley Road
FC-3: Remove Tennessee Valley Lagoon
EVD TC: M4 Mines I Access Road
EVD TC: M4 Mines I
EVD-1: Move Bench off Cable Manhole Mines I
EVD TC: Tennessee Valley Road Turn-Around
EVD TC: Elk Valley-Cronkhite Cable Hut
FC TC: Wolf Ridge to Tenn. Beach Trail (Alternatives)
ELK VALLEY DEFENSES
WRD TC: Wolf Ridge Interpretive Trail
WOLF RIDGE DEFENSES
WRD-1: Document, Stabilize, and Reveal AA Battery #1/Position No. 10 and Hutment
WRD TC: Bunker Road Trail
WRD-1: Document and Stabilize Fire-Control Station Cluster
THD-1: Document and Interpret Townsley Approach Defensive Positions
THD TC: Little Ranch Valley Interpretive Trail
TOWNSLEY HILL DEFENSES
THD TC: Battery Townsley Interpretive Trail
TPD TC: Trail to Battery Townsley
TPD-1: Document and Stabilize Fire-Control Stations
TPD-2: Document, Stabilize, and Reveal Military Remnants
TENNESSEE POINT DEFENSES
TPD-3: Remove URS Fence and Mark Historic Boundary
BBC-3: Remove Non-Military Cold-War Era Tree Plantings
FC-1: Preserve and Enhance Historic Character of Tennessee Point Road
SF88C TC: Battalion Sign
SF88C TC: Buildings
SF88C TC: Perimeter Fence
SF-88C
BBC-2: Remove Volunteer Non-Native Trees (typ.)
SF87L-1: Remove Volunteer Trees and Retain Historic Trees in Limited Area
THD TC: Townsley Reserve Magazine and PSR Room
SF87L TC: TSF-87L Perimeter Fence
FC-4: Document and Preserve SF-87L T2 Site
SF-87L
FORT CRONKHITE CANTONMENT
SF-87A
FA TC: Bunker Road Causeway (Dwg. 3.2)
SEE DRAWING 3.5
SEE FORT BARRY, DRAWING 3.2

Sausalito
101
PACIFIC OCEAN
POINT DIABLO
LIME POINT
POINT BONITA
GOLDEN GATE
Golden Gate Bridge

0′ 400′ 800′ 1600′



DRAWN BY
John Auwaerter, Ella Braco
Illustrator CS 5, 2017

NOTES
1. See Existing Conditions plan (Drawings 1.10) for additional detail; TC = Treatment Consideration
2. See 1945–1972 Period Plan (Drawing 1.12a, CLR Vol. I) for historic conditions (treatment period) of cantonment.
3. All features shown at approximate location and scale; vegetation represents overall character.

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LEGEND

- Trees to remove
- Other feature treatment
- Tree to replant
- Building
- Road, asphalt with gutter
- Road, gravel/earth
- Sidewalk, Steps
- Trail, propane tank
- Wall, Fence
- Remnant, trace
- Power line
- Drain inlet, outlet
- Deciduous, conifer tree
- Shrub, herbaceous plantings
- Native woods, scrub
- Turf
- Grassland or bare earth
- Cut, fill
- Beach, stream

Cultural Landscape Report
Forts Baker, Barry, and Cronkhite
Golden Gate National Recreation Area

