Appendices

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Appendix A. Summary of Public Involvement/Comments and Consultation/Coordination

Summary of Public Consultation

 30 November 2005 - Regular attendance at the monthly Sonoma Overlook Trail Task Force (SOT) meetings beginning 30 November 2005 through present 7 November 2005 - 1:00 pm, John Crossman, David Goodison December 2005 - Escrow closed on Montini Open Space Preserve 26 January 2006 - Meeting with Steve Bachman, Rob Gjestland 4 February 2006 - Preserve Dedication, 1st Congregational Church Sonoma 17 February 2006 - Trail meeting with City and State parks 2 March 2006 - Stakeholder's kick off meeting at Sonoma Ecology Center (SEC) - participants agreed to use the SOT meetings as a forum for participating in the planning process for the Dancama
r reserve.
11 March 2006 – Public couting
20 21 April Trail flagging Don Boons SOT representatives and David Coodison
15 May 2006 Montini aloon up stowardshin day
10 and 11 June 2006 Open Spaces Public Places Event open house at the Preserve
19 July 2006 City Council Mosting 1 presentation of appreciation
12 July 2006 - City Council Meeting 1 – presentation of appreciation
7 August 2006 - Public outing
17 August 2006 - David Goodison, Wendy Atkins, John Crossman, Don Monahan, Marla Hastings
and Leslie Lew – Review preliminary plan
5 October 2006 – Volunteer Patrol training
5 October 2006 – Bill Montini – fences
22 October 2006 - Public outing
28 October 2006 - Volunteer Patrol training
2 November - Volunteer Patrol training
27, 28 December 2006 - Trail flagging
15 February 2007 - David Goodison, John Crossman
March 2007 - SOT Veterans Memorial Parking meeting with the SOT and Regional Parks
May 2007 - SOT Veterans Memorial Parking meeting
6 May 2007 - Montini public outing
21 June 2007 Bill Montini
5 June 2007 - SOT Trailhead Improvement Fundraising Event
9 June 2007 - Public outing
25 June 2007 – Meeting with City Manager and Planner to discuss ownership
27 June 2007 - Public workshop
22 August 2007 - Mayor Cohen and Councilmember Sanders site visit
22 August 2007 – State Parks, Mary Pass and John Crossman
23 August 2007 - Councilmember Brown site visit
30 August 2007 - Councilmember Sebastiani site visit
5 September 2007 – Maggie and Karen Founding chairs of the SOT site visit
11 October 2007 – SOT site visit
12 September 2007 Ken Brown morning show KSVY
4 October 2007 – Visit to Nelson's Home
13 October 2007 – Public outing
20 October 2007 – Councilmember Steve Barbose site visit
24 October 2007 – Meeting with David Goodison
25 October 2007 – SOT Chair supports 5 th St West access.
25 October 2007 – Jeff Stuhr (disabled advocate) site visit.
29 October 2007 Neighbor meeting site visit with District Community Affairs Officer
1 November 2007 – Conference call with Graham Bennet and David Goodison
5 November2007 – Bill Montini and David Goodison meeting

15 November 2007 - Rob Helms SCTC site visit

1 December 2007 – Volunteer Patrol training

5 December 2007 – City Council meeting 2

20 December 2007 - 4th St. neighbors meeting Sonoma Community Center

28 February 2008 – Agency meeting with Gina Bartlett

5 March 2008 – Volunteer Patrol training

12 March 2008 – Mediation session 1

31 March 2008 - Meeting with Bill Montini, and Steve Fiala

 $25\ March\ 2008\$ - Mediation session $2\$

23 May 2008 - Meeting with Lisa Badenfort, Assemblyman Huffman's Field Representative

14 June 2008 – Stewardship day

21 June 2008 – Public outing

17 September 2008 – City Council Meeting 3

14 October 2008 – Public Outing

Appendix B. Plant List

<u>Plant List</u>

Scientific Name	Common Name	Life Form	Habitat
Ferns and Allies			
Adiantum jordanii	California maidenhair fern	perennial	forest
Aspidotis californica	California lace fern	perennial	forest
Dryopteris arguta	wood fern	perennial	forest
Isoetes (nuttallii)	quillwort	perennial	wetland
Pelaea andromedaefolia	coffee fern	perennial	forest
Pentagramma triangularis	goldback fern	perennial	forest
Polypodium calirhiza	polypody	perennial	forest
Conifers			
Pseudotsuga menziesii (seedling)	Douglas fir	tree	forest
Flowering Plants			
Dicots			
Anacardiaceae			
Toxicodendron diversilobum	poison oak	shrub	woodland, forest
Apiaceae			
Foeniculum vulgare	fennel *	perennial	woodland, grass.
Lomatium macrocarpum	large-fruited lomatium	perennial	rock outcrop
Osmorhiza chilensis	mountain sweet cicely	perennial	forest
Sanicula bipinnatifida	purple sanicle	perennial	woodland, grass.
Sanicula crassicaulis	Pacific snakeroot	perennial	forest
Torilis nodosa	knotted hedge parsley *	annual	woodland, grass.
Aristolochiaceae			
Aristolochia californica	Dutchman's pipe	vine	forest
Asclepiadaceae			
Asclepias fascicularis	narrow-leaved milkweed	perennial	grassland
Asteraceae			
Achyracheana mollis	blow wives	annual	grassland
Agoseris grandiflora	large-flowered agoseris	perennial	forest
Aster radulinus	rough aster	perennial	forest
Baccharis pilularis	coyote brush	shrub	forest
Carduus pycnocephalus	Italian thistle *	annual	woodland
Centaurea calcitrapa	purple star thistle	biennial	grassland
Centaurea melitensis	Napa thistle *	annual	woodland
Centaurea solstitialis	yellow star thistle *	annual	grassland
Conyza bonariensis	South American Conyza *	annual	grassland
Filago gallica	narrow-leaved filago *	annual	grassland
Gnaphalium canescens ssp. beneolens	slender cudweed	perennial	rocks
Gnaphalium purpureum	purple cudweed	annual	forest

Scientific Name	Common Name	Life Form	Habitat
Hypocahaeris glabra	smooth cat's ear *	annual	grassland
Hypochaeris radicata	hairy cat's ear *	perennial	woodland
Madia gracilis	slender tarweed	annual	grassland
Micropus californicus ssp. californicus	slender cottonweed	annual	grassland
Psilocarphus tenellus var. tenellus	woolly marbles	annual	grassland
Silybum marianum	milk thistle *	biennial	woodland
Solidago californica	California goldenrod	perennial	woodland
Boraginaceae			
Amsinckia menziesii var. menziesii	common fiddleneck	annual	grassland
Plagiobothrys nothofulvus	rusty popcornflower	annual	grassland
Plagiobothrys bracteatus	bracted popcornflower	annual	wetland
Brassicaceae			
Capsella pursa-pastoris	shepherd's purse *	annual	grassland
Cardamine californica ssp. californica	California milkmaids	perennial	woodland
Lepidium nitidum var. nitidum	shining peppergrass	annual	grassland
Raphanus sativus	wild radish *	annual	grassland
Sisymbrium officinale	tower mustard *	annual	woodland
Caprifoliaceae			
Lonicera hispidula var. vacillans	hairy honeysuckle	vine	forest
Symphoricarpus albus ssp. laevigatus	common snowberry	shrub	forest
Caryophyllaceae			
Silene gallica	windmill pink *	annual	grassland
Spergularia rubra	purple sand spurry *	perennial	grassland
Stellaria media	common chickweed *	annual	grassland
Convolvulaceae			
Convolvuls arvensis	field bindweed *	perennial	grassland
Cucurbitaceae			
Marah fabaceus	California manroot	perennial	forest
Ericaceae			
Arctostaphylos manzanita	common manzanita	shrub	forest
Euphorbiaceae			
Eremocarpus setigerus	turkey mullein	annual	grassland
Euphorbia spathulata	reticulate-seeded spurge	biennial	grassland
Fabaceae			
Lathyrus vestitus var. vestitus	Pacific hillside pea	perennial	woodland
Lupinus nanus	Douglas's lupine	annual	grassland
Medicago polymorpha	bur clover *	annual	grassland

Scientific Name	Common Name	Life Form	Habitat
Trifolium dubium	shamrock *	annual	grassland
Trifolium gamellum	Spanish clover *	annual	grassland
Trifolium hirtum	rose clover*	annual	grassland
Trifolium incarnatum	crimson clover *	annual	grassland
Trifolium tomentosum	woolly clover *	annual	grassland
Trifolium variegatum	red-top clover	annual	grassland
Fagaceae			
Quercus agrifolia var. agrifolia	coast live oak	tree	forest, woodland
Quercus douglasii	blue oak	tree	forest, woodland
Quercus kelloggii	black oak	tree	forest
Gentianaceae			
Centaurium davyi	Davy's centaurium	annual	woodland
Geraniaceae			
Erodium botrys	white-stem filaree *	annual	grassland
Geranium purpureum	purple stem geranium *	annual	forest
Hippocastanaceae			
Aesculus californica	buckeye	tree	woodland, forest
Hydrophyllaceae			
Nemophila heterophylla	woodland nemophila	annual	forest
Phacelia distans	common phacelia	annual	grassland
Phacelia imbricata	imbricate phacelia	perennial	rocks
Hypericaceae			
Hypericum perforatum	gold wire	perennial	grassland
Lamiaceae			
Marrubium vulgare	horehound *	perennial	woodland
Mentha pulegium	pennyroyal *	perennial	grassland
Scutellaria californica	California skullcap	perennial	woodland
Stachys ajugoides ssp. rigida	rigid hedge nettle	perennial	woodland
Trichostema lanceolatum	Vinegar weed	Annual	grassland
Lauraceae			
Umbellularia californica	California bay	tree	forest
Lythraceae			
Lythrum hyssopifolia	hyssop-leaved loosestrife	* annual	grassland
Malvaceae			
Malva nicaeensis	bull mallow *	biennial	grassland

Scientific Name	Common Name	Life Form	Habitat
Oleaceae			
Olea europaea	European olive *	tree	woodland
Onagraceae			
Clarkia purpurea	wine-cup clarkia	annual	grassland
Clarkia unguicalata	elegant clarkia	annual	woodland
Plantaginaceae			
Planatago lanceolata	English plantain *	perennial	grassland
Polemoniaceae			
Navarretia intertexta ssp. intertexta	needle navarretia	annual	grassland
Navarretia tagetina	marigold navarretia	annual	grassland
Polygonaceae			
Rumex conglomeratus	clustered dock *	perennial	grassland
Rumex pulcher	pretty dock *	perennial	grassland
Portulacaceae			
Claytonia perfoliata var. perfoliata	miner's lettuce	annual	woodland
Primulaceae			
Anagallis arvensis	scarlet pimpernel	annual	grassland
Ranunculaceae			
Delphinium variegatum ssp. variegatum	royal larkspur	perennial	woodland
Ranunculus californicus	California buttercup	perennial	woodland
Ranunculus muricatus	prickly buttercup *	annual	grassland
Rhamnaceae			
Rhamnus californica	coffeeberry	shrub	forest
Rosaceae			
Heteromeles arbutifolia	toyon	shrub	forest, woodland
Sanguisorba minor ssp. muricata	small burnet	perennial	grassland
Rubiaceae			
Galium aparine	cleavers	annual	woodland
Galium divaricatum	Lamarck's bedstraw *	annual	grassland
Galium parisiense	Parisian bedstraw *	annual	woodland
Galium porrigens ssp. porrigens	climbing bedstraw	perennial	forest, woodland
Scrophulariaceae			
Castilleja attenuata	valley tassels	annual	grassland
Collinsia heterophylla	Chinese houses	annual	woodland
Collinsia tinctoria	sticky Chinese houses	annual	rocks

Scientific Name	Common Name	Life Form	Habitat
Mimulus aurantiacus	sticky monkeyflower	shrub	woodland
Mimulus guttatus	seep spring monkeyflower	annual	grassland
Parentucellia viscosa	yellow glandweed *	annual	grassland
Monocots			
Cyperaceae			
Carex gracilior	slender sedge	perennial	grassland
Eleocharis (rostellata)	spikerush	perennial	grassland
Iridaceae			
(Romulea australis)	rosy sand crocus *	perennial	grassland
Sisyrinchium bellum	blue-eyed grass	perennial	grassland
Juncaceae			
Juncus bufonius	toad rush	annual	grassland
Juncus capitatus	headed rush	annual	grassland
Luzula comosa	wood rush	perennial	woodland
Juncaginaceae			
Lilaea scilloides	flowering quillwort	perennial	grassland
Liliaceae			
Allium penninsulare var .franciscanum	Franciscan onion	perennial	forest, rocks
	narrow-anthered California	ı	
Brodiaea californica ssp. leptandra	brodiaea	perennial	grassland
Brodiaea elegans ssp. elegans	harvest brodiaea	perennial	grassland
Calochortus luteus	gold nuggets	perennial	grassland
Chlorogalum pomeridianum ssp. pomeridianum	indian soap	perennial	forest
Dichelostemma congestum	ookow	perennial	grassland
Triteleia hyacinthina	white wild hyacinth	perennial	grassland
Poaceae			
Agrostis exerata var. monolepis	western bentgrass	perennial	forest
Avena (fatua)	wild oats *	annual	grassland
Brachypodium distachyon	false brome *	annual	woodland, grass.
Briza minor	small quaking grass *	annual	grassland
Briza major	large quaking grass *	annual	grassland
Bromus diandrus	rip-gut brome *	annual	grassland
Bromus hordeaceus	soft cheat *	annual	grassland
Cynosurus echinatus	dogtail grass *	annual	woodland, grass.
Dactylis glomerata	orchard grass *	perennial	woodland
Elymus glaucus ssp. glaucus	western rye	perennial	woodland
Festuca arundinacea	tall meadow fescue *	perennial	grassland
Gastridium ventricosum	nit grass *	annual	grassland
Hordeum marinum ssp. gussoneanum	Mediterranean barley *	annual	grassland
Hordeum murinum ssp. leporinum	wall barley *	annual	grassland
Lagurus ovatus	hare's tail *	annual	woodland

Scientific Name Lolium multiflorum Melica californica Melica torreyana Nassella pulchra Phalaria aquatica Pleuropogon californicus Polypogon monspeliensis Vulpia myuros var. myuros

* = Non-Native Species

Common Name

Italian rye * California melica Torrey's melica purple needlegrass harding grass * semaphore grass rabbit's foot * rattail fescue *

Life Form

annual perennial perennial perennial annual annual annual Habitat grassland woodland forest woodland, grass. grassland grassland grassland grassland Appendix C. Bird List

Appendix C. Bird List

The following is a list of birds counted in section 2 of Audubon's Christmas Bird Count (CBC), which could potentially be found at the Preserve. Birds specifically seen on the Preserve are marked with and asterisk (*). Because of the limited wetland habitat found on the Preserve, most waterbirds were omitted from Section 2's CBC.

