WELD COUNTY ROAD 29

ACCESS CONTROL PLAN
Weld County Road 29

Access Control Plan

Prepared in cooperation with:

The Town of Eaton
The Town of Ault
The Town of Pierce
The Town of Nunn
The Town of Severance

Weld County

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I. INTRODUCTION

A. Project Background

Weld County Road (WCR) 29 is a unique for now Weld County road west of US Highway 85 because of its continuous right-of-way in place between State Highway 392 and WCR 100. WCR 100 is a collector road that connects to Interstate 25 to the west at Wellington. The Weld County Board of Commissioners decided it would like to see an Access Control Plan (ACP) developed for this corridor due to increased traffic and the geographic proximity to the surrounding towns. Weld County staff, led by Weld County Commissioner Mike Freeman, began meeting with elected officials and staff from the towns of Severance, Eaton, Ault, Pierce, and Nunn in June of 2016 and a coalition was formed to meet monthly to discuss the development of the ACP.

A map of the study area is depicted in Figure 1.
Fig. 1: Study Area Map

B. Purpose

Each access point creates potential conflicts between through traffic and traffic using that access. Each conflict is a potential crash. Access management improves safety by separating access points so that turning and crossing movements occur at fewer locations. This allows drivers passing through an area to predict where other drivers will turn and cross, and provides space to add turn lanes.
Agreeing to certain common standards and policies for the corridor helps ensure the communities with jurisdiction on the corridor are collaborating on regional goals that are best for the travelling public and not working at cross purposes. For example, if one community were to promote the corridor as a truck route and another to discourage trucks from using it, that could result in a waste of resources and frustration for the people involved, including motorists.

C. Goals and Objectives

One of the first things the coalition did was develop a list of goals for the WCR 29 ACP. The main objective of the WCR 29 ACP is to provide safe access to properties, which can be accomplished through the following goals:

1. Improve corridor safety.
2. Coordinate construction improvements.
3. Promote economic vitality.
4. Protect infrastructure investments.
5. Maintain the functional integrity of the corridor (safety, mobility, & capacity).

D. Process

The steps to develop this ACP are shown in Figure 2 below:
II. INVENTORY OF EXISTING CONDITIONS

A. Roadway Characteristics

The southern half of the WCR 29 corridor traverses somewhat hilly terrain that can, in places, obstruct the view of oncoming traffic. More detail on these sight distance hazards is presented in Chapter III, Access Requirements.

WCR 29 is paved from SH 392 to north of WCR 70 and between WCR 74 and SH 14 with two travel lanes but no shoulders or very narrow shoulders, sometimes due to steep roadside ditches near the roadway. The pavement is deteriorated in some areas. Between WCR 70 and WCR 74 Weld County Public Works treats the road surface with magnesium chloride for dust control due the traffic volumes. North of SH 14, the road is untreated gravel.

The ditches and fences in areas along the corridor has naturally limited the location of accesses. Other areas have no fences or ditches, which makes it possible for vehicles to enter and exit the road at any point, which can be a safety concern for motorists already on the roadway.

The current right-of-way width is 60 feet. Power lines and water lines are in place within the right-of-way for much of the corridor. There are stop signs on WCR 29 at SH 392, WCR 74, SH 14, and WCR 100.
North WCR 98, the road is within Nunn’s town limits and maintained by the town, where it is called Eisenhower Road. WCR 29 ends at WCR 100 approximately one-half mile west of US 85.

The table below gives the most recent traffic volume data on WCR 29.

