



Grant-Kohrs Ranch Cultural Landscape Report, Part Two

Treatment Recommendations



Seven Component Landscapes

Home Ranch Complex
East Feed Lot / Warren Hereford Ranch
Grant-Kohrs Residence
Warren Residence
Riparian Woodland
Railroad Corridor and Barrow Pit / Wetland
Development Zone

June 2017

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East Feed Lot / Warren Hereford Ranch
Grant-Kohrs Residence
Warren Residence
Riparian Woodland
Railroad Corridor and Barrow Pit / Wetland
Development Zone

June 2017

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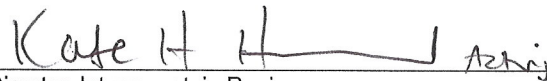
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Executive Summary

PROJECT OVERVIEW AND PURPOSE

The purpose of this Cultural Landscape Report, Part Two, Treatment Recommendations (CLR Part Two) is to provide appropriate treatment guidance and strategies for the preservation and enhancement of cultural landscape resources within the seven component landscapes of the Grant-Kohrs Ranch (GRKO) National Historic Site and National Historic Landmark. This document presents a vision for the overall landscape condition and guidance for the long-term management of cultural and natural resources. This guidance is intended to be broad-brush. Park personnel will develop specific strategies, further development of alternatives, analysis, and selections. However, some detailed guidance and suggested treatments are provided to address specific management concerns.

The Grant-Kohrs cultural landscape includes nine component landscapes. Two of these, Pasture/Hay Field and Upland Pasture are addressed in the previous CLR Part Two report completed in 2009.¹ The 2009 report established the treatment approach and organization of recommendations, which is carried forward into this document. The other seven component landscapes are addressed in this CLR Part Two. These seven component landscapes cover approximately 638 acres.

- Home Ranch Complex
- East Feed Lot / Warren Hereford Ranch
- Grant-Kohrs Residence
- Warren Residence
- Riparian Woodland
- Railroad Corridor and Barrow Pit/Wetland
- Development Zone

The basis of this report is the 2009 Cultural Landscape Report Part One which is the main source of documentation for site history, significance, existing condition and contributing features of GRKO.² This report provides a brief review of the GRKO historical background and significance and an update to the previously completed CLR Part One to reflect current conditions. It also provides the treatment plan for the seven component landscapes.

The CLR Part Two is prepared in accordance with the mission of the NPS and guidance offered in the most recent versions of various federal standards documents, and conforms to National Park Service guidelines and other precedents, including the following.

- NPS Organic Act
- Sections 106 and 110 of the NHPA
- NPS Guide to Cultural Landscape Reports (1998);
- NPS Management Policies (2006);
- NPS Director's Order 28 (Cultural Resources Management Guidelines, 1998);
- National Register Bulletin No. 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes (1999);
- Secretary of the Interior's Standards for Treatment of Historic Properties, with Guidelines for the Treatment of Cultural Landscapes (1996);
- The Secretary of the Interior's Guidelines and Standards for Archeology and Historic Preservation (1983);
- NAGPRA (Native American Graves Protection and Repatriation Act);
- AIRFA (American Indian Religious Freedom Act)
- Natural Resource Management Reference Manual #77
- National Environmental Policy Act

¹ Shapins Belt Collins, GRKO CLR, Part Two Pasture Hay Fields and Upland Pasture. 2009.

² John Milner Associates, Cultural Landscape Report Part One for Grant-Kohrs Ranch, 2004.

REPORT OVERVIEW

In addition to the executive summary, this document includes the following chapters.

Chapter 1 - Background and Part One Update

Chapter 2 - Treatment Approach

Chapter 3 - Treatment Plan

Chapter 1 summarizes GRKO's historical significance and integrity, and provides a brief physical description of the seven component landscapes included in this document. Contributing landscape features and patterns are identified for each component landscape.³

Chapter 2 describes the overall treatment approach for the GRKO cultural landscape, and identifies management issues to be addressed by the treatment plan. The management philosophy is identified in this chapter in accordance with the treatment philosophy established in the CLR Part Two Pasture/Hay Field and Upland Pasture.

Chapter 3 presents general treatment guidance and specific treatment recommendations for the seven component landscapes. These are organized by landscape characteristic, e.g. circulation, vegetation, and are illustrated graphically.

KEY FINDINGS OF THE CLR

This section outlines key findings, including those of this document and findings from CLR Part One. Key findings include relevant management issues, the primary treatment approach, and key recommendations for the seven component landscapes.

Key Findings from CLR Part One

- The National Historic Landmark (NHL) District—nearly the entire ranch—is significant under NHL Criterion 1 in the areas of Agriculture and Developing the American Economy.
- The ranch possesses state and national significance under National Register Criteria A and C.
- CLR Part One recommends the ranch also be considered significant at the state and national level under National Register Criterion B for its association with John Grant, Conrad Kohrs, and Conrad Warren.
- CLR Part One establishes the period of significance for the ranch as 1862 to 1982, including two subperiods: 1862 to 1919 and 1929 to 1982.

Key Management Issues

Management issues were identified through correspondence with park personnel and review of literature. These are challenges the treatment recommendations assist in addressing.

- Grant-Kohrs Ranch is an operating cattle ranch, which is central to GRKO's founding legislation.
- The Clark Fork River is an active Superfund site and is to be remediated in the near future.
- Circulation patterns do not reflect the historic condition.
- There are safety concerns and conflicts between the operating ranch and visitors.
- NPS added fence types are not readily distinguishable from historic fence types.

3 This is an update to the work previously completed in the CLR Part One.

Primary Treatment

The overall landscape treatment for the Grant-Kohrs Ranch cultural landscape is preservation, with selected rehabilitation and restoration as needed.

Key Recommendations

Chapter 3 provides guidelines and specific treatments for the seven component landscapes, organized by topic. The following summarizes key recommendations.

General Guidance

- Provide universal access to specific buildings and spaces throughout GRKO. This includes access to the Warren Boat House and Dairy Barn.
- Provide additional pedestrian routes to connect disparate portions of the ranch, including a route from the Development Zone to the Warren Residence, and extending the Nature Path along the Clark Fork River, and potentially creating a community path along the abandoned Milwaukee Railroad.
- Reconstruct missing vegetation that occurred historically.
- Retain contributing circulation routes, and modify road surfaces to provide ease of access.
- Conduct further historical and archeological research into the residential gardens at the Grant-Kohrs Residence and Warren Residence. Verify plant locations and species grown.

Home Ranch Complex

- Preserve contributing ranch yards, buildings, structures, and vegetation. Retain supporting/non-contributing compatible features that are essential to the landscape character.
- Repair road surfacing to ensure positive drainage away from buildings and structures, and to provide a level walking surface.
- Provide accessible access to the Lower Yard with a route that meets universal access

requirements. Resurface the yard to provide a level, even surface.

- Plant additional cottonwood trees to supplement the existing mature tree stand.
- Reseed pastures as needed.

East Feed Lot / Warren Hereford Ranch

- Maintain NPS operations, but limit the number of vehicles / equipment stored so as to not diminish the historic ranch setting.
- De-emphasize Cattle Drive by removing the overhead gate. Remove the non-contributing portion of the road and repair fence alignments where they are not historically accurate if NPS operations are relocated from this area.

Grant-Kohrs Residence

- Formalize the main entrance to the residence. Resurface the drive in front of the residence, re-establish the grid of cottonwood trees, and maintain the symmetrical lawn in front of the residence. Restore carriage block and hitching posts per historic photographs.
- Repair the cobble wall adjacent to the residence and to reveal its full extents. Repair the landing and stone steps at the base (west) of the residence, and resurface paths to match the historic condition.
- Repair the stone walk between the residence and Bunkhouse.
- Maintain the perennial garden, utilizing historic plant species. Conduct further investigations into the type and arrangement of the historic garden.

Warren Residence

- Remove the overhead gate from Warren Drive.
- Reconstruct vegetation missing from the domestic landscape since 1988 NPS acquisition, following accurate historic documentation,

including shrubs and perennials, shade and evergreen trees.

- Reconstruct small scale features in-kind that have been removed since 1988 NPS acquisition where accurate documentation is available.
- Provide a universally accessible route into the Warren Boat House.

Riparian Woodland

- Manage grazing access within the riparian woodland. Allow for grazing where it occurred historically.
- Following the Superfund remediation, determine if and where fencing is needed at the Clark Fork River and if it should be permanent.

Railroad Corridor and Barrow Pit/Wetland

- Fully document and record the abandoned Milwaukee Railroad and all its components within GRKO.
- Preserve all railroad features at the south end of the ranch, and replace in-kind as needed. At the north end of the ranch, stabilize railroad features as possible and remove hazards as necessary.
- Clear vegetation within the historic railroad right-of-way in order to preserve the linear feature.

Development Zone

- Create a consistent NPS visitor experience by enhancing building style, plantings, and visitor amenities to distinguish the entrance and clearly mark the ranch as part of the NPS system.
- Connect the Development Zone to other parts of GRKO by adding new pedestrian routes.
- Provide new park signage along Business Loop 90 to clearly indicate the entrance to GRKO.

Chapter 1 - Background and Part One Update

HISTORICAL BACKGROUND AND SIGNIFICANCE

Grant-Kohrs Ranch National Historic Site is located in Powell County, adjacent to the town of Deer Lodge, Montana. The ranch is one of the last remaining great American West cattle ranches associated with the open range cattle industry of the 19th and early 20th centuries.^{1.1} The boundaries of the ranch encompass approximately 1,618 acres, only a fraction of what was once a much larger ranching operation. The ranch includes acres of grazing lands, pastures and hayfields, buildings and structures, a railroad, and a riparian corridor along Clark Fork River and its tributaries.

Grant-Kohrs Ranch was established by John Grant in 1862. It was purchased and operated by Conrad Kohrs from 1866 to 1920. Kohrs and his partner and half-brother, John Bielenberg, developed the ranch into the center of an expansive cattle empire. During the 1890s the ranch extended over 27,000 acres in the Deer Lodge Valley and surrounding area. The ranch's feed, water, and grazing rights extended over ten million acres of private and public land that spanned across much of the West. Grant and Kohrs' dominance of the regional beef market demonstrated to entrepreneurs the possibilities of developing the frontier, and the ability to run cattle over a virtual empire of open and free grassland.

The close of the open range era brought tremendous changes to the cattle industry. Conrad Kohrs sold off great portions of his once vast ranch. Conrad Kohrs Warren, Kohrs' grandson, began managing the ranch in the late 1920s, purchasing it in 1940. Conrad Warren transformed the ranch into a modern cattle breeding and sales complex. The Warren Ranch represents the modernization of cattle ranching on the Great Plains of the American West, specifically in the early 20th century, which marked the close of the open range. Warren continued active ranching until the early 1980s.

GRKO preserves and interprets the evolution of western cattle ranching throughout the 19th and 20th centuries. The Grant-Kohrs Ranch was designated a National Historic Landmark (NHL) in 1960, with a period of significance of 1862 to 1919, extending from the initial development of John Grant's ranch to the dissolution of the greater Kohrs Ranch.^{1.2} The NHL district is significant under Criterion 1 in the areas of Agriculture and Developing the American Economy. The ranch is listed in the National Register of Historic Places (NRHP) for state and national significance under National Register Criteria A and C, with a period of significance of 1929 to 1958, which includes the time Conrad Warren operated the ranch until dispersion of his purebred Hereford business.^{1.3}

Congress authorized establishment of the Grant-Kohrs Ranch NHS in 1972, and assumed management of the Warren Ranch in 1988. The NPS manages GRKO as an operating ranch to preserve and interpret the nationally significant themes it depicts.

The CLR Part One recommends the ranch be considered significant at the state and national levels under Criterion B for its association with Grant, Kohrs, and Warren. It recommends a period of significance of 1862 to 1982 to encompass two sub-periods: 1) 1862 to 1919: John Grant's establishment of the ranch to the dissolution of the Kohrs and Bielenberg cattle empire; and 2) 1929 to 1982: covering Conrad Warren's arrival at the ranch to his retirement from active ranching.^{1.4}

Altogether, Grant-Kohrs Ranch represents changes in agriculture, and the continuum of cattle ranching from the days of the open range into the modern era. Its cultural landscape encompasses the features that help interpret the story of western cattle ranching.

1.1 National Park Service, *The Cattlemen's Empire: Westward Expansion and the Extension of the National Boundaries to the Pacific, 1830-1898. The National Survey of Historic Sites and Buildings, Theme XV*. Washington D.C.: U. S. Department of the Interior, National Park Service, 1959.

1.2 *National Historic Landmark for Grant-Kohrs Ranch*, 2001.

1.3 *National Register of Historic Places Registration Form, Grant-Kohrs Ranch / Warren Ranch*, 2003.

1.4 John Milner Associates Inc., *Grant-Kohrs Ranch National Historic Site Cultural Landscape Report, Part One: Landscape History, Existing Conditions, and Analysis and Evaluation*. 2004, 1-12.

DESIRED FUTURE CONDITION

The cultural landscape of Grant-Kohrs Ranch National Historic Site preserves and interprets the legacy of cows, cowboys, and cattle barons. Here, in the shortgrass prairies of western Montana, successive generations of ranchers shaped the natural landscape to meet their needs. Over more than a century, they manipulated plant communities and built a collection of modest structures and landscape features to serve their purposes, giving rise to a distinctive landscape that bears witness to their values of hard work.

Today the NPS continues the tradition of working the land. They manage the park as a working ranch, yet also devote care to the preservation of natural resources. Under this approach, the entire spectrum of ranch resources has been preserved in excellent condition. NPS officials carefully manage the scene to portray every phase of the property's history, from the open range period of the mid-nineteenth century to the ranch's modernization in the mid-twentieth.

The heart of the ranch is the land itself: a western tableau of dry hills, wide fields, and open vistas. Grasslands cover most of the ranch: native shortgrass prairie on the dry hills and cultivated pasture grasses in the irrigated lowlands and uplands. The NPS sustains these healthy plant communities through grazing and other means. In keeping with the property's past, they maintain a mixed herd of longhorn, shorthorn, and Hereford cattle. Many of these animals have even been trained to eat noxious weeds, thus reducing their impact on the landscape.

Views of open spaces and agricultural scenes remain a major component of the visitor experience. Looking west, a visitor to the ranch will notice irrigated pastures and hay fields in the foreground and middleground. Predominantly introduced pasture species, these grasses grow tall in this well-watered environment. For much of the year, they shine a vibrant green, which sets off these irrigated fields from the dry hills beyond, which are clothed in tan and gold. One observes in this view patterns of land use and spatial organization that were in place during the period of significance. Due to careful management of grazing and irrigation regimes, and the selective removal of non-contributing fences,

these fields maintain an open, expansive quality as compared to contemporary neighboring ranches. One scarcely notices any separation between the upland pastures at the western edge of the park and the private lands beyond, which are protected by conservation easements and other agreements. From a distance, the NPS boundary fence is hardly visible, and cattle graze on both sides of the line. Further west, the forested slopes of distant mountains are the last features in view. Even this distant portion of the viewscape, lying well beyond the limits of the park, has been protected. Along with its partners, NPS is actively engaged in planning efforts to secure its long-term range survival.

A variety of built features, from historic hay stackers to irrigation ditches, attest to the working quality of the landscape. All of these contributing features are preserved and used to the greatest extent possible. The informal network of ranch roads has seen few changes since the mid-twentieth century. Roads are surfaced in dirt or gravel and receive fairly light use, except during periods of busy activity on the ranch. Constructed over many decades, the historic irrigation system of ditches, headgates, and pumps is maintained in good working order and retains its essential role in supplying water to hayfields and pastures. The NPS updates irrigation equipment and implements other necessary changes in a way that is compatible with the ranch's history and visual character. For example, they preserve the historic pump houses in good condition and design any modifications to these structures to be unobtrusive and visually compatible.

The evolution of ranching over time may also be observed in the variety of historic fence types on the property. The presence of non-contributing fences that were added after the period of significance has been reduced, especially in the dry ranges of the Upland Pastures component landscape. Before making any changes to the fence network, NPS managers carefully weigh historic evidence with effects to wildlife and other natural resources, as well as the impacts to views. The NPS maintains this entire suite of historic infrastructure and uses it in the day-to-day operations of the ranch. As a host site for innovative preservation programs, the park attracts and trains skilled personnel, including

students and volunteers, who learn the historic practices and skills integral to the ranch's long-term preservation and daily operations.

Public use and interpretation of the landscape has expanded, with careful attention to enhancing visitor experience through compatible activities. A better-informed public takes advantage of the park's opportunities for self-guided hikes and horseback rides, as well as future new guided programs such as overnight cowboy camps. In general, interpretive signs are avoided in favor of forms of interpretation that do not require additions to the landscape. However, a limited number of well-sited directional signs ensure that non-guided visitors will be properly oriented and safe. These directional signs are very low profile and unobtrusive, and are compatible with the historic setting in materials, color, and finish.

The Cottonwood Creek Trail has been restored and realigned to avoid major flooding and is better incorporated into interpretive programming. Aside from this trail, built visitor facilities are kept to an absolute minimum. By seeking creative solutions, the NPS implements accessibility with few, if any, permanent changes to the landscape. In summary, increased use of the cultural landscape reflects an enhanced appreciation for it as one of the park's primary assets. The public views the ranch landscape as a collection of interconnected places and spaces where visitors may imagine themselves in another time, and experience the sights, sounds, smells, and traditional practices of a historic American cattle ranch.

Grant-Kohrs Ranch NHS Component Landscapes

2000 0 2000 Feet



Component Landscapes

-  Pasture/Hay Fields
-  East Feed Lot/Warren Hereford Ranch
-  Grant-Kohrs Residence
-  Railroad Bed & Borrow Pit/Wetland
-  Home Ranch Complex
-  Upland Pasture
-  Riparian Area/Woodland
-  Warren Residence
-  Development Zone
-  City-owned

Map Sources: Base Geographic Information Systems (GIS) data derived from National Park Service, Grant-Kohrs Ranch National Historic Site GIS Program, compiled 1998. Metadata available from World Wide Web: [<http://www.nps.gov/gis/metadata/grko/>]. GIS data supplemented by 2002 field observations and 1994 color aerial photographs provided by the National Park Service, Grant-Kohrs Ranch NHS.

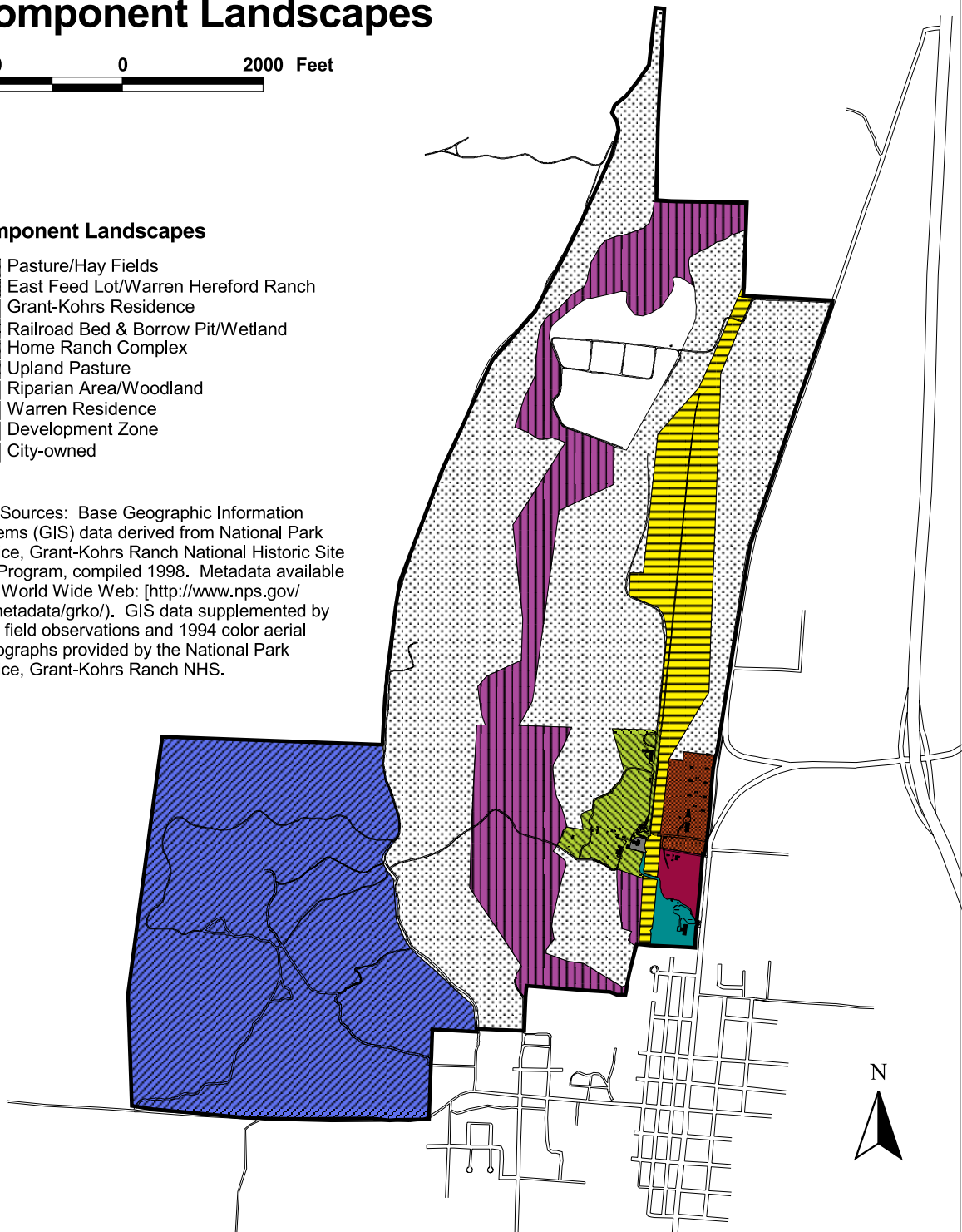


Figure 1-1. The CLR Part One identified nine component landscapes. This CLR Part Two addresses treatment for seven component landscapes: Home Ranch Complex; East Feed Lot / Warren Hereford Ranch; Grant-Kohrs Residence; Warren Residence; Riparian Woodland; Railroad Corridor and Barrow Pit/Wetland; and Development Zone. The CLR Part One erroneously included pastures and hayfields within Upland Pasture. (Map adapted from John Milner Assoc.)

PROJECT AREA DESCRIPTION - COMPONENT LANDSCAPES

The CLR Part One organizes the Grant-Kohrs Ranch into nine component landscapes that formed as a result of design, construction, agricultural and grazing practices under Kohrs, Bielenberg, and Warren. This document addresses seven of these component landscapes, as follows.

- Home Ranch Complex
- East Feed Lot / Warren Hereford Ranch
- Grant-Kohrs Residence
- Warren Residence
- Riparian Woodland
- Railroad Corridor and Barrow Pit/Wetland
- Development Zone

Each component landscape has a ‘period of association’ that the CLR Part One identified as a range of dates most strongly represented by the landscape. Typically, the period of association is connected to either the Grant/Kohrs period or the later Warren period of ranch development. The periods of association for each component landscape are listed in Figure 1-2. The numbering scheme (e.g. B for buildings) and names of features are based upon the CLR Part One and are used for consistency with that document, however the park may currently refer to features differently.

Grant-Kohrs Ranch - Component Landscapes and Significance

<u>Component Landscape</u>	<u>Period of Significance</u>	<u>Period of Association</u>	<u>National Register Listing</u>
Home Ranch Complex (Illustration 1-2)	1862 to 1982	1870 to 1954	NHL / NRHP
East Feed Lot / Warren Hereford Ranch (Illustration 1-3)	1862 to 1982	1952 to 1982	NRHP
Grant-Kohrs Residence (Illustration 1-4)	1862 to 1982	1890 to 1934	NHL / NRHP
Warren Residence (Illustration 1-5)	1862 to 1982	1952 to 1993	NRHP
Riparian Woodland (Illustration 1-7)	1862 to 1982	1972 to present	NHL
Railroad Corridor and Barrow Pit / Wetland (Illustration 1-7)	1862 to 1982	1908 to 1982	NHL
Development Zone (Illustration 1-8)	1862 to 1982	1975 to present	NRHP

Figure 1-2. The period of significance remains constant for the entire Grant-Kohrs Ranch. Each component landscape is more strongly represented by a period of association, which represents a timeframe when the majority of its landscape features were constructed.

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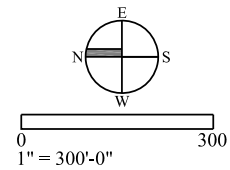


- Legend**
- Component Landscape Boundary Line
 - GRKO Boundary Line
 - Roads
 - Railroads
 - Buildings and Structures
 - Fence
 - Bench
 - Streams/Sloughs/Ditches
 - Vegetation
 - Superfund Boundary

- Key Buildings and Structures**
- B-1 Bunkhouse Row (HS-2)
 - B-30 Warren Barn (HS-64)
 - B-44 Main Residence (HS-1)
 - B-45 Warren Residence (Grant-Kohrs Residence) (HS-58)
 - B-53 Visitor Contact Station

Illustration 1-1

Map Sources: Adapted from Oculus / JMA, 2004, and GRKO NHS GIS data 2015.



JUNE 2017		TITLE OF PROJECT	
UNITED STATES		CULTURAL LANDSCAPE REPORT	
DEPARTMENT OF THE INTERIOR		TITLE OF DRAWING	
GRANT-KOHR'S RANCH		EXISTING CONDITION - OVERALL	
NATIONAL HISTORIC SITE		NAME OF PARK	
		GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE	
REGION	COUNTY	STATE	
INTERMOUNTAIN	POWELL	MONTANA	

Home Ranch Complex

The Home Ranch Complex includes the landscape historically developed by John Grant, Conrad Kohrs, and Conrad Warren, including the ranch and building complex (excluding the main residence) and its adjacent lands (Illustration 1-2). This component landscape contains the most highly developed area within GRKO. It includes all landscape features associated with the core complex of the Grant-Kohrs Ranch. It is bounded by the railroad corridor on the east, the riparian corridor of the Clark Fork River on the west, and includes the Lower Yards, Lower House Yards, Bunkhouse Yards, Johnson Creek Field, L-Barn South Field, West Corrals, and West Feedlot.

Historically this area of approximately 36 acres served as the hub of ranch operations, providing such functions as housing, equipment and food storage, and health maintenance care for livestock. Dominated by a variety of historic buildings and structures, this component landscape is an integral part of the ranch, both in terms of the spatial relationships between buildings and the various landscape features.^{1.5}

1.5 John Milner Associates, *CLR Part One*, 3-1-1.

The Home Ranch Complex is bordered on the east by a topographical bench and on the west by the Clark Fork River. This component landscape contains the oldest buildings in GRKO, including the Bunkhouse (HS-2), Ice House (HS-5), Draft Horse Barn (HS-7), and Oxen Barn (HS-10). The numerous outbuildings were clustered together to support domestic and ranching activities and were oriented parallel or perpendicular to the Grant-Kohrs Residence.

The vegetation in the Home Ranch Complex has been grazed and managed for ranching operations. Several large cottonwoods and willows are near Johnson Creek. Portions of Johnson Creek between the Lower Yard and Loop Road were fenced on both sides to control grazing but this created excessive water and vegetation. This area will be restored to its historic configuration with a fence on the north side and no fence on the south side. Two natural springs are within the complex in the Lower Yards. The Kohrs-Manning Ditch traverses the Home Ranch Complex, which dates to circa 1870 and provides irrigation water to fields between the Clark Fork River and the railroad. The ditch crosses Johnson Creek via a wooden flume.



Figure 1-3. The Home Ranch Complex is the most highly developed area, and includes all landscape features associated with the core complex of the Grant-Kohrs Ranch. (Mundus Bishop, 2015)

Circulation through the Home Ranch Complex includes several narrow, gravel/dirt roads, many of which date to the late 19th century. A great diversity of fence and gate types occur and include: Jack-Leg fences; Vertical Board fence; 5-rail stacked-end fence; simple post and rail fence; chicken wire fence; stacked log fence; overhead gate; red-painted wood gate; 5-rail braced gates; and vertical board gate.

The Home Ranch Complex component landscape retains integrity in all seven aspects including location, design, setting, materials, workmanship, feeling, and association. Buildings, circulation routes, spatial patterns, and small scale features including fences remain in original locations. The ranch remains within the natural landscape adjacent to the Clark Fork River with views to the surrounding mountains that retain integrity of setting. Responses to natural features and systems, patterns of spatial organization, physical construction, and functional relationships of buildings, structures, fences, fields, corrals, views, roads, and constructed water features convey the organization and operation of the ranch to visitors and convey the character and use during the period of significance. Daily operations of the ranch,

the presence of livestock, and land management techniques reflect the historic feeling of the ranch, preserving its historic character. The feeling is somewhat diminished due to reduction in intensity of use and number of livestock within the Home Ranch Complex (this area would have housed the greatest diversity of livestock species).

The Home Ranch Complex retains integrity in materials, workmanship, design and association. Contributing features retain hand-craftsmanship, native materials, and the utilitarian style of a working ranch. Materials have been replaced in-kind where needed, and reflect the historic materials used. The Home Ranch Complex retains integrity of association to John Grant, Conrad Kohrs, and Conrad Warren as the ranch preserves the physical components from each time period representing the evolution of the open range cattle industry to modern practices.^{1.6}

The period of association most strongly represented by the existing conditions of the Home Ranch Complex component landscape is 1870 to 1954. The entire area lies within the NHL and NRHP districts.

1.6 John Milner Associates, *CLR Part One*, 4-74.



Figure 1-4. The Home Ranch Complex was the heart of the historic ranch and includes barns and outbuildings, corrals, yards and fields, narrow dirt roads, Johnson Creek and natural fresh water springs. (Mundus Bishop, 2015)

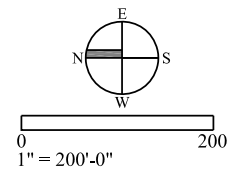


- Legend**
- Component Landscape Boundary Line
 - GRKO Boundary Line
 - Roads
 - Railroads
 - Buildings and Structures
 - Fence
 - Bench
 - Streams/Sloughs/Ditches
 - Vegetation
 - Spring
 - Superfund Boundary

- Buildings and Structures**
- B-1 Bunkhouse Row (HS-2)
 - B-2 Ice House (HS-5)
 - B-3 Coal Shed (HS-4)
 - B-4 Blacksmith Shop/Garage (HS-3)
 - B-5 Granary/Roller Mill (HS-6)
 - B-6 Draft Horse Barn (HS-7)
 - B-7 Privy (HS-8)
 - B-8 Dairy (HS-9)
 - B-9 Oxen Barn (HS-10)
 - B-10 Bielenberg Barn (HS-11)
 - B-11 Machine Shed (HS-12)
 - B-12 Cow Shed (HS-13)
 - B-13 Thoroughbred Barn (HS-15)
 - B-14 Stallion Barn (HS-14)
 - B-15 Stallion Barn (HS-16)
 - B-16 Stallion Barn/Garage (HS-19)
 - B-17 Stallion Barn (HS-30)
 - B-19 Feed Storage House (HS-31)
 - B-20 Buggy Shed (HS-17)
 - B-21 Privy (HS-20)
 - B-22 Granary (HS-18)
 - B-23 Brooding House (HS-21)
 - B-24 Chicken House (HS-22)
 - B-25 Metal Granary (HS-23)
 - B-26 Feed Storage House (HS-28)
 - B-27 West Feedlot Storage Shed (HS-34)

Illustration 1-2

Map Sources: Adapted from Oculus / JMA, 2004, and GRKO NHS GIS data 2015.



JUNE 2017	TITLE OF PROJECT		
	CULTURAL LANDSCAPE REPORT		
	TITLE OF DRAWING		
	EXISTING CONDITION - HOME RANCH		
UNITED STATES DEPARTMENT OF THE INTERIOR GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE	NAME OF PARK		
	GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE		
	REGION	COUNTY	STATE
	INTERMOUNTAIN	POWELL	MONTANA

East Feed Lot / Warren Hereford Ranch

The East Feed Lot/Warren Hereford Ranch, east of the railroad corridor, was developed by Conrad Warren (Illustration 1-3). It contains the land bordered by Warren Lane (NPS nomenclature) and the Conrad Warren residence on the south, the GRKO boundary on the east / Business Loop 90, the railroad corridor on the west, and the south edge of Front Field on the north.

The East Feed Lot and Warren Barn were built in the early 1950s. The East Feed Lot was the center of much activity on the ranch where highly productive breeds of cattle were bred and sold. The ranch became well known throughout the western U.S. as the show place for champion Herefords. During the 1940s, hundreds of people often congregated at the ranch during stock sales. The entire operation was active until the early 1980s when the last remaining Warren-owned stock was sold.^{1,7}

The East Feed Lot / Warren Hereford Ranch is situated on a level piece of land elevated above the Clark Fork River, with pasture grasses comprising the vegetation. The layout of the feedlots is

oriented north-south and consists of eleven corrals, symmetrically arranged. The Sales Barn (now the NPS Maintenance Shop), Warren Barn, new NPS Resource Building, and Scale House anchor the southeast corner, adjacent to Cattle Drive. Buildings and structures include barns, chutes, sheds, and other equipment used for handling the animals. Heated water troughs are located in each of the corrals. Circulation consists of Cattle Drive (NPS nomenclature), extended by NPS in 1973 from Business Loop 90 to the west to the original road crossing in front of the bull barns and over the railroad tracks. Warren Lane divides the Warren Residence from the East Feedlot / Warren Hereford Ranch. Unpaved grass/dirt roads provide access along the alleys of the corrals. Fencing and gates are of several types and include wood, metal posts, wire mesh, and metal pipe that is part of the modern NPS chute system.

The East Feed Lot / Warren Hereford Ranch component landscape retains integrity in all seven aspects of location, design, setting, materials, workmanship, feeling, and association. The organization of the feedlots in relationship to structures and circulation routes, enclosed by board fences, remain in their original locations and convey

1.7 John Milner Associates, *CLR Part One*, 3-2-1.



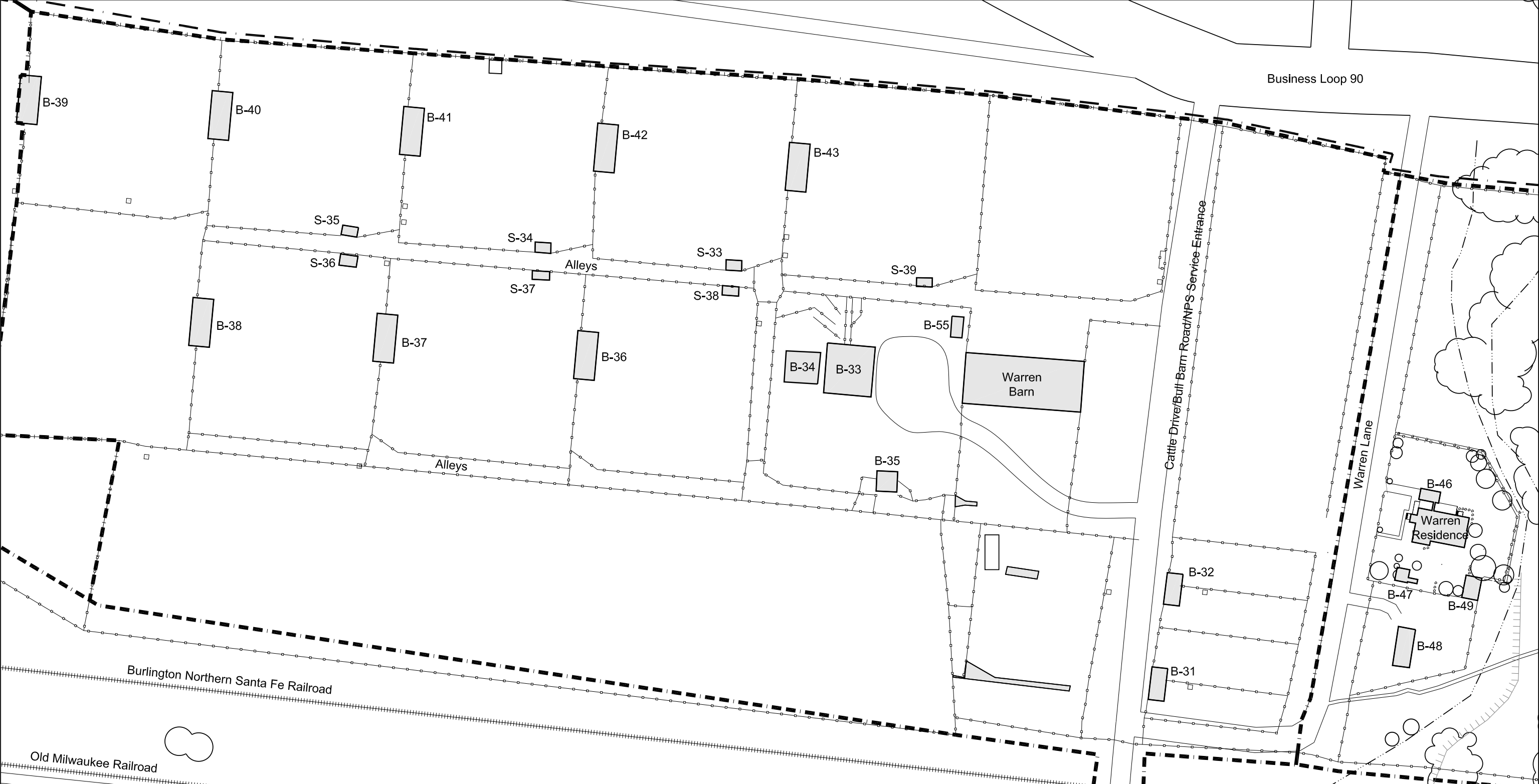
Figure 1-5. The East Feed Lot / Warren Hereford Ranch component landscape includes the Warren Barn and several outbuildings that were part of modernizing ranch operations in the 1950s. (Mundus Bishop, 2015)

the historic organization and operation of the Warren Hereford Ranch. All feedlots, pastures, and alleys remain essentially as originally constructed. The continued active use of this area retains the feeling and setting of the historic ranch. The East Feed Lot / Warren Hereford Ranch retains integrity in materials, workmanship, and design. The original design of this component landscape reflects the shift to modern ranching methods, and the craftsmanship and materials reflect the need to ensure a safe, efficient cattle operation. Integrity of materials has been compromised by recent additions needed for continuing operations, such as the contemporary squeeze chute and new heated water troughs. However, these additions assist in retaining the overall character and feeling of the operating ranch. The East Feed Lot / Warren Hereford Ranch retains integrity in association for its connection to Conrad Warren and the development of this area as part of the family legacy and shift to modern ranching in the 20th century.

The period of association most strongly represented by the existing conditions of the Warren Hereford Ranch is 1952 to 1982. This component landscape is within the NRHP district.



Figure 1-6. The East Feed Lot / Warren Hereford Ranch component landscape is an organized grid of feedlots, sheds, and barns, situated on the level, elevated plain east of the Clark Fork River. (Mundus Bishop, 2015)



Buildings and Structures

B-30 Warren Barn (HS-64)

B-31 Bull Barn (HS-62)

B-32 Bull Barn (HS-63)

B-33 Sales Barn (HS-65)

B-34 Resource Building/Office (003)

B-35 Scale House (HS-66)

B-36 Cow Shed (HS-70)

B-37 Cow Shed (HS-71)

B-38 Cow Shed (HS-72)

B-39 Cow Shed (HS-73)

B-40 Cow Shed (HS-74)

B-41 Cow Shed (HS-75)

B-42 Cow Shed (HS-76)

B-43 Cow Shed (HS-77)

B-45 Warren Residence (HS-58)

B-46 Garage (HS-61)

B-47 Warren Residence Pump House (HS-88) and Well

B-48 Chicken Coop (HS-59)

B-49 Boat House (HS-60)

B-55 Hazmat Building

S-33 Feed House (HS-78)

S-34 Feed House (HS-79)

S-35 Feed House (HS-80)

S-36 Feed House (HS-81)

S-37 Feed House (HS-82)

S-38 Feed House (HS-83)

S-39 Feed House (HS-84)

Legend

Component Landscape Boundary Line

GRKO Boundary Line

Roads

Railroads

Buildings and Structures

Fence

Bench

Streams/Sloughs/Ditches

Vegetation

Tree

JUNE 2017

UNITED STATES
DEPARTMENT OF THE INTERIOR
GRANT-KOHR'S RANCH
NATIONAL HISTORIC SITE

TITLE OF PROJECT
CULTURAL LANDSCAPE REPORT
TITLE OF DRAWING
EXISTING CONDITION - WARREN RANCH AND RESIDENCE
NAME OF PARK
GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE
REGION
INTERMOUNTAIN
COUNTY
POWELL
STATE
MONTANA

Illustration 1-3

1-15

Grant-Kohrs Residence

The Grant-Kohrs Residence component landscape consists of features contained within the domestic landscape immediately surrounding the residence built by John Grant and Conrad Kohrs (Illustration 1-4).