Vultures, Hawks, eagles

Turkey vulture* White-tailed kite Cooper 's hawk Sharp-shinned hawk Red-shouldered hawk* Red-tailed hawk*

Falcons American kestrel

Upland Game Birds Wild turkey* California quail*

Gulls, Terns Ring-billed gull

Doves Rock dove Mourning dove

Owls Western screech owl Barn owl* Great-horned owl*

Hummingbirds Anna's hummingbird

Woodpeckers

Northern flicker Acorn woodpecker* Downey woodpecker Nuttall's woodpecker* Pileated woodpecker*

Flycatchers

Black phoebe* Say's phoebe

Shrikes/Vireos Loggerhead shrike

Jays, crows, ravens

Steller's jay Western scrub jay* American crow Common raven*

Larks, swallow

Barn swallow

Chickadees, nuthatches

Oak titmouse Chestnut-backed chickadee Bushtit White-breasted nuthatch

Creepers Brown creeper

Wrentits Wrentit

Kinglets,gnatcatchers Ruby-crowned kinglet

Thrushes Western bluebird Hermit thrush American robin

Mockingbirds, thrashers Northern mockingbird California thrasher

Waxwings Cedar waxwing

Starlings European starling

Wood warblers Townsend's warbler Yellow-rumped warbler

Towhee's, sparrows, juncos California towhee

Spotted towhee Fox sparrow Song sparrow Dark-eyed junco White-crowned sparrow Golden-crowned sparrow

Icterids Western meadowlark Red-winged blackbird Brewer's blackbird

Finches, old world sparrows

House finch Purple finch Lesser goldfinch American goldfinch House sparrow Appendix D. Compatibility Determinations

Use

Environmental Education and Interpretation

Preserve Purpose

The purpose of the acquisition is to preserve and protect the open space, natural, and scenic values of the Preserve, and to prevent any uses of the Preserve that will significantly impair or interfere with those values. The Preserve is visible from much of the city of Sonoma and serves as an important backdrop contributing to the community identity Sonoma. The Preserve also has a significant amount of oak woodland that serves as habitat for important plant and animal species integral to preserving the natural heritage of Sonoma County. Accordingly, the Preserve protects the City's scenic values including the pastoral view of the Preserve from surrounding and nearby public lands, and the Preserve's existing natural resources including the oak woodland, grasslands, and other important habitats.

In addition, the Preserve will expand public recreational access, ranging from viewpoints high on the Preserve to meadows along Fifth Street West. The recreational opportunities created by this project will benefit many who will be able to walk a few city blocks to the Preserve from the Sonoma Plaza.

Description of Use

The District proposes to involve the public and educate them about efforts to protect and enhance the scenic quality and natural, cultural, and recreational resources in Sonoma County. Currently the preserve hosts public access outings and volunteer events. However, no interpretive or educational displays or materials exist at present. Within three years the Preserve would offer interpretive and environmental education programs providing up possibly thousands of people annually with an outdoor experience where visitors become aware of the Preserve's role in the conservation of Sonoma Valley habitats and wildlife. Interpretive activities would introduce the public to restoration, enhancement and conservation efforts. Environmental education activities could be integrated into both indoor and outdoor classroom curriculums.

The District proposes to provide for environmental education uses by working with the Sonoma Ecology Center, Acorn Soupe, LandPaths, and/or other appropriate partners and by conducting outreach to let people know of the opportunities for environmental education on the Preserve. The District proposes to develop an interpretive program by developing a self-guided trail system and interpretive panels and exhibits. The use is consistent with the Preserve purpose.

For additional details about this proposed use, please see the Montini Open Space Preserve Management Plan (SCAPOSD 2007) which is incorporated by reference.

Anticipated Impacts of the Use

Impacts are also discussed in Appendix A, CEQA documentation for the implementation of this management plan (SCAPOSD 2007). Direct impacts to animals would occur, as with any group along the trail, if birds or other wildlife near the trail are disturbed. This disturbance is considered to be of minimal impact because: (1) the total number of students to be permitted to use the Preserve for these purposes is limited (2) students and teachers will be instructed in trail etiquette and the best ways to view wildlife with minimal disturbance; (3) education groups will be required to have a sufficient number of adults to supervise the group; and (4) trail design will provide adequate cover for wildlife. Impacts to vegetation are expected to be limited as students and their adult attendants will be asked to remain on the trail. Human activity may disturb birds using the Preserve's habitats for feeding or nesting activities. Off-trail human activity in habitat restoration

areas can slow restoration efforts. Litter discarded by visitors can entangle wildlife or be ingested, resulting in injury or death. The construction and maintenance of trails and boardwalks will impact soils, vegetation, and in some instances hydrology around the trails. This could include an increased potential for erosion, soil compaction (Liddle 1975), reduced seed emergence (Cole and Landres 1995), and alteration of vegetative structure and composition.

Determination

The use is compatible with following stipulations:

Stipulations Necessary to Ensure Compatibility

In order to allow public access to the Preserve for environmental education and interpretation, the following measurers will be taken. Access to the Preserve will be allowed only between sunrise and sunset. The District will have the authority to close certain areas to interpretive programs, or to cancel activities as he or she deems necessary to fulfill Preserve purposes. Visitors will be directed to remain a safe distance from any nesting areas with signs and barriers. Visitors will be directed away from areas where sensitive habitat restoration projects are under way, to prevent damage to fragile plants by being crushed underfoot or by the introduction of nonnative plant species.

Trails will be well-marked to guide public access. This will minimize trespass through any sensitive areas. The District will maintain an active presence through the volunteer patrol and active communication with law enforcement agencies.

Justification

The goals of the District include providing an understanding and appreciation of native Sonoma County habitats and ecology and the human role in the environment, and providing Sonoma County residents with high-quality and safe recreational experiences oriented toward passive recreation and open space to the extent these activities are compatible with the purposes for which a Preserve was established. The District strives to provide priority public uses when compatible with the purpose and goals of the Preserve and the mission of the District.

Environmental education and interpretive programs provide opportunities for the public to learn about and experience native plants and wildlife in their natural habitat, enhancing their visit. The District can also educate the public about its role within the agency and the Open Space Preserve System, developing better community awareness and volunteer involvement. The District has the opportunity to provide the community educational experiences about habitat and wildlife in Sonoma County.

References

Cole, D. N. and P. B. Landres. 1995. Indirect effects of recreation on wildlife. Pages 183-201 in R. L.

Liddle, M. J. 1975. A selective review of the ecological effects on human trampling on natural ecosystems. Biol.Conserv. 7:17-36.

Use

Wildlife Observation and Photography

Preserve Purpose

The purpose of the acquisition is to preserve and protect the open space, natural, and scenic values of the Preserve, and to prevent any uses of the Preserve that will significantly impair or interfere with those values. The Preserve is visible from much of the city of Sonoma and serves as an important backdrop contributing to the community identity Sonoma. The Preserve also has a significant amount of oak woodland that serves as habitat for important plant and animal species integral to preserving the natural heritage of Sonoma County. Accordingly, the Preserve protects the City's scenic values including the pastoral view of the Preserve from surrounding and nearby public lands, and the Preserve's existing natural resources including the oak woodland, grasslands, and other important habitats.

In addition, the Preserve will expand public recreational access, ranging from viewpoints high on the Preserve to meadows along Fifth Street West. The recreational opportunities created by this project will benefit many who will be able to walk a few city blocks to the Preserve from the Sonoma Plaza.

Description of Use

Currently, public access to the Preserve is limited to periodic scheduled hikes and as a result the public demands are not being met. The District proposes to provide adequate facilities to view, photograph and enjoy its spectacular views and natural habitats and wildlife during all seasons of the year, with a target of 2,000 visitors per year by 2008. The Preserve would provide opportunities for wildlife observation and photography by constructing a trail and providing three benches located at viewpoints on the Preserve.

The use is consistent with the Preserve purpose. For additional details about this proposed use, please see the Montini Open Space Preserve Management Plan (SCAPOSD 2007), herein incorporated by reference.

Anticipated Impacts of the Use

Impacts are also discussed in the Compatibility Determination for environmental education and interpretation. Human activity may disturb birds using the Preserve's habitats for feeding or nesting. Off-trail human activity in habitat restoration areas can slow restoration efforts. Litter discarded by visitors can entangle wildlife or be ingested, resulting in injury or death. The construction and maintenance of trails and parking areas will affect soils, vegetation, and in some instances hydrology around the trails. This could include an increased potential for erosion, soil compaction (Liddle 1975), reduced seed emergence (Cole and Landres 1995), alteration of vegetative structure and composition, and sediment loading (Cole and Marion 1988).

The primary disturbance season for great horned owl, red-shouldered hawk, and pileated woodpecker is during the nesting season, typically Jan - July. Of the wildlife observation techniques, wildlife photographers tend to have the largest disturbance impacts (Klein 1993, Morton 1995, Dobb 1998). While wildlife observers frequently stop to view species, wildlife photographers are more likely to approach wildlife (Klein 1993). Even slow approach by wildlife photographers tends to have behavioral consequences to wildlife species (Klein 1993). Other impacts include the potential for photographers to remain close to wildlife for extended periods of time, in an attempt to habituate the wildlife subject to their presence (Dobb 1998) and the tendency of casual photographers, with low-power lenses, to get much closer to their subjects than other activities would require (Morton 1995), including wandering off trails. This usually results in increased disturbance to wildlife and habitat, including trampling of plants.

Determination

This use is compatible with following stipulations:

Stipulations Necessary to Ensure Compatibility

To allow public access to the Preserve for wildlife observation and photography, the following measurers would be taken. By 2007, interpretive signs and an orientation kiosk will be installed on the Preserve to inform visitors about the Preserve's habitats and wildlife and ways of avoiding adverse impacts, including staying on trails. Access to the Preserve will be allowed only between sunrise and sunset, unless a permit for alternative hours is acquired from the General Manager in advance. The main kiosk will make clear that no domesticated animals are allowed on the Preserve and will include the following information: (1) a trail map, trail information, contact information, and regulations; (2) a description of the Sonoma County Agricultural Preservation and Open Space District; and (3) any trail closures for and bird nesting season. Trails will be well-marked and symbolic fencing will be installed to guide public access through sensitive areas. This will minimize trespass through closed areas, and will reduce disturbance to restoration areas. The District will maintain an active presence to ensure public compliance with Preserve rules.

Justification

Wildlife observation and photography are appropriate uses of the District Open Space Preserves and is consistent with the District Mission and Preserve Purpose. The District strives to provide public use when compatible with the purpose and goals of the Preserve and the mission of the District. Expanding the existing level of wildlife observation and photography opportunities would allow the visiting public to experience, enjoy, and learn about native wildlife species in Sonoma County. Due to the Preserve's proximity to the city of Sonoma, the Preserve is sure to attract a high number of visitors. With management conducted in accordance with the stipulations herein, wildlife observation and photography would be compatible with the Preserve purpose and goals and the District mission.

References

- Cole, D. N. and P. B. Landres. 1995. Indirect effects of recreation on wildlife. Pages 183-201 in R. L.
- Cole, D. N. and J. L. Marion. 1988. Recreation impacts in some riparian forests of the eastern United States. Env.Manage. 12:99-107.
- Dobb, E. 1998. Reality check: the debate behind the lens. Audubon: Jan.-Feb.
- Klein, M. L. 1993. Waterbird behavioral responses to human disturbances. Wildl. Soc. Bull. 21:31-39.
- Liddle, M. J. 1975. A selective review of the ecological effects on human trampling on natural ecosystems. Biol.Conserv. 7:17-36.

Morton, J.M. 1995. Management of human disturbance and its effects on waterfowl. Pages F59-F86 in W.R. Whitman, T. Strange, L. Widjeskog, R. Whittemore, P. Kehoe, and L. Roberts (eds.). Waterfowl habitat restoration, enhancement and management in the Atlantic Flyway. Third Edition of the Environmental Manage Committee, Atlantic Flyway Council Technical Section, and the Delaware Division of Fish and Wildlife, Dover, Delaware. 1,114 pp.

