

To: Steve Gramm, SDDOT	
From: HDR	Project: I-190/Silver St. Study
CC: file	
Date: 5 Jan 2012	Job No: HP5596(14), HDR 137390

RE: Interstate 190 & Mount Rushmore Road Connection

The concept of connecting Interstate 190 to Mount Rushmore Road at the Omaha Street intersection has been studied for many years. The concept continues to appear attractive because it would eliminate the need to turn at two adjacent signalized intersections on Omaha Street and provide a smooth travel path for visitors traveling through Rapid City. This memorandum summarizes the analysis associated with this realignment concept and provides a summary finding.

Background

Interstate 190 was built in the late 1950's to provide a connection between the Interstate Highway System and the City of Rapid City. At the south end of this four lane divided interstate segment, it was aligned to connect with West Boulevard which played a different role in the city's transportation system than it currently does. There were perceived benefits related to directing visitors to a boulevard-type street that would allow them to either bypass the central business district or turn on Omaha Street or St. Joseph Street to reach downtown businesses. As shown in the attached aerial photo mosaic from 1960, the area along the north side of Rapid Creek and near the current Rapid City Central High School property was previously fully developed and occupied by homes and small businesses. This would have made an alternative connecting I-190 to Mount Rushmore Road unsuitable for road construction if any other alternative with less impact was available. The conversion of land use in this neighborhood from residential/commercial to public park and school lands resulting from the greenway created after the 1972 flood made the land required for the realignment/connection nearly unobtainable under Federal law requirements.

The concept of realigning I-190 to connect to Mt. Rushmore Road was considered in 2000 as part of the Decennial Interstate Corridor Study, conducted for SDDOT. A summary from the 2000 Decennial Interstate Corridor Study is attached to this memorandum. At the time, this Mt. Rushmore Road connection alternative was screened from further consideration for the following reasons:

- The realignment would have severe environmental impacts on the floodplain, sensitive creekside areas, public parks, and other public properties (school lands).
- The realignment would require an estimated \$5.5 million dollars in additional construction costs compared to alternatives that use the existing I-190 alignment. The \$5.5 million does not include costs for right-of-way acquisition, tennis court demolition, and associated improvements on school property.

Current Interchange Study & Environmental Analysis

The 2010 edition of the Decennial Interstate Corridor Study reviewed the I-190/Silver Street interchange and recommended several concepts for improving the interchange while keeping I-190 on its current alignment. SDDOT then moved forward with a more detailed study of the interchange area and reconstruction alternative to investigate jurisdictional issues, examine environmental issues, and determine a preferred design concept. That detailed study began in 2010 and is currently resulting in the Interchange Modification Justification

Report and Environmental Assessment documents required under Federal law and National Environmental Policy Act (NEPA) processes.

The concept of connecting I-190 to Mt. Rushmore Road was again revisited during the first Phase of the current study and was again screened from further consideration because of the comparable additional costs and environmental impacts.

It's important to note that Federal law is clear about the environmental issues related to realigning I-190 to connect with Mt. Rushmore Road. Federal law governs design and environmental issues related to the Interstate Highway System, spending of Federal highway funds on projects that may have adverse environmental impacts, and highway projects that may impact park land or other resource land that was developed using Federal funds. The park and floodway properties that exist along the potential I-190/Mt. Rushmore Rd. alignment were developed using Federal funds.

23 USC 138 and 49 USC 303 state:

“After the effective date of the Federal-Aid Highway Act of 1968, the Secretary shall not approve any program or project (other than any project for a park road or parkway under section 204 of this title) which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, or any land from an historic site of national, State, or local significance as so determined by such officials unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use.”

Also, Federal laws require that City and State governments repay any Federal money that was used to develop park or school land that is subsequently converted to non-recreational use. In practice, the provisions of Federal law make it very difficult, if not impossible, for Federal officials to approve a realignment project with impacts and property acquisition like the I-190/Mt. Rushmore Road connection when feasible alternatives exist that don't result in the same level of environmental impact.

