Phase A/B Report: Initial & Detailed Evaluation of Alternatives
Rio Grande Gorge Bridge
MP 242.10 to MP 243.40
New Mexico Department of Transportation
District Five
Control/Project No. 5101020
December, 2018
Phase A/B Report: Initial & Detailed Evaluation of Alternatives

Rio Grande Gorge Bridge MP 242.10 to 243.40
PN/CN 5101020

Taos County, NM

December 2018
PHASE A/B REPORT
for
RIO GRANDE GORGE BRIDGE MP 242.10 TO 243.40
STRUCTURAL FEASIBILITY STUDY FOR SUICIDE
DETERRENT SYSTEMS
CN 5101020

THIS PROJECT INCLUDES THE FOLLOWING: DETAILED STRUCTURAL ANALYSIS OF
IDENTIFIED SUICIDE DETERRENT SYSTEMS FOR THE RIO GRANDE GORGE BRIDGE.
PROJECT LIMITS INCLUDE US64 BETWEEN MILE POST 242.10 AND 243.40. STUDY
INCLUDES THE EVALUATION OF NO-BUILD, VERTICAL RAILING AND HORIZONTAL NET
ALTERNATIVES.

Prepared For:

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December 2018

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I. Executive Summary

Project Background

The Rio Grande Gorge Bridge is an iconic vista in Taos County New Mexico. Located on US 64, the bridge was designed and built by the State’s Highway Department in the early 1960s. At 1,272 feet (ft) long and 650 ft above the canyon floor, this historic structure is the 7th tallest bridge in the United States. It is attractively positioned across the gorge and compliments its surroundings.

Within a year of opening, the bridge was awarded first place for “Beauty in Steel Bridges” by the American Institute of Steel Bridges and by the late 1990s was listed on the State Register of Cultural Properties and included in the National Register of Historic Places. While this historic bridge has been nationally recognized based on its original design, the current design does not offer physical barriers as a suicide deterrent. The New Mexico Office of Medical Investigator (OMI) reports 44 suicides have occurred at the bridge between 1991 and 2017, 80 percent of which were New Mexico residents.

The statewide suicide rate in New Mexico is consistently one percent higher than the national suicide rate. In the last decade, there have been 4,235 suicides in New Mexico, 113 of which occurred in Taos County. A total of 21 of those suicides occurred at the bridge.

Public safety is a top priority for New Mexico Department of Transportation (NMDOT). Balancing the need to improve bridge safety while preserving an important piece of history and maintaining the structural integrity of the bridge has driven the need to conduct a feasibility study to identify bridge enhancement options to deter future suicides. This Phase A/B Report: Initial & Detailed Evaluation of Alternatives documents the process and determinations of the Rio Grande Gorge Bridge Suicide Deterrent Systems Project (Study).

Initial studies from 2009 and 2015 identified several alternatives consisting of netting systems and various railing configurations. Through analysis of the alternatives, those which most significantly impacted the bridge’s structural integrity, visual resources, safety, and/or historic integrity were eliminated from further study. Other considerations included community input, engineering feasibility, constructability, maintenance, inspection access, and construction cost. Of the alternatives identified, three feasible alternatives were advanced for consideration in this study.
Purpose and Need

The Rio Grande Gorge Bridge is located on US 64 in Taos County New Mexico. The bridge, a historic structure built in the 1960s, is 1,272 feet (ft) long and 650 ft above the canyon floor making it the 7th tallest bridge in the United States.

Purpose

The purpose of the project is to:

- Reduce the number of suicides at the Rio Grande Gorge Bridge resulting from people jumping off the bridge.
- Reduce the exposure risk for emergency responders (e.g., police, firefighters) attempting to prevent people from jumping off the bridge, and reduce the number of recoveries need following a suicidal jump from the bridge.

Need

The project is needed because:

- Forty-four deaths by suicide have occurred from jumping off bridge between 1991 and 2017, 80 percent which involved New Mexico residents.
- In the last decade, there have been 113 suicides in Taos County, 22 of which occurred from jumping off this bridge.
- Since the installation of emergency telephones and crisis hotline signage in 2014, the hotline staff have received 20 clinical calls where the caller stated intent of jumping off the bridge. Hotline staff remained engaged with those callers until police officers arrived and safety was confirmed. Despite the presence of emergency telephones, there have been 15 deaths by suicide at the bridge since 2014.
- People considering suicide can walk onto the bridge and jump without impediment.
- The Taos County Sheriff’s office, which performs the majority of the recovery operations with the Taos Fire Department, reports that the cost of each recovery effort ranges between $2,000 to $8,000 with no financial assistance from any other agency.
- The dangerous recovery efforts sometimes result in injuries to deputies. The local public service departments cover the cost of the rehabilitation for the deputies and the community goes without the services of the deputies when they are out of full duty.

The objective of this Study was to analyze the structural feasibility of adding a physical suicide deterrent system to the existing structure to meet the purpose and need of the project.

Alternatives Evaluated

The following suicide deterrent alternatives were analyzed and evaluated in this Study process:
• No-Build Alternative: Assumes that no improvements or reconstruction would take place
• Build Alternative A - Vertical Railing
• Build Alternative B – Horizontal Net

The Study evaluated the structural feasibility of adding a rail or net system to the existing structure. The 8-ft-3-inch-high Vertical Railing Alternative (Alternative A) would replace the existing pedestrian rail. The Horizontal Net Alternative (Alternative B) would be installed approximately 15 ft below the existing railing and extend out 15 ft from the edge of bridge. Specific details such as type of railing or netting, colors, and type of material would be determined during design.

Alternative Evaluation and Preferred Alternatives

The three alternatives were evaluated against the following criteria topics: Purpose and Need, Constructability, Future Maintenance, Inspection Access, Required Bridge Capacity, Cost, and potential environmental impacts based on a desktop review of existing environment.

A review of bridge structural demand and capacity analysis of all three alternatives determined that both the Vertical Railing Alternative and Horizontal Net Alternative result in increased future maintenance costs compared to the No-Build Alternative. Of the build alternatives, the Horizontal Net would require more significant and costly modifications to the bridge than the Vertical Railing alternative. Based on all the impacts that would result from the Horizontal Net Alternative, it was eliminated from consideration. The No-Build Alternative and Vertical Railing Alternative will advance for more detailed evaluation and consideration. Ultimately, historic preservation, environmental impacts, and public input will continue to be significant factors in the decision making process.

Environmental Investigations and Recommendations

Environmental field investigations and surveys have not yet been conducted. The surveys will be conducted once the preferred alternative has been identified and the area of impact has been determined.
II. Introduction

NMDOT is evaluating the feasibility of different types of enhancements to the US 64/Rio Grande Gorge Bridge (Bridge No. 6462) structure to deter suicides. The proposed project has been assigned NMDOT Control Number (CN) 5101020.

The project area is located in Taos County in the northern portion of the state (Figure 1). The property surrounding the project area on the west side of the bridge is owned by the Bureau of Land Management (BLM) and the east side of the bridge is owned by the Taos Pueblo. The bridge is located 7.6 miles west of the NM 522/US 64 intersection. The project area is shown in Figure 2.

