

**Location Of Applegate Trail in Upper Rat Creek:
A Work In Progress**



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For

Hugo Neighborhood Association & Historical Society

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Outline

- I. INTRODUCTION
- II. ISSUE
- III. ANALYSIS
 - A. Methodologies
 - 1. Ranking Reliability Of Different Types Of Evidence Used To Verify Trail Location
 - 2. Value Of Types of Maps: Surveyed And Non-surveyed
 - a) Surveyed Maps
 - b) Non-Surveyed Maps
 - 3. Credibility Of Primary Versus Secondary Sources
 - 4. Relationship Of Applegate Trail's Open Valleys & Wagon Routes
 - 5. Multiple Trails As Applegate Trail Evolves Out Of The Mud
 - B. Trail Location Analysis: 2010
 - 1. Analysis Supporting Conclusion That Applegate Trail Was East Of Rat Creek
 - a) 1855 & 1893 GLO Surveys
 - b) 1855 Corps of Topographical Engineers Railroad Map
 - c) 1874 Josephine County Road Survey
 - d) 1895 Josephine County Map
 - e) 1954 USGS Glendale Quadrangle
 - f) 1998 USGS Merlin Quadrangle
 - g) 2010 Josephine County Old Stage Road
 - 2. Analysis Supporting Conclusion That Trail Was West Of Rat Creek
 - 3. Analysis of Conflict
 - 4. Recommendations
- IV. SUMMARY
- V. AUTHORS

Acronyms/Abbreviations

BLM	Bureau of Land Management
DLC	Donation Land Claim
GLO	General Land Office
MET	Mapping Emigrant Trails
MET Manual	Mapping Emigrant Trails Manual
OCTA	Oregon-California Trails Association
ODOT	Oregon Department of Transportation
OR	Oregon

POIs	Points of Interest
<i>Trail</i>	Applegate Trail
SOU	Southern Oregon University
USGS	United States Geological Survey
W.M.	Willamette Meridian

Appendices

- Appendix A. Maps Of Rat Creek (Section 14. T.34S., R.6W., WM): 1856 - 2000
 Appendix B. Fiber Optics Line In Rat Creek & Applegate Trail

Maps

- Map 1. 1855 GLO Survey/1856 GLO Map (partially surveyed road)
 Map 1B. 1855 Railroad Map (surveyed road)
 Map 2. 1874 Josephine County's First Road (surveyed road)
 Map 3. 1893 GLO Survey/1894 GLO Map (partially surveyed road)
 Map 4. Hugo's Applegate Trail At Mt. Sexton: 1855 - 1893 (Map 13).
 Map 5. 1895 Official County Map
 Map 6. 1904 (Reprinted 1923) USGS Riddle Quadrangle (surveyed roads)
 Map 7A. Old Road North Sexton Pass
 Map 7B. Roads Identified: O&C Revestment Act on June 9, 1916
 Map 8. 1922 Oregon Highway Department's Transit Notes & Maps For Pacific Highway (surveyed roads, but map not developed)
 Map 9. 1932 Metsker Map, Josephine County, Oregon
 Map 10. 1940 Sexton Mt. Construction Right-Of-Way Map (surveyed roads)
 Map 11. 1954 USGS Glendale, Oregon Quadrangle (surveyed roads)
 Map 12.A. 1955 Metsker Map, Josephine County, Oregon
 Map 12.B. 1959 BLM Aerial Photograph
 Map 13. 1970 Metsker Map, Josephine County, Oregon
 Map 14A. 1998 Merlin Quadrangle (surveyed roads)
 Map 14B. 1874 Josephine County Road & 1998 Rat Creek Analysis (surveyed roads)
 Map 14C. 1874 Road In Section 14 Of Rat Creek (surveyed roads)
 Map 15. SOU August 31, 2010 Field Work on North Side of Sexton Pass In South Fork of Rat Creek: Section 14. T.34S., R.6W., WM
 Maps 16. Multiple Secondary Source Maps (maps referenced but not mapped)
 1. *Scott Applegate Trail Atlas & Gazetteer*
 2. *The South Road And The Route Across Southern Oregon*
 3. *The Applegate Trail of 1846, A Documentary Guide to the Original Southern Emigrant Route to Oregon*
 4. *Maps of the California Trail*
 Map 17. 2010 Buried Cable Route In Rat Creek

Edited by Jim and Rene Ford, Kelly Rarey, Karen Rose, and Mike Walker.

Location Of Applegate Trail in Upper Rat Creek: A Work In Progress

I. INTRODUCTION

On August 31, 2010 Chelsea Rose, Staff Archeologist, Southern Oregon University (SOU), was the trip leader for a SOU Applegate Trail (*Trail*) field trip into the Rat Creek drainage of northern Josephine County, Oregon. The participants were Chelsea Rose; Julia Johnson, Staff Archeologist, SOU; Roger Roberts, Volunteer; Chuck Eccleston, Volunteer; Kelly Rarey, Volunteer; and Mike Walker Volunteer. The group's purpose was to visually look for traces of the *Trail* within the I-5 corridor on the north side of Mt. Sexton Pass in the South Fork of Rat Creek. The team conducted a pedestrian survey of the terrain of a surveyed 1893 General Land Office (GLO) site, JA-15 South Rat Creek, and north approximately .4 miles (Section 14. T.34S., R.6W., WM, Josephine County, Oregon; Map 15).

On this field trip the issue was raised concerning the location of the *Trail* in Rat Creek. Was the *Trail* located on the east side of Rat Creek, or was the *Trail*, or parts of the *Trail*, located west of Rat Creek, and/or did it, or parts of it, evolve to be located west of Rat Creek?

II. ISSUE

The authors believe the preponderance of evidence is that the *Trail* was located east of Rat Creek with significant segments within the present I-5 corridor administered by the Oregon Department of Transportation (ODOT). However, there was still the question from the August 31, 2010 field trip. Was the *Trail*, or parts of the *Trail*, west of Rat Creek and/or did it, or parts of it, evolve to be located west of Rat Creek. For example, in the northern part of the study area (i.e., northern .15 miles of the .4 mile long study area - Map 15; Appendix A, Map 15) the team viewed the terrain as steep and mountainous on the east slopes of Rat Creek until a ways from the creek where two major old logging trails were located parallel to the creek. The ground was also steep at this location with the fill of I-5 adjacent just uphill of the two skid roads.

Topographic features that serve to confine wagon travel can aid interpretation of sketchy diary accounts and GLO plats. However, emigrant trails often defy modern reasoning on the route these trails should have taken. Be cautious, therefore, of second guessing emigrant reasoning and practices.

In this .15 mile long area there were almost zero bottom lands surrounding the creek. The terrain had a dense understory of vegetation and large down firs making it difficult to travel and see any traces, if they were there. It was also difficult for the team to visualize a slope meeting the "non-sideling" criteria necessary for covered wagons without tipping over. A short distance above Rat Creek to the west was a dirt road paralleling the creek. A fiber optics line sign was observed west of Rat Creek on this dirt road (Appendix B). The ground in this area below the west road was dense and natural (Map 15).

III. ANALYSIS

The following analysis concerning the location of the *Trail* in upper Rat Creek is based on 25 maps of Rat Creek published from 1856 through 2000 (Appendix A) and several field trips to the area. The analysis methodologies for the maps follow (i.e., to rank the reliability of the maps, the value of types of maps, credibility of primary versus secondary sources, relationship of the *Trail's* open valleys and wagon routes, and multiple routes as the *Trail* evolved out of the mud).

A. Methodologies

1. Ranking Reliability Of Different Types Of Evidence Used To Verify Trail Location (Oregon-California Trails Association (OCTA). July 2002, *Mapping Emigrant Trails MET Manual*. Fourth Edition. Independence, MO).

In the best of all situations, the trail researcher examines all the relevant written, cartographic, physical, and artifact evidence and finds them mutually supporting. But, what does the researcher do when different kinds of evidence conflict? How does one determine the relative reliability of different types of evidence (MET Manual, page 5).

Though it may not apply in all situations, **as a general rule the closer in time the evidence is in relation to the trail under investigation, the more reliable that evidence becomes** (MET Manual, page 5).

When adequate diary/journal or topographic/artifact evidence is lacking, the researcher must rely heavily on the next best source of evidence, usually later reports or maps, especially GLO plats. In all cases, one must utilize all types of available evidence, keeping in mind that the closer the evidence is **in time** to the period of the trail's use, the more reliable it becomes (MET Manual, page 6).