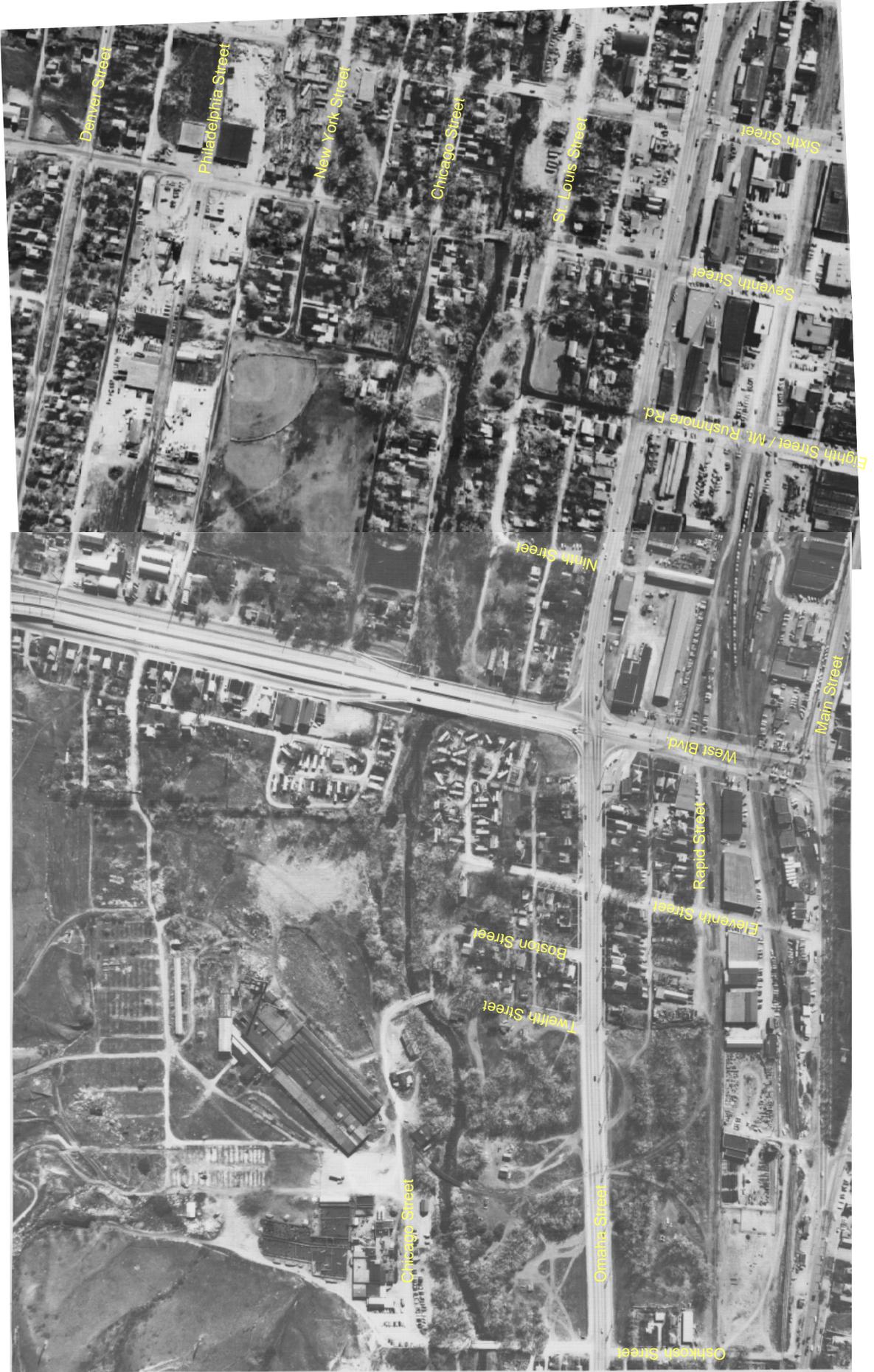
Finding

The realignment of I-190 to create a direct connection to Mt. Rushmore Road may appear to be an attractive concept for regional travel, but it would result in significant additional costs and environmental impacts. The environmental impact when compared to other feasible alternatives means that the concept cannot be approved under Federal law.