Use: Hiking

Preserve Purpose

The purpose of the acquisition is to preserve and protect the open space, natural, and scenic values of the Preserve, and to prevent any uses of the Preserve that will significantly impair or interfere with those values. The Preserve is visible from much of the city of Sonoma and serves as an important backdrop contributing to the community identity Sonoma. The Preserve also has a significant amount of oak woodland that serves as habitat for important plant and animal species integral to preserving the natural heritage of Sonoma County. Accordingly, the Preserve protects the City's scenic values including the pastoral view of the Preserve from surrounding and nearby public lands, and the Preserve's existing natural resources including the oak woodland, grasslands, and other important habitats.

In addition, the Preserve will expand public recreational access, ranging from viewpoints high on the Preserve to meadows along Fifth Street West. The recreational opportunities created by this project will benefit many who will be able to walk a few city blocks to the Preserve from the Sonoma Plaza.

Description of Use

The District proposes to provide for hiking by constructing a 1.2 mile trail system that would connect in 2 places to an existing city trail. This program would allow residents and visitors the unique opportunity of hiking from the city of Sonoma to spectacular views in quiet solitude. A parking lot would be constructed on the southwest corner of the Preserve. The use is consistent with the Preserve purpose.

For additional details about this proposed use, please see the Montini Open Space Preserve Management Plan (SCAPOSD 2007) which is herein incorporated by reference.

Anticipated Impacts of the Use

Impacts are also discussed in Appendix A, CEQA documentation for the implementation of this management plan (SCAPOSD, 2007). Direct impacts to animals would occur, as with any group along the trail, if birds or other wildlife near the trail are disturbed. This disturbance is considered to be of minimal impact because: (1) the total number of hikers on the Preserve is expected to be somewhat limited (2) signs and interpretive materials will be available to instruct hikers to stay on the trail, trail etiquette, and the best ways to view wildlife with minimal disturbance; and (3) trail design will provide adequate cover for wildlife. Impacts to vegetation are expected to be limited as hikers will be asked to remain on the trail. Human activity may disturb birds using the Preserve's habitats for feeding or nesting activities. Off-trail human activity in habitat restoration areas can slow restoration efforts. Litter discarded by visitors can entangle wildlife or be ingested, resulting in injury or death. The construction and maintenance of trails and boardwalks will impact soils, vegetation, and in some instances hydrology around the trails. This could include an increased potential for erosion, soil compaction (Liddle 1975), reduced seed emergence (Cole and Landres 1995), and alteration of vegetative structure and composition.

Determination

This use is compatible with following stipulations.

Stipulations Necessary to Ensure Compatibility

In order to hiking on the Preserve, the following measures will be taken. Access to the Preserve will be allowed between sunrise and sunset. The General Manager will have the authority to close certain areas to hiking as she deems necessary to fulfill Preserve goals. Trails will be restricted to areas where access will put minimal stress on animal and plant populations. Visitors will be directed to remain a safe distance from any nesting areas with signs and barriers, and by District staff and trained volunteers. Visitors will be directed away from areas where habitat restoration projects are under way, to prevent damage to plants by being crushed underfoot or by the introduction of nonnative plants. The trails will be well-marked to guide public access which will minimize trespass into closed areas and reduce disturbance to sensitive resources. The Preserve will maintain an volunteer patrol, to enable public compliance with Preserve rules.

Justification

The mission of the District includes providing Preserve visitors with safe, high-quality passive outdoor recreational experiences, to the extent these activities are compatible with the purposes for which a Preserve was established and the mission of the District. Hiking is a universally enjoyed outdoor recreational pursuit, accessible to most residents of Sonoma County.

References

Cole, D. N. and P. B. Landres. 1995. Indirect effects of recreation on wildlife. Pages 183-201 in R. L.

Liddle, M. J. 1975. A selective review of the ecological effects on human trampling on natural ecosystems. Biol.Conserv. 7:17-36.

Use: Grazing

Preserve Purpose

The purpose of the acquisition is to preserve and protect the open space, natural, and scenic values of the Preserve, and to prevent any uses of the Preserve that will significantly impair or interfere with those values. The Preserve is visible from much of the city of Sonoma and serves as an important backdrop contributing to the community identity Sonoma. The Preserve also has a significant amount of oak woodland that serves as habitat for important plant and animal species integral to preserving the natural heritage of Sonoma County. Accordingly, the Preserve protects the City's scenic values including the pastoral view of the Preserve from surrounding and nearby public lands, and the Preserve's existing natural resources including the oak woodland, grasslands, and other important habitats.

In addition, the Preserve will expand public recreational access, ranging from viewpoints high on the Preserve to meadows along Fifth Street West. The recreational opportunities created by this project will benefit many who will be able to walk a few city blocks to the Preserve from the Sonoma Plaza.

Description of Use

The District will allow limited grazing by privately-owned domestic livestock for the purpose of habitat management. Livestock will be chiefly cattle, but may include other domestic livestock. Grazing will occur on specified areas to improve or maintain grassland and wet meadow habitat. For example, grazing may be used to stimulate growth of desirable grass species, reduce woody vegetation or other undesirable invasive plant species. The entire Preserve would be open to grazing except those areas undergoing restoration or erosion control activities or are found to be sensitive areas.

Grazing will be allowed all year, with up to 40 animals at one time.

Measures required to manage livestock will be the responsibility of the cooperating private party. Grazing fees will be charged based on annual review of local market rates conducted by the District in consultation with area U.S. Department of Agriculture (USDA) specialists or reports; or as determined by permittee selection using a best bid basis. Grazing fees will typically be assessed using the Animal Unit Month (AUM) method. Grazing fees may include market rate deductions for special circumstances; such as, atypical fencing or water requirements, required cattle movement, or other factors limiting economic return for permittees. Frequency of grazing on any unit will be based on site-specific evaluation of the grassland unit being managed.

Grazing will be subject to the terms and conditions of the grazing lease.

For additional details about this proposed use, please see the Montini Open Space Preserve Management Plan (SCAPOSD 2007) which is herein incorporated by reference.

Anticipated Impacts of the Use

Grazing by domestic livestock has severe short-term effects on grassland communities. Many of these effects are desirable and are designed to maintain and improve healthy grassland/wet meadow communities. Some of these effects include removing standing vegetation, trampling of other vegetation, and reducing populations of pioneering woody plants. Other effects, such as areas where livestock may frequently concentrate, are more harmful but generally shortlived. Grazing in the spring can cause direct loss of grassland bird nests due to trampling and loss of standing vegetation. Grazing at any time of year creates an aesthetic issue of concern for some people who enjoy using the Refuge; seeing public land being grazed by domestic livestock reduces the appeal of the visit for many people, although it augments the appeal for others.

Grazing livestock can create minor direct disturbance of wildlife, such as causing nearby birds to take flight. There is a slight potential for conflict between members of the public and livestock or the permittee.

Determination

This use is compatible with following stipulations.

Stipulations Necessary to Ensure Compatibility

- 1) All fencing, water supply, and other livestock management costs will be borne by the permittee.
- 2) No insecticides will be used.
- 3) No supplemental feeding will be allowed.
- 4) Grazing must meet specific habitat and related wildlife objectives and contribute to the purposes of the Preserve.

Justification

Grazing is an historic use of the Preserve and serves the purpose of keeping Preserve grasses short. At public meetings and other contacts, several members of the public expressed that they enjoyed seeing the cows in the pasture, particularly along 5th Street West. Grazing preserves a part of the Preserve's historic past, provides a scenic addition, and serves the function of keeping grasses short.

Grazing can be an effective technique for providing long-term habitat improvements to grassland, and a useful alternative to haying or prescribed fire in certain circumstances. Permitting grazing on the Preserve will not materially interfere or detract from fulfilling the mission of the District or the purposes of the Preserve because: Short term adverse effects on habitat caused by properly applied grazing are typically offset by long term habitat improvement and the constraints regarding location, duration, and timing of grazing will reduce adverse impacts and maximize benefits.

References

Use: Research

Preserve Purpose

The purpose of the acquisition is to preserve and protect the open space, natural, and scenic values of the Preserve, and to prevent any uses of the Preserve that will significantly impair or interfere with those values. The Preserve is visible from much of the city of Sonoma and serves as an important backdrop contributing to the community identity Sonoma. The Preserve also has a significant amount of oak woodland that serves as habitat for important plant and animal species integral to preserving the natural heritage of Sonoma County. Accordingly, the Preserve protects the City's scenic values including the pastoral view of the Preserve from surrounding and nearby public lands, and the Preserve's existing natural resources including the oak woodland, grasslands, and other important habitats.

In addition, the Preserve will expand public recreational access, ranging from viewpoints high on the Preserve to meadows along Fifth Street West. The recreational opportunities created by this project will benefit many who will be able to walk a few city blocks to the Preserve from the Sonoma Plaza.

Description of Use

The Montini Open Space Preserve (Preserve) has received requests to conduct scientific research. Scientific research can benefit Preserve resources and support the purpose of the Preserve and mission of the District. The District would give priority to studies that contribute to the enhancement, protection, use, preservation, and management of native Preserve plants and animals and their habitats. Research proposals would be reviewed by District staff or others, as appropriate. The following criteria, and others as necessary, would be used to assess research proposals:

- 1) Research that would contribute to Preserve management would have higher priority than other requests.
- 2) Research that would conflict with other ongoing research, monitoring, or management programs would not be approved.
- 3) Research projects that do not benefit Preserve management and can be carried out elsewhere (off-Preserve) would be less likely to be approved.
- 4) Research that causes undue disturbance or is intrusive would likely not be approved. The degree and type of disturbance would be carefully weighed when evaluating a research request.
- 5) Evaluation of research requests would determine whether any effort has been made to minimize disturbance through study design (for example, by considering adjustments in the location, timing, or scope of the study, the number of participants, study methods, the number of study sites, etc.).
- 6) If it would be impossible for the District to monitor researcher activities because of staffing or logistical constraints, requests for research may be denied, depending on the circumstances.
- 7) The duration of the project would be considered and agreed upon before approval. Openended projects would not be approved. All projects would be reviewed annually to assess whether they continue to meet these criteria (and others as necessary), continue to operate as originally proposed, and are contributing to the objectives of the study.

Approved research projects would be conducted under a District-issued Special Use Permit with case-specific stipulations. For additional details about this use, please see the Montini Open Space Preserve Draft Resource Management Plan (SCAPOSD 2007) herein incorporated by reference.

Anticipated Impacts of the Use

Some level of disturbance is expected with all research activities since most researchers will be entering areas that are normally closed to the public, including going off designated trails, and may be collecting samples or handling wildlife. However, minimal impact to Preserve wildlife and habitats will be expected with research studies because Special Use Permit conditions will include conditions to ensure that impact to wildlife and habitats are kept to a minimum (see stipulations below).

Impacts are also discussed in Appendix A, CEQA documentation

Determination

This use is compatible with following stipulations.

Stipulations Necessary to Ensure Compatibility

Research applicants would be required to submit a proposal summarizing:

- 1) objectives of the study;
- 2) justification for the study;
- 3) detailed study methodology and schedule;
- 4) potential impacts on Preserve plants, wildlife, and their habitats, including short- and long-term disturbance, injury, and mortality;
- 5) research personnel required and their qualifications/experience;
- 6) status of necessary permits (i.e., scientific collecting permits, endangered species permit);
- 7) costs to District Preserve and District staff time requested, if any; and
- 8) anticipated end products (i.e., reports, publications).

If proposed research methods would adversely affect, or would have the potential to adversely affect, Preserve resources (habitat or wildlife), the researcher will be required to demonstrate the need for the research and to identify potential impacts in advance of their occurrence. The researcher will also be required to develop mitigation measures to minimize potential impacts; mitigation measures will be listed as conditions on the Special Use Permit. District staff may accompany researchers at any time to assess potential impacts, and may determine that previously approved research and Special Use Permits should be terminated because of impacts. All Preserve rules and regulations must be followed unless otherwise excepted by District management.

Justification

Research projects would contribute to the enhancement, protection, use, preservation, and management of native Preserve wildlife populations and their habitats, or they would not be approved. The anticipated level of research to be conducted on the Preserve at any given time would be compatible because the Preserve would ensure that research proposals support the purpose of the Preserve and mission of the District. In view of the impacts research activities may have on the Service's ability to achieve the Preserve purpose, sufficient restrictions will be placed on the researcher to ensure that disturbance is kept to a minimum.

References

Appendix E. Example Sudden Oak Death Informational Material
HELP PREVENT THE SPREAD OF SUDDEN OAK DEATH



Trees in this area are infected with the fungus that causes Sudden Oak Death. This deadly fungus is killing tanoak, coast live oak and black oak in California's Coastal Counties.



AND OPEN SPACE DISTRICT

Help prevent the spread of this serious tree pathogen by taking the following precautions.

WHILE HERE...

- Park your vehicle only in designated parking areas.
- Stay on established trails respect trail closures.
- Do not collect wood, plants (acorns, leaves) or soil.
- Avoid muddy areas.

BEFORE GOING TO UNIFESTED AREAS*...

- Clean soil and mud off of shoes, mountain bikes, horse's hooves, and pet's paws.
- *Sudden Oak Death is present only in the following counties: Marin, Sonoma, Napa, San Mateo, Santa Cruz, Monterey
- Wash-off mud or soil on tires, wheel wells and the undercarriage of your vehicle at the nearest automated car wash.

