

# STATE OF COLORADO

## Traffic & Safety

Region 1

2000 South Holly Street

Denver, Colorado 80222



COLORADO  
Department of Transportation

Project Name: **Larkspur Truck Stop**

Print Date:

Highway:

Mile Marker:

### Drainage Comments:

I have reviewed the attached drainage report for this location and visited the site as well

I have concluded that there will be no negative drainage impact to I25 as a result of this proposed work and that drainage downstream conditions will be maintained

thanks

samer 8-4-2016

8-15-2016

9-30-2016

### Environmental Comments:

**\*\*If plans change and work/staging is in our ROW Environmental review will be needed\*\*** Since there currently no work in CDOT ROW we would like to share the following with the applicant: **Due to the presence of habitat occupied by a federally protected species we recommend that the applicant call the US Fish and Wildlife Service, Endangered Species Program (Mtn Prairie Region) at 303-236-4749 We also recommend the applicant coordinate closely with Douglas County's Environmental Resources Coordinator Andy Hough at 303-814-4342**

### Traffic Comments:

8-1-16 Paul Scherner

The traffic generation analysis by SM Rocha dated 7-25-16 needs to identify the number of heavy trucks that will be using the development. The number of fuel pumps (32) suggests that this number would be significant. As stated, "*The detailed traffic study currently being prepared will analyze study intersection and roadway operations and provide recommendations to ensure adequate traffic operations.*" This needs to also include accurate truck percentages and their impacts on the existing roadway infrastructure.

9-26-16 Paul Scherner

Previous comments are addressed in response letter. I have no further comments

1-31-17 Paul Scherner

I didn't see any operational issues popping out.

**Resident Engineer Comments:**

30Jan2017: ryj

Have the ramp connections to ULG Rd been analyzed using AutoTURN (or similar software) given the proposed frequent use by WB-67 trucks ?

**Permits Comments:**

Upper Lake Gulch Road & Spruce Mountain Road are Douglas County roadways. Douglas County is an issuing authority for access permitting. Where these two roadways connect to the State Highway -interstate system, CDOT will ask for access permits based on a 20% increase of volume, and possible upgrades warranted - TBD under the Traffic Study.

CDOT request that the traffic study follow the content-format as outlined in the State Access Code. Please examine the turn radius at the in & outbound ramp terminus at I-25 exits 172 & 173 to ensure they are sufficient for the oversize vehicles this facility will attract. (southbound I-25 ramp at 172 appears substandard and has substantial sedimentation at the inlets)

Signs oriented to the highway must adhere to the State rules for outdoor advertising.

Noted that the UPRR grade crossing is already signal-gated. CDOT ROW includes the eastern approach. Any work on the UPRR crossing should be coordinated through the State's RR coordinator, and should any of that work on the crossing approach extend into CDOT ROW, a permit would be necessary.

Noted that no bicycle or pedestrian facilities (pathways) currently exist in CDOT ROW @ exit 172. Unsure of the clearance under I-25 at exit 172. The Upper Lake Gulch Road underpass of I-25 is only 2-lanes wide and is incapable of handling center left turn lanes in either direction without substantial bridge reconstruction.

Further comments may be forthcoming upon review of the Traffic study.

- RS 08-09-16

As stated above, new access permits will be required for Upper Lake Gulch and Spruce Mountain Roads, for the increase in traffic, change in use and vehicle type. Douglas County informed CDOT, " Per subsection 2.3(12) of the State Highway Access Code, the County would ask that any access permit(s) be administered by CDOT as provided in subsection 2.3(6) and (7). The County will also designate the developer of the truck stop as the permittee on the application(s). The developer will also need to cause any needed intersection improvements related to the access permits." Chris Martin and Al Peterson with Douglas County would like to be involved in any meetings that take place related to the access permit applications. Chris Martin, Senior Traffic Engineer, Douglas County Public Works Engineering, 100 Third Street, Castle Rock, CO 80104, Office: 303-660-7490, [cmartin@douglas.co.us](mailto:cmartin@douglas.co.us).

-MC 8-10-16

Previous remarks geared toward the site plan & off-site improvements are still valid.

We recognize that this proposed "Travel Center" land use will generate new (tax) revenue into the Larkspur community by attracting travelers from I-25 in both directions. Signs for this land use need to be compliant with the State rules for Outdoor Advertising. The Town would be advised to investigate opportunities for TODS & LOGOS on the interstate for this travel center

CDOT would advise the Town that the TIS for this travel center is lacking and needs to be re-done. In particular:

The TIS is not sufficient to meet the minimal requirements of our State Access code which states:

**(5) Traffic Impact Studies**

*(a) When the land use will generate a DHV of 100 vehicles or more, or when considered necessary*

*or desirable by the issuing authority or Department for exceptional reasons, the applicant shall provide a traffic impact study. The scope of the study shall be commensurate with the scale and scope of probable operational and safety impacts to the general street system.*

*(b) When a traffic impact study is required, the study shall be completed and sealed by a Colorado*

*registered professional engineer. Selected items from the following list may be excluded if not applicable to the situation and exclusion is specifically authorized by the issuing authority. The contents and extent of a traffic impact study depend on the location and size of the proposed development and the conditions prevailing in the surrounding area. Larger developments proposed in congested areas obviously require more extensive traffic analysis, whereas smaller sites may only require a minimal analysis of traffic on site and at immediately adjacent intersections. In determining how large a study area to include, a general guideline is to carry the analysis out at least as far as those areas where newly generated site traffic represents 5 percent or more of roadway's peak hour capacity. Where site generated traffic will be less than 5 percent of the roadway capacity, the intersections adjacent to the site should, at a minimum, be analyzed. The study area boundaries may also be influenced by impacts other than pure capacity relationships such as neighborhood short cuts, traffic noise and hours of operation.*

Neither of the highway interchanges are included in the analysis. These are the "adjacent" intersections to this proposed development. Considering that minimal peak-hour traffic exist, we anticipate that both interchanges will see more than a 5% increase of peak-hour traffic. CDOT would recommend that the Town work with Douglas County, to investigate if traffic counts exist here that may be used as a baseline of traffic at the interchange ramps for opening day, for which a reasonable 20-yr growth projection may be generated and documented by submitting the appropriate access permits.