The Rio Grande Gorge Bridge was constructed in 1965 and is New Mexico’s signature bridge structure. The bridge was listed on the State Register of Cultural Properties on May 9, 1997 and was included in the National Register of Historic Places on July 15, 1997. Although the bridge was less than 50 years old at the time of its listing, it was recognized for its exceptional importance as a bridge whose history is closely associated with a critical chapter of transportation history in New Mexico and because of its unique structure type in the state. The structure is a continuous steel deck truss bridge with spans of 300 ft, 600 ft, and 300 ft. The deck surface towers approximately 600 ft above the river and offers stunning views of the canyon below, making it one of the most visited tourist attractions in the region.
Figure 1. Location Map
Figure 2. Project Area Map
III. Purpose and Need Statement

The Rio Grande Gorge Bridge is located on US 64 in Taos County New Mexico. The bridge, a historic structure built in the 1960s, is 1,272 feet (ft) long and 650 ft above the canyon floor making it the 7th tallest bridge in the United States.

Purpose

The purpose of the project is to:

- Reduce the number of suicides at the Rio Grande Gorge Bridge resulting from people jumping off the bridge.
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The project is needed because:

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- Since the installation of emergency telephones and crisis hotline signage in 2014, the hotline staff have received 20 clinical calls where the caller stated intent of jumping off the bridge. Hotline staff remained engaged with those callers until police officers arrived and safety was confirmed. Despite the presence of emergency telephones, there have been 15 deaths by suicide at the bridge since 2014.
- People considering suicide can walk onto the bridge and jump without impediment.
- The Taos County Sheriff’s office, which performs the majority of the recovery operations with the Taos Fire Department, reports that the cost of each recovery effort ranges between $2,000 to $8,000 with no financial assistance from any other agency.
- The dangerous recovery efforts sometimes result in injuries to deputies. The local public service departments cover the cost of the rehabilitation for the deputies and the community goes without the services of the deputies when they are out of full duty.

The objective of this Study was to analyze the structural feasibility of adding a physical suicide deterrent system to the existing structure that meets the purpose and need of the proposed project. The study; however, did not evaluate the effectiveness of a physical suicide deterrent system. In consultation and cooperation with the NMDOT, the Study assumes that physical barriers that make suicide more difficult and inconvenient would deter suicides at the Bridge.
IV. History of Bridge Evaluations

A. 2009 Feasibility Study

In 2009, Senate Joint Memorial 18 requested that NMDOT, in cooperation with the Department of Public Safety, conduct a feasibility study on installing bridge barriers and other safety features on the Rio Grande Gorge Bridge to deter suicides and accidental falls. Joint Memorial 18 stated that the Rio Grande Gorge Bridge accounts for over 50 percent of all suicides in the Taos County area and referred to the National Suicide Prevention Lifeline Steering Committee’s statement that the use of bridge barriers is the most effective means of bridge suicide prevention.

Based on the request from Senate Joint Memorial 18, NMDOT, in cooperation with the Department of Public Safety, conducted a feasibility study, Project Number BR-064-6(25)242, CN 3973. The study considered four build alternatives and the No-Build Alternative. A document dated February 10, 2009 from Armando M. Armendariz, PE, North Region Design to Max E. Valerio, PE, Deputy Secretary Programs and Infrastructure, detailed the activities and events associated with the study (see Appendix A).

B. 2014 Emergency Telephone Installation

In an effort to deter suicides, an emergency telephone system was installed in 2014 on the bridge structure, approaches, and parking areas. The phone system included 10 pedestal emergency telephones with a direct connection to a suicide prevention hotline. The call boxes were installed in December 2014 and went live on January 14, 2015. A total of 2,015 calls have been placed through July 31, 2018. A summary of the calls placed through the call boxes is provided below. See Appendix B for full report.

- 20 Clinical Calls: Law enforcement dispatched to aid persons of concern who stated intent of jumping off the bridge. Hotline staff engaged with the caller until police officers arrived and safety was confirmed.
- 240 No Response Dispatches
- 1 Non-mental Health Dispatch (Car Crash)
- The remaining were accidental calls, calls regarding other traffic incidents, non-emergent bridge issues, test calls, and other miscellaneous types of calls not having to do with needing help

C. 2015 Structural Feasibility Analysis

In 2015, the NMDOT contracted with HDR to complete a structural feasibility analysis. The purpose of the analysis was to determine the feasibility of adding a suicide deterrent system to the bridge. The number of alternatives was reduced from the 2009 effort from four to two build alternatives (Vertical Railing and Horizontal Net) and the No-Build Alternative.
A two-dimensional analysis was completed for the build alternatives and a report was developed. The analysis report recommended some additional considerations to be studied in a subsequent analyses. Those additional considerations included constructability, maintenance, inspection access impacts, views, and historic preservation. The report also recommended a three-dimensional analysis to refine the analysis and determine the impacts of wind and ice loads on the structure. The refined three-dimensional analysis would provide additional results to determine the need for additional lateral bracing or strengthening of members with the transverse wind loads and ice loads.

The details of the analysis and discussion associated with the study are provided the January 2015 Structural Feasibility Analysis in Appendix B.

V. Rio Grande Gorge Bridge Existing Conditions

A. Bridge Existing Conditions

1. Bridge Geometry
The existing typical section is approximately 36 ft wide, as shown in Figure 3. The width consists of two 4-ft sidewalks and two 14-ft driving lanes. The raised sidewalks are approximately one ft above the roadway surface.

![Figure 3. Existing Bridge Geometry](image-url)

The bridge structure is a three span deck truss with span lengths of 300 ft, 600 ft, and 300 ft, as shown in Figure 4. On both ends of the truss structure is an approach span supported by steel girders with an approximate length of 36 ft. The deck surface of the bridge is approximately 600 ft above the Rio Grande Gorge floor.
2. Bridge Railing
The existing bridge railing extends approximately four ft above the sidewalk surface. The railing is constructed of steel tube and oval bar sections. The railing is constructed in 30-ft panel sections (Figure 5) and attached the edge of the bridge deck with steel bolts anchored in the concrete deck (Figure 6).

Figure 4. Existing Profile

Figure 5. Typical Railing Panel
3. Bridge Inspection

The last inspection for the Rio Grande Gorge Bridge was in August of 2017. Overall, the Rio Grande Gorge Bridge is in fair condition (NBI Condition State 5). There are several areas of deterioration throughout the structure, primarily concentrated in the deck and floor system elements.

The deck was overall in fair condition (NBI Condition State 5). There was corrosion, efflorescence, and damaged forms throughout the deck with isolated locations of exposed and corroded reinforcement. There were transverse and map cracking in the deck top side and minor abrasion and loss of fines in the wheel lines. Expansion joints are deteriorated and leaking. The curbs and sidewalks exhibit cracking and isolated spalls throughout.

