

US 281

Comal County Line to SL 1604 (Anderson Loop)

Current Conditions

U.S. Highway 281 North is a multi-lane divided highway in a developing suburban corridor. U.S. 281 south of Loop 1604 is a typical Texas freeway with mainlanes and frontage roads; however, the expressway ends just north of Loop 1604. A superstreet design along some of the corridor has reduced delays, fuel consumption, driver frustration, and vehicle emissions, but congestion remains a significant problem. US 281 experiences the worst congestion and slowdowns in the northbound direction, specifically during the evening rush hour period. Southbound traffic consistently experiences weekday congestion-related slowdowns each morning.

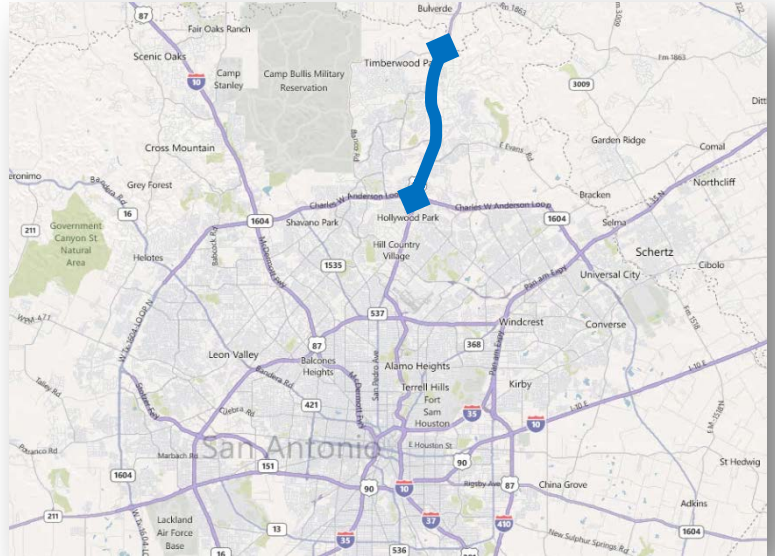
- Segment Length: 7.3 miles
- Road Type: 4- to 6-Lane divided highway
- Annual Hours of Delay: 1,214,000
- Texas Congestion Index: 1.53
- Commuter Stress Index: 1.73

Possible Congestion Causes

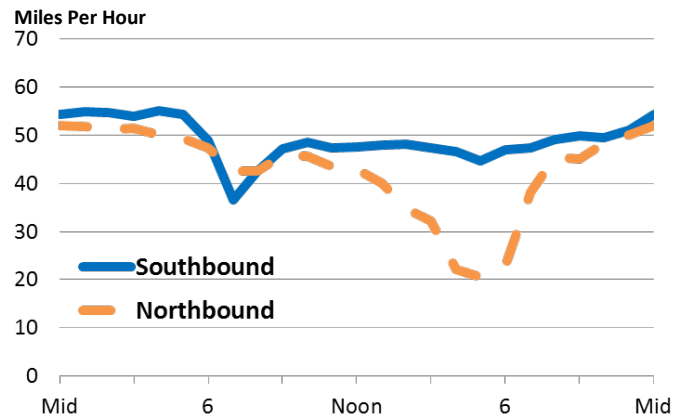
Most of the congestion along the US 281 corridor is directional: delays occur inbound in the morning and outbound in the afternoon. Traffic volume has significantly increased because of rapid residential development in the surrounding area in recent years. The growth in homes has dramatically outpaced expansion of the roads causing significant congestion, particularly in the evening rush hours.

Completed Projects

Superstreet Configuration North of Loop 1604
A superstreet high-capacity street configuration was completed in October 2010 on four intersections north of Loop 1604: Marshall Road, Stone Oak Parkway, Evans Road, and Encino Rio. The project used \$5 million of one-time federal stimulus funding. The project increased the



| | |
|--|-----------------------|
| 2010 Rank: 38 | 2013 Rank: 28* |
| Annual Hrs. of Delay/Mile: 168,000 | |
| Congestion Time: 10 Hours | |
| Annual Cost of Delay: \$23.8 Million | |
| Average Daily Traffic: 130,000 Vehicles | |



amount of green time at signals on the US 281 corridor by reducing the number of major intersection traffic movements.