Fort Cronkhite Cantonment Treatment Plan

0′ 100′ 300′

Drawing 3.5

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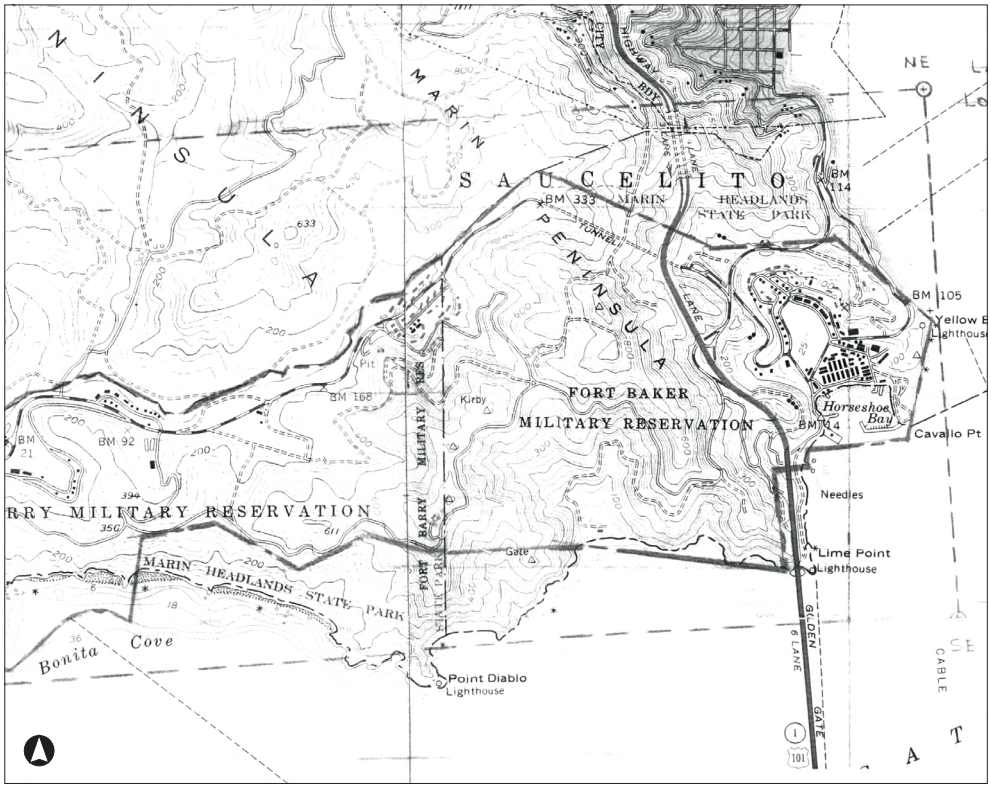
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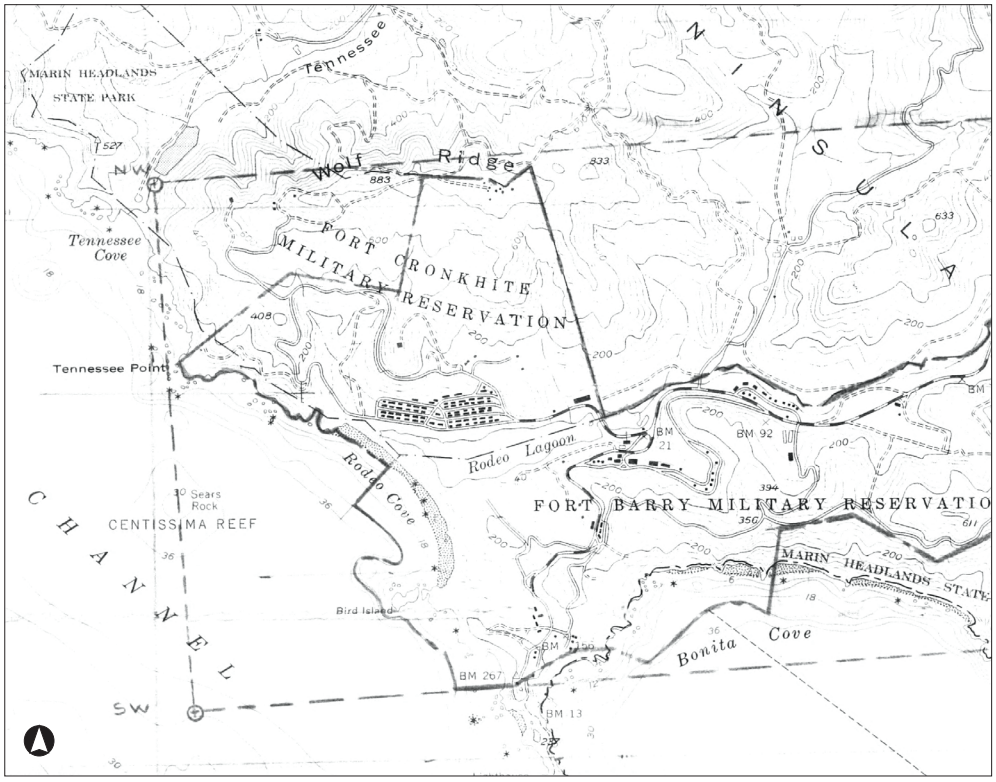
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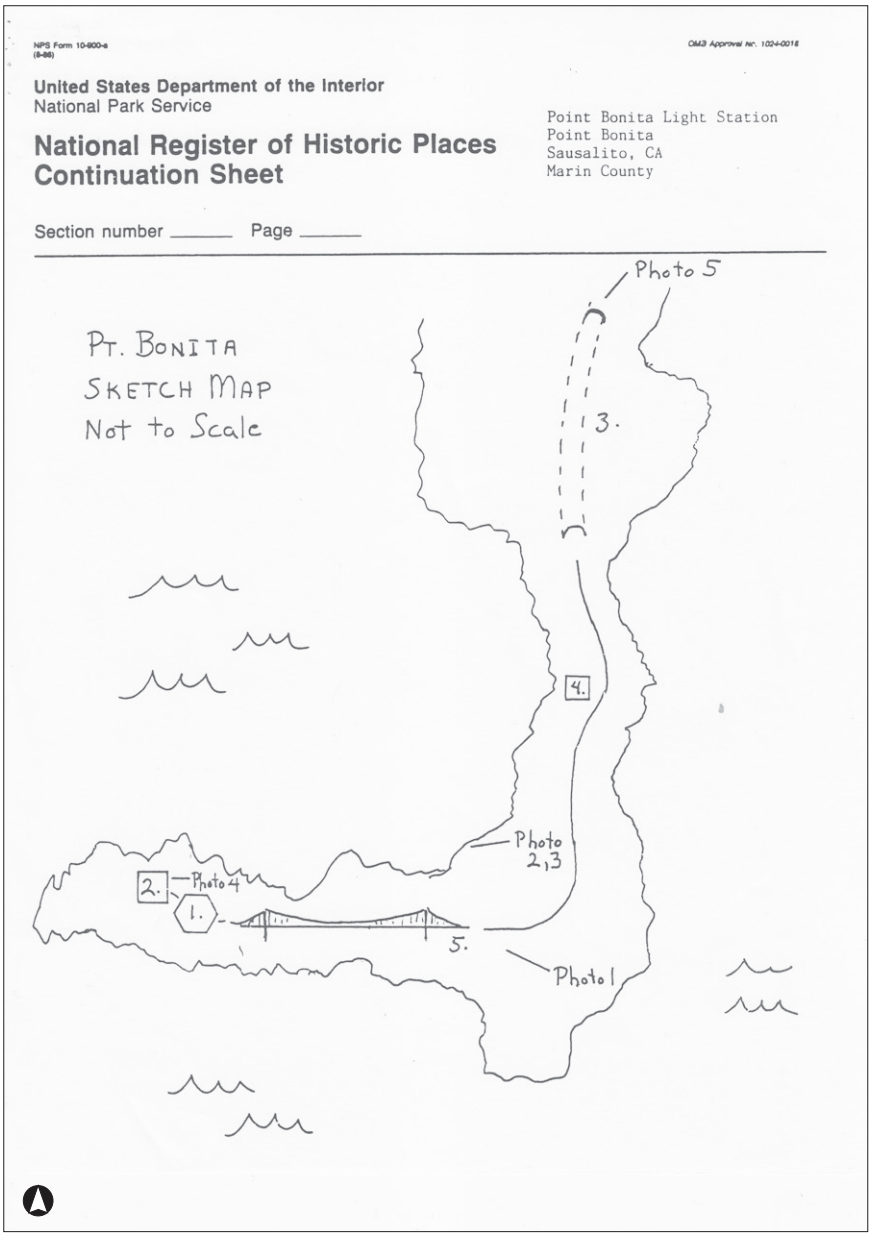
Appendices

A. Forts Baker, Barry, and Cronkhite National Register District Map (1973)





B. POINT BONITA LIGHT STATION NATIONAL REGISTER DISTRICT MAP (1989)



C. LIST OF RELATED CULTURAL RESOURCE REPORTS

The following reports, which address in whole or part the cultural landscape of Forts Baker, Barry, and Cronkhite, provide additional documentation on the existing conditions, analysis and evaluation, and treatment of the cultural landscape. Because these reports focus on small areas, they provide more detail in some cases than is documented in this cultural landscape report that covers the entire landscape of the three forts.

1. Barker, Leo, and Peter Gavette, Jason Hagin, and Amy Hoke. "Rodeo Valley Stables: Cultural Resource Reports and Site Treatments: Cultural Landscape Report, Historic Structures Report, Archeological Assessment and Treatment Report." Unpublished National Park Service Report, April 30, 2013.

2. Bookstein, Emily. "Preliminary Cultural Landscape Report: Rodeo Beach Wetlands and Parking Lot." Unpublished report prepared for the National Park Service, September 2009.

3. Feierabend, Carey. "Historic Road Characterization Study, Supplemental Work, Marin Headlands, Golden Gate National Recreation Area." Unpublished report prepared for the National Park Service, April 2004.