Rapid City - 1952



1960



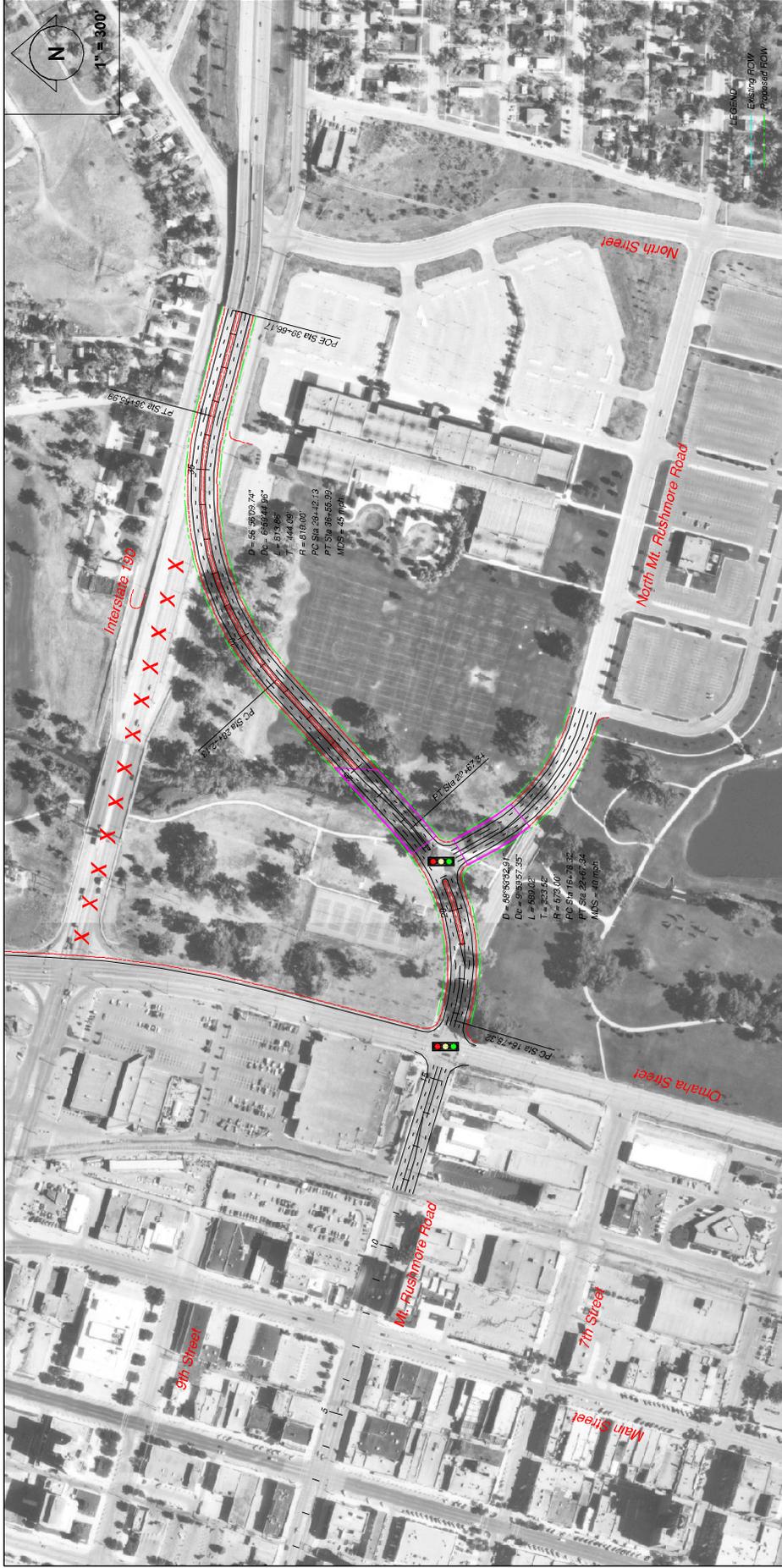
SDDOT Interstate Corridor Study - Phase II