Table 1: WCR 29 Traffic Volumes

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Annual Average Daily Trips (AADT)</th>
<th>Percent Truck Traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCR 90 to WCR 96</td>
<td>10/15/2015</td>
<td>133</td>
<td>24</td>
</tr>
<tr>
<td>WCR 88 to WCR 90</td>
<td>10/15/2015</td>
<td>121</td>
<td>24</td>
</tr>
<tr>
<td>WCR 86 to WCR 88</td>
<td>5/17/13</td>
<td>130</td>
<td>18</td>
</tr>
<tr>
<td>WCR 84 to WCR 86</td>
<td>6/13/2014</td>
<td>219</td>
<td>22</td>
</tr>
<tr>
<td>SH 14 to WCR 84</td>
<td>3/9/2017</td>
<td>376</td>
<td>18</td>
</tr>
<tr>
<td>WCR 80 to SH 14</td>
<td>7/22/2016</td>
<td>456</td>
<td>22</td>
</tr>
<tr>
<td>WCR 78 to WCR 80</td>
<td>7/22/2016</td>
<td>466</td>
<td>20</td>
</tr>
<tr>
<td>WCR 76 to WCR 78</td>
<td>7/22/2016</td>
<td>582</td>
<td>19</td>
</tr>
<tr>
<td>WCR 74 to WCR 76</td>
<td>7/20/2016</td>
<td>616</td>
<td>17</td>
</tr>
<tr>
<td>WCR 72 to WCR 74</td>
<td>3/9/2017</td>
<td>397</td>
<td>26</td>
</tr>
<tr>
<td>WCR 70 to WCR 72</td>
<td>3/9/2017</td>
<td>406</td>
<td>27</td>
</tr>
<tr>
<td>SH 392 to WCR 70</td>
<td>1/29/2015</td>
<td>368</td>
<td>26</td>
</tr>
</tbody>
</table>

B. Crash Data

There were 17 reported crashes in the subject area between the beginning of 2014 and the end of 2016, one of which was a fatal crash on February 21, 2015 at the intersection of WCR 74 and WCR 29. There were four other crashes that resulted in injuries.
Most of the crashes were reported as caused by distracted drivers, which is in line with the nationwide trend. Crash data by cause is presented below.

Fig. 4: Crash Data by Cause
Not surprisingly, the most dangerous places on the corridor are at the busiest intersections. The graph below shows where the crashes took place.

![Crash Data by Location](image)

**Fig. 5: Crash Data by Location**

### C. Functional Classification

Until recently, Weld County had no designated collector or arterial roads between State Highway 14 and WCR 100 west of WCR 33. In May of 2017, the Weld County Board of Commissioners adopted on third and final reading Ordinance #2017-01 designating WCR 29 between SH 392 and WCR 100 an arterial road. Several residents came to the Commissioner hearings as well as the Planning Commission meeting that preceded it. As a result of public input, the Board of County Commissioners decided to leave the section of WCR 29 south of SH 392 a local road. The section north to WCR 100 was designated an arterial road, but with 100 feet of right-of-way rather than the standard 140 feet, except for the intersections of SH 392, WCR 74, SH 14, WCR 90, and WCR 100.

WCR 29 south of SH 392 is unpaved and is within the City of Greeley's growth area, which designates the road as a two-lane minor arterial on its transportation plan. This area is within the North Greeley Rail Corridor Subarea Plan and is designated as part of the northwest industrial-rail corridor south of WCR 66 on its comprehensive plan. WCR 29 ends at WCR 64 (O Street) approximately one-quarter mile west of 71st Avenue.

The 100-foot future right-of-way for WCR 29 between the major intersections will allow for a two-lane road with eight-foot paved shoulders. Drainage swales and utilities will take up the rest of the right-of-way outside of the roadway. The 140-foot right-of-way at the major intersections will allow for both left- and right-turn lanes. **Figure 5** depicts a typical cross-section for reconstruction of a 40-foot road within 100 feet of right-of-way. No timeline for reconstructing the road to this standard has been established.
D. Land Use

Currently, land along WCR 29 is almost all agricultural and large-lot residential with oil and gas facilities throughout the area. The land between SH 392 and WCR 98 is zoned Agricultural on either side of WCR 29, except for the Gold Stone Creek Subdivision, which is zoned Estate.

Nunn’s comprehensive plan shows the area along WCR 29 north of WCR 98 as low- and medium-density residential. There is a subdivision called Prairie View Subdivision on the west side of WCR 29 south of 4th Street that was platted 2006 and has not been developed. No additional right-of-way along WCR 29 was platted, but the plat did include drainage and utility easements along WCR 29.

South of WCR 98, the town’s comprehensive plan shows the future land use as undeveloped agriculture. The planning area extends to WCR 92. **Figure 7** shows the town’s Land Use Concept Plan Map.
Fig. 7: Nunn Comprehensive Plan Future Land Use Map
Pierce’s growth area currently extends to WCR 29. Its comprehensive plan shows the area east of WCR 29 as low-density residential. See Figure 8 below.