The Grant-Kohrs Residence was originally built by John Grant in 1862. It was later improved and expanded by Conrad Kohrs throughout the latter part of the 19th century and modified by his grandchildren Conrad and Nellie Warren. It was the centerpiece of domestic life on the ranch for 80 years. Today the residence is one of the primary focal points of NPS preservation and interpretation.^{1.8}

The Grant-Kohrs Residence is set on a topographic bench above the Clark Fork River with views to the ranch and surrounding mountains. Vegetation surrounding the residence includes a garden, formal and informal plantings of trees and shrubs, and

a lawn surrounding the residence on the north, east, and south sides. Circulation routes include pedestrian walkways and steps of stone, brick, and wood. A white picket fence encloses the yard on the east, south, and west sides, built by Kohrs and modified by Conrad Warren to the current location. Stone terraces and a cobble retaining wall separate the garden from the residence above. A stone retaining wall is along the west slope of the yard.

The Grant-Kohrs Residence component landscape retains integrity of location, design, materials, workmanship, feeling, and association. The residence has diminished integrity of setting due to the absence of the historic cottonwood trees in front of the residence and the condition of existing vegetation. The spatial organization and relationships to topography/landform, natural features, circulation features, and surrounding buildings and structures has remained essentially the same since Conrad and Augusta Kohrs lived in the residence. This contributes to the integrity of location, feeling, and design. Original materials are throughout the component landscape, including

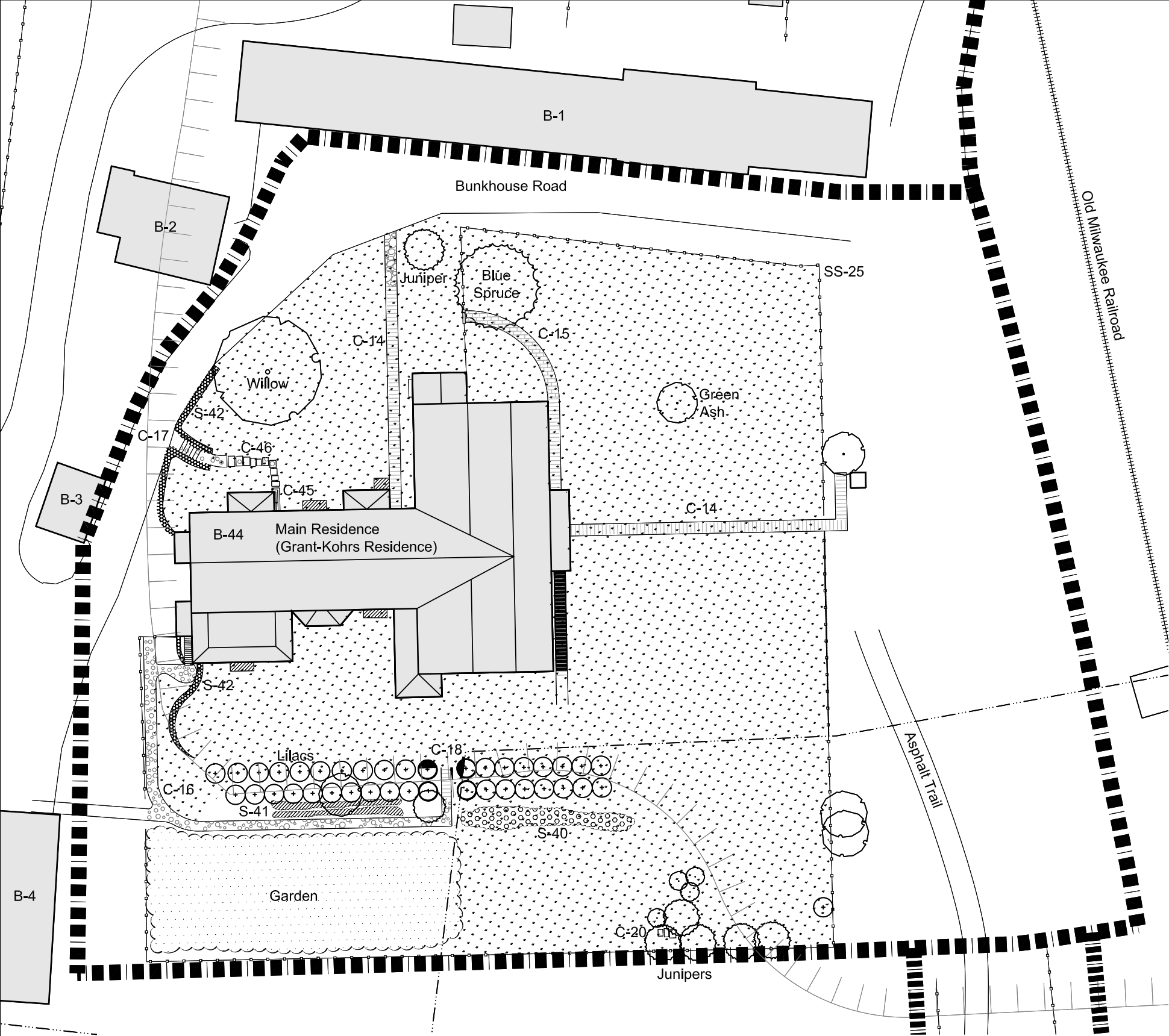
1.8 John Milner Associates, *CLR Part One*, 3-3-1.



Figure 1-7. The Grant-Kohrs Residence component landscape includes the residence and immediate surroundings: lawn, shade trees, garden, walls and pathways around the building. (Mundus Bishop, 2015)

wood, brick, and stone. The informal workmanship of the small scale features retain integrity. The residence retains integrity of association with Conrad and Augusta Kohrs and the Warrens.

The period of association most strongly represented by the existing condition of the Grant-Kohrs Residence is 1890 to 1934. The entire area lies within the NHL and NRHP districts.



- Legend**
- Component Landscape Boundary Line
 - Roads
 - Railroads
 - Buildings and Structures
 - Fence
 - Bench
 - Streams/Sloughs/Ditches
 - Irrigation Ditch
 - Vegetation
 - Evergreen Tree
 - Deciduous Tree
 - Lawn

- Buildings**
- B-1 Bunkhouse Row (HS-2)
 - B-2 Ice House (HS-5)
 - B-3 Coal Shed (HS-4)
 - B-4 Blacksmith Shop / Garage (HS-3)
 - B-44 Main Residence (Grant-Kohrs Residence)

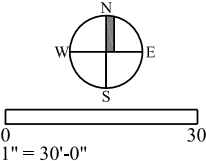
- Circulation**
- C-14 Wood Plank Walk
 - C-15 Brick Walk
 - C-16 Flagstone Walk
 - C-17 Wide Stone Staircase
 - C-18 Narrow Stone Staircase
 - C-20 Remnant Stone Steps
 - C-45 Kitchen Stairs
 - C-46 Stone Path

- Structures**
- S-40 Cobble Wall
 - S-41 Stone Terraces
 - S-42 Cut Stone Retaining Wall

- Objects and Small-scale Features**
- SS-25 White Picket Fence

Illustration 1-4

Map Sources: Adapted from Oculus / JMA, 2004, and GRKO NHS GIS data 2015.



JUNE 2017		TITLE OF PROJECT	
UNITED STATES DEPARTMENT OF THE INTERIOR		CULTURAL LANDSCAPE REPORT	
GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE		TITLE OF DRAWING	
		EXISTING CONDION - GRANT KOHR'S RESIDENCE	
		NAME OF PARK	
		GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE	
REGION	COUNTY	STATE	1-19
INTERMOUNTAIN	POWELL	MONTANA	

Warren Residence

The Warren Residence component landscape includes the domestic landscape immediately surrounding the residence built by Conrad Warren (Illustration 1-5). It includes the complex of buildings associated with the domestic yard, as well as the larger landscape defined by Warren Lane to the north, Business Loop 90 to the east, the railroad corridor to the west, and the Development Zone to the south.^{1.9} The Warren Residence was built in 1934 on the land given to Conrad and Nellie Warren as a wedding gift by Conrad's grandmother, Augusta Kohrs. Today, the administrative offices for the ranch are located in the Warren Residence.

The Warren Residence is on high ground, located east and above the Clark Fork River floodplain. Native, exotic, and ornamental plants are around the residence, enclosed by a picket fence. The domestic yard includes a lawn with trees at the fence line and a few shrubs. Historically the ornamental vegetation around the residence was more lush and varied.

1.9 John Milner Associates, *CLR Part One*, 3-4-1.

The garden diminished as Nellie Warren's health declined.

In addition to the Warren Residence, buildings and structures include the Chicken Coop, Pump House, and Boat House. The Warren Residence is surrounded by four larger fields: east, south, and to the west at the chicken coop. The residence fronts the historic entry road, Warren Lane, linking the Home Ranch Complex with Business Loop 90. Several remnant stone paths are within the yard. A paved flagstone patio of locally quarried stone is east of the residence.

The Warren Residence component landscape retains integrity of location, design, setting, and association. The Warren Residence has diminished integrity of feeling, workmanship and materials due to the loss of vegetation and small scale features that historically denoted the residential landscape as separate from the remainder of the working ranch and provided the overall feeling of a residential landscape. Spatial organization of the residence and its relationships to natural features, circulation



Figure 1-8. The Warren Residence component landscape includes the Warren Residence, outbuildings, vegetation, and small scale features constructed by Conrad Warren. (Mundus Bishop, 2015)

routes, and the Warren Hereford Ranch has remained essentially the same since Conrad Warren retired from ranching in 1982, and contributes to the integrity of location, design, and setting. Association retains integrity through the connection to the Warren family who built the residential landscape.

The period of association most strongly represented by the existing conditions of the Warren Residence is 1952 to 1993, extending from the last major house remodel until Conrad Warren's death. The entire area lies within the NRHP district.

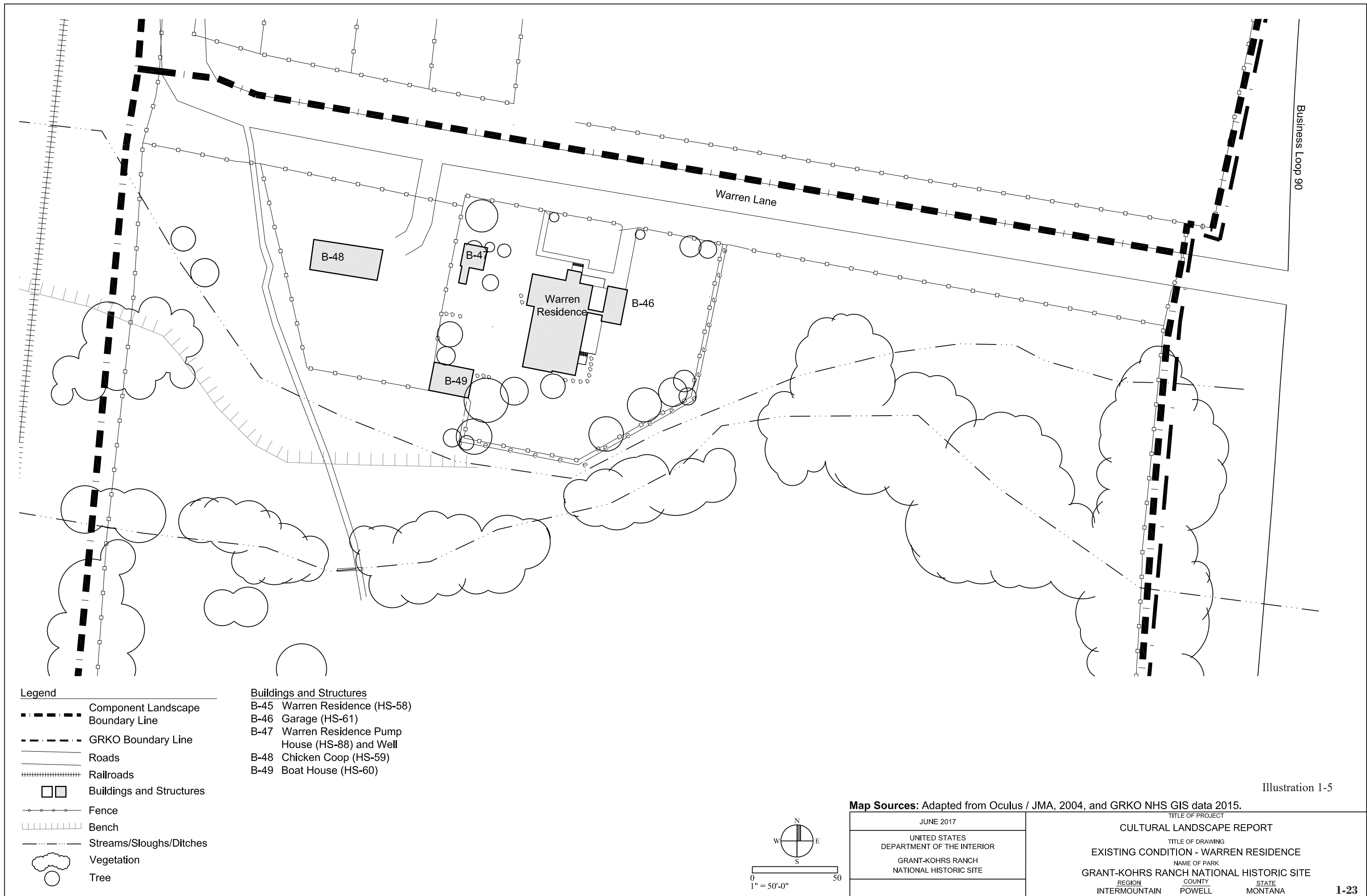


Illustration 1-5

Riparian Woodland

This component landscape consists of the riparian corridors along the Clark Fork River, Johnson Creek, and Cottonwood Creek (Illustration 1-7). The Riparian Woodland component landscape comprises thick woodlands and wetland areas. Portions of the riparian areas are fenced to keep livestock out of the Superfund remediation area.

In 1983, approximately 100 years after Anaconda smelter operations began, the U.S. Environmental Protection Agency (EPA) placed the surrounding area and the Clark Fork River floodplain on its Superfund National Priorities List. The contaminants of concern are heavy metals (cadmium, copper, lead, and zinc), and arsenic that threaten human health, and plant and animal life. The Grant-Kohrs Ranch is within the Superfund area, comprising 2.5 miles of the 120 miles of the Clark Fork River impacted by contaminants. A Record of Decision in 2004 for cleanup of the Clark Fork River called for soil removal of the worst contaminated areas, and treatment in-place of other contaminated areas. In

February 2015, a Preliminary Design Plan (PDP) was prepared for the Superfund area within Grant-Kohrs Ranch. The PDP outlines the desired future condition for the floodplain including contaminant clean-up, floodplain restoration, streambank reconstruction, and revegetation.^{1.10}

The 2015 Natural Resource Condition Assessment determined that Johnson Creek is at risk due to stream down-cutting, low numbers of woody species, noxious weed prevalence, and insufficient in-stream structure (e.g., woody debris or rocks) to dissipate stream energy and trap sediment. A railroad is near the stream and in those locations bank stabilization is a concern. Yet overall, the stream appears to be improving.^{1.11}

1.10 Tetra Tech, et al. *Draft Final Preliminary Design Plan, Clark Fork River Operable Unit Phase 15 and 16, Grant-Kohrs Ranch National Historic Site*. Helena, Montana: Montana Department of Environmental Quality, 2015.

1.11 National Park Service, *GRKO NHS Natural Resource Condition Assessment*. Fort Collins, Colorado: U. S. Department of the Interior, National Park Service, 2015, 65.



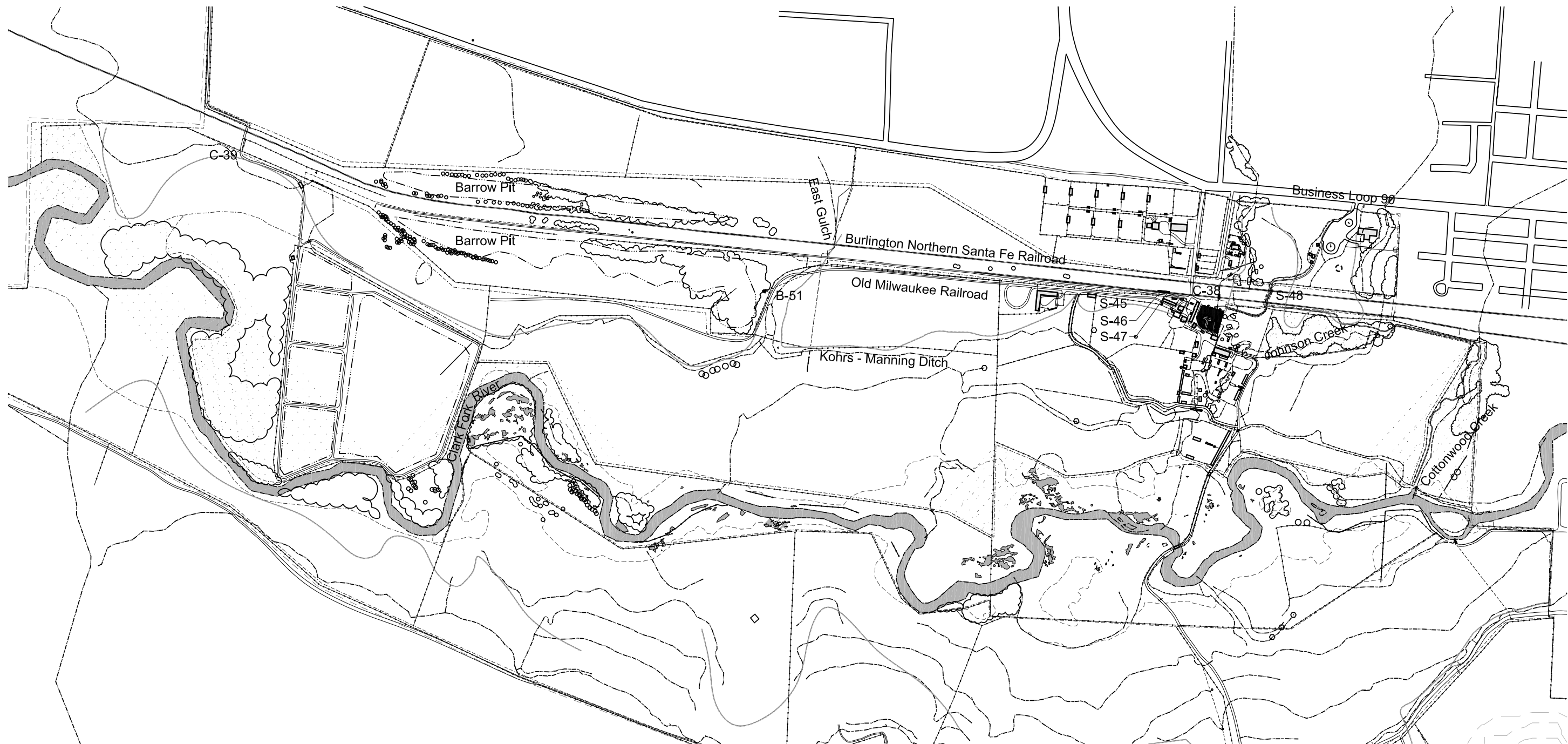
Figure 1-9. The Riparian Woodland component landscape is defined by the Clark Fork River that extends south - north through the ranch. The river corridor is part of the Milltown Reservoir/Clark Fork River Superfund site, and contains high concentrations of metals due to upstream mining operations. The NPS is working closely with the EPA on remediation measures through GRKO. (Mundus Bishop, 2015)

The same natural resource condition assessment determined that Cottonwood Creek is similarly at risk. In lower portions of the creek, near the confluence with the Clark Fork River, apparent lateral cutting may be causing establishment of non-native grasses. Riparian wetland cover and cottonwood/willow recruitment are also a concern at Cottonwood Creek. Overall, the stream's riparian health appears to be improving with evidence of willow recruitment, bank stabilizations and beaver activity along the extent of the waterway.^{1.12}

The Riparian Woodland component landscape retains integrity of location, design, setting, materials, workmanship, feeling, and association. The natural landscape of the Clark Fork River and its tributaries, views to the mountains, and riparian vegetation retain integrity of setting, location, and feeling. Integrity of materials, workmanship, and design will be impacted as part of the Superfund remediation; however the overall landscape pattern will remain. Integrity of setting and design has been diminished due to the addition of fencing adjacent to the river and the poor health of the existing vegetation. Integrity of association remains due to the continued use of this area for ranching operations.

The period of association most strongly represented by the existing conditions of the Riparian Woodland is 1972 to present. The entire area lies within the existing NRHP district, and portions of the NHL.

1.12 National Park Service, *GRKO NHS Natural Resource Condition Assessment*. Fort Collins, Colorado: U. S. Department of the Interior, National Park Service, 2015, 65.



Legend

- Component Landscape Boundary Line
- GRKO Boundary Line
- Roads
- Railroads
- Buildings and Structures
- Fence
- Bench
- Streams/Sloughs/Ditches
- Vegetation
- Superfund Boundary

Buildings

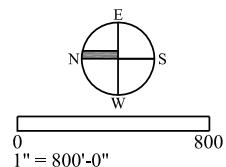
- B-51 Warren Pumphouse (HS-86)

Circulation

- C-38 Main Entry Road/at-grade crossing
- C-39 Sewage Treatment Road/at-grade crossing

Structures

- S-45 Siphon (HS-57)
- S-46 Cattle Car (GRKO-970)
- S-47 Cattle Car (GRKO-862)
- S-48 Railroad Trestles



Map Sources: Adapted from Oculus / JMA, 2004, and GRKO NHS GIS data 2015.

JUNE 2017		TITLE OF PROJECT	
UNITED STATES DEPARTMENT OF THE INTERIOR		CULTURAL LANDSCAPE REPORT	
GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE		TITLE OF DRAWING	
		EXISTING CONDITIONS - RIPARIAN WOODLAND	
		NAME OF PARK	
		GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE	
REGION	COUNTY	STATE	
INTERMOUNTAIN	POWELL	MONTANA	

Illustration 1-6

Railroad Corridor and Barrow Pit/Wetland

This component landscape includes the linear railroad corridor, associated utility lines, and depressed wetland areas (barrow pits) that border the railroad on both sides (Illustration 1-7).

Two parallel railroad tracks bisect the ranch near its eastern boundary. Utah Northern Railroad, acquired by Northern Pacific Railroad Company in 1888, established a line through Deer Lodge circa 1883. Today, Burlington Northern Santa Fe (BNSF) Railroad uses the eastern track, with an average of two trains each day. The BNSF has a right-of-way through GRKO and a large in-holding within this component landscape. The western railroad track, the Chicago, Milwaukee, St. Paul & Pacific Railroad, was built circa 1908 and ceased operation in 1983. A portion of the track remains, as does the graded railroad bed. This line is used by the NPS to interpret the role of the railroad in ranching operations. This railroad served as an important early transportation network for shipping cattle to

distant markets. It also allowed the expansion of the ranch during that time period.^{1.13}

Approximately 64 acres of land on either side of the railroad corridor was dredged for construction of the Milwaukee Railroad in 1908. These barrow pits are approximately 1,000 yards long and reach nearly 200 yards in width at the widest point. They are integral part of the railroad corridor and included in this component landscape.^{1.14}

The Railroad Corridor and Barrow Pit / Wetland component landscape retain integrity of location, design, setting, materials, workmanship, feeling, and association. The railroad corridor remains in the same location as originally constructed. Its setting and design as an elevated corridor, which separates it from the ranch, remains essentially unchanged. The railroad grade is missing some original materials but

1.13 John Milner Associates, *CLR Part One*, 3-8-1.

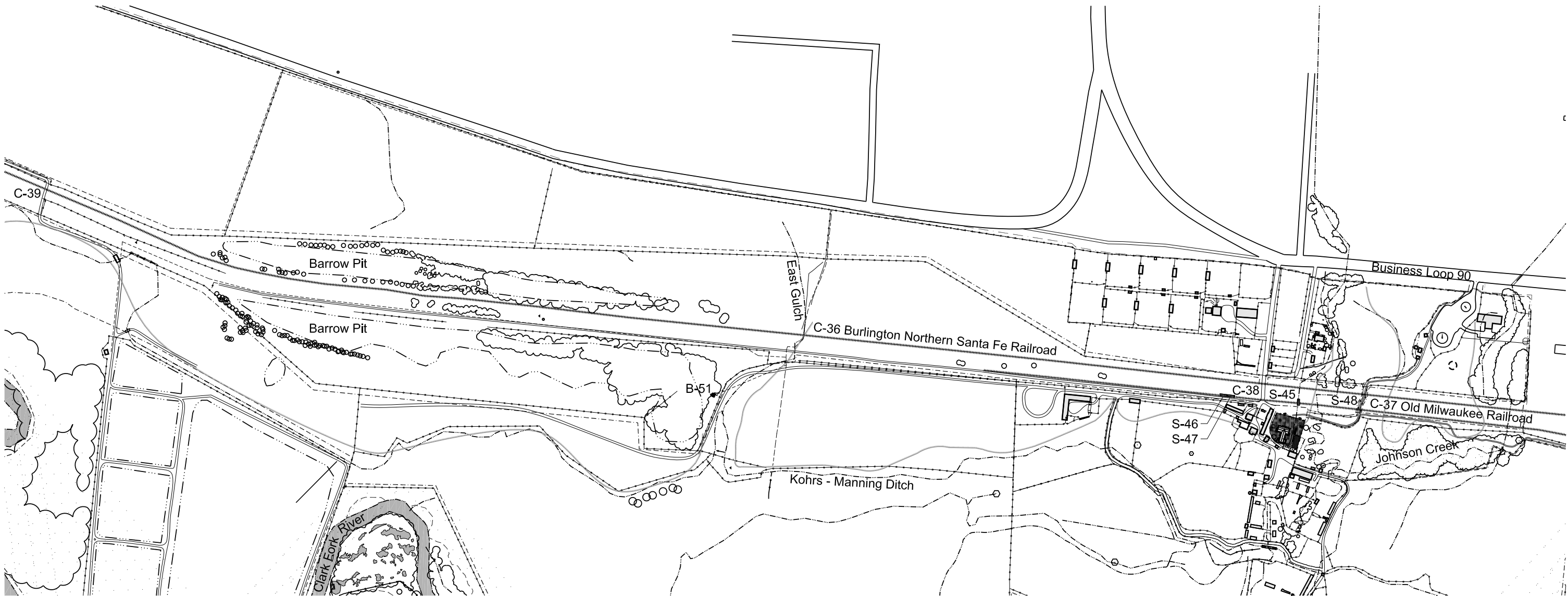
1.14 John Milner Associates, *CLR Part One*, 3-8-1.



Figure 1-10. The Railroad Corridor and Barrow Pit/Wetland component landscape includes the double set of railroad tracks that traverse the ranch north - south, and the barrow pits that were created as part of the railroad grade construction. (Mundus Bishop, 2015)

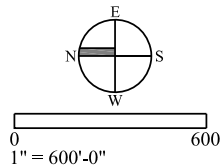
those that remain retain integrity of workmanship and association.

The period of association most strongly represented by the existing conditions of the Railroad Corridor and Barrow Pit / Wetland component landscape is 1908 to 1982.



- Legend**
- Component Landscape Boundary Line
 - GRKO Boundary Line
 - Roads
 - Railroads
 - Buildings and Structures
 - Fence
 - Bench
 - Streams/Sloughs/Ditches
 - Vegetation
 - Superfund Boundary

- Buildings**
- B-51 Warren Pumphouse (HS-86)
- Circulation**
- C-36 Burlington Northern Santa Fe Railroad
 - C-37 Old Milwaukee Railroad
 - C-38 Main Entry Road/at-grade crossing
 - C-39 Sewage Treatment Road/at-grade crossing
- Structures**
- S-45 Siphon (HS-57)
 - S-46 Cattle Car (GRKO-970)
 - S-47 Cattle Car (GRKO-862)
 - S-48 Railroad Trestles



Map Sources: Adapted from Oculus / JMA, 2004, and GRKO NHS GIS data 2015.

JUNE 2017		TITLE OF PROJECT	
UNITED STATES DEPARTMENT OF THE INTERIOR		CULTURAL LANDSCAPE REPORT	
GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE		TITLE OF DRAWING EXISTING CONDITIONS - RAILROAD CORRIDOR & BARROW PIT / WETLAND NAME OF PARK	
REGION INTERMOUNTAIN		COUNTY POWELL	STATE MONTANA

Illustration 1-7

Development Zone

The Development Zone component landscape is in the southwestern corner of the ranch. This area provides primary visitor services, such as a visitor contact station with a bookstore, restrooms, and parking (Illustration 1-8). The Development Zone is bounded by the elevated railroad corridor on the west, Business Loop 90 on the east, the Warren Residence on the north, and the GRKO boundary on the south. It includes a portion of Johnson Creek, an archeological site, and natural topography that provides views to the Home Ranch and mountains beyond.

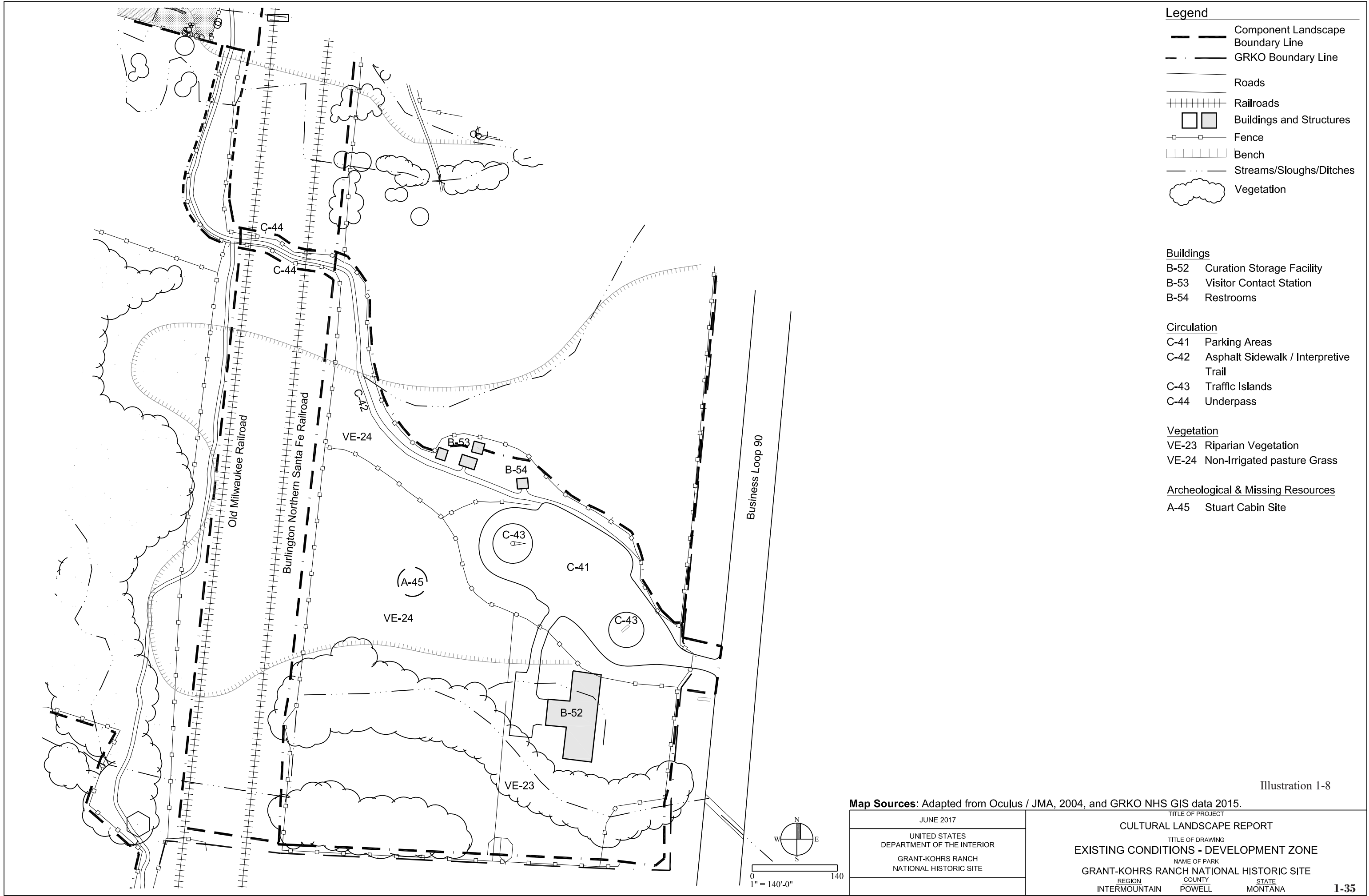
This component landscape has been developed primarily by the NPS, and many of the resources associated with the Development Zone do not contribute to the historical significance of the ranch, except for natural features, views, archeological resources, fences, and Johnson Creek. The period of association most strongly represented by the existing conditions of the Development Zone is 1975 to present. The beginning of this period is associated

with NPS development, including addition of historic-era buildings from another Kohrs-owned ranch to serve as visitor contact station, and development of the parking and circulation system. A collections and archival storage building was added in 2002.



Figure 1-11. The Development Zone includes contemporary additions by the NPS, including the visitor contact station, archival storage building, and visitor parking. (Mundus Bishop, 2015)

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CONTRIBUTING, SUPPORTING, & NON-CONTRIBUTING LANDSCAPE ELEMENTS

Tables summarizing landscape features of the seven component landscapes follow. These tables have been adapted from the CLR Part One, and updated to reflect current conditions. Contributing features are highlighted in yellow, and are those landscape elements that survive from the period of significance, 1862 to 1919 Grant-Kohrs Ranch operations and the 1929 to 1982 Warren Hereford Ranch operations. They retain sufficient integrity to represent their historic appearance and function at that time, and which convey the character of the landscape during the period of significance.

Non-contributing features are those landscape elements that have become part of the landscape since the period of significance, or are features surviving from the period of significance that no longer possess integrity.

Supporting (non-contributing compatible, or NCC) features are those resources that post-date the period of significance, but support the historic character as they are reconstructions with the same or similar design as features dating from the period of significance. These features are typically reconstructions or modern additions necessary for ranch operations and support the ranch's historic character. Some structures noted as NCC were reconstructed according to Secretary of the Interior Standards for historic preservation, and could be considered contributing if there is a revision to the National Register Nomination. Missing features are those elements of the landscape that existed during the periods of significance but have since been lost or destroyed.