The superstructure is overall in fair condition (NBI Condition State 5). There is corrosion in the floor system (girders, stringers, lateral bracing, and floorbeams). The truss members have paint loss, cracked tack welds at connections, missing/loose fasteners, minor section loss and pack rust, and isolated areas of debris buildup at connections. The pins and hangers in the approach spans are showing signs of deterioration and corrosion. Several cracks at the diaphragm to girder connections in the approach spans were documented. The exterior sidewalk stringers exhibit corrosion with section loss up to 1/16 of an inch. Overall, the superstructure elements exhibited approximately fifty percent paint failure ranging from a top coat failure only, to top coat and primer layer failure, to failure of paint to bare metal.

The substructure was overall in Satisfactory condition (NBI Condition State 6). All substructure members have transverse, longitudinal, and/or map cracks up to 1/16-inch-wide with minor efflorescence and delamination. There are several areas of patching along the columns, some
that have failed. The slope paving at each abutment is showing signs of cracking up to 1/8-inch-wide, minor undermining, and/or moderate heaving.

4. Traffic and Pedestrian Use

The average daily traffic for vehicles is 560, with 27 percent being trucks. This section of US 64 connects the communities of Tres Piedras to Taos. The Gorge Bridge structure is the only river crossing suitable for all vehicle types for approximately 90 miles. This crossing is a significant element to New Mexico’s transportation system in the north central region of the state.

Pedestrian counts were not recorded for this study and would vary depending on the season of year, however tourists from all parts of the world have been observed frequenting the sidewalks of the Gorge Bridge. The visitors take in the views toward the structure and from the structure to canyon walls and river below. The rest area and parking facility on the west side of the bridge facilitates pedestrian use of the bridge sidewalks and facilities.

B. Existing Environmental Conditions

1. Geology and Soils

The study area is located within the Southern Rocky Mountain Physiographic Province in the Rio Grande Basin. Geology is influenced by the Rio Grande Rift, which is two parallel fault zones that extend in a north-south direction across the state. The rift was formed by the pulling apart of the earth’s crust. Volcanoes bordered the rift and spread lava across the region. The study elevation ranges from 6,960 to 6,970 ft above mean sea level. The study area terrain is on slightly sloping land bisected by the deep Rio Grande Gorge. The bottom of the Gorge below the bridge is at 6,380 ft above mean sea level. The Rio Grande flows in a north-south direction at the bottom of the gorge. Geology consists of Tertiary basaltic to andesitic lava flows. Just east of the gorge, surface geology consists of Quaternary piedmont alluvial deposits (Chronic, 1987; New Mexico Bureau of Geology and Mineral Resources, 2003; Williams, 1986).

Three soil map units show information within the study area, but only one of the units has soil cover (see Table 1. Soil Mapping Units). Rock outcrop, very steep, covers 80.6 percent of the study area, and water covers 10.8 percent. Sedillo-Silva association covers just 3.6 percent of the study area and has a severe erosion risk.

Table 1. Soil Mapping Units

<table>
<thead>
<tr>
<th>Soil Map Unit</th>
<th>Percent of Study Area (%)</th>
<th>Erosion Risk</th>
<th>Farmland Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rock outcrop, very steep</td>
<td>80.6</td>
<td>Not rated</td>
<td>Not prime farmland</td>
</tr>
<tr>
<td>Sedillo-Silva association, strongly sloping</td>
<td>3.6</td>
<td>Severe</td>
<td>Not prime farmland</td>
</tr>
<tr>
<td>Water</td>
<td>10.8</td>
<td>Not rated</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Source: Natural Resources Conservation Service (2018)
2. **Water**  
The Rio Grande originates in the San Juan Mountains of southern Colorado and flows in a north-south direction across central New Mexico. It receives runoff from the Sangre de Cristo and San Juan mountain ranges. The river’s runoff is mostly from the San Juan Mountains in southwestern Colorado. The bridge is located within a section of the Rio Grande designated “wild” by the BLM in accordance with the guidelines established by the Wild and Scenic Rivers Act of 1968. Wild rivers are defined as “those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.”

The US 64 Bridge is the northernmost paved roadway crossing of the Rio Grande in New Mexico. The headwaters of the Rio Grande are in the San Juan Mountains of south-central Colorado. The river is also fed by tributaries such as the Red River in the Sangre de Cristo Mountains. Based on data from 1925 through 2016, the river’s mean daily discharge is 1,090 cubic feet per second (cfs). Daily discharge reached 5,480 cfs in 1942. In April 2018, the river had a very low discharge of 248 cfs, which was near the record low discharge of 235 cfs in 1956 (US Geological Survey, 2018). The low discharge was due to low mountain snowpack conditions.

The Rio Grande reach between Red River and Rio Pueblo de Taos is not an impaired river. No pollutant issues have been identified. (NMED, 2016).


No waterways are located in upland portions of the study area. Stormwater runoff from the study area empties into the Rio Grande Gorge and eventually flows into the Rio Grande.

Based on available, published information, the depth to groundwater is approximately 590 ft (New Mexico Office of the State Engineer, 2018).

3. **Wetlands**

No wetlands are located within upland portions of the study area. Conditions for wetland development are not present in the study area due to the absence of adequate water sources and low-lying areas. Wetlands may occur along the Rio Grande at the bottom of the gorge.

4. **Vegetation**

Vegetation surrounding the Rio Grande Gorge Bridge consists of Plains/Mesa Grassland and Great Basin Desert Scrub vegetation (Dick-Peddie, 1993). Dominant plants species include big sagebrush, blue grama, rubber rabbitbrush, snakeweed, Russian thistle, Indian ricegrass, one-seed juniper, and common sunflower. The only noxious weed in the study area is Siberian elm, a Class C noxious weed. No treatment is recommended for Class C noxious weeds (Marron and Associates, 2010).
5. **Wildlife**

The varied vegetation and proximity to a permanent water source at the bottom of the gorge provide habitat for a variety of wildlife species. However, the gorge depth makes access to water difficult for some species. The bridge provides potential roosting habitat for bats and nesting habitat for cliff swallows. Common bird species include American kestrel, northern Harrier, common raven, western bluebird, Townsend solitaire, and house finch. Golden eagle nests have been observed within 0.25 mile of the study area. Perch sites indicative of raptors were located on both cliff faces of the gorge upstream and downstream of the Rio Grande Gorge Bridge. During a June 2011 survey, an unoccupied peregrine falcon aerie was also observed north of the bridge on the west side of the canyon. A peregrine falcon was observed flying in the general area, but it did not appear that peregrine falcons were attending the aerie.

Mammals that could pass through the area include coyote and desert cottontail rabbit. Habitat suited to a variety of mammal species is present near the study area. Big-horn sheep were observed foraging along the east side of the river upstream of the Rio Grande Gorge Bridge. Bats such as the Myotis complex (*Myotis spp.*) could use the existing bridge structure and cliffs associated with the gorge for night or day roosting. Bridge girder joints are generally open and do not provide the same quality of habitat which is available within nearby rock faces in the gorge. No bats were recorded with an Anabat ™ detection device immediately adjacent to the bridge during 2008 surveys.

Lizards expected in this habitat include lesser earless lizard, New Mexico whiptail, prairie lizard, and side-blotched lizard (Marron and Associates, 2010).