4. Golden Gate National Recreation Area. "Design Guidelines for the Marin Headlands and Ft. Baker Tansportation Infrastructure and Management Plan." Unpublished park report, 2009.

5. Judy, Barbara, and Jessica Shorts, with Cathy Gilbert, Michael Hankinson, Amy Hoke, Erica Owens, Kimball Koch, and Len Warner. "Cultural Landscape Report for Fort Baker." Unpublished National Park Service report, July 2005.

6. Kramer, Daniel. "Preliminary Cultural Landscape Report for AA Position No. 81." Unpublished report prepared for the National Park Service, 2009.

7. Lehman, Jane, and John Martini. "Fort Barry Balloon Hangar and Motor Vehicle Sheds Abbreviated Historic Structure Report." Unpublished National Park Service report, ca. 2005.

8. Martini, John. "Fort Baker Marine Repair Facility, Historic Structure Report, Part 1A." Draft report prepared for the National Park Service, 2009.

9. Martini, John. "Preliminary Cultural Landscape Report, Kirby Cove." Unpublished report prepared for the National Park Service, September 2010.

10. Martini, John and Stephen Haller. "What We Have We Shall Defend: An Interim History and Preservation Plan for Nike Site SF-88L, Fort Barry, California." Unpublished National Park Service report, 1998.

11. Rurik, Chris. "Preliminary Cultural Landscape Report, Departmental Rifle Range, Fort Barry, Marin Headlands." Unpublished National Park Service report, 2010.

D. PARTICIPANTS IN TREATMENT WORKSHOP, MAY 20, 2014

Golden Gate National Recreation Area (GOGA)

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Brian Aviles, GOGA Senior Planner
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Susan Ewing Haley, Supervisory Curator, GOGA Park Archives & Record Center
Amy Hoke, Historical Landscape Architect, GOGA Cultural Resources Division
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John Martini, Historical Consultant
Bill Merkle, Supervisory Wildlife Ecologist, GOGA Natural Resources
Mia Monroe, Site Supervisor of Muir Woods/Interpretive Supervisor of Marin Lands
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Jonathan Sifuentes-Winter, Natural Resource Specialist, GOGA Natural Resources
Kim Sykes, Historical Architect, GOGA Business Management Division
Keith Stegall, Trails Supervisor, GOGA Maintenance Division
Jennifer Treutelaar, Partnership Development Specialist, GOGA Business Management Division
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Golden Gate National Parks Conservancy

Kate Bickert, Director of Park Initiatives & Stewardship
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John Skibbe, Director, Planning and Design

NPS Olmsted Center for Landscape Preservation

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John Auwaerter, CLR principal investigator
George W. Curry, SUNY CLR project director
Haichao Wang, intern

E. FORT BAKER APPROVED PLANT LIST

Source: "Fort Baker Military Reservation Ornamental Plant Selection Lists," Golden Gate National Recreation Area, November 2005 working draft [park has adopted this draft as the approved list].

PLANT LIST 1: PLANTS FOR USE IN DESIGNED LANDSCAPES

This list contains both historically-used plant species and species that have been planted subsequent to the historic periods of significance but match the form, size, and other criteria that help retain the historic landscape character of the forts.

SCIENTIFIC NAME	COMMON NAME	PLANT TYPE	HISTORIC USE BY ARMY
Abelia grandiflora	Glossy Abelia	Shrub	Yes
Acanthus mollis	Bear's Breech, Acanthus	Perennial	Yes
Aeonium spp.	Aeonium	Perennial/succulent	Yes
Agapanthus spp.	Lily of the Nile	Perennial	Yes
Agave americana	Century Plant	Shrub/succulent	Yes
Aloe spp.	Aloe	Perennial/succulent	Yes
Araucaria arauncana	Monkey Puzzle Tree	Tree	Yes
Araucaria heterophylla	Norfolk Island Pine	Tree	Yes
Aucuba japonica	Japanese Aucuba	Shrub	Yes
Berberis darwinii	Darwin Barberry	Shrub	Yes
Bergenia crassifolia	Winter Blooming Bergenia	Perennial	
Bougainvillea spp.	Bougainvillea	Vine/shrub	
Brugmansia spp.	Angel's Trumpet	Shrub	Yes
Buddleia spp.	Butterfly Bush	Shrub	Yes
Buxus microphylla	Boxwood	Shrub	Yes
Buxus sempervirens	English Boxwood	Shrub	Yes
Callistemon spp.	Bottlebrush	Shrub/tree	
Calocedrus decurrens	Incense Cedar	Tree	Yes
Camellia spp.	Camellia	Shrub	Yes
Casuarina spp.	She-oak	Tree	Yes
Cedrus deodara	Deodar Cedar	Tree	Yes
Chaenomeles x superba	Flowering Quince	Shrub	Yes
Chamaecyparis lawsoniana	Port Orford Cedar	Shrub/tree	Yes
Chamaecyparis pisifera	Sawara False Cypress	Shrub/tree	Yes
Choisya ternata	Mexican Orange	Shrub	Yes
Cinnamomum camphora	Camphor	Tree	Yes
Cistus spp.	Rockrose	Shrub/groundcover	
Cordyline australis	Cordyline	Shrub/tree	Yes
Cornus capitata	Evergreen Dogwood	Shrub/tree	Yes
Crataegus phaenopyrum	Washington Thorn	Tree	
Crassula argentea	Jade Plant	Shrub/succulent	Yes
Cryptomeria japonica	Japanese Cryptomeria	Tree	Yes
Dichondra micrantha	Dichondra	Groundcover	Yes
Echeveria spp.	Hens and Chickens	Perennial/succulent	Yes
Eriobotrya japonica	Loquat	Tree	
Escallonia spp.	Escallonia	Shrub	Yes
Eucalyptus ficifolia	Red Flowering Gum	Tree	Yes
Eucalyptus maculata		Tree	
Eucalyptus polyanthemos	Silver Dollar Gum	Tree	Yes
Eucalyptus saligna	Sydney Blue Gum	Tree	
Eucalyptus sideroxylon "Rosea"	Ironbark tree	Yes	
Euonymus spp.	Euonymus	Vine/shrub Yes	
Euryops pectinatus	Euryops	Shrub	