The MET manual identifies a ranking of eight categories of evidence (MET Manual, page 6):

1. Written eyewitness descriptions that locate the trail with reasonable accuracy or exactness, such as detailed diaries, journals, letters, newspaper accounts, and reports of the Army Topographical Engineers describing newly-opened trails.
2. Written eyewitness descriptions that locate the trail in a general way or direction, such as less detailed diaries, journals, letters, emigrant guides or logs, and the more detailed recollections/reminiscences.
3. Remaining physical, vegetation, or artifact evidence of wagon trails that correspond to either diary or plat evidence, such as traces, ruts, swales, wagon parts differential vegetation, etc.
4. General Land Office (GLO) cadastral survey plats.
5. Topographic features that serve to confine wagon travel can aid interpretation of sketchy diary accounts and GLO plats. **However, emigrant trails often defy modern reasoning on the route these trails should have taken. Be cautious, therefore, of second guessing emigrant reasoning and practices.** (Emphasis added).

6. Reports that describe the location of emigrant trails, such as federal, state, county, territorial, military, and railroad surveys undertaken in the 1850s and later. Stage highway/transportation department surveys at the beginning of the motor vehicle period, sometimes conducted along or across earlier emigrant trail routes, may prove useful.
7. Maps that show the location of either emigrant trails or possible emigrant trails.
8. Recent evidence and documentation (not necessarily in order of reliability).

2. Value Of Types of Maps: Surveyed And Non-surveyed

There were two types of maps used in this analysis: surveyed, or partially surveyed, and non-surveyed.

a) Surveyed Maps Ten of the 25 maps are surveyed or partially surveyed maps with the credibility of being surveyed. The majority of these maps demonstrate, or support, the proposition that the *Trail* was east of Rat Creek (Appendix A).

The crucial primary evidence in support of the position that the *Trail* was east of Rat Creek are nine surveyed or partially surveyed maps, or in some cases, analysis of these maps (Appendix A). The four oldest surveyed maps used in the analysis are included in these nine (1856 - 1894).

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|----|---------|---|
| 1. | Map 1A | 1855 GLO Survey/1856 GLO Map (partially surveyed road) |
| 2. | Map 1B | 1855 Railroad Survey Map (surveyed road) |
| 3. | Map 2 | 1874 Josephine County's First Road (surveyed road) |
| 4. | Map 3 | 1893 GLO Survey/1894 GLO Map (partially surveyed road) |
| 5. | Map 10 | 1940 Sexton Mt. Construction Right-of-Way Map (surveyed road) |
| 6. | Map 11 | 1954 USGS Glendale, Oregon Quadrangle (surveyed roads) |
| 7. | Map 14A | 1998 Merlin Quadrangle (surveyed roads) |
| 8. | Map 14B | 1874 Josephine County Road & 1998 Rat Creek Analysis (surveyed roads) |
| 9. | Map 14C | 1874 Road In Section 14 Of Rat Creek (surveyed roads) |

b) Non-Surveyed Maps Fifteen (15) of the 25 maps are not surveyed maps. They represent a variety of purposes: analysis, property, assessor, and taxation. Three of these non-surveyed maps, the Metsker maps, demonstrate, or support, the proposition that the *Trail* could be, or was west of Rat Creek (Maps 9, Map 12A, & Map 13).

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|----|---------|--|
| 1. | Map 9 | 1932 Metsker Map, Josephine County, Oregon |
| 2. | Map 12A | 1955 Metsker Map, Josephine County, Oregon |
| 3. | Map 13 | 1970 Metsker Map, Josephine County, Oregon |

3. Credibility Of Primary Verus Secondary Sources

Primary sources are what remain from the past. Aside from human memory and the unrecorded passing down of information from generation to generation, histories based upon primary sources are really the only way the current generation can hope to understand what happened before.

Those who are not professional historians have the option of relying on others to find this evidence from the past and interpret it. But many people find it more fun and interesting to have direct contact with the historical records themselves, because they value learning about historical events in the words and images of the direct participants. Besides, everything worth finding out about hasn't been written in a history book or journal – not by a long shot!

Primary sources are things that give first-hand or direct information about the past. For the historian, primary sources are the 'nuts and bolts' of their trade, from which all secondary texts are produced. Examples of primary materials include the following.

first hand accounts:	oral records, diaries, memoirs, correspondence
documents:	correspondence, treaties, laws, speeches
images:	maps, photographs, drawings, paintings

The value of primary sources:

1. they were produced at the same time as the events they describe, so the information they contain is original,
2. they were not written separately from the events they documented, they rarely contain someone else's view of the events, and
3. they allow historians to make their own analyses and judgments of the information without having to consider someone else's interpretation and/or opinions.

As you are reading through sources for your *Trail* papers, ask yourself, where does this information come from? How does the author know this particular date, this name, or that this event occurred? It's a little like putting together a puzzle, and the farther back in time you go, the more pieces are missing. Historians often must make assumptions based on a few scraps of information. This does not invalidate their conclusions, it should simply make you aware that truth is often in the eyes of she or he who views the evidence. Statements made in a textbook, on the air, in a newspaper, or a historical monograph can be true in varying degrees. As you write you must learn to determine for yourself the degree of accuracy in your sources. Ask journalistic questions: who, what, where, when, and why.

4. **Relationship Of Applegate Trail's Open Valleys & Wagon Routes** (Hugo Emigrant Trails Committee, Hugo Neighborhood Association & Historical Society, & Josephine County Historical Society. August 23, 2010. *Applegate Trail's Open Valleys & Wagon Routes In Hugo Region: 1846 - 1855*. Brochure 4B of Applegate Trail GLO Surveys Brochure Series. Hugo, OR (<http://www.hugoneighborhood.org/inventorybrochures.htm>).

When the emigrants reached the Rogue Valley their exact route and crossings of the Rogue River varied based on several things: a) Indian activity, b) time of year, c) height or level of the river, and, d) known obstacles. There is no single Applegate Trail through Grants Pass, Oregon. Two main routes developed and they joined in Hugo, Oregon near the intersection of Oxyoke Road and Hugo Road before mounting the push over Mt. Sexton Pass in northern Josephine County. In all likelihood these routes crossed the Rogue River at Vannoy Creek or the head of Pearce Riffle

(<http://www.hugoneighborhood.org/applegatetrailfords.htm>). There was no single Applegate Trail through our area of interest.

Hugo's Applegate Trail (*Trail*) is located in Josephine County, Oregon from the Rogue River in the south to Grave Creek in the north. There are dozens of 1850s Oregon General Land Office (GLO) and donation land claim (DLC) surveyed points of interest (POIs) along Hugo's two emigrant routes of the *Trail*.

In southwestern Oregon the uses of fire by Native Americans, as well as natural lightning fires, greatly influenced vegetation patterns for thousands of years, until the mid-1800s. When European settlers first arrived in the area, recently burned over lands were common, grasslands were much more prevalent than today, and trees clustered along streams, ridge tops, and protected valleys.

Accounts by explorers many times noted huge burned over areas with many dead trees "littering" the landscape, without knowledge of whether the fires were natural or Indian caused. Written accounts by early settlers and fur trappers remain incomplete although many noted that there were open prairies with tall grasses in almost every river basin.

Survey notes on prairies and open woodlands from the 1850s GLO surveys for the Hugo region are one of the most prevalent notes. These open areas were like popcorn on the string of the *Trail*.

Except for the houses, Hugo's POIs were surveyed on the boundaries of one mile square sections which means the distances from POI to POI averaged approximately one mile.

The 1840s *Trail* diarists generally did not record the *Trail* having to be cleared on the east side of the Cascades. Except for the Cascades and the Umpqua mountains north of Grants Pass, a considerable portion of the emigration routes were through open valleys. In the Hugo region diarists noted only three places they had to cut brush from Louse Creek to Grave Creek: 1. Louse Creek, 2. Jumpoff Joe Creek, and 3. north side of Grave Creek Hills.

The time of travel during 1846 - 1855 was at the last quarter of a 2,000 mile emigration. Travel in southwestern Oregon was during the late summer when the land was bone dry until the fall rains came in late October or November. On October 26, 1846 diarist Pringle wrote: "*The wet season commenced the second day after we started through the mountains.*"

Trail traffic direction during 1846 - 1855 in Southwestern Oregon was during a time hostile to pioneers prior to the Native American removal in 1856 to distant reservations. This meant that, except for anomalies like the 1848 gold rush to California, and the first donation land claimers all traffic on the *Trail* in the Hugo region was one-way north to the Willamette Valley. This was especially true for northern Josephine County versus Jackson County and the Applegate and Illinois valleys. These folks were not building or improving roads through northern Josephine County. Where necessary they were cutting a trail through the wilderness to get beyond, and they did not intend to come back.

