

ACCESS MANAGEMENT ANALYSIS

Driveway Survey

As indicated in **Table 1**, it was demonstrated that driveway and side street spacing is much denser than recommended NMDOT Access Management standards between NM 313 and Paseo del Volcan, especially east of NM 528. West of NM 528, appropriate access management has already been implemented via raised medians and shared access points. As part of this project, a master access management plan has been created and is depicted in **Figures 14a through 14b**. As indicated the proposed access management plan includes the use of medians, left-in pockets, back access roads, and access alignment.

Medians

The most effective method of traffic control is the implementation of raised medians to restrict a very dense area of full movement driveways to right-in right-out only. This will remove one of the most unsafe movements within the corridor, which is the minor street left-out movement. As traffic demands on US 550 increase and a third through lane has been added, this maneuver will be increasingly less safe. In an attempt to still provide left-in access for those poorly spaced and aligned driveways between NM 313 and Camino Don Tomas, one or two left-in only median openings can be provided with adjacent properties sharing access at these points indicated in the concept. As indicated in **Figure 14a and 14b**, the number of conflict points has been reduced from 16 to three with left-in median access control and driveway consolidation has been introduced. This translates into a reduction of 54 conflict points between NM 313 and Camino Don Tomas.

Figure 13a. Conflict Points w/o Access Management (Between Camino Don Tomas & NM 313)

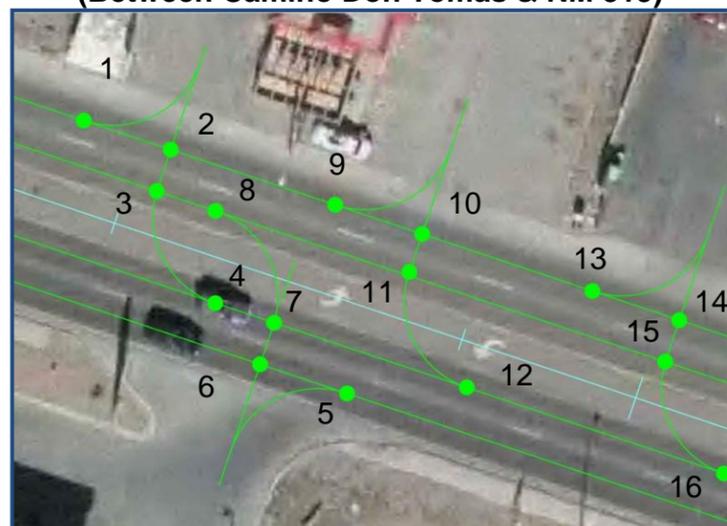
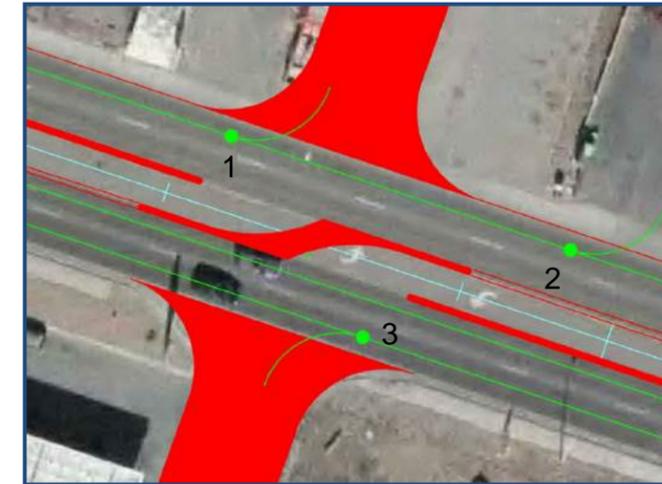
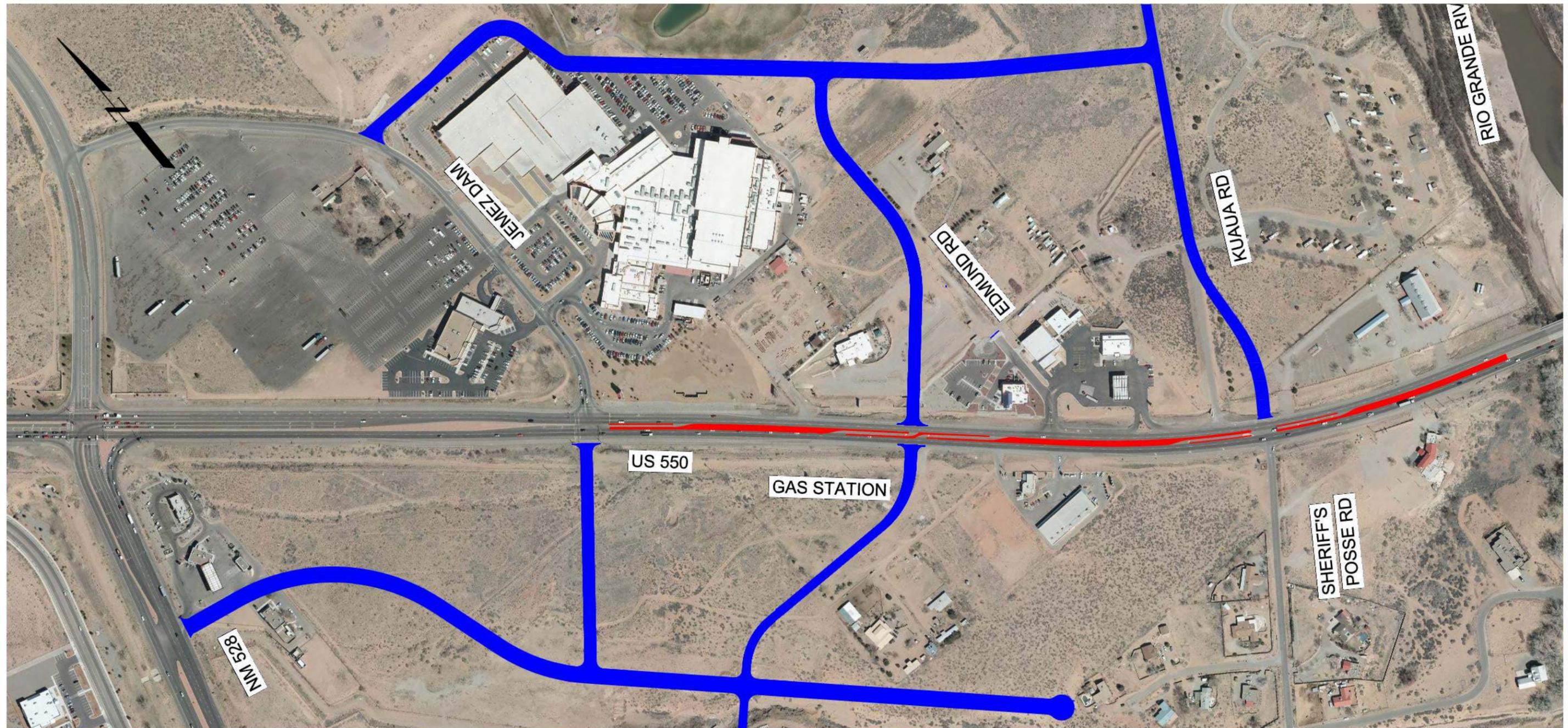