For further information www.suddenoakdeath.org

Guidelines provided by the California Oak Mortality Task Force are based on the best current knowledge and may change as new information becomes available. January 18, 2001

California Oak Mortality Task Force

Appendix F. Trail Report and Log

Ruth G. Coleman, Director



DEPARTMENT OF PARKS AND RECREATION North Coast Redwoods District PO Box 2006 Eureka, CA 95502

Ms. Leslie Lew Sonoma County Agricultural Preservation and Open Space District 747 Mendocino Avenue, Suite 100 Santa Rosa, CA 95401

November 16, 2007

Dear Leslie,

This past year at the request of the Diablo Vista District I have assisted you and the Sonoma County Agricultural Preservation and Open Space District in designing and laying out a new hiking trail on the Montini Open Space Reserve. The initial concept for this trail was to provide public access to the new Montini Reserve, provide a connection to the Sonoma Overlook Trail, provide a connection to Vallejo State Historic Park and provide a connection to current and future parking facilities. These points of connection became major control points or locations on the landform where the trail had to be. (See figure 1.)

Trail Standards

The new trail was to be designed to accommodate hikers and meet California State Park's trail standards. Given its proximity to developed facilities, connection with existing trails, and anticipated use this proposed trail would qualify as a California State Park class 1 trail. The minimum standards for this trail classification is 36" trail tread width, 40" tread width between the rails on bridges and puncheon structures, 42" handrail height, an 8' overhead clearance height and a 6' minimum clearance width (three feet from the centerline of the trail). In addition, I evaluated all potential trail alignments to determine if they could meet the accessible trail standards as defined by the US Access Board and the Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas.

Maximum Sustainable Grade

Given these design parameters I then began the process of identifying the maximum sustainable grade limits of the landform that the proposed trail would be traversing. Having worked extensively on trail projects in the Santa Rosa and Sonoma area, I was somewhat familiar with the local geology, soils, vegetation, and hydrologic conditions. The oak grassland plant community observed on the Montini property predominantly has thin soil horizons on top of underlying bedrock. These conditions when combined with even moderate amounts of rainfall result in a high coefficient of runoff. Rain falling on the ground is absorbed into the thin soil layer where it quickly encounters the impermeable underlying rock. Once these soils reach their maximum absorption, rain water begins to flow overland in the form of sheetflow. In addition, the water that is

intercepted by the underlying bedrock begins to flow along the bedrock downslope until it emerges where the bedrock protrudes through the soil or until it reaches the bottom of the slope and emerges in the form of a spring or seep. When present, these conditions can greatly affect a trail's sustainability. These conditions in fact do exist on the Montini Property. Vallejo called this area "Lachryma Montis" which translates to Mountain Tear. This name was derived from the Native American name for this site "Chiucuyem" which translates to Crying Mountain.

In addition to my past experience in laying out trails in the Santa Rosa and Sonoma area I also reviewed available literature on the local landform including topographic maps, aerial photos, property boundaries, rainfall data and other information sent to me by you.

Before beginning my reconnaissance of the Montini property, I reviewed an existing trail in the area to evaluate its performance and determine what the maximum sustainable grade thresholds might be for that trail. I hiked the Sonoma Overlook Trail which is a hiking only trail adjacent to the Montini property and one of the destination points of the proposed Montini Trail. After hiking this trail which has similar geology, soil, vegetation and hydrologic conditions to the Montini property, I discovered that there were a variety of maximum sustainable grade limits. These grade limits varied based on site conditions. Where the hillslope was less than 10% and the soil profiles were thin and there was underlying bedrock no trail grade was sustainable without augmenting the trail tread with crushed rock or a boardwalk. Where the hillslopes were greater than 20% and the soil profiles were thin and there was underlying bedrock the maximum sustainable grade was between 0 and 4%. Where the hillslopes were greater than 30% and the soil profiles were thin and there was underlying bedrock and there was a forest canopy the maximum sustainable grade was between 3 and 6%. Where the hillslope was greater than 20% and the soil profiles were moderately developed the maximum sustainable grade was between 4 and 5%. Where the hillslope was greater than 20% and the soil profiles were moderately developed and there was a forest canopy the maximum sustainable grade was between 5 and 6%. Where the hillslope was greater than 30% and the soil profiles were well developed the maximum grade limits were between 7 and 8 percent. Where the hillslope was greater than 30%, the soil profiles were well developed and there was a forest canopy the maximum sustainable grade limits were 9 to 11%.

In addition to these observed maximum grade limits, other variables such as the trails location on the hillslope and the percent of rock in the soils also influenced the maximum sustainable grade limits. Generally the lower on the hillslope the trail location is the greater the amount of water that the trail will intercept in the form of sheetflow or shallow subsurface flow. This increased water interception will reduce the maximum sustainable grade. If the parent soils are comprised of fractured rocks or rocks imbedded into the soil the more durable the trail tread will be. This improved durability will increase the maximum sustainable grade.

Identifying the maximum sustainable grades for any trail alignment requires careful observation of the landform. As site conditions change so must the linear grades. The Montini trail was an excellent example of constantly changing site conditions.

Reconnaissance

The next step in the design process was to perform a reconnaissance of the Montini property. I met with you and local members of the community and we began the process of exploring a variety of potential trail corridors that I had plotted on topo maps. These were just hypothetical trail corridors that need to be ground truthed. During this process I received more information from you and the members of the local community on the Montini property. This exchange of information greatly improved my understanding of the Montini property and your vision for the trail. We also began to learn a great deal about the property. As we traversed the landform we located problematic areas that needed to be avoided such as chronically wet areas, sensitive historic areas or facilities, unmarked property lines, water storage facilities, or areas with thin soil profiles and emerging water. We also located areas that were scenic, offered excellent viewsheds, were good stream crossing sites, had historic interest or offered good ground for trail construction (See figure 1). During this time we also evaluated the landform to further refine the maximum sustainable grade limits and were sighting rough trail corridor grades to begin the process of identifying the linear grades between these various land features or points of interest. This reconnaissance process really helped locate the minor control points or areas that we needed to take the trail to or needed to avoid. Areas that we needed to avoid were taken off of the map and areas that we needed to go to were left on the map. From this process a trail corridor began to emerge that linked together high quality features on the landform and avoided the problematic ones. The limiting factor on linking together positive control points and staying away from negative control points was staying within the landforms maximum sustainable grade limits.

After a couple of days of reconnaissance a trail alignment was developed. Within this alignment all the grades between the control points were within the maximum sustainable grade limits and if a negative minor control point could not be avoided an appropriate design solution was developed to mitigate it. In addition, all the linear trail grades between the control points were identified to facilitate the flagging of the trail alignment.

Accessibility

At this point in the trail design and layout process the alignment was re-evaluated to determine if it could comply with the REGNEG accessibility guidelines. It should be pointed out that all during the reconnaissance process every attempt was made to identify a sustainable trail alignment that could meet the REGNEG guidelines. Only when major or minor control points (that could not be altered) required the trail to exceed the linear grade limits of REGNEG were those guidelines not complied with. Following this process only one segment of the trail could meet the REGNEG Guidelines and that was from the western parking lot to an overlook on the south slope of the Montini Property (see Figure1).

Flagging

The next phase of the project involved the flagging of the trail alignment. For the purpose of breaking the trail into manageable units this flagging was performed in two segments. Segment A which started at the Sonoma Overlook Trail and ended near the Scenic Overlook at the northwest corner of the property and segment B which began at the large rock quarry and terminated at the parking lot location near the south west corner of the property (see figure 1). These trail segments were initially loose flagged

(40 to 60 feet apart) and were then tight flagged (15 to 30 feet apart) once we confirmed that the alignment was satisfactory and no minor adjustments would be required.

Segment B Alternate Route

After the initial trail reconnaissance and flagging was completed the Diablo Vista District raised an objection to a portion of the Segment B Route. The portion of this route that traversed under the City water tanks was deemed too close to the historic facilities at the Vallejo Home by the District. To compensate for this objection we identified an alternate route that traversed above the City water tanks and did not come within close proximity to the Vallejo Home (see figure 1). This alternate route has some advantages and disadvantages to the route under the water tanks. The advantages are that it avoids the Vallejo Home conflict and takes the hiker into some interesting rock outcroppings. The disadvantages are that it crosses a flat area (for a short distance) with poor drainage capabilities, comes close to the Montini Dairy and offers no accessible trail opportunities.

Work Logs

Once all the trail segments were flagged, then trail work logs were developed for each segment. These work logs identified and quantified the various trail construction work categories and structures that will be required to construct the Montini trail. These work logs recorded the starting and ending point along the trail alignment for each trail structure or category of trail construction prescribed. These work logs serve two functions, one they provide the future trail builders with station by station prescriptions for the construction of the trail and they quantify all trail work by individual work categories (see attached work log files).

Trail Cost Estimates

The totaled trail work quantities from the work logs were then inserted into trail cost estimate worksheets that calculated the cost for constructing each trail segment (see attached worksheet files). Theses spreadsheets have been developed by tracking hundreds of trail construction projects using a wide variety of labor sources. They provide the most accurate means of identifying the cost of constructing a trail. They also help the designer identify the amount of time it will take to construct the trail.

Trail Construction

The construction of the Montini trail system would take approximately six months to construct using a ten person trail crew that possesses the necessary skills, equipment and logistical support to undertake this project. Both Segment A and Segment B would take approximately three months each to construct. These segments could be constructed separately if a phased approach is followed or they could be constructed at the same time. The phased approach may be preferable as it allows the funding to be secured in smaller increments and could focus the trail construction activities when the site conditions are optimum.

Construction Timing, Task Assignment and Skill Requirements

Performing this project requires considering the seasonal weather conditions of the Sonoma area and the variety of trail structures prescribed for this trail system. The best weather conditions are when the temperatures and rainfall are moderate. Some rainfall is necessary to moisten the soils so they can be shaped and compacted properly. The best months to obtain these conditions would be during the spring (March, April and May).

With the generally thin soil profiles of the Montini property these conditions could be difficult to obtain on a consistent basis even during these months. However, there is a great deal of trail structure work such as retaining wall, turnpike, puncheon, step, armored drain swale and bridge construction that can occur during inclement weather or when the soils are too saturated or dry to construct trail tread. Rock excavation work can also be performed during these conditions. The trail crew could be assigned to work on these trail structures or excavation activities when soil conditions are not optimal for tread construction. The balancing of trail crew assignments between these two activities will require careful planning and having all the tools, equipment and materials on hand to quickly transition from one work activity to another.

Another key to balancing crew assignments is having a crew that possesses the necessary skill sets to be broken into smaller groups that can individually excavate rock or construct rock retaining walls, puncheons, turnpikes, rock steps, armored drain swales or bridges. It is not necessary that all the crew members possess all of these skills. If there is the proper blend of knowledge and skills within the crew, groups and assignments can be identified that complement the knowledge and skills of the individuals in those groups.

The most important trail construction skills required for building the trail system on the Montini property is dry stack rock retaining wall construction, rock excavation, rock step construction, tread construction and bridge construction. In addition, the crew should have some basic knowledge and skills in trail rigging applications. Finding trail crews with this level of skill and knowledge is difficult. I would recommend a State Park Trail Crew from the North Coast Redwoods or Sierra Districts, a CCC Backcountry Crew, a CCC Statewide Trail Crew (under development) a CCC crew from the Green View Center or a Trail Crew from the American Conservation Experience.

Trail Tread Construction

Because the soil profiles are predominately thin and rocky and bedrock protrudes through the surface in many locations, constructing the trail tread with a trail dozer or excavator is not advised. Using a trail dozer or excavator in these conditions often results in over excavating the trail tread, removing or dislodging rocks imbedded below the intended tread surface and a substantial amount of collateral damage. The normal efficiencies achieved with this equipment would not be obtained on the Montini property and their use would result in an inferior product and additional resource impacts. The most effective method of constructing the trail tread would be to employ a trail crew using hand tools.

Grazing Activities

Cattle from the Montini Dairy are currently allowed to graze on the Montini property. These cattle roam freely over the land that the proposed hiking trails will be traversing. Cattle have the same impacts to trail tread surfaces that horses do. They are very large animals with small hoofs that produce a substantial amount of pounds per square inch pressure on the trail tread. Having a herd of dairy cattle freely walking over these trails would be equivalent to the mechanical wear associated with allowing equestrian use on these trails. In addition, cattle often walk up and down the trail's cutbanks and fillslopes which further damages the trail. For these reasons, I strongly recommend that the cattle grazing leases not be renewed when the opportunity arises or that the areas being grazed by cattle be fenced off to protect the trails.

Project Logistics and Local Support

All of the trail crew sources identified above are not located in the Sonoma area. In order for them to work on this project they will need to establish a Spike Camp in close proximity to the Montini property. The logical location for this Spike Camp would be one of the nearby State Parks such as Sugarloaf Mountain SP or Jack London SHP. Both of these parks are close enough to provide a reasonable commute and have the land base or facilities to support a spike camp facility. Sugarloaf SP is currently providing a spike camp facility for CCC crews working on the Goodspeed Trail. The cooperation and support of the Diablo Vista District would be required to establish and operate these spike camp facilities.