Hugo's area of interest was very sparsely inhabited by pioneers from 1848 through 1855. In 1855 there were six neighbors in the Jumpoff Joe Creek drainage (i.e., Harris, Haines, Niday, Augustus Walker, Wesley Walker, and Wagner).

The *Trail* in the Hugo region was restricted by the complex mountain-valley structure of the region. A working hypothesis is that, except when traversing mountains and ridges, the *Trail* was located in the narrow valleys next to trees clustered along streams which in 1846 - 1855 were generally open woodlands and prairies.

Guidelines for locating wagon trails within the parameters of the working hypothesis for locating routes between POIs the guidelines are from the Oregon-California Trails Association's *Mapping Emigrants Trails MET Field Manual*.

Eventual year-around traffic meant travelers had to deal with lowland ground that was wet and muddy in the winter. After 1856 many segments of the *Trail* continued to evolve away from the winter wet ground to the toes of adjacent hills and ridges.

- 5. Multiple Trails As Applegate Trail Evolves Out Of The Mud** (Hugo Emigrant Trails Committee, HNA&HS, & Josephine County Historical Society. August 28, 2010. *Applegate Trail Evolves Out Of The Mud: After 1855 - 1856*. Very Draft For Review & Editing. Brochure 4F of Applegate Trail GLO Surveys Brochure Series. Hugo, OR; <http://www.hugoneighborhood.org/inventorybrochures.htm>)

Western Oregon's first roads were the paths which the Indians made and traveled. After the trappers arrived many of the old paths were widened, first for the white man's pack trains, and then for emigrant wagons.

During the development of DLCs from 1850 through 1855 white settlers began to arrive in the Rogue Valley especially on the larger better bottom lands in what would become Jackson County.

Except for the 1853 Military Road at Mt. Sexton most roads in the Hugo region were not so much built as simply cleared and used from 1846 through 1856.

Wagon roads after 1856 remained simple with a little digging on the sides of hills as the road locations moved away from the winter bottom lands that had been dry and relatively open during the one-way fall 1846 - 1856 migrations north. Where side hills in the area permitted it these roads were a little higher than the surrounding bottom lands with draining occurring when it rained. Even then wagons in the country often meant struggling through deep ruts or, in wet weather, through rivers of mud.

The following historical and present roads are known areas in the Hugo region where the wagon roads of the *Trail* evolved away from the bottom lands which turned into a quagmire of axle-deep mud during the winter toward the toes of slopes/hills.

Jacksonville Road of *Trail*

- Donaldson Road West of GLO *Trail* sites JA-1 to JA-2
- East of *Trail* to Gun Club Road/Highland Avenue At Harris Creek West of GLO *Trail* sites JA-4 to JA-6
- East & West of 1855 GLO *Trail* At JA-8 & Schoolhouse Creek
- West to Monument Drive At Schoolhouse Creek
- 1857 JA-10B East of JA 1855 GLO *Trail* At JA-10A
- East of Monterico Drive At JA-10C
- Hugo Road East of Upper Bannister Creek & *Trail*
- 1853 Military Road West of Maple Creek & *Trail*
- Sunny Valley Loop Road East of *Trail* at JA-17B & JA-17-C

Illinois Valley Road of *Trail*

- West of Bannister Creek & *Trail* At IV-5 to IV-6
- Oxyoke Road West of Bannister Creek & *Trail* At IV-7 to IV-8

B. *Trail* Location Analysis: 2010

1. Analysis Supporting Conclusion That Applegate *Trail* Was East Of Rat Creek.

The crucial primary evidence in support of the position that the *Trail* was east of Rat Creek are nine surveyed or partially surveyed maps, or in some cases, analysis of these maps (Appendix A), including other field work.

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| 1. | Map 1A. | 1855 GLO Survey/1856 GLO Map (partially surveyed road) |
| 2. | Map 1B | 1855 Railroad Survey Map (surveyed road) |
| 3. | Map 2. | 1874 Josephine County's First Road (surveyed road) |
| 4. | Map 3. | 1893 GLO Survey/1894 GLO Map (partially surveyed road) |
| 5. | Map 10. | 1940 Sexton Mt. Right-of-Way Map (surveyed road) |
| 6. | Map 11. | 1954 USGS Glendale, Oregon Quadrangle (surveyed roads) |
| 7. | Map 14A. | 1998 Merlin Quadrangle (surveyed roads) |
| 8. | Map 14B. | 1874 Josephine County Road & 1998 Rat Creek (surveyed roads) |
| 9. | Map 14C. | 1874 Road In Section 14 Of Rat Creek (surveyed roads) |

a) 1855 & 1893 GLO Surveys

The two GLO surveys satisfy the general rule that the closer in time the evidence is in relation to the trail under investigation, the more reliable that evidence becomes. They are also primary sources. The 1855 GLO survey for *Trail* site JA-16, Old Stage Road and the 1893 GLO survey for the *Trail* site JA-15, South Rat Creek have features accurately located on section lines. They are conclusive proof that sites along the *Trail* were east of Rat Creek. However, as a general rule, accuracy on GLO plats will exist only where the *Trail* intersects a section line and the location of the *Trail* between JA-15 and JA-16 needs corroboration.

Partial support comes from the 1856 and 1894 GLO maps whose features are accurately located on section lines. Informed surveyors filled in the blanks between GLO surveyed sites JA-15 and JA-16 (i.e., the linear Rat Creek and *Trail* were plotted with information from the field even though they were not surveyed within the section lines).

b) 1855 Corps of Topographical Engineers Railroad Map

1855 Railroad Map Abbot, Henry L. *Report of Lieut. Henry L. Abbot, Corps of Topographical Engineers, upon Explorations for a Railroad Route from the Sacramento River to the Columbia River, made by Lieut. R. S. Williamson, Corps of Topographical Engineers, assisted by Lieut. Henry L. Abbot, Corps of Topographical Engineers, 1855* (see Appendix A, Map 1B).

Page 108. “November 2. — . . . **Wolf and Grave creeks are separated by high and steep hills, covered with thick timber and underbrush.** On reaching Wolf creek we found Captain Smith in camp, near a house surrounded by a small stockade. . . . **Between Grave and Jump off Joe creeks the road passed over a steep and heavily timbered divide.** The Indians had killed two men in charge of a pack train on this hill, and the half burned remains of their wagon and packs were still to be seen.”

Map 1B is a map of Hugo’s area of interest part of a larger map of western Oregon prepared by Lieutenant Henry L. Abbot and Lieutenant R. S. Williamson of the U.S. Army Topographical Engineers in 1855. Obvious named features on the 1855 railroad map include: Rogue River, Applegate River, Jumpoff Joe Creek, Wolf Creek, Jacksonville, Fort Lane, Table Rock, Harris Rancho, and the Six Bit House. In Hugo’s area of interest unnamed Grave Creek, Louse Creek, and Rat Creek are also obvious. Red Mountain and Walker Mountain as well as the Granite Hill Road pass can be clearly identified, but strangely, Sexton Mountain does not stand out as much.

The *Trail* is clearly mapped east of unnamed Rat Creek on the 1855 railroad map. This map satisfies the general rule that the closer in time the evidence is in relation to the *Trail* under investigation, the more reliable that evidence becomes. It is also a primary source.

c) 1874 Josephine County Road Survey

Josephine County Public Works reported a surveyed road established by the Josephine County Commissioners in 1874 (Appendix A., Map 2 text, Map 2, & Map 14C). It was the county’s first road and partially composed of today’s Warner Road, Railroad Avenue, Edgewood Road, Sunny Valley Loop, Old Stage Road, Hugo Road, Oxyoke Road, Monument Drive, Grants Pass Road, Camp Joy Road and Highland Avenue. The county was able to establish the road’s general location and relationship to today’s roads with an AutoCAD program by plotting the survey notes. Three survey notes in or near the borders of Section 14 support the location of the *Trail* as East of Rat Creek.

More importantly was a comparison of how the 1874 road matched with locations JA-15 and JA-16 plotted on the modern 1998 Merlin Quadrangle without changing the 1874 survey for the distance and course of the AutoCAD points. The purpose was also to locate the *Trail* in comparison to existing roads and Rat Creek. The results were not perfect, but the 1874 road was very close to JA-15 and JA-16 and the 1998 private driveway, with of the *Trail* east of Rat Creek

(Appendix A, Map 14A, Map 14B, & Map 14C). The comparison also explained the location of JA-16 uphill from the existing Old Stage Road. For example, Point 181, Point 182, and Point 183 corroborate the *Trail site* JA-16 Old Stage Road being uphill from the existing non-maintained Old Stage Road (Point 181) with the *Trail* staying at that elevation going south to the approximate area just before the Light house (Point 182) where it descends down to the Old Stage Road at today's private gate (Point 183, Appendix A, Map 14B, Map 14C).