HOME RANCH COMPLEX: Inventory of Existing Condition and Contributing Resources (See text pg. 1-9 to 1-11)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined; MS=Missing				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-1	Natural Systems and Features								
	NS-1	Bench	C	X	X	X			
	NS-2	Johnson Creek	C	X	X	X			
	NS-3	North Fork of Johnson Creek	C	X	X	X			
	NS-4	Springs	C	X	X	X			
EC-1	Vegetation								
	VE-1	Riparian vegetation	C	X	X	X			
		Willow spp.		X	X	X		N	<i>Salix sp.</i>
		Smooth Brome				X		E	<i>Bromus inermis</i>
		Black Cottonwood		X	X	X		N	<i>Populus trichocarpa</i>
		Cattail		X	X	X		N	<i>Typha latifolia</i>
	VE-2	Lower Yard Garden	NC			X	1981		To be removed/reseeded
	VE-3	Row of Cottonwoods	C						<i>Populus trichocarpa</i>
	VE-4	Mix of native/non-native grasses/forbs	UD						Detailed species not inventoried

HOME RANCH COMPLEX: Inventory of Existing Condition and Contributing Resources (See text pg. 1-9 to 1-11)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined; MS=Missing				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-2 Spatial Organization									
	SO-1	Lower yards	C	X	X	X			
	SO-2	Lower House Yards	C	X	X	X			
	SO-3	Bunkhouse Yards	C	X	X	X			
	SO-4	L-Barn South	C	X	X	X			
	SO-5	West Corrals	C	X	X	X			
	SO-6	Johnson Creek Field	C	X	X	X			
	SO-7	West Feedlot	C		X	X			
EC-3 Land Uses									
	L-1	Interpretation	NC		X	X	1975		
	L-2	Visitor services	NC		X	X	1975		
	L-3	Livestock grazing	C	X	X	X	ca. 1862		
	L-9	Ranching operations	C	X	X	X	ca. 1862		
EC-1 Constructed Water Features									
	CW-1	Kohrs-Manning Ditch	C	X	X	X	ca. 1870		
EC-2 Circulation									
	C-1	Clark Fork River Bridge Road	C		X	X	ca. 1930		
	C-2	Kohrs-Manning Ditch Road	NC		X	X	ca. 1973		Constructed by NPS
	C-3	Bunkhouse Road	C	X	X	X	ca. 1862		
	C-4	Dairy Loop Road	C	X	X	X	ca. 1870-1880		Reconfigured after 1932
	C-5	Warren Pump House Road	C	X	X	X	ca. 1890		Lengthened to access HS-86 ca. 1960
	C-6	Lower House Yard Road	C	X	X	X	ca. 1870		
	C-7	Johnson Creek Road	C	X	X	X	ca. 1870		
EC-5 Views and Viewsheds									
	V-1	Views of western foothills	C	X	X	X			
	V-2	Views of Deer Lodge Mt. and Mt. Power	C	X	X	X			
	V-3	Views of riparian corridor	C	X	X	X			
	V-4	Views of Grant-Kohrs residence	C	X	X	X			
	V-5	Views within fields, feedlots, and corral	C	X	X	X			

HOME RANCH COMPLEX: Inventory of Existing Condition and Contributing Resources (See text pg. 1-9 to 1-11)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined; MS=Missing				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-3,4 Buildings and Structures									
	B-1	Bunkhouse Row	C	X	X	X	1862 - 1907		HS-2
	B-2	Ice House	C	X	X	X	1880		HS-5
	B-3	Coal Shed	C	X	X	X	1915		HS-4
	B-4	Blacksmith Shop/Garage	C		X	X	1935		HS-3
	B-5	Granary/Roller Mill	C		X	X	1935		HS-6
	B-6	Draft Horse Barn	C	X	X	X	1870		HS-7
	B-7	Privy	C		X	X	1934		HS-8
	B-8	Dairy	C		X	X	1932		HS-9
	B-9	Oxen Barn	C	X	X	X	ca. 1870		HS-10
	B-10	Bielenberg Barn	C	X	X	X	1880		HS-11
	B-11	Machine Shed	C	X	X	X	1890		HS-12
	B-12	Cow Shed	C	X	X	X	1908		HS-13
	B-13	Thoroughbred Barn	C	X	X	X	1883		HS-15
	B-14	Stallion Barn	C	X	X	X	1870s		HS-14
	B-15	Stallion Barn	C	X	X	X	1870s		HS-16
	B-16	Stallion Barn	C	X	X	X	1870s		HS-19
	B-17	Stallion Barn	C	X	X	X	1870s		HS-30
	B-19	Feed Storage House	C		X	X	1932		HS-31
	B-20	Buggy Shed	C	X	X	X	ca. 1883		HS-17
	B-21	Privy	C	X	X	X	ca. 1890		HS-20
	B-22	Granary	C	X	X	X	ca. 1890		HS-18
	B-23	Brooding House	C		X	X	1935		HS-21
	B-24	Chicken House	C		X	X	1935		HS-22
	B-25	Metal Granary	C	X	X	X	ca. 1910		HS-23
	B-26	Feed Storage House	C		X	X	1933		HS-28
	B-27	West Feedlot Storage Shed	C		X	X	ca. 1930		HS-34
	S-1	Cattle Scale	C		X	X	1935		HS-35
	S-2	Feed Rack	C			X	1984		HS-36; Reconstruction of Original per Sec Interior Stds
	S-3	Feed Rack	C			X	1984		HS-37; Reconstruction of Original per Sec Interior Stds
	S-4	Feed Rack	C			X	1984; 2004		HS-38; Reconstruction of Original per Sec Interior Stds
	S-5	Manure Pit	C		X	X	1932		HS-39
	S-6	Beef Hoist	C	X	X	X	ca. 1880		HS-40; rehab. 1982

HOME RANCH COMPLEX: Inventory of Existing Condition and Contributing Resources (See text pg. 1-9 to 1-11)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined; MS=Missing				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
	S-7	Squeeze Chute	C			X	1984; 2008		HS-41; Reconstruction of Original per Sec Interior Stds
	S-8	Feed Rack	C			X	1982; 1998		HS-42
	S-9	Feed Rack	C			X	1982-83		HS-43; Reconstruction of Original per Sec Interior Stds
	S-10	Feed Rack	C			X	1982-83		HS-44; Reconstruction of Original per Sec Interior Stds
	S-11	Feed Bunk	C			X	ca. 1937;		HS-45; reconstructed 1991; 2004; 16173L
	S-12	Feed Bunk	C			X	ca. 1937		HS-46; reconstructed 1991; 2004; 16173L
	S-13	West Corrals Squeeze Chute	C			X	1984		HS-47
	S-14	Stock Shelter	C		X	X	1933		HS-24
	S-15	Stock Shelter	C		X	X	1933		HS-27
	S-16	Stock Shelter	C		X	X	1933		HS-29
	S-17	Stock Shelter	C			X	2000		HS-25; Reconstruction of Original per Sec Interior Stds
	S-18	Hay Storage	C			X	2000		HS-26; Reconstruction of Original per Sec Interior Stds
	S-19	Feed Bunk	C			X	1987-88		HS-48
	S-20	Feed Bunk	C			X	1987		HS-49; Repaired 2004
	S-21	Active/Irrigation Flume	C		X	X	1974/ 2014		HS-50; Repaired 2014
	S-22	Kohrs-Manning Ditch Bridge	C			X	1982		HS-55; 1982 work included new wood abutments, wing walls, deck, and wheel lanes. 1992 work replaced wooden bulkheads with concrete footings and timber bulkheads
	S-23	West Feedlot Stock Shelter	C		X	X	1934		HS-32
	S-24	West Feedlot Stock Shelter	C		X	X	1932		HS-33
	S-25	West Feedlots Squeeze Chute	C			X	1984		HS-53; Reconstructed 2008
	S-26	West Feedlots Feed Bunk	C			X	1987		HS-52; Repaired 2004
	S-27	Slough Bridge	C		X	X	1930		HS-90
	S-28	Not used							
	S-29	Feed House	C		X	X	ca. 1945		M. McWright info, 2004
EC-6	Objects and Small-scale Features								
	SS-1	Jack-Leg Fence	C/ NCC	X	X	X	ca. 1982		G. Stuart drawing; refer to GRKO GIS database for details

HOME RANCH COMPLEX: Inventory of Existing Condition and Contributing Resources (See text pg. 1-9 to 1-11)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined; MS=Missing				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
	SS-2	Vertical Board Fence	C		X	X	pre- 1937		16173L; fence likely dates to same period as HS-45 and HS-46.
	SS-3	5-Rail Stacked-end Fence	C		X	X	pre- 1940		16841H
	SS-4	Simple Post and Rail Fence	C		X	X	pre- 1940		16160H/16158H
	SS-5	Chicken Wire Fence	NCC			X	1974		Reconstruction
	SS-6	Chicken Wire Gates	NCC			X	1974		Reconstruction
	SS-7	Stacked Log Fence	C		X	X	pre- 1938		16841H
	SS-8	Overhead Gate	C		X	X	pre- 1938		16841H
	SS-9	Red Wood Gate	C		X	X	pre- 1938		16841H
	SS-10	5-Rail Braced Gate	C	X	X	X	ca. 1866		1866 dwg, GRKO 6269
	SS-11	Vertical Board Gate	NCC			X	ca. 1937		Part of Feed Bunk (S-11; S-12) reconstructed 1991
	SS-116	Water Trough	NC			X	1995		
	SS-117	Water Bar	NC			X	2001		
	O-1	Fire Hydrants	NC			X	1980		Administrative History
	O-2	Fire Box	NC			X	ca. 1985		Administrative History
EC-7	Missing Resources								
	A-1	Irrigation system	MS	X			ca. 1883		HRS, 215-216; CLI
	A-2	Drainage Ditch to Johnson Creek	MS	X			ca. 1890		1907 map of townsite
	A-3	Hydraulic Ram	MS	X			ca. 1890		HRS, 194
	A-4	Kohrs-Manning Flume	MS		X		1947		HS-51 Abandoned
	A-5	Bridge	MS		X		ca. 1930		HS-54
	A-6	Machine Shed	MS	X			pre- 1907		NES-B
	A-7	Open Cow-Shed	MS	X			pre- 1907		NES-C
	A-8	Cow Stable	MS	X			pre- 1907		NES-D
	A-9	Cow Barn	MS	X			pre- 1907		NES-E
	A-10	Chicken House	MS	X	X		pre- 1884		NES-G, Leeson dwg
	A-11	Turkey House	MS	X	X		pre- 1884		11400L, Leeson dwg
	A-12	Cow Shed	MS		X		pre- 1930		NES-L

HOME RANCH COMPLEX: Inventory of Existing Condition and Contributing Resources (See text pg. 1-9 to 1-11)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined; MS=Missing				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
	A-13	Feed Rack	MS		X		pre- 1930		NES-H
	A-14	Feed Rack	MS		X		pre- 1930		NES-I
	A-15	Feed Rack	MS		X		pre- 1930		NES-J
	A-16	Feed Rack	MS		X		pre- 1930		NES-K
	A-17	Wooden Box or Flume	MS				UD		NES-M
	A-18	Foundations, unknown	MS		X		pre- 1930		NES-N
	A-19	Watering Trough	MS				UD		NES-O
	A-20	Log Retaining Wall	MS		X		pre- 1935		NES-P
	A-21	NPS trailer	MS			X	1970		NPS Caretaker, removed 1976
	A-22	NPS trailer	MS			X	1971		NPS Caretaker Office, removed 1976
	A-23	NPS trailer	MS			X	1974		NPS Historian, moved near HS-15 in 1976 and removed 2002
	A-47	Slaughter House	M	X			ca. 1904		Gerhmann, 1974
	A-54	Building, unknown function	M		X		ca. 1937		"GRKO 15884.12, GRKO 15884.14"
Archeological Sites									
		Grant Kohrs Ranch NHS (District)	C						ASMIS ID: GRKO00001.000 State ID: 24PW00118
		Prehistoric Scatter	C						ASMIS ID: GRKO00021.000 State ID: 24PW01078

EAST FEED LOT / WARREN HEREFORD RANCH: Inventory of Existing Conditions and Contributing Resources (See text pg. 1-13 to 1-15)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-8 Natural Systems and Features									
	NS-5	Drainage swale	C		X	X			
EC-8 Vegetation									
	VE-5	Mix of native/non-native pasture grasses	C						detailed species not inventoried
EC-8 Spatial Organization									
	SO-11	Square Corrals	C		X	X	1952		
	SO-12	Chute area	C/NC		X	X	1952		metal chute system NC
	SO-13	Shop/barn yards	C		X	X	1952		
	SO-14	West pasture	C		X	X	1952		
	SO-15	Bull barn corrals	C		X	X	1952		
	SO-16	Whiskey pasture	C		X	X	1952		NPS converted to parking area, 2003
Land Uses									
	L-4	"NPS administration /storage/maintenance"	NC		X	X	1974		
	L-3	Livestock grazing	C		X	X	ca. 1954		
	L-9	Ranching operations	C		X	X	ca. 1954		
	L-10	Water Treatment/Effluent Irrigation	NCC		X	X	1999		
EC-9 Constructed Water Features									
	CW-2	Heated water troughs	C		X	X	ca. 1956		
	CW-2	Heated water trough	NC		X		ca. 1995		NPS-era troughs replaced in 2015
EC-8 Circulation									
	C-8	Cattle Drive	C/NC		X	X	1953		Road modified by NPS in 1973 Also referred to as Bull Barn Rd./NPS Service Entrance
	C-9	Warren Lane	C	X	X	X	ca. 1862		
	C-10	Gravel parking areas	C/NC		X	X	1952		HS-64/65 est. by Warren; Whiskey Pasture parking is NC, est. by NPS
	C-11	Alleys	C		X	X	1952		
	C-12	Business Loop 90	C	X	X	X	pre- 1862		Road to Hell Gate; Montana Hwy 10

EAST FEED LOT / WARREN HEREFORD RANCH: Inventory of Existing Conditions and Contributing Resources (See text pg. 1-13 to 1-15)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-8 Views and Viewsheds									
	V-6	Views to fairgrounds	C		X	X			
	V-7	Views of railroad corridor	C	X	X	X	CA. 1879		
	V-8	Views to Warren Residence	C		X	X			
	V-9	Views to Home Ranch Complex	C	X	X	X			
EC-9 Buildings and Structures									
	B-30	Warren Barn	C		X	X	1952		HS-64
	B-31	Bull Barn	C		X	X	1952		HS-62
	B-32	Bull Barn	C		X	X	1952		HS-63
	B-33	Sales Barn	C		X	X	1954		HS-65
	B-34	Resource Building/Office	NC			X	2000		BLDG-003
	B-35	Scale House	C		X	X	1952		HS-66
	B-36	Cow Shed	C		X	X	1952		HS-70
	B-37	Cow Shed	C		X	X	1952		HS-71
	B-38	Cow Shed	C		X	X	1952		HS-72
	B-39	Cow Shed	C		X	X	1952		HS-73
	B-40	Cow Shed	C		X	X	1952		HS-74
	B-41	Cow Shed	C		X	X	1952		HS-75
	B-42	Cow Shed	C		X	X	1952		HS-76
	B-43	Cow Shed	C		X	X	1952		HS-77
	B-55	Hazmat Building	NC			X	2003		GRKO-005
	S-30	Loading Chute	C		X	X	1952		HS-69
	S-31	Squeeze Chute	C			X	1990s		HS-67; 2008
	S-32	Feed Rack	C			X	1998		HS-68
	S-33	Feed House	C		X	X	1952		HS-78
	S-34	Feed House	C		X	X	1952		HS-79
	S-35	Feed House	C		X	X	1952		HS-80
	S-36	Feed House	C		X	X	1952		HS-81
	S-37	Feed House	C		X	X	1952		HS-82
	S-38	Feed House	C		X	X	1952		HS-83
	S-39	Feed House	C		X	X	1952		HS-84
	S-51	Portable Chute System	NC			X	2000s		

EAST FEED LOT / WARREN HEREFORD RANCH: Inventory of Existing Conditions and Contributing Resources (See text pg. 1-13 to 1-15)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-10 Objects and Small-scale Features									
	SS-3	5-Rail Stacked-end Fence	C		X	X	ca. 1952		15916.41 ("rub rails")
	SS-8	Overhead Gate	C		X	X	ca. 1952		16171W
	SS-9	Red Wood Gate	C		X	X	ca. 1952		16193A
	SS-10	5-Rail Braced Gate	C		X	X	ca. 1952		16193A
	SS-11	Not Used							
	SS-12	Not Used							
	SS-13	Concrete slabs/blocks	UD				UD		Probably airplane tie-downs
	SS-14	Plank and Post Fence	C		X	X	pre-1972		16114F
	SS-15	Flat Rail and Post Fence	C		X	X	ca. 1952		
	SS-16	Woven Wire Fence	C		X	X	ca. 1945		16171W
	SS-17	Metal Pipe Fence	NC			X	2000		
	SS-18	Metal Pipe Gates	NC			X	2000		
	SS-19	Lumber Stack	NC			X	ca. 1980s		
	SS-20	Hitching Post	NC			X	ca. 1980s		
	SS-21	Stop sign/RR crossing sign	NC			X	ca. 1970		
	SS-22	Wood Trough	C		X	X	ca. 1950s-1970s		
	SS-24	Wood Chutes and Gates	C		X	X	ca. 1954		used with HS-65
	O-1	Fire Hydrants	NC			X	ca. 1985		
EC-10 Missing Resources									
	A-24	Pump house	MS		X	X	pre-1958		HS-85, moved 10' west from original location in 1990; removed 2002
	A-55	Warren Hereford Entry Sign	MS		X	X	ca. 1952		16193A; removed by Warren

GRANT-KOHR'S RESIDENCE: Inventory of Existing Conditions and Contributing Resources (See text pg. 1-17 to 1-19)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-11	Natural Systems and Features								
	NS-1	Bench	C	X	X	X			
EC-11	Vegetation								
	VE-6	Grid of Cottonwood trees	NCC	X	X	X	ca. 1870s	N	Restored by NPS 2002, trees died; currently most are missing
	VE-7	Ornamental vegetation (historical association derived from CLI, 2003)							
		Black Willow	C		X	X	ca. 1935		<i>Salix scoulerana</i>
		Green Ash	NCC	X	X	X	2002		" <i>Fraxinus Pennsylvanica</i> "; restored by NPS 2002"
		Juniper	C	X	X	X			<i>Juniperus occidentalis</i>
		Blue Spruce	C	X	X	X	pre-1922		<i>Picea pungens</i>
		Boxelder	C	X	X	X			<i>Acer negundo</i>
		Lilac	C	X	X	X	pre-1934		<i>Syringa vulgaris</i>
		Twinberry Honeysuckle	C	X	X	X			<i>Lonicera involucrata</i>
		Lanceleaf Cottonwood	C	X	X	X			<i>Populus accuminata</i>
		Barberry	C		X	X	ca. 1934		" <i>Berberis thunbergii</i> 'Atropurpurea'"
		Gooseberry	C		X	X			<i>Ribes sp.</i>
		Cotoneaster	C		X	X			<i>Cotoneaster acutifolius</i>
	VE-8	Perennial Garden (historical association derived from CLI, 2003)							Existing species not verified 11/2015
		Babies Breath	UD			X			
		Bachelor Button	UD			X			
		Columbine	UD			X			
		Crocus	C	X		X			
		Daffodil	C	X		X			
		Daisy	UD			X			
		Delphinium	UD			X			
		Phlox	UD			X			
		Forget-me-not	UD			X			
		Geranium	UD			X			
		Goldenrod	UD			X			
		Hairbell	UD			X			
		Hemerocallis	UD			X			

GRANT-KOHR'S RESIDENCE: Inventory of Existing Conditions and Contributing Resources (See text pg. 1-17 to 1-19)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
		Hens And Chicks	UD			X			
		Hyacinth	C	X		X			
		Iris	UD			X			
		Dwarf Iris	UD			X			
		Lily	C	X		X			
		Monk's Hood	C	X		X			
		Peony	C	X		X			
		Pink Poppy	UD			X			
		Yellow Ranunculus	UD			X			
		Rhubarb, Soapwood	UD			X			
		Sweet Pea	C	X		X			
		Sweet William	UD			X			
		Tea Rose	C	X		X			
		Orange Poppy	UD			X			
		Tulip	C	X		X			
	VE-9	Lawn	C	X	X	X	ca. 1880		
EC-13 Spatial Organization									
	SO-19	Front lawn	C	X	X	X	ca. 1880		
	SO-20	Side yards	C		X	X	ca. 1890		North side yard served as former service area until 1934
	SO-21	Lower garden	C	X	X	X	ca. 1890		Re-established by NPS mid-1980s
EC-12 Land Uses									
	L-1	Interpretation	NC		X	X	1975		
	L-4	NPS Admin/Storage	NC			X	1975		
EC-13 Circulation									
	C-14	Wood Plank Walk	NCC	X		X	"1975/ 1986"		Reconstructed by NPS
	C-15	Brick Walk	NCC	X	X	X	ca. 1912		Reconstructed by NPS ca. 1975
	C-16	Flagstone Walk	NCC			X	1997		Reconstructed/Resurfaced by NPS 1997
		West Walk	C			X	ca. 1934		Repaired by NPS 1998
	C-17	Wide Stone Staircase	C		X	X	1934		
	C-18	Narrow Stone Staircase	NCC		X	X	1987		Reconstructed by NPS

GRANT-KOHR'S RESIDENCE: Inventory of Existing Conditions and Contributing Resources (See text pg. 1-17 to 1-19)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
	C-19	Wooden Stairs	NCC	X	X	X	1977		Reconstructed by NPS
	C-20	Remnant Stone Steps	C	X			ca. 1890		Abandoned ca. 1930
	C-21	Bunkhouse Row Loop Road	C	X	X	X	ca. 1865		
	C-45	Kitchen Stairs	UD	X	X	X	ca. 1890		Reconstructed by NPS
	C-46	Stone Path	UD		X	X	ca. 1934		
EC-12	Views and Viewsheds								
	V-10	Views of Railroad Corridor & Warren Residence	C	X	X	X	1883 and 1934		
	V-11	Views to lower ranch, riparian corridor, and western foothills	C	X	X	X			
	V-12	Views to Bunkhouse Row	C	X	X	X			
	V-13	Views from within lower garden	C	X	X	X			
	V-27	Views to Hillcrest Cemetery	C	X	X	X			
EC-12	Buildings and Structures								
	B-44	Main Residence	C	X	X	X	1862/1890		HS-1
	S-40	Cobble Wall	C	X	X	X	UD		
	S-41	Stone Terraces	NCC	X	X	X	UD		Repaired by NPS ca. 1983-85
	S-42	Cut Stone Retaining Wall	C		X	X	1934		
EC-14	Objects and Small-scale Features								
	SS-25	White Picket Fence	NCC	X	X	X	2002-2003		Originally built 1882; replaced 1934; original reconstructed by NPS
	SS-26	Wire Mesh Gate	NCC		X	X	ca.1934/post-1982		Original removed by NPS and replaced with reconstruction
	SS-28	Wood Benches	NC	X	X	X	UD		Replicas NPS ca. 1980
	SS-29	Stanchion Pipe	NC			X			
	SS-30	Trash Barrel	NC			X			
	SS-32	Wooden Raised-Bed Frames	NCC	X	X	X	ca. 1980s		Reconstructed by NPS
	SS-33	Wooden Trellis	NCC	X	X	X	1984		Reconstructed by NPS
	SS-34	Capped Pipes	NC			X			

GRANT-KOHR'S RESIDENCE: Inventory of Existing Conditions and Contributing Resources (See text pg. 1-17 to 1-19)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
	SS-35	Utility Meters	NC			X			
	SS-36	Yellow Stand-pipe	NC			X			
	SS-37	Sign	NC			X	1997		
	SS-38	Wood Cellar Covers	NCC	X	X	X	ca. 1890		Reconstructed by NPS
	SS-39	Wood hand rail	NCC		X	X	1987		Reconstructed by NPS
	O-1	Fire Hydrant	NC			X			
	O-3	Utility Cover	NC			X			
	O-4	Wheelbarrow	NC			X	ca. 1995		"NPS reproduction of period piece"
		Carriage Block	MS	X			ca. 1900		
		Hitching Post	MS	X			ca. 1900		
EC-14	Missing Resources								
	A-1	Irrigation system	MS	X			ca. 1883		HRS, 215-216; CLI
	A-2	Drainage Ditch	MS	X			ca. 1890		
	A-22	NPS trailer	MS/ NC			X	1970		
	A-48	Ornamental vegetation	MS						Shappins, 2003, 35; specific locations Undetermined
		Granny's Bonnet (Aquilegia)							
		Johnny Jump Up (Viola Tricolor)							
		Heart's Ease (Viola X Wittrockiana)							
		Rose (Various Species)							
		Orange Zinnia							Speculative
		Yellow Marigold							Speculative
		Blue Ageratum							Speculative
		Pink Wax Begonia							Speculative
		White Alyssum							Speculative
		Scarlet Salvia							Speculative
		Purple Petunia							Speculative
	A-49	Vegetable garden	MS						Shappins, 2003, 35.
		String Bean							
		Rhubarb							
		Red Potato							
		Scallio							
		Onion							

GRANT-KOHR'S RESIDENCE: Inventory of Existing Conditions and Contributing Resources (See text pg. 1-17 to 1-19)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
		Leaf Lettuce							
		Carrot							
		Radish							
		Yellow Corn							
		Squash (Hubbard)							
		Parsnip							
		Strawberry							

WARREN RESIDENCE: Inventory of Existing Conditions and Contributing Resources (See text pg.1-21 to 1-23)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-15 Natural Systems and Features									
	NS-6	North Fork of Johnson Creek	C	X	X	X			
	NS-1	Bench	C	X	X	X			
EC-15 Vegetation									
	VE-10	Ornamental vegetation	C						
		Black Cottonwood			X	X		N	<i>Populus trichocarpa</i>
		Spruce			X	X		N	<i>Picea sp.</i>
		Mountain Alder			X	X			<i>Alnus incana</i>
		Mountain Ash			X	X		N	<i>Sorbus aucuparia</i>
		Maple			X	X			<i>Acer sp.</i>
		Green Ash			X	X			<i>Fraxinus pennsylvanica</i>
		Juniper Tree			X	X			<i>Juniperus sp.</i>
		Juniper Shrub			X	X			<i>Juniperus sp.</i>
		Cotoneaster			X	X			<i>Cotoneaster sp.</i>
	VE-11	Riparian zone vegetation	C						
		Willow Sp.		X	X	X		N	<i>Salix sp.</i>
		Smooth Brome				X		E	<i>Bromus inermis</i>
		Black Cottonwood		X	X	X		N	<i>Populus trichocarpa</i>
	VE-12	Non-irrigated pasture grasses	C						
		Bluebunch Wheatgrass		X	X	X		N	<i>Agropyron spicatum</i>
		Moss Phlox		X	X	X		N	<i>Phlox muscoides</i>
		Needle-And-Thread Grass		X	X	X		N	<i>Stipa comata</i>
		Missouri Goldenrod		X	X	X		N	<i>Solidago missouriensis</i>
		Hairy Goldenaster		X	X	X		N	<i>Chrysopsis villosa</i>
		Desert Alyssum				X		E	<i>Alyssum desertorum</i>
		Blue Grama		X	X	X		N	<i>Bouteloua gracilis</i>
	VE-13	Lawn			X	X			
EC-16 Spatial Organization									
	SO-23	Domestic yard	C		X	X	1934		
	SO-24	Chicken coop field	C		X	X	1940		
	SO-25	East field	C		X	X	1934		
	SO-26	West field	C		X	X	1934		

WARREN RESIDENCE: Inventory of Existing Conditions and Contributing Resources (See text pg.1-21 to 1-23)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
	SO-27	Stuart pasture	C		X	X	1934		Spatial organization altered after visitor center area development
EC-16	Land Uses								
	L-4	NPS administration/ storage	NC			X	1994		
	L-3	Livestock grazing	C	X	X	X	ca. 1884		
	L-1	Interpretation	NC			X	ca. 1994		
EC-16	Constructed Water Features								
	CW-3	Well	C		X	X	1934		
	CW-4	Culvert	C		X	X	pre- 1947		
	CW-5	Old Ditch	C		X	X	UD		
EC-16	Circulation								
	C-7	Warren Lane	C	X	X	X	ca. 1862		
	C-19	Driveway	C		X	X	1934		
	C-20	Sidewalk	C		X	X	1934		Concrete replaced flagstone walk ca. 1956 (16004.152)
	C-21	Stuart pasture road	NC			X	2012		Trail/road from Warren Residence to Pasture and Development Zone
	C-22	Steps	C		X	X	1956		HSR
	C-23	Patio	C		X	X	ca. late 1940s		
	C-45	Remnant stone path	C		X	X			Locations approximate
	C-46	Chicken Coop road	C		X	X			
EC-17	Views and Viewsheds								
	V-14	Views within yard	C		X	X			
	V-15	Views of riparian zone	C	X	X	X			
	V-16	Views to Grant-Kohrs Residence	C	X	X	X			
	V-17	Views to Warren Hereford Ranch	C		X	X			
	V-18	Views of railroad corridor	C	X	X	X			
	V-19	Views of Visitor Center Complex	NC			X			

WARREN RESIDENCE: Inventory of Existing Conditions and Contributing Resources (See text pg.1-21 to 1-23)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-16 Buildings and Structures									
	B-45	Warren Residence	C		X	X	1934		HS-58
	B-46	Warren Garage	C		X	X	1934		HS-61
	B-47	Warren Residence Pump House	C		X	X	1954		HS-88
	B-48	Chicken Coop	C		X	X	1940		HS-59
	B-49	Boat House	C		X	X	ca. 1950		HS-60
EC-18 Objects and Small-scale Features									
	SS-40	Picket Fence	NCC		X	X	1934		5992HS; reconstructed by NPS ca. 2001
	SS-41	Electric Fence	NC			X	ca. 2000		
	SS-42	Picket Double Gate	C		X	X	1934		15884.22
	SS-43	Picket Single Gate	C		X	X	1934		
	SS-44	Wire Mesh Gate	C		X	X	ca. 1952		15882
	SS-45	Wood Post and Woven Wire Fence	C		X	X	pre-1943		1588421
	SS-46	Red Wood Gate	C				ca. 1934		
	SS-47	Jack-Leg Fence	NC				ca. 1975		NPS construction
	SS-48	5-Rail Braced Gate	C		X	X	ca. 1934		
	SS-49	Stepping Stones	NC		X	X			Not in original location; stones removed by NPS 2003; 5891
	SS-50	NPS Mailbox	NC			X	2002		
	SS-51	BBQ foundation	C		X	X	ca. 1958		
	SS-52	Clothesline	C		X	X	pre-1964		16058A
	SS-53	Concrete trough	C				pre-1972		
	SS-54	Magpie trap	NCC		X		ca. 1950		Reconstructed 2014
	SS-55	Birdbath	C		X	X	pre-1964		16058A
EC-18 Missing Resources									
	A-1	Irrigation Ditch (GK residence)		X	X		ca. 1883		HRS, 215-216; CLI
	A-24	Granary foundation remains			X		"ca. 1950-60"		1947 and 1960 aerials
	A-25	Ornamental vegetation			X		"1934 and later"		
	A-26	Garden			X		ca. 1934		Location approximate
	A-27	Row of cottonwoods			X		ca. 1870		16114H

WARREN RESIDENCE: Inventory of Existing Conditions and Contributing Resources (See text pg.1-21 to 1-23)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
	A-47	Berg Trailer			X		pre- 1982		1983 aerial
	A-48	Creep Feeder			X		UD		Location approximate; removed by NPS
	A-49	Wooden Bridge			X		ca. 1940		15882.20
	A-50	Flagstone Walk			X		ca. 1940		15882.20; full extent N
	A-51	Swing set			X		ca. 1938		5964
	A-52	Dog House			X		ca. 1939		5879; location approximate
	A-53	Sweet Pea Trellis			X		ca. 1937		5936; 5881; location approximate
Archeological Sites									
		Prehistoric Scatter	C						ASMIS ID: GRKO00020.000 State ID: 24PW01077
		Foundation Warren Dump by Concrete Granary	C						ASMIS ID: GRKO00016.000 State ID: 24PW00807

RIPARIAN WOODLAND: Inventory of Existing Conditions and Contributing Resources (See text pg 1-25 to 1-27)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-33	Natural Systems and Features								
	NS-2	Johnson Creek	C	X	X	X			
	NS-7	Springs	C	X	X	X			
	NS-14	Clark Fork River	C	X	X	X			
	NS-15	Cottonwood Creek	C	X	X	X			
	NS-16	Sloughs	C	X	X	X			
	NS-17	Beaver Lodges	C	X	X	X			
		No Name Creek / Jeff Johnson Creek	C	X	X	X			
EC-33	Vegetation								
	VE-19	Riparian vegetation communities							
		Geyer Willow	C	X	X	X		N	<i>Salix geyeriana</i>
		Water Birch	C	X	X	X		N	<i>Betula occidentalis</i>
		Sandbar Willow	C	X	X	X		N	<i>Salix exigua</i>
		Western Snowberry	C	X	X	X		N	<i>Symphoricarpos occidentalis</i>
		Bebb willow	C	X	X	X		N	<i>Salix bebbiana</i>
		Woods Rose	C	X	X	X		N	<i>Rosa woodsii</i>
		Smooth Brome	NC		X		ca. 1950	E	<i>Bromus inermis</i>
		Baltic Rush	C	X	X	X		N	<i>Juncus balticus</i>
		Redtop Bentgrass	NC		X	X	?	E	<i>Agrostis stolonifera</i>
		Beaked Sedge	C	X	X	X		N	<i>Carex utriculata</i>
		Black Cottonwood	C	X	X	X		N	<i>Populus trichocarpa</i>
		Rocky Mountain Juniper	C	X	X	X		N	<i>Juniperus scopulorum</i>
		Cattail	C	X	X	X		N	<i>Typha latifolia</i>
EC-34	Spatial Organization								
	SO-53	Clark Fork River Riparian Zone	C	X	X	X			
	SO-54	Cottonwood Creek Riparian Zone	C	X	X	X			
	SO-55	Johnson Creek Riparian Zone	C	X	X	X			
	SO-56	Slickens	NC	X	X	X	post 1908		

RIPARIAN WOODLAND: Inventory of Existing Conditions and Contributing Resources (See text pg 1-25 to 1-27)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-34 Land Uses									
	L-6	Conservation	NC			X	early 1980s		
	L-1	Interpretation	NC		X	X	1975		
	L-11	Recreation	NC			X	UD		
		Livestock Grazing/ Agricultural Production	C	X	X	X			
EC-35 Constructed Water Features									
	CW-1	Kohrs-Manning Ditch	C	X	X	X	ca. 1870		
	CW-7	Johnson Ditch	C	X	X	X	ca. 1874		
	CW-9	Old/abandoned ditches	C		X	X	UD		
EC-34 Circulation									
	C-29	Cottonwood Nature Trail	NC			X	1993		
	C-26	Clark Fork River Bridge Road	C		X	X	ca. 1930		
EC-35 Views and Viewsheds									
	V-31	Views of pastures and hay fields	C	X	X	X			
	V-32	Views within riparian woodland	C	X	X	X			
	V-33	Views to sewage treatment ponds	C		X	X	1958-60		
EC-35 Buildings and Structures									
	S-27	Slough Bridge	C		X		1930		HS-90
	S-44	Clark Fork Bridge	C		X		1930		HS-89
	B-50	Pump House South	C		X		1960		HS-87
EC-36 Objects and Small-scale Features									
	SS-3	4-rail stacked end fence	C			X	ca.1930		
	SS-56	Jack-Leg Fence	C/NC		X	X	ca. 1980		
	SS-63	Wood Post and Woven Wire Fence	C			X	ca. 1930		
	SS-70	Metal Post and Hog Panel Fence	C			X	UD		
	SS-71	Double-Rail and Post Fence	C			X	UD		
	SS-72	5-rail braced gate	C			X	UD		

RIPARIAN WOODLAND: Inventory of Existing Conditions and Contributing Resources (See text pg 1-25 to 1-27)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
	SS-73	Old Fence Remnants	C		X	X	UD		
	SS-74	Health warning signs	NC			X	1988		
	SS-75	Wooden sign	NC			X	UD		
	O-5	Metal pump drum	NC			X	ca. 1988		
EC-37	Missing Resources								
	A-37	Wagon tongues	MS				UD		
	A-38	Wagon wheels	MS				UD		
	A-39	Old logs	MS				UD		
	A-40	Old bridge	MS				UD		
	A-41	Historic dump	MS				UD		
	A-42	Berm dam	MS				UD		
	A-43	Old wooden flume	MS				UD		

RAILROAD CORRIDOR AND BARROW PIT / WETLAND: Inventory of Existing Conditions and Contributing Resources
(See text pg.1-29 to 1-31)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-38	Natural Systems and Features								
	NS-2	Johnson Creek	C	X	X	X			
	NS-11	East Gulch	C	X	X	X			
	NS-18	Beaver Lodges	C	X	X	X			
EC-38	Vegetation								
	VE-20	Railroad bed grass							
		Bluebunch Wheatgrass	C	X	X	X		N	<i>Agropyron spicatum</i>
		Moss phlox	C	X	X	X		N	<i>Phlox muscoides</i>
		Needle-and-thread Grass	C	X	X	X		N	<i>Stipa comata</i>
		Missouri Goldenrod	C	X	X	X		N	<i>Solidago missouriensis</i>
		Hairy Goldenaster	C	X	X	X		N	<i>Chrysopsis villosa</i>
		Desert Alyssum	C	X	X	X		N	<i>Alyssum desertorum</i>
		Blue Grama	C	X	X	X		N	<i>Bouteloua gracilis</i>
		Spring Whitlowgrass	C	X	X	X		N	<i>Draba verna</i>
		Common Sagewort	C	X	X	X		N	<i>Artemisia campestris</i>
		Spotted knapweed	NC			X		E	<i>Centaurea biebersteinii</i>
		Baby's Breath	NC			X		E	<i>Gypsophila paniculata</i>
	VE-21	Barrow pit vegetation							
		Cattails	C	X	X	X		N	<i>Typha latifolia</i>
		Softstem Bulrush	C	X	X	X		N	<i>Schoenoplectus tabernaemontani</i>
		Forget-me-not	C	X	X	X		N	<i>Myosotis scorpioides</i>
		Cottonwood	C	X	X	X		N	<i>Populus trichocarpa</i>
		Willow	C	X	X	X		N	<i>Salix sp.</i>
		Western serviceberry	C	X	X	X		N	<i>Amelanchier alnifolia</i>
		Yellow rocket	NC			X		E	<i>Barbarea vulgaris</i>
		Bullhead Waterleaf	C	X	X	X		N	<i>Hydrophyllum capitatum</i>
		Utah Honeysuckle	C	X	X	X		N	<i>Lonicera utahensis</i>
		Blunt-leaf Yellowcress	C	X	X	X		N	<i>Rorippa curvipes</i>
		Red Osier Dogwood	C	X	X	X		N	<i>Cornus sericea</i>
		Chokecherry	C	X	X	X		N	<i>Prunus virginiana</i>
		Violet	C	X	X	X		N	<i>Viola sp.</i>
	VE-22	Ungrazed prairie							
		Bluebunch Wheatgrass	C	X	X	X		N	<i>Agropyron spicatum</i>
		Giant Wildrye	C	X	X	X		N	<i>Elymus canadensis</i>

RAILROAD CORRIDOR AND BARROW PIT / WETLAND: Inventory of Existing Conditions and Contributing Resources
(See text pg.1-29 to 1-31)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
		Needle-and-thread Grass	C	X	X	X		N	<i>Hesperostipa comata</i>
		Indian Ricegrass	C	X	X	X		N	<i>Oryzopsis hymenoides</i>
		Moss Phlox	C	X	X	X		N	<i>Phlox muscoides</i>
		Long-leaf Phlox	C	X	X	X		N	<i>Phlox longifolia</i>
		Land Larkspur	C	X	X	X		N	<i>Delphinium nuttallianum</i>
		Wooly Pod Milkvetch	C	X	X	X		N	<i>Astragalus purshii</i>
		Plains Prickly Pear	C	X	X	X		N	<i>Opuntia polyacantha</i>
EC-38	Spatial Organization								
	SO-59	Railroad Corridor	C	X	X	X	1879/ 1908		
	SO-60	Barrow Pit	C	X	X	X	1908		
	SO-61	Ungrazed prairie	C	X	X	X			
EC-39	Land Uses								
	L-6	Conservation	NC			X	UD		
	L-7	Transportation	C	X	X	X	1879		
	L-8	Utilities	C	X	X	X	UD		
	L-1	Interpretation	NC			X	1985		
		Recreation	NC			X	1975		
EC-39	Constructed Water Features								
	CW-12	Effluent Wells	NC			X	1999		
	CW-13	Irrigation Mainline	NC			X	1999		
EC-39	Circulation								
	C-33	Burlington Northern Railroad line	C	X	X	X	1879		
	C-34	Old Milwaukee Railroad road	C	X	X	X	1908		
	C-35	NPS Service Road/at-grade crossing	C		X	X	1979		
	C-36	Sewage treatment service road/at-grade crossing	C		X	X	1958-60		

RAILROAD CORRIDOR AND BARROW PIT / WETLAND: Inventory of Existing Conditions and Contributing Resources
(See text pg.1-29 to 1-31)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-40	Views and Viewsheds								
	V-34	Views to Ranch complexes	C	X	X	X			
	V-35	Views to Visitor Center complex	NC		X	X			
	V-36	Views framed by vegetation	C	X	X	X			
	V-37	Views to riparian corridor and mountains	C	X	X	X			
EC-39	Buildings and Structures								
	S-47	Siphon	C	X	X	X	1908		
	S-48	Cattle Car ca. 1923	NCC		X	X	1986		
	S-49	Cattle Car ca. 1929	NCC		X	X	1985		
	S-50	Railroad trestles	NC		X	X	1978		
	B-51	Warren Pumphouse	C		X	X	1960		
EC-40	Objects and Small-scale Features								
	SS-78	Metal Post and Wire Fence	NC			X	UD		
	SS-79	Jack-Leg Fence	NCC			X	UD		
	SS-80	4-Rail Stacked-end Fence	UD			X	UD		
	SS-81	5-Rail Braced Gate	UD			X	UD		
	SS-82	Galvanized Metal Gate	UD			X	UD		
	SS-83	Metal Pipe Gate	UD			X	UD		
	SS-84	Wood and Metal Post and Wire Fence	NCC			X	UD		reconstructed by NPS ca. 1995
	SS-85	Wheel flange detector system	UD			X	UD		
EC-40	Missing Resources								
	A-44	Dump areas	MS		X	X	UD		
	A-57	Maintenance Shed	MS		X	X	UD		Used by Milwaukee RR; removed ca. 1982
	A-58	Gravel excavation remains	MS		X	X	UD		
	A-59	Oil barrel	MS		X	X	UD		Used by Milwaukee RR
	Archeological Sites								
		Concrete slabs associated with RR construction	C						ASMIS ID: GRKO00005.000 State ID: 24PW00796
		Hobo Camps	C						ASMIS ID: GRKO00006.000 State ID: 24PW00797
		Railroad Gravel Quarry	C						ASMIS ID: GRKO00018.000 State ID: 24PW00809

DEVELOPMENT ZONE: Inventory of Existing Conditions and Contributing Resources (See text pg 1-33 to 1-35)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-41	Natural Systems and Features								
	NS-1	Bench	C	X	X	X			
	NS-2	Johnson Creek	C	X	X	X			
EC-41	Vegetation								
	VE-23	Riparian vegetation							
		Native Plant Garden	NC						<i>species unverified</i>
		Willow sp.	C	X	X	X		N	<i>Salix sp.</i>
		Smooth Brome	NC		X	X		E	<i>Bromus inermis</i>
		Black Cottonwood	C	X	X	X		N	<i>Populus trichocarpa</i>
	VE-24	Non-irrigated pasture grasses		X	X	X		N	
		Bluebunch Wheatgrass	C	X	X	X		N	<i>Agropyron spicatum</i>
		Moss Phlox	C	X	X	X		N	<i>Phlox muscoides</i>
		Needle-and-thread Grass	C	X	X	X		N	<i>Stipa comata</i>
		Missouri Goldenrod	C	X	X	X		N	<i>Solidago missouriensis</i>
		Hairy Goldenaster	C	X	X	X		N	<i>Chrysopsis villosa</i>
		Desert Alyssum	NC			X		E	<i>Alyssum desertorum</i>
		Blue Grama	C	X	X	X		N	<i>Bouteloua gracilis</i>
EC-42	Spatial Organization								
	SO-62	Developed area	NC		X	X	1975		
	SO-64	Visitor center field	NC	X	X	X			
EC-41	Land Uses								
	L-2	Visitor services	NC		X	X	1975		
	L-1	Interpretation	NC		X	X	1975		
	L-4	NPS administration/ storage	NC		X	X	1975		
	L-6	Preservation	NC		X	X	1975		

DEVELOPMENT ZONE: Inventory of Existing Conditions and Contributing Resources (See text pg 1-33 to 1-35)

C = Contributing; NC = Non-Contributing; NCC=Non-Contributing Compatible (Supporting); UD=Undetermined				Associated Period					
Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-41	Constructed Water Features								
	CW-9	Old/abandoned ditches	C		X	X	UD		
EC-42	Circulation								
	C-40	Visitor Entry Drive	NC		X	X	1975		
	C-41	Parking areas	NC		X	X	1975		
	C-42	Asphalt sidewalk/trail	NC		X	X	1975/ 1977		
	C-43	Traffic islands	NC		X	X	1975		
	C-44	Pedestrian underpass	NC		X	X	1977		
EC-42	Views and Viewsheds								
	V-38	Views of riparian area	C	X	X	X			
	V-39	Views of railroad trestles/ corridor	NC		X	X	1975		
	V-40	Views within developed area	NC		X	X	1975		
	V-41	Views of fairgrounds and Business Loop 90	NC		X	X			
	V-42	Views of Grant-Kohrs Ranch	C	X	X	X			
EC-41	Buildings and Structures								
	B-52	Curation Storage Facility / Museum Facility	NC			X	2002		GRKO-004
	B-53	Visitor Contact Station	NC		X	X	1975		GRKO-002
	B-54	Restroom	NC		X	X	1975		Moved behind VC, 2015
		Restroom	NC			X	2015		
		Picnic Shelter	NC			X	2014		
EC-43	Objects and Small-scale Features								
	SS-87	Entrance Sign	NC			X	1987		
	SS-88	Jack-Leg Fence	NC			X	"1975/ 1978"		
	SS-89	Overhead Gate	NC			X	1992		Entrance from Loop 90
		Overhead Gate	NC			X	2002		Curation Facility
	SS-90	5-Rail Braced Gate	NC			X	1992		
	SS-91	Typical Ranch Gate	NC			X	UD		
	SS-93	Wayfinding Signage	NC			X	1982		
	SS-94	Large Interpretive Sign	NC			X	2013		
	SS-95	Information Kiosk	NC			X	UD		

DEVELOPMENT ZONE: Inventory of Existing Conditions and Contributing Resources (See text pg 1-33 to 1-35)

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Map #	CLR/ Map ID#	Feature	C/NC/ NCC/ UD	Grant- Kohrs 1862- 1919	Warren 1929- 1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
	SS-97	Flagpole/Flag	NC			X	1982		
	SS-98	Concrete Curb	NC			X	1975		
	SS-99	Interpretive Grain Wagon	UD			X	UD		
	SS-102	Trash Barrels	NC			X	UD		
	SS-103	Fire Hydrant	NC			X	1980		
	SS-107	Picnic Tables	NC			X	2003		
	SS-111	Interpretive Trail waysides	NC		X	X			
	SS-112	Wooden Benches	NC			X	1994		
	SS-113	Small informational signs	NC			X	1982		
	SS-114	Metal plaque	NC			X	2000		
EC-41	Missing Resources								
	A-46	Weather Station	MS			X	1979		Location unknown
	Archeological Sites								
		Tom Stuart Homestead	C				pre-1884		ASMIS ID: GRKO00007.000 State ID: 24PW00798
		Planning for New Museum Building (Artifact Scatter; Historic Dump)	C						ASMIS ID: GRKO00002.000 State ID: 24PW00651

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Chapter 2 - Treatment Approach

DESIRED FUTURE CONDITION

Grant-Kohrs Ranch preserves and interprets the headquarters of a 10 million acre cattle empire and remains an important symbol of the American West. The historic setting of wide open spaces, original buildings and structures, museum collections, and the continued use of livestock production provides an authentic visitor experience.