6. **Protected Species**

BLM-managed lands occur at the bridge. The BLM considers impacts to sensitive species as well as federally-listed species. The evaluation of wildlife and plant impacts should include the current BLM sensitive species list at the time of the evaluation.

No suitable habitat for federal endangered or threatened species is present. The state threatened peregrine falcon has been observed near the bridge. No state endangered or federal listed plants occur in Taos County (see Table 2. USFWS and NMDGF Listed Species in Taos County).

**Table 2. USFWS and NMDGF Listed Species in Taos County**

<table>
<thead>
<tr>
<th>Group</th>
<th>Common/Scientific Names</th>
<th>Status in Taos County</th>
<th>Habitat/Distribution</th>
<th>Suitability of Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plants</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invertebrates</td>
<td>Sangre de Christo peacalam</td>
<td>NMDGF T</td>
<td>High mountain lake in southern part of county</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td>Group</td>
<td>Common/Scientific Names</td>
<td>Status in Taos County</td>
<td>Habitat/Distribution</td>
<td>Suitability of Habitat</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------------------------------------</td>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Wrinkled</td>
<td>Marsh snail (Stagnicola caperata)</td>
<td>NMDGF T</td>
<td>In Taos County, limited to one high elevation peak</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td>Fishes</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amphibians</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reptiles</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birds</td>
<td>Southwestern willow flycatcher (Empidonax</td>
<td>USFWS E NMDGF E</td>
<td>Dense riparian woodlands</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td></td>
<td>traillii extimus)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yellow-billed cuckoo (Coccyzus americanus)</td>
<td>USFWS T</td>
<td>Expansive riparian woodlands with complex canopy</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td></td>
<td>Mexican spotted owl (Strix occidentalis lucida)</td>
<td>USFWS T</td>
<td>Canyons in forests - old growth conifer habitat</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td></td>
<td>White-tailed ptarmigan (Lagopus leucura)</td>
<td>NMDGF E</td>
<td>Alpine tundra, meadows</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td></td>
<td>White-eared hummingbird (Hylocharis leucotis)</td>
<td>NMDGF T</td>
<td>Montane woodlands</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td></td>
<td>Bald eagle (Haliaeetus leucocephalus)</td>
<td>BGEPA NMDGF T</td>
<td>Large water bodies, winters along big rivers in NM</td>
<td>Suitable habitat</td>
</tr>
<tr>
<td></td>
<td>Golden eagle (Aquila chrysaetos)</td>
<td>BGEPA</td>
<td>Cliffs in tableland habitats</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Boreal owl (Aegolius funereus)</td>
<td>NMDGF T</td>
<td>Boreal forests</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td></td>
<td>Baird’s sparrow (Ammodramus bairdii)</td>
<td>NMDGF T</td>
<td>Grasslands and plains</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td></td>
<td>Common black hawk (Buteogallus anthracinus</td>
<td>NMDGF T</td>
<td>In cottonwood overstory of expansive riparian woodlands</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td></td>
<td>anthracinus)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peregrine falcons (Falco peregrinus</td>
<td>NMDGF T</td>
<td>Steep mountain or shore cliffs near water</td>
<td>Suitable habitat</td>
</tr>
<tr>
<td></td>
<td>anatum/tundrius)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gray vireo (Vireo vicinior)</td>
<td>NMDGF T</td>
<td>Rolling pinyon-juniper habitat</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td>Mammals</td>
<td>Black-footed ferret (Mustela nigripes)</td>
<td>USFWS ENP</td>
<td>Expansive grasslands</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td></td>
<td>Pacific martin (Martes caurina)</td>
<td>NMDGF T</td>
<td>Mountain woodland and forest</td>
<td>No suitable habitat</td>
</tr>
<tr>
<td></td>
<td>Canada lynx (Lynx canadensis)</td>
<td>USFWS T</td>
<td>Boreal forest</td>
<td>No suitable habitat</td>
</tr>
</tbody>
</table>
### 7. Cultural Resources

Pursuant to Section 106 of the National Historic Preservation Act (16 USC 470), NMDOT and FHWA are required to evaluate the potential impacts of the proposed project on cultural resources that are listed on or eligible for listing on the National Register of Historic Places (NRHP). Cultural resource eligibility and potential for adverse effects are evaluated in consultation with the State Historic Preservation Officer (SHPO) at the New Mexico Historic Preservation Division. NMDOT, on behalf of FHWA, would consult with Taos Pueblo, Bureau of Indian Affairs, and BLM. In addition, Native American Tribes would be consulted regarding potential religious and cultural resources in the project area.

The Rio Grande Gorge Bridge was listed on the NRHP in July 1997 and the State Register of Cultural Properties in May 1997. It was also designated the Most Beautiful Bridge – long span in 1966.

### 8. Section 4(f)

As part of the Section 4(f) requirements, the Federal Highway Administration (FHWA) evaluates projects for impacts on public parks, recreation areas, wildlife and waterfowl refuges, and historic sites. Created in 1966, Section 4(f), as codified in 49 United States Code (USC) 1653(f), mandates that “special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.” For Section 4(f) to apply, “a publicly owned park, recreation area or wildlife and waterfowl refuge

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**Listed and Migratory Birds**

Golden eagles (*Aquila chrysaetos*) have been observed roosting along the Rio Grande Gorge approximately 0.25 mile north of the bridge. During previous surveys, large stick nests likely built by this species were present north of the bridge as well. This species is protected under the Bald and Golden Eagle Protection Act and under the Migratory Bird Treaty Act. Golden eagles nest from approximately mid-January to mid-June.

Peregrine falcons (American peregrine falcon [*Falco peregrinus anatum*] and Arctic peregrine falcon [*Falco peregrinus tundrius*]) are known to occur within the Taos area and could nest on cliffs associated with the gorge either north or south of the project area. These falcons are protected as threatened species by the State of New Mexico and are a BLM sensitive species.
must be a “significant” resource. Pursuant to Title 23 Code of Federal Regulations (CFR) Section 771.135(c), 4(f) resources are presumed to be significant unless the official having jurisdiction over the site concludes that the entire site is not significant. Even if this is done, FHWA must make an independent evaluation to assure that the official’s finding of significance or non-significance is reasonable.” As part of the Section 4(f) requirements, transportation projects are evaluated for impacts on public parks, recreation areas, wildlife and waterfowl refuges, and historic properties. Project developers and the FHWA are required to avoid such lands unless there is no prudent or feasible alternative to using that land. If such lands are used, the project must take steps to minimize harm to the land.

The Rio Grande Gorge Bridge is protected by Section 4(f) as a historic property listed on the NRHP. The effects of the undertaking on the bridge are determined through the Section 106 process and Section 4(f) analysis.

The Rio Grande del Norte National Monument is a Section 4(f) property since it is a designated recreation area publicly owned and managed by the BLM. The NMDOT/FHWA would consult with the appropriate official with jurisdiction to assess the impacts of the preferred alternative on this Section 4(f) property. The monument is a scenic area consisting of open plains, volcanic cones, and the Rio Grande Gorge. Recreational opportunities at the monument include whitewater rafting, hunting, fishing, hiking, mountain biking, and camping. The Rio Grande Gorge Bridge is an important scenic overlook for the monument.