Mount Rushmore Road Connection

The feasibility of realigning Interstate 190 at Omaha Street to provide a direct connection to Mount Rushmore Road (US 16) was preliminarily evaluated in this Phase II Investigation. A potential conceptual alignment for the direct connection is shown on Figure 19. A larger radius of 819 feet was used for the north horizontal curve and a radius of 573 feet was used for the south horizontal curve near Omaha Street. The north radius would achieve a design speed of 45 mph, which is essential due to the higher speeds of Interstate 190 to the north, while the south radius would achieve a design speed of 40 mph, which is acceptable for vehicles approaching a signalized intersection. It is anticipated that traffic signals would be required at the intersection of Interstate 190 and the realigned North Mount Rushmore Road and at the intersection of Interstate 190 and Omaha Street. There would be approximately 500 feet of distance between the two intersections. The existing sections of North Mount Rushmore Road and Interstate 190 could be removed.

Access from parallel ramps serving North Street is provided to Interstate 190 just north of the existing structure for Rapid Creek. Ramps may need to be closed at the highway and rerouted to North Street and North Mount Rushmore Road. Two new structures would be required over Rapid Creek for the proposed alignment. The structure needed for Interstate 190 would be at a skew to Rapid Creek causing a longer structure and possibly more impacts to the floodplain of Rapid Creek. The radii discussed above were used to minimize the impacts to the existing linear park that has been developed through the heart of the City. The trail system for the park and access to the tennis courts would need to be realigned approximately where the North Mount Rushmore Road and Interstate 190 intersection is proposed to be located.

Because of the significant impacts of the I-190 realignment as shown, the SDDOT is not pursuing this connection at this time.