The desired future condition for the Grant-Kohrs Ranch reveals the daily and seasonal operations of the ranch. Livestock breeds are representative of those raised during the historic period, and improved safe routes allow for visitors to see animals, tour historic buildings and spaces, and gain an insight into the workings of an historic ranch. The domestic landscapes will be repaired as intimate spaces, distinct from the adjacent utilitarian landscapes. A goal of the interpretive program is visitors learn about the evolution of the open range to mechanized ranching operations. Improved pedestrian routes and multi-use paths connect previously inaccessible or unsafe areas, expanding opportunities for learning and exploration, connecting to the Town of Deer Lodge and beyond. The gateway and visitor entrance experience orients and greets visitors to GRKO, introducing them to the operating ranch and providing visitor amenities in an improved NPS parklike setting. The restored Clark Fork River is an amenity for visitors as well as for wildlife and livestock, as a thriving green spine through the ranch. The barrow pits will be allowed to be reclaimed by wetland vegetation. Cottonwood Creek and Johnson Creek continue as an integral part of the Home Ranch with managed grazing in these riparian areas.

Secretary of the Interior's Four Treatments

The Secretary of the Interior recognizes four appropriate treatment alternatives for cultural landscapes: preservation, rehabilitation, restoration, and reconstruction. Published standards for each of these treatments are available.^{2.1} These standards provide managers with the philosophical framework for a consistent approach to a cultural landscape

2.1 Charles Birnbaum and Christine Peters. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. Washington: U.S. Department of the Interior, 1996.

planning project. The overall goal for each of the four treatments is the preservation and enhancement of historic integrity. However, both restoration and reconstruction introduce measures to return a landscape to its condition and appearance at a particular time in history. By contrast, preservation and rehabilitation approaches “seek to secure and emphasize continuity, while acknowledging change.”^{2.2}

Preservation

Preservation is “the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property.”^{2.3} Treatment, including measures to protect or stabilize the property, focuses on maintenance and repair of contributing features or spaces rather than extensive replacement or new construction. Preservation allows “the limited and sensitive upgrading” of utility systems (mechanical, electrical and plumbing), and other code-required work to ensure the historic property is made functional.^{2.4} Preservation may be viewed as an appropriate treatment when a property’s distinctive materials, features, and spaces are essentially intact and thus convey historical significance without the need for extensive repair or replacement; when depiction at a particular period of time is not appropriate; and when a continuing or new use does not require extensive changes. Of the four treatments, preservation standards require the greatest amount of extant historic fabric, including the landscape’s historic form, features, and details as they have evolved over time.^{2.5}

Rehabilitation

Rehabilitation is the act or process of making possible a compatible use for a property through repair, alterations, and additions, while preserving those portions or features that convey its historical,

2.2 Birnbaum, *Guidelines for the Treatment of Cultural Landscapes*, 6.

2.3 Robert Page, Cathy A. Gilbert, and Susan A. Dolan. *A Guide to Cultural Landscape Reports: Contents, Process and Techniques*. Washington: NPS Cultural Resource Stewardship and Partnerships Park Historic Structures and Cultural Landscapes Program, 1998.

2.4 Adapted from *The Secretary of the Interior Standards for the Treatment of Historic Properties* as amended and annotated (1995).

2.5 Birnbaum, *Guidelines for the Treatment of Cultural Landscapes*, 3, 17-18.

cultural, or architectural values. Rehabilitation is an appropriate treatment when repair and replacement of deteriorated features is necessary; when alterations are planned for a new or continued use; and when depiction at a particular period of time is not appropriate. The standards for rehabilitation—as with those for preservation—emphasize retaining and repairing existing historic features, finishes, and materials. However rehabilitation standards acknowledge the need to alter a cultural landscape to meet continuing or new uses.^{2.6}

Restoration

Restoration is the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. Restoration may be appropriate when the property's significance or design during a particular period outweighs the potential loss of extant materials, features, and spaces from other periods.^{2.7}

Reconstruction

Reconstruction is the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving landscape, site, or object for the purpose of replicating its appearance at a specific period of time and in its historic location. Reconstruction is primarily undertaken for interpretive purposes.^{2.8}

PRIMARY TREATMENT APPROACH

This CLR Part Two reaffirms **preservation** as the overall treatment for the Grant-Kohrs Ranch, with **selected rehabilitation and restoration** projects as appropriate. The selection of preservation as the primary treatment approach is based upon the CLR Part Two Pasture/Hay Field and Upland Pasture.^{2.9}

The treatment approach of preservation is well-suited for Grant-Kohrs Ranch, as the complex is a cultural landscape that has a continuity of use with few modifications since the end of the period of significance (1862 to 1982). Distinctive materials, features and spaces are essentially intact. Those characteristics that shaped the ranch historically are present today in much the same way as they were originally.

The Secretary of the Interior has set forth eight standards that outline the philosophy for preservation in detail. These standards emphasize stabilization and repair over replacement, although they allow for limited replacement of historic features. The standards respect changes that have occurred to a landscape over time and acquired significance in their own right. The stated goal of the preservation approach is the retention of a cultural landscape's existing form, features, and materials, provided these actions will not result in a degraded landscape condition—that is, provided the actions do not conflict with other resource objectives.^{2.10}

Preservation of the cultural landscape will be undertaken holistically with a full understanding of the complex and inter-relationships of its features. Individual contributing features and spaces will be preserved, as will those landscape characteristics that have been instrumental in shaping the land, including land use, patterns of spatial organization, and circulation. The preservation treatment approach will enable the NPS to preserve contributing resources while accommodating continued use, ranch operations, interpretation/education, as well as protecting natural systems.

2.6 Birnbaum, *Guidelines for the Treatment of Cultural Landscapes*, 3, 47-48.

2.7 Birnbaum, *Guidelines for the Treatment of Cultural Landscapes*, 89-90.

2.8 Birnbaum, *Guidelines for the Treatment of Cultural Landscapes*, 127-128.

2.9 Shapins Belt Collins. *Grant-Kohrs Ranch, Cultural Landscape Report, Part Two, Pasture / Hay Fields Component Landscape, Upland Pastures Component Landscape*. National Park Service, 2009.

2.10 Birnbaum, *Guidelines for the Treatment of Cultural Landscapes*, 3, 19-20.

Treatment Terminology

The treatment recommendations provide guidance for the preservation of the cultural landscape through specific actions. All actions will be undertaken in keeping with the overall treatment approach of preservation. The following terminology is used to describe recommended actions.^{2.11}

Preserve/Preservation refers to measures necessary to sustain the existing form, integrity, and materials of the contributing features of Grant-Kohrs Ranch. It allows for measures that focus on sustaining extant features or areas rather than replacement. Preservation allows for maintenance, repair, restoration, and sensitive upgrading of systems and code-required work.

Maintain/Protect refers to standard maintenance practices that are necessary to retain a feature or area as a contributing resource. Maintenance activities are usually not classified as repair, however minor repair such as replacement of posts or segments of paving or painting or cleaning of features are considered maintenance. Limited and sensitive upgrading of systems (mechanical, electrical, plumbing) and other code related work is appropriate as is pruning, thinning, fertilization, or pest control to maintain the health and vigor of vegetation.

Rehabilitate/Rehabilitation refers to the act or process of allowing a compatible use through repair, alteration, or additions as long as those features that convey the historical, cultural, or architectural values are preserved. Rehabilitation allows new, compatible additions.

Repair refers to those measures that are necessary to sustain a contributing feature with methods that are more extensive than regular maintenance. It allows for undertaking work necessary to bring a contributing feature or area to a good condition.

Restore/Restoration refers to those measures necessary to accurately depict a feature or area and its character as appeared historically. It allows for the replacement of missing features and the removal of features from other periods where a property's significance during that period outweighs the loss

of extant elements from other periods, and where substantial physical and documentary evidence exists. Restoration may include repair of a feature so that it appears as it did historically. It may include replacement of missing features such as replacing a section of a contributing walkway or restoring a historic view.

Retain are those actions that are necessary to allow a feature (contributing or non-contributing) to remain in place in its current configuration and condition.

Stabilize/Stabilization refers to those measures that require more work than standard maintenance practices, and that are necessary to prevent the further deterioration, failure, or loss of contributing features.

2.11 Adapted from *The Secretary of the Interior Standards*.

MANAGEMENT ISSUES

This section summarizes those management issues, concerns, and objectives relevant to the management of the seven component landscapes. These issues are based on a variety of sources including the Foundation Document and GMP for GRKO, the CLR Part One, field investigations, and input from staff. Park-wide issues are identified first, followed by more detailed issues identified for each component landscape.

Park-wide

Integrating Visitor Experience with Ranch Operations

More opportunities are needed for visitors to understand the cattle industry and to observe day-to-day ranching operations.

It is desired for visitors learn about the evolution of the open range to mechanized feedlot operations, however this must be accomplished while ensuring visitor safety. Safety concerns include trucks, animals, and NPS activities occurring within the same spaces as visitor use. Several roads are congested due to visitors and staff moving through the same routes, which pose safety concerns. While trying to achieve its legislative mission, the ranch must ensure the safety of visitors, staff, and livestock.

Low Visitation

At 20,000 visitors per year, the ranch would like to see a modest increase in visitors. An increase in recreational opportunities are needed. Local residents have expressed interest in additional hiking trails, opportunities for fishing, tubing and swimming, birding, and horse driving. The NPS has added a gate to the southwest entrance, which has increased public use. However existing trail maps can be intimidating, and there is a lack of signage. Plans are underway to develop a nature trail to form a loop through the ranch. Portions of this trail are already constructed.

Superfund Remediation

The Superfund remediation site includes a 2 ½ mile long section within the 50-year channel migration zone, extending a minimum of 50 feet either side of the channel and additional removal and contouring of flood plain as required. During remediation the appearance of the cultural landscape will be modified and access to some areas will be limited.

Remediation will take approximately 400 days, with a follow-up time of 10 years for continued monitoring of vegetation establishment. For the first 2 or 3 years after remediation, access to the river will be closed. During remediation, existing vegetation, slickens, and contaminated soil within the remedial area will be removed. Mature cottonwoods, established wetlands, river oxbows, and features of cultural significance will be left in place to reflect the cultural landscape.

Climate Change

Average annual mean temperature and precipitation are projected to increase in the region that includes Grant-Kohrs Ranch. Scientific studies indicate that extreme weather events such as storms, droughts, and floods are likely to become more intense as the atmosphere continues to warm. This could create a range of implications for the cultural and natural resources of the ranch over time, along with implications for infrastructure and operations.^{2,12}

Balancing Historic and Natural Resources with Operating Ranch Needs

Contributing structures, buildings, and features should be protected but also need to be functional for the operating ranch. A balance must be achieved between the operating ranch and preservation. For example, historic diversion systems that cause erosion are modified to support success of the entire system.

Natural resources need to be managed in such a manner as to complement the historic context of the ranch and cattle ranching operations. Resource managers are learning how natural and cultural resources depend on each other. Cattle ranch and agricultural operations here can enhance the natural resource condition. Native species (beaver, ground squirrel) populations need to be balanced with cultural resource protection. Animals block ditches and burrow holes in contributing hayfields. The ranch utilizes Integrated Pest Management philosophy and practices to manage plant and animal species negatively impacting resources.

2.12 Foundation Document, Grant-Kohrs Ranch National Historic Site, Montana. National Park Service, 2015, 12.

Orienting and Connecting Visitor to Resource

The visitor contact station and parking create some barriers for visitors. When visitors enter the parking, the historic ranch buildings are not visible. In addition, the visitor contact station sits near the parking lot and its appearance can easily be confused by visitors as a remnant of the historic ranch.

The ranch needs classroom space for educational programs and as cover during bad weather. Existing contributing structures may provide an opportunity to meet this need.

Visitor access into the cultural landscape is difficult due to the railroad crossing and safety hazards associated with crossing the tracks. Routes are difficult walking surfaces for some, and long distances make it difficult for visitors to experience daily ranching activities.

To bring the visitor closer to daily ranching operations, and to establish a visual connection to the ranch's most significant resources, the GMP identified the Warren Barn, within the Warren Ranch Complex, as the preferred location for a new visitor center and administrative offices. Today, the feasibility of this strategy is unlikely.^{2,13}

Existing waysides are dated, but staff is working with Harper's Ferry on an wayside exhibit plan to incorporate 20 new interpretive waysides throughout the ranch. A Long-Range Interpretive Plan will be completed in 2016.

Modern Intrusions and Incremental Changes Over Time

Incremental changes over time have modified the cultural landscape. A desire to maintain the historic setting and ambiance needs to be balanced with NPS operations. The appearance of the cultural landscape has been modified by replacement of gates and fencing, and addition of a modern chute system, resource office, annunciator building and hazmat building, and changes to the Lower Yard with visitor activities (e.g. Chuck Wagon, interpretive elements such as roping dummies).

Buildings have been modified to be functional for NPS operations. The Sales Barn is now a

maintenance shop with an added stove pipe and antenna for radio and security. These additions and others disrupt the building's historic character.

The ranch utilizes a modern movable chute system since historic cattle chutes are not safe. These contemporary, compatible features are located side-by-side with historic (contributing) features.

Fences added by NPS to protect resources and direct visitors are not readily distinguishable from historic fence types. Jack-leg fences are used extensively, including replacement fences set along historic alignments. These new NPS fences are the same style as the historic.

Circulation Patterns do not Reflect the Historic Condition

The original entrance to the ranch, Warren Lane, is no longer the main entrance for visitors. Most visitors enter the ranch not along Warren Lane, but from the Development Zone. This change in the road and entrance experience diminishes the integrity of setting and feeling of the historic ranch. The entrance that existed historically is no longer experienced by most visitors.

Additional Research is Needed

More data is needed for treatment of specific features before decisions are made. Additional documentation of small scale features along the railroad corridor is needed. Research and archeological testing could be considered to assess historic vegetation types and locations, and extent of walls and paths adjacent to the Grant-Kohrs and Warren Residences. Further research into changes in fencing and gate types and alignments is needed.

Portions of GRKO are Not Accessible

Accessibility needs include parking and wayfinding. Currently, a ½ mile trail extends from the visitor center to the Grant-Kohrs Residence, which is paved and is the route taken by most visitors. An accessible parking area is adjacent the Grant-Kohrs Residence, with access to requiring crossing an active railroad line. Crossing the railroad line is particularly hazardous to those utilizing the accessible parking area and to the elderly, who may be at a higher risk due to poor vision and hearing when crossing the tracks. The Grant-Kohrs Residence main floor is universally accessible, but otherwise pedestrian

2.13 GRKO Foundation Document, 11.

travel is over gravel, grass, and uneven surfaces. Universal accessibility is desirable to the Lower Yard, Warren House, Dairy Barn, and alleys. The ranch has metal ramps to access some buildings, but they are not often used.

Home Ranch Complex

The Home Ranch Complex has the highest visitor use. It is a high-traffic area with programs in contributing buildings and re-use of some of the buildings. The complex includes the following management issues.

- The Home Ranch Complex is on the edge of the Superfund remediation area and will be impacted during remediation from visual and audible intrusion and by limited access.
- Some NPS activities disrupt historic ambiance important to visitor experience in this area.
- Visitor accessibility to the Lower Yard is desired.
- Guidance is needed on the future re-use of some contributing structures.
- Shade is needed, as well as protection for the mature cottonwood trees and replacement in-kind of these trees once they have reached the end of their natural lives.

East Feed Lot / Warren Hereford Ranch

- This complex is used similarly to how it was historically. Due to the working operations in this complex, there is potential for more visitor programs, such as the working chute area.
- Greater interpretation is needed to tell the story of this area.
- This complex has congestion hazards, associated with park operations traffic.
- Identifying the least impactful way to use resources, e.g. things needed for operations should be temporary so they can be removed and used at a later date, is needed.
- Use areas and operations need to be streamlined to minimize conflicts, and provide adequate space and storage.

Grant-Kohrs Residence

- It has been problematic getting trees to grow around the residence, and guidance is needed to assist with tree and vegetation establishment.
- The front entry is no longer as prominent an entry as existed historically.
- Walls, garden, trees, circulation patterns have been damaged and need to be repaired and/or restored.

Warren Residence

- Ornamental plantings are missing from adjacent to the house.
- The original entrance to the ranch – Warren Lane – is no longer the main entrance. Visitors often arrive at the Warren Residence by mistake.

Riparian Woodland

- Superfund remediation area (see Park-wide).
- A long-term riparian management plan is needed, including appropriate use of fencing, livestock grazing, and fire.
- A plan for accommodating increased recreational use, e.g. fishing, floating, swimming, birding, and trails is needed.

Railroad Corridor and Barrow Pit/Wetland

- Two sets of railroad tracks occur, one is owned by BNSF Railroad, and the other was purchased by the NPS. The NPS portion includes only a portion of the original track, the remainder has been removed.
- Safety concerns occur in this area, including abandoned telegraph wires and poles.
- Better documentation and history of this area is needed, particularly for small scale features such as the wood poles and archeological sites.
- The borrow pits have been allowed to become a wetland rather than appearing as historic borrow pits.
- The railroad corridor is not currently preserved as a railroad corridor.

Development Zone

- This area is not easily recognized as a component of the NPS, does not have curb appeal, and lacks wayfinding. Opportunities exist to improve visitor orientation and NPS identity.
- Interpretation and protection is needed for the archeological site in this area.
- RV parking is needed for seasonal volunteers and researchers.
- New trails are desired to connect the Development Zone with the other component landscapes.
- For security purposes, the Museum Facility should remain unmarked. Visitors unintentionally coming to the museum should be dissuaded, potentially through signage.

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Chapter 3 - Treatment Plan

INTRODUCTION

The following presents a series of guidelines and suggested treatment recommendations for the preservation and enhancement of historic integrity within the seven component landscapes of Grant-Kohrs Ranch.

Grant-Kohrs Ranch is listed in the NRHP as a district with a large number of resources dispersed across approximately 1,600 acres. The ranch contains contributing, supporting and non-contributing buildings, structures, objects and sites. For purposes of this document, these resources are broken into landscape characteristics (rather than NRHP property types) to describe tangible and intangible aspects of the landscape that create its overall historic character and to aid in the understanding of its cultural importance. Recommendations include treatment for individual features (e.g. cattle chutes), which are described within the broader landscape characteristic (e.g. buildings and structures). Preservation of individual features results in preservation of the landscape characteristic and historic integrity of the ranch.

Preservation guidelines and suggested treatments are provided for the following landscape characteristics.

- Natural Systems and Features
- Vegetation
- Spatial Organization and Views
- Land Use
- Constructed Water Features
- Circulation
- Buildings and Structures
- Small Scale Features
- Archeological Sites
- New Design and Construction

This chapter presents general treatment guidance first, followed by more detailed guidance for each component landscape. The narrative is illustrated by treatment plans that graphically describe the recommendations. Implementation of the treatment recommendations is identified in Appendix C: FMSS Crosswalk and Treatment Tables. The FMSS tables organize recommendations into distinct tasks, to guide preparation of Project Management Information System (PMIS) project statements.

GENERAL TREATMENT GUIDANCE

These guidelines offer general guidance regarding the maintenance and use the cultural landscape, as well as guidance on the addition of new features and the general design character of those features. These guidelines reflect the overall treatment approach of preservation with selected rehabilitation and restoration actions. These guidelines apply to all seven component landscapes as appropriate.

Special Requirements

The treatments of the cultural landscape must reflect the core principles of the NPS and its mission to preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. These special requirements include GRKO's responsibility and obligation to do the following.

1. Provide a safe environment for both visitors and employees;
2. Maintain an environmentally friendly and sustainable setting;
3. Abide by federal regulations and policies, including Sections 106 and 110 of the NHPA, NEPA, and on topics such as sustainability and energy use;
4. Be economically efficient;
5. Promote strong working relationships with outside partners.

General Treatment

GT-1. Preserve features that contribute to the significance of Grant-Kohrs Ranch, including buildings, structures, small scale features, and vegetation. Preserve land use, topography, spatial organization, natural systems including the Clark Fork River and its tributaries that contribute to the landscape character.

- Stabilize features or repair and/or replace deteriorated contributing features in-kind, as needed.

- Allow upgrades to repair features to meet current building codes, universal accessibility standards, and to ensure visitor safety, using methods that protect historic fabric.
- Code upgrades are not required or appropriate for all buildings and must be evaluated on a case-by-case basis.

GT-2. Document and record NPS actions, including repairs and replacement of historic features. Document all major modifications and treatments through drawings, photographs, and notes. Maintain records of treatment and preserve documentation according to professional archival standards. Provide photo documentation for any modifications.

GT-3. Explore further partnerships to increase preservation, visitation, and enhance interpretation.

- Develop a partnership with the Milwaukee Railroad Historical Association.

Natural Systems and Features

NS-1. Preserve native plant communities and promote ecological function in areas where historically introduced plant species are not present.

NS-2. Preserve and protect riparian corridors, wetlands, and natural springs. Mitigate damage from erosion, pollution, and invasive species.

NS-3. Implement the 2011 Northern Rocky Mountain Invasive Plant Management Plan.

NS-4. Integrate and interpret the Deer Lodge Valley and natural systems as part of the visitor experience.

NS-5. Consider safe passage for wildlife through the ranch, including modifying fences where necessary to allow deer crossing. Consider wildlife passage in any new fence project.

Vegetation

The ranch has four major vegetation types: 1) dry upland topographic benches with native bunchgrasses and forbs, and introduced rangeland species; 2) irrigated and sub-irrigated hayfields and pastures with forage species; 3) riparian areas dominated by riparian shrubs and small wetland communities; and 4) maintained/formal ornamental vegetation around residential buildings.

Vegetation should be managed to distinguish ranch areas from residential, development zone, and riparian woodland areas. The overall goal for vegetation management is to sustain the appearance of the historically appropriate plant communities.

VE-1. Retain and preserve contributing vegetation representative of the ranch's history.

VE-2. Maintain a distinct vegetation type within residential spaces, ranch spaces, and the riparian area to distinguish these land uses.

VE-3. Maintain distinct vegetation types between the Pastures/Hayfields and the feedlots and yards, with the latter allowed to be grazed more intensely.

VE-4. Maintain turf grasses and ornamental plantings where they existed historically.

VE-5. Use only historically appropriate ornamental species and grow them only where adequate evidence or documentation exists to support their historic presence.

VE-6. Reseed pastures and feedlots as necessary utilizing introduced pasture grass species or native species used historically. Retain and perpetuate native plant species where possible. Consider propagation methods, such as seed collection from existing plants, to preserve the local, native seed pool, or purchase cultivars most similar to native species.

VE-7. Allow short-lived non-invasive new grasses and forbs species not grown historically on the ranch if these support natural resource management, soil health, or other objectives and are similar in form, color, and scale to those used historically.

- VE-8. Manage riparian woodland vegetation as dominantly native species, allowing historic pasture species where they occurred historically. Follow recommendations where feasible included in the revegetation plan for the Phases 15-16 of the Milltown Reservoir/Clark Fork River Superfund Site.^{3.1}

Spatial Organization and Views

- SO-1. Protect and preserve open spaces and views that contribute to the ranch's significance. Preserve the wide open spaces of the Montana landscape by continuing ranching operations.
- SO-2. Collaborate with adjacent property owners and local and regional partners, such as Five Valley Land Trust, to protect areas of scenic importance and views of the Flint Creek Mountains and other mountains.
- SO-3. Preserve the spatial organization and relationships of the buildings and landscape features of the ranch. Maintain historic spatial organization patterns, particularly the contrast of open hay fields, pastures and feedlots to developed and residential areas. Preserve features that define historic spatial patterns (feedlots, pastures, yards, fences, ditches, roads, buildings, trees, hay crop, vegetation, and topographic features).
- SO-4. Limit new buildings and structures. If determined necessary, locate new facilities to not interfere with the spatial organization of the historic ranch. Site new facilities to be compatible with the historic character of the ranch as defined through historic patterns and scale of construction.

Land Use

- LU-1. Maintain the use of the ranch as an operating cattle ranch. Maintain existing mix of livestock, grazing, irrigation, and haying practices, and administrative and visitor uses.
- LU-2. Continue to interpret the historic land uses for visitor enjoyment and appreciation.

- LU-3. Develop a consistent NPS visitor experience utilizing signs, wayfinding, buildings, materials and design that respect the historic character of the ranch but also reads clearly and consistently as part of the NPS.

- LU-4. Retain a variety of livestock breeds that represent those raised during historic periods, Longhorn, English Shorthorn, Hereford for cattle, and other livestock such as horses and chickens.

- ° Consider re-introducing livestock species and breeds that were historically raised on the ranch. These might include additional breeds of cattle (dairy, Angus), horses, turkeys, hogs, and sheep.^{3.2} Diversification of livestock must be supported by documentation, and managers must have a plan for managing these new species and/or breeds.

- LU-5. Continue to allow managed cattle grazing in riparian areas.

- LU-6. Expand efforts to integrate the local community into the daily workings of the ranch. Develop partnerships with other groups and existing programs such as Milwaukee Historic Railroad Association, Deer Lodge Chamber of Commerce, and Montana State University.

- ° Develop programs to educate visitors about heritage breeds, sustainable land use practices, and self-sufficient land practices in the West. These could include education on heirloom garden species, heritage breeds of livestock, beekeeping, and herbal remedies that would have been employed during the Grant-Kohrs era.
- ° Continue to collaborate with other national parks (Yellowstone NP, Glacier NP) and the Montana Office of Tourism to share

3.1 Geum Environmental Consulting Inc. *Draft CFR Reach A Phases 15-16, Plant Selection Pathway*, March 2015.

3.2 During the Grant-Kohrs period, longhorn cattle, shorthorn cattle, Hereford cattle, thoroughbred horses, Clydesdale horses, Percheron-Norman draft horses, Yorkshire hogs, and chickens (varieties included Buff Orpington, Rhode Island Red, and Barred Plymouth Rock) and turkeys were raised. Conrad Warren raised meat and dairy cattle, Belgian horses, hogs, and chickens. Documentation also suggests oxen, merino rams and sheep, ducks, and mules. GRKO 2005 CLI, 45.

promotional materials, and to encourage visitation by tourists traveling through the state.

Constructed Water Features

- CW-1. Preserve major existing historic irrigation features (main ditches, lateral ditches, abandoned ditches, hand lines).
- CW-2. Continue to operate the irrigation network as a working system. Repair historic infrastructure (headgates and headwalls, diversion dams, distribution gates, etc) associated with the proper functioning of the irrigation ditch network. Maintain these systems to ensure proper flow.
- CW-3. Repair, rather than replace, features associated with the historic irrigation network. When a feature is too deteriorated to be repaired, replace with materials that match the original in composition and design.
- CW-4. Maintain the historic irrigation network as a system, and allow improvements to the original design when the historic design does not function adequately (e.g. original headgate design is frequently washed out). Additions or modifications to the irrigation system may be allowed if they meet other management goals such as sustainability, ecological health, and preservation of cultural resources.

Circulation

The vehicular circulation system will remain similar to the existing system. Modifications may include improved wayfinding into the Development Zone, and improved surfacing and light grading for roads used heavily by NPS maintenance vehicles. The ranch does not currently have a trails plan, which would assist in planning and designing appropriate trails holistically across the ranch.

Pedestrian connections are needed to link the Development Zone with the historic ranch, and to connect the ranch with Powell County trails. Generally, pedestrian routes will follow historic roads and walkways, and new pedestrian routes should take advantage of historic roads.

- CI-1. Preserve the existing road network and road alignments that have evolved over time as a result of historic ranching practices.
- CI-2. Preserve the network of historic roads and alleys and soft-paved surfacing.
 - Maintain historic condition of roads, defined as having a narrow width, surfaced with dirt or gravel.
 - When resurfacing or when a new surface treatment is required, use locally sourced material that matches the original in composition, color, and texture.
- CI-3. Re-establish the historic character of the main ranch entrance.
 - Remove the overhead gate at Warren Lane, maintain views into the ranch, and maintain historic fence types along the road.
- CI-4. Preserve remnant ranch roads and lanes.
 - Preserve the alignment and width of historic road traces by removing encroaching woody vegetation as necessary.
 - Avoid constructing new roads along non-historic alignments or where roads did not exist historically.
- CI-5. Preserve the network of non-contributing roads that are necessary for ranch operations.
 - Maintain these roads with a soft surface. Distinguish non-contributing roads from historic by utilizing a subtly different material.
 - Consider eliminating the NPS-built portion of Cattle Drive if this area becomes less focused on NPS operations.
- CI-6. Undertake a trails plan to address ranch-wide pedestrian circulation needs. New pedestrian paths may be considered as long as they do not disrupt historic ranch operations, impact views or historic spatial

arrangements (e.g., new paths should not cut directly across open fields or feedlots).

- If new trails are proposed, carefully consider visual and other impacts. To the extent possible, locate new trails along existing roads rather than building new trails. Develop designated hiking or horseback riding routes along existing roads and agricultural spaces. Any new trails should be built of soft-surface material that blends with the historic materials, colors, and textures of the historic ranch roads.
- Coordinate with Powell County to consider a pedestrian route along the abandoned Milwaukee Railroad Line. This route could link to a larger trail system, either within Powell County or for the length of the abandoned railroad line.
 - This route would need to be gated to limit after hours access into the Grant-Kohrs Ranch.
 - Consider designating this route as a multiple use path for pedestrians and equestrians.
- Develop a pedestrian path to connect the Development Zone with the Warren Residence. This route would allow safe access for visitors to the Warren Residence and Warren Hereford Ranch. Consider siting this route outside of major viewsheds with a preference for following existing routes, where possible.
- Extend the Cottonwood Nature Trail to the Home Ranch Complex, providing a loop trail.
- Consider a universally accessible route from the Development Zone to the Lower Yards (Illustration 3-2). Follow the edge of the field and provide an accessible, compliant gradient, width, and surface.

CI-7. Add universally accessible compliant routes to access specific areas and buildings.^{3.3}

- Provide accessible routes to specific buildings and spaces including the Dairy Barn, Warren Boat House, and Lower Yard, refer to each Component Landscape for further discussion.
- Maintain existing universally accessible access to the Grant-Kohrs Residence, Visitor Center, Resource Office and Museum Building.

CI-8. Provide safe visitor access across the active railroad line, and along roads that follow the railroad tracks.

CI-9. Provide safe access where the road to the Grant-Kohrs Residence and path to Headquarters/Resources and Maintenance converge.

Buildings and Structures

BS-1. Preserve contributing and supporting buildings and structures.

BS-2. Limit physical repairs to the amount needed to maintain integrity of the building or structure. Missing features should be replaced only where documented evidence exists. New materials should match the original in composition, design, color, and texture.

BS-3. Do not reconstruct missing buildings and structures unless full documentation exists that would assist in an accurate reconstruction.

BS-4. New buildings or structures should be modest in scale, sensitive to views, and sited consistent with historic landscape patterns.

BS-5. Avoid modifications that create a false sense of historical development, including

3.3 The Americans with Disabilities Act (ADA 1990) guarantees equal opportunity for people with disabilities and requires access to public spaces and buildings via ‘reasonable modifications’ to existing features and sets minimum standards for new construction. ADA routes are required from accessible parking areas to an accessible entrance, and must be accommodated by routes at 36” minimum at a maximum slope of 20:1.

addition of conjectural or “typical” features. Base all repairs and restorations on accurate documentary evidence.

Small Scale Features

- SS-1. Maintain non-contributing small scale features (e.g., benches, trash receptacles, fire hydrants, etc) that are functional and necessary for safety, operations, or interpretation.
- SS-2. Add new entry signage along Business Loop 90. Clearly indicate visitor versus administrative entrances to the ranch. Utilize a consistent style and aesthetic for signs throughout the ranch that is appropriate and compatible with the ranch aesthetic.
- SS-3. Directional signage and informational signs in the landscape should be limited. Design and construct signs to be subtle and low profile. Signs should only be visible at close range.
 - ° Explore alternative methods of interpretation besides interpretive or informational signs.
 - ° Explore the opportunities presented by interpretive media (brochures, audio tours) that leave no impact on the landscape.

Fences

- SS-4. Maintain the existing and historic variety of fence types (e.g. jack-leg, metal post-and-wire, wooden post-and-wire, five-rail stacked end) gates, overhead gates, metal gates, and mesh gates that represent the long history of ranching practices.
- SS-5. Repair fencing in-kind. Avoid creating an artificial sense of history by adding historic fence types where they did not exist historically.
- SS-6. Remove non-contributing gates and overhead gates. Preserve overhead gates only where they occurred historically.
- SS-7. If new fences are needed, design these to be temporary, and in a style that does not replicate the historic. For example, new fencing to protect riparian vegetation in

the Superfund remediation area should be designed in a compatible style to historic fences and be visually unobtrusive. Consider color, materials and permeability of fence as well as siting to ensure compatibility.

- SS-8. Identify areas where NPS-built fences are most disruptive to the historic scene. Remove nonessential NPS fences. Removal of fences may be less of a priority in areas typically viewed from a distance.

Archeological Sites

- AS-1. Undertake measures to identify and preserve areas of potential archeological significance. Protect and preserve previously recorded archeological sites.
 - ° Known archeological sites are within the Development Zone, Warren Residence, Riparian Woodland, and Railroad Corridor and Barrow Pit / Wetland component landscapes.
- AS-2. Undertake archeological investigations for any proposed improvements that could impact below-grade archeological features.
- AS-3. Undertake additional archeological work to identify areas of past use.
 - ° Archeological research may confirm locations of former gardens and types of species planted. Investigation into historic seed types could assist in future restoration.
 - Potential investigations could occur in the lower garden at the Grant-Kohrs Residence to confirm the extents of the cobble wall, stone path, historic presence of a kitchen garden, and species of perennials and other vegetation grown historically.
 - Future investigations at the Warren Residence could confirm the route of the remnant stone path and the plant locations and species grown around the residence.
 - ° Additional investigation is needed to confirm the accuracy of some reconstructions and to inform the extents of built features.

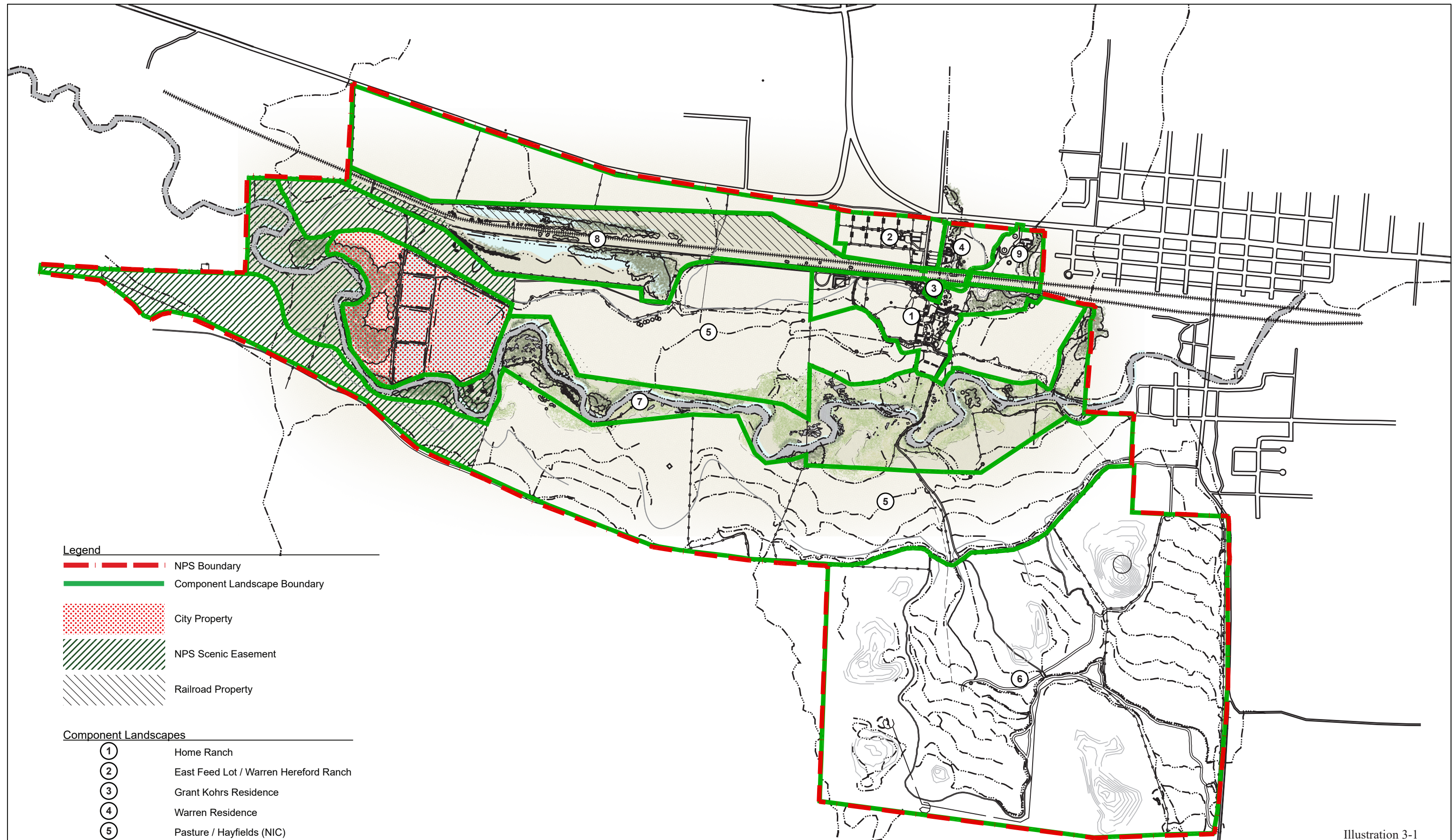
- Potential investigations include verifying the accuracy of the sweet pea trellis and raised garden beds at the Grant-Kohrs Residence.