We anticipate this initial development to generate interest and activity for additional land development. It is incumbent upon the local agency to monitor the resulting traffic at the key intersections and interchanges. Land use developments (including phased developments) which increase peak hour traffic volumes by > 20% will also require access permits.

As currently configured 100% of the southbound traffic on I-25 must use Upper Lake Gulch Road to return to the interstate as there is no southbound entrance ramp at the Spruce Mountain Road interchange. We noted that this TIS shows zero left turns (east to northbound) anticipated at access A on Upper Lake Gulch Road both on opening day

and the projected 20-yr horizon. Therefore, peak hour traffic (and those projected) for eastbound through traffic shown on Upper Lake Gulch Road are inaccurate. We also venture to say that the assumption of traffic distribution is flawed and much more than 20% of the total traffic will utilize Upper Lake Gulch Road.

The paragraph in the report that discusses adjustments to vehicle trip generation rates needs to include the breakdown of truck/bus –v- passenger car traffic. A truck/bus trip by our code is an equivalent of 2-3 cars, which would change all traffic numbers accordingly.

Please note that CDOT is not opposed to this land use, but rather we are concerned that the traffic figures be more accurate to account for the traffic anticipated to be generated at our highway connections. Having those (reasonable) numbers in place, will enable the State and local agencies to responsibly monitor future traffic growth in this area and determine pro-rata share for public (highway) improvements that may be warranted.

RS- 09-29-16

Thank you for including an outline responding to previous remarks.

Since the last submittal, CDOT R-1 and the Town staff met to discuss expectations of the State and Local agency. In particular:

1. The raised profile of the Planning Environmental Linkage (PEL) underway for I-25 including this segment and interchanges critical and necessary for this Travel center. Although in a conceptual stage at this time, it appears likely that improvements to the interstate will be effectuated before 2035 which could have impacts on both the Town and this development.

We recommend that the Town and the property owner remain involved in the PEL and NEPA process as plans evolve and various details are addressed. Early pro-active involvement is better -v- reaction once under construction.

2. Given the uncertainties of the future highway designs, we agreed that this Travel Center should proceed with a conventional Traffic Impact Analysis (TIA). This TIA offers us an more accurate assessment of traffic passing through the interchange ramps and verifies that proposed traffic from this development will increase by > 20%. We determined that Access Permits are necessary by the Town to be submitted for both roadway connections to the interstate at Spruce Mountain and Upper Lake Gulch. Via the permits, we will have a baseline of traffic in-place that will enable the Town & CDOT to monitor for additional development (in either the Town or County) that might increase traffic by more than 20% at these connections. Should that occur, a new permit will be required to determine the necessary public improvements warranted by their development. As mentioned in our previous comments, even though these intersections-connections are not directly adjacent to this property, they are responsible by code & statute to mitigate any impacts created by their traffic via the Permit.

3. We discussed that the existing Upper Lake Gulch Road interchange was initially designed as a rural tight diamond and it is conceivable that improvements may be necessary for accommodating the type of traffic to be generated. We mentioned the needs for accommodating a double trailer truck turning movement, and to examine by template (WB67) if the geometry works. It is also conceivable in the near term, that ramp metering and land restriping at the interchanges could be warranted and necessary. We noted-discussed that the bridge deck re-paving project (summer 2016) laid some additional asphalt near the I-25 southbound return-ramp at Upper Lake Gulch Rd. which was a temporary fix to shoulder erosion occurring from vehicles making the (tight) turn movement. The Access Permits will examine (based on the turn template) what additional lane striping-stenciling may be necessary at both ramp connections - north & southbound. This will typically be required with the permit, but the Town would be advised via a subdivision Improvement agreement or other legal document, to ensure the owner-developer will

contribute to the Town to help fund the design & construction of such off-site improvements that may be warranted by their traffic during each phase of development.

4. Any work at the Upper Lake Gulch Road RR crossing, particularly from the eastern approach which is CDOT ROW, needs to be coordinated through Rob Martindale, at CDOT HQ. His # is 970-683-6357 / [rob.martindale@state.co.us](mailto:rob.martindale@state.co.us). Any work - improvement to this crossing within CDOT ROW will be by a permit issued through the Region 1 office.

5. We disagree with the TIA conclusion ascertaining "*...that the addition of site-generated traffic is expected to create no discernable impact to traffic operations for the existing and surrounding roadway system.*" by the observed daily peak hour congestion on the I-25 mainline. By this observation alone, it is highly conceivable that the entrance ramps to the interstate may need metering during those peak periods. As alluded to above, we would examine this warrant by the Access Permits. We have no further comments on the TIA other than to advise the Town to use the traffic numbers from the TIA for the Access Permits we require.

- RS 01-31-17