Bus and Park and Ride Services
VIA Metropolitan Transit has a temporary express bus park and ride facility at the south end of the corridor, as well as a local route servicing the Loop 1604/US 281 interchange area.

Expansion of Blanco Road/FM 2696

This stretch, which parallels US 281 to the west, was expanded from two lanes to four lanes with median treatments beginning in 2008. The project opened in November 2010 and was funded by pass-through financing supported by TxDOT (70 percent of the \$30 million cost). San Antonio Advanced Transportation District (ATD) tax proceeds covered the remaining cost. This was the first project completed under a pass-through financing agreement between Bexar County and TxDOT.

Expansion of Bulverde Road

Bulverde Road, which parallels US 281 to the east, was recently expanded by Bexar County from two lanes to four lanes with medians from Evans Road to Marshall Road.

Projects in Progress

Direct Connector Ramps

American Recovery and Reinvestment Act/federal stimulus funding is being used to add four direct connect ramps to the US 281/ Loop 1604 interchange. The total construction cost of the four south-side direct connectors and associated improvements is \$145.2 million. Two of the four direct ramps opened in November 2012; the remaining two opened in early 2013.

Corridor Improvements

The Alamo Regional Mobility Authority (ARMA) is working on an Environmental Impact Statement (EIS) for corridor improvements between Loop 1604 and the Bexar/Comal

County Line. ARMA is aggressively pursuing public input (twice the required number of public meetings have been held, and the RMA has an active web site, Twitter account, and Facebook page for the project).

Traffic Signals

TxDOT installed traffic signals at the Sonterra interchange, just north of Loop 1604, in late 2012. The cost of this project was \$68,000, and addressed localized congestion.

Expansions

The City of San Antonio is using bond funding to expand Bulverde Road from Loop 1604 to Evans Road from two lanes to seven lanes with medians, sidewalks, and bicycle lanes. Improvements to the Bulverde Road/Evans intersection were completed in the spring of 2012, while the roadway expansion to the south will continue into the fall of 2013.

Additional expansion projects affecting this corridor are summarized in the table below.

Planning Efforts to Date

Expansions of US 281

Options for US 281 improvements studied in the Alamo RMA corridor EIS include:

- Widening the existing divided highway.
- Non-tolled freeway with frontage roads.
- Tolled freeway with non-tolled frontage roads.
- Overpass construction at major crossings.
- Managed lane HOV/HOT lane options.

| Road Expansions | Location | Stage |
|-------------------|--|--|
| Bulverde Phase IV | Marshall Road to 1.2 miles north of Marshall | Being designed for an expansion from two lanes to four lanes with shoulders and curbs. |
| Bulverde Phase V | Bulverde Phase IV to Smithson Valley | Preliminary design phase to widen the existing 2-lane roadway to a 4-lane road with shoulders. |
| Borgfeld Phase I | Timberline to US 281 | Final design stage for a reconstruction from a 2-lane street to a 4-lane road with shoulders. |
| Borgfeld Phase II | Blanco to Timberline | Awaiting right-of-way clearance for an expansion from two lanes to a 4-lane road with shoulders. |



In an October 2011 newsletter, the RMA informed the public that the expansion of US 281 with overpasses at cross streets and frontage roads between intersections was eliminated from future consideration by the EIS team. Other aspects of the corridor situation and future plans include:

- Local opposition to tolling in the corridor has been strong for years.
- When construction moves forward, Alamo RMA will require the construction contractor to provide incident clearance during construction.
- Any future tolling improvements will be done with electronic tolling.
- Dynamic message signs and monitoring cameras will be used for traffic management in the corridor, in cooperation with TxDOT.
- Ensure adequate right-of-way is preserved for future high-capacity transit options and maintained on US 281 as part of any added capacity projects.