New Design and Construction

Allow new construction when additional buildings and structures are needed to meet maintenance, administrative, and visitor needs. Prior to new construction, explore reuse of historic buildings and possibilities of providing space off-site. If no suitable alternative is identified, consider new construction in the Development Zone first, as this component landscape is separate from the remainder of the ranch.

- ND-1. Design new buildings and structures to consider massing, scale, and patterns sensitive to the historic ranch. Design new structures to be compatible but not replicative of the historic structures. Designs should be understated so as not to mimic or overwhelm the historic.
 - ° Design new buildings to be subordinate in scale to the historic ranch.
 - ° Materials should be simple and not replicative of historic buildings.
 - ° Ornamentation should be minimal and not replicative of the historic or mimic any historic style.
- ND-2. Modifications to existing buildings or structures should be easily reversible. Design and locate additions and alterations so that if removed in the future, the essential form and integrity of the ranch would be unimpaired.
- ND-3. Design site development to fit existing landforms and to minimize disruptions to the natural topography.
- ND-4. Avoid the addition of new buildings, fences, or other structures in historic viewsheds. Design new facilities to be low profile, minimal, and unobtrusive.
- ND-5. Design new buildings and structures to be universally accessible.

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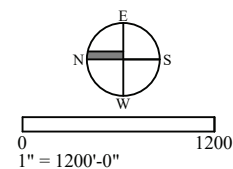


Legend

- NPS Boundary
- Component Landscape Boundary
- City Property
- NPS Scenic Easement
- Railroad Property

Component Landscapes

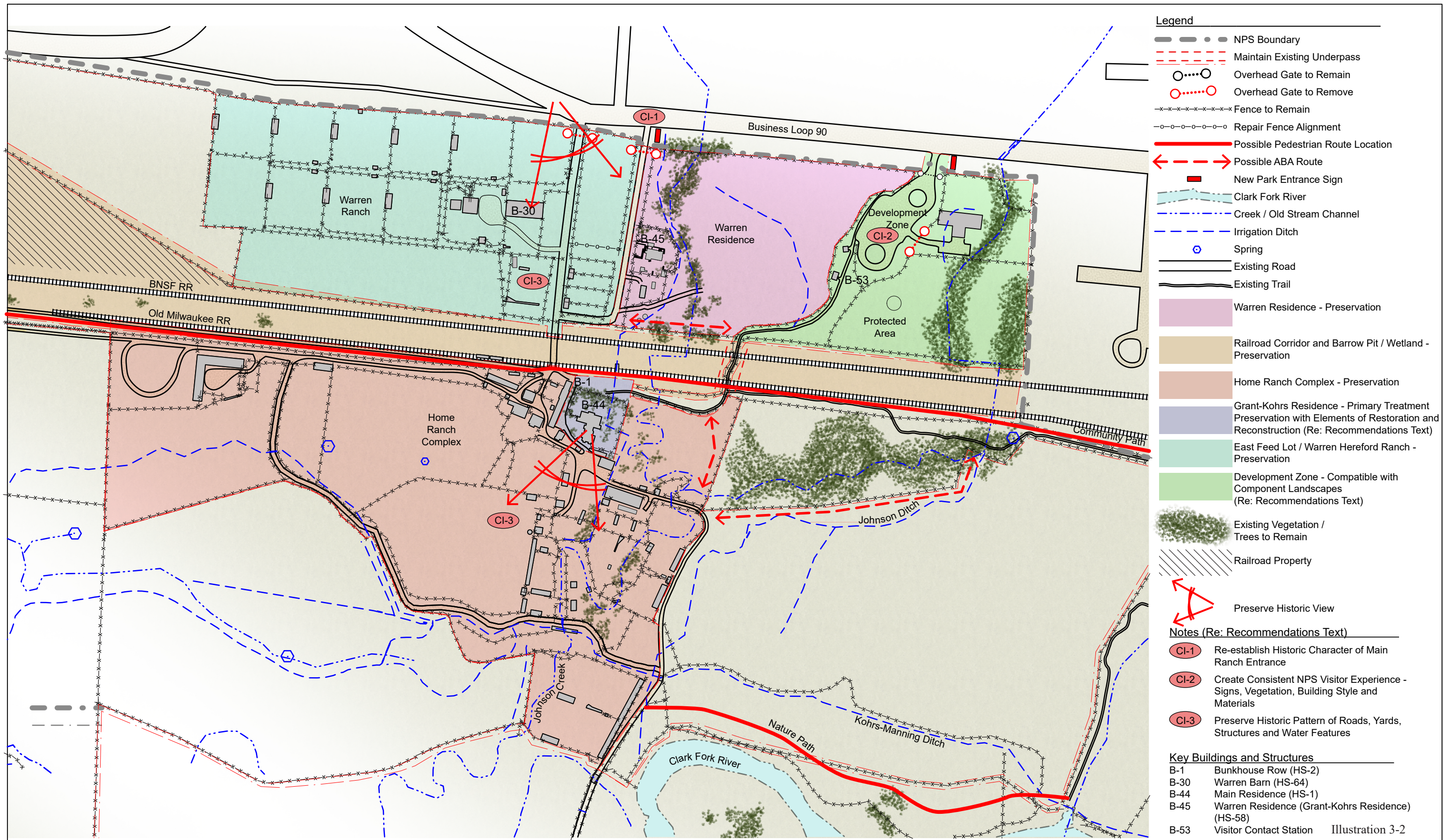
- ① Home Ranch
- ② East Feed Lot / Warren Hereford Ranch
- ③ Grant Kohrs Residence
- ④ Warren Residence
- ⑤ Pasture / Hayfields (NIC)
- ⑥ Upland Pasture (NIC)
- ⑦ Riparian Woodland
- ⑧ Railroad Corridor and Barrow Pit / Wetlands
- ⑨ Development Zone



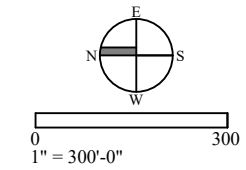
Map Sources: Adapted from Oculus / JMA, 2004, GRKO 2014 CLI, and GRKO NHS GIS data 2015.

JUNE 2017		TITLE OF PROJECT	
UNITED STATES DEPARTMENT OF THE INTERIOR		CULTURAL LANDSCAPE REPORT	
GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE		TITLE OF DRAWING	
		OVERALL OWNERSHIP MAP	
		NAME OF PARK	
		GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE	
REGION	COUNTY	STATE	
INTERMOUNTAIN	POWELL	MONTANA	

Illustration 3-1



Map Sources: Adapted from Oculus / JMA, 2004, GRKO 2014 CLI, and GRKO NHS GIS data 2015.



JUNE 2017		TITLE OF PROJECT	
UNITED STATES DEPARTMENT OF THE INTERIOR		CULTURAL LANDSCAPE REPORT	
GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE		TITLE OF DRAWING	
		PRESERVATION TREATMENT PLAN - OVERALL	
		NAME OF PARK	
		GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE	
REGION	COUNTY	STATE	
INTERMOUNTAIN	POWELL	MONTANA	3-11

HOME RANCH COMPLEX

This section presents treatment guidance for the preservation and enhancement of the Home Ranch Complex component landscape. Preservation guidance and suggested treatments are provided for the following topics.

- Natural Systems
- Vegetation
- Spatial Organization and Views
- Circulation
- Buildings and Structures
- Small Scale Features
- Archeological Sites

The treatment plan for the Home Ranch Complex emphasizes preservation and interpretation of the working ranch. The landscape will be preserved and repaired where necessary, to focus visitor experience on the daily and seasonal operations of the ranch, including housing, equipment and food storage, and care for livestock. This will be accomplished through preservation of contributing features, improved delineation of historic spaces such as the Lower Yard, and improved access to specific areas.

Natural Systems

- NS-6. Preserve and protect the riparian corridor of Johnson Creek within the Home Ranch Complex.
- Protect adjacent structures, corrals and sheds from flooding by allowing managed livestock into the riparian corridor. Balance this use with appropriate plant communities in areas where historically introduced plant species are not present.
 - Follow best management practices for riparian and wetland prescribed grazing.
- NS-7. Preserve and protect the natural fresh water springs in the Lower Yards. Continue to allow livestock to access water in these locations as occurred historically.

Vegetation

- VE-9. Maintain the natural vegetation that would naturally occur along the banks of Johnson Creek through managed grazing and livestock access. Limit access should water quality or other environmental issues become problematic.



Figure 3-1. Treatment guidance for the Lower Yard of the Home Ranch Complex includes maintaining the space as an open area with a level surface that allows universal access. (Mundus Bishop, 2015)

VE-10. Preserve the stand of cottonwood trees in the Lower Yard. Consider adding new trees to diversify the age of the tree stand. Protect the trunk and dripline of these trees, taking care not to park heavy vehicles or equipment under the trees, which could damage their root systems.

- Replace the cottonwood trees in-kind once they have reached the end of their natural lives.

VE-11. Allow additional shade trees where present historically.

VE-12. Maintain vegetation in Johnson Creek field as a mixture of willows and cottonwoods, with the high water table.

VE-13. Remove the Lower Yard vegetable garden, added in 1981, unless further research shows this was the historic location.^{3,4}

VE-14. Reseed the former garden area with grasses and maintain as an open space as part of the Lower Yard.

VE-15. Maintain pasture and native or culturally significant species in the corrals and feedlots. Reseed the yards with pasture and native grasses to create a high diversity mix, tolerant of a wide range of conditions.

VE-16. Sow pasture species with species grown during the period of significance, such as timothy (*Phleum pratense*), meadow fescue (*Festuca pratensis*) and other species planted by Conrad Warren (but are not invasive).^{3,5} Base reseeding efforts on the latest historical and ecological scholarship.

Spatial Organization and Views

SO-5. Preserve the spatial organization of the Home Ranch Complex, sited on the edge of the river terrace overlooking the floodplain and mountains beyond.

- Preserve those characteristics and features that create this spatial organization including

buildings and structures, topography, vegetation, streams, irrigation canals, and roads.

- Preserve the separate and distinct spaces of the Lower Yards, Bunkhouse Yards, Johnson Creek Field, West Corrals, L-Barn Yard, and West Feedlots by maintaining roads and fencelines that define these spaces.

- Preserve the spatial arrangement of each field, enclosed by fences and framed by a ranch structure on one side. This arrangement defines the use of the field and organizes space.

SO-6. Reseed grasses as needed within the yards to distinguish and define these spaces as distinct from roads and alleys.

SO-7. Repair historic spatial patterns where later NPS-built features interrupted these patterns.

SO-8. Protect contributing views to surrounding mountains, riparian area, and across open fields and feedlots.

Circulation

CI-10. Preserve contributing road network and road alignments that have evolved over time as a result of historic ranching practices.

CI-11. Discourage visitor vehicular circulation beyond the accessible parking area adjacent the Bunkhouse.

CI-12. Maintain the Kohrs-Manning Ditch Road. Although it is a non-contributing feature, this road is necessary for ranch operations. Do not allow visitor vehicular circulation on this road. Repair the road as needed, but do not widen or alter the alignment.

CI-13. Consider a new material for roadways. This could be the same color as the existing roads to be compatible with the historic, but a different texture, to provide universally accessible routes.

- Resurface Bunkhouse Road, Dairy Loop Road, and the Lower Yard to create a level, stable surface.

^{3,4} CLR Part I, 4-40; and 2-83.

^{3,5} CLR Part I, 4-20.

- Consider a soil stabilizer or stabilized crushed fines as a surface treatment.
- Regular maintenance (light grading and rolling) is needed.

CI-14. Add universally accessible routes to provide access to specific areas and buildings, so long as the routes are sensitive to the Home Ranch Complex landscape and do not damage contributing features.

- ° Provide a universally accessible route into the north entrance of the Dairy Barn. The route should connect the accessible parking area adjacent the Grant-Kohrs Residence to the Dairy Barn.
- ° Create alternative access to the Lower Yard, if an accessible route cannot be identified on existing roads. Consider the possibility of adding a new trail to connect to the Development Zone that meets accessibility standards. Utilize a soft-surface for this route to blend with the landscape, while providing an accessible grade, surface, and width.
- ° If accessible routes cannot be identified, provide alternative methods of interpretation.

Buildings and Structures

BS-6. Preserve buildings and structures that contribute to the cultural landscape. Refer to Chapter 1 for a list of contributing buildings and structures.

- ° Repair buildings and structures as necessary, using materials and quality of workmanship that match the historic condition.
- ° Monitor buildings and structures for maintenance needs.

BS-7. Preserve structures that are supporting features and necessary for the successful operation of the operating ranch, such as reconstructed feed bunks and squeeze chutes.

BS-8. Allow additional interpretive exhibits in buildings that do not currently have exhibits.

BS-9. Preserve the restored flume across Johnson Creek. Repair or replace in-kind as necessary.

Small Scale Features

SS-9. Preserve contributing small scale features including fences, gates, and overhead gates.

SS-10. Maintain non-contributing small scale features (contemporary water troughs, fire hydrants) that are functional and necessary for ranch operations, safety, staff, or visitor needs.

SS-11. Retain and maintain the wide variety of fence types and replace in-kind as needed, in historic locations. Replace NPS-built fences during the next maintenance cycle with a less visually intrusive fence style (Refer to Park-wide Recommendations).

SS-12. The fencing and gates surrounding the Chicken Coop were built by the NPS in 1976; originally this was surrounded by an all board fence.^{3.6} Consider building a partial board fence to reflect the historic condition, while retaining a portion of the chicken wire fence for visitors to view the chickens.

Archeological Sites

AS-4. Undertake measures to identify and preserve areas of archeological significance. Protect and preserve previously recorded archeological sites.

- ° Archeological sites include:

Site Name: Prehistoric Scatter near Trail/RR

Site Type: Lithic Scatter

ASMIS ID: GRKO00021.000

State ID: 24PW01078

3.6 CLR Part I, 4-22.

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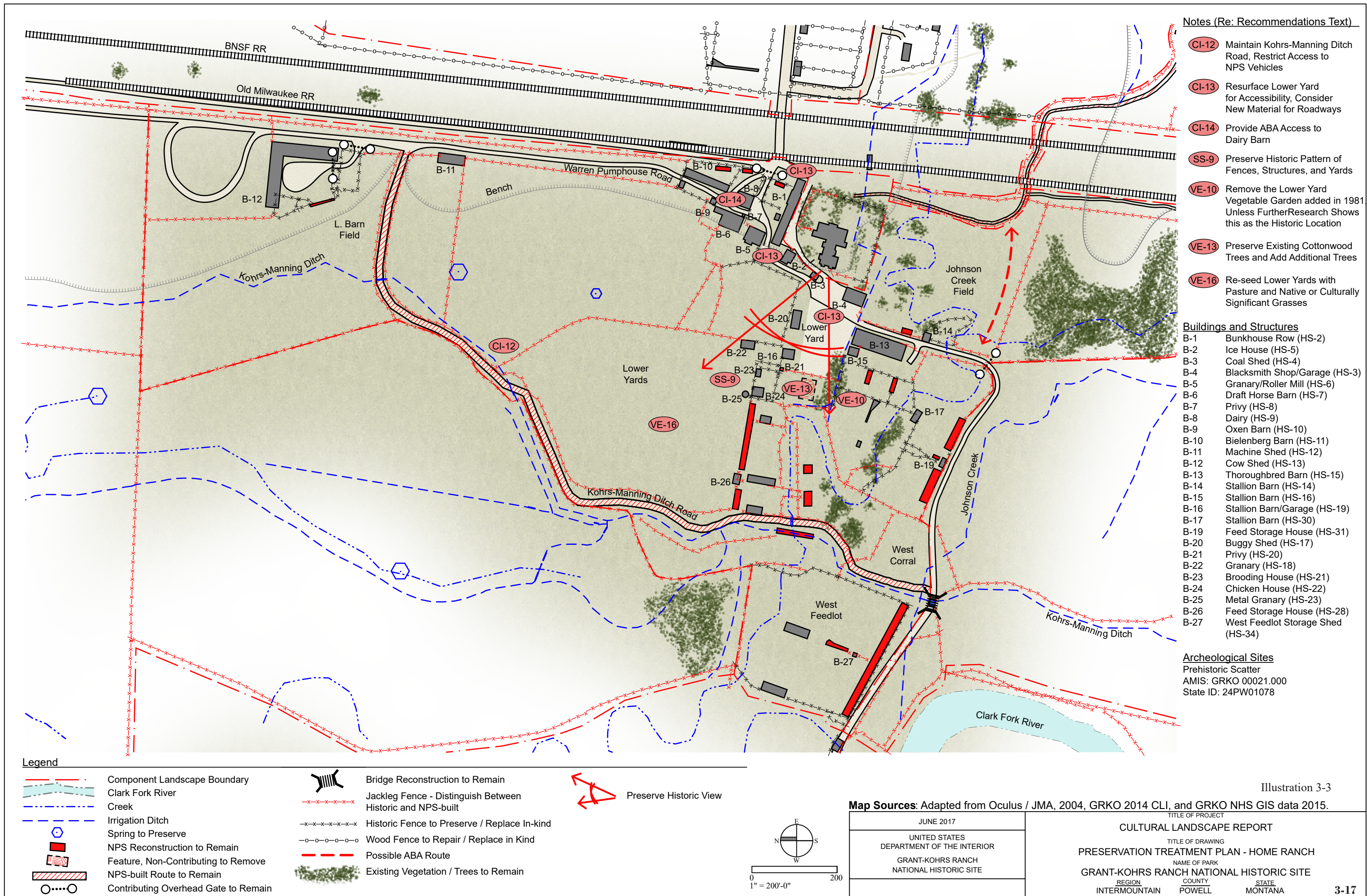


Illustration 3-3

EAST FEED LOT / WARREN HEREFORD RANCH

This section presents treatment guidance for the preservation and enhancement of the East Feed Lot / Warren Hereford Ranch component landscape. Preservation guidance and suggested treatments are provided for the following topics.

- Vegetation
- Spatial Organization and Views
- Circulation
- Buildings and Structures
- Small Scale Features

Treatment for the East Feed Lot / Warren Hereford Ranch envisions this component landscape as one space, but with different use areas: one for NPS operations and one for visitors. Use of the area for NPS operations and management will continue, but areas will be better delineated in order to minimize conflicts. Adequate space and storage will be accommodated by utilizing the historic yard spaces, limiting the operations area to NPS vehicles only, and providing additional storage space in alternate locations. Visitor experience will be enhanced by improved connections and wayfinding.

Vegetation

VE-17. Maintain existing groundcover of pasture and native grasses. Do not add shrubs, forbs, or trees that were not present historically.

VE-18. Allow new shade trees if they were present historically.

VE-19. Maintain pasture species in the west pasture and in Whiskey Pasture. Reseed these pastures with pasture and native grass species, tolerant of a wide range of conditions but also suitable to livestock consumption.

- Sow pasture grasses and forbs with species present during the period of significance, such as timothy (*Phleum pratense*) and meadow fescue (*Festuca pratensis*) and other species planted by Conrad Warren that are not invasive.^{3,7} Base reseeding efforts on the latest historical and ecological scholarship.

3.7 CLR Part I, 4-20.



Figure 3-2. Treatment recommendations for the East Feed Lot / Warren Hereford Ranch balance preservation of contributing features with continued use of the area for NPS operations. (Mundus Bishop, 2015)

VE-20. Maintain feedlots as a mixture of dirt, grasses and forbs. Occasionally reseed the feedlots with pasture and native grasses, or mulch if needed to stabilize the soil. Maintain the feedlots with a uniform material, so that all feedlots receive a similar treatment and read as a cohesive part of the ranch.

Spatial Organization and Views

SO-9. Preserve the contributing spatial organization of the East Feed Lot/ Warren Hereford Ranch, an organized arrangement of lots and corrals formed by fences and alleys, set on the level terrace above the river floodplain.

- ° Preserve all contributing buildings, structures, and roads.
- ° Preserve those characteristics and features that create this spatial organization (buildings, structures, fences, overhead gates, roads and alleys).
- ° Preserve the separate and distinct spaces of each feedlot, enclosed by fences and framed by a ranch structure on one side.

SO-10. Protect contributing views including views to the Warren Residence and Home Ranch Complex, and views down alleys framed by overhead gates.

SO-11. Maintain the NPS maintenance and resource parking and operations area. Use this area for government vehicles, equipment, and bus parking.

- ° If additional space is needed, consider utilizing the L-Barn field for additional storage for trailers and towed equipment. Alternatively, storage may be accommodated at the north end of the East Feed Lot/ Warren Hereford Ranch, as this area was utilized historically by Conrad Warren for a similar purpose.
- ° Limit the amount of equipment and vehicles in the operations area to ensure adequate space for parking, turnaround, and emergency access. Preserve the ranch setting

by limiting the number of vehicles and equipment to not distract from the character, views and setting of the ranch landscape.

SO-12. Repair the entry space and view to the front of the Warren Barn. Maintain this area as one uniform space creating a uniform, clear façade. Manage the ground surface as a continuous space, e.g. a mixture of dirt and grass that is utilized for large vehicle parking. Do not store equipment in this area, in order to preserve views and the setting of the Warren Barn.

SO-13. Provide safe visitor access to the East Feed Lot/ Warren Hereford Ranch at the railroad crossing. (Refer to Park-wide Recommendations)

Circulation

CI-15. Preserve the contributing road network of roads and narrow alleys, which reflect historic ranching practices.

CI-16. Maintain the NPS operations parking and maintenance area as a necessary component of the operating ranch. Do not allow visitor vehicular circulation within this area. Repair the surface as needed, but do not widen or alter the alignment of the space.

CI-17. Provide bus parking and turnaround space at the front of the Warren Barn.

CI-18. Improve visitor safety in the East Feed Lot/ Warren Hereford Ranch by directing visitors along the alleys rather than into the operations area.

- ° Resurface the operations area or create a subtle grade change to direct pedestrian circulation along the alleys. Alternatively, a temporary gate or NPS fence could direct pedestrian circulation safely through this area.
- ° Provide safe visitor access to the East Feed Lot/Warren Hereford Ranch and Warren Residence by creating a new path to the Development Zone that does not require crossing the railroad tracks.

CI-19. Maintain Cattle Drive Road. Although it is a non-contributing feature, it is the primary entrance for large vehicles, operations, and accessible parking.

- De-emphasize the entrance to this road by removing the non-contributing overhead gate at the intersection with Business Loop 90. Add a simple gate across the road to limit access and minimize the presence of the road. Maintain a recognizable approach at the entrance of this road to direct visitors arriving by bus or who need to access the accessible parking area within the Home Ranch Complex.
- Surface the non-contributing (east) portion of this road with a surface that is distinguishable from contributing roads.
- Should NPS operations largely leave this area, remove the non-contributing portion of the road and restore the space to its historic appearance.

Buildings and Structures

BS-10. Preserve the buildings and structures that contribute to the ranch, including the Warren Barn, Sales Barn, Scale House, Bull Barns, feed houses, and cow sheds.

- Repair contributing buildings and structures as necessary, using materials and quality of workmanship that matches the historic.
- Monitor buildings and structures for maintenance needs.

BS-11. Do not modify contributing buildings or structures with additions or modifications that drastically alter the historic appearance of the structure.

BS-12. Preserve buildings and structures that are non-contributing but are necessary for the successful operation of the ranch, such as contemporary chutes, hazmat building, and the NPS resource building.

BS-13. Expand exhibits into the Warren Barn as part of the interpretation of this portion of the ranch's history. Alternatively, consider

opening the Warren Barn to visitors for special events and tours.

Small Scale Features

SS-13. Preserve contributing small scale features including fences, overhead gates, wood chutes and gates.

- Replace contributing fences in-kind with like materials and construction methods as needed. Replacement fences should be located in historic locations.
- Repair fence rail alignment in Whiskey Pasture where it has not been installed correctly. Fence rails should be installed perpendicular to posts, not at angles.

SS-14. Maintain non-contributing small scale features (water troughs, metal chutes) that are functional and necessary for ranch operations and/or safety.

- Original heated water troughs are in original locations but are not functional. New NPS water troughs matched historic appearance as much as possible. Consider repair or replacement in-kind of historic troughs and removal of new troughs.
- Retain NPS-added chutes and temporary metal panels.

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GRANT-KOHR'S RESIDENCE

This section presents treatment guidance for the preservation and enhancement of the Grant-Kohrs Residence component landscape. Preservation guidance and suggested treatments are provided for the following topics.

- Vegetation
- Spatial Organization and Views
- Circulation
- Buildings and Structures
- Small Scale Features

The treatment plan for the Grant-Kohrs Residence focuses on preserving the domestic landscape and distinguishing this space from the remainder of the working ranch.

This component landscape has had a mixed approach to treatment in the past, including reconstruction and restoration of Kohrs time period landscape features. Projects have been undertaken following the philosophy that the house and landscape would represent the Kohrs time period, resulting in restoration of the back porch, portions of the picket fence, and replanting trees. At the same time, Warren-era landscape changes have been preserved. This treatment approach creates a confusion for staff,

as it is difficult to discern which features to preserve and which to reconstruct, and creates a confusing visitor experience as well. This CLR recommends a preservation treatment approach which would maintain all historic features and would minimize reconstructions to a very few select projects. Moving forward, the treatment for this landscape should include preservation of both Kohrs and Warren- era landscape features.

Treatment guidance in this CLR recommends restoring the setting of the residence by replanting missing vegetation, repairing paths, walls, and garden spaces. The formal entrance to the residence will be repaired by replanting the grid of cottonwood trees in front of the residence, and removing non-contributing small scale features. The garden spaces will be preserved, and further research and archeological investigations will identify appropriate plant species and placement, and will verify the extent of the garden and garden walls.

Appendix D includes research completed by Lannete King, a seasonal employee at Grant-Kohrs Ranch for over 30 years. She has done extensive research and documentation on the Grant-Kohrs Residence component landscape as well as other vegetable



Figure 3-3. The Grant-Kohrs Residence component landscape will be reestablished as the center of domestic life on the ranch by replanting missing trees and ornamental plantings that enhance the residential quality of the setting. (Mundus Bishop, 2015)

gardens and the Warren Residence. She provided extensive comment on the narrative and drawing to be used in future preservation and design.

Vegetation

VE-21. Preserve contributing vegetation of the Grant-Kohrs Residence, including contributing trees, shrubs, garden, and lawn areas.

VE-22. Maintain vegetation as a manicured space, to distinguish the Grant-Kohrs Residence as a domestic space, separate from outlying grasslands, rangelands, and the operating ranch.

- Preserve the mature black willow, juniper, and blue spruce in the north side yard.
- Preserve junipers, the box elder, and the cluster of shrubs along the south edge of the picket fence near the eastern corner.
- Preserve the double row of lilac shrubs, and other ornamental shrubs (barberry, gooseberry, cotoneaster) on the slope between the upper yard and lower garden.
- Maintain the four barberry shrubs that flank the stone steps into the lower garden.
- Prune lilac shrubs to remove suckers and dead branches, and to reveal the path between the two rows of lilacs.
- Preserve the perennial garden in the lower garden.
- Based upon accurate documentation, use historic species and varieties of perennials and annuals whenever possible.

VE-23. Research is needed on the garden, including which species were grown and the extents of the garden.

- Archeological work in the garden could assist in identifying plant species that were historically grown.
- Additional research is needed to verify the presence and extent of the kitchen garden.

- Research is needed to verify the chronology and history of the garden and residential landscape. This would include investigations into the presence of a kitchen garden, the extent of the perennial garden and ornamental shrubs, and other plantings around the residence.

- Develop a planting guide based on research.

VE-24. Maintain the lower garden as a Victorian styled garden with formal plantings of brightly colored annuals that change as seasons progress, and hardy, colorful perennials.^{3,8}

- Maintain non-contributing NPS-built raised wooden garden beds (in triangle, square, and diamond shapes) and sweet pea trellis. Conduct further investigations to verify the placement and style of these features, and replace as needed. If documentation verifies their placement, replace dimensional lumber that forms the garden bed edges.
- Restore the flower beds formed by the stone terraces. Remove non-contributing dimensional lumber (2x6s) and repair grade.
- Maintain the lawn in the lower garden as a neat and perfectly shaped lawn with clean edges.

VE-25. Allow additional trees, shrubs, perennials and annuals if evidence confirms they were removed after the period of significance.

VE-26. Maintain the lawn surrounding the residence, providing irrigation and maintenance as needed. Preserve the formality and lushness of the historic, domestic landscape.

- Reseed lawn areas periodically to maintain a healthy grass cover.

VE-27. Reconstruct the grid of black cottonwood trees (*Populus trichocarpa*) in front of the residence that was present historically. Space trees at 15 feet on-center with a double row in front and trees flanking the entry boardwalk. (Illustration 3-55)

3.8 GRKO CLI, 2004, 35.

- Remove the green ash from the front yard to assist in establishing a uniform tree pattern. Historically trees were a uniform height and maturity.

VE-28. Consider restoring vines growing adjacent to the bay window if documentation confirms this is historically accurate and a trellis can be designed to protect the building.

VE-29. Implement Integrated Pest Management for vegetation preservation.

Spatial Organization and Views

SO-14. Preserve the contributing spatial organization of the Grant-Kohrs Residence as the focal point of domestic life on the ranch.

- Preserve the residence and three yard areas with each reflecting a different domestic use (formal entrance at the front yard, utilitarian north yard, and ornamental garden in the south yard).
- Preserve Bunkhouse Road as the northern edge of the domestic landscape.
- Preserve those characteristics and features that create the contributing spatial organization (building, topography above the floodplain, ornamental vegetation, paths, and picket fence).
- Preserve the elevated yard north of the residence as a contributing feature constructed by Conrad Warren in the 1930s.

SO-15. Repair contributing spatial patterns by repairing yard spaces and emphasizing the land uses that occurred historically.

- Reestablish the front yard and entrance as a formal entrance.
- Reconstruct grid of cottonwood trees and regrade road and approach to house. Remove non-contributing asphalt from the front of the residence and replace with material compatible with the ranch setting.

- Preserve the lower garden as an enclosed garden space. Repair the cobble wall to reveal its full form and extent. Preserve shrubs at the top of the wall and perennial vegetation at the base. (Illustration 3-55)

SO-16. Protect views to and from the residence, and views from the rear of the house to the Home Ranch Complex.

Circulation

CI-20. Preserve the contributing vehicular roads including the entrance drive in front of the residence and Bunkhouse Road to the north.

CI-21. Preserve contributing pedestrian circulation including walks, steps, and stairs located on all sides of the residence, and built with a variety of materials (stone, wood, brick).

CI-22. Preserve the stone garden stairs and reconstructed wooden handrail.

CI-23. Preserve the universally accessible route into the residence.

CI-24. Repair the front drive by filling and re-grading the road bed.

- Resurface the entrance drive with new gravel or a stabilized soil material to create a level, stable surface. Regular maintenance (light grading and rolling) is needed.
- Deter parking near the house, and do not allow parking in front of the residence.
- Limit NPS operations within the landscape to non-core visitor times.

CI-25. Repair pedestrian circulation routes to match the historic condition.

- Repair the stone landing and steps at the west edge of the residence by resetting the steps to create a level surface. Add soil as necessary to provide a level setting bed for the stone steps.
- Remove the flagstone walk on the north side of the garden (added 1997-98) and replace with a soft-surface path (dirt or sand) to



Figure 3-4. Katherine Kohrs Warren Bogard in the lower garden, circa 1930. Perennial plantings occurred both east and west of the stone staircase. (GRKO Archives)



Figure 3-5. Cottonwood trees in front of the Grant-Kohrs Residence, circa 1900. The grid of trees and lawn created a formal entrance into the residence. (GRKO Archives)

reflect the historic appearance of the path.

- Repair the stone path at the southeast edge of the garden. Archeologically verify the extents of the stone path and reveal the stone pavers by removing surrounding grass. As needed, re-set the stones to create a usable pedestrian path. Consider adding material that is compatible with the historic to reconstruct the stone path to its full extent.

CI-26. Modify the non-contributing asphalt path from in front of the residence. Retain the path but modify the surface to a soft-surface paving to blend with the ranch landscape and match the historic character. This includes removal of asphalt material, light re-grading of the surface, and installation of a stabilized soft material.

CI-27. Repair the stone walk between the north yard and the Bunkhouse. Remove the encroaching vegetation and expose the portion of the walk obscured by the road to reveal the full extent of the path.

Buildings and Structures

BS-14. Preserve buildings and structures that contribute to the cultural landscape, including the residence, cobble wall, stone terraces, and cut stone retaining wall.

- Preserve the Grant-Kohrs Residence, built by John Grant in 1862 and expanded by Conrad Kohrs between 1862 and 1907.

—Protect the building from pests and ensure positive drainage away from the building by maintaining a barrier and perimeter free of vegetation at the foundation. Further design is needed to determine the appropriate extent and material used, but the barrier should be composed of a material that blends with the existing historic setting and color that matches the native soil.

- Monitor buildings and structures for maintenance needs.

BS-15. Repair structures to match the historic condition.

- Repair stone terraces by removing encroaching vegetation damaging the walls.

- Repair the cobble wall to the full extents, clearing vegetation and removing soil and resetting stones as needed to expose the original stone cobble. As needed, provide new materials that match the historic in color and size, to re-establish the wall to its full length and height. Archeologically verify the full extent of the cobble wall and reveal the stones by removing dirt and vegetation as necessary.

Small Scale Features

SS-15. Preserve contributing small scale features including previously restored fences and gates.

SS-16. Maintain non-contributing small scale features (benches, trash receptacles, trellis, raised bed frames) that are functional and necessary for interpretation and operational purposes.

- Remove the wooden benches from the front yard, as these diminish the formality of the entrance. Relocate these to either outside of picket fence, or within the north side yard.

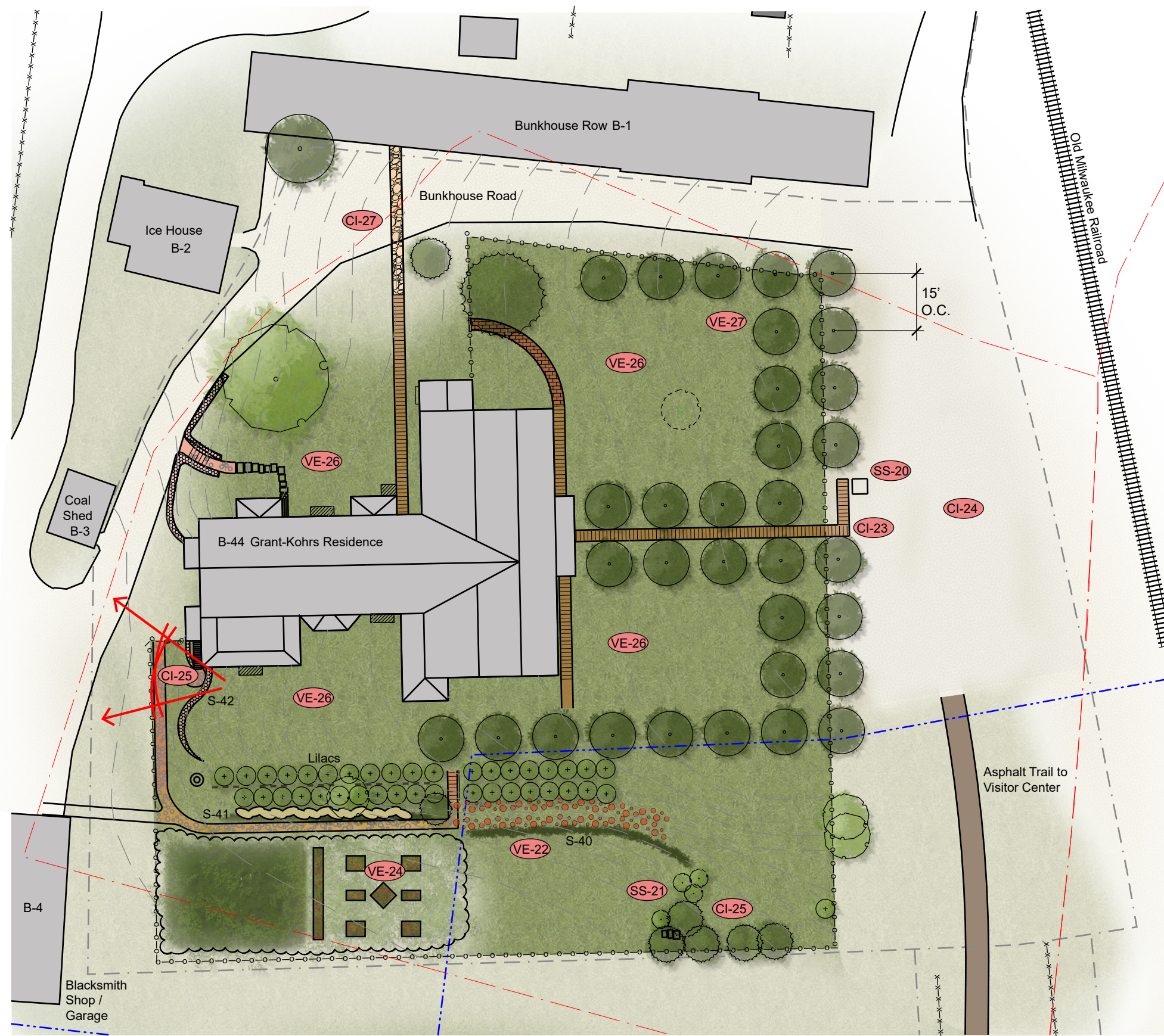
SS-17. Preserve the picket fence. As a supporting feature, the fence reinforces the spatial organization and historic character of the Grant-Kohrs Residence. Repair the fence as needed, and replace materials in-kind.

SS-18. Maintain the reconstructed wood gate at Bunkhouse Road. Replace in-kind when necessary.

SS-19. Retain the contributing irrigation system and any underground pipes, as an archeological feature. Repair the existing underground irrigation system, added in the 2000s, to working condition if possible or replace.

SS-20. Reconstruct the carriage block and hitching posts per historic photographs to enhance the historic entrance and formal yard.

SS-21. Reconstruct the birdbath in the lower garden, based upon historic photographs.



Legend

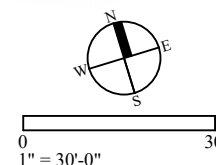
- Component Landscape Boundary
- Existing Tree to Remain
- New Tree
- Tree to be Removed
- Lawn
- Pasture Grasses
- Picket Fence to Repair
- Existing Boardwalk to Maintain / Repair
- Existing Brick Walk to Maintain / Repair
- Existing Stone Walk to Maintain / Repair
- Existing Stone Wall to Maintain / Repair
- Existing Stone Steps to Maintain / Repair
- Cobble Wall, Verify Extents and Repair
- Replace Surface with Compatible Material / Remove Flagstone
- Asphalt Walk to Resurface
- Stone Walk to Preserve
- Stone Terraces to Maintain / Repair
- Irrigation Ditch to Preserve as Archeological Feature
- Stone Pavers to Repair
- Preserve Historic View

- Notes**
- CI-23 Maintain ABA Access
 - CI-24 Resurface and Regrade Drive
 - CI-25 Repair Landing and Steps, Verify Extents and Repair Stone Path
 - CI-27 Repair Stone Walk
 - SS-20 Reconstruct Carriage Block and Hitching Posts
 - SS-21 Reconstruct Birdbath
 - VE-22 Restore Perennial Plantings
 - VE-24 Maintain Lower Garden and Raised Garden Beds
 - VE-26 Re-seed Lawn
 - VE-27 Restore Cottonwood Grid

- Buildings and Structures**
- B-1 Bunkhouse Row (HS-2)
 - B-2 Ice House (HS-5)
 - B-3 Coal Shed (HS-4)
 - B-4 Blacksmith Shop / Garage (HS-3)
 - B-44 Main Residence (Grant-Kohrs Residence)
 - S-40 Cobble Wall
 - S-41 Stone Terraces
 - S-42 Cut Stone Retaining Wall

Illustration 3-5

Map Sources: Adapted from Oculus / JMA, 2004, GRKO 2014 CLI, and GRKO NHS GIS data 2015.