9. Climate and Air Quality
The Rio Grande Gorge region has a variable, semi-arid climate with warm summers and cold winters. Based on 1892 to 2016 climate data for Taos, the mean annual maximum temperature is 63.6 degrees Fahrenheit (°F), and the mean annual minimum temperature is 31.0 °F. Temperatures range from an average maximum monthly of 85.7°F in July to an average minimum of 10.7 °F in January. The mean annual precipitation is 12.35 inches with more 1 inch of monthly precipitation in July, August, September, and October. Annual average snowfall is 29.5 inches with more than 6 inches of snowfall in December and January (Western Regional Climate Center, 2018). Air quality is good near the proposed study area because surrounding lands have low-density development and winds disperse most pollutants. San Juan County is in attainment with the Clean Air Act (NMED, 2017). No major emission sources are located near the study area. In terms of climate change, the only greenhouse gas emissions source is motor vehicles traveling on US 64. Traffic volumes are relatively low and represent a very small proportion of New Mexico greenhouse gas emissions (NMED, 2016).

10. Noise
The FHWA has adopted policies and procedures for evaluating transportation projects noise impacts and determining the need for noise abatement. Under federal noise guidelines in Title 23, Part 772, Code of Federal Regulations (23 CFR 772), a noise study must identify existing land use activities or sensitive receptors that may be affected by noise from a transportation project. According to FHWA procedures, noise abatement must be considered when predicting

Traffic noise is sound generated on roadways by vehicles. Sound is quantified as decibels, which measure relative acoustic energy intensities. A-weighted decibels (dBA) are used to simulate human response to noise. To address the hourly variations in highway noise adequately, average hourly energy levels (Leq(h)) are used. The selected unit of measurement in noise analysis is the A weighted equivalent sound level (Leq(dBA)).

Traffic noise impacts occur when either future noise levels approach one dBA, equal, or exceed the Noise Abatement Criteria; or when future noise levels result in a substantial increase over the existing noise environment (NMDOT, 2011).

Since the project alternatives involve the installation of vertical railing or horizontal netting, and does not entail traffic capacity improvements, such as the addition of through-traffic lanes, this project falls under the category of a Type III Project, as defined in 23 CFR 772 and NMDOT IDD-2011-02, which does not require noise analysis. Noise abatement measures would not be needed.

11. Socioeconomics

The study area is located within Taos County. Based on the 2016 Census Bureau estimates, Taos County’s population was 125,133 (see Table 3). The population is older than the state median age of 37.2 years with a median age of 47.6 years in Taos County. The Hispanic/Latino population is both the state’s and Taos County’s largest minority group representing 47.8 percent of New Mexico’s population and 56.6 percent of Taos County’s population.

Table 3. 2016 Socioeconomic Characteristics of Areas near US 64 Rio Grande Gorge Bridge Study Area

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>New Mexico</th>
<th>Taos County</th>
<th>Census Tract 9401</th>
<th>Census Tract 9523</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location Description</td>
<td>Statewide</td>
<td>Countywide</td>
<td>East of Rio Grande</td>
<td>West of Rio Grande</td>
</tr>
<tr>
<td>Population:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Total Population</td>
<td>2,082,669</td>
<td>32,961</td>
<td>9,149</td>
<td>2,417</td>
</tr>
<tr>
<td>- Median Age – years</td>
<td>37.2</td>
<td>47.6</td>
<td>45.0</td>
<td>52.2</td>
</tr>
<tr>
<td>- Percent Under 18</td>
<td>24.1%</td>
<td>19.1%</td>
<td>20.5%</td>
<td>21.3%</td>
</tr>
<tr>
<td>- Percent Over 64</td>
<td>15.3%</td>
<td>22.3%</td>
<td>21.6%</td>
<td>22.7%</td>
</tr>
<tr>
<td>Race Status:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- White</td>
<td>73.5%</td>
<td>75.7%</td>
<td>67.1%</td>
<td>72.3%</td>
</tr>
<tr>
<td>- Black/African American</td>
<td>2.0%</td>
<td>0.3%</td>
<td>0.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td>- Native American</td>
<td>9.3%</td>
<td>6.8%</td>
<td>15.8%</td>
<td>0.4%</td>
</tr>
</tbody>
</table>
Two Census Tracts provide local socioeconomic data for areas near the study area. Census Tract 9401 includes areas east of the Rio Grande, and Census Tract 9523 includes areas west of the Rio Grande. The census tracts have an older population: Tract 9401 has a median age of 45 years with 21.6 percent over 64 years of age; Tract 9523 has a median age of 52.2 years with 22.7 percent over 64 years of age. Both tracts have a large Hispanic/Latino population representing 48.4 percent of Tract 9401’s population and 55.5 percent of Tract 9523’s population. Taos Pueblo has a sizeable population in Tract 9401, and 15.8 percent of this tract’s residents are Native American.

Median family incomes are lower in Taos County than in New Mexico. Taos County has a median family income of $44,988 compared with a state median family income of $55,900 (see Table 3). In contrast, the state and county family poverty rates are similar with a poverty rate of 15.9 percent in New Mexico and 15.7 percent in Taos County. Incomes are lower in Tract 9401 with a median family income of $46,600 and family poverty rate of 16.3 percent. Incomes are higher in Tract 9523 with a median family income of $55,568 and family poverty rate of 22.8 percent.

As in the rest of the country, unemployment rates have been lower in recent years. In February 2018, New Mexico’s unemployment rate was 5.5 percent, and Taos County’s unemployment rate was 7.1 percent (New Mexico Department of Workforce Solutions, 2018).

The Rio Grande Gorge Bridge is one of the main tourist attractions in Taos County. Many local tourists visit the bridge. Other county tourist attractions include the Pueblo of Taos, Taos Ski Valley, Rio Grande del Norte National Monument, and galleries, stores, and restaurants in the town of Taos.
12. Land Use
Lands near the study area are undeveloped except for the parking lots on either end of the bridge and the rest area west of the bridge. The BLM owns the land west of the bridge, while the land east of the bridge is owned by the Taos Pueblo. The BLM lands are part of the Rio Grande del Norte National Monument. Livestock grazing has historically been the main land use on the BLM and Taos Pueblo lands. No development in the region near the bridge is proposed in the foreseeable future.

13. Visual Resources
The Rio Grande Gorge is a steep-walled canyon in level to rolling terrain (see Figure 7. View from Gorge Bridge looking north and Figure 8. View from Gorge Bridge looking south). The steep cliffs and depth of canyon create a distinctive landform. Surrounding lands are flat to slightly rolling. The gorge is an unexpected visual element in the surrounding landscape. Hills are visible in background to the north, and high peaks of Sangre de Cristo Mountains are visible in the distance to the east. The gorge establishes a north-south general linear theme that includes top of canyon edge and river at the gorge bottom. Gorge color varies greatly with light conditions. In shadow, the gorge appears a dark brown. In light, the gorge appears a medium brown shade. In cloudy conditions, the gorge appears as medium to light brown. Variations in color and shadow increase the visual interest of the gorge and emphasize the gorge’s depth. The gorge landscape has a rugged and coarse texture.