Fig. 8: Pierce Comprehensive Plan Future Land Use Map
Ault’s comprehensive plan shows the area along WCR 29 as agriculture and currently is the western boundary of the town’s planning area. **Figure 9** shows the town’s Future Land Use Map.

![Ault Comprehensive Plan Future Land Use Map](image)

Fig. 9: Ault Comprehensive Plan Future Land Use Map
Eaton’s current (2006) comprehensive plan map does not extend west of WCR 31. The area between WCR 31 and WCR 35 is shown as agriculture. Figure 10 shows the town’s comprehensive plan planning boundaries.
Severance’s growth boundary does not extend east of WCR 27. It shows the area along WCR 27 as rural residential. **Figure 11** shows the town’s Future Land Use Map.

![Future Land Use Map](image)

Fig. 11: Severance Comprehensive Plan Future Land Use Map

E. **Types of Accesses**
Accesses on the ACP maps are classified in the following categories. These are useful for determining change-of-use, further discussed in Chapter V, Plan Recommendations. The type of access may also determine its width. For example, accesses used by large trucks and farm equipment are usually much wider than residential accesses.

a. **Agricultural/Field/Ditch Access**: Accesses with the least amount of trip generation. Generally used during planting and harvesting seasons.

b. **Residential Access**: Driveways to residences. Also considered a low trip generation with about 10 daily vehicle trips.

c. **Commercial Access**: Businesses, schools, government buildings, and utilities such as electrical substations. Access considered to have heavy traffic or trip generation.

d. **Oil & Gas/Industrial Access**: Mostly oil and gas facilities, including wells, tanks, valve sites, etc. Similar to commercial access trip generation.

e. **Multiple Use Access**: Accesses used by two or more properties or uses (e.g., residential and field).

f. **Future Access**: Accesses that have been previously permitted but are not yet constructed or for currently vacant lots that have no other road frontage.

**F. Access Inventory**

There are 209 accesses shown on the ACP maps, including 15 future access locations. The table below shows the number of accesses by type.

Table 2: Number of Accesses by Type

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of Accesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural</td>
<td>85</td>
</tr>
<tr>
<td>Residential</td>
<td>73</td>
</tr>
<tr>
<td>Commercial</td>
<td>7</td>
</tr>
<tr>
<td>Oil and Gas, Industrial</td>
<td>11</td>
</tr>
<tr>
<td>Multiple Use</td>
<td>18</td>
</tr>
<tr>
<td>Future</td>
<td>15</td>
</tr>
</tbody>
</table>
III. ACCESS REQUIREMENTS

A. Access Spacing

The minimum spacing between accesses or between accesses and intersecting roads on WCR 29 is 660 feet (1/8 mile) as measured from the center of the access or street. Spacing accesses farther apart improves safety and mobility on the corridor.

B. Sight Distance

For roads with a 55 mile per hour speed limit, the minimum sight distance is 550 feet for a passenger car. Even relatively short hills can block a driver’s view of oncoming traffic, for example, when a driver is attempting to turn left into an access, or enter onto the road from an access. Sight distance can also be blocked by curves in the road, but there are no such cases on WCR 29, which is generally straight north and south.

C. Auxiliary Lane Requirements

Auxiliary lanes (or turn lanes) allow a driver to merge with traffic after turning onto the road, or exit (diverge) the travel lane before turning. They are useful in maintaining the safety, traffic
flow, and operation of the road. Proposed developments that warrant installation of auxiliary lanes based on the resulting type and amount of traffic to and from the development must design and install the auxiliary turn lanes. See also Weld County’s Engineering and Construction Guidelines available on the Weld County Public Works Engineering webpage.

Fig. 12: Auxiliary Lanes

D. Accesses with Safety Concerns

Most existing accesses on the WCR 29 Corridor do not meet the minimum spacing requirement, which can lead to uncertainty for drivers trying to determine where other drivers may be exiting or entering the road. Some accesses do not meet the minimum sight distance due to hills obstructing the driver’s view. Accesses with safety concerns are indicated on the maps in the next chapter with red boxes and “SD” is for sight distance or “S” for spacing. Accesses that don’t meet either minimum standard are labelled accordingly. Since sight distance is a greater safety concern than spacing, Weld County hopes to work with landowners to relocate these accesses to safer areas in the future.