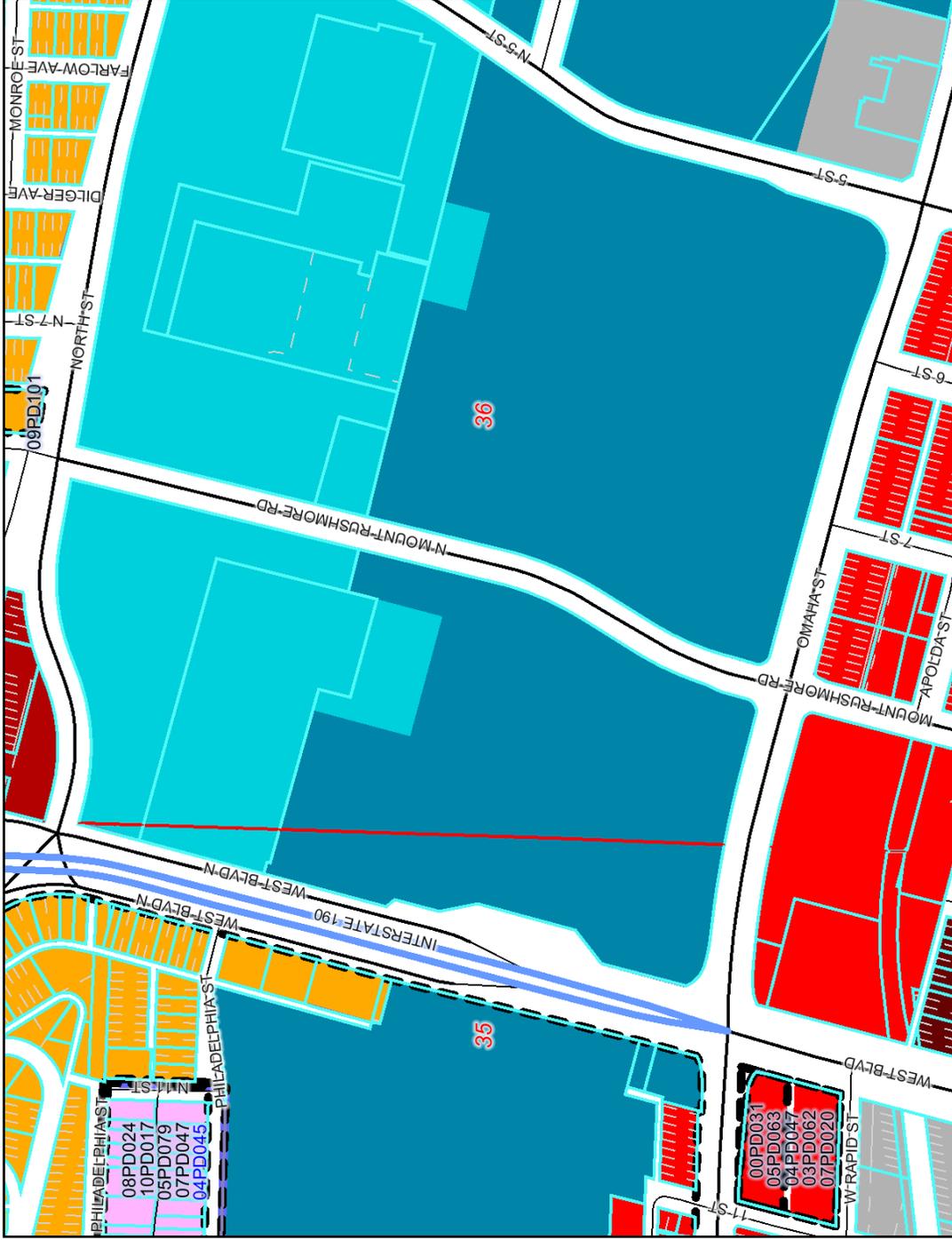


**KIRKHAM
MICHAEL**
CONSULTING ENGINEERS

Figure 19
I-190/Mt. Rushmore Road Connection

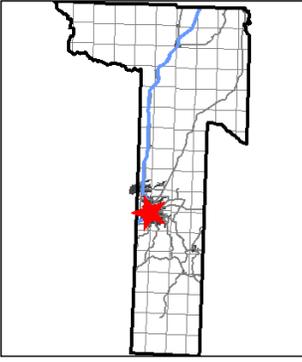
South Dakota Interstate Corridor Study

Current Zoning



0 600 1200 1800 ft.

Map center: 44° 5' 11.1" N, 103° 13' 45.6" W



Legend

- Rapid City Zoning Districts**
- Airport zoning district
 - Business park district
 - Central business district
 - Civic center district
 - Cement Plant
 - Flood hazard district
 - General agricultural district
 - General commercial district
 - High density residential district
 - Heavy industrial district
 - Hotel-motel district
 - Low density residential district 1
 - Low density residential district 2
 - Light industrial district
 - Medium density residential district
 - Mining and earth resources extraction district
 - Mobile home residential district
 - Neighborhood commercial district
 - No use district
 - Office commercial district
 - Park forest district
 - Public district
 - Neighborhood shopping center district
 - Community shopping center district



Scale: 1:6,094

DISCLAIMER: This map is provided "as is" without warranty of any representation of accuracy, timeliness, or completeness. The burden for determining accuracy, completeness, timeliness, merchantability, and fitness for the appropriateness for use rests solely on the user. Rapid City and Pennington County make no warranties, express or implied, as to the use of the map. This map is provided for informational purposes only and is not intended for use in any legal proceeding. The user agrees to recognize and honor in perpetuity the copyrights and other proprietary claims for the map(s) established or produced by the City of Rapid City or the vendors furnishing said items to the City of Rapid City.