Figure 13b. Conflict Points with Access Management



Back Access Roads

Continuing the back access road concept that is currently being constructed as part of the US 550/I-25 interchange project, the proposed access management concept proposes back access roads from NM 313 to just west of Camino Don Tomas. As shown, there already is a public street (Belle Lane) which the proposed back access road can use. However, this would likely require some right-of-way (ROW) acquisition in order to provide a three lane or two lane cross-section. The north back access road would then extend to Ronald Drive. For the south side, more ROW acquisition would be required to provide a back access road adjacent to the US 550 commercial properties from NM 313 to just east of Camino Don Tomas. As commercial development continues, these back access roads are recommended on the west side of the river as well, connecting potential properties east of Sheriff's Posse Road/Kuaua Road over to Jemez Dam on the north side and NM 528 on the south. Again, this would require the need for significant ROW acquisition.



LEGEND

- █ = POTENTIAL BACK ACCESS ROADS
- █ = POTENTIAL MEDIAN

SCALE: 1"=325'

KEY MAP

US 550 TRAFFIC OPERATIONS AND
SAFETY DRAFT REPORT

FIGURE 14a. ACCESS MANAGEMENT CONCEPT
(WEST SIDE OF RIO GRANDE RIVER)



LEGEND

- █ = POTENTIAL BACK ACCESS ROADS
- █ = POTENTIAL MEDIAN

SCALE: 1"=300'