JUNE 2017 UNITED STATES DEPARTMENT OF THE INTERIOR GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE	TITLE OF PROJECT		
	CULTURAL LANDSCAPE REPORT		
	TITLE OF DRAWING		
	PRESERVATION TREATMENT PLAN - GRANT-KOHR'S RESIDENCE		
	NAME OF PARK		
	GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE		
	REGION	COUNTY	STATE
	INTERMOUNTAIN	POWELL	MONTANA
			3-31

WARREN RESIDENCE

This section presents treatment guidance for the preservation and enhancement of the Warren Residence component landscape. Preservation guidance and suggested treatments are provided for the following topics.

- Vegetation
- Spatial Organization and Views
- Circulation
- Buildings and Structures
- Small Scale Features
- Archeological Sites

The treatment plan for the Warren Residence includes preservation of contributing features and reconstruction of features that have disappeared since the period of significance, 1929 to 1982. The Warren Residence will be reestablished as an oasis and discrete space from the remainder of the ranch landscape. The domestic landscape will be repaired by replanting missing trees, shrubs and perennials that have died and were not replaced since the end of the period of significance. The patio and stone path that historically circled the residence will be repaired, and a new universally accessible route will provide access into an educational center located in the Warren Boat House.

Vegetation

VE-30. Preserve contributing vegetation of the Warren Residence, including trees, shrubs, and lawn areas. Maintain vegetation as a lush domestic space, to distinguish the Warren Residence from the adjacent operating ranch.

- Preserve the blue spruce trees at the southeast corner of the yard.
- Preserve the cottonwoods, green and mountain ash trees.
- Preserve the cotoneaster and juniper shrubs.

VE-31. Preserve riparian vegetation adjacent to Johnson Creek.

VE-32. Implement Integrated Pest Management for vegetation preservation.

VE-33. Reconstruct vegetation that has died since 1993 and was not replaced.

- Replace missing spruce trees at the north edge of the component landscape. These trees historically framed the residential



Figure 3-6. Warren Residence will continue as NPS administrative offices. Contributing features will be preserved, missing features replaced, and universal accessibility access routes will be added. (Mundus Bishop, 2015)

landscape and partially screened the operating ranch from the residence. (Illustration 3-66)

- Reconstruct shade trees that were historically present around the residence, including weeping birch, mountain ash, and maple.^{3.9} Base planting decisions on current and well-documented scholarship.
- Reconstruct missing foundation plantings. These were removed by the NPS in 2001 to improve drainage around the exterior of the residence and patio. Some plants were replaced but not to the historic extent and the current condition does not reflect the historic setting.^{3.10} Historically the foundation plantings included lilac, juniper, mountain ash, cotoneaster, currant, clematis, and peonies.^{3.11}

VE-34. Maintain the lawn surrounding the residence as an irrigated, lush space, emphasizing the domestic landscape.

VE-35. Reseed the lawn periodically to maintain a healthy grass cover.

VE-36. Balance reconstruction of vegetation with building preservation, e.g. foundation plants vs. water damage to basement walls.

Spatial Organization and Views

SO-17. Preserve contributing spatial organization of the Warren Residence, as the domestic area of the Warren Ranch.

- Preserve the residence and yard as a discrete space from the remainder of the operating ranch.
- Preserve those characteristics and features that create this spatial organization (the residence, topography above Johnson Creek, Warren Lane, ornamental vegetation, and domestic small scale features surrounded by a picket fence).

SO-18. Preserve the chicken coop as the western edge of the domestic landscape and as a distinct space.

SO-19. Preserve the open field east of the residence.

SO-20. Maintain the open field to the south of the Warren Residence and Johnson Creek, preserving views from the Development Zone to the rear of the Warren Residence.

- Continue to utilize this field as pasture, so visitors can see cattle as they enter the ranch.

SO-21. Reconstruct or restore historic spatial patterns to emphasize the domestic landscape surrounding the residence. Maintain the yard as a fenced and enclosed space, and as an oasis from the arid ranch landscape, as existed historically.

- Reconstruct non-extant vegetation, restore pedestrian paths and the patio, and preserve the open lawn. (Illustration 3-66)

- Maintain the feeling of an oasis at the Warren Residence by maintaining the open lawn around the residence enclosed by the picket fence.

SO-22. Protect views to and from the residence, especially from Warren Lane and across Whiskey Field to the Warren Ranch.

SO-23. Maintain the view to Johnson Creek to the south, from the rear yard of the residence.

Circulation

CI-28. Preserve the contributing circulation routes of Warren Lane, Warren Residence driveway, and pedestrian circulation routes and features including the stone path and patio.

- Maintain the concrete driveway and concrete walk in front of the residence.

CI-29. Repair Warren Lane, emphasizing this route as the historic entrance into the ranch.

- Maintain the width and surface of the road.

3.9 GRKO, Vegetation Map, Con Warren Complex. Drawing, 1994-95.

3.10 CLR Part I, 3-4-1.

3.11 GRKO, Vegetation Map, Con Warren Complex. Drawing, 1994-95.

- ° Preserve the views along the road into the ranch.
- ° Repair the fences along the road to match historic fence types.
- ° Remove the non-contributing overhead gate at the entrance and intersection of Warren Lane with Business Loop 90.

- CI-30. Add universally accessible routes to provide access to specific areas and buildings, ensuring the routes are sensitive to the historic ranch and do not damage contributing features.
- ° Provide a universal accessible route into the west entrance of the Boat House. The route should connect the NPS parking area to the Boat House.
- CI-31. Preserve remaining stone steps in-situ that once circled the residence. Repair the stone steps by resetting the stones to create a level surface. Remove or add soil as necessary to provide a level setting bed for the stone steps.
- CI-32. Add a pedestrian path to connect the Warren Residence to the Development Zone (Refer to Park-wide Recommendations).
- ° Conduct further research and design to determine the route of this path.

Buildings and Structures

- BS-16. Preserve buildings and structures that contribute to the ranch including the Warren Residence, Boat House, Pump House, and Chicken Coop.
- ° Repair buildings and structures as necessary, using materials and quality of workmanship that match the historic condition.
 - ° Monitor buildings and structures for maintenance needs.
- BS-17. Do not add new buildings or structures (Refer to Park-wide Recommendations).
- BS-18. Allow adaptive re-use of the Boat House.

Small Scale Features

- SS-22. Preserve contributing small scale features including the bird bath, magpie trap, concrete trough, lightpost, BBQ foundation, and clothesline.
- SS-23. Preserve the picket fence, gates, and wire mesh fence at the driveway. Although the fence is a reconstruction, it supports the spatial organization and character of the Warren Residence and distinguishes this area as a domestic landscape. Repair the fence as needed, and replace in-kind.
- SS-24. Preserve the sheep wire fence enclosing the chicken coop.
- SS-25. Maintain the NPS administrative sign and mailbox located along Warren Lane.
- SS-26. Preserve the metal irrigation pipes along Warren Lane that once irrigated the non-extant row of trees flanking the road. The irrigation system does not need to be maintained as a functioning system, however the pipes should remain in-situ as contributing features.
- SS-27. Replace in-kind small scale features that have been removed since 1993.
- ° Re-establish the burn barrel that rested on top of the BBQ foundation.
 - ° Additional research may reveal when other small scale features were removed, providing a basis for their reconstruction, e.g. swing set and sweet pea trellis.
- SS-28. Add a prominent, new entry sign at the end of Warren Lane, at Business Loop 90. The sign should clearly indicate the administrative entrance and not the visitor entrance. Utilize a consistent style and aesthetic for signs throughout the ranch that is compatible to the ranch aesthetic (Refer to Park-wide recommendations).
- SS-29. Provide interpretation for missing features. Consider adding ghost marks of non-extant features.

- ° Ghost-marking could include signage to interpret the granary foundations west of the residence, and the non-extant garden.
- ° Ghost-mark other missing features as part of the domestic landscape including a barbecue pad, swing set, picnic table, dog house, sweet pea trellis.

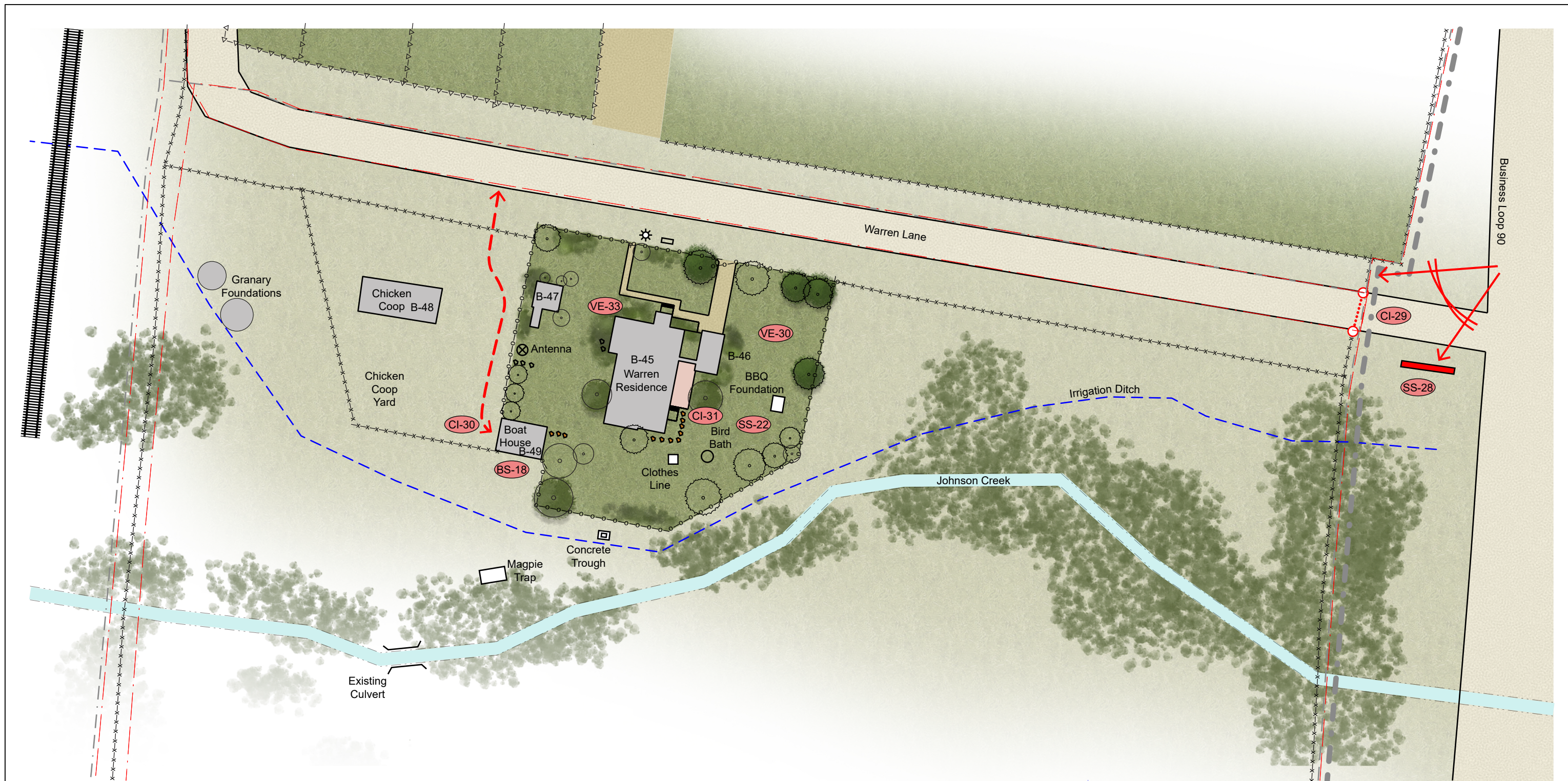
Archeological Sites

AS-5. Undertake measures to identify and preserve areas of archeological significance. Protect and preserve previously recorded archeological sites.

- ° Archeological sites include:

Site Name: Prehistoric Scatter by Warren
Granary Cement Foundations
Site Type: Artifact Scatter, Campsite,
Historic Structure, Lithic Scatter
ASMIS ID: GRKO00020.000 State ID:
24PW01077

Site Name: Foundations Warren Dump by
Concrete Granary
Site Type: Historic Dump
ASMIS ID: GRKO00016.000
State ID: 24PW00807



Legend

- Component Landscape Boundary
- ABA Route
- Repair Road / Walk to Match Historic
- Patio to Preserve
- Remnant Stone Path to Preserve
- Lawn
- Pasture
- Existing Evergreen and Deciduous Trees to Remain
- Evergreen Tree to Restore
- Deciduous Tree to Restore
- Shrubs, Perennials to Restore
- Overhead Gate to Remove
- Post and Wire Fence to Preserve
- Picket Fence to Preserve
- Board Fence to Preserve
- Johnson Creek
- Irrigation Ditch
- Preserve Historic View

Notes

- BS-18 Adaptive Re-use of the Boat House
- CI-29 Repair Road as Historic Main Entrance
- CI-30 Provide ABA Access to Boathouse
- CI-31 Preserve Stone Steps
- SS-22 Preserve Yard Features
- SS-28 New Park Sign
- VE-30 Maintain Lawn
- VE-33 Restore Missing Shrubs

Buildings and Structures

- B-45 Warren Residence (HS-58)
- B-46 Garage (HS-61)
- B-47 Warren Residence Pump House (HS-88) and Well
- B-48 Chicken Coop (HS-59)
- B-49 Boat House (HS-60)

Archeological Sites

- Prehistoric Scatter
ASMIS GRKO 00020.000
State ID 24PW01077
- Warren Dump
ASMIS 00016.000
State ID 24PW00807

Map Sources: Adapted from Oculus / JMA, 2004, GRKO 2014 CLI, and GRKO NHS GIS data 2015.

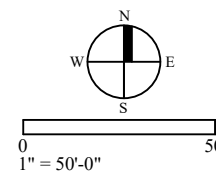


Illustration 3-6

JUNE 2017		CULTURAL LANDSCAPE REPORT	
UNITED STATES DEPARTMENT OF THE INTERIOR		TITLE OF DRAWING PRESERVATION TREATMENT PLAN - WARREN RESIDENCE	
GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE		NAME OF PARK GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE	
REGION INTERMOUNTAIN	COUNTY POWELL	STATE MONTANA	3-37

RIPARIAN WOODLAND

The following presents treatment recommendations for the preservation and enhancement of the Riparian Woodland component landscape. Treatment guidance and suggested treatments are provided for the following topics.

- Natural Systems and Features
- Vegetation
- Spatial Organization and Views
- Constructed Water Features
- Circulation
- Buildings and Structures
- Small Scale Features

The Riparian Woodland component landscape includes the Clark Fork River, tributaries of Johnson and Cottonwood Creeks, and woodlands and wetland areas.

The Milltown Reservoir/Clark Fork River Superfund Site includes 2.5 miles of the Clark Fork River and adjacent land on both sides of the river. The CERCLA/Superfund process will remediate and restore much of the riverbank. The river channel alignment will change adjacent the Clark Fork

River Bridge, but elsewhere the alignment will be restored to its current alignment. In February 2015, a Preliminary Design Plan (PDP) was prepared for the Superfund site within Grant-Kohrs Ranch. The PDP outlines the desired future condition for the restored floodplain including contaminant clean-up, streambank reconstruction, and revegetation.^{3.12}

The recommendations for the Clark Fork River included in this section build upon the plans for the Superfund remediation, and outline a desired future condition once remediation is essentially complete. This treatment plan envisions a healthy ecosystem of predominantly native vegetation, balanced with grazing activities that historically took place along the river corridor. Visitor access would be accommodated along an expanded nature trail.

3.12 Tetra Tech, et al. *Draft Final Preliminary Design Plan, Clark Fork River Operable Unit Phase 15 and 16, Grant-Kohrs Ranch National Historic Site*. (Montana; Montana Department of Environmental Quality, 2015).



Figure 3-7. The treatment recommendations for the Riparian Woodland component landscape build upon the Superfund remediation and work already underway. Recommendations focus on the desired future condition once remediation is complete, and include recommendations to preserve existing structures, such as the Clark Fork River Bridge, above. (Mundus Bishop, 2015)

Natural Systems and Features

NS-8. Preserve and protect the riparian corridors of Johnson Creek and Cottonwood Creek.

- Allow managed livestock into these riparian corridors. Follow riparian grazing best management practices.
- Mitigate damage from flooding, livestock use, and invasive species.
- Preserve native plant communities and wildlife habitat in areas where historically introduced plant species are not present.

NS-9. At the completion of the Superfund remediation, allow managed livestock into the Clark Fork River riparian corridor, as occurred historically.

Vegetation

VE-37. Preserve riparian and wetland vegetation along Cottonwood and Johnson Creeks.

- Manage livestock with the goal of enhancing riparian health. Follow riparian best management practices.
- Allow prescribed fire for resource benefit or hazard fuels mitigation in accordance with the Fire Management Plan.

VE-38. Following implementation of the revegetation plan for the Phases 15-16 of the Milltown Reservoir/Clark Fork River Superfund Site, protect and maintain new vegetation along the Clark Fork River.^{3.13}

- Monitor and evaluate the success of the vegetation over time, allowing for new plantings, prescribed burns, livestock grazing and other vegetation management methods to reestablish a healthy riparian condition.
- Manage riparian vegetation as dominantly native species, allowing for pasture grasses and forbs where they occurred historically.

- Allow managed grazing within the riparian corridor. Develop a grazing plan to outline acceptable limits and parameters for grazing in riparian areas.

VE-39. Thin vegetation along the Clark Fork River as needed to preserve views from the Home Ranch Complex.

VE-40. Consider thinning vegetation to provide river access and to address safety concerns along the river. Alternatively, plant additional vegetation (willow breaks) in locations to deter river users from exiting the river in unsafe locations and directing them to safe locations.

VE-41. Implement the 2011 Invasive Plant Management Plan to identify the tolerance for invasive species, and best management practices (BMPs) that identify appropriate maintenance procedures for control of invasive plant species.

Spatial Organization and Views

SO-24. Maintain the spatial organization of the riparian corridor as a distinct space, separate from the remainder of the ranch.

- Maintain those characteristics and features that create this spatial organization (river, creeks, topography and vegetation patterns).

- Preserve the separate and distinct space of Cottonwood Creek by maintaining existing nature path and supporting fences that define that space as separate from the adjacent pasture.

SO-25. Protect views listed as contributing to the significance of the Riparian Woodland component landscape, including views to the pastures and hayfields, and the Home Ranch Complex.

- Preserve and provide views of the river from the Home Ranch Complex.

- Provide views to the river in locations along Clark Fork River Road.

3.13 Geum Environmental Consulting Inc. *Draft CFR Reach A Phases 15-16, Plant Selection Pathway*, March 2015. See Appendix C for Superfund Plant Selection Plan.

- Maintain views by thinning vegetation as it matures.

Constructed Water Features

- CW-5. Preserve contributing irrigation features, specifically the Kohrs-Manning Ditch and Johnson Ditch.
- CW-6. Repair, rather than replace, features associated with the contributing irrigation network. Maintain irrigation systems as complete systems, retaining their alignment, scale and volume.
- CW-7. Allow future projects that would benefit water quality, quantity, and ecosystem health.

Circulation

- CI-33. Preserve Clark Fork River Bridge Road as a contributing feature to the ranch. This road provides access to the western hayfields and upland pasture, and was first constructed in the 1930s.
- Limit vehicular use of this route to NPS vehicles, but continue to permit public and equestrian circulation on this route.
- CI-34. Maintain the nature path along Cottonwood Creek. Although a non-contributing feature, this path provides visitor access to the riparian woodland.
- Consider extending this path along the river to the north at an intersection with Clark Fork River Bridge Road.
 - If desirable in the future, allow continuation of this path along the full extent of the river.
- CI-35. Allow and manage recreational access to the river.
- Consider modifying vegetation along the streambank to provide a safe water exit adjacent the Clark Fork River Bridge. Use plantings along the riverbank to direct river users to safe entry and exit points.

Buildings and Structures

BS-19. Preserve buildings and structures that contribute to the ranch.

- Maintain the contributing irrigation pump house and modern pump and intake system at the southern end of the ranch. Upgrade and modify as needed for sustainable delivery of irrigation water.
- Preserve the three bridges along the road including the Clark Fork River Bridge and Slough Bridge.

Small Scale Features

- SS-30. Analyze the health of vegetation after the removal of the 10-year protection fencing of the Superfund remediation. Determine if and where fencing is needed and if it should be made permanent.
- Maintain the jackleg fencing where it occurred historically.
 - Consider a non-historic fence type for use in areas where fencing is needed but was not installed historically. Consider a transparent and low-visibility fence type if additional fencing is needed. Do not use a historic type.

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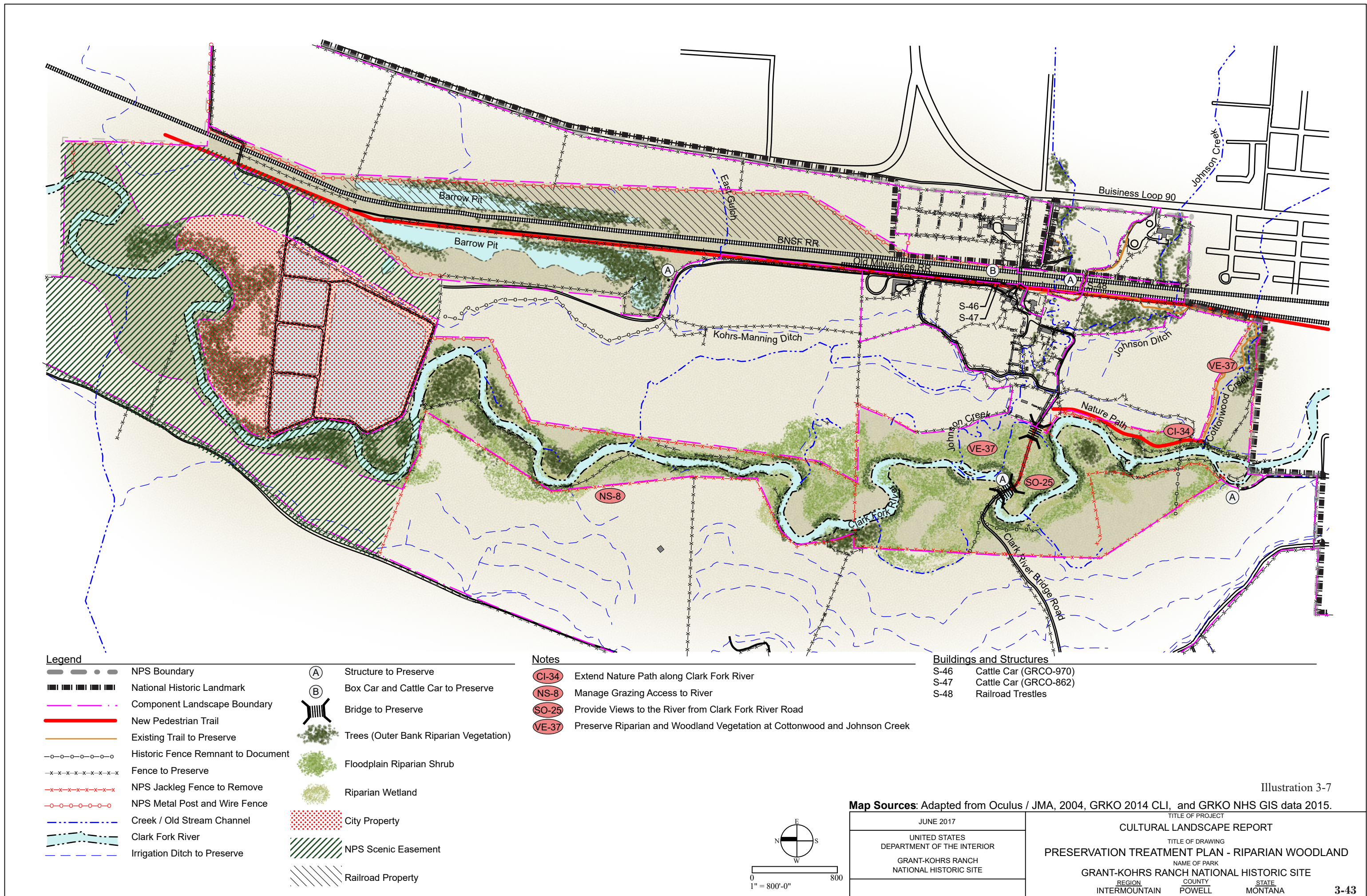


Illustration 3-7

RAILROAD CORRIDOR AND BARROW PIT / WETLAND

This section presents treatment guidance for the preservation and enhancement of the Railroad Corridor and Barrow Pit / Wetland component landscape. Preservation guidance and suggested treatments are provided for the following topics.

- Vegetation
- Spatial Organization and Views
- Constructed Water Features
- Circulation
- Buildings and Structures
- Archeological Sites

The historic character of the railroad corridor will be preserved, and visitor access along its length will be enhanced by a new multiple use path. Wetland vegetation that has emerged in the barrow pits will remain and be allowed to evolve, managed as a natural resource except where it threatens the integrity of the barrow pits.

Treatment of the railroad corridor follows two approaches. The south portion of the abandoned Milwaukee Railroad where the tracks are extant, will be preserved to reflect the historic appearance of the

railroad corridor. The north portion of the railroad including its linear character and features will be preserved, however features may be removed as they become hazardous.

There is a large in-holding and right-of-way through this component landscape, which includes the active line of the Burlington Northern Santa Fe Railroad. This in-holding can not be managed by the NPS, however there may be opportunities to partner with the railroad on management of vegetation and preservation of the railroad corridor.



Figure 3-8. Treatment recommendations for the Railroad Corridor and Barrow Pit /Wetland component landscape include a two-part approach of preserving all features in the southern part of the ranch, and allowing for the eventual removal of hazardous features at the north end of the ranch. (Mundus Bishop, 2015)

Vegetation

VE-42. Maintain wetland vegetation in the constructed barrow pits as habitat for wildlife.

- Do not allow livestock access to the barrow pits/wetland, rather manage these areas as a natural resource.
- If trees become hazardous and threaten the integrity of the railroad grade or barrow pit, they should be removed. Priority should be given to vegetation adjacent to the inactive railroad grade. Allow vegetation in the remainder of the barrow pits to become part of a natural system of growth and decay.

VE-43. Preserve the low grass cover at the edges of the inactive railroad grade, and the grasses that occur within the railroad bed. Treat with non-selective herbicide annually.

VE-44. Thin the vegetation along the inactive railroad line and from the barrow pits when they obscure the man-made constructions. Allow vegetation to grow within the railroad corridor but not to obscure the spatial arrangement or views along the railroad grade.

- Adjacent to the Home Ranch Complex and extant railroad tracks, vegetation should be kept as low grasses with no woody vegetation in keeping with how the historic railroad would have appeared.
- North of the Home Ranch Complex, woody vegetation is permissible on the edges of the railroad grade, in keeping with the treatment of the northern portion of the tracks.

Spatial Organization and Views

SO-26. Preserve the linear alignment and spatial organization of the Railroad Corridor and Barrow Pit/Wetland, set on an elevated grade above the adjacent landscape.

- Preserve those characteristics and features that create this spatial organization (natural and constructed topography, railroad tracks).

- Preserve the separate and distinct spaces of the barrow pits as constructed features. Preserve the form and extent of the pits by thinning vegetation as needed if it threatens the constructed feature.

SO-27. Remove vegetation where it obscures the spatial arrangement and views along the railroad grade.

SO-28. Protect views contributing to the significance of the Railroad Corridor, including the linear view along the corridor and views from the corridor to the ranch and mountains.

Constructed Water Features

CW-8. Preserve and protect contributing barrow pits as man-made features associated with construction of the railroad.

- Preserve the form and dimensions of the constructed barrow pits.
- Preserve the wetland vegetation within the barrow pits as a natural resource.
- Thin vegetation as necessary between the railroad grade and the barrow pit(s) to maintain the form and view to the constructed feature.

CW-9. Preserve the underground culvert and power line associated with the Pump House (HS-86) and irrigation system of East Fields and L-Barn Fields.

Circulation

CI-36. Preserve the dirt road that follows the railroad corridor. Maintain this road as a circulation route, retaining the existing width and surface, reflecting its historic use. Discourage visitor vehicular traffic on this route.

- Establish a walking route along this road (Refer to Park-wide Recommendations).

— This route would need to be gated to limit after hours access onto the ranch.

- Consider designating this route as multi-use path for pedestrians and equestrians.

CI-37. Allow a temporary haul road across the railroad tracks as currently proposed by the Superfund remediation.

- At the conclusion of the Superfund remediation, this temporary road should be removed. Regrade to obliterate the road and reseed the roadbed with a high diversity mix of native and pasture grasses and forbs. This area will need to be monitored and managed for invasive vegetation once grasses are reestablished.

CI-38. Maintain the non-contributing Sewage Treatment Road as modified for the Wastewater Treatment Facility access as it crosses the Railroad Corridor.

Buildings and Structures

BS-20. Preserve buildings and structures that contribute to the Railroad Corridor and Barrow Pit/Wetland, including the railroad trestle, Warren Pumphouse, box car and stock car.

- Repair buildings and structures as necessary. Use materials and quality of workmanship that match the historic condition. Repair to ensure safety for people and livestock around the active railroad line.
- Reconstruct active power poles and lines removed by the NPS to the Warren Pumphouse.

BS-21. Do not add new buildings, structures, or museum exhibits (box cars) to the Railroad Corridor and Barrow Pit/Wetland component landscape.

BS-22. Conduct further documentation into the abandoned Milwaukee Railroad to determine which components are historic.

- This would include investigation into the color and type of rock used for railroad

ballast, ties, telegraph poles and wires, and remnants of structures and features.

- Types of investigations may include archeological investigations and/or HALS (Historic American Landscapes Survey) documentation.

BS-23. Preserve the abandoned Milwaukee Railroad corridor at the southern end of the ranch. Where railroad tracks are extant, preserve and replace in-kind all railroad features. To reflect the historic appearance of the railroad, preserve and maintain all historic fabric in this section of the railroad, as this is the area most people visit.

- Maintain the abandoned Milwaukee Railroad tracks by removing vegetation to reveal the tracks. Repair and replace in-kind railroad features as necessary including ties, rails, poles, insulators, and wire, and tamp ballast so it supports ties instead of covers them.
- Repair and preserve the poles and wires adjacent to the extant set of railroad tracks. Stabilize all poles and reset wires in this section of the railroad corridor.

BS-24. On the northern end of the ranch, where the tracks of the railroad are non-extant, preserve features related to the abandoned Milwaukee Railroad corridor as possible. The north portion of the railroad will be preserved, however features may be removed as they become hazardous.

- Allow removal of features as they become hazardous, including wire and poles.
- Remove wires and poles that have fallen, as these pose a safety hazard. Do not replace.

Archeological Sites

AS-6. Undertake measures to identify and preserve areas of archeological significance. Protect and preserve previously recorded archeological sites.

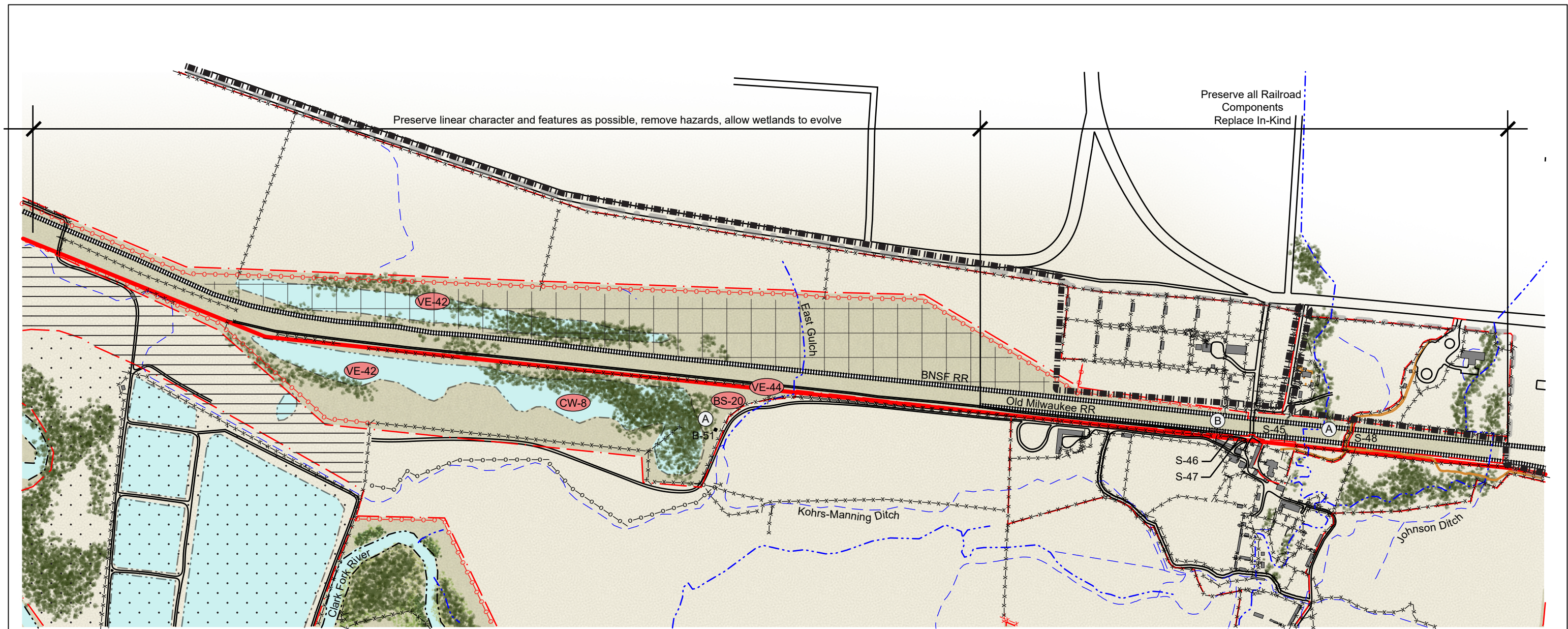
- ° Archeological sites include:

Site Name: RR Gravel Quarry
Site Type: Depression, Historic Structure,
Multicomponent, Historic
ASMIS ID: GRKO00018.000
State ID: 24PW00809

Site Name: Historic Dump Hobo Camps
Site Type: Artifact Scatter, Historic Camp
ASMIS ID: GRKO00006.000 State ID:
24PW00797

Site Name: Concrete slabs associated with
RR construction
Site Type: Artifact Scatter, Multicomponent,
Historic
ASMIS ID: GRKO00005.000
State ID: 24PW00796

- AS-7. Consider additional archeological research
to confirm use and development of the
Railroad Corridor and Barrow Pits.



Legend

- | | | | |
|--|------------------------------------|--|--|
| | NPS Boundary | | Structure to Preserve |
| | National Historic Landmark | | Box Car and Cattle Car to Preserve |
| | Component Landscape Boundary | | Bridge to Preserve |
| | New Pedestrian Trail | | Trees (Outer Bank Riparian Vegetation) |
| | Existing Trail to Preserve | | Floodplain Riparian Shrub |
| | Historic Fence Remnant to Document | | Riparian Wetland |
| | Fence to Preserve | | City Property |
| | NPS Jackleg Fence to Remove | | NPS Scenic Easement |
| | NPS Metal Post and Wire Fence | | Railroad Property |
| | Creek / Old Stream Channel | | |
| | Clark Fork River | | |
| | Irrigation Ditch to Preserve | | |

Notes

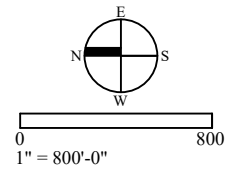
- BS-20 Reconstruct Power Poles and Lines Removed by NPS
- CW-8 Maintain Wetland Vegetation
- VE-42 Preserve Barrow Pits
- VE-44 Clear Vegetation, Historic Railroad Right of Way

Archeological Sites

- Concrete Slabs at Railroad
ASMIS GRKO 00005.000
State ID 24PW00796
- Hobo Camps
ASMIS GRKO 00006.000
State ID 24PW00797
- Gravel Quarry
ASMIS GRKO 00018.000
State ID 24PW00809

Buildings and Structures

- B-51 Warren Pumphouse (HS-86)
- S-45 Siphon (HS-57)
- S-46 Cattle Car (GRKO-970)
- S-47 Cattle Car (GRKO-862)
- S-48 Railroad Trestles



JUNE 2017		TITLE OF PROJECT CULTURAL LANDSCAPE REPORT	
UNITED STATES DEPARTMENT OF THE INTERIOR		TITLE OF DRAWING PRESERVATION TREATMENT PLAN - RAILROAD CORRIDOR AND BARROW PIT / WETLAND	
GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE		NAME OF PARK GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE	
REGION INTERMOUNTAIN	COUNTY POWELL	STATE MONTANA	3-49

Illustration 3-8

DEVELOPMENT ZONE

This section presents treatment guidance for the preservation and enhancement of the Development Zone component landscape. Suggested treatments are provided for the following topics.

- Vegetation
- Spatial Organization and Views
- Circulation
- Buildings and Structures
- Small Scale Features
- Archeological Sites

The treatment plan for the Development Zone recommends enhancing the clarity and presence of the visitor entrance and first impression of the ranch. To ensure a quality visitor experience, the treatment plan recommends creating a consistent NPS visitor experience with improved wayfinding, identity, and accommodation of visitor needs. This will be accomplished by preserving views to the mountains and the historic ranch, while allowing for additional design and construction. This would include sensitively sited buildings, additional trees for screening and shade, and outdoor gathering areas within the Development Zone.

Vegetation

VE-45. Maintain the native riparian vegetation along the bank of Johnson Creek at the southern edge of the ranch. Preserve the stand of cottonwood trees along the creek as character defining features of the ranch landscape.

VE-46. Allow planting additional shade trees around the visitor center restroom and picnic area. Maintain views across the open field to the north, and to the mountains to the west.

VE-47. Maintain as feasible a native plant garden, with a mix of native grasses and forbs, and reseed these areas as needed to create a high diversity mix.

VE-48. Manage rangeland vegetation according to rangeland grazing Best Management Practices.

Spatial Organization and Views

SO-29. Maintain the Development Zone as a separate, distinguishable area from the remainder of the historic ranch, with its own character as a visitor space.

- Maintain the physical separation of the Development Zone by preserving the contributing topography, trees that frame south edge, and the open field to the north. Maintain the trees to the north that separate this area from the Warren Residence.
- Create an inviting look, with a unique character that reads as a separate resource that is clearly identifiable as NPS.



Figure 3-9. The Development Zone will be enhanced with new entrance signage and wayfinding. Future development will consider implementing a consistent NPS aesthetic, unique from the remainder of the historic ranch. (Mundus Bishop, 2015)

SO-30. Preserve and curate views into the ranch by maintaining low-growing vegetation adjacent to Business Loop 90, and by thinning vegetation as needed to maintain open views to the historic center of the ranch.

- Provide livestock viewing opportunities.

SO-31. Consider hierarchy of spaces when adding new buildings or structures. New features should be subordinate to historic in scale and massing.

SO-32. Protect the museum facility. Direct visitors to the visitor center by removing the overhead gate at the entrance to the museum parking area. Create a screen of vegetation between the museum building and the main entrance and parking area to further diminish the presence of the museum facility.

Circulation

CI-39. Maintain the pedestrian route from the Development Zone to the historic ranch.

- Consider modifying the surface of this path to a soft-surface, to match the historic character of the ranch. Consider a soil stabilizer or stabilized crushed fines as a surface treatment.

CI-40. Add new pedestrian paths to connect the Development Zone with other portions of the ranch as well as with the City of Deer Lodge.

- Add a pedestrian route to connect to the Warren Residence to the north (Refer to Park-wide Recommendations).
- Work with the City of Deer Lodge and the Montana Department of Transportation to provide pedestrian access along Business Loop 90 to connect downtown with the Development Zone.

CI-41. Maintain the current ranch entrance, parking area and turn-around. Allow modification of this area if additional parking is needed in the future.

Buildings and Structures

BS-25. Allow new building construction within the Development Zone for administrative and visitor needs.

- Future buildings and structures should consider massing, scale, and pattern that is sensitive to the landscape. Any new buildings should be subordinate to the historic ranch.
- Allow design and development of recreational vehicle pads and hookups for use by researchers and volunteers so long as it does not interfere with the historic ranch setting, character, and views.
- Allow dog kennels within the Development Zone. Place these structures out of the view into the ranch, ensuring they do not disrupt the setting.