Sincerely,

Don Beers Retired Supervisor, Roads Trails & Resource Section North Coast Redwoods District



		TRAIL WORK LOC	3					
Trail	Montini Se	egment A, Overlook Tra	ail to \	/ista	a Point			
			Si	70/0)tv			
Foot	Action	Feature		W	н	Unite	Comment	Total
1 001	Action	reature	-	••		Units	to prevent cutting at	Totai
86	install	barrier log	34	1		sa ft	intersection	34
	motan	barnor log	01			0910		34
							for public to rest and enjoy	
4115	install	bench. slab	1			ea	view	1
								1
1182	remove	down tree	1			ea	2' dia.	1
			-					1
0		intersection					with Overlook Trail	0
1357		intersection					water tank road	0
1896		intersection					with segment B	0
1467	const.	puncheon	8			lin ft	4' wide across ditch	8
								8
536	const.	retaining wall rock	18	3	1.00	cu ft	raise trail above tree	54
721	const.	retaining wall rock	12	2	3.00	cu ft	around tree and boulders	72
806	const.	retaining wall rock	30	2	2.00	cu ft	around rock outcrops	120
904	const.	retaining wall rock	15	2	2.00	cu ft	around rock outcrops	60
1211	const.	retaining wall rock	13	2	3.00	cu ft	around tree and boulders	78
2675	const.	retaining wall rock	12	2	3.00	cu ft	around rock outcrops	72
2692	const.	retaining wall rock	12	2	3.00	cu ft	around rock outcrops	72
4115	const.	retaining wall rock	36	2	2.00	cu ft	to provide overlook area	144
								672
195	const.	retaining wall rock, crib	10	1	1.00	cu ft	under tree to protect roots	10
3325	const.	retaining wall rock, crib	10	1	1.00	cu ft	around tree and boulders	10
3505	const.	retaining wall rock, crib	15	1	1.00	cu ft	under tree to protect roots	15
3782	const.	retaining wall rock, crib	10	1	1.00	cu ft	under tree to protect roots	10
3870	const.	retaining wall rock,crib	16	1	1.00	cu ft	around rock outcrops	16
4070	const.	retaining wall rock,crib	18	1	1.00	cu ft	around rock outcrops	18
0.00					4.00			79
260	const.	rip rap	8	2	1.00	cu ft	wet crossing	16
612	const.	rip rap	10	5	1.00	cu ft	wet crossing	50
1659	const.	rip rap	16	4	1.00	cu ft	wet crossing	64

3772	const.	rip rap	16	4	1.00	cu ft	wet crossing	64
								194
1453		road crossing						0
629	excavate	rock, hard	274	3	1.00	cu ft	hard, large boulders	822
2667	excavate	rock, hard	55	4	1.00	cu ft	hard, large boulders	220
3325	excavate	rock, hard	70	4	1.00	cu ft	hard, large boulders	280
3860	excavate	rock, hard	30	4	1.00	cu ft	hard, rocky substrate	120
4070	excavate	rock, hard	45	4	1.00	cu ft	around rock outcrops	180
								1,622
427	excavate	rock, soft	50	3	0.50	cu ft	soft, unconsolidated	75
978	excavate	rock, soft	233	4	0.50	cu ft	soft, unconsolidated	466
1312	excavate	rock, soft	45	3	1.00	cu ft	soft, unconsolidated	135
1786	excavate	rock, soft	30	3	1.00	cu ft	through quarry talus	90
2130	excavate	rock, soft	25	3	0.50	cu ft	through quarry talus	38
2275	excavate	rock, soft	150	4	1.00	cu ft	through quarry talus	600
							rocky substrate and loose	
2515	excavate	rock, soft	390	4	0.50	cu ft	rocks near surface	780
							rocky substrate and loose	
3412	excavate	rock, soft	48	4	0.50	cu ft	rocks near surface	96
			_					2,280
509	excavate	rock,hard	30	3	0.50	cu ft	hard, large boulders	2,280 45
509	excavate	rock,hard	30	3	0.50	cu ft	hard, large boulders	2,280 45 45
509 250	excavate export	rock,hard soil	30 20	3	0.50	cu ft cu ft	hard, large boulders away from drainage	2,280 45 45 30
509 250 560	excavate export export	rock,hard soil soil	30 20 60	3 3 3	0.50 0.50 0.50	cu ft cu ft cu ft	hard, large boulders away from drainage away from drainage	2,280 45 45 30 90
509 250 560 3740	excavate export export export	rock,hard soil soil soil	30 20 60 80	3 3 3 4	0.50 0.50 0.50 0.50	cu ft cu ft cu ft cu ft	hard, large boulders away from drainage away from drainage away from drainage	2,280 45 45 30 90 160
509 250 560 3740	excavate export export export	rock,hard soil soil soil	30 20 60 80	3 3 3 4	0.50 0.50 0.50 0.50	cu ft cu ft cu ft cu ft	hard, large boulders away from drainage away from drainage away from drainage	2,280 45 45 30 90 160 280
509 250 560 3740 1975	excavate export export export const.	rock,hard soil soil soil steps, rock	30 20 60 80 11	3 3 4 3	0.50 0.50 0.50 0.50 1.00	cu ft cu ft cu ft cu ft cu ft	hard, large boulders away from drainage away from drainage away from drainage 7 steps 3' wide	2,280 45 30 90 160 280 33
509 250 560 3740 1975	excavate export export export const.	rock,hard soil soil soil steps, rock	30 20 60 80 11	3 3 3 4 3	0.50 0.50 0.50 0.50 1.00	cu ft cu ft cu ft cu ft cu ft	hard, large boulders away from drainage away from drainage away from drainage 7 steps 3' wide	2,280 45 30 90 160 280 33 33
509 250 560 3740 1975 0	excavate export export export const.	rock,hard soil soil soil steps, rock	30 20 60 80 11 4115	3 3 4 3	0.50 0.50 0.50 1.00	cu ft cu ft cu ft cu ft cu ft cu ft lin ft	hard, large boulders away from drainage away from drainage away from drainage 7 steps 3' wide 36 inch trail tread	2,280 45 30 90 160 280 33 33 4,115
509 250 560 3740 1975 0	excavate export export export const.	rock,hard soil soil soil steps, rock Trail	30 20 60 80 11 4115	3 3 4 3	0.50 0.50 0.50 1.00	cu ft cu ft cu ft cu ft cu ft lin ft	hard, large boulders away from drainage away from drainage away from drainage 7 steps 3' wide 36 inch trail tread	2,280 45 30 90 160 280 33 33 4,115 4,115
509 250 560 3740 1975 0 4115	excavate export export export const. const.	rock,hard soil soil soil steps, rock Trail trail segment	30 20 60 80 11 4115	3 3 4 3	0.50 0.50 0.50 1.00	cu ft cu ft cu ft cu ft cu ft lin ft	hard, large boulders away from drainage away from drainage away from drainage 7 steps 3' wide 36 inch trail tread	2,280 45 30 90 160 280 33 33 4,115 4,115 0
509 250 560 3740 1975 0 4115 1253	excavate export export export const. const. end remove	rock,hard soil soil soil steps, rock Trail trail segment trash	30 20 60 80 11 4115 4115	3 3 4 3	0.50 0.50 0.50 1.00	cu ft cu ft cu ft cu ft cu ft lin ft	hard, large boulders away from drainage away from drainage away from drainage 7 steps 3' wide 36 inch trail tread homeless encampment	2,280 45 30 90 160 280 33 33 4,115 4,115 4,115 0 0
509 250 560 3740 1975 0 4115 1253	excavate export export export const. const. end remove	rock,hard soil soil soil steps, rock Trail trail segment trash	30 20 60 80 11 4115 4115	3 3 4 3	0.50 0.50 0.50 1.00	cu ft cu ft cu ft cu ft cu ft lin ft	hard, large boulders away from drainage away from drainage away from drainage 7 steps 3' wide 36 inch trail tread homeless encampment	2,280 45 30 90 160 280 33 33 4,115 4,115 4,115 0 0 0
509 250 560 3740 1975 0 4115 1253 1507	excavate export export export const. const. end remove const.	rock,hard soil soil soil steps, rock Trail trail segment trash turnpike, gravel	30 20 60 80 11 4115 4115 215	3 3 4 3	0.50 0.50 0.50 1.00	cu ft cu ft cu ft cu ft cu ft lin ft	hard, large boulders away from drainage away from drainage away from drainage 7 steps 3' wide 36 inch trail tread homeless encampment 4' wide x 6" depth	2,280 45 45 30 90 160 280 33 33 4,115 4,115 4,115 0 0 0 215
509 250 560 3740 1975 0 4115 1253 1507	excavate export export export const. const. end remove const.	rock,hard soil soil soil steps, rock Trail trail segment trash turnpike, gravel	30 20 60 80 11 4115 4115 215	3 3 4 3	0.50 0.50 0.50 1.00	cu ft cu ft cu ft cu ft cu ft lin ft	hard, large boulders away from drainage away from drainage away from drainage 7 steps 3' wide 36 inch trail tread homeless encampment 4' wide x 6" depth	2,280 45 45 30 90 160 280 33 33 4,115 4,115 4,115 0 0 0 215 215
509 250 560 3740 1975 0 4115 1253 1507	excavate export export export const. end remove const.	rock,hard soil soil soil steps, rock Trail trail segment trash turnpike, gravel	30 20 60 80 11 4115 4115 215	3 3 4 3	0.50 0.50 0.50 1.00	cu ft cu ft cu ft cu ft lin ft	hard, large boulders away from drainage away from drainage away from drainage 7 steps 3' wide 36 inch trail tread homeless encampment 4' wide x 6" depth	2,280 45 45 30 90 160 280 33 33 4,115 4,115 4,115 0 0 0 215 215 215 0
509 250 560 3740 1975 0 4115 1253 1507	excavate export export export const. const. end remove	rock,hard soil soil soil steps, rock Trail trail segment trash turnpike, gravel	30 20 60 80 11 11 4115 4115 215	3 3 4 3	0.50 0.50 0.50 1.00	cu ft cu ft cu ft cu ft cu ft lin ft	hard, large boulders away from drainage away from drainage away from drainage 7 steps 3' wide 36 inch trail tread homeless encampment 4' wide x 6" depth	2,280 45 30 90 160 280 33 33 4,115 4,115 4,115 0 0 0 215 215 215 0 0 0

TRAIL WORK LOG

Trail Montini Trail Segment B

			S	ize/(Qty			
Feet	Action	Feature	L	W	Н	Units	Comment	Total
3262	const.	bridge	26			lin ft	across drainage ditch	26
								26
146	remove	down tree	2			ea	1' dia.	2
								2
							at various low areas to	
3252	const.	drain lense	40	6	1.50	cu ft	provide drainage	360
								360
0		intersection					segment A	0
1778	const.	puncheon, bridge	12			lin ft	across water pipe	12
1847	const.	puncheon, bridge	8			lin ft	across drain swale	8
2886	const.	puncheon, bridge	14			lin ft	over water pipe	14
3860	const.	puncheon, bridge	48			lin ft	across wetland	48
								82
344	const.	retaining wall rock	38	1	2.00	cu ft	through quarry talus	76
							rock lined ditch crossing	
1773	const.	retaining wall rock	10	1	2.00	cu ft	approach	20
2540	const.	retaining wall rock	25	2	2.00	cu ft	through large boulder field	100
3232	const.	retaining wall rock	36	2	2.00	cu ft	bridge approach	144
3288	const.	retaining wall rock	36	2	2.00	cu ft	bridge approach	144
								408
2996	const.	retaining wall rock, crib	16	1	1.00	cu ft	through large boulder field	16
								16
							outlet of quarry low wet	
408	const.	rip rap	26	4	1.00	cu ft	area	104
641	const.	rip rap	12	4	1.00	cu ft	wet crossing	48
								152
1400	excavate	rock, hard	30	3	2.00	cu ft	large boulder outcrop	180
1920	excavate	rock, hard	60	3	2.00	cu ft	large boulder outcrop	360
2071	excavate	rock, hard	8	3	2.00	cu ft	large boulder outcrop	48
2127	excavate	rock, hard	40	3	2.00	cu ft	large boulder outcrop	240
2335	excavate	rock, hard	40	3	2.00	cu ft	large boulder outcrop	240
2526	excavate	rock, hard	30	3	2.00	cu ft	large boulder outcrop	180
2926	excavate	rock, hard	12	3	2.00	cu ft	large boulder outcrop	72

			T	r –		r		
								1,320
0	excavate	rock, soft	344	3	0.50	cu ft	through quarry talus	516
1110		na da sa ft	450	_	0.50			005
1149	excavate	rock, soft	150	3	0.50	cuπ	shallow fock hear surface	225
1420	ovoovoto	rock ooft	100	2	0.50	ou ft	shallow rock poar surface	270
1430	excavale		180	3	0.50	cun		270
2485	excavate	rock soft	30	3	2 00	cu ft	shallow rock near surface	180
2100	Oxeditate		00	Ŭ	2.00	oun		1,191
600	export	soil	80	3	0.50	cu ft	away from drainage	120
2856	export	soil	60	3	0.50	cu ft	away from drainage	90
				-				210
4150	const.	stile	4			ea	at fence crossings	4
								4
0	const.	trail	4150			lin ft	36" wide	4,150
								4,150
							location of future parking	
4150	end	trail					lot	0
2040	remove	tree limb	1			ea	1' dia, protruding into trail	1
								1
3252	const.	turnpike	815			lin ft	4' wide x 6" high	815
								815
								0
								0
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Trail Montini Alternate