This Access Control Plan recommends most of the accesses with safety concern be allowed to remain as they are for the time being, until the property develops or redevelops, the use of the property or access change from its current use, or the road is reconstructed.

See Appendix A for specific recommendations regarding accesses.

E. Access Widths

Typical widths of accesses are given in the table below, as measured at the property line (edge of right-of-way), not the edge of the roadway.

Table 3: Access Widths

<table>
<thead>
<tr>
<th>Access Type</th>
<th>Width (at property line)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural/Field/Ditch</td>
<td>Typically 12 to 24 feet. Up to 36 feet, if necessary for large equipment</td>
</tr>
<tr>
<td>Residential</td>
<td>12 to 24 feet</td>
</tr>
<tr>
<td>Commercial</td>
<td>Up to 36 feet</td>
</tr>
<tr>
<td>Oil &amp; Gas/Industrial</td>
<td>Up to 36 feet. May be temporarily up to 40 feet during drilling</td>
</tr>
<tr>
<td>Multiple Use</td>
<td>Varies depending on use (same as above)</td>
</tr>
<tr>
<td>Future</td>
<td>Varies depending on use (same as above)</td>
</tr>
</tbody>
</table>
F. Access Control Techniques

There are generally four ways unsafe accesses can be addressed: The access can be eliminated so the property uses an access on a side road instead, especially if it is a lower classified side road. It can be relocated to a safer location, usually either farther from other accesses or aligned with an access across the street. Where there are multiple accesses on one property, they can be consolidated into one access. Finally, if the access needs to stay where it is, the access can be made safer by movement conversion; which is restricting it from a full-movement access to one where only three-quarter movements or right turns are allowed, for example. This is referred to as a “right-in/right-out” access. This movement conversion is best accomplished with a raised median or other barrier in the center of the road.

1. Elimination

Access elimination is typically used at locations where a property has more than one access point. See Figure 13 below depicting access elimination.

Fig. 13: Access Elimination

2. Relocation

Access relocation is a method that would either align opposite approaches to create a more familiar intersection design or move an existing access point to a new location, such as a side road. Offset accesses can create a situation with overlapping left turns, which could result in a head-on collision. Figure 14 below shows an example of access relocation.

Fig. 14: Access Relocation
3. **Consolidation**

Access consolidation is used to reduce the number of access points along the corridor. Refer to Figure 15 below.

![Access Consolidation](image1)

Fig. 15: Access Consolidation

4. **Movement Conversion**

The purpose of access movement conversion using median treatments is to eliminate some turning movements to reduce the number of conflicts between left turning vehicles and through vehicles on the road. Sometimes a full-movement access is converted to a ¾ intersection by restricting left turns on exiting, but not entering, vehicles. More commonly, a right-in/right-out (RI/RO) would be used to eliminate all left-hand turning movements. Typically, a median or some type of barrier is required. Refer to Figure 16 below.

![Movement Conversion](image2)

Fig. 16: Movement Conversion
IV. Access Maps

Please review the draft ACP maps on the following webpage:

https://www.weldgov.com/departments/public_works/access_control_plans/WCR_29/.
V. PLAN POLICIES

The WCR 29 working group developed the following Access Control Plan policies, which the county and each of the towns shall enforce to the best of their ability, unless an amendment is granted in accordance with Chapter VI, Plan Amendments:

A. Right-of-Way Policy

The ultimate future right-of-way width shall generally be 100 feet except at the following intersections it shall be 140 feet for 1,800 feet north and south of the intersections: SH 392, WCR 74, SH 14, WCR 90, WCR 100. New development and redevelopment shall dedicate or reserve additional right-of-way if the ultimate right-of-way width is not already existing. Setbacks for new structures shall be measured from the ultimate future right-of-way.

B. Access Policies

1. Additional Access. Only new accesses that comply with the Access Control Plan criteria shall be permitted. No new accesses to WCR 29 that do not comply with the Access Control Plan criteria shall be permitted from existing legal parcels unless approved through the plan amendment process, in accordance with Chapter VI, Plan Amendments. New lots shall share accesses where feasible in order to minimize the number of additional accesses.