Sagebrush/grassland vegetation occurs on upland rolling terrain. Vegetation on canyon sides is sparse or absent; scattered junipers occur on upper canyon slopes. Narrow ribbons of green vegetation border each side of Rio Grande. Green lines of vegetation border the Rio Grande and extend parallel with the gorge. Tan vegetation dominates upland rolling terrain. Dark blue-green vegetation occurs on slopes of Sangre de Cristo Mountains. Upland vegetation has a smooth texture, which can become mottled where the sagebrush contrasts with grasses. Juniper on the upper gorge creates weak mottling.

The bridge is a distinctive man-made structure that forms an impressive span across the gorge (see Figure 9, Figure 10, and Figure 11). The Rio Grande Gorge Bridge is a linear east-west structure across the north-south orientated gorge. The bridge contains linear sub-elements such as beams, trusses, and handrails and is silver color. Pavement and sidewalks are grey. This bridge enhances visual experience by providing a wide-open view of the surrounding landscape and an overhead view of the gorge. The viewing platforms project out from the bridge and allow viewers to see the gorge from an aerial perspective.
Figure 7. View from Gorge Bridge looking north

Figure 8. View from Gorge Bridge looking south
Figure 9. View of Gorge Bridge from rest area looking northeast

Figure 10. View from west part of Gorge Bridge looking east
14. Farmland
The Natural Resources Conservation Service (NRCS) classifies the soils as Not Prime Farmland (see Table 1; NRCS, 2018). These areas are not currently used as farmland and are not possible to cultivate.

15. Wilderness Area
Wilderness areas are not found near the Rio Grande Gorge Bridge. There are no wilderness areas within or adjoining the study area. (Wilderness Connect, 2017).

16. Wild and Scenic River
Seventy-four miles of the Rio Grande are designated as a Wild and Scenic River. The designated wild and scenic river corridor extends from the Colorado state line to Rinconada, a community located about one mile south of the Rio Arriba/Taos county line. In 1968, the river was included in the National Wild and Scenic River System. It was one of the eight first rivers to be designated by Congress as Wild and Scenic (BLM, 2018).

C. History of Suicides from the Rio Grande Gorge Bridge
Data for suicides from the Rio Grande Gorge Bridge was provided by the OMI, as shown in Figure 12. Total Number of Suicides by Year at Bridge. The reported information is solely related to suicides from the bridge structure. Suicides which occurred from the canyon rim or adjacent properties were not included in the reported data. The magnitude of the reported
numbers may be debatable, depending on the source of the data, however the implication of the numbers is not. Each number represents an individual who had a family and loved ones. That fact makes this an emotional discussion and the reporting of numbers is not intended to trivialize the lives of those that the numbers represent.

The OMI’s official data goes back to the beginning of their office, which was in 1973. However, OMI reported that their investigation determined there were no suicides prior to 1973. OMI reports there have been a total of 44 deaths from the bridge, with the first noted in 1991. The highest number of suicides in one year was seven in 2005.

![Figure 12. Total Number of Suicides by Year at Bridge](image)

The OMI information provides the home location for each suicide, as shown in Figure 13. Rio Grande Gorge Bridge Suicides by Home Location. Thirty percent or 13 of the suicides were Taos County residents. Fifty (50) percent or 22 of the suicides were other NM residents and the remaining 20 percent or nine were out of state or country.

![Figure 13. Rio Grande Gorge Bridge Suicides by Home Location](image)
Suicides per Year in Taos County and at Bridge. In 2005, there was the highest number of suicides in a year for Taos County (20) and the highest number of suicides from the bridge (7).

Figure 14. Total Number of Suicides per Year in Taos County and at Bridge

New Mexico’s suicide rate is consistently higher than the national average. Suicides equal 2.6 percent of all deaths in New Mexico, compared to 1.6 percent of all deaths in the U.S. The rate in 2014 (most recent data available) was 21 per 100,000 people, compared to a rate of 13 per 100,000 people in the rest of the U.S. (2014 New Mexico Selected Health Statistics, State Center for Health Statistics, Department of Health). The OMI data also provided a comparison of overall suicide data for New Mexico against the number at the bridge. Between 2007 and 2016, the number of suicides per year state-wide ranged between 379 and 479 (Figure 15. Total Number of Suicides per Year in NM and at Bridge). The suicides at the bridge for the same year span ranged between zero and five. On average, the number of suicides at the bridge is just over 0.5 percent of the total number of suicides in New Mexico per year.
Figure 15. Total Number of Suicides per Year in NM and at Bridge

The OMI data can also be divided and evaluated by cause of death, as shown in Figure 16. Suicide by Cause of Death, State-wide. Consistently, the largest number of suicides in New Mexico are caused by gunshot wound, hanging, and substance intoxication.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rio Grande Gorge Bridge</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Gunshot Wound</td>
<td>218</td>
<td>223</td>
<td>230</td>
<td>236</td>
<td>263</td>
<td>243</td>
</tr>
<tr>
<td>Hanging</td>
<td>92</td>
<td>90</td>
<td>100</td>
<td>104</td>
<td>94</td>
<td>109</td>
</tr>
<tr>
<td>Substance Intoxication</td>
<td>61</td>
<td>64</td>
<td>73</td>
<td>52</td>
<td>76</td>
<td>72</td>
</tr>
<tr>
<td>Multiple Injuries</td>
<td>0</td>
<td>13</td>
<td>13</td>
<td>11</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Stab Wound</td>
<td>6</td>
<td>8</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Asphyxia</td>
<td>7</td>
<td>9</td>
<td>6</td>
<td>8</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>28</td>
<td>7</td>
<td>11</td>
<td>1</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>417</td>
<td>419</td>
<td>442</td>
<td>431</td>
<td>479</td>
<td>468</td>
</tr>
</tbody>
</table>

Figure 16. Suicide by Cause of Death, State-wide

The OMI provided the available data they have regarding the number of suicides from the bridge. To get a broader perspective the Taos Dispatch operator provided the number of calls they have received from the bridge and provided the data below in Table 4 and 5. The data from the dispatcher describes the nature of the call; however, the nature of the calls are not necessarily verified and there no additional data is provided to record the outcome of the call.
There is a volunteer group in Taos known as the “Gorge Bridge Safety Network”, which has been involved in various activities regarding the bridge. They have also provided some statistics that they have gathered and is provided in Appendix D.