BS-26. Any new buildings or structures should be compatible with, but not replicative of the historic ranch buildings and structures.

- Any new development should be outside the view to the historic ranch and should complement the historic character.

BS-27. Consider replacing and relocating the visitor center and picnic area to a new location within the Development Zone that would clearly identify the site as part of the NPS system.

- A new visitor center would provide improved visitor amenities. This may include a outdoor gathering area as well.

Small Scale Features

SS-31. Maintain non-contributing small scale features (jackleg fences, overhead gate at entrance) that are functional and assist with interpretation of the ranch.

- Remove the overhead gate at the entrance to the museum facility, to deemphasize this entrance and avoid visitor confusion.

- SS-32. Maintain the use of the Development Zone for display of interpretive exhibits (ranching equipment, etc).
- SS-33. Provide clarity at the entrance by adding new signage along Business Loop 90.
- Integrate the design of new signage into a new park-wide aesthetic, utilized throughout.

Archeological Sites

- AS-8. Undertake measures to identify and preserve areas of archeological significance. Protect and preserve previously recorded archeological sites.
- Archeological sites in this component landscape include:

Site Name: Tom Stuart Homestead
Site Type: Artifact Scatter, Depression, Habitation, Multicomponent, Historic
ASMIS ID: GRK000007.000
State ID: 24PW00798

Site Name: Planning for new museum building
Site Type: Artifact Scatter, Historic Dump
ASMIS ID: GRK000002.000
State ID: 24PW00651
- AS-9. Archeological resources that are uncovered need better protection. Consider additional artifact-free fill material to cover exposed archeological features, or archeological research/excavation to salvage exposed artifacts.
- AS-10. Explore opportunities to interpret the Stuart Homestead to visitors.

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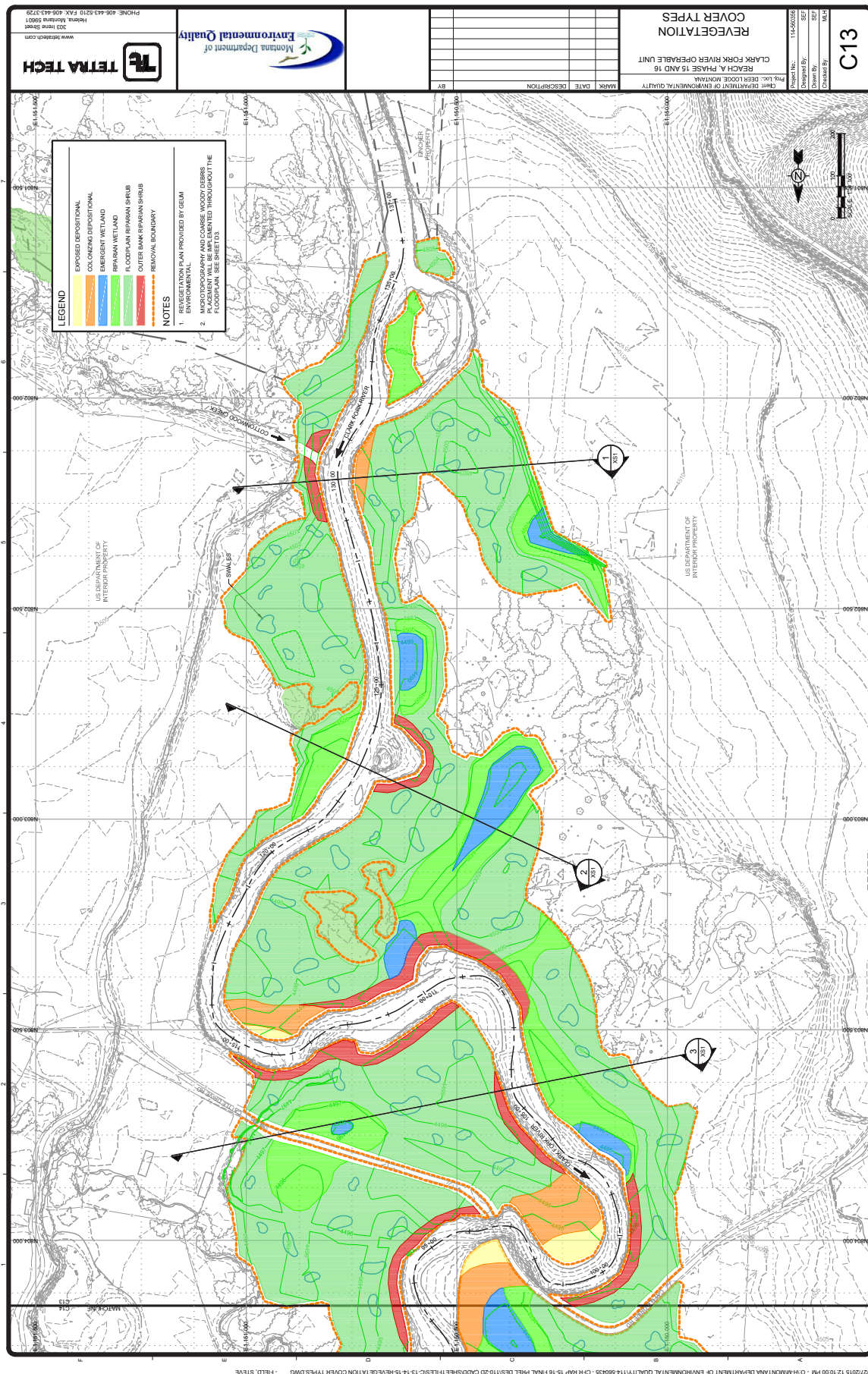
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Appendix B: Superfund Plans



Appendix C: FMSS



CLR Treatment Recommendation	CLR Implementation Task/ FMSS Task	CLR Task Component/ FMSS Task Component	FMSS Asset Code	FMSS Location Name (Number)	FMSS Asset Name (Number)	FMSS Work Type / Sub Type	Material; Units; Unit of Measure*	Potential Project Funding Source (Y/N)	Proposed PMIS Project Name	Preliminary Estimate
Development Zone										
Ch.3 Development Zone, SO-33	DV1. Diminish presence of museum facility	DV1.1 Remove overhead gate at entrance to museum parking area								
		DV1.2 Plant screen of vegetation between museum and visitor parking area and entrance	3100	Development Zone Landscape (233157)		FM / DM	1 wood, overhead gate			
Ch.3 Development Zone, CI-39	DV2. Resurface route from Development Zone to Home Ranch Complex	DV2.1 Remove asphalt				FM	Shrubs, 15000 SF			
		DV2.2 Resurface route with soft-surface that meets accessibility requirements				FM / RM	Asphalt removal, 6,000 SF			
Ch.3 Development Zone, CI-40	DV3. Add pedestrian route from Development Zone to Warren Residence	DV3.1 Complete further design and consultation to determine the preferred alignment of the route					Stabilized fines or similar, 6,000 SF			
		DV4. Relocate Visitor Center and Picnic Shelter out of the Viewshed. Update aesthetic of Development Zone					TBD			
Ch.3 Development Zone, BS-27		DV4.2 Remove existing Visitor Center and Picnic Shelter					TBD			
		DV4.3 Construct new Visitor Center with integrated outdoor gathering area								
		DV4.4 Plant new vegetation at the Visitor Center and outdoor gathering area with native species and shade trees	3100	Development Zone Landscape (233157)						

Ch.3 Grant-Kohrs Residence, VE-22	GK8. Prune lilacs	GK8.1 Remove lilac branches away from path	3100	Residential Landscape Areas (233156)	(1074776)	RM	Lilac bushes, 22 EA			
Ch.3 Grant-Kohrs Residence, VE-24	GK9. Maintain Victorian Garden	GK9.1 Maintain garden beds; repair plantings when needed	3100	Residential Landscape Areas (233156)		FM / PM	Garden Area, 6,000 SF			
Ch.3 Grant-Kohrs Residence, VE-24	GK10. Repair garden at stone terrace	GK10.1 Remove dimensional lumber at edge of garden bed, if not historic				RM	Boards, 40 LF			
		GK10.2 Repair grade below stone terrace				RM	Grading, 100 SF			
		GK10.3 Replant perennials	3100	Residential Landscape Areas (233156)		RM	Perennial Plantings, 75 SF			
Ch.3 Grant-Kohrs Residence, VE-24	GK11. Maintain lawn	GK11.1 Maintain lawn with clean edges	3100	Residential Landscape Areas (233156)	GKR Front lawn (1074780)	FM / RM	Lawn edge, 1,000 LF			
		GK11.2 Reseed lawn	3100	Residential Landscape Areas (233156)	GKR Front lawn (1074780)	RM	Lawn Seed, 18,500 SF			
Ch.3 Grant-Kohrs Residence, VE-27	GK12. Restore black cottonwood trees	GK12.1 Remove green ash from front of residence	3100	Residential Landscape Areas (233156)		FM / DM	Green Ash, 1 EA			
		GK12.2 Plant black cottonwoods in grid pattern	3100	Residential Landscape Areas (233156)		FM / DM	Black Cottonwood Trees, 32 EA			
Ch.3 Grant-Kohrs Residence, SS-20, SS-21	GK13. Reconstruct missing small scale features	GK13.1 Replace missing carriage block and hitching post, based on historic photographs	3100	Residential Landscape Areas (233156)		PM	TBD			
		GK13.2 Replace missing birdbath, based on historic photographs	3100	Residential Landscape Areas (233156)		PM	TBD			
Home Ranch Complex										
Ch.3 Home Ranch, Cl-13	HR1. Accessible route to and within Lower Yard	HR1.1 Design and compliance for new route from Development Zone to Lower Yard				FM				
		HR1.2 Lightly regrade Lower Yard	1100	Kohrs System (91393)	HR Lower House Yard Road	FM / RM	25,000 SF			
		HR1.3 Resurface Lower Yard	1100	Kohrs System (91393)	HR Lower House Yard Road	RM / RM	25,000 SF			
Ch.3 Home Ranch, Cl-14	HR2. Accessible access to Dairy Barn	HR2.1 Design route, ramp, and needed building modifications	4100	HS-09 Dairy (67565)		FM	TBD			
		HR2.2 Grading, surfacing route from parking area to Dairy Barn	1100	Kohrs System (91393)	HR Dairy Loop Road	FM	200 - 250 LF (MIN)			

Ch.3 Grant-Kohrs Residence, VE-22	GK8. Prune lilacs	GK8.1 Remove lilac branches away from path	3100	Residential Landscape Areas (233156)	(1074776)	RM	Lilac bushes, 22 EA			
Ch.3 Grant-Kohrs Residence, VE-24	GK9. Maintain Victorian Garden	GK9.1 Maintain garden beds; repair plantings when needed	3100	Residential Landscape Areas (233156)		FM / PM	Garden Area, 6,000 SF			
Ch.3 Grant-Kohrs Residence, VE-24	GK10. Repair garden at stone terrace	GK10.1 Remove dimensional lumber at edge of garden bed, if not historic				RM	Boards, 40 LF			
		GK10.2 Repair grade below stone terrace				RM	Grading, 100 SF			
				Residential Landscape Areas (233156)		RM	Perennial Plantings, 75 SF			
Ch.3 Grant-Kohrs Residence, VE-24	GK11. Maintain lawn	GK11.1 Maintain lawn with clean edges	3100	Residential Landscape Areas (233156)	GKR Front lawn (1074780)	FM / RM	Lawn edge, 1,000 LF			
		GK11.2 Reseed lawn	3100	Residential Landscape Areas (233156)	GKR Front lawn (1074780)	RM	Lawn Seed, 18,500 SF			
Ch.3 Grant-Kohrs Residence, VE-27	GK12. Restore black cottonwood trees	GK12.1 Remove green ash from front of residence	3100	Residential Landscape Areas (233156)		FM / DM	Green Ash, 1 EA			
		GK12.2 Plant black cottonwoods in grid pattern	3100	Residential Landscape Areas (233156)		FM / DM	Black Cottonwood Trees, 32 EA			
Ch.3 Grant-Kohrs Residence, SS-20, SS-21	GK13. Reconstruct missing small scale features	GK13.1 Replace missing carriage block and hitching post, based on historic photographs	3100	Residential Landscape Areas (233156)		PM	TBD			
		GK13.2 Replace missing birdbath, based on historic photographs	3100	Residential Landscape Areas (233156)		PM	TBD			

Home Ranch Complex										
Ch.3 Home Ranch, CI-13	HR1. Accessible route to and within Lower Yard	HR1.1 Design and compliance for new route from Development Zone to Lower Yard				FM				
		HR1.2 Lightly regrade Lower Yard	1100	Kohrs System (91393)	HR Lower House Yard Road	FM / RM	25,000 SF			
		HR1.3 Resurface Lower Yard	1100	Kohrs System (91393)	HR Lower House Yard Road	RM / RM	25,000 SF			
Ch.3 Home Ranch, CI-14	HR2. Accessible access to Dairy Barn	HR2.1 Design route, ramp, and needed building modifications	4100	HS-09 Dairy (57565)		FM	TBD			
		HR2.2 Grading, surfacing route from parking area to Dairy Barn	1100	Kohrs System (91393)	HR Dairy Loop Road	FM	200 - 250 LF (MIN)			

		HR2.3 Ramp and modifications to building door width, etc	4100	HS-09 Dairy (57565)		FM	TBD			
Ch.3 Home Ranch, SS-11	HR3. Replace NPS era fence with less visually intrusive	HR3.1 Design new fence type	3100	Ranch Complex (59462)	HR Fence (1074786)	FM	TBD			
		HR3.2 Remove fence in need of replacement	3100	Ranch Complex (59462)	1074786	PM	TBD			
		HR3.3 Install new fence type	3100	Ranch Complex (59462)	1074786	PM / RM	TBD			
Ch.3 Home Ranch, VE-11	HR4. Plant cottonwood trees	HR4.1 Plant additional cottonwood trees in historic locations	3100	Ranch Complex (59462)	1074819	PM	12 Black Cottonwoods			
Ch.3 Home Ranch, VE-13	HR5. Remove Lower Yard vegetable garden	HR5.1 Remove garden and reseed area with grasses to match adjacent vegetation				FM / DM*	500 SF Clear; 500 SF Grass Seed			
Ch.3 Home Ranch, VE-16	HR6. Reseed pastures		3100	Ranch Complex (59462)	Turfgrass/Pasture Crop. Field Grass (1074821)	RM	15 AC Pasture Grass/Crop Seed			

Railroad Corridor and Barrow Pit/ Wetland										
Ch.3. Railroad Corridor and Barrow Pit/Wetland, CI-36	RR1. Establish a walking/equestrian route along the railroad corridor.	RR1.1 Clear woody vegetation along the railroad corridor.				FM	Vegetation clearing (grasses, shrubs) 9400 LF			
		RR1.2 Regrade the route to provide access for pedestrians and equestrians.				FM	Earthwork, stabilized fines, 9400 LF			
		RR1.3 Provide a gate to limit after hours access onto the ranch.				FM	2 EA			
Ch3. Railroad Corridor and Barrow Pit/Wetland, BS-20	RR2. Reconstruct active power poles to Pumphouse.					FM / PM	Electric wire and poles, 700 LF			
Ch3. Railroad Corridor and Barrow Pit/Wetland, BS-23	RR3. Preserve Milwaukee Railroad at the southern end of the ranch, preserve and replace in-kind all railroad features as needed.	RR3.1 Remove the vegetation that obscures the tracks of the Milwaukee Railroad.	6500	HS-56 Railroad (58357)		FM / DM	Grass, shrubs removal, 3250 LF			

		RR3.2 Repair and replace in-kind railroad features as necessary including ties, rails, poles, insulators, and wire. Tamp ballast so it supports ties instead of covering them.						FM / DM	Railroad, 3250 LF				
		RR3.3 Stabilize poles and resting wires at the southern end of the ranch, adjacent the extant railroad tracks.						FM / DM	Railroad, 3250 LF				
Ch3. Railroad Corridor and Barrow Pit/Wetland, BS-24	RR4. On the northern end of the ranch, remove features as they become hazardous, including wire and poles.							FM / PM	Railroad, 6150 LF				
Ch3. Railroad Corridor and Barrow Pit/Wetland, VE-42	RR5. Preserve the form, dimensions, and view of the constructed barrow pits by thinning woody vegetation.	RR5.1 Remove hazardous trees and those that threaten the integrity of the railroad grade or barrow pit. Priority should be given to vegetation adjacent the railroad grade.						FM / PM	Select tree thinning, 10 AC				
Ch3. Railroad Corridor and Barrow Pit/Wetland, VE-44	RR6. Thin vegetation along Milwaukee Railroad.							FM / PM	Tree thinning, shrub removal, 1 AC				
Riparian Woodland													
Ch 3. Riparian Woodland, VE-39	RW1. Maintain views to and from the Home Ranch Complex and to the mountains from the Riparian Woodland	RW1.1 Thin woody vegetation in key locations as needed to preserve views.	3100	Riparian Area (233155)	Riparian Vegetation (1074785)			FM / RM	Tree thinning, 2 AC				
Ch 3. Riparian Woodland, CI-34	RW2. Extend Nature Trail	RW2.1 Design / Investigate preferred route to connect the trail to Clark Fork River Bridge Road.						FM	TBD				
		RW2.2 Extend nature trail as a soft-surface route						FM	TBD, Stabilized fines, 1500 LF MIN				
		RW2.3 Extend nature trail along the river corridor to the north						FM	TBD, Soft-surface/dirt, 1.5 to 2.5 MI				
East Feed Lot/Warren Hereford Ranch													
Ch 3. East Feed Lot/Warren Hereford Ranch, CI-18	WHR1. Improve visitor safety / direct pedestrian traffic down alleys	WHR1.1 Design preferred wayfinding approach						FM	TBD				
		WHR1.2 Install gate or traffic direction through operations area						FM	TBD				

Ch 3. East Feed Lot/Warren Hereford Ranch, CI-19	WHR2. De-emphasize Cattle Drive	WHR2.1 Remove overhead gate at Cattle Drive and Business Loop 90	3100	Ranch Complex (59462)	WHR Overhead Gate	FM / DM	1 wooden overhead gate			
		WHR2.2 Add gate at Cattle Drive	1100	Warren Complex (91392)	WHR Bull Barn Rd./NPS Service Entrance	FM / DM	1 gate (metal or wood)			
		WHR2.3 Re-surface Cattle Drive with unique material	1100	Warren Complex (91392)	WHR Bull Barn Rd./NPS Service Entrance	FM / DM	Crushed stone/ stabilized dirt 11,000 SF			
Ch 3. East Feed Lot/Warren Hereford Ranch, SS-13	WHR3. Repair fence alignment	WHR3.1 Repair fence alignment and fence rail arrangement at Whiskey Pasture	3100	Ranch Complex (59462)	1074786	FM / DM	Post and Woven Wire, 150 LF			
Ch 3. East Feed Lot/Warren Hereford Ranch, VE-20	WHR4. Reseed pastures		3100	Ranch Complex (59462)	Turfgrass/Pasture Crop, Field Grass (1074821)	RM	Seed mix, 12 AC			
Warren Residence										
Ch 3. Warren Residence, CI-29	WR1. Remove overhead gate from Warren Lane and Business Loop 90		3100	Ranch Complex (59462)	WR Overhead Gate	FM / DM	1 wooden overhead gate			
Ch 3. Warren Residence, CI-30	WR2. Provide accessible route to Boat House	WR2.1 Clear vegetation, modify fence and gate				FM	TBD. Clear vegetation, 250 LF MIN; Fence, 5 LF MIN			
		WR2.2 Grade and surface route between parking area and Boat House				FM	TBD. Earthwork and pavement, 250 LF MIN			
Ch 3. Warren Residence, CI-31	WR3. Repair stone path	WR3.1 Verify original extent of path			WR Remnant stone path	FM / DM	TBD. Investigations may include 2500 SF area			
		WR3.2 Reset existing stones to make level				FM / DM	Stepping stones, 16 EA			
		WR3.3 Complete stone path with in-kind materials				FM / DM	TBD.			
Ch 3. Warren Residence, SS-27	WR4. Restore missing small scale features	WR4.1 Verify / Research missing features (location, dates, etc)					TBD.			
		WR4.2 Restore features missing since POS (burn barrel, swingset) based on evidence				FM / DM	TBD.			
Ch 3. Warren Residence, VE-33	WR5. Restore vegetation	WR5.1 Restore evergreen trees				FM / DM	Spruce Trees, 3 EA; Ponderosa, 1 EA			
		WR5.2 Restore shade trees				FM / DM	Weeping Birch, 1 EA; Maple, 1 EA; Black Cottonwood, 1 EA;			

		WR5.3 Restore foundation plantings	3100	Residential Landscape Areas (233156)	1074775	FM / RM	TBD, Lilac; Juniper; Cotoneaster; Currant; Clematis; Peony			
		WR5.4 Re-seed lawn	3100	Residential Landscape Areas (233156)	1074780	FM / RM	Lawn seed, 15 500 SF			

* TBD = To be determined. Future design is needed to determine accurate materials and quantities

* Units of Measure: SF (square feet); LF (linear feet); AC (acre); MI (miles); EA (each)

[illegible]

[illegible]

Vegetation	GKR hyacinths pg	119526 Contributing					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR juniper ov	119476 Contributing					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR lanceleaf cottonwoods ov	119486 Contributing					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR Lawn	119554 Contributing					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR lilac shrubs ov	119482 Contributing					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR lilies pg	119532 Contributing					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR monk's hood pg	119534 Contributing					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR peonies pg	119536 Contributing					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR sweet peas pg	119544 Contributing					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR tea roses pg	119548 Contributing					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR tulips pg	119552 Contributing					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR winberry honeysuckle ov	119484 Contributing					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR green ash ov - compatible	119474 compatible											
Vegetation	GKR Gnd or cottonwood trees - compat.	119470 compatible											
Vegetation	GKR babies breath pg	119496 Undetermined					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR bachelor buttons pg	119498 Undetermined					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR columbines pg	119500 Undetermined					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR daisies pg	119508 Undetermined					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR delphiniums pg	119510 Undetermined					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR dwarf iris pg	119530 Undetermined					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR fox pg	119512 Undetermined					Y	all Grant-Kohrs Residence vegetation grouped into one asset	3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT

Vegetation	GKR forget-me-nots pg	119514	Undetermined					all Grant-Kohrs Residence vegetation grouped into one asset	Y		3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR geraniums pg	119516	Undetermined					all Grant-Kohrs Residence vegetation grouped into one asset	Y		3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR goldenrods pg	119518	Undetermined					all Grant-Kohrs Residence vegetation grouped into one asset	Y		3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR harricots pg	119520	Undetermined					all Grant-Kohrs Residence vegetation grouped into one asset	Y		3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR hemerocals pg	119522	Undetermined					all Grant-Kohrs Residence vegetation grouped into one asset	Y		3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR hens and chicks pg	119524	Undetermined					all Grant-Kohrs Residence vegetation grouped into one asset	Y		3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR hies pg	119528	Undetermined					all Grant-Kohrs Residence vegetation grouped into one asset	Y		3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR orange poppies pg	119530	Undetermined					all Grant-Kohrs Residence vegetation grouped into one asset	Y		3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR pink poppies pg	119538	Undetermined					all Grant-Kohrs Residence vegetation grouped into one asset	Y		3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR rhubarb, soapwoods pg	119542	Undetermined					all Grant-Kohrs Residence vegetation grouped into one asset	Y		3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR sweet williams pg	119546	Undetermined					all Grant-Kohrs Residence vegetation grouped into one asset	Y		3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Vegetation	GKR yellow raniculus pg	119540	Undetermined					all Grant-Kohrs Residence vegetation grouped into one asset	Y		3100	233156	Residential Landscape Areas	1074776	Plant or Vegetation, 2 FT, 180 FT, 160 FT
Views and Visas	GKR to low ranch, rip, corr. & w. foot, GKR Views from	119012	Contributing					maintained	?						
Views and Visas	GKR Views within lower garden	119022	Contributing					maintained	?						
Views and Visas	GKR Views of RR Corridor & Warren Res.	119008	Contributing					maintained	?						
Views and Visas	GKR Views to Bunkhouse Row	119020	Contributing					maintained	?						
Views and Visas	GKR Views to Hillcrest Cemetery	119026	Contributing					maintained	?						
Home Ranch Complex															
Buildings and Structures	HR Active Irrigation Flume	118194	Contributing	HS-50		50415	Irrigation Flume		Y		6200	56337	HS-50 Flume		
Buildings and Structures	HR Beef Hoist	118162	Contributing	HS-40		10650	Beef Hoist		Y		4100	56266	HS-40 Beef Hoist - SALVAGE		
Buildings and Structures	HR Bielenberg Barn	118066	Contributing	HS-11		10661	Bielenberg Barn		Y		4100	56223	HS-11 Bielenberg Barn		
Buildings and Structures	HR Blacksmith Shop	118054	Contributing	HS-03		10653	Blacksmith Shop		Y		4100	57559	HS-03 Garage-Blacksmith Shop		
Buildings and Structures	HR Brooding House	118090	Contributing	HS-21		10002	Brooder House		Y		4100	56236	HS-21 Brooder Coop		
Buildings and Structures	HR Buggy Shed	118084	Contributing	HS-17		10667	Buggy Shed		Y		4100	56230	HS-17 Buggy Shed		
Buildings and Structures	HR Bunkhouse Row	118048	Contributing	HS-02		10652	Bunkhouse Row		Y		4100	57558	HS-02 Bunk House Row		
Buildings and Structures	HR Cattle Scale HS-35	118152	Contributing						Y		3100	59462	Ranch Complex	1069319	Generic Structure
Buildings and Structures	HR Chicken House	118092	Contributing	HS-22		10672	Chicken House		Y		4100	56238	HS-22 Chicken Coop		
Buildings and Structures	HR Coal Shed	118052	Contributing	HS-04		10664	Coal Shed		Y		4100	57560	HS-04 Coal Shed		
Buildings and Structures	HR Cow Shed	118070	Contributing	HS-13		10663	Cow Shed		Y		4100	56225	HS-13 L-Barn Cow Shed		

Buildings and Structures	HR Dairy HS-9	18062 Contributing	HS-09	10659 Dairy	Y		4100	57565	HS-09 Dairy			
Buildings and Structures	HR Draft Horse Barn	18058 Contributing	HS-07	10657 Draft Horse Barn	Y		4100	57563	HS-07 Draft Horse Barn			
Buildings and Structures	HR Feed Bunk	118176 Contributing	HS-46	10694 Feed Bunk	Y	Update FKSS # in LCS Update FKSS # in LCS. Update asset description Comment: 3 assets with same Long Description: Feed Racks (HS-42, 43, and 44), surround the Thoroughbred Barn, servicing various corrals. Feed racks HS-43 and 44 are located to the west of the barn while feed rack HS-42 is located east of the barn. The replacement cost is based on the removal and replacement of the feed racks. 1069312.	3100	59462	Ranch Complex	1069313	Generic Structure, HS-46 Feed Bunks	
Buildings and Structures	HR Feed Rack	118168 Contributing	HS-43	10693 Feed Rack	Y		3100	59462	Ranch Complex	1069313	Generic Structure	
Buildings and Structures	HR Feed Rack	118170 Contributing	HS-44	23052 Feed Rack	Y		3100	59462	Ranch Complex	1069314	Generic Structure	
Buildings and Structures	HR Feed Storage House	118082 Contributing	HS-31	10681 House	Y		4100	58250	HS-31 Feed Storage Shed			
Buildings and Structures	HR Feed Storage House	118096 Contributing	HS-28	10678 House	Y		4100	58244	HS-28 Feed Storage Building			
Buildings and Structures	HR Granary	118088 Contributing	HS-18	10668 Granary	Y		4100	58232	HS-18 Granary			
Buildings and Structures	HR Granary/Roller Mill	118056 Contributing	HS-06	10656 Mill	Y		4100	57562	HS-06 Granary			
Buildings and Structures	HR Ice House	118050 Contributing	HS-05	10655 Ice House	Y		4100	57561	HS-05 Ice House			
Buildings and Structures	HR Machine Shed	118068 Contributing	HS-12	10662 Machine Shed	Y		4100	58224	HS-12 Machine Shed			
Buildings and Structures	HR Manure Pit	118160 Contributing	HS-39	10689 Manure Pit	Y	Update FKSS # in LCS. Update asset Description Comment	3100	59462	Ranch Complex	1069298	Wall, Retaining, Concrete, 54 FT, 2 FT	
Buildings and Structures	HR Metal Granary	118094 Contributing	HS-23	10673 Metal Granary	Y		4100	58239	HS-23 Metal Granary			
Buildings and Structures	HR Oxen Barn	118064 Contributing	HS-10	10660 Oxen Barn	Y		4100	57566	HS-10 Oxen Barn			
Buildings and Structures	HR Privy	118060 Contributing	HS-08	10658 Privy	Y		4100	57564	HS-08 Privy			
Buildings and Structures	HR Privy	118066 Contributing	HS-20	10670 Privy	Y		4100	58234	HS-20 Privy			
Buildings and Structures	HR Stallion Barn	118074 Contributing	HS-14	10666 Stallion Barn	Y		4100	58228	HS-14 Stallion Barn			
Buildings and Structures	HR Stallion Barn	118076 Contributing	HS-16	10668 Stallion Barn	Y		4100	58228	HS-16 Stallion Barn			
Buildings and Structures	HR Stallion Barn	118078 Contributing	HS-19	10669 Stallion Barn	Y		4100	58233	HS-19 Stallion Barn			
Buildings and Structures	HR Stallion Barn	118080 Contributing	HS-30	10660 Stallion Barn	Y		4100	58246	HS-30 Stallion Barn			
Buildings and Structures	HR Stock Shelter	118180 Contributing	HS-24	10674 Stock Shelter	Y		4100	58240	HS-24 Cow Shed			
Buildings and Structures	HR Stock Shelter	118182 Contributing	HS-27	10677 Stock Shelter	Y		4100	58243	HS-27 Cow Shed			
Buildings and Structures	HR Stock Shelter	118184 Contributing	HS-29	10679 Stock Shelter	Y		4100	58245	HS-29 Cow Shed			
Buildings and Structures	HR Thoroughbred Barn	118072 Contributing	HS-15	10665 Barn	Y		4100	58227	HS-15 Thoroughbred Barn			
Buildings and Structures	HR W. Corral				?	1069315 and 1069316 have same Long Description: A Squeeze Chute (HS-67), and Feed Rack (HS-68), are located in the corral north of the Bull Barns and west of the Warren Barn. The squeeze chute is approximately 110 feet long and is constructed of wood. It was rehabilitated in the 1990s. The feed rack consists of several narrow wood beams crossed close to the bottom of the beams to form a large V pattern at the top while the rack rests on the smaller V. A long wood plank rests in the crux of the larger V to support fodder. As this structure was completely deteriorated, it was reconstructed in 1998. The replacement cost is based on the removal and replacement of the feed	3100	59462	Ranch Complex	1069315	Generic Structure	
Buildings and Structures	HR W. Corral				Y		4100	58251	HS-32 Cow Shed			
Buildings and Structures	HR W. Feedlot Stock Shelter	118198 Contributing	HS-32	10682 Stock Shelter	Y		4100	58253	HS-32 Cow Shed			
Buildings and Structures	HR W. Feedlot Stock Shelter	118200 Contributing	HS-33	10683 Stock Shelter	Y		4100	58258	HS-33 Cow Shed			
Buildings and Structures	HR West Feedlot Storage Shed	118098 Contributing	HS-34	10664 Storage Shed	Y		4100	58258	HS-34 Feed Storage Building			
Buildings and Structures	HR Feed Bunk	118174 compatible	HS-45	100003 Feed Bunk	Y		4100	58323	HS-45 Feed Bunk - SALVAGE			

Small Scale Features	HR Jack-Leg Fence	119172	Contributing					Y	all styles of fences grouped	3100	59462	Ranch Complex	1074786	Fence Gate, Fence, Wood, 5 FT, 10075 FT
Small Scale Features	HR Overhead Gate	119186	Contributing					Y	all gates in Home Ranch grouped	3100	59462	Ranch Complex	1140850	Fence Gate, Gate, Metal, 20 FT, 5.5 FT
Small Scale Features	HR Red Wood Gate	119188	Contributing					Y	all gates in Home Ranch grouped	3100	59462	Ranch Complex	1140850	Fence Gate, Gate, Metal, 20 FT, 5.5 FT
Small Scale Features	HR Simple Post and Rail Fence	119178	Contributing					Y	all styles of fences grouped	3100	59462	Ranch Complex	1074786	Fence Gate, Fence, Wood, 5 FT, 10075 FT
Small Scale Features	HR Stacked Log Fence	119184	Contributing					Y	all styles of fences grouped	3100	59462	Ranch Complex	1074786	Fence Gate, Fence, Wood, 5 FT, 10075 FT
Small Scale Features	HR Vertical Board Fence	119174	Contributing					Y	all styles of fences grouped	3100	59462	Ranch Complex	1074786	Fence Gate, Fence, Wood, 5 FT, 10075 FT
Small Scale Features	HR Chicken Wire Fence	119180	Non contributing - compatible					Y	all styles of fences grouped	3100	59462	Ranch Complex	1074786	Fence, Wood, 5 FT, 10075 FT
Small Scale Features	HR Chicken Wire Gates	119182	Non contributing - compatible											
Small Scale Features	HR Fire Box	119200	Non contributing - compatible											
Small Scale Features	HR Fire Hydrants	119198	Non contributing - compatible											
Small Scale Features	HR Fire bar	119196	Non contributing - compatible											
Small Scale Features	HR Water bar	119194	Non contributing - compatible											
Small Scale Features	HR Water trough													
Small Scale Features	HR Vertical Board Gate	119192	Indetermined					Y	all gates in Home Ranch grouped	3100	59462	Ranch Complex	1140850	Fence Gate, Gate, Metal, 20 FT, 5.5 FT
Spatial Organization	HR Bunkhouse yards	118564	Contributing					N						
Spatial Organization	HR Clark Fork Bridge													
Spatial Organization	HR Johnson Creek Field	118574	Contributing					Y	All unpaved roads - West of railroad tracks. Approx. 9 miles of roads - averaging 12-14 feet wide. CRV= \$1.05/sf	1100	91393	Kohrs System		Turfgrass-Pasture
Spatial Organization	HR L-Barn South	118566	Contributing					Y		3100	59462	Ranch Complex	1074821	Crop, Field Grass
Spatial Organization	HR Lower house yards	118562	Contributing					N/A						
Spatial Organization	HR Lower yards	118560	Contributing					N/A						
Spatial Organization	HR West Corral	118568	Contributing					N/A						
Spatial Organization	HR West feedlot	118572	Contributing					N/A						
Spatial Organization	HR Kohrs-Hanning Ditch Road	118576	Non contributing - compatible											
Vegetation	HR black cottonwood	119458	Contributing					Y	Long Description: The vegetation that does exist consists mostly of willows and cottonwoods. This vegetation is primarily found within Johnson Creek field, to the south of the ranch house, and the Johnson Creek feedlot, south of the Stallion Barn (HS-30). Several large cottonwoods are also found along the southern edge of the demonstration field where Johnson Creek bends far to the east. Pasture grasses comprise the majority of vegetative cover within the Home Ranch complex corals and feedlots, providing food for the livestock contained within. Because these areas have been so heavily impacted by livestock, the species composition is a mix of native and non-native grasses and forbs. A detailed breakdown of vegetation species is not available for this area. The replacement cost is based on the removal of the existing trees and their replacement with	3100	59462	Ranch Complex	1074819	Plant or Vegetation, 30 FT, 765 FT, 300 FT

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Vegetation	PHF needle-and-thread grass lrg	119650 Contributing							Y		3100	233139	Hayfield/Pasture	1069291	Turfgrass/Pasture	
Vegetation	PHF needle-and-thread grass lrg	119668 Contributing							Y		3100	233139	Hayfield/Pasture	1069291	Turfgrass/Pasture	
Vegetation	PHF red clover lrg	119634 Contributing							Y		3100	233139	Hayfield/Pasture	1069291	Turfgrass/Pasture	
Vegetation	PHF red clover lrg	119642 Contributing							Y		3100	233139	Hayfield/Pasture	1069291	Turfgrass/Pasture	
Vegetation	PHF smooth bromegrass lrg	119628 Contributing							Y		3100	233139	Hayfield/Pasture	1069291	Turfgrass/Pasture	
Vegetation	PHF smooth bromegrass lrg	119660 Contributing							Y		3100	233139	Hayfield/Pasture	1069291	Turfgrass/Pasture	
Vegetation	PHF western sticktight lrg	119880 Contributing							Y		3100	233139	Hayfield/Pasture	1069291	Turfgrass/Pasture	
Vegetation	PHF Canada thistle lrg	119636 compatible														
Vegetation	PHF desert alyssum lrg	119656 compatible														
Vegetation	PHF desert alyssum lrg	119674 compatible														
Vegetation	PHF orchard grass lrg	119678 compatible														
Vegetation	PHF spotted knapweed lrg	119662 compatible														
Vegetation	PHF white clover lrg	119640 Undetermined							Y		3100	233139	Hayfield/Pasture	1069291	Turfgrass/Pasture	
Views and Views	PHF Views of Business Loop 90 corridor	119104 Contributing							N/A	Not Contributing						
Views and Views	PHF Views of Deer Lodge	119098 Contributing							?	Maintained?						
Views and Views	PHF Views of Hillcrest Cemetery	119108 Contributing							?	Maintained?						
Views and Views	PHF Views of Ranch Complex	119102 Contributing							?	Maintained?						
Views and Views	PHF Views of Railroad Corridor	119106 Contributing							?	Maintained?						
Views and Views	PHF Views of sewage treatment ponds	119100 Contributing							?	Maintained?						
Views and Views	PHF Views to irrigation corridor	119094 Contributing							?	Maintained?						
Views and Views	PHF Views to western foothills	119096 Contributing							?	Maintained?						
Railroad Corridor and Barrow Pit Wetland																
Buildings and Structures	RR Siphon	118238 Contributing							Y	Add FMSS # to LCS	6200	583359	HS-57 Siphon, concrete			
Buildings and Structures	RR Warren Pump House	118142 Contributing							Y		4100	583397	HS-86 Pump House, North			
Buildings and Structures	RR Cattle Car ca. 1923	118240 compatible														
Buildings and Structures	RR Cattle Car ca. 1929	Non contributing -														
Buildings and Structures	RR Railroad trestles	118242 compatible														
Buildings and Structures	RR Burlington Northern Railroad line	118244 compatible														
Circulation	RR NPS Service Road at-grade crossing	118950 Contributing							N/A							
Circulation		118954 Contributing							N/A							

Vegetation	RR blunt-leaved yellowcress bvp	119844 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR cattails bvp	119826 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR chokecherry bvp	119848 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR common sagemore rbg	119820 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR cottonwoods bvp	119832 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR desert ayssum rbg	119814 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR forged-me-rods bvp	119830 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR giant wildrye up	119854 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR hairy goldenaster rbg	119812 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR Indian meadowgrass up	119858 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR land larkspur up	119864 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR long-beak phlox up	119862 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR Mission goldemod rbg	119810 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR moss phlox rbg	119806 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR needle-and-thread grass rbg	119808 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR needle-and-thread grass up	119856 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR plains pricklypear up	119868 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR redstart dogwood bvp	119846 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR softstem buffrush bvp	119828 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR spring willow-grass rbg	119818 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR Utah honeysuckle bvp	119842 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR violet bvp	119850 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR wisnom serviceberry bvp	119836 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR willows bvp	119834 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR wooly pod milkvetch up	119866 Contributing					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR baby's breath rbg	119824 compatible					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR spotted knapweed rbg	119822 compatible					No Maintained Landscape Location overlapping the RR Corridor	?
Vegetation	RR yellow rocket bvp	119838 compatible					No Maintained Landscape Location overlapping the RR Corridor	?
Views and Visits	RR Views framed by vegetation	119126 Contributing					Maintained?	?
Views and Visits	RR Views to Ranch complexes	119122 Contributing					Maintained?	?
Views and Visits	RR Views to riparian corridor and mtns.	119128 Contributing					Maintained?	?