2. New Accesses to be located on Side Roads: New access onto WCR 29 shall not be permitted unless access to a lower classified road is not feasible and the proposed access meets the spacing requirement below and does not interfere with the location, planning, and operation of the general street system or access to nearby properties.

3. Access Spacing: No new full-movement access shall be permitted within 660 feet of an existing access or intersection, as measured from the center of accesses or streets.

C. Collector & Arterial Road Spacing Policy

No new public road shall intersect with WCR 29 unless the new road is constructed to an arterial or collector standard and it is located at least one-quarter mile from any other existing public road(s) intersecting WCR 29. If accesses exist within 660 feet of the new road, a median or medians restricting all such existing accesses to right-in/right-out movement shall be installed on WCR 29 to ensure the safety and integrity of the corridor is maintained.
Subdivisions also should plan for street connections to future abutting development. See **Figure 17**.

Fig. 17: Subdivision Connection

**D. Change of Use Policy**

Use of existing accesses shall be restricted to the current use identified in this ACP. Change of use of the property/access will require the existing access to be brought into compliance with spacing criteria or eliminated. Change of use is defined as a use substantially different from the previous use of a building or land unless such change can be shown to have no effect on vehicular circulation or traffic volumes anticipated to use the access.

**E. Access with Safety Concern Policy**

Accesses with Safety Concern, indicated on the maps in the Plan, shall be eliminated, relocated, consolidated, or movement converted (e.g., restricted to right-in/right-out) as soon as feasible, when development occurs, with change of use, or when the road is widened, whichever occurs sooner.

**F. Traffic Signal Policy**

Traffic signals shall only be installed at major arterial intersections and only when such intersections meet warrants in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

**G. Speed Limit Policy**

Posted speed limits on WCR 29 are 55 miles per hour (mph) south of approximately WCR 98 and 35 mph north of WCR 98. The speed limit along WCR 29 will remain 55 mph unless a jurisdiction provides a valid safety reason for speed limits to be altered in accordance with the MUTCD, CRS §42-4-1102 with a traffic investigation, or a speed study performed by Weld County Public Works, through a plan amendment request in accordance with Chapter VI, Plan Amendments, to ensure the request does not adversely affect the functional integrity of the corridor.
Regardless of jurisdiction, south of approximately 7th Street in Nunn the speed limit on WCR 29 shall be 55 mph. Speed limits may be reduced within one-quarter mile of traffic signals and other controlled intersections.

H. Load Limit Policy

Regardless of jurisdiction, there shall continue to be no weight limits on WCR 29.

I. Road Cut Policy

In order to preserve the integrity of the road surface, road cuts will not be allowed in any section of road that has been reconstructed after adoption of this Access Control Plan. Crossings will only be allowed to be placed under the road by boring underneath it. The minimum crossing depth for lines will be 10 feet below the lowest roadside ditch flowline elevation, except for oil and gas lines whose minimum depth will be 15 feet below the lowest roadside ditch flowline elevation.

J. School Bus Stop Policy

School Districts RE-2 and RE-9 bisect the corridor. School districts are encouraged to work with local government agencies to ensure bus stops are appropriately identified in safe locations. It is recommended school buses use side roads, private properties (driveways), or private accesses (oil and gas) for loading and unloading children whenever possible and should only stop on WCR 29 in safe locations as determined by an engineered safety analysis.
VI. PLAN AMENDMENTS

The WCR 29 working group developed the following process for amending the ACP:

1. Proposed amendments, such as traffic signals, new accesses that don’t meet the ACP criteria, or speed limits, shall be submitted by one of the entities participating in this ACP (Weld County, Severance, Eaton, Ault, Pierce, or Nunn).

2. Proposed amendments shall be considered by the WCR 29 committee consisting of one representative from each entity.

3. Proposed amendments shall be submitted to Weld County Public Works for distribution and scheduling of a committee meeting.
   a. The submittal request shall include a written description of the proposed amendment to the ACP, including engineering supported justification for the amendment, and supporting traffic safety analysis to show the amendment will not adversely impact the corridor from its current level of service.
   b. The submitting entity will be given an opportunity to present its request to the committee and answer questions.

4. The committee will review the submittal for consistency with the ACP.

5. Four of the entities must vote in favor of the proposed amendment in order for it to take effect. No proxy votes will be allowed.