The 1874 road survey with the evidence of the GLO surveyed locations of JA-15 and JA-16 was conclusive support for the *Trail* being located east of Rat Creek.

d) 1895 Josephine County Map

The 1895 county map is not a surveyed map (Map 5). It is a significant property map of important landowners with large holdings, probably in some way based on the GLO maps and assessor maps. The *Trail* is located east of Rat Creek on this map. The 1895 map is the only local comprehensive property map of Josephine County in the 1800s, and as such it is assumed that local landowners' knowledge in some way assisted in the development of this map.

This map satisfies the general rule that the closer in time the evidence is in relation to the trail under investigation, the more reliable that evidence becomes, especially for the 1893 GLO survey for the location JA-15, South Rat Creek, and the 1894 GLO partially surveyed map. It is also a primary source.

e) 1954 USGS Glendale Quadrangle

This USGS map is a surveyed map with features accurately located. The 1954 USGS topo clearly identifies Rat Creek flowing north into Grave Creek. An East Fork of Rat Creek is identified. The upper stretch of the main stem of Rat Creek on an east-west alignment in the center of Section 14 (on the east side of today I-5) is also identified. The south fork of Rat Creek is unnamed without it being identified as a perennial stream. However, the north-south drainage of the South Fork Rat Creek is clearly identified by topography contours. Several summer field trips verified the stream was active (Appendix A., Map 11 text, and Map 11). Except for the Copper Queen Road, this USGS map identifies no roads west of Rat Creek in Section 14. It identifies the county maintained Old Stage Road in Section 11 and the non-maintained Old Stage Road in Section 14, both segments located east of Rat Creek.

This map does not satisfy the general rule that the closer in time the evidence is in relation to the trail under investigation, the more reliable that evidence becomes. It is a primary source.

f) 1998 USGS Merlin Quadrangle

This USGS map is a surveyed map with features accurately located. Except for the Copper Queen Road in the very northwest corner of Section 14, this USGS map identifies no roads west of Rat Creek in Section 14 (Appendix A, Map 14A text, and Map 14A). The map clearly locates

the main stem of Rat Creek between *Trail* sites JA-15 and JA-16 and a road parallel and east of it. The road parallel and east of Rat Creek has three segments:

1. Public Old Stage Road maintained by Josephine County.
2. Public Old Stage Road not maintained by Josephine County.
3. Private driveway to house in middle of Section 14.

This map does not satisfy the general rule that the closer in time the evidence is in relation to the trail under investigation, the more reliable that evidence becomes. It is a primary source.

g) 2010 Josephine County Old Stage Road

Old Stage Road is located on the east side of Rat Creek. It was named after it's history of being the Applegate Trail and then a stage road.

The substantial evidence that the *Trail* was east of Rat Creek are the historical GLO 1855 & 1893 surveys for *Trail* sites JA-15 and JA-16 and their relationship with the 1874 Josephine County survey, both of which tie into today's Old Stage Road.

There is substantial evidence in the 1800s surveyed maps and analysis that Old Stage Road in the north half of Section 14 of Rat Creek, including the extended private driveway, is the location of the original ca., 1855 Applegate Trail (Maps 1, 2, 5, 7B, 11, 12B, 14A - 14C, & 15). The *Trail* in the south half of Section 14 from the confluence of Rat Creek and its south branch is also understood (Maps 2, 3, 5, 12B, & 14B - 14C).

2. Analysis Supporting Conclusion That Trail Was West Of Rat Creek.

There were no original appearing historic features viewed by members of the August 31, 2010 field trip that would support the *Trail* east of Rat Creek in the northern .15 miles of the .4 mile long study area (i.e., northern .15 miles of the .4 mile long study area - Map 15; Appendix A, Map 15). Was the *Trail*, or parts of the *Trail*, west of Rat Creek and/or did it, or parts of it, evolve to be located west of Rat Creek. For example, in the northern part of the study area (i.e., northern .15 miles of the .4 miles - Map 15) the team viewed the terrain as steep and mountainous on the east slopes of Rat Creek until a ways from the creek where two major old logging skid trails were located parallel to the creek. The original ground was also steep here with the fill of I-5 adjacent and also just uphill of the two skid roads.

In this .15 mile long area there were almost zero bottom lands surrounding the creek. The terrain had a dense understory of vegetation and large down firs making it difficult to travel and see any traces, if they were there. It was also difficult for the team to visualize a slope meeting the "non-sidelings" criteria necessary for covered wagons without tipping over. To the west a short distance above Rat Creek was a dirt road paralleling the creek. The ground in this area below the west road was dense and natural (Map 15).

The dirt road parallel to Rat Creek on the west side of Rat Creek raised the question of whether the *Trail*, or parts of the *Trail*, could be on the west side (Map 15). On August 31, 2010 Chuck Eccleston observed a buried fiber optics route sign on this dirt road and walked the road for a short distance. Later analysis of 2010 Google satellite photographs and 2002 Josephine County GIS aerial photographs support a dirt road in the .15 mile area. A physical road paralleling the west side of Rat Creek is supported for a small distance by satellite and aerial photographs.

It is a given that later communication lines followed the only road, Applegate Trail, through northern Josephine County, Oregon (i.e., 1864 Collins Telegraph Line and parts of the 1886 - 1887 Postal Telegraph Line - Maps 2 & 3).

Three Metsker maps locate a road west of Rat Creek. These maps are primary sources probably in some way based on assessor maps.

Map 9.	1932 Metsker Map, Josephine County, Oregon
Map 12A.	1955 Metsker Map, Josephine County, Oregon
Map 13.	1970 Metsker Map, Josephine County, Oregon

The 1932 Metsker Map clearly shows an unimproved road west of Rat Creek from Mt. Sexton Pass down past JA-15 and JA-16 and no roads on the east side except the Pacific Highway uphill to the east (Map 9).

The 1955 Metsker Map clearly shows a road west of Rat Creek from JA-15 north to JA-16 (Map 12A).

The 1970 Metsker Map clearly shows an improved and unimproved road west of Rat Creek from Grave Creek south to just past JA-16 and no roads on the east side except segments of the Pacific Highway uphill to the east and the I-5 freeway (widest black line) built from Mount Sexton to Canyonville in 1965 - 1966 (Map 13).

In summary, there were no original appearing historic features viewed by members of the August 31, 2010 field trip that would support the *Trail* east of Rat Creek in the northern .15 miles of the .4 mile long study area. For example, it was difficult for members to visualize the slopes they had observed that would meet the “non-sideling” criteria necessary for covered wagons without tipping over. The three un-surveyed Metsker maps clearly support a road west of Rat Creek and there is a dirt road there. It is a given that later communication lines followed the only road, Applegate Trail, through northern Josephine County, Oregon (i.e., 1864 Collins Telegraph Line and parts of the 1886 - 1887 Postal Telegraph Line). If the only information available to the researcher was the three Metsker maps, the conclusion that the *Trail* was west of Rat Creek would be a viable hypothesis.

3. Analysis of Conflict

Three Metsker maps locate a road west of Rat Creek. These maps are primary sources. However, they are not surveyed and they do not satisfy the general rule that the closer in time the evidence is in relation to the trail under investigation, the more reliable that evidence becomes.

1. Map 9. 1932 Metsker Map, Josephine County, Oregon
2. Map 12A. 1955 Metsker Map, Josephine County, Oregon
3. Map 13. 1970 Metsker Map, Josephine County, Oregon

The authors' two explanations that explain the location of the road west of Rat Creek as depicted on the Metsker maps follows.

1. Access for the Buried Fiber Optics Route
2. Gross Mapping Error.

Appendix B supports the hypothesis that the road west of Rat Creek serves a buried fiber optics route (Map 17).

Map 13 supports a map error by Metsker. This map has a significant error in conflict with the 1954 USGS Glendale Quad (Map 11), the 1998 USGS Merlin Quad (Map 14A), and the physical Old Stage Road (i.e., "paved" maintained and "gravel" non-maintained). The error is that Map 13 has an improved road plotted on the west side of Rat Creek when it is, in fact, on the east side of the creek. The improved road west of Rat Creek is clearly an error as there never has been an improved (paved) road in that area. The improved road is Old Stage Road, both maintained (paved) and non-maintained (Map 14A). This error is considered conclusive evidence that Maps 9 and 12A have the same error.