TRAIL WORK LOG

Feet Action Feature L H W Units Comment Total 2588 construct armored drain swale 8 1 4 out With lower trail route or segment B 0 957 construct retaining wall rock 8 2 1 cut With lower trail route or segment B 0 1561 construct retaining wall rock 10 2 1 cut				Siz	ze/Qt	y			
2588 construct armored drain swale 8 1 4 cutt 32 0 Intersection - - With lower trail route or segment B 0 957 construct retaining wall rock 8 2 1 cutt With lower trail route or segment B 0 1561 construct retaining wall rock 10 2 1 cutt - 40 1552 construct retaining wall rock 15 3 2 cut - 90 1554 construct retaining wall rock 18 3 1 cutt - 64 1564 construct retaining wall rock 12 1 1 cutt - 64 255 construct retaining wall rock 12 1 1 cutt - 12 266 excavate rock 10 1 1 cutt - 12 27 excavate rock 12 1 1 cutt - 12 27 excavate rock 12 1 1 cutt - 12 28 excavate rock 12 1	Feet	Action	Feature	L	Н	W	Units	Comment	Total
0 Intersection	2588	construct	armored drain swale	8	1	4	cu ft		32
957 construct retaining wall rock 8 2 1 outh endth 46 1581 construct retaining wall rock 10 2 1 cuft	0		Intersection					With lower trail route or segment B	0
1581 construct retaining wall rock 20 2 1 out out 20 1581 construct retaining wall rock 15 3 2 cut 1 20 1654 construct retaining wall rock 4 3 1 cut 1 1 20 1654 construct retaining wall rock 4 3 1 cut 1 1 21 1 232 2255 construct retaining wall rock 10 1 1 cut 10 12 27 excavate rock 12 1 1 cut 10 12 368 excavate rock 12 2 1 cut 10 12 364 excavate rock 12 2 1 cut 16 3 12 11 cut 16 3 10 12 1 1 cut 16 3 12 12 1 1 cut 16 16 16 10 <t< td=""><td>957</td><td>construct</td><td>retaining wall rock</td><td>8</td><td>2</td><td>1</td><td>cu ft</td><td></td><td>16</td></t<>	957	construct	retaining wall rock	8	2	1	cu ft		16
1581 construct retaining wall rock 10 2 1 cu ft 90 1592 construct retaining wall rock 15 3 2 cu ft 12 1664 construct retaining wall rock 18 3 1 cu ft 12 1700 construct retaining wall rock 18 3 1 cu ft 54 2255 construct retaining wall rock 12 1 1 cu ft 12 235 excavate rock 10 1 1 cu ft 12 268 excavate rock 12 1 cu ft 12 1 10 36 excavate rock 12 1 cu ft 12 12 13 12 48 excavate rock 12 1 cu ft 12 14 14 12 48 excavate rock 12 3 0.5 cu ft 18 3 12 14 16 18 57 ex	1561	construct	retaining wall rock	20	2	1	cu ft		40
1592 construct retaining wall rock 14 3 1 cu ft 90 1654 construct retaining wall rock 18 3 1 cu ft 54 1700 construct retaining wall rock 18 3 1 cu ft 54 2255 construct retaining wall rock crib 12 1 1 cu ft 232 2255 construct retaining wall rock 10 1 1 cu ft 10 12 35 excavate rock 12 1 1 cu ft 12 1 1 10 12 1 1 cu ft 12 1 12 11 12 1 1 11 12 1 12 1 12 1 12 14 12 13 12 12 1 12 14 12 14 12 14 12 14 12 14 12 14 12 14 14 14 14 14 14 13 15 14	1581	construct	retaining wall rock	10	2	1	cu ft		20
1654 construct retaining wall rock 4 3 1 cu ft 54 1700 construct retaining wall rock 18 3 1 cu ft 54 2255 construct retaining wall rock orb 12 1 1 cu ft 122 27 excavate rock 10 1 1 cu ft 12 68 excavate rock 12 1 1 cu ft 12 68 excavate rock 12 1 1 cu ft 12 68 excavate rock 12 2 1 cu ft 12 12 79 excavate rock 12 3 0.5 cu ft 18 3 14 cu ft 18 603 excavate rock 5 3 1 cu ft 15 15 16 18 3 14 cu ft 18 3 14 10 16 16 16 16 16 16 16 16 16	1592	construct	retaining wall rock	15	3	2	cu ft		90
1700 construct retaining wall rock 18 3 1 cu ft 232 2255 construct retaining wall rock crib 12 1 1 cu ft 12 276 excavate rock 10 1 1 cu ft 10 35 excavate rock 12 1 1 cu ft 10 36 excavate rock 12 1 1 cu ft 10 36 excavate rock 12 1 1 cu ft 10 12 379 excavate rock 12 3 0.5 cu ft 4 4 603 excavate rock 18 3 0.5 cu ft 18 18 927 excavate rock 18 3 2 cu ft 18 18 944 excavate rock 8 3 2 cu ft 18 3 11 10 11 12 14 12 14 12 11 11 <	1654	construct	retaining wall rock	4	3	1	cu ft		12
Image: Construct Tetaining wall rock crib 12 1 1 cut ft 232 2255 construct retaining wall rock crib 12 1 1 cuft 10 35 excavate rock 12 1 1 cuft 10 36 excavate rock 12 1 cuft 12 68 excavate rock 10 2 1 cuft 20 304 excavate rock 12 3 0.5 cuft 4 603 excavate rock 12 3 0.5 cuft 18 844 excavate rock 6 3 1 cuft 18 944 excavate rock 6 3 1 cuft 18 1051 excavate rock 2 1 1 cuft 3 1164 excavate rock 2 1 cuft 3 </td <td>1700</td> <td>construct</td> <td>retaining wall rock</td> <td>18</td> <td>3</td> <td>1</td> <td>cu ft</td> <td></td> <td>54</td>	1700	construct	retaining wall rock	18	3	1	cu ft		54
2255 construct retaining wall rock crib 12 1 1 cut 10 10 27 excavate rock 10 1 1 cut 10 10 35 excavate rock 12 1 1 cut 11 12 68 excavate rock 10 2 1 cut 11 12 68 excavate rock 10 2 1 cut 11 12 13 603 excavate rock 12 3 0.5 cut 11 11 12 704 excavate rock 18 3 0.5 cut 18 894 excavate rock 6 3 1 cut 11 15 957 excavate rock 8 3 2 cut 12 13 114 excavate rock 3 1 1 cut 12 13 124 excavate rock 3 1									232
27 excavate rock 10 1 1 cuft 10 35 excavate rock 12 1 1 cuft 12 68 excavate rock 4 2 1 cuft 8 179 excavate rock 10 2 1 cuft 4 304 excavate rock 12 3 0.5 cuft 18 844 excavate rock 18 3 0.5 cuft 18 927 excavate rock 6 3 1 cuft 18 944 excavate rock 8 3 2 cuft 48 1051 excavate rock 3 1 1 cuft 3 1164 excavate rock 2 1 1 cuft 3 1261 excavate rock 2 2 cuft 3	2255	construct	retaining wall rock crib	12	1	1	cu ft		12
35 excavate rock 12 1 1 cuft 12 68 excavate rock 4 2 1 cuft 8 179 excavate rock 10 2 1 cuft 20 304 excavate rock 12 3 0.5 cuft 18 804 excavate rock 18 3 0.5 cuft 18 944 excavate rock 18 3 0.5 cuft 18 944 excavate rock 6 3 1 cuft 18 944 excavate rock 6 3 1 cuft 15 957 excavate rock 2 1 1 cuft 3 1261 excavate rock 2 1 1 cuft 3 1342 excavate rock 2 2 cuft 3 <	27	excavate	rock	10	1	1	cu ft		10
68 excavate rock 4 2 1 cu ft 20 304 excavate rock 10 2 1 cu ft 20 304 excavate rock 12 3 0.5 cu ft 4 304 excavate rock 18 3 0.5 cu ft 27 927 excavate rock 6 3 1 cu ft 18 944 excavate rock 6 3 1 cu ft 48 1051 excavate rock 8 3 2 cu ft 48 1051 excavate rock 3 1 cu ft 3 1184 excavate rock 2 1 1 cu ft 3 1342 excavate rock 2 2 2 u ft 3 1430 excavate rock 3 1 1 cu ft 3	35	excavate	rock	12	1	1	cu ft		12
179 excavate rock 10 2 1 cuft 20 304 excavate rock 12 2 1 cuft 4 603 excavate rock 12 3 0.5 cuft 18 894 excavate rock 18 3 0.5 cuft 27 927 excavate rock 6 3 1 cuft 18 944 excavate rock 8 3 2 cuft 48 957 excavate rock 8 3 2 cuft 48 1051 excavate rock 3 1 1 cuft 2 118 excavate rock 2 1 1 cuft 3 1261 excavate rock 3 1 1 cuft 3 1342 excavate rock 3 1 1 cuft 3 1536 excavate rock 5 2 3 cuft	68	excavate	rock	4	2	1	cu ft		8
304 excavate rock 2 2 1 cu ft 4 603 excavate rock 12 3 0.5 cu ft 18 894 excavate rock 18 3 0.5 cu ft 18 927 excavate rock 6 3 1 cu ft 18 944 excavate rock 5 3 1 cu ft 18 957 excavate rock 5 3 1 cu ft 15 957 excavate rock 2 1 1 cu ft 2 1184 excavate rock 3 1 1 cu ft 3 1261 excavate rock 2 1 1 cu ft 3 1342 excavate rock 2 1 1 cu ft 3 1430 excavate rock 5 1 1 cu ft	179	excavate	rock	10	2	1	cu ft		20
603 excavate rock 12 3 0.5 cu ft 18 894 excavate rock 18 3 0.5 cu ft 27 927 excavate rock 6 3 1 cu ft 18 944 excavate rock 5 3 1 cu ft 15 957 excavate rock 2 1 1 cu ft 48 1051 excavate rock 3 1 1 cu ft 3 1184 excavate rock 3 1 1 cu ft 3 1261 excavate rock 2 1 1 cu ft 3 1342 excavate rock 2 2 cu ft 3 3 1649 excavate rock 3 1 1 cu ft 3 1770 excavate rock 4 3 1 cu ft	304	excavate	rock	2	2	1	cu ft		4
894 excavate rock 18 3 0.5 cu ft 27 927 excavate rock 6 3 1 cu ft 18 944 excavate rock 5 3 1 cu ft 15 957 excavate rock 8 3 2 cu ft 48 1051 excavate rock 2 1 1 cu ft 3 1261 excavate rock 2 1 1 cu ft 3 1342 excavate rock 2 1 1 cu ft 3 1430 excavate rock 2 2 cu ft 8 1536 excavate rock 5 2 3 cu ft 30 1649 excavate rock 5 1 1 cu ft 30 1770 excavate rock 4 2 1 cu ft 12	603	excavate	rock	12	3	0.5	cu ft		18
927 excavate rock 6 3 1 cu ft 18 944 excavate rock 5 3 1 cu ft 15 957 excavate rock 8 3 2 cu ft 48 957 excavate rock 2 1 1 cu ft 2 1184 excavate rock 3 1 1 cu ft 3 1261 excavate rock 3 1 1 cu ft 3 1322 excavate rock 2 1 1 cu ft 3 1430 excavate rock 2 2 2 cu ft 30 1649 excavate rock 5 2 3 cu ft 30 1649 excavate rock 4 3 1 cu ft 30 1770 excavate rock 4 3 1 cu ft	894	excavate	rock	18	3	0.5	cu ft		27
944 excavate rock 5 3 1 cuft 15 957 excavate rock 8 3 2 cuft 48 1051 excavate rock 2 1 1 cuft 2 1184 excavate rock 3 1 1 cuft 3 1261 excavate rock 2 1 1 cuft 3 1342 excavate rock 2 1 1 cuft 3 1342 excavate rock 2 2 2 cuft 8 1536 excavate rock 3 1 1 cuft 30 1649 excavate rock 4 2 1 cuft 30 1706 excavate rock 5 1 1 cuft 12 1826 excavate rock 4 2 1 cuft 1	927	excavate	rock	6	3	1	cu ft		18
957 excavate rock 8 3 2 cuft 48 1051 excavate rock 2 1 1 cuft 2 1184 excavate rock 3 1 1 cuft 3 1261 excavate rock 3 1 1 cuft 3 1261 excavate rock 2 1 1 cuft 3 1261 excavate rock 2 1 1 cuft 3 1342 excavate rock 2 2 2 cuft 3 1430 excavate rock 2 2 2 cuft 3 1649 excavate rock 5 1 1 cuft 30 1694 excavate rock 4 2 1 cuft 2 1706 excavate rock 4 2 1 cuft 12<	944	excavate	rock	5	3	1	cu ft		15
1051 excavate rock 2 1 1 cuft 2 1184 excavate rock 3 1 1 cuft 3 1261 excavate rock 3 1 1 cuft 3 1342 excavate rock 2 1 1 cuft 3 1430 excavate rock 2 1 1 cuft 3 1430 excavate rock 2 2 cuft 3 1536 excavate rock 5 2 3 cuft 30 1649 excavate rock 5 1 1 cuft 30 1766 excavate rock 5 1 1 cuft 12 1866 excavate rock 4 3 1 cuft 12 1826 excavate rock 4 2 1 cuft 12	957	excavate	rock	8	3	2	cu ft		48
1184 excavate rock 3 1 1 cuft 3 1261 excavate rock 3 1 1 cuft 3 1342 excavate rock 2 1 1 cuft 3 1430 excavate rock 2 2 2 cuft 3 1536 excavate rock 5 2 3 cuft 30 1649 excavate rock 5 2 3 cuft 30 1694 excavate rock 5 1 1 cuft 30 1694 excavate rock 5 1 1 cuft 8 1770 excavate rock 4 2 1 cuft 12 1796 excavate rock 4 3 1 cuft 12 1826 excavate rock 6 1 1 cuft 12 2800 excavate rock 6 3 1 cuft	1051	excavate	rock	2	1	1	cu ft		2
1261 excavate rock 3 1 1 cuft 3 1342 excavate rock 2 1 1 cuft 2 1430 excavate rock 2 2 2 cuft 8 1536 excavate rock 3 1 1 cuft 3 1649 excavate rock 5 2 3 cuft 3 1649 excavate rock 5 1 1 cuft 3 1694 excavate rock 4 2 1 cuft 3 1760 excavate rock 5 1 1 cuft 2 1770 excavate rock 4 3 1 cuft 12 1826 excavate rock 4 3 1 cuft 12 1838 excavate rock 6 2 1 cuft 30	1184	excavate	rock	3	1	1	cu ft		3
1342 excavate rock 2 1 1 cu ft 2 1430 excavate rock 2 2 2 cu ft 8 1536 excavate rock 3 1 1 cu ft 3 1649 excavate rock 5 2 3 cu ft 30 1694 excavate rock 4 2 1 cu ft 30 1694 excavate rock 5 1 1 cu ft 30 1694 excavate rock 5 1 1 cu ft 30 1694 excavate rock 5 1 1 cu ft 30 1700 excavate rock 2 1 1 cu ft 12 1826 excavate rock 4 2 1 cu ft 12 1826 excavate rock 6 2 1 cu ft 12 2380 excavate rock 8 3 1	1261	excavate	rock	3	1	1	cu ft		3
1430 excavate rock 2 2 2 cut 1 1430 excavate rock 3 1 1 cuft 3 1536 excavate rock 5 2 3 cuft 30 1649 excavate rock 4 2 1 cuft 30 1694 excavate rock 4 2 1 cuft 30 1694 excavate rock 5 1 1 cuft 8 1770 excavate rock 2 1 1 cuft 12 1826 excavate rock 4 3 1 cuft 8 1847 excavate rock 6 2 1 cuft 12 2380 excavate rock 6 2 1 cuft 12 2414 excavate rock 5 3 1 cuft <td< td=""><td>1342</td><td>excavate</td><td>rock</td><td>2</td><td>1</td><td>1</td><td>cu ft</td><td></td><td>2</td></td<>	1342	excavate	rock	2	1	1	cu ft		2
1336 excavate rock 3 1 1 cu ft 3 1649 excavate rock 5 2 3 cu ft 30 1694 excavate rock 4 2 1 cu ft 30 1694 excavate rock 4 2 1 cu ft 5 1770 excavate rock 2 1 1 cu ft 5 1770 excavate rock 2 1 1 cu ft 2 1796 excavate rock 4 3 1 cu ft 6 1826 excavate rock 4 2 1 cu ft 8 1847 excavate rock 6 2 1 cu ft 30 2380 excavate rock 6 2 1 cu ft 30 2443 excavate rock 5 3 1 cu ft 371 1667 construct steps rock (10) 15 1 3 <td>1430</td> <td>excavate</td> <td>rock</td> <td>2</td> <td>2</td> <td>2</td> <td>cu ft</td> <td></td> <td>8</td>	1430	excavate	rock	2	2	2	cu ft		8
1649 excavate rock 5 2 3 cu ft 30 1694 excavate rock 4 2 1 cu ft 8 1746 excavate rock 5 1 1 cu ft 8 1746 excavate rock 2 1 1 cu ft 5 1770 excavate rock 2 1 1 cu ft 2 1796 excavate rock 4 3 1 cu ft 12 1826 excavate rock 4 2 1 cu ft 6 1838 excavate rock 4 2 1 cu ft 12 2380 excavate rock 6 10 3 1 cu ft 30 2443 excavate rock 5 3 1 cu ft 15 2507 excavate rock 5 3 1	1536	excavate	rock	3	1	1	cu ft		3
1694 excavate rock 4 2 1 cu ft 8 1746 excavate rock 5 1 1 cu ft 5 1770 excavate rock 2 1 1 cu ft 2 1796 excavate rock 4 3 1 cu ft 2 1796 excavate rock 4 3 1 cu ft 6 1826 excavate rock 4 2 1 cu ft 6 1838 excavate rock 4 2 1 cu ft 8 1847 excavate rock 6 2 1 cu ft 30 2414 excavate rock 8 3 1 cu ft 30 2443 excavate rock 5 3 1 cu ft 371 1667 construct steps rock (10) 15 1 3 <td< td=""><td>1649</td><td>excavate</td><td>rock</td><td>5</td><td>2</td><td>3</td><td>cu ft</td><td></td><td>30</td></td<>	1649	excavate	rock	5	2	3	cu ft		30
1746 excavate rock 5 1 1 cu ft 5 1770 excavate rock 2 1 1 cu ft 2 1796 excavate rock 4 3 1 cu ft 12 1826 excavate rock 4 3 2 1 cu ft 12 1826 excavate rock 4 2 1 cu ft 6 1838 excavate rock 6 2 1 cu ft 12 2380 excavate rock 6 2 1 cu ft 30 2414 excavate rock 8 3 1 cu ft 15 2507 excavate rock 6 3 1 cu ft 18 1667 construct steps rock (10) 15 1 3 cu ft 371 1667 construct steps rock (6) 9 1 </td <td>1694</td> <td>excavate</td> <td>rock</td> <td>4</td> <td>2</td> <td>1</td> <td>cu ft</td> <td></td> <td>8</td>	1694	excavate	rock	4	2	1	cu ft		8
1770 excavate rock 2 1 1 cu ft 2 1776 excavate rock 4 3 1 cu ft 12 1826 excavate rock 3 2 1 cu ft 6 1838 excavate rock 4 2 1 cu ft 6 1838 excavate rock 4 2 1 cu ft 8 1847 excavate rock 6 2 1 cu ft 12 2380 excavate rock 10 3 1 cu ft 30 2414 excavate rock 8 3 1 cu ft 15 2507 excavate rock 6 3 1 cu ft 18 1667 construct steps rock (10) 15 1 3 cu ft 45 1807 construct steps rock (6) 9 1 3 <td>1746</td> <td>excavate</td> <td>rock</td> <td>5</td> <td>1</td> <td>1</td> <td>cu ft</td> <td></td> <td>5</td>	1746	excavate	rock	5	1	1	cu ft		5
1796 excavate rock 4 3 1 cu ft 12 1826 excavate rock 3 2 1 cu ft 6 1838 excavate rock 4 2 1 cu ft 6 1847 excavate rock 4 2 1 cu ft 8 2380 excavate rock 6 2 1 cu ft 30 2414 excavate rock 8 3 1 cu ft 30 2414 excavate rock 8 3 1 cu ft 30 2414 excavate rock 5 3 1 cu ft 15 2507 excavate rock 6 3 1 cu ft 18 1667 construct steps rock (10) 15 1 3 cu ft 45 1807 construct steps rock (6) 9 1 3 <td>1770</td> <td>excavate</td> <td>rock</td> <td>2</td> <td>1</td> <td>1</td> <td>cu ft</td> <td></td> <td>2</td>	1770	excavate	rock	2	1	1	cu ft		2
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							0
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Appendix G. Stile Designs