SCIENTIFIC NAME	COMMON NAME	PLANT TYPE	HISTORIC USE BY ARMY
Fatsia japonica	Japanese Aralia	Shrub	Yes
Festuca arundinacea "Warrens Front Runner Blend"	Dwarf Tall Fescue	Turf	
Festuca rubra "Molate"	Molate Red Fescue groundcover		
Ficus microcarpa	Indian Laurel Fig tree		
Fuchsia spp.	Fuchsia shrub		
Griselinea littoralis	Griselinia	Shrub/tree	Yes
Hydrangea macrophylla	Big Leaf Hydrangea	Shrub	Yes
Hymenosporum flavum	Sweetshade	Tree	
Ilex cornuta	Chinese/Burford Holly	Shrub	Yes
Impatiens oliveri	Poor Man's Rhododendron	Shrub	Yes
Juniperus spp.	Juniper	Shrub	Yes
Juniperus chinensis	"Kaizuka (a.k.a.Torulosa)" Juniper	Tree	Yes
Kniphofia (Tritonia) uvaria	Red Hot Poker	Perennial	
Lagunaria patersonii	Primrose Tree, Cow Itch Tree	Tee	No
Lantana spp.	Lantana	Shrub/groundcover	
Laurus nobilis	European Laurel	Shrub/tree	Yes
Leptospermum scoparium	New Zealand Tea Tree	Shrub/tree	Yes
Lycianthes rantonnei	Paraguay Nightshade	Vine/shrub	Yes
Mahonia spp.	Oregon Grape	Shrub	
Maytenus boaria	Mayten Tree	Tree	
Metasequoia glyptostroboides	Dawn Redwood	Tree	Yes
Metrasideros excelsus	New Zealand Christmas Tree	Tree	
Myrsine africana	African Boxwood	Shrub	
Myrtus communis	True Myrtle	Shrub	Yes
Nandina domestica	Heavenly Bamboo	Shrub	
Olea europaea	Olive tree	Tree	Yes
Opuntia spp.	Opuntia Cactus shrub Yes		
Osteospermum fruticosum	African Daisy	Groundcover	
Pelargonium spp.	Geranium	Perennial	Yes
Phormium tenax	New Zealand Flax	Shrub	
Picea glauca "Conica"	Dwarf Alberta/White Spruce	Shrub	Yes
Pinus eldarica	Afghan Pine	Tree	
Pinus pinea	Italian Stone Pine	Tree	
Pittosporum crassifolium "Compactum"	Compact Pittosporum	Shrub	
Platycladus spp.	Arborvitae	Shrub/tree	
Plumbago auriculata	Cape Plumbago	Vine/shrub	
Prunus armerniaca	Armenian Plum	Tree	Yes
Prunus ilicifolia	Hollyleaf Cherry	Shrub/tree	Yes
Prunus laurocerasus	English Laurel	Shrub/tree	Yes
Prunus lusitanica	Portugal Laurel	Shrub/tree	Yes
Punica granatum	Pomegranate	Shrub	
Rhaphiolepis indica	Indian Hawthorn	Shrub	Yes
Rhododendron spp.	Rhododendron	Shrub	
Rosa spp.	Rose	Shrub	Yes
Sedum spp.	Stonecrop	Perennial/succulent	Yes
Senecio hybridus (cruentus)	Cineraria	Annual/perennial	Yes
Spiraea spp.	(Varies per specie)	Shrub	Yes
Taxus baccata 'Stricta'	Irish Yew	Tree	Yes
Thuja spp.	Arborvitae	Shrub/tree	Yes
Trachycarpus fortunei	Windmill Palm	Tree	
Tristania conferta	Brisbane Box	Tree	
Tristania laurina	Water Gum	Tree	
Ugni molinae	Chilean Guava	Shrub	Yes
Ulmus parvifolia	Chinese Elm	Tree	Yes
Vulpia myuros "Zorro"	Zorro Annual Fescue	Groundcover	

SCIENTIFIC NAME	COMMON NAME	PLANT TYPE	HISTORIC USE BY ARMY
Washingtonia filifera	California Fan Palm	Tree	Yes
Washingtonia robusta	Mexican Fan Palm	Tree	Yes
Watsonia spp.	Watsonia	bulb	Yes
Weigela florida	Weigela	Shrub	Yes
Xylosma congestum	Xylosma	Shrub/tree	Yes

PLANT LIST 2: CONDITIONAL-USE PLANTS IN DESIGNED LANDSCAPES

For use within core of Main Post of Fort Baker [may also be appropriate for use in core of Fort Barry Main Post, Fort Cronkhite Cantonment, Nike administration areas], except Monterey cypress and Monterey pine that may be used outside the main posts/cantonment but only as approved historic tree replacements.

SCIENTIFIC NAME	COMMON NAME	PLANT TYPE	HISTORIC USE BY ARMY
Amaryllis belladonna	Belladonna Lily/Naked Lady	Perennial	Yes
Chasmanthe floribunda	Chasmanthe	Perennial	Yes
Crocosmia crocosmiflora	Monbretia	Perennial	Yes
Crocosmia masoniorium	Monbretia	Perennial	Yes
Cupressus macrocarpa	Monterey Cypress	Tree	Yes
Dodonaea viscosa	Hopseed Bush	Shrub/tree	
Hebe spp.	Hebe	Shrub	Yes
Hedera canariensis	Algerian Ivy	Groundcover/vine	Yes
Hedera helix	English Ivy	Groundcover/vine	Yes
Leptospermum laevigatum	Australian Tea Tree	Shrub/tree	Yes
Melaleuca spp.	Melaleuca	Shrub/tree	
Mentha spicata	Spearmint	Perennial	Yes
Oxalis spp.	Oxalis	Perennial	Yes
Phoenix canariensis	Canary Island Date Palm	Tree	Yes
Pinus radiata	Monterey Pine	Tree	Yes
Pittosporum crassifolium	Pittosporum	Shrub/tree	Yes
Pittosporum eugenioides	Pittosporum	Shrub/tree	Yes
Pittosporum undulatum	Victorian Box	Shrub/tree	Yes
Quercus suber	Cork Oak	Tree	
Schinus molle	California Pepper Tree	Tree	Yes
Tropaeolum majus	Garden Nasturtium	Annual/ perennial	Yes
Vinca major	Periwinkle	Groundcover	Yes
Vinca minor	Dwarf Periwinkle	Groundcover	Yes
Viola spp.	Violets	Perennial/ groundcover	
Zantedeschia aethiopica	Calla Lilly	Perennial	Yes

F. LIST OF NON-NATIVE INVASIVE PLANTS AT GOLDEN GATE NATIONAL RECREATION AREA

Source: Golden Gate National Recreation Area, Invasive Non-Native Species For Which Removal within the GGNRA is a Priority Habitat Restoration Team, January 2012"

Note: Not all species found at Forts Baker, Barry, and Cronkhite.