What is known is that these three Metsker maps are in direct conflict with powerful evidence from early 1800's survey maps and other analysis that the Applegate Trail was on the east side of Rat Creek. The crucial primary evidence in support of the position that the *Trail* was east of Rat Creek are nine surveyed or partially surveyed maps, or in some cases, analysis of these maps. They include the four oldest surveyed maps used in the analysis (1856 - 1894).

1. Map 1A. 1855 GLO Survey/1856 GLO Map (partially surveyed road)
2. Map 1B. 1855 Railroad Survey Map (surveyed road)
3. Map 2. 1874 Josephine County's First Road (surveyed road)
4. Map 3. 1893 GLO Survey/1894 GLO Map (partially surveyed road)
5. Map 10. 1940 Sexton Mt. Right-of-Way Map (surveyed road)
6. Map 11. 1954 USGS Glendale, Oregon Quadrangle (surveyed roads)
7. Map 14A. 1998 Merlin Quadrangle (surveyed roads)
8. Map 14B. 1874 Josephine County Road & 1998 Rat Creek (surveyed roads)
9. Map 14C. 1874 Road In Section 14 Of Rat Creek (surveyed roads)

It is the authors' position that the evidence supporting the location of the Applegate Trail east of Rat Creek is substantial.

4. Recommendations

Even though the authors believe the *Trail* was east of Rat Creek, they recommend that further field research investigate for *Trail* traces from JA-15 toward the location of Site Visit No. 4, or some other location (i.e., in its northern course toward the narrow bottom of Rat Creek in Study Section 1 (Map 15), or more north-north easterly toward Site Visit No. 4 (Map 15) and the two major old logging skid trails (Site Visit No. 2), and the Biarchi home. The foundation for this line of investigation is the 1874 Josephine County Survey of the Applegate Trail (Map 2, Map 14B, & Map 14C; Walker, Mike. August 31, 2010. Minutes of August 31, 2010 Southern Oregon University Field Trip to Hugo Emigrant Trail Committee Files, including locations identified on Maps 12B, 14B, and 15).

IV. SUMMARY

A lack of evidence in the field does not prove or disprove a position or professional opinion.

The analysis supporting the conclusion that the Applegate Trail was east of Rat Creek is substantial. It is significant that the four 1800s surveyed sites on the *Trail* in Rat Creek support the conclusion that the *trail* was east of Rat Creek. These surveys satisfy the general rule that the closer in time the evidence is in relation to the trail under investigation, the more reliable that evidence becomes. They are also primary sources.

Map 1	1855 GLO Survey/1856 GLO Map (partially surveyed road)
Map 1B	1855 Railroad Survey Map (surveyed road)
Map 2	1874 Josephine County's First Road (surveyed road)
Map 3	1893 GLO Survey/1894 GLO Map (partially surveyed road)

The two GLO surveys satisfy the general rule that the closer in time the evidence is in relation to the trail under investigation, the more reliable that evidence becomes. They are also primary sources. The 1855 GLO survey for location JA-16, Old Stage Road and the 1893 GLO survey for the location JA-15, South Rat Creek have features accurately located on section lines. They are conclusive proof that sites along the *Trail* were east of Rat Creek. However, as a general rule, accuracy on GLO plats will exist only where the *Trail* intersects a section line and the location of the Trail between JA-15 and JA-16 needs corroboration.

Partial support comes from the 1856 and 1894 GLO maps whose features are accurately located on section lines. Informed surveyors filled in the blanks between GLO surveyed sites JA-15 and JA-16 (i.e., the linear Rat Creek and Trail were plotted with information from the field even though it was not surveyed).

The 1874 Josephine County road survey east of Rat Creek with the evidence of the surveyed locations of JA-15 and JA-16 was conclusive support for the *Trail* being located east of Rat

Creek. The 1874 road survey satisfies the general rule that the closer in time the evidence is in relation to the trail under investigation, the more reliable that evidence becomes. It is also a primary source.

The 1895 Josephine County map is a significant property map of important landowners with large holdings, probably in some way based on the GLO maps and assessor maps. The *Trail* is located east of Rat Creek on this map. The 1895 map is the only local comprehensive property map of Josephine County in the 1800s. It satisfies the general rule that the closer in time the evidence is in relation to the trail under investigation, the more reliable that evidence becomes. It is a primary source, but it is not a surveyed map.

The analysis supporting the question that the Applegate Trail, or portions of the Applegate Trail might have been west of Rat Creek is not considered substantial when compared to the conclusive evidence supporting the location of the Trail east of Rat Creek..

Study Area 2's terrain supported the "non-sideling" criteria needs of a wagon (Map 15). Traces were not observed except within 400' - 500' north of JA-15, mostly just west of the I-5 boundary fence. Study Area 1, Section 1 (Map 15) should be revisited per the recommendation.

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Appendix A. Maps Of Rat Creek (Section 14. T.34S., R.6W., WM): 1856 - 2000

The following 25 maps were considered in the analysis concerning the location of the *Trail* in upper Rat Creek. The dates of the maps range from 1856 through 2000.

- Map 1. 1855 GLO Survey/1856 GLO Map (partially surveyed road)
- Map 1B 1855 Railroad Map (surveyed road)
- Map 2. 1874 Josephine County's First Road (surveyed road)
- Map 3. 1893 GLO Survey/1894 GLO Map (partially surveyed road)
- Map 4. Hugo's Applegate Trail At Mt. Sexton: 1855 - 1893 (Map 13).
- Map 5. 1895 Official County Map
- Map 6. 1904 (Reprinted 1923) USGS Riddle Quadrangle (surveyed roads)
- Map 7A. Old Road North Sexton Pass
- Map 7B. Roads Identified: O&C Revestment Act on June 9, 1916
- Map 8. 1922 Oregon Highway Department's Transit Notes & Maps For Pacific Highway (surveyed roads, but map not developed)
- Map 9. 1932 Metsker Map, Josephine County, Oregon
- Map 10. 1940 Sexton Mt. Construction Right-Of-Way Map (surveyed roads)
- Map 11. 1954 USGS Glendale, Oregon Quadrangle (surveyed roads)
- Map 12.A. 1955 Metsker Map, Josephine County, Oregon
- Map 12.B. 1959 BLM Aerial Photograph
- Map 13. 1970 Metsker Map, Josephine County, Oregon
- Map 14A. 1998 Merlin Quadrangle (surveyed roads)
- Map 14B. 1874 Josephine County Road & 1998 Rat Creek Analysis (surveyed roads)
- Map 14C. 1874 Road In Section 14 Of Rat Creek
- Map 15. SOU August 31, 2010 Field Work on North Side of Sexton Pass In South Fork of Rat Creek: Section 14. T.34S., R.6W., WM
- Maps 16 Multiple Secondary Source Maps (maps referenced but not web published)
 - 1. *Scott Applegate Trail Atlas & Gazetteer*
 - 2. *The South Road And The Route Across Southern Oregon*
 - 3. *The Applegate Trail of 1846, A Documentary Guide to the Original Southern Emigrant Route to Oregon*
 - 4. *Maps of the California Trail*
- Map 17. 2010 Buried Cable Route In Rat Creek

All the maps have a pdf file attached to this paper and/or a web address where the map is located.

Map 1. 1855 GLO Survey/1856 GLO Map

This 1856 GLO map is a surveyed map with features accurately located on section lines.

It is significant that the only surveyed 1855 GLO point on the *Trail* in Rat Creek is JA-16 Old Stage Road location. The *Trail* location is east of Rat Creek. JA-15 Old Stage Road was not surveyed until later in 1893; its location was estimated in 1856 east of Rat Creek, but to far east per the 1893 surveyed location.

The 1855 GLO surveyed point for the *Trail* is east of Rat Creek. The 1856 GLO map places the Applegate Trail east of, and parallel to, unnamed creek (Rat Creek). The average distance of the *Trail* from Rat Creek per the GLO map was 370', a 5' difference from the only surveyed point, JA-16, which was 365 feet east of the *Trail*.

In summary, the average distance of the *Trail* from Rat Creek between JA-15 and JA-16 at five east-west direction lines was 370' (draft non-published notes). The distance from JA-16 to creek was the only surveyed distance. There was no significant difference between the road's distance to the creek from JA-15 north ½ mile and JA-16 south ½ mile. The northern ½ mile width averaged 389' and the southern ½ mile width averaged 397'. Both of these averages are within 24' - 32" of the 365' at the surveyed JA-16. What we have is near parallel lines (i.e., unnamed Rat Creek and the *Trail*).