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TYPE 2 OM-

NO SCALE

3/13/2008

http://www.fs.fed.us/recreation/programs/accessibility/pubs/htmlpubs/htm06232340/drawings/fig04.htm

ELEVATION VIEW

d60'







THIS IS A REDUCED PRINT

http://www.fs.fed.us/recreation/programs/accessibility/pubs/htmlpubs/htm06232340/drawings/fig03.htmlpubs/html





UsableNet 508/WAI Approved Тор

<u>Back</u>



Appendix H. Priority List and Funding Estimate

Priority List and Funding Estimate

Priority	Goal and Objective	Project	Initial cost	Ongoing Ann. Cost
Н	1.1	Harding grass control - stimulate new growth with mowing, irrigation, or grazing, then treating with glyphosate.	See 1.1 below	Same
Н	1.1	Outreach to universities for weed control research.	.02 FTE	Same
Н	1.1	Partner with groups for weed control assistance.	.02 FTE	Same
Н	1.1	Annual spring monitoring for noxious weeds.	.01 FTE	Same
Н	1.1	Train select volunteers to identify and monitor noxious weed growth after treatment.	.02 FTE	Same
Н	1.1	Spot spray about 1 acre transline or glyphosate in spring.	.02 FTE \$100 ¹	Same
Н	1.2	Maintain grasslands by periodic disturbance such as mowing, grazing, or burning. Administer grazing licensee.	.02 FTE	Same
Н	1.3	Remove the fencing that concentrates cow movement to the area uphill of the eroding ranch road.	1,600 lf @ 16.00/lf - \$25,000	
Н	1.3	Restore the eroded areas using biotechnical measures such as coir mats, and using only native plants.	0.5 acre @ 15,000/acre - 7,500	
Н	1.4	Work with local law enforcement officials, such as the Sonoma County Sheriff 's Department, Sonoma Police Department, and County Regional Parks staff to patrol the Preserve once per week.	.05 FTE	Same
Н	1.4	Continue the volunteer patrol.	.04 FTE See SEC contract	Same
Н	1.4	Maintain a District presence on the Preserve with regular visits to the Preserve.	.05 FTE*	.05 FTE
Н	1.4	Develop interpretive materials that address fire safety, public stewardship, and the potential harm that can come to the Preserve by hiking off- trail, littering, and smoking.	.02 FTE	Same
Н	1.4	Continue to organize periodic volunteer trash pick up days.	.04 FTE	Same
Н	2.1	Work with the grazing lessee to remove unnecessary fences and ranch roads and restore these areas to natural conditions.	See Goal 1, Objective 3	
Н	2.2	Monitor susceptible tree species for evidence of SOD on the Preserve	.01 FTE	Same

Priority	Goal and Objective	Project	Initial cost	Ongoing Ann. Cost
Н	2.2	Develop interpretive materials to help visitors recognize SOD and understand how they can prevent the spread of SOD.	.02 FTE shared with other Preserves	
Н	2.2	Meet with researchers to identify appropriate SOD research projects on the Preserve.	.05 FTE	.04 FTE
Н	2.2	Consider treatment of affected oaks with Phosphonate and partial or complete removal of individual affected bay trees.	\$20/ tree for 40 trees \$800 \$200 spray rig .02 FTE	\$10/tree for 40 tress \$400 20 hours
Н	2.3	Encourage universities to research topics that would facilitate management and fill data gaps.	.04 FTE	.03 FTE
Н	2.3	Continue to nurture and seek partnerships with entities such as SOT, State Parks, California State University Sonoma, UC Davis, UC Berkeley, and others to manage Preserve resources more effectively.	.02 FTE	Same
Н	2.4	Establish management responsibilities among the various partners involved in the Preserve.	.02 FTE	.01 FTE
Н	2.4	Establish an annual or other meting with the city, State Parks, the SOT, and others, as appropriate to discuss Preserve management.	.05 FTE	.05 FTE
Н	2.4	Develop a protocol for notifying agencies and the public of actions that may be of interest to them.	.02 FTE	.01 FTE
Н		Construct fencing around a portion of ditch to protect from grazing	.01 FTE &10,000	
Н	3.1	Remove unnecessary fencing within the Preserve.	See goal 1, objective 3.	
Н	4.1	Construct and maintain trail with partner groups.	\$250,000 ²	.04 FTE
Н	4.1	Hire a trail consultant for the technical aspects of trail construction and volunteer oversight.	\$25,000	
Н	4.1	Work with the city to establish a fully accessible connection from the city's ball field parking lot to the Preserve trailhead.	.04 FTE	-
Н	4.1	Develop trail signage including directional and safety signage.	.02 FTE	.01 FTE
Н	4.1, 4.2	Construct information kiosks at trailheads.	\$3,000 ³	
Н	4.1	Install a self-closing pedestrian gate from the city's ball field lot to the Preserve that will not allow cows to escape.	\$700	-
Н	4.1	Install a self-closing pedestrian gate along	\$700	-

Priority	Goal and Objective	Project	Initial cost	Ongoing Ann. Cost
		Norrbom Road.		
Н	4.5	Continue working with the Sonoma Overlook Trail Task Force.	.07 FTE	same
М	1.2	Establish small (<0.25 acre) experimental native grass restoration plots. Collect seed on site and have the seeds grown by a contract nursery. Remove nonnative seed sources by mowing or chemical application for two seasons before establishing native grasses. Control broadleaf and invasive plants on restored areas for at least three years.	\$7,000 .02 FTE	.01 FTE
М	1.2	Develop and implement a monitoring plan to assess success of native grass restoration projects.	\$5,000 .02 FTE	.01 FTE
М	1.2	Develop and implement a native grassland restoration plan	\$5,000 .02 FTE	.02 FTE
М	1.3	Reroute Preserve roads to be less erodible.		
М	1.3	Inventory existing ranch roads and work with grazing lessee to determine which roads are unnecessary and can be restored.	.02 FTE	same
М	1.4	Monitor the Preserve yearly to ensure that grazing activities are creating adequate to fire breaks.	.02 FTE	
М	2.1	If appropriate conditions exist, plant native woody vegetation on the 9-acre parcel on 5th St. West using plant materials grown from on-site seeds and cuttings.	\$15,000	-
М	2.1	Implement oak restoration plantings that are protected from seedling depredation using plant materials grown from on-site seeds and cuttings, where possible, and individual fencing for each oak seedling.	\$1,000 @ \$9.00/oak	
М	2.1	Monitor oak restoration projects.	.02 FTE	Same
М	2.4	Conduct outreach with schools, scout groups, and other organizations for volunteer work.	.02 FTE	Same
М	3.1	Investigate exterior fencing and gates that would keep cattle in the Preserve while allowing wildlife to move out of the Preserve.	.02 FTE	
М	4.1	Construct a gravel parking lot for 10 cars with disabled access, where feasible with a self-closing gate. Lot shall be 53 feet by 62 feet (1,426 sq. ft.) with 2 fully accessible spots.	\$700 for gate \$18,000 ⁴	$50/yr^{5}$ -
М	4.2	Conduct outreach with schools to use the Preserve for Environmental Education.	.02 FTE	Same
М	4.2	Consider contracting with LandPaths to provide environmental education through their IOOBY program.	.01 FTE	Same