Table 4. Taos Central Dispatch 911 Calls Related to the Rio Grande Gorge Bridge Since 2015

<table>
<thead>
<tr>
<th>Nature of Calls</th>
<th>Total Calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rio Grande Gorge Bridge</td>
<td>441</td>
</tr>
<tr>
<td>Suicidal Subject</td>
<td>68</td>
</tr>
<tr>
<td>Suicide</td>
<td>5</td>
</tr>
<tr>
<td>Suicide Attempt</td>
<td>3</td>
</tr>
<tr>
<td>Suspicious</td>
<td>7</td>
</tr>
<tr>
<td>Welcheck</td>
<td>243</td>
</tr>
<tr>
<td>Law Unknown</td>
<td>15</td>
</tr>
<tr>
<td>911 Hang Up</td>
<td>56</td>
</tr>
<tr>
<td>Medical Unknown</td>
<td>4</td>
</tr>
<tr>
<td>Rio Grande Gorge Bridge Rest Area</td>
<td>11</td>
</tr>
</tbody>
</table>

Table 5. 911 Calls Related to the Rio Grande Gorge Bridge Prior to 2015

<table>
<thead>
<tr>
<th>Nature of Calls</th>
<th>Total Calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rio Grande Gorge Bridge</td>
<td>511</td>
</tr>
<tr>
<td>Suicidal Subject</td>
<td>10</td>
</tr>
<tr>
<td>Suicide</td>
<td>70</td>
</tr>
<tr>
<td>Suicide Attempt</td>
<td>80</td>
</tr>
<tr>
<td>Welcheck</td>
<td>57</td>
</tr>
<tr>
<td>Law Unknown</td>
<td>9</td>
</tr>
</tbody>
</table>
VI. Stakeholder and Agency Coordination

A. Rio Grande Gorge Bridge Safety Network Stakeholder Meeting, Aug. 15 2017

The meeting was held at the NMDOT general office in Santa Fe. The overall purpose of the meeting was for the Safety Network Group to provide the Study Team with their input for safety measures at the bridge and NMDOT to provide the group an update on activities.

The Safety Network Group proposed the following safety measures at the Bridge:

- Remove the existing pedestrian rail and replace with an 8-ft-high barrier which consists of vertical posts and Jakob WebNet
- Widen the bridge pedestrian walkways to 5 ft and provide crash-tested combined traffic and pedestrian barrier railings between walkway and roadway
- Reduce clear roadway width on bridge from 28 ft to 24 ft with 2 11-ft lanes and 1-ft shoulders
- Reduce posted vehicle speed on bridge from 45 miles per hour (mph) to 30 mph
- Add lighting in pedestrian walkway and provide pedestrian crosswalks

The Safety Network Group also proposed the following safety modifications and enhancements for the approaching roadway and rest area:

- Barriers along both sides of US 64 to prevent parking along road
- Modified vendor space to be located off the roadway in a safe location
- Provide Americans with Disabilities Act-compliant access from rest area to the bridge
- Provide designated visitor parking area
- Provide gorge overlook and open air interpretative signage with information about Taos public lands, Big Horn Sheep, Wild Rivers Recreation Area, hiking, etc.

The NMDOT reported to the Safety Network Group that the study team’s scope of work included inspection of the bridge structure, analysis of the bridge structure with applied loading of the vertical railing and horizontal net alternative, and public involvement activities. The public involvement activities include stakeholder meetings and a public meeting. The public meeting will be scheduled after the Study is complete and public meeting materials are prepared.

The Safety Network Group inquired about the expected future developments for the project and the NMDOT team noted the Study and stakeholder/public input will be influential to the future developments. The Safety Network Group was also directed to the responsible planning organizations and government officials as being key elements to the development of the project.
B. Stakeholder Meeting, August 14, 2018, Taos County Commission Chambers

The stakeholder meeting was held on Tuesday, August 14, 2018 at the Taos County Commission Chambers. The purpose of the meeting was to inform the stakeholder officials about the public meeting, meeting material and answer any questions. The stakeholders included officials from the owners of the adjacent land, Bureau of Land Management and Taos Pueblo. It also included officials from Taos County and The Town of Taos. The public meeting material was presented and the study team answered questions. See appendix E for notes from the Stakeholder meeting.

C. Public Meeting, August 16, 2018, Sage Brush Inn in Taos, New Mexico

The public meeting was held on Thursday, August 16, 2018 from 5:30 p.m. to 7:30 p.m. at the Sage Brush Inn in Taos, New Mexico. The meeting was an open house format and no formal presentation was given. Attendees could view a variety of study materials and study team members were available to discuss study details and answer questions. Comment cards were available during the meeting and attendees were encouraged to provide their input. A total of 76 people signed in at the meeting. See appendix F for a complete report of the Public Meeting Summary.

VII. Evaluation Criteria

The evaluation criteria outlined below was used to evaluate each of the three alternatives.

A. Engineering

1. Constructability

The evaluation of constructability considered the alternatives’ feasibility to be built. This factor considered whether the alternative could reasonably be constructed using typical methods, materials, and equipment common to the construction industry and area. Alternatives that minimize impacts and are more easily constructed reflect negligible or positive impacts.

Construction of the suicide deterrent alternatives would span the length of the Rio Grande Gorge Bridge, which is over 600 ft above the Rio Grande. At that height, scaffolding from below the structure would not be feasible. The construction effort would have to be supported from the bridge deck using small bucket trucks, cranes, and suspended work platforms.

Closure of the bridge structure for vehicular traffic would result in an unreasonable detour length, so at least one lane would be maintained with the exception of short duration closures necessary to particular construction activities. The single lane would be bi-directional and would be controlled by signals on each end of the bridge structure.
Caution would be needed with the weight of the construction equipment and materials that are allowed to be placed on the bridge. The construction loading at all critical construction phases would have to be evaluated to avoid overload to the structure.

2. Future Maintenance
Minimal maintenance is ideal to reduce safety risks and be cost effective for NMDOT. The high profile and historic nature of this structure creates a challenge to completing any necessary maintenance. The risk associated with working on an active roadway is accentuated because of the height of the bridge. All maintenance efforts would have a level of risk associated to them, and the cost of the maintenance on this bridge would reflect the respective risk level. Alternatives expected to have a relatively higher required maintenance effort would correlate to a higher impact.

3. Inspection Access Impacts
The Rio Grande Gorge Bridge is on an annual inspection schedule. Inspectors need to be able to access all members of the truss structure, the pier caps, and the bearings. Snooper trucks are typically used to access the majority of this structure. The remaining areas are inspected with rope access. Consideration of the inspection access would be critical for the evaluation of the alternatives and the final design of the selected alternative.

4. Bridge
Both build alternatives would create additional loads to the structure, which were not considered during the original design. These new loads are comprised of the physical weight of the component plus the lateral load associated with additional wind and ice effects induced by the additional members. The loads would add additional stress to the structural members and in some situations the original design may not have enough reserve strength to carry the added loads. The existing members may also need to be strengthened to carry the added loads with cover plates or by replacing the member.

To appropriately evaluate the forces and ratings of each member, a three-dimensional structural analysis model was created that included the loading on the structure for each loading condition. The three-dimensional model was first calibrated with the original structure design loads to provide verification that the load distribution reported by the truss model was consistent with the original design. The model was then manipulated to add the additional wind, snow and ice loads as appropriate, to each alternative.