Map 1B. 1855 Railroad Map

Abbot, Henry L. *Report of Lieut. Henry L. Abbot, Corps of Topographical Engineers, upon Explorations for a Railroad Route from the Sacramento River to the Columbia River, made by Lieut. R. S. Williamson, Corps of Topographical Engineers, assisted by Lieut. Henry L. Abbot, Corps of Topographical Engineers, 1855.* United States War Department. *Reports of explorations and surveys, to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean.* Made under the direction of the Secretary of War, in 1853-4. House of Representatives Exec. Doc. No. 91, 33rd Congress, 2d Session. Nicholson, Washington, 1856.

Page 38. "*The chief obstacles would be encountered in passing from the Sacramento valley to Shasta valley, and in crossing the Siskiyou mountains, the Umpqua mountains, the Grave Creek Hills in Rogue River valley, and Long's Hills in Umpqua valley.*" [emphasis added]

Page 108. "*November 2. — . . . Wolf and Grave creeks are separated by high and steep hills, covered with thick timber and underbrush. On reaching Wolf creek we found Captain Smith in camp, near a house surrounded by a small stockade. . . . Between Grave and Jump off Joe creeks the road passed over a steep and heavily timbered divide. The Indians had killed two men in charge of a pack train on this hill, and the half burned remains of their wagon and packs were still to be seen.*"

Map 1B is a map of Hugo's area of interest part of a larger map of western Oregon prepared by Lieutenant Henry L. Abbot and Lieutenant R. S. Williamson of the U.S. Army Topographical Engineers in 1855. It is not known whether the 1855 Railroad Map is a surveyed map. It is presumed to be surveyed which means there are probably survey notes for the *Trail*.

Obvious named features on the 1855 railroad map include: Rogue River, Applegate River, Jumpoff Joe Creek, Wolf Creek, Jacksonville, Fort Lane, Table Rock, Harris Rancho, and the Six Bit House. What do 75A, 76A, and 77A mean? Perhaps they are surveyed locations? In Hugo's area of interest unnamed Grave Creek, Louse Creek, and Rat Creek are also obvious. Red Mountain and Walker Mountain as well as the Granite Hill Road pass can be clearly identified, but strangely, Sexton Mountain does not stand out as much. The Applegate Trail is clearly mapped east of unnamed Rat Creek.

Map 2. 1874 Josephine County's First Road Josephine County, Oregon Road Viewers Report as Road Number 12 (Book 1, Pages 40-45, May 20, 1874)

This 1874 county road is a surveyed road with many features accurately located along the road, but this survey does not tie into any surveyed corner or monument and, therefore, it can not be accurately located as a normal local survey would be that was tied to a monument. Map 2 includes the 12 surveyed points within Section 14 and the adjacent *Trail* north and south of Section 14 (Maps 14B & 14C).

On July 11, 1997, Bob Chard, Engineering Technician III, Josephine County Public Works, developed a report on a road established by the Josephine County Commissioners on April 9, 1874 (Commissioner's Book 2, Page 261). Alex Watts, County Surveyor at that time, did a survey of the route. It is recorded as part of the Josephine County, Oregon Road Viewers Report as Road Number 12 (Book 1, Pages 40-45, May 20, 1874).

Chard determined that the old 1874 road is partially composed of today's Warner Road, Railroad Avenue, Edgewood Road, Sunny Valley Loop, Old Stage Road (Map 2), Hugo Road, Oxyoke Road, Monument Drive, Grants Pass Road, Camp Joy Road and Highland Avenue.

Chard was able to establish the 1874 road survey and its relationship to today's roads with an AutoCAD program by plotting the survey notes. Applicable here are the survey notes (i.e., points) for Section 14 (Maps 14B & 14C).

Henry B. McMichael was an early settler in the Grave Creek drainage. He would own several large parcels of land. In 1869 he purchased 40 acres and built a house (Point 180) along the *Trail* in Rat Creek (Cash-Entry, May 1, 1869, Patent No. 2060) north and adjacent to Section 14 (Map 2).

Map 3. 1893 GLO Survey/1894 GLO Map

This GLO map is a surveyed map with features accurately located on section lines.

It is significant that the only two GLO surveyed 1800s points on the *Trail* in Rat Creek are the 1893 GLO JA-15 South Rat Creek location and the 1855 GLO JA-16 Old Stage Road. The *Trail* location for both surveyed sites is east of Rat Creek.

The 1856 GLO map places the Applegate Trail east of, and parallel to unnamed Rat Creek. There is a substantial difference in the 1856 and 1894 GLO maps as to the distance from Rat Creek. The average distance of the 1893 *Trail* from Rat Creek was 206' versus the average distance of 370' in 1856. However, there was a significant difference between the distance from the creek to the road from JA-15 north ½ mile and JA-16 south ½ mile. The northern ½ mile width averaged 285' and the southern ½ mile width averaged 130'. In general, the width distance on the 1894 GLO map between the creek and the *Trail* increased from south to north.

Map 4. Map 13. Hugo's Applegate Trail: Mt. Sexton

This is not a surveyed map. Map 13. Hugo's Applegate Trail: Mt. Sexton web published at: <http://www.hugoneighborhood.org/applegat.htm> (see Map 7).

Map 5. 1895 Official Josephine County Map Koch, Joseph , Draughtsman. 1895 *Official Josephine County, Oregon Map*. Scale 1 inch = 1 mile. Meston - Dygert Book M'F'G. Portland, OR.

This is not a surveyed map. It is a significant property map of important landowners with large holdings, probably in some way based on the GLO maps and assessor maps. The *Trail* is located east of Rat Creek. It is the only local comprehensive property map of Josephine County in the 1800s, and as such it is assumed that local landowners' knowledge in some way assisted in the development of this map. Web Page: <http://www.hugoneighborhood.org/map13.htm>.

Map 6. 1904 (Reprinted 1923) USGS Riddle Quadrangle

Goode, R. U., Geographer in Charge. Edition of 1904, Reprinted in 1923. *Oregon Riddle Quadrangle*. Department of Interior, U. S. Geological Survey. Scale 1:125,000. Contour 100'. Surveyed in 1901 - 1902.

This USGS map is a surveyed map with features accurately located. The scale of the Riddle Quadrangle is such that the road between JA-15 and JA-16 in 1901 - 1902 appears to be in the bottom of the creek (i.e., you can not tell if road is west or east of Rat Creek; It is a relatively small scale map of a large area versus large scale maps of smaller areas).

Map 7A. Old Road North Sexton Pass

Map 7A is not a surveyed map. A 2005 field trip to the north side of Mt. Sexton found a major unpaved roadbed at a lower elevation than the 1920 - 1921 paved Pacific Highway to the east. Three GPS way points locate the old *Trail*: Way Point 2 - Orchard, Way Point 3 - Three Ditches, and Way Point 4 - Cedar Grove.

Map 7A is web published as Map 13, Hugo's Applegate Trail: Mt. Sexton at: <http://www.hugoneighborhood.org/applegat.htm>.

Map 7B. Roads Identified: O&C Revestment Act on June 9, 1916

The Chamberlain-Ferris Act (39 Stat. 218) of June 9, 1916 was an Act of the United States Congress that ruled that 2,800,000 acres (11,300 km) of the original 4 million granted to the Southern Pacific Company (successor to the Oregon and California Railroad) in California and Oregon were "revested" to the United States, and put under the control of the General Land Office, which was to dispose of the lands and timber through auction sales.

It is not known what mechanism was used to determine the lands to be revested to the U.S. It is presumed that there were maps that identified such lands. There are maps c.a., 1917 that identify Oregon and California Railroad Lands. The Douglas County Abstract Company was known to make maps for, among other purposes, titles. Did the government make its own maps to determine lands for revestment?

Maps by the Douglas County Abstract Company, Roseburg, Oregon used the following terms.

- HE Homestead Entry
- FHE Final Homestead Entry
- Fct Final Certificate
- TCE Timber Cash Entry
- PE Pre-emption Entry
- Ind Allot Indian Allotment
- T App Timber Application Filed
- O & C Oregon and California Railroad Lands
- NPRR North Pacific Railroad Lands
- S State or School Lands
- FLS Forest Liew Selections
- WRCo Wagon Road Grant

Map 7B. *Roads Identified: O&C Revestment Act on June 9, 1916*, identifies a road through Rat Creek in Section 14. What is not certain is whether the map is a government map generated as a result of the O&C Revestment Act, or a map developed by a commercial company like the Douglas County Abstract Company.