Priority	Goal and Objective	Project	Initial cost	Ongoing Ann. Cost
М	4.2	Continue exploring a partnership with environmental education organizations like Acorn Soupe.	.02 FTE	.01 FTE
М	4.2	Encourage stewardship-oriented educational activities that benefit Preserve management such as wildlife and botanical surveys, and vegetation management and restoration projects.	.05 FTE	Same
М	4.3	Construct 10 8 x 10 inch panels for interpretive trail.	.06 FTE \$4,500 ⁶	.02 FTE \$100
М	4.3	Identify plants with a label.	.1 FTE \$800	.01 FTE \$20
М	4.3	Develop a self-guided brochure.	.08 FTE \$500	.01 FTE \$50
М	4.3	Work in partnership with the Sonoma Overlook Trail Task Force to provide guided tours.	.02 FTE	Same
М	4.5	Continue and expand partnerships for the annual Open Spaces & Public Places celebration other events.	.01 FTE	Same
М	4.5	Participate in appropriate local off-Preserve events each year such as the Pacific Flyway Festival and classroom activities.	.04 FTE	Same
М	4.5	Collaborate with and assist local resource- oriented agencies and city departments on outreach programs involving the Preserve.	.01 FTE	Same
М	4.5	Expand number of presentations given to schools, conservation groups, and public service organizations.	.03 FTE	Same
М	5.1	Develop exhibits to illustrate the role of the Preserve rock quarries in California history and the use of the quarried rocks in Sonoma and San Francisco streets. M 5.1	.01 FTE	-
М		Develop exhibits to illustrate the role of that MG Vallejo played in California history. M 5.1	.01 FTE	-
L	4.1	Install 2 bike racks.	.01 FTE \$800	
L	4.4	The District will allow donations of benches at several viewpoints, at the entrance kiosk and at the quarry site.	.04 FTE	minimal
L	4.4	Interpretive panels will be placed near each bench.	.02 FTE \$2,100	minimal
			\$380,000, 1.75 FTEs	10,700, .91 FTEs

Appendix I. List of Preparers

List of Planning Team Members and Persons Responsible for Preparing this Document

Leslie Lew Kathleen Marsh Tom Robinson David Goodison John Crossman Don Beers John Donnelly Jackie Steuer Open Space Planner Stewardship Coordinator GIS Analyst City of Sonoma California Department of Parks and Recreation California Department of Parks and Recreation Sonoma Overlook Trail Task Force Sonoma Overlook Trail Task Force

Appendix J. W-Trans Report


July 25, 2008

Ms. Leslie Lew Open Space Planner Sonoma Agricultural Preservation & Open Space District 747 Mendocino Avenue, Suite 100 Santa Rosa, CA 95401 Whitlock & Weinberger Transportation, Inc.

490 Mendocino Avenue Suite 201 Santa Rosa, CA 95401

voice 707.542.9500 fax 707.542.9590 web www.w-trans.com

Montini Open Space Preserve – Trail Crossing Evaluation and Conceptual Parking Layout

Dear Ms. Lew;

As requested, Whitlock & Weinberger Transportation, Inc. (W-Trans) has evaluated a potential trail crossing of 1st Street West in the City of Sonoma, and prepared a conceptual parking layout for two accessible van handicap spaces at the corner of 5th Street West and Verano Avenue for the Montini Open Space Preserve Project. This report serves as an addendum to our analysis of two potential trail crossing locations on Norrbom Road as presented in the *Montini Open Space Preserve – Evaluation of Norrbom Road Trail Crossings* report dated April 11, 2007. The background data, trail crossing design standards, design considerations, findings and conclusions identified in that report remain valid. The focus of this effort is to identify a new southerly crossing site and recommend crossing enhancements as well as to develop conceptual plans for a parking area on the west side of the Preserve. This evaluation is consistent with standard traffic engineering techniques and in accordance with available trail crossing design standards.

Study Area

The Montini Open Space Preserve, which includes approximately 150 acres of rolling grasslands, oak woodlands, and steep slopes, is located on Schocken Hill overlooking the City of Sonoma. The property is situated between Norrbom Road and 5th Street West and is adjacent to the Sonoma State Historic Park and the City of Sonoma's Mountain Cemetery. Land uses in the vicinity of the project include residential development and developed public parks to the south of the Preserve within the City of Sonoma, and low impact open spaces, rural residences, ranches, and agricultural activities immediately adjacent to the property in the surrounding unincorporated countryside.

Proposed Trail Crossing of Ist Street West

A new potential crossing location was evaluated on 1st Street West in the vicinity of the Sonoma Veteran's Memorial Hall. The need for a crossing at this location was identified by District staff and the City of Sonoma in order to connect open space users with available parking at the Veteran's Hall and adjacent public resources including the Mountain Cemetery, Overlook Trail, and other nearby destinations. Field reconnaissance was performed with District and City staff to review potential crossing locations. The selected location will connect the Veteran's Hall main parking entrance on the east side of 1st Street West to the proposed Montini Trailhead on the west side of the street. The newly proposed crossing location is approximately 130 feet south of the previously evaluated lower trail crossing on Norrbom Road.

Ms. Leslie Lew

Existing Conditions

Norrbom Road is a two-lane winding rural road which is designated as a local road in the Draft 2020 Sonoma County General Plan Update. It is predominantly 21 feet in width, with two 10.5-foot travel lanes divided by double yellow centerline striping, with limited shoulders and occasional pullouts. At the southern end of the project, in the vicinity of the Mountain Cemetery driveway, it widens to approximately 30 feet where it transitions from the unincorporated County into the City of Sonoma as 1st Street West. The posted speed limit on Norrbom Road is 30 miles per hour (mph). Norrbom Road has an estimated Average Daily Traffic Volume (ADT) of 750 vehicles.

Ist Street West is a two-lane local street with a paved width of approximately 28 feet and a posted speed limit of 25 mph. No curb, gutter, or sidewalks are provided in the immediate vicinity of the proposed project; however, sidewalks extend south on the west side of the street all the way to downtown from the adjacent property to the south, the Sonoma Police Station. Ist Street West has an estimated ADT of 750 vehicles in the vicinity of the proposed project.

Collision History

The collision history for both 1st Street West and Norrbom Road in the vicinity of the lower crossing was reviewed to determine any trends or patterns that may indicate safety issues. Collision rates were calculated based on records obtained from the California Highway Patrol as published in their Statewide Integrated Traffic Records System (SWITRS) reports for the calendar years 2001 through 2006, which is the most recent full year for which records are currently available. There was one collision reported in the vicinity of the project during the five-year period reviewed. The collision, a sideswipe, took place approximately 60 feet south of the Mountain Cemetery driveway. The calculated collision rate for the roadway segment over the five-year period is 0.64 collisions per million vehicle miles (c/mvm). The average collision rate for similar facilities statewide, as indicated in 2002 Accident Data on California State Highways, California Department of Transportation, is 1.65 c/mvm. Therefore, roadway segment has a collision rate that is lower than the statewide average for similar roadways.

<u>Sight Distance</u>

Sight distance at the proposed crossing location was evaluated based on stopping sight distance criteria contained in the Caltrans *Highway Design Manual*, 5th Edition. The posted speed limit on 1st Street West in the vicinity of the project is 25 mph. For a design speed of 25 mph, stopping sight distance should measure at least 150 feet. However, drivers approaching the crossing from the north have just finished descending a grade on Norrbom Road as they approach the proposed crossing. Thus a 30-mph design speed was used. Sight distance from the proposed crossing location was measured at approximately 210 feet to the north and over 400 feet to the south, which are sufficient for speeds in excess of 30 mph. Therefore the proposed crossing location has adequate sight distance.

Proposed Crossing Treatments

Installation of high visibility "continental" crosswalk markings is recommended. Crosswalk transition points shall be ADA compliant. Advance warning signs for southbound traffic, "Pedestrian Xing" (W11-2) and "450 (ahead)" (W16-2a), should be placed 450 feet north of the proposed crossing close to the travel way on Norrbom Road. Given that the proposed crossing location is less than 1,000 feet north of an existing crossing for the Sonoma City Trail which is signed and marked, advance warning signs for northbound traffic are not recommended. Pavement legends reading "Trail Xing" should be installed

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north and south of the crossing, beginning about 150 feet in advance of both approaches to the crossing. Pedestrian crossing signs, "Ped Xing" (W11-2) and the crosswalk down arrow (W16-7P), should be used at the crossing facing traffic on both approaches to the trail. Proposed crossing treatments are illustrated in Figure 1.

Maintenance of Roadside Vegetation

It is important that care be taken to keep vegetation and other obstacles out of the sight lines for trail users and approaching motorists. Areas of vegetation were identified along the Veteran's Memorial property frontage north of the proposed crossing during the site review. Removing vegetation near the edge of the roadway that measures between two and eight feet off of the ground would provide improved sight distance at this location. Furthermore, it is important that roadside vegetation be properly maintained to ensure visibility of pedestrian warning signs.

Conceptual Parking Layout

A conceptual parking layout has been developed to accommodate two accessible van handicap parking spaces at the proposed western entry to the Preserve, which is planned at the intersection of 5th Street West and Verano Avenue in northwest Sonoma. It is understood that the District, at the request of local neighbors, intends to limit the scale of improvements proposed for the site. While only two accessible van handicap parking spaces are proposed for the parking area, it is anticipated that the lot will function as a primary access point and staging area on the west side of the Preserve. Therefore, while the improvement footprint and overall design have been kept to a minimum, various remedial actions pertaining to the intersection are identified, and a few basic public amenities are recommended, including pedestrian access from the street and bicycle parking. These basic improvements will expand the site's function without enlarging its footprint.

Access to the parking would be provided via a new driveway connection that will form the eastern leg of the 5th Street West/Verano Avenue intersection. Together, 5th Street West and Verano Avenue form a popular "short-cut" for area residents trying to avoid Sonoma Highway and West Napa Street. Their intersection, which historically was an uncontrolled 90-degree turn, is slightly irregular. 5th Street West forms the southern leg, Verano Avenue forms the western leg, and a private driveway forms the northern leg of the intersection. In recent years, the three-way intersection has been converted to an all-way stop; however, center and edge line stripes are still in place through the curve, and the northern leg of the intersection remains unpaved.

In order to develop an entry and parking area for the Preserve at this location, the following improvements are recommended: tighten the intersection footprint by relocating existing stop bars and signs, pave the full extent of the intersection, remove center and edge line striping from within the intersection, install a crosswalk on 5th Street West between Verano Avenue and the Preserve, and install a pathway connection from 5th Street West to the parking area along with accessible curb ramps at all transition points. Proposed intersection improvements and the conceptual layout of the parking area are identified on Figure 2.

Accessible Parking Requirements

Accessible parking requirements are identified in the 2008 California Access Compliance Reference Manual, Section 1129B: Accessible Parking Required. The Manual establishes accessibility requirements for the development of parking spaces, along with the ratio of accessible parking spaces required for parking

Ms. Leslie Lew

areas. As proposed, the two accessible parking spaces alone would meet the minimum requirement for a parking area with up to 50 regular parking spaces. Therefore minimum accessibility standards are met with this conceptual design if the District decides to expand the parking area at some point in the future.

Conclusions and Recommendations

- Ist Street West is a low volume local roadway in the vicinity of the proposed crossing with a posted . speed limit of 25 mph, and an estimated ADT of 750 vehicles per day.
- 1st Street West has a calculated collision rate of 0.64 collisions per million vehicle miles (c/mvm), . well below the statewide average of 1.65 c/mvm for similar roadway segments.
- Sight distance at the proposed crossing location is in excess of what is required, and will adequately ٠ serve the trail crossing. However, it is important that care be taken to keep vegetation and other obstacles out of the sight lines for trail users and approaching motorists.
- Recommendations for signing and striping enhancements are illustrated in Figure 1.
- The intersection of 5th Street West and Verano Avenue is irregular. To correct these irregularities . it is recommended that the stop bars and stop signs be relocated to tighten the intersection foot print, the full extent of the intersection should be paved, and the center and edge line striping should be removed from within the intersection.
- Recommended public access improvements and amenities include the installation of a crosswalk on ٠ 5th Street West, installing a pathway connection from 5th Street West to the proposed parking area, installing accessible curb ramps at all transition points, along with bicycle parking and trash receptacles in the parking area.
- Proposed intersection improvements and the conceptual layout of the parking area are identified on Figure 2.

Thank you for giving W-Trans the opportunity to provide these services. If you have any further questions, please give me a call.

Sincerely,

Josh Abrams Planner

JA/ja/SOX912.L5.wpd

Enclosures: Figure 1: Southern Crossing Conceptual Design Figure 2: Conceptual Parking Design