During the course of the RMA US 281 EIS, TxDOT identified \$170 million in funding that will be

used to construct a non-tolled, 4-lane access controlled facility with frontage roads between Loop 1604 and Stone Oak Parkway. The RMA will ultimately complement this improvement with a tolled managed lane in each direction, and it will likely construct the extension of the access controlled mainlanes as tolled facilities north of Stone Oak Parkway (contingent on the outcome of the EIS study).

Toll Expressway

The San Antonio-Bexar County Metropolitan Planning Organization's (MPO) Metropolitan Transportation Plan (MTP)/Transportation Improvement Program (TIP) includes a project to expand this corridor to a 6-lane toll expressway with non-tolled outer 2- and 3-lane frontage roads and non-tolled north-side direct connector ramps at Loop 1604. Total project cost for the tolled expressway expansion is \$462.5 million (though these values will change given the TxDOT improvement dollars identified above), while the non-tolled northern direct connectors at the Loop 1604 interchange have a total cost of \$59 million.

Future Transit Center

VIA Metropolitan Transit has a plan for a future transit center near the middle of the corridor at US 281 and Stone Oak Parkway. The center will serve a local route, as well as express bus service to downtown San Antonio.

Next Steps

- The Alamo Regional Mobility Authority is currently constructing four of the eight direct connector ramps at the US 281/ Loop 1604 interchange at the southern end of this congested corridor. The ramps were completed in May 2013, with other improvements to be completed by February 2014. Funding exists for the four northern direct connectors that will complete the interchange, but design work for those connectors has not yet been funded and performed. Plans currently exist to use Rider 42 funding to **perform the design work necessary for the four northern direct connector ramps at the US 281/ Loop 1604 interchange**. The record of decision on the US 281 EIS must first be approved before these connectors are built. Assuming the EIS completes in the fall of 2015, construction could begin by mid-2016 and be completed in 2020 (The connectors and US 281 improvements would be built simultaneously).
- There is local agency agreement and support for **more aggressive incident management methods** to improve mobility and congestion in the San Antonio area. Improved incident management and related agency coordination in quickly clearing crashes and disabled vehicles will reduce incident-related delay and congestion. Improving incident management will be one component of a Rider 42-funded traffic management study in San Antonio that began in the spring of 2013.
- **Broad deployment of advanced traveler information systems** (including dynamic message signs and camera monitoring), in cooperation with TxDOT, has been identified as a city-wide congestion management measure. The TransGuide traffic management center does not cover the US 281 north corridor. TransGuide can be improved with electronic signs, which provide updated traffic information and other traffic management solutions to travelers. Funding for the expansion and maintenance of additional traffic management devices and services has not been identified, but a study of traffic management improvement needs for San Antonio is being funded under Rider 42. Work on this study began in the spring of 2013.
- There is local agency agreement and support for **increased travel demand management activity and strategy deployment** in San Antonio. Likely champions of these activities in the San Antonio region are the Alamo Area Council of Governments and VIA Metropolitan Transit. Studies can determine the most effective travel demand management strategies for the region and determine the potential to form Transportation Management Associations (TMA) in cooperation with major employers in the region. TxDOT is funding a study on travel demand management in San Antonio; this study is anticipated to be underway by late 2013 or early 2014.
- **Superstreet operation should be monitored and signal timing adjusted** in the corridor to ensure the best possible operation of the existing road.

- **Monitor the progress of the Alamo RMA EIS for this corridor** (to be completed in the fall of 2015) as it is reviewed by TxDOT and the FHWA and released to the public. Provide technical and public information support, as needed, during this process and in support of any future project identified by the EIS. Depending upon which alternative is ultimately identified in the EIS, construction cost for US 281 is expected to be between \$403 million and \$703 million. Assuming the EIS is finalized and a record of decision is made by the end of 2015, construction could begin in mid-2016 and be completed in 2020.