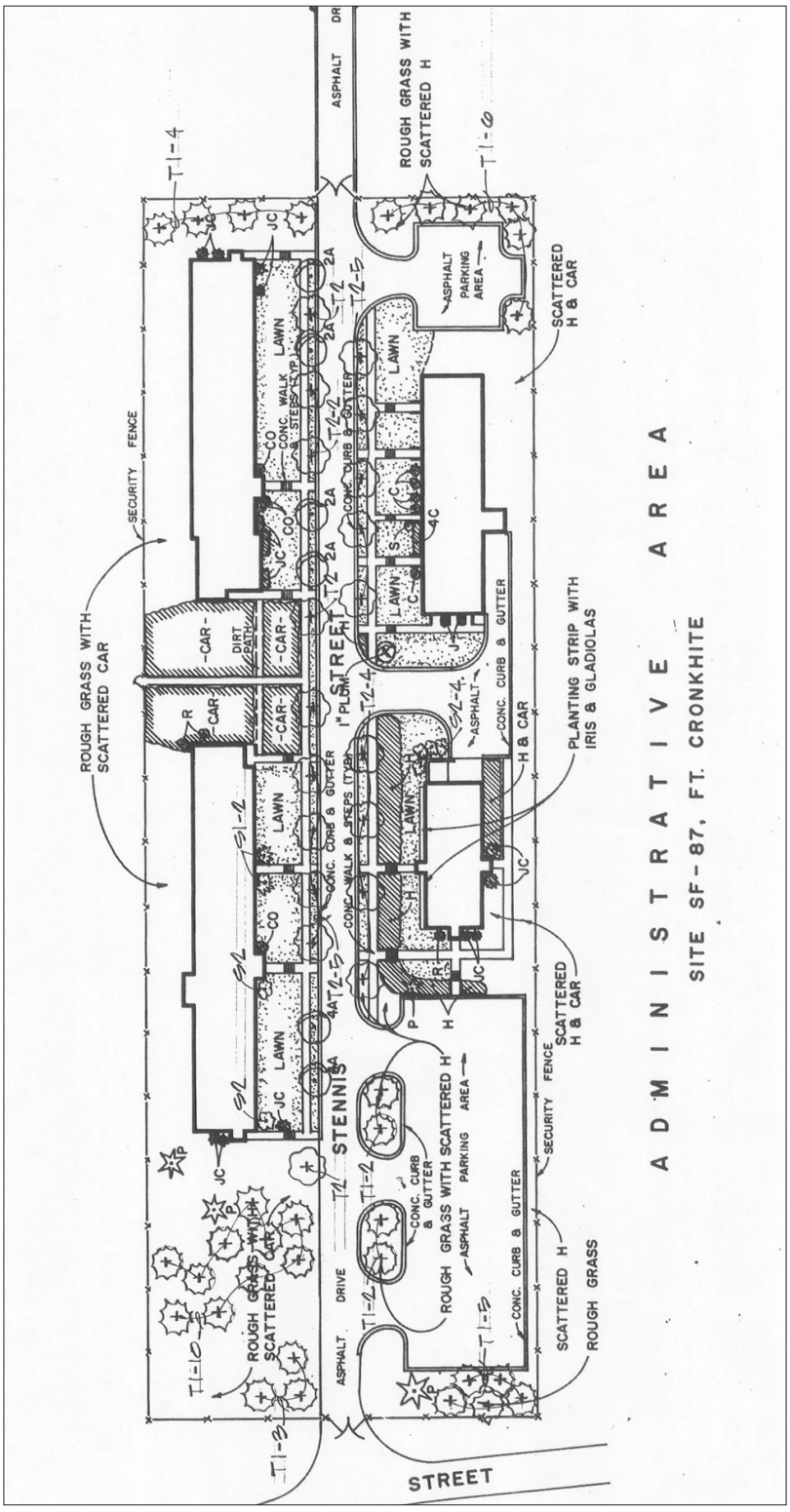
COMMON NAME	SPECIES CODE	SCIENTIFIC NAME
Invasive Herbs and Shrubs		
Thoroughwort/Eupatorium	AGAD	*Ageratina adenophora*
Sweet Vernal Grass	ANOD	*Anthoexanthum odoratum*
Heartleaf iceplant	APCO	*Aptenia cordifolia*
Capeweed (infertile)	ARPR	*Arctotheca prostrate* (the common one)
Capeweed (fertile black-centered)	ARCA	*Arctotheca calendula*
Darwin Barberry	BEDA	*Berberis darwinii*
Calendula	CAAR	*Calendula arvense*
Iceplant	CAED	*Carpobrotus edulis*
Purple starthistle	CECA	*Centauria calcitropa*
Yellow starthistle	CESO	*Centaurea solstitiali*
Cestrum	CEAU	*Cestrum aurantiacum*
African corn flag	CH	*Chasmanthe floribunda*
Jubata grass	COJU	*Cortaderia jubata*
Pampas grass	COSE	*Cortaderia selloana*
Prostrate Cotoneaster	COMI	*Cotoneaster microphyllus*
Orange Cotoneaster	COFR	*Cotoneaster franchetii* (leaves to 3cm)
Cotoneaster	COPA	*Cotoneaster pannosa* (larger leaves)
Watsonia/croscosmia	CRCR	*Crocosmia x crocosmia*
Scotch broom	CYSC	*Cytisus scoparius*
Striated broom	CYST	*Cytisus striatus*
Orchard grass	DAGL	*Dactylis glomerata*
Wallaby Grass	RYPE	*Rytidosperma pencillatum*
Cape-ivy	DEOD	*Delairea odorata*
Foxglove	DIPU	*Digitalis purpurea*
Mock-strawberry	DUIN	*Duchesni indica*
Tower of Jewels/Pride of Madeira	ECCA	*Echium candicans*
Veldt Grasses	EHER	*Ehrharta erecta*
Russian Wheatgrass	ELJU	*Elytrigia juncea*
Coast fireweed	ERGL	*Erechtities glomerata*
Fireweed	ERMI	*Erechtities minima*
Fleabane	ERKA	*Erigeron karvinskianus*
Escallonia species	ES	*Escallonia sp.*
Oblong Spurge	EUES	*Euphorbia oblongata*
Tall fescue	FEAR	*Festuca arundinaceae*
Fennel, Sweet	FOVU	*Foeniculum vulgare*
French broom	GEMO	*Genista monspessulana*
Chilean Gunnera	GUCH	*Gunnera chilensis*
English and Algerian ivy	HEHE	*Hedera helix*
Kahili ginger	HEGA	*Hedychium gardneranum*
Licorice Plant	HEPE	*Helichrysum petiolatum*
Morning Glory species	IPMU	I*pomea mutiblis or acuminata, or alba*
Giant pea	LALA	*Lathyrus latifolia*
Spanish lavender	LAST	*Lavandula stoechas*
Perennial pepperweed	LELA	*lepidium latifolium*
Shasta Daisy and hybrids	LEMA	*Leucanthemum maximum*
Ox-eye daisy	LEVU	*Leucanthemum vulgare*