At this point the map will be assumed to have been produced by the Douglas County Abstract Company c.a., 1917. It identifies four landowners in Section 14: Willaim Light, J.H. Smith, G. Penn and Harry L. Smith. It also identifies a road through Section 14 east of an unnamed creek (i.e., Rat Creek).

The east road bend in the middle of Section 14 is similar in shape to the 1874 County Road identified on Map 2, but especially on Map 14B (base map is 1998 Merlin Quadrangle). However, the bend on Map 14B is approximately ¼ mile while the east bend in the c.a., 1917 map (Map 7B) is almost ½ mile to the center of the section. This difference bears investigation. Perhaps there was an evolution of the *Trail* higher from the original Applegate Trail which was

lower in elevation and nearer Rat Creek? The significant point is that all the referenced maps locate the *Trail* east of Rat Creek.

For further research: Records of the Bureau of Land Management (BLM) 49.15.1 Records of the Oregon and California Railroad Revested Lands..... Maps (45367 items).

Map 8. 1922 State Highway Department's Transit Notes & Maps For Pacific Highway In Rat Creek

This map is a surveyed map and features can be accurately located. Map 8 was not constructed.

HNA&HS only have maps north to Oxyoke Road and Hugo Road. They are for the Hugo area in locating dominate features in the area of the Pacific Highway. Corresponding maps for Rat Creek might be valuable, but the transit notes for Rat Creek were not helpful.

Map 9. 1932 Metsker Map, Josephine County, Oregon

The 1932 Metsker Map is not a surveyed map. It is a property map assumed to be based upon the transposition of assessor information and GLO map information. Road features are not quality controlled like USGS maps.

The 1932 Metsker Map clearly shows a road west of Rat Creek between JA-15 and JA-16 and no roads on the east side except the Pacific Highway uphill to the east. The dark black line is the paved 1920 -1921 Pacific Highway in 1932.

The 1855 JA-16 *Trail* site plots in Rat Creek which is much further east than the 1932 road (today's Old Stage Road) which is west of creek. The 1893 GLO JA-15 *Trail* site plots on the 1932 road; road is west of Rat Creek if creek is extended south.

Reference Section III.B.3. and Map 13 for an explanation of the conflict between the road location on Map 9 and the GLO *Trail* sites.

Map 10. 1940 Sexton Mt. Construction Right-Of-Way Map Oregon State Highway Department. August 1940. Right of Way Map, Sexton Mt. Section. Pacific Highway, Josephine county. Scale 1" = 100'. Part 1 of 2, Drg. No. 5B-28-11.

The 1940 right-of-way map is a surveyed detailed engineered map at 1" equals 100' and features can be very accurately located. However, the majority of the *Trail* in Section 14 is outside of the right-of-way map and Map 10 was not constructed. The 1940 Sexton Mt. Right-Of-Way map did provide the following applicable information corroborating the *Trail* was east of Rat Creek for two *Trail* segments (1,100' in north and 600' in south) totaling approximately .3 miles.

1. The section line between sections 11 and 14 is the north boundary of Section 14. In the northern 1,100' of Section 14 the 1940 map locates the Light house, chicken house, and shed and the non-maintained portion of today's Old Stage Road (*Trail*) east of Rat Creek (Map 14A).

2. The section line between sections 14 and 23 is the south boundary of Section 14. The 1940 map locates the *Trail* and the 1864 Collins Telegraph line east of Rat Creek for 600' north of the section line between sections 14 and 23.

3. South of the section line between sections 14 and 23, east of I-5, and north of Mt. Sexton Pass the 1940 map locates a segment of the *Trail* (1,060' Applegate Trail North Sexton Pass I-5 East; also see Map 7 for old road found) that links JA-15 and the well known 310' segment of the *Trail* south of Mt. Sexton Pass (Applegate Trail inventory brochures 18B - 18L at <http://www.hugoneighborhood.org/inventorybrochures.htm>).

4. At Mt. Sexton Pass the 1940 map locates the route of the *Trail* through the John S. W. Smith homestead in the form of a house, barn, garage, hog house, and two other structures. In 1877 John and Susan Smith took up a one hundred and sixty acre homestead in a meadow on the north side of Sexton Mountain. A majority of this meadow was taken out by the Smith Hill Pass cut (i.e., today's Interstate 5 freeway cut at Mt. Sexton Pass). At the time they homesteaded, the overland stage road ran through this property. On September 16, 1896 John S. W. Smith was issued a homestead patent for 160 acres in Hugo, Oregon. John and Susan farmed their homestead until just after the turn of the 20th century.

5. South of the Smith homestead the 1940 map locates the same county road (*Trail*) just south of Mt. Sexton pass at the well known 310' segment of the 1853 military road.

In summary, the 1940 map is substantial proof that the *Trail* was east of Rat Creek for approximately .3 miles, especially at the un-maintained section of today's Old Stage Road.

Map 11. 1954 USGS Glendale, Oregon Quadrangle

This 1954 USGS map is a surveyed map with features accurately located. The topo clearly identifies Rat Creek flowing north into Grave Creek. An East Fork of Rat Creek is identified, as well as the north-south drainage of South Fork Rat Creek (Map 11).

The 1920 - 1921 paved Pacific Highway clearly is identified in red, including the 1941 - 1942 cut at Mt. Sexton Pass.

The old Light house and the Liedecker's fishpond are identified at the confluence of Rat Creek and the East Fork of Rat Creek. This confluence is also the southern end of the non-maintained Old Stage Road east of Rat Creek (Map 11).

Except for the Copper Queen Road in the very northwest corner of Section 14, this USGS map identifies no roads west of Rat Creek in Section 14. It identifies the county maintained Old Stage Road in Section 11 and the non-maintained Old Stage Road in Section 14, both segments located east of Rat Creek.

Map 12.A. 1955 Metsker Map, Josephine County, Oregon

Map 12A, the 1955 Metsker Map, is not a surveyed map. It is a property map assumed to be based upon the transposition of assessor information. Road features are not quality controlled like USGS maps.

Map 12A clearly shows an improved road west of Rat Creek in Section 14 from JA-16 south to just past JA-15. Hugh Long owns the old Light homestead. The dark black line is the paved 1920 -1921 Pacific Highway in 1955. It has a 1942 improvement at Grave Creek where it bypassed part of the old Pacific Highway.

The 1855 GLO JA-16 *Trail* site location is much further east than the 1955 Metsker Map road which is west of creek. The 1893 GLO JA-15 *Trail* site location plots on the 1955 road which is west of Rat Creek if creek location is extended south.

A significant conflict is the 1954 USGS Glendale Quadrangle which shows what would become Old Stage Road on the east side of Rat Creek and no roads on the west side of Rat Creek.

Reference Section III.B.3 and Map 13 for an explanation of the conflict between the road location on Map 12A and the GLO *Trail* sites.

Map 12.B. 1959 BLM Aerial Photograph: M-JOS-27C-13 for Section 14 of Rat Creek

Map 12 B, the 1959 BLM aerial photograph M-JOS-27C-13 for Rat Creek, clearly locates a road associated with the buried fiber optics cable route on the west side of Rat Creek and the evolved *Trail* on the east side of Rat Creek.

Part of the 1959 road (*Trail*) is buried in the huge fill from the development of I-5 (i.e., basically just north of Site Visit No. 4, ODOT Monitoring Well to south of Site Visit No. 2 North Boundary of Study Area identified on Map 15).

The routes of the buried fiber optics cable and the *Trail* are in the same corridor at JA-15. They are parallel and close together from the junction of the South Fork of Rat Creek the Light house. They are in the same route from the Light house to the vicinity of JA-16.

Map 13. 1970 Metsker Map, Josephine County, Oregon

The 1970 Metsker Map is not a surveyed map. It is a property map assumed to be based upon the transposition of assessor information. Road features are not quality controlled like USGS maps.

The 1970 Metsker Map clearly shows an improved and unimproved road in Section 14 west of Rat Creek from JA-16 south to just past JA-15. R. R. Leidecker owned the old Light homestead. The biggest difference is the I-5 freeway (widest black line) built from Mount Sexton to Canyonville in 1965 - 1966 and the improved road west of Rat Creek.

The 1970 Metsker shows the improved road in the same location and length as the 1955 Metsker road and its junction with the Copper Queen Road on the west side of Rat Creek.

The 1855 JA-16 *Trail* site location plots east of the 1970 Metsker road in or just to the east of Rat Creek. The 1893 GLO JA-15 *Trail* site location plots on the 1970 Metsker road west of Rat Creek if the creek location is extended south.

A significant conflict is the 1954 USGS Glendale Quadrangle which shows what would become Old Stage Road on the east side of Rat Creek and no roads on the west side of Rat Creek.