KEY MAP

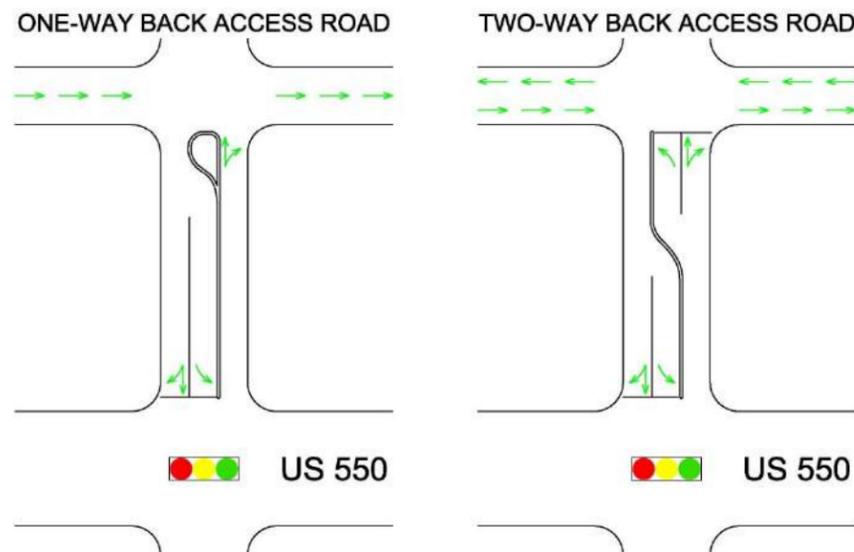
US 550 TRAFFIC OPERATIONS AND
SAFETY DRAFT REPORT

FIGURE 14b. ACCESS MANAGEMENT CONCEPT
(EAST SIDE OF RIO GRANDE RIVER)

To reduce ROW acquisition requirements, back access roads could be restricted to one way couplets on either side of US 550. This could significantly reduce the required width of the new road network. If one way couplets were constructed it is recommended that the direction of flow should be counter to the adjacent US 550 flow. For example, the north side of US 550 would be recommended to flow west to east and the south side back access road would be recommended to flow east to west. This layout would provide the following benefits:

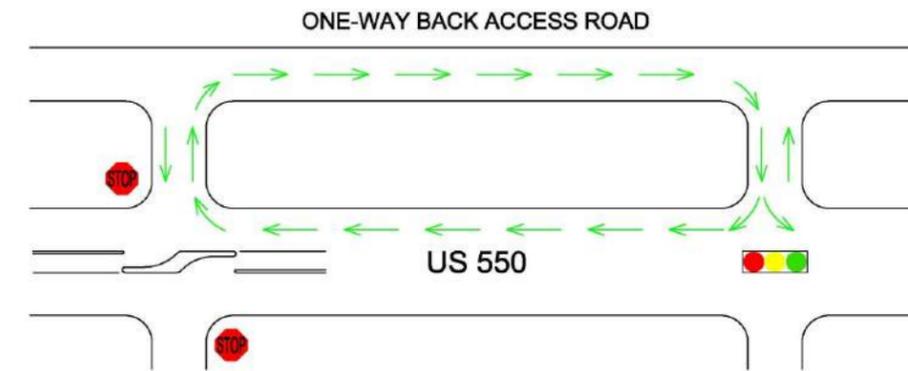
- A one way street will require less pavement, thus requiring less material and ROW cost.
- One way operations would offer fewer conflict points for accessing vehicles thereby reducing risk for crashes.
- One way back access roads will eliminate the need for left-turn movements from US 550 via a side street and thus there will be no “back to back” competition for limited queue lane storage between the side street left-turn to US 550 and access to the back access road. This will allow much more storage where it is needed for vehicles turning left onto US 550 from the side street. **Figure 15** depicts this comparison.

Figure 15. One Way Back Access Comparison



- This layout will provide a more natural movement for vehicles accessing adjacent businesses with simple right-turns. Vehicles exiting the adjacent businesses can exit either left or right by using the side street signal. A conceptual schematic demonstrates this in **Figure 16**.
- One way back access roads may also mitigate the need to signalize the back access road intersection due to the elimination of left-turn movements from the north-south street.

Figure 16. One Way Back Access Concept



Proposed back access along this corridor would provide several benefits including the following:

- Back access will provide a much safer alternative to turning left from a minor street or driveway onto US 550. Vehicles desiring to head left onto US 550 would be able to make a right onto the back access road with much lighter demands and speeds and then make a left-turn at an existing signalized intersection. This is much safer movement and would reduce the risk for crashes.
- Back access streets will not only provide additional local capacity, but will also divert traffic that would otherwise have to use US 550, thus providing additional capacity for through-put on the corridor.
- Back access streets will provide an alternative for bike riders that are not comfortable riding on a high speed-high demand arterial roadway.
- These access streets will provide safe full access for all adjacent commercial properties even with the implementation of access control medians.

Access Alignment

There are several locations, especially between Camino Don Tomas and NM 313, where driveways are not aligned across from each other. Misaligned driveways can create opposing left-turn conflicts with the existing two-way left-turn lane and violate driver expectation, which can lead to increased crash risk. To mitigate this situation, shared access points have been proposed that will allow left-in only movements that will access adjacent commercial properties and ultimately proposed back access streets.

Both Sheriff's Posse Road and Kuaua Road are proposed to be aligned. Not only will this simplify access to and from these roads, but will also facilitate a much less complicated, safe shared median opening and signalized intersection when warranted.