Sweet alyssum	LOMA	*Lobularia maritime*
Forget-me not	MYLA	*Myosotis laxa*

COMMON NAME	SPECIES CODE	SCIENTIFIC NAME
Chilean Nassella	NANE	*Nassella neesiana*
Nassella	NAMA	*Nassella manicata*
Dallas grass	PADI	*Paspalum dilatatum*
Kikuyu grass	PECL	*Pennisetum clandestinum*
Harding grass	PHAQ	*Phalaris aquatica*
Canary Reed Grass	PHAR	*Phalaris arrundinaceae* (UNCONFIRMED)
Timothy grass	PHPR	*Phleum pretense*
Black seeded grass	PI sp.	*Piptochaetum sp.*
Wild radish	RASA	*Raphanus sativus*
Dog Rose/Sweetbriar	ROEL	*Rosa eleganteria*
Himalayan blackberry	RUDI	*Rubus discolor*
Thornless blackberry	RUCA	*Rubus ulmifolius*
Pennsylvania blackberry	RUPE	*Rubus pensylvanicus Stinson*
Mourningbride	SCAT	*Scabiosa atropurpurea*
Kangaroo apple	SOLA	*Solanum laciniatum*
Wand or Harlequin Flower	SPTR	*Sporaxis tricolor or grandiflora*
Teucrium	TEGL	*Teucrium glandulosum*
Gorse	ULEU	*Ulex europaeus*
Periwinkle	VIMA	*Vinca major*
Calla lily	ZAAE	*Zantedeschia aethiopica*
INVASIVE TREES		
Green Wattle	ACDE	*Acacia decurrens*
Sydney Golden Wattle	ACLO	*Acacia longifolia lanceolate* leaves, yell fls
Acacia	ACVE	*Acacia verticillata* needle like leaves, yellow fls
Blackwood acacia	ACME	*Acacia melanoxylon*
Paradox acacia	ACPA	*Acacia paradoxa*
Mirror Bush	CORE	*Coprosma repens*
Monterey cypress	CUMA	*Cupressus macrocarpa*
Blue Gum Eucalyptus	EUGL	*Eucalyptus globulus*
English Holly	ILAQ	*Ilex aquifolium*
Australian Tea Tree	LELA	*Leptospermum laevigatum*
Glossy Privet	LILU	*Ligustrum lucidum*
Myoporum	MYLA	*Myoporum laetum*
Monterey pine	PIRA	*Pinus radiata*
Mock Orange/Victorian box	PIUN	*Pittosporum undulatum & crassifolium*

G. PLANTING PLAN FOR SF-87A, 1970

Source: Prentiss French and US Army Corps of Engineers, "Air Defense Missile Site SF-87...Master Plan, Future Development Plans, Planting Plan," March 1970," Golden Gate National Recreation Area, PARC, D246 F2. The key to this planting plan has not been found; it documents the Army's intended character for the plantings at Nike administration areas.



H. 1945 AERIAL PHOTOGRAPH OF EAST FORT BAKER

Source: USGS aerial, October 28, 1945, 7ARD07044_050. This photograph provides a reference for treatment of features at the Fort Baker Main Post, Mine Depot, Horseshoe Cover Waterfront, and Horseshoe Cove Defenses according to the recommended philosophy of managing the landscape for its World War II-era character.



I. PLANNED NATURAL RESOURCE PROJECTS AT THE MARIN HEADLANDS

Source: Golden Gate National Recreation Area, "rptActivityByPriority" (as of June 20, 2017), filtered for projects with relevance to the Marin Headlands cultural landscape. The projects reflect the park's a five-year plan for natural resources.

Priority Resource	Component	Priority	Activity	Short Term Goal
Geologic Resources and Processes	Beaches	High	Develop and implement beach geomorphology monitoring at park beaches in Marin County (Stinson Beach, Rodeo Beach, Muir Beach); and monitor beach/nearshore geomorphology at Ocean Beach by	Protect beaches and processes that support beaches while facilitating adaptation to climate change
Wildlife Communities	Birds	Medium	Implement pet restrictions to protect shorebirds (public education, fencing, enforcement)	Minimization of human-bird conflicts
Wildlife Communities	Birds	Medium	Monitor disturbance impacts to shorebirds	Minimization of human-bird conflicts
Wildlife Communities	Birds	High	Protect birds with seasonal restrictions on human activities and adapt as necessary with changing climate regimes and species compositions	Sustained biodiversity; species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Wildlife Communities	Birds	High	Monitor landbird communities	Sustained biodiversity; species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Wildlife Communities	Birds	Medium	Monitor birds with beachwatch program	Sustained biodiversity; species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Wildlife Communities	Birds	Medium	Complete landbird inventories	Sustained biodiversity; species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Wildlife Communities	Birds	Medium	Monitor raptor migration	Sustained biodiversity; species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Threatened, Endangered, and Sensitive Species	California red-legged frog	High	Monitor occupancy of suitable breeding habitats, abundance of egg masses, and occupancy of CRLF	Self-sustaining populations of CRLF in current watersheds
Threatened, Endangered, and Sensitive Species	California red-legged frog	Medium	Protect CRLF habitat and individuals through implementation of BMPs and education (information dissemination on habitats to project managers,	Self-sustaining populations of CRLF in current watersheds
Threatened, Endangered, and Sensitive Species	California red-legged frog	Low	Conduct non-breeding habitat use study	Understand non-breeding habitat use by CRLF at Rancho
Climate	Climate: Highly-vulnerable	Medium	Develop and implement adaptation plan for protecting California red-legged frog from climate	Species viability within potential ranges, preferably within the park
Climate	Climate: Highly-vulnerable	Medium	Develop and implement adaptation plan for protecting Potentilla from climate and non-climate	Species viability within potential ranges, preferably within the park
Climate	Climate: Highly-vulnerable	High	Develop and implement adaptation plan for protecting Mission Blue Butterfly from climate and	Species viability within potential ranges, preferably within the park
Climate	Climate: Highly-vulnerable	High	Identify species highly vulnerable to climate change stressors	Species viability within potential ranges, preferably within the park
Climate	Climate: Highly-vulnerable	High	Develop and implement adaptation plan for protecting marsh sandwort from climate and non-	Species viability within potential ranges, preferably within the park
Climate	Climate: Highly-vulnerable	Medium	Develop and implement adaptation plan for protecting Black Abalone from climate and non-	Species viability within potential ranges, preferably within the park
Climate	Climate: Highly-vulnerable species	Medium	Develop and implement adaptation plan for species highly vulnerable to climate change stressors that are not called out specifically in this "Climate: Highly-	Species viability within potential ranges, preferably within the park
Climate	Climate: Hydrology	High	Monitor rainfall and streamflow with technical assistance from partners as needed (e.g., NPS WRD, USGS) to track frequency and magnitude of extreme	Better understanding of trends in frequency and magnitude of extreme events
Climate	Climate: Hydrology	Low	Encourage local agencies to promote water conservation and ensure compliance with permitting requirements	Adaptation of resources and facilities to minimize damage from extreme events (drought, flood)
Climate	Climate: Native Vegetation Communities	Low	Track locations impacted by Phytophthora or other pests/pathogens, accounting for potential vulnerabilities in relation to climate change	Plant community and species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Climate	Climate: Native Vegetation Communities	High	Develop and implement BMPs to prevent spread of invasive plants and pathogens in response to climate change	Plant community and species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Climate	Climate: Native Vegetation Communities	Low	Develop and implement a climate adaptation plan for vegetation	Plant community and species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Climate	Climate: Native Vegetation Communities	High	Spacially analylze vulnerability of ecosystems to invasive plants for prioritizing invasive plants/populations for inventory and control,	Plant community and species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Climate	Climate: Native Vegetation Communities	High	Manage highest priority invasives parkwide, accounting for potential range changes with climate change	Plant community and species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Terrestrial Native Plant Communities	Coastal dunes and dune scrub	Medium	Install and maintain appropriate fencing and signage to manage visitor use in dune habitats	Accommodation of visitor use in a manner that protects coastal dunes