Reference Section III.B.3 and Map 13 for an explanation of the conflict between the road location on Map 12A and the GLO *Trail* sites.

Map 14A. 1998 Merlin Quadrangle USGS. 1998. *Merlin Quadrangle*. 7.5 minute topographic series, scale 1:24,000, and contour interval 40 feet.

Map 14A is a USGS surveyed map with features accurately located. Except for the Copper Queen Road in the very northwest corner of Section 14, this USGS map identifies no roads west of Rat Creek in Section 14. The map clearly locates the main stem of Rat Creek between JA-15 and JA-16 and a road parallel and east of it in the north half of Section 14. The road parallel and east of Rat Creek has three segments:

1. Public Old Stage Road maintained by Josephine County.
2. Public Old Stage Road not maintained by Josephine County.
3. Private driveway to house in middle of Section 14.

The map also shows the Interstate 5 (I-5) Highway and segments of the old Pacific Highway.

It also shows the old Light house at the old fish pond and the house at the end of the un-maintained Old Stage Road paralleling Rat Creek.

Map 14B 1874 Josephine County Road & 1998 Rat Creek Analysis Josephine County, Oregon Road Viewers Report as Road Number 12 (Book 1, Pages 40-45, May 20, 1874; USGS. 1998. *Merlin Quadrangle*. 7.5 minute topographic series, scale 1:24,000, and contour interval 40 feet

Map 14B was a comparison analysis with an art program to plot the surveyed 1874 County Road (Map 2) in Section 14 of the 1998 USGS Merlin Quadrangle. The following are the actual survey points for the 1874 road (Map 2; Map 14C) and the AutoCAD Points established by Chard (Josephine County Public Works) for Section 14.

<u>AutoCAD</u>	<u>Links</u>	<u>Feet</u>	<u>Course</u>	<u>Feature</u>
Point 180	8.0	528'	S 2½" W	McMichael's House
Point 181	5.5	363'	S 31" E	

Point 182	10.0	660'	S 24" E	
Point 183	5.5	363'	S 4½" E	
Point 184	15.0	990"	S 25" E	Small Stream c. NW, Leave Road
Point 185	8.0	528'	S 12" E	
Point 186	5.0	330'	S 19" W	
Point 187	7.0	462'	S 12" W	Strike Road
Point 188	5.0	330'	S 24" W	
Point 189	13.0	858'	S 9" W	
Point 190	5.0	330'	S 4" E	
Point 191	12.5	825'	S 6½" W	Ascend Hill

The analysis was to compare how closely the 1874 road (12 site specific surveyed points) matched JA-15 and JA-16 without changing the 1874 survey for the distance and course of the AutoCAD points, and compare the location of the 1874 *Trail* in comparison to existing roads and Rat Creek. Operationally this meant to overlay the 1874 Point 181 with JA-16. The results were not perfect, but within the limitations of the art program the 1874 *Trail* (county road) was very close to both JA-15 and JA-16, and the private driveway in 1998 east of Rat Creek. It was much closer than anticipated. The 12 surveyed points provide detailed information for the route of the *Trail* between JA-15 and JA-16 and are considered the definitive proof that the *Trail* was east of Rat Creek.

More importantly was a comparison of how the 1874 road matched with locations JA-15 and JA-16 plotted on the modern 1998 Merlin Quadrangle without changing the 1874 survey for the distance and course of the AutoCAD points. The purpose was also to locate the *Trail* in comparison to existing roads and Rat Creek. The results were not perfect, but the 1874 road was very close to JA-15 and JA-16 and the 1998 private driveway, with of the *Trail* east of Rat Creek (Appendix A, Map 14A, Map 14B, & Map 14C). The comparison also explained the location of JA-16 uphill from the existing Old Stage Road. For example, Point 181, Point 182, and Point 183 corroborate the *Trail site* JA-16 Old Stage Road being uphill from the existing non-maintained Old Stage Road (Point 181) with the *Trail* staying at that elevation going south to the approximate area just before the Light house (Point 182) where its descends down to the Old Stage Road at today's private gate (Point 183, Appendix A, Map 14B, Map 14C).

The 1874 road survey with the evidence of the GLO surveyed locations of JA-15 and JA-16 was conclusive support for the *Trail* being located east of Rat Creek.

Map 14C **1874 Josephine County Road & 1998 Rat Creek** Josephine County, Oregon
 Road Viewers Report as Road Number 12 (Book 1, Pages 40-45, May 20, 1874;
 USGS. 1998. *Merlin Quadrangle*. 7.5 minute topographic series, scale 1:24,000,
 and contour interval 40 feet

Map 14C is the 1874 map of the 12 surveyed points within Section 14.

Map 15. SOU August 31, 2010 Field Work on North Side of Sexton Pass In South Fork of Rat Creek: Section 14. T.34S., R.6W., WM

On August 31, 2010 Chelsea Rose, Staff Archeologist, Southern Oregon University (SOU), was the trip leader for a SOU Applegate Trail (*Trail*) field trip into the Rat Creek drainage of northern Josephine County, Oregon. The group's (i.e., Rose, Julia Johnson, Staff Archeologist, SOU; Roger Roberts, Volunteer; Chuck Eccleston, Volunteer; Kelly Rarey, Volunteer; and Mike Walker Volunteer) purpose was to visually look for traces of the *Trail* within the I-5 corridor on the north side of Mt. Sexton Pass in the South Fork of Rat Creek. The team conducted a pedestrian survey of the terrain of a surveyed 1855 General Land Office (GLO) site, JA-15 South Rat Creek, and north approximately .4 miles (Section 14. T.34S., R.6W., WM, Josephine County, Oregon; Map 15).

Approximate North-South Distances (Map 15)

Study Area: Section 1

Site Visit No. 3 Location to Site Visit No. 4 Location .15 miles

Study Area: Section 2

Trail Site JA-15 North to Site Visit No. 4 Location .25 miles

Study Area: Total

Trail Site JA-15 North to Site Visit No. 3 Location .4 miles

On this field trip the issue was raised concerning the location of the *Trail* in Rat Creek. Was the *Trail* located on the east side of Rat Creek, or was the *Trail*, or parts of the *Trail*, located west of Rat Creek, and/or did it, or parts of it, evolve to be located west of Rat Creek?

The authors believe the preponderance of evidence is that the *Trail* was located east of Rat Creek with significant segments within the present I-5 corridor. However, there was still the question from the August 31 field trip. Was the *Trail*, or parts of the *Trail*, west of Rat Creek and/or did it, or parts of it, evolve to be located west of Rat Creek. For example, in the northern part of the study area (i.e., northern .15 miles of the .4 mile long study area - Map 15) the team viewed the terrain as steep and mountainous on the east slopes of Rat Creek until a ways from the creek where two major old logging skid trails were located parallel to the creek. The ground was also steep here with the fill of I-5 adjacent and just uphill of the two skid roads.

Topographic features that serve to confine wagon travel can aid interpretation of sketchy diary accounts and GLO plats. However, emigrant trails often defy modern reasoning on the route these trails should have taken. Be cautious, therefore, of second guessing emigrant reasoning and practices.

In this .15 mile long area there were almost zero bottom lands surrounding the creek. The terrain had a dense understory of vegetation and large down firs making it difficult to travel and see any traces, if they were there. It was also difficult for the team to visual a slope meeting the "non-

sideling” criteria necessary for covered wagons without tipping over. A short distance above Rat Creek to the west was a dirt road paralleling the creek. The ground in this area below the west road was dense and natural (Map 15).

Maps 16 Multiple Secondary Source Maps

The following secondary sources have maps of the *Trail* through Hugo's area of interest from Louse Creek in the south to Grave Creek in the north. However, none of them are at a scale that the location of the *Trail*, either on the west or east side of Rat Creek, can be determined (i.e., they are relatively small scale maps of large areas versus large scale maps of smaller areas).

1. Davis, Charles George. 1995. *Scott Applegate Trail Atlas & Gazetteer*. Soap Creek Enterprises, North Plains, OR.
2. Davis, Charles George. 2000. *The South Road And The Route Across Southern Oregon*. Emigrants West.com, North Plains, OR.
3. Emerson, William. 1996. *The Applegate Trail of 1846, A Documentary Guide to the Original Southern Emigrant Route to Oregon*. Ember Enterprises, Ashland, OR.
4. Franzwa, Gregory M. 1999. *Maps of the California Trail*. The Patrice Press. Tucson, AZ.

Map 17. 2010 Buried Cable Route In Rat Creek

See Appendix B.