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Vegetation	RW cattail nvc	118802 Contributing					Y	One Plant Veg asset for all Riparian Vegetation.	3100	233155	Riparian Area	1074785 Plant or Vegetation, 40 FT, 4135 FT, 1861 FT
Vegetation	RW geyer willow nvc	118774 Contributing					Y	One Plant Veg asset for all Riparian Vegetation.	3100	233155	Riparian Area	1074785 Plant or Vegetation, 40 FT, 4135 FT, 1861 FT
Vegetation	RW Rocky Mountain juniper nvc	118796 Contributing					Y	One Plant Veg asset for all Riparian Vegetation.	3100	233155	Riparian Area	1074785 Plant or Vegetation, 40 FT, 4135 FT, 1861 FT
Vegetation	RW sandbar willow nvc	118778 Contributing					Y	One Plant Veg asset for all Riparian Vegetation.	3100	233155	Riparian Area	1074785 Plant or Vegetation, 40 FT, 4135 FT, 1861 FT
Vegetation	RW water birch nvc	118776 Contributing					Y	One Plant Veg asset for all Riparian Vegetation.	3100	233155	Riparian Area	1074785 Plant or Vegetation, 40 FT, 4135 FT, 1861 FT
Vegetation	RW western snowberry nvc	118780 Contributing					Y	One Plant Veg asset for all Riparian Vegetation.	3100	233155	Riparian Area	1074785 Plant or Vegetation, 40 FT, 4135 FT, 1861 FT
Vegetation	RW woods rose nvc	118784 Contributing					Y	One Plant Veg asset for all Riparian Vegetation.	3100	233155	Riparian Area	1074785 Plant or Vegetation, 40 FT, 4135 FT, 1861 FT
Vegetation	RW redtop benign nvc	118790 Contributing					Y	One Plant Veg asset for all Riparian Vegetation.	3100	233155	Riparian Area	1074785 Plant or Vegetation, 40 FT, 4135 FT, 1861 FT
Vegetation	RW smooth brome nvc	118786 Contributing					Y	One Plant Veg asset for all Riparian Vegetation.	3100	233155	Riparian Area	1074785 Plant or Vegetation, 40 FT, 4135 FT, 1861 FT
Views and Visas	RW views of pastures and hay fields	119116 Contributing					?	Maintained				
Views and Visas	RW Views to sewage treatment ponds	119120 Contributing					?	Maintained				
Views and Visas	RW Views within Riparian woodland	119118 Contributing					Y	One Plant Veg asset for all Riparian Vegetation.	3100	233155	Riparian Area	1074785 Plant or Vegetation, 40 FT, 4135 FT, 1861 FT
Upland Pasture												
Circulation	UP Big Gulch Road	118940 Contributing					Y	All unpaved roads - West of railroad tracks. Approx. 9 miles of roads - averaging 12-14 feet wide. CRV= \$1.05/sf	1100	91393	Kohrs System	
Circulation	UP Gravel Pit Road	118922 Contributing					Y	All unpaved roads - West of railroad tracks. Approx. 9 miles of roads - averaging 12-14 feet wide. CRV= \$1.05/sf	1100	91393	Kohrs System	
Circulation	UP Kohrs Ditch Road	118912 Contributing					Y	All unpaved roads - West of railroad tracks. Approx. 9 miles of roads - averaging 12-14 feet wide. CRV= \$1.05/sf	1100	91393	Kohrs System	
Circulation	UP Little Gulch Road	118936 Contributing					Y	All unpaved roads - West of railroad tracks. Approx. 9 miles of roads - averaging 12-14 feet wide. CRV= \$1.05/sf	1100	91393	Kohrs System	
Circulation	UP MTSR-4691	118920 Contributing					?	All unpaved roads - West of railroad tracks. Approx. 9 miles of roads - averaging 12-14 feet wide. CRV= \$1.05/sf	1100	91393	Kohrs System	
Circulation	UP Ridge Road	118916 Contributing					Y	All unpaved roads - West of railroad tracks. Approx. 9 miles of roads - averaging 12-14 feet wide. CRV= \$1.05/sf	1100	91393	Kohrs System	
Circulation	UP Upland Pasture Road	118914 Contributing					Y	All unpaved roads - West of railroad tracks. Approx. 9 miles of roads - averaging 12-14 feet wide. CRV= \$1.05/sf	1100	91393	Kohrs System	
Constructed Water Features								118811 Effluent Irrigation System; 99797 HS-91 West Side Ditch System; 99798 HS-92 Kohrs Manning Ditch System; 99799 HS-93 Warren Ditch System				
Constructed Water Features	UP Hartz Ditch	118742 Contributing					?	LCS 451882 other name = Kohrs "Big" Ditch. LCS has 2 LOC IDs: 59463 (Irrigation System), 99799 (Irrigation Ditch Locations).	6200 - Constructed Waterway	99798	HS-92 Kohrs Manning Ditch System	
Constructed Water Features		118732 Contributing					Y	118811 Effluent Irrigation System; 99797 HS-91 West Side Ditch System; 99798 HS-92 Kohrs Manning Ditch System; 99799 HS-93 Warren Ditch System	6200 - Constructed Waterway			
Constructed Water Features	UP Lateral ditches UP Old abandoned ditches	118734 Contributing					?					
Constructed Water Features		118736 Contributing					?					

Vegetation	UP Bessey's locoweed dr/fg	119746 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP bitterroot dr/fg	119740 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP blue grama dr/fg	119708 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP bluebunch wheatgrass dr/fg	119756 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP broom snakeweed dr/fg	119730 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP common timothy	119684 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP common yarrow dr/fg	119700 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP cottonwood tree cluster	119772 Contributing				N	Only apple trees in Non-Irrigated pasture locations	3100	233137	Non-Irrigated Pastures		
Vegetation	UP crested wheatgrass hq	119692 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP culticard daisy dr/fg	119720 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP curly-cup gumweed dr/fg	119728 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP fringed sagewash dr/fg	119704 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP intermediate wheatgrass hq	119698 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP little-leaf alumnroot dr/fg	119736 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP longleaf phlox dr/fg	119750 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP Missouri goldenrod dr/fg	119760 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP moss phlox dr/fg	119752 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP needle-and-thread dr/fg	119734 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP plains pricklypear dr/fg	119744 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP prairie smoke dr/fg	119726 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP red clover hq	119698 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP redtop benigness hq	119696 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP rough fescue dr/fg	119722 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP rubber rabbitbush dr/fg	119716 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP sandberg's bluegrass dr/fg	119754 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP scarlet gaura dr/fg	119724 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP scarlet globeamarow dr/fg	119762 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP staggy fleabane dr/fg	119718 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP smooth brome hq	119692 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP spineless horsebush dr/fg	119766 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP standing milkvetch dr/fg	119706 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture
Vegetation	UP waveleaf mistle dr/fg	119714 Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	lurgrass-Pasture

Vegetation	UP western wheatgrass dr/fg	119748	Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	Upland Pasture
Vegetation	UP winterfat dr/fg	119738	Contributing				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	Upland Pasture
Vegetation	UP baby's breath dr/fg	119732	compatible										
Vegetation	UP Canada thistle thg	119690	compatible										
Vegetation	UP crested wheatgrass dr/fg	119702	compatible										
Vegetation	UP dandelion dr/fg	119764	compatible										
Vegetation	UP intermediate wheatgrass dr/fg	119768	compatible										
Vegetation	UP smooth bromegrass dr/fg	119710	compatible										
Vegetation	UP spotted knapweed dr/fg	119712	compatible										
Vegetation	UP tall fescue dr/fg	119758	compatible										
Vegetation	UP yellow sweetclover dr/fg	119742	compatible										
Vegetation	UP Kentucky bluegrass thg	119886	Undetermined				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	Upland Pasture
Vegetation	UP white clover thg	119894	Undetermined				Y	Upland Pastures combined into one asset	3100	233137	Non-Irrigated Pastures	69292	Upland Pasture
Views and Views	UP Views of Deer Lodge/Hillcrest Cemetery	119112	Contributing				?	Maintained?					
Views and Views	UP Views of the ranch and riparian zone	119110	Contributing				?	Maintained?					
Views and Views	UP Views to Deer Lodge Mtn./Mt. Powell	119114	Contributing				?	Maintained?					
Warren Hereford Ranch/East Feed Lot													
Buildings and Structures	WHR Bull Barn	118102	Contributing	HS-62	100010	Bull Barn	Y		4100	58367	HS-62 Bull Barn		
Buildings and Structures	WHR Bull Barn	118104	Contributing	HS-63	100011	Bull Barn	Y		4100	58557	HS-63 Bull Barn		
Buildings and Structures	WHR Cow Shed	118112	Contributing	HS-70	100017	Cow Shed	Y		4100	58376	HS-70 Cow Shed		
Buildings and Structures	WHR Cow Shed	118114	Contributing	HS-71	100018	Cow Shed	Y		4100	65531	HS-71 Cow Shed		
Buildings and Structures	WHR Cow Shed	118116	Contributing	HS-72	100019	Cow Shed	Y		4100	65533	HS-72 Cow Shed		
Buildings and Structures	WHR Cow Shed	118118	Contributing	HS-73	100020	Cow Shed	Y		4100	65534	HS-73 Cow Shed		
Buildings and Structures	WHR Cow Shed	118120	Contributing	HS-74	100021	Cow Shed	Y		4100	65536	HS-74 Cow Shed		
Buildings and Structures	WHR Cow Shed	118122	Contributing	HS-75	100022	Cow Shed	Y		4100	65538	HS-75 Cow Shed		
Buildings and Structures	WHR Cow Shed	118124	Contributing	HS-76	100023	Cow Shed	Y		4100	65539	HS-76 Cow Shed		
Buildings and Structures	WHR Cow Shed	118126	Contributing	HS-77	100024	Cow Shed	Y		4100	65540	HS-77 Cow Shed		
Buildings and Structures	WHR Feed House	118172	Contributing	HS-78	100025	Feed House	Y		4100	58541	HS-78 Feed House		
Buildings and Structures	WHR Feed House	118216	Contributing	HS-79	100026	Feed House	Y		4100	58392	HS-79 Feed House		
Buildings and Structures	WHR Feed House	118218	Contributing	HS-80	100027	Feed House	Y		4100	65544	HS-80 Feed House		
Buildings and Structures	WHR Feed House	118220	Contributing	HS-81	100028	Feed House	Y		4100	65548	HS-81 Feed House		
Buildings and Structures	WHR Feed House	118222	Contributing	HS-82	100029	Feed House	Y		4100	65549	HS-82 Feed House		
Buildings and Structures	WHR Feed House	118224	Contributing	HS-83	100030	Feed House	Y		4100	65552	HS-83 Feed House		
Buildings and Structures	WHR Feed House	118226	Contributing	HS-84	100031	Feed House	Y		4100	65554	HS-84 Feed House		
Buildings and Structures	WHR Loading Chute	118210	Contributing	HS-69	100016	Loading Chute	Y	Add FMSS # to LCS	3100 - Maintained Landscapes	59462	Ranch Complex	Generic Structure, HS69 Loading Chute	1074767
Buildings and Structures	WHR Sales Barn	118106	Contributing	HS-65	100013	Sales Barn	Y		4100	58369	HS-65 Metal Barn, maintenance shop		
Buildings and Structures	WHR Scale House	118110	Contributing	HS-66	100014	Scale House	Y		4100	58371	HS-66 Scale House		
Buildings and Structures	WHR Warren Barn	118100	Contributing	HS-64	100012	Warren Barn	Y		4100	58368	HS-64 Red Barn		
Buildings and Structures	WHR Feed Rack	118214	compatible	HS-68	52794	Feed Rack	Y		4100	65493	HS-68 Feed Rack - SALVAGE		

[illegible]

Buildings and Structures	WR Garage	118132 Contributing	HS-61		100006	Garage Warren Residence Pump 57977 Warren 100006	Residence	Y		4100	58366	HS-61 Garage, Warren residence			
Buildings and Structures	WR Pump House	118134 Contributing	HS-48				Warren residence	Y		4100	58400	HS-68 Pump House, Warren residence			
Buildings and Structures	WR Warren Residence	118130 Contributing	HS-58				Warren park headquarters	Y		4100	58361	HS-58 Warren Residence, park headquarters			
Circulation	WR Chicken Coop road	118896 Contributing						Y	All unpaved roads - East of railroad tracks-Approx. 2 miles of road - 14' wide. CRV= \$1.05/SF	1100		91392 Warren Complex			
Circulation	WR Driveway	118884 Contributing						Y	All unpaved roads - East of railroad tracks-Approx. 2 miles of road - 14' wide. CRV= \$1.05/SF	1100		91392 Warren Complex			
Circulation	WR Kohrs-Warren lane	118882 Contributing						Y	All unpaved roads - East of railroad tracks-Approx. 2 miles of road - 14' wide. CRV= \$1.05/SF	1100		91392 Warren Complex			
Circulation	WR Pailo	118892 Contributing						?		3100		233156 Residential Landscape			
Circulation	WR Remnant stone path	118894 Contributing						?							
									Long Description: A paved driveway provides access to the garage, and concrete sidewalks provides pedestrian links to the front door of the house. The replacement cost is based on the removal and replacement of the existing concrete driveway.						
Circulation	WR Sidewalk	118896 Contributing						?		3100		233156 Residential Landscape	1074752	35 FT, 8 FT	
Circulation	WR Steps	118890 Contributing						?		3100		233156 Residential Landscape	1074753	Stairs, Stone	
Circulation	WR Stuart pasture road	118898 Contributing						Y	All unpaved roads - East of railroad tracks-Approx. 2 miles of road - 14' wide. CRV= \$1.05/SF	1100		91392 Warren Complex			
Constructed Water Features	WR Culvert	118704 Contributing						Y		Constructed Waterway		99799 System	1284436	Culvert	
Constructed Water Features	WR Old Ditch	118706 Contributing						?	do assets exist for this? Only other asset in location says this Waterway	Constructed		99799 System			
Constructed Water Features	WR Well	118702 Contributing						?							
Land Use	WR Livestock grazing	118516 Contributing						N/A							
Land Use	WR Interpretation	118518 compatible													
Land Use	WR NPS administration/storage	118514 compatible													
Natural Systems and Features	WR Bench	118302 Contributing													
Natural Systems and Features	WR North Fork of Johnson Creek	118298 Contributing						Y	GKR and WR benches	3100		233156 Residential Landscape	1140845	EXTERIOR Furnishing, Bench, Wood, 18 IN, 72 IN, 12 IN	
Small Scale Features	WR 5-Hall Braced Gate	119290 Contributing						N/A							
Small Scale Features	WR BBQ foundation/burn barrel	119296 Contributing						Y		3100		233156 Residential Landscape	1140849	Fence/Gate, Gate	
Small Scale Features	WR Birdbath	119304 Contributing						?							
Small Scale Features	WR Clothesline	119298 Contributing						Y	Update Description Comment	3100		233156 Residential Landscape	1074770	Sculpture, Other	
Small Scale Features	WR Picket Double Gate	119278 Contributing						Y	Update Description Comment	3100		233156 Residential Landscape	1074773	Sculpture, Other	
Small Scale Features	WR Picket Single Gate	119280 Contributing						Y		3100		233156 Residential Landscape	1140849	Fence/Gate, Gate	
Small Scale Features	WR Red Wood Gate	119286 Contributing						Y		3100		233156 Residential Landscape	1140849	Fence/Gate, Gate	
Small Scale Features	WR Wire Mesh Gate	119282 Contributing						Y		3100		233156 Residential Landscape	1140849	Fence/Gate, Gate	

Small Scale Features	WR Wood Post and Woven Wire Fence	119284	Contributing - Non contributing -					Y	all fences in Residential area grouped into one asset	3100	233156	Residential Landscape Areas	1074781	Fence Gate, Fence, Wood, 4 FT, 640 FT
Small Scale Features	WR Antenna	119308	compatible											
Small Scale Features	WR Electric Fence	119276	compatible											
Small Scale Features	WR Fire hydrant	119306	compatible											
Small Scale Features	WR Jack-Leg Fence	119288	compatible											
Small Scale Features	WR Meter	119310	compatible											
Small Scale Features	WR NPS Mailbox	119294	compatible											
Small Scale Features	WR Picket Fence - supporting	119274	compatible											
Small Scale Features	WR Sleeping Stones	119292	compatible											
Small Scale Features	WR Concrete trough	119300	Undetermined					?						
Small Scale Features	WR Maple trap	119302	Undetermined					Y		3100 - Maintained Landscapes	59462	Ranch Complex	1074817	Generic Structure
Spatial Organization	WR Chicken coop field	118610	Contributing					?						
Spatial Organization	WR Domestic yard	118608	Contributing					Y		3100	233156	Residential Landscape Areas	1074780	turfgrass/Pasture Crop, Ornamental, Edging is fence
Spatial Organization	WR East field	118612	Contributing					?						
Spatial Organization	WR Kohrs-Warren lane	118618	Contributing					Y	All unpaved roads - East of railroad tracks Approx. 2 miles of road - 14 wide. CRV= \$1.05/SF	1100	91392	Warren Complex		
Spatial Organization	WR Riparian zone (N. Fork Johnson Cr.)	118620	Contributing					N/A						
Spatial Organization	WR Stuart pasture	118616	Contributing					?						
Spatial Organization	WR West field	118614	Contributing					Y	combined with all other non-irrigated pastures 233139 Hayfeed/Pasture for irrigated portions	3100	233137	Non-irrigated Pastures		
Vegetation	WR Black cottonwood ov	119558	Contributing					Y		3100	233156	Residential Landscape Areas	1074778	Plant or Vegetation, 40 FT, 500 FT, 150 FT
Vegetation	WR black cottonwood rzv	119608	Contributing											
Vegetation	WR blue grama nbgp	119624	Contributing					Y		3100	233156	Residential Landscape Areas	1074775	Plant or Vegetation, 40 FT, 500 FT, 150 FT
Vegetation	WR bluebunch wheatgrass nbgp	119612	Contributing					Y		3100	59462	Ranch Complex	1074821	turfgrass/Pasture Crop, Field Grass
Vegetation	WR Cottonaster ov	119600	Contributing					Y		3100	59462	Ranch Complex	1074821	turfgrass/Pasture Crop, Field Grass
Vegetation	WR desert alysium nbgp	119622	Contributing					Y		3100	233156	Residential Landscape Areas	1074778	Plant or Vegetation, 40 FT, 500 FT, 150 FT
Vegetation	WR Green ash ov	119594	Contributing					Y		3100	59462	Ranch Complex	1074821	Plant or Vegetation, 40 FT, 500 FT, 150 FT
Vegetation	WR hairy goldenaster nbgp	119620	Contributing					Y		3100	233156	Residential Landscape Areas	1074775	Plant or Vegetation, 40 FT, 500 FT, 150 FT
Vegetation	WR Juniper shrub ov	119598	Contributing					Y		3100	59462	Ranch Complex	1074821	turfgrass/Pasture Crop, Field Grass
Vegetation	WR Juniper tree ov	119596	Contributing					Y		3100	233156	Residential Landscape Areas	1074775	Plant or Vegetation, 40 FT, 500 FT, 150 FT

[illegible]

Appendix D: Lanette King Drawings

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GRANT-KOHR'S RESIDENCE

1 This section presents treatment guidance for the
2 preservation and enhancement of the Grant-Kohrs
3 Residence component landscape. Preservation
4 guidelines and suggested treatments are provided for
5 the following topics.

- 6
- 7 • Spatial Organization and Views
- 8 • Circulation
- 9 • Buildings and Structures
- 10 • Small Scale Features
- 11 • Vegetation

12

13 The treatment plan for the Grant-Kohrs Residence
14 focuses on preserving the domestic landscape
15 and distinguishing this space from the remainder
16 of the working ranch. The landscape will be
17 repaired by introducing new vegetation where it
18 existed historically, and repairing walls and paths
19 where needed in order to reflect the Victorian
20 garden aesthetic that existed during the period of
21 significance.

22 Spatial Organization and Views

- 24 1. Preserve contributing spatial organization of the
25 Grant-Kohrs Residence, as the focal point of
26 domestic life on the ranch.

- 1 ° Preserve the ranch house and three yard
2 areas with each yard reflecting a different
3 domestic use (formal entrance at the front
4 yard, utilitarian north yard, and ornamental
5 garden in the south yard).

- 6 ° Preserve Bunkhouse Road as the northern
7 edge of the domestic landscape.

- 8 ° Preserve those characteristics and features
9 that create the historic spatial organization
10 (the ranch house, topography above the
11 floodplain, ornamental vegetation, paths,
12 and picket fence).

- 13 ° Preserve elevated yard north of the ranch
14 house, as a contributing feature constructed
15 by Conrad Warren in the 1930s.

- 16 2. Repair historic spatial patterns to repair yard
17 spaces and emphasize the land uses that
18 historically occurred.

- 19 ° Reestablish the front yard and entrance as a
20 formal entrance, which existed historically.

Box & hitch outside front gate



Figure 3-2. The Grant-Kohrs Residence component landscape will be reestablished as the center of domestic life on the ranch, by restoring missing trees and ornamental plantings.

- 1 -Repair grid of cottonwood trees and
- 2 regrade road and approach to house.
- 3 Remove non-contributing asphalt path from
- 4 directly in front of the residence.

- 6 ° Reestablish the lower garden as an enclosed
- 7 garden space by repairing the cobble wall
- 8 and restoring missing shrubs at the top
- 9 of the wall and perennial vegetation at
- 10 the base of the wall. ("Illustration 3-3.
- 11 Treatment Recommendations - Grant-Kohrs
- 12 Residence")

- 14 -The lower garden was composed of a large
- 15 flowerbed, a lawn area, a cobble rock wall,
- 16 stone terraces on the steep slope and sand
- 17 walkways between raised beds.^{3.7}

- 18 -Two 16-foot wooden sweet pea trellises
- 19 running north and south divided the flower
- 20 and vegetable beds.

- 22 3. Protect views to and from the ranch house, and
- 23 views from the rear of the house to the Home
- 24 Ranch complex.

Circulation

- 27 1. Preserve the historic vehicular access roads of
- 28 the entrance drive in front of the ranch house
- 29 and Bunkhouse Road to the north.

- 31 2. Preserve contributing pedestrian circulation that
- 32 includes walks, steps, and stairs located on all
- 33 sides of the ranch house and constructed with a
- 34 variety of materials (stone, wood, brick).

- 36 3. Preserve stone garden stairs and reconstructed
- 37 wooden handrail.

- 39 4. Preserve existing universally accessible access
- 40 route into the ranch house.

- 42 5. Repair front drive by filling and re-grading the
- 43 road bed. ?

- 45 ° Consider adding material /resurfacing
- 46 the entrance drive to create a level, stable
- 47 surface. Regular maintenance (light grading
- 48 and rolling) is needed.

- 50 ° Deter parking near the house, and do not
- 51 allow parking in front of the ranch house.

3.7 GRKO CLI, 2004, 32.

- 1 ° Maintain maintenance access to the ranch
- 2 house.

- 4 6. Repair pedestrian circulation routes to match the
- 5 historic condition.

- 6 ° Repair the stone landing and steps at the
- 7 west edge of the ranch house by resetting
- 8 steps to create a level surface. Add soil as
- 9 necessary to provide a level setting bed for
- 10 the stone steps.

- 13 ° Replace the flagstone walk on the north side
- 14 of the garden (added in 1997-98) with a
- 15 soft-surface having that existed historically.
- 16 Augusta Kohrs's garden utilized narrow,
- 17 sand-surfaced paths.

- 18 ° Repair stone pavers at the southeast edge
- 19 of the lower garden. Archeologically verify
- 20 the extents of the steps and reveal the pavers
- 21 by removing surrounding grass. As needed,
- 22 re-set the stones to create a usable pedestrian
- 23 path. Consider adding material that is
- 24 compatible with the historic, in order to
- 25 restore the stone paver path to its full extent.

- 28 7. Remove the non-contributing asphalt path from
- 29 in front of the ranch home. Consider modifying
- 30 this route to a soft-surface paving, in order to
- 31 blend with the ranch landscape.

- 33 8. Repair the stone walk between the north yard
- 34 and the Bunkhouse. Remove encroaching
- 35 vegetation and expose the portion of the walk
- 36 that is obscured by the road, to reveal the full
- 37 extent of the path.

Buildings and Structures

- 41 1. Preserve buildings and structures that contribute
- 42 to cultural landscape including the ranch house,
- 43 river cobble wall, stone terraces, and cut stone
- 44 retaining walls.

- 45 ° Preserve the Grant-Kohrs Residence, built
- 46 by John Grant in 1862 and expanded by
- 47 Conrad Kohrs between 1862 and 1907.

- 50 ° Monitor buildings and structures for
- 51 maintenance needs.

Grant-Kohrs Residence Plant List*

Trees

Black Cottonwood (*Populus trichocarpa*)

Juniper (*Juniperus occidentalis*)

Blue Spruce (*Picea pungens*)

Black Willow (*Salix scoulerana*)

Box Elder (*Acer negundo*)

Weeping Birch (*Betula pendula*)

Augusta had a row of Currant and Mock Orange along fence across

Shrubs

Lilac (*Syringa vulgaris*)

Barberry (*Berberis thunbergii*)

Cotoneaster (*Cotoneaster acutifolius*)

Gooseberry (*Ribes*, spp.)

Tea Rose (*Rosa x hybrida*)

Antique Rose (*Rosa x alba*; *R. x centifolia*; *R. x damascena*; *R. gallica*; *R. woodsii*)

Perennials - Lower Garden**

Peony (*Paeonia* spp.)

Sweet Pea (*Lathyrus odoratus*)

Granny's Bonnet (*Aguilegia vulgaris*)

Johnny Jump-up (*Viola* spp.)

Monk's Hood (*Aconitum napellus*)

Heart's Ease (*Viola tricolor*)

Asiatic Lily (*Lilium asiatic*)

Daffodil (*Narcissus* spp.)

Hyacinth (*Hyacinthus* spp.)

Tulip (*Tulipa* spp.)

Crocus (*Crocus* spp.)

Vines

Virginia Creeper (*Parthenocissus quinquefolia*)

Twinberry honeysuckle (*Lonicera involucrata*)

Kitchen Garden

string beans

rhubarb

red potatoes

scallions

white and yellow onions

leaf lettuce

carrots

radishes

yellow corn

squash, hubbard

parsnips

strawberries.

beets cabbage ...

*Compiled from 2004 CLI and NPS unpublished drawings, GRKO Archives.

**Additional species likely occurred, but are unverified.

NOT BLUE SPRUCE white Engelmann?

both added

put in later by Mr. Warren

Augusta had a row of Currant and Mock Orange along fence across from bunk house. planting of 4 honeysuckles were located close to the NE corner. legend has it they were planted during the Grant years also a white flowered honey suckle at top of garden rock stairs

purple florids (mostly purples)

Moss roses

The roses were likely located at base of curving rock wall, upon it would have been tough.

all planted by me.

there were remainants of the blue delphinium, found the delphinium may have been found a scapwort (Solanaria) colors that reverted to blue. The roses (light pink and fragrant) along back(s) fence. rhubarb located where it is now, mid east back. also perennial poppy

Not a vining horicera, bush type. See trees/shrub

copies of State nursery catalog

white

doesn't grow very well

see catalog from State Nursery - the Kohrs were investors.

Figure 3-3. Grant-Kohrs Residence Plant List

2. Repair structures to match the historic condition.
- ° Repair stone terraces by removing encroaching vegetation that is damaging the walls. Reset the stones to form 2 flower beds, approximately 4' wide by 25' long, as existed historically.

- ° Repair cobble wall to the full extents, clearing vegetation and removing soil and resetting stones as needed to expose the original stone cobble. As needed, provide new materials that match the historic in color and size, in order to re-establish the wall to its full length and height.

Small Scale Features

1. Preserve contributing small scale features including fences, gates, and irrigation systems.

2. Maintain non-contributing small scale features (benches, trash receptacles, trellis, raised bed frames) that are functional and necessary for interpretation purposes.

- ° Remove wooden benches from front yard, as these diminish the formality of the entrance. Relocate to either outside of picket fence, or within the north side yard.

3. Preserve the existing picket fence. Although a non-contributing feature, the fence supports the spatial organization and character of the Grant-Kohrs Residence. Repair the fence as needed, and replace in-kind.

4. Maintain the reconstructed wood gate at Bunkhouse Road. Replace in-kind when necessary.

5. Retain historic irrigation system where it remains, as an archeological feature. The existing underground irrigation system, added in the 2000s, should be repaired to working condition if possible or replaced.

Vegetation

1. Preserve contributing vegetation of the Grant-Kohrs Residence, including the contributing trees, shrubs, garden, and lawn areas. Maintain vegetation as a manicured space, to distinguish the Grant-Kohrs Residence component

landscape as a domestic space, separate from outlying grasslands, rangelands, and the operating ranch.

- ° Preserve the large black willow, juniper and blue spruce in the north side yard.

- ° Preserve junipers, box elder, and cluster of shrubs along the south edge of the picket fence near the eastern corner.

- ° Preserve the double row of lilac shrubs, and other ornamental shrubs (barberry, gooseberry, cotoneaster) on the slope between the upper yard and lower garden.

- ° Maintain the four barberry shrubs to flank the stone steps into the lower garden.

- ° Prune lilacs to remove suckers and dead branches.

- ° Preserve perennial garden in the lower garden.

2. Maintain the lower garden as a Victorian styled garden with formal plantings of brightly colored annuals that change as seasons progress, and hardy, colorful perennials.^{3.8}

- ° Maintain non-contributing NPS-built raised wooden garden beds (in triangle, square, and diamond shapes) and sweet pea trellis. Replace these features in-kind as needed. Remove boards forming garden bed edges and the lower path and do not replace.

- ° Repair the two flower beds formed by the stone terraces. These beds were historically about 4' wide and 25' long. Remove non-contributing wood boards (2x6s) and repair grade.

- ° Establish plantings as distinct garden rooms, with each featuring a different species, as was typical of Victorian gardens.

- Use historic species and varieties of perennials and annuals whenever possible.
- "Figure 3-3. Grant-Kohrs Residence Plant

3.8 GRKO CLI, 2004, 35.



NOT
August
Anna or
Katharine

Figure 3-4. August Kohrs in the lower garden, circa 1930. Perennial plantings occurred both east and west of the stone staircase. Maps drawn of the garden based on interviews with Pat Warren, suggest that the sweet pea trellis divided the lower garden in two; to the east were the ornamental plantings and to the west were rows of vegetables

The sweet pea trellis was not located at present spot.



Figure 3-5. View of cottonwood trees in front of the Grant-Kohrs Residence, circa 1900. The grid of trees and lawn created a formal entrance into the ranch house.

across shaded lawn

1 List" provides plant species known to have
2 been grown.

3
4 ° Maintain the lawn in the lower garden as a
5 neat and perfectly shaped lawn with clean
6 edges.

7
8 ° Research is needed on the garden, including
9 what species were grown and the extents of
10 the garden.

11
12 – Archeological work in the garden could
13 assist in identifying plant species that were
14 historically grown.

15
16 3. Reestablish the kitchen garden that historically
17 occurred west of the sweet pea trellis.^{3.9} Utilize
18 the sweat pea trellis to divide the garden into
19 two; to the east establish perennial plantings and
20 to the west establish rows of vegetables.^{3.10}

21
22 ° Maintain the kitchen garden with vegetable
23 varieties that would have been grown
24 historically. ("Figure 3-3. Grant-Kohrs
25 Residence Plant List")

26
27 ° Consider interpreting this area as both
28 Victorian kitchen garden as well as an
29 opportunity to educate visitors on heirloom
30 vegetables.

31
32 4. Allow for additional trees, shrubs, perennials
33 and annuals if evidence confirms they were
34 present historically.

35
36 ° Consider re-planting non-extant honeysuckle
37 and weeping birch. The stumps of these
38 are extant in the northeast corner of the
39 property.

40
41 ° Continue the double row of lilac shrubs
42 above the cobble wall. ("Illustration 3-3.
43 Treatment Recommendations - Grant-Kohrs
44 Residence")

45
46 ° Consider re-planting vines along the south
47 facade of the ranch house where they existed
48 historically. Virginia creeper (*Parthenocissus*
49 *quinquefolia*) climbed the columns of the
50

51 3.9 GRKO CLI, 2004, 37.

52 3.10 GRKO CLI, 2004, 37.

1 kitchen porch and south bay window of the
2 house.

3
4 5. Maintain lawn surrounding the ranch home,
5 providing irrigation and maintenance as needed.
6 Preserve the formality and lushness of the
7 historic, domestic landscape.

8
9 ° Reseed lawn areas periodically to maintain a
10 healthy grass cover.

11
12 6. Reestablish grid of black cottonwood trees
13 (*Populus trichocarpa*) in front of the residence.
14 Space trees at 15 feet on-center with a double
15 row in front and trees flanking the entry
16 boardwalk. ("Illustration 3-3. Treatment
17 Recommendations - Grant-Kohrs Residence")

18
19 ° Remove the green ash from front yard, to
20 assist in establishing a uniform tree pattern,
21 e.g. trees of a uniform height and maturity.

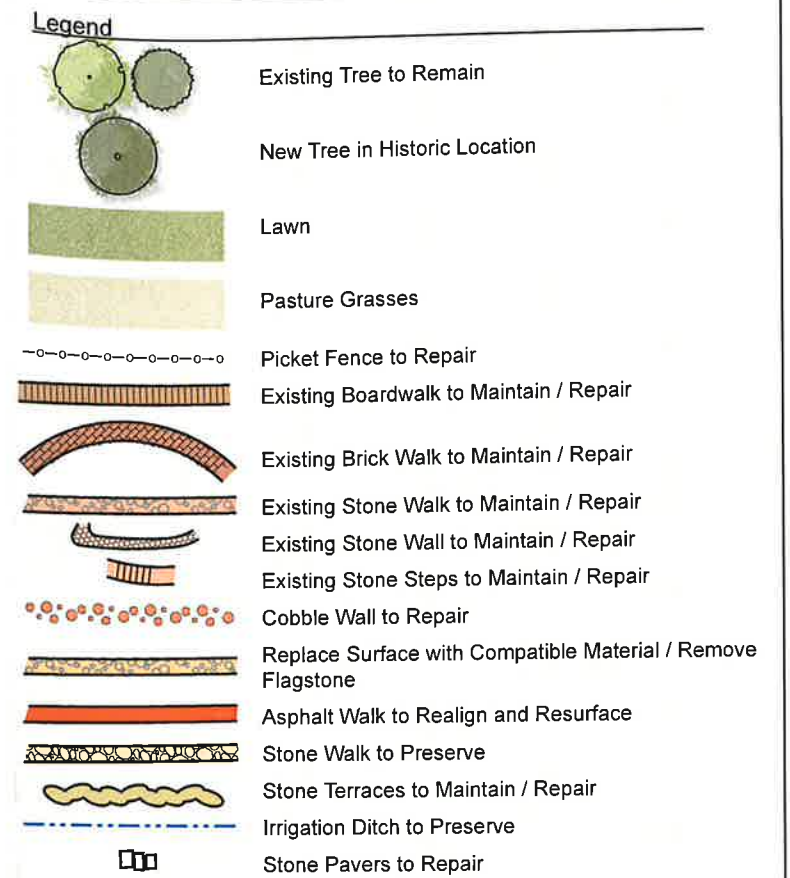
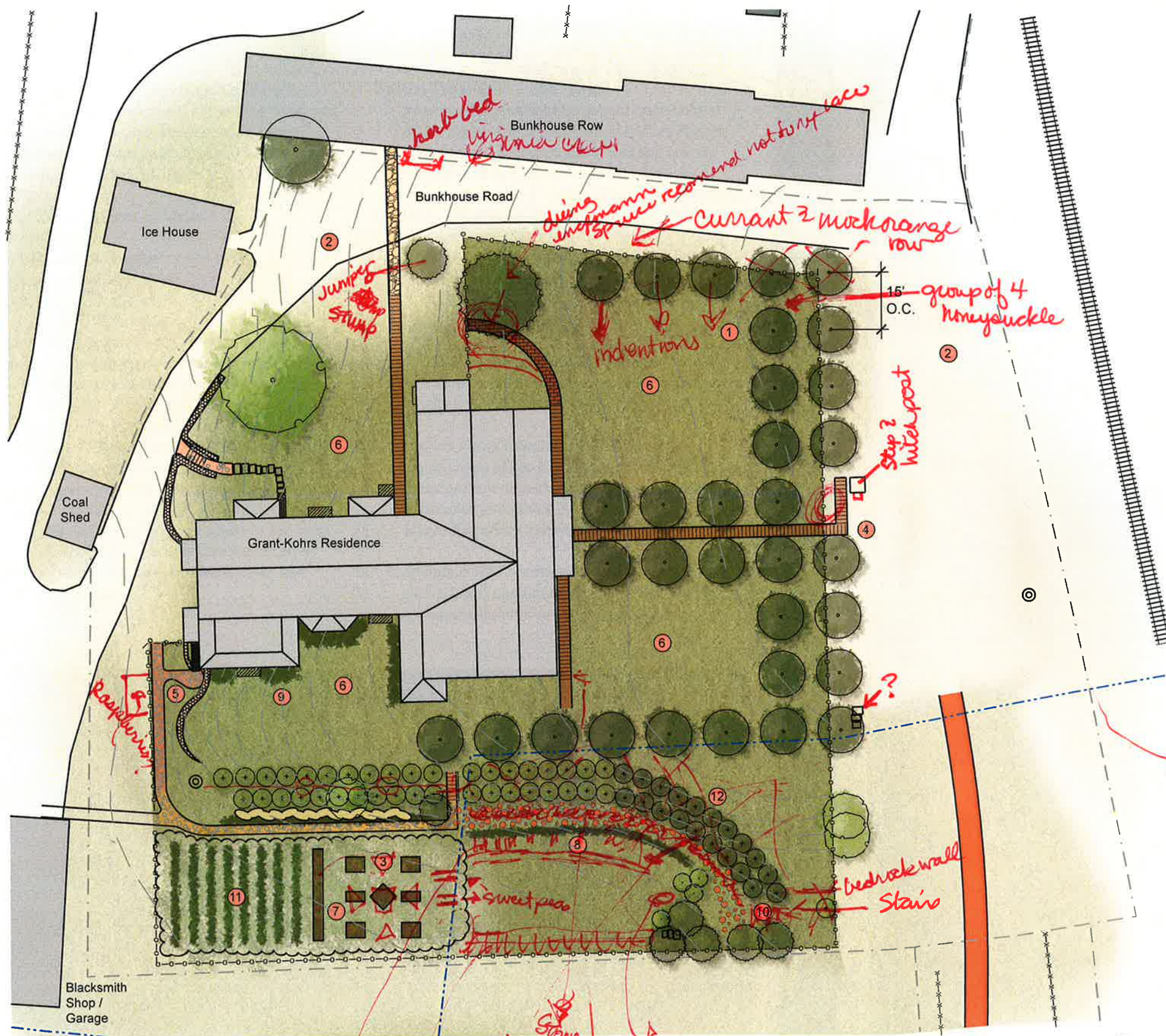
*Suggest cottonwoods on
20-30 year cycle due
to fragile nature of older
trees*

*See State Nurseries
catalogs*

*planted after
cottonwoods began to die
also Engelmann spruces*

*irrigation running
between w/ 1/2 barrels for clipping and siphon*

*have small chunk
squirreled away.
would need structure to climb-as
may be detrimental to structure*



- Notes**
- Repair Cottonwood Grid
 - Resurface and Regrade Drive
 - Maintain Perennial Garden
 - Maintain ADA Access
 - Repair Landing and Steps
 - Maintain Lawn
 - Retain Raised Garden Beds
 - Reestablish Perennial Plantings
 - Reestablish Vines at Edge of Home
 - Repair Stone Path
 - Reestablish Kitchen Garden, West of Trellis
 - Replace Missing Lilac Hedge

Map Sources: Adapted from Oculus / JMA, 2004, and GRKO NHS GIS data 2015.

APRIL 2016	TITLE OF PROJECT		
UNITED STATES DEPARTMENT OF THE INTERIOR	CULTURAL LANDSCAPE REPORT AND ENVIRONMENTAL ASSESSMENT		
GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE	TITLE OF DRAWING		
	TREATMENT PLAN - GRANT-KOHR'S RESIDENCE		
	NAME OF PARK		
	GRANT-KOHR'S RANCH NATIONAL HISTORIC SITE		
Illustration 3-3.	REGION	COUNTY	STATE
	INTERMOUNTAIN	POWELL	MONTANA



Grant-Kohrs Ranch Cultural Landscape Report, Part Two

Seven Component Landscapes

June 2017