Terrestrial Native Plant Communities	Coastal dunes and dune scrub	Low	Monitor dune systems	Maintenance of extent and composition of coastal dune plant communities, including presence of rare dune plants
Terrestrial Native Plant Communities	Coastal grasslands	Medium	Maintain coastal grasslands through succession management and invastive plant management in highest priority locations	Maintenance of extent and composition of intact coastal grassland communities to the extent feasible in relation to climate change
Terrestrial Native Plant Communities	Coastal grasslands	High	Map, assess, and prioritize native grasslands parkwide for treatment	Maintenance of extent and composition of intact coastal grassland communities to the extent feasible in relation to climate change
Threatened, Endangered, and Sensitive Species	Coho and steelhead (CCC)	Medium	Conduct study of steelhead habitat use and potential within Rodeo Lagoon watershed	Attain self-sustaining populations of Coho and steelhead in all suitable park streams and meet recovery plan goals
Threatened, Endangered, and Sensitive Species	Coho and steelhead (CCC)	Medium	Monitor steelhead abundance in target streams/water bodies	Attain self-sustaining populations of Coho and steelhead in all suitable park streams and meet recovery plan goals
Threatened, Endangered, and Sensitive Species	Coho and steelhead (CCC)	Medium	Monitor steelhead occupancy of suitable streams (including inventory of streams to determine habitat suitability)	Attain self-sustaining populations of Coho and steelhead in all suitable park streams and meet recovery plan goals
Threatened, Endangered, and Sensitive Species	Coho and steelhead (CCC)	Medium	Implement actions to improve water quality conditions in Rodeo Lagoon for juvenile steelhead and other native fish	Attain self-sustaining populations of Coho and steelhead in all suitable park streams and meet recovery plan goals
Freshwater Aquatic Ecosystems	Freshwater invertebrates	Low	Increase capacity for early detection of known priority invasive aquatic animals	Protection of park waters from invasive aquatic invertebrates (should this be rolled up to invasive animals)
Freshwater Aquatic Ecosystems	Freshwater invertebrates	High	Develop and implement BMPs to prevent spread of invasive aquatic invertebrates	Protection of park waters from invasive aquatic invertebrates (should this be rolled up to invasive animals)
Freshwater Aquatic Ecosystems	Freshwater invertebrates	Low	Conduct CA bioassessment protocol inventories on streams and ponds/wetlands lacking past surveys	Improved understanding of freshwater invertebrate biodiversity in park
Freshwater Aquatic Ecosystems	Freshwater wetlands	Medium	Complete ground-based inventory and functional assessment (partially completed in early 2000s)	Improved knowledge of freshwater wetlands extent and condition
Freshwater Aquatic Ecosystems	Freshwater wetlands	Medium	Prioritize protection, enhancement and restoration activities for freshwater wetlands	Maintenance and improvement of freshwater wetland community and species viability within potential ranges under climate change, preferably within the park.
Geologic Resources and Processes	Geologic features	Medium	Resource management staff and project managers work together to protect and/or document geologic exposures	Geologic exposures available for study and interpretation, and to promote research and education
Geologic Resources and Processes	Geologic features	Low	Resource management staff and interpretation division work together to interpret geologic resources at geologic exposures	Geologic exposures available for study and interpretation, and to promote research and education
Geologic Resources and Processes	Geologic processes	Medium	Work with facilities managers in park to minimize impacts to geologic resources from hill-slope erosion	Mitigate hill-slope erosion high priority anthropogenically-accelerated erosion
Geologic Resources and Processes	Geologic processes	Medium	Continue to influence regional sediment planning and implement regional plans as appropriate	Mitigation of local anthropogenic disruption of sediment dynamics and use of knowledge/research to sustain beach, shoreline, and subtidal processes to the extent possible
Geologic Resources and Processes	Geologic processes	Medium	Review project proposals and establish permit conditions for activities with the potential to disrupt sediment processes on GOGA lands/waters	Mitigation of local anthropogenic disruption of sediment dynamics and use of knowledge/research to sustain beach, shoreline, and subtidal processes to the extent possible
Geologic Resources and Processes	Geologic processes	Low	Complete LIDAR survey and analysis to improve understanding of coastal bluff erosion rates	Improved understanding of coastal bluff erosion rates
Water Resources and Processes	Hydrological processes	Low	Inventory age and source water in park springs	Improved understanding of locations and water sources/ages of park springs and seeps
Marine Aquatic Ecosystems	Lagoons	Low	Increase natural shoreline habitat at Rodeo Lagoon through implementation of restoration plan (work with Env'l Mngt to address contaminant data gap	High quality lagoon habitat and functionality
Wildlife Communities	Mammals	Medium	Monitor harbor seal abundance and productivity	Harbor seal species viability within potential range, preferably within the park within the context of sea level rise
Wildlife Communities	Mammals	Low	Formalize sensitive marine resource zone through rulemaking to protect harbor seals from boaters and	Minimization of human-wildlife conflicts
Wildlife Communities	Mammals	High	In partnership with regional working group manage human/coyote conflicts	Minimization of human-wildlife conflicts
Wildlife Communities	Mammals	Low	Provide public education to boaters and fishermen to minimize human-seal conflicts at Point Bonita	Minimization of human-wildlife conflicts
Wildlife Communities	Mammals	Medium	Install/replace trash cans with wildlife-resistant units	Minimization of human-wildlife conflicts

Wildlife Communities	Mammals	Medium	Provide public education to minimize human-wildlife conflicts (e.g., discourage wildlife feeding, feeding animals indoors, keeping cats indoors, keep pets on	Minimization of human-wildlife conflicts
Wildlife Communities	Mammals	High	Inventory bat populations	Sustained biodiversity; species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Wildlife Communities	Mammals	Medium	Conduct assessment of migratory corridor needs and opportunities relative to GOGA lands, particularly for large mammals	Improved habitat condition and effectiveness of habitat connectivity for large mammals including facilitation of potential climate-driven species migration
Threatened, Endangered, and Sensitive Species	marsh sandwort	High	Maintain self-sustaining populations of marsh sandwort at the limited sites with suitable habitat	Achievement of recovery plan goals for federally listed plant species
Threatened, Endangered, and Sensitive Species	marsh sandwort	High	Control Cape ivy in Rodeo Valley to protect marsh sandwort populations	Achievement of recovery plan goals for federally listed plant species
Natural Lightscapes	Natural Lightscapes	High	Identify priority areas and reduce non-natural night lighting in priority areas through review of activities and projects, and working on external sources of	Minimize non-natural night light in the park
Terrestrial Native Plant Communities	Parkwide vegetation	High	Prioritize invasive plants/populations for inventory and control, accounting for potential range changes with climate change	Plant community and species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Terrestrial Native Plant Communities	Parkwide vegetation	Medium	Coordinate with Trails Program to revegetate areas distrubed by trails projects	Plant community and species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Terrestrial Native Plant Communities	Parkwide vegetation	Medium	Identify Special Ecological Areas to prioritize vegetation management actions and inform broader park management	Plant community and species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Terrestrial Native Plant Communities	Parkwide vegetation	High	Manage highest priority invasives parkwide, accounting for potential range changes with climate change	Plant community and species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Wildlife Communities	Reptiles and amphibians	Low	Track occurences of known and novel herpetofauna disease through partnerships	Sustained biodiversity; species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Wildlife Communities	Reptiles and amphibians	Medium	Minimize disease existence and threats in herpetofauna	Sustained biodiversity; species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Wildlife Communities	Reptiles and amphibians	Low	Monitor reptiles and amphibians at target habitats and locations using cover boards	Sustained biodiversity; species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Wildlife Communities	Reptiles and amphibians	Low	Conduct inventory for stream dwelling amphibians where data gaps present (e.g., San Mateo streams)	Sustained biodiversity; species viability within potential ranges, preferably within the park (species incoming and migrating elsewhere)
Terrestrial Native Plant Communities	Riparian	Medium	Map, protect, and restore riparian habitat parkwide consistent with LCPs and/or CZMA requirements to promote connectivity	Maintenance and restoration of riparian communities and species composition including connectivity
Terrestrial Native Plant Communities	Riparian	Low	Complete assessment of riparian habitat connectivity and identify opportunities for restoration	Maintenance and restoration of riparian communities and species composition including connectivity
Marine Aquatic Ecosystems	Rocky intertidal habitat	Medium	Complete large scale community map of rocky intertidal community	Improved understanding of spatial distribution and composition of rocky intertidal habitat
Freshwater Aquatic Ecosystems	Stream and pond habitat	Medium	Monitor and report habitat monitoring in accordance to established evaluation criteria (Monitor and report on One Tam, Surfer Lot wetland, Banducci floodplain, etc. in accordance to	Stream and pond habitats meet reference criteria for habitat conditions
Threatened, Endangered, and Sensitive Species	T&E Butterflies	High	Enhance Mission Blue Butterfly habitat through invasive non-native species management	Sustained existence of Mission Blue Butterfly; species viability within potential ranges, preferably within the park
Threatened, Endangered, and Sensitive Species	T&E Butterflies	High	Protect MBB habitat and individuals through implementation of BMPs and education (information dissemination on habitats to project managers,	Sustained existence of Mission Blue Butterfly; species viability within potential ranges, preferably within the park
Threatened, Endangered, and Sensitive Species	T&E Butterflies	High	Improve Mission Blue Butterfly habitat resilience through host plant diversification at Sweeney, Milagra, and MAHE	Sustained existence of Mission Blue Butterfly; species viability within potential ranges, preferably within the park
Threatened, Endangered, and Sensitive Species	T&E Butterflies	High	Enhance grassland habitat through management of native scrub to promote MBB occupation and reconnect fragmented populations when	Sustained existence of Mission Blue Butterfly; species viability within potential ranges, preferably within the park
Threatened, Endangered, and Sensitive Species	T&E Butterflies	Low	Remove eucalyptus at Battery Duncan to expand butterfly habitat	Sustained existence of Mission Blue Butterfly; species viability within potential ranges, preferably within the park

Threatened, Endangered, and Sensitive Species	Tidewater goby	Low	Develop strategy to increase regional resilience of Tidewater goby in conjunction with USFWS and experts by increasing distribution of tidewater gobies within the park's legislative boundaries (Bolinas and	Species viable within potential ranges, preferably within the park
Threatened, Endangered, and Sensitive Species	Tidewater goby	Medium	Monitor population abundance of Tidewater Goby at Rodeo Lagoon	Species viable within potential ranges, preferably within the park
Water Resources and Processes	Water Quality	High	Work with other divisions and external partners as needed to ensure adequate water quality protections are employed during projects: (BMPs,	Maintain or improve water quality conditions protective of healthy aquatic ecosystems and beneficial uses
Water Resources and Processes	Water Quality	Low	Monitor beach water quality (pathogens) per AB 411; partner with counties	Maintain or improve water quality conditions protective of healthy aquatic ecosystems and beneficial uses
Water Resources and Processes	Water Quality	Medium	Complete study to determine water quality factors contributing to fish kills in Rodeo Lagoon; study will	Increased understanding of factors contributing to poor water quality
Threatened, Endangered, and Sensitive Species	Western pond turtle	Medium	Reintroduce Western pond turtle from local donor site(s) with partners (Sonoma State, PORE, and SF	Self-sustaining populations of Western pond turtle in southern Marin
Wildlife Communities	Wildlife	Low	Track emerging invasions of non-native animals (pigs, turkeys, bullfrogs, cats, rats, red fox) and mitigate as	Reduction of impacts from non-native animals
Wildlife Communities	Wildlife	Low	Provide education to neighbors about impacts of feral animals on park resources	Reduction of impacts from non-native animals

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