5. Cost
Considering the limited infrastructure budgets and increasing competition for transportation project funding, alternatives that minimize construction costs and on-going maintenance costs were valued as a lower impact.
B. Environmental

Each of the three alternatives were analyzed to identify potential impacts to the existing environmental conditions identified in Section V.B as a result of project implementation. Potential impacts were characterized as no effect, negligible, or significant.

VIII. Alternatives

Three alternatives were developed and evaluated for the structural feasibility: a No-Build Alternative and two build alternatives (Vertical Railing and Horizontal Net). The following subsections discuss the alternatives.

A. Build Alternatives Analysis Criteria

A combination of the following specifications, design guides and research documents were used to establish the build alternatives criteria for analysis. Table 6. Engineering Criteria, summarizes the proposed criteria.

- AASHTO Standard Specifications for Highway Bridges, 17th Edition, revised to date
- AASHTO The Manual for Bridge Evaluation, 2nd Edition, revised to date
- ASCE 7-10 Minimum Design Loads for Buildings and other Structures

Table 6. Engineering Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Method of Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loading</td>
<td>AASHTO HS20 Truck and HS20 Lane per lane</td>
</tr>
<tr>
<td></td>
<td>Design wind speed: 90 mph</td>
</tr>
<tr>
<td></td>
<td>Design Wind Pressure: 75 psf</td>
</tr>
<tr>
<td></td>
<td>Maximum snowfall: 7.5 in snow water equivalent</td>
</tr>
<tr>
<td></td>
<td>Maximum ice thickness: 0.25 in (ASCE Figure 10-2)</td>
</tr>
<tr>
<td>Method of Analysis</td>
<td>Load Factor Rating of Main Members</td>
</tr>
<tr>
<td></td>
<td>Load Factor Rating of Gusset Plates</td>
</tr>
<tr>
<td></td>
<td>Load Factor Capacity/Demand Ratios for the following load cases</td>
</tr>
<tr>
<td>I</td>
<td>1.3[1.0D+1.67(L+I)]</td>
</tr>
<tr>
<td>II</td>
<td>1.3[1.0D+1.0W]</td>
</tr>
<tr>
<td>III</td>
<td>1.3[1.0D+1.0(L+I)+0.3W+1.0WL+1.0LF]</td>
</tr>
<tr>
<td>VIII</td>
<td>1.3[1.0D+1.0(L+I)+1.0ICE]</td>
</tr>
</tbody>
</table>
Criteria

IX 1.2[1.0D+1.0W+1.0ICE]

**B. No-Build Alternative**

The No-Build Alternative would leave the bridge structure in its existing condition and configuration. No improvements would be made to the geometry or condition of the bridge.

**C. Build Alternative A – Vertical Railing**

The Build Alternative A – Vertical Railing would replace the existing pedestrian railing with a taller pedestrian railing (Figure 17 and Figure 18). The railing evaluated would be 8-ft-3-inches in height with vertical members spaced such that there would be clear opening between vertical members of approximately 4 inches to 2-ft-5-inches above the sidewalk height and clear opening of approximately 8 inches from 2-ft-5-inches above the sidewalk to the top of the railing. All railing members are adequately stiff to resist a half-inch deflection with the applied design load. The vertical members would frame into the horizontal support members near the top and bottom of the system and at the transition in vertical member spacing. The horizontal elements would connect to the vertical posts.

The vertical fence was assumed to extend the entire length of the bridge, including around the overlooks. The proposed railing would be sectioned in similar lengths as the existing railing. Any break in the taller railing height would be an opportunity to negate the deterrent effects of the system.

![Figure 17. 8-Foot Tall Pedestrian Railing Elevation](image-url)
Figure 18. 8-Foot Tall Pedestrian Railing Section

The following photo simulations (Figure 19, Figure 20, Figure 21, and Figure 22) were prepared to illustrate the alternative.
Figure 19. Photo Simulation of Vertical Railing, facing northeast

Figure 20. Photo Simulation of Vertical Railing, facing east
Figure 21. Photo Simulation of Vertical Railing, Facing East from an Overlook

Figure 22. Photo Simulation of Vertical Railing, Facing South near an Overlook
D. Build Alternative B – Horizontal Net

The Build Alternative B – Horizontal Net would add a horizontal net system (Figure 23) to the bridge structure. The system would be installed 15 ft below the top of rail and would extend outward 15 ft from the edge of the deck. The net system analyzed consisted of a stainless steel netting with a grid of approximately four inches supported by horizontal steel struts or frames.

Figure 23. Horizontal Net System
The following photo simulations (Figure 24, Figure 25, Figure 26, and Figure 27) were prepared to illustrate the Horizontal Net Alternative.

**Figure 24.** Photo simulation of Horizontal Net, facing northeast

**Figure 25.** Photo simulation of Horizontal Net, facing northeast
Figure 26. Photo simulation of Horizontal Net, facing east from overlook

Figure 27. Photo simulation of Horizontal Net, looking into Gorge
IX. Evaluation of Alternatives

Each alternative was developed and evaluated against engineering and environmental criteria. The evaluation process assigned a factor value to the different criteria for each alternative. The factors were as follows:

++ = very positive effects  
+  = positive effects  
0  = negligible or no effects  
-  = negative effects  
-- = very negative effects

The following discussion details the evaluation factors for each alternative and determines the preferred alternative for advancement into Phase C of the Study.

A. Purpose and Need Analysis

1. No-Build Alternative

The No-Build Alternative would not meet the stated Purpose and Need of the project. No safety improvements would be made with this alternative and there would be no physical barriers constructed to deter suicides from the bridge. Because the No-Build Alternative would not meet the Purpose and Need of the project, it was valued as Very Negative effect.

2. Build Alternatives

Both build alternatives meet the Purpose and Need of the project. Physical barriers would be constructed to improve safety on the bridge and presumably deter suicides. Because the build alternatives would meet the Purpose and Need of the project, they were valued as Very Positive effects.

Table 7 summarizes the Purpose and Needs Analysis.

Table 7. Summary of Purpose and Need Analysis

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Factor</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Build Alternative A</td>
<td>++</td>
</tr>
<tr>
<td>Build Alternative B</td>
<td>++</td>
</tr>
</tbody>
</table>
B. Cost Analysis

1. No-Build Alternative
There would be no construction costs associated with the No-Build Alternative, which would be favorable in the existing competitive infrastructure funding environment. However, there would be a cost associated with the recovery effort after a suicide that could be included in the evaluation of the No-Build Alternative. The annual cost for that effort is subjective because of the many undefined variables associated with recovery missions. The cost would fluctuate by the number of suicides that year, the location of the recovery, and the recovery resources available. The immediate cost of a No-Build option would be positive from a cost perspective; however, the long term investment of a No-Build could potentially cost more, which would have negative effect. Because the No-Build Alternative would have both a positive and negative effect, constructability of the No-Build Alternative was valued as Negligible or No Effects.

2. Build Alternatives
The cost associated with Build Alternative A – Vertical Railing would include the labor, equipment and materials for the vertical railing and the strengthening of some existing bridge members. Although this alternative would have an immediate negative effect on cost, the long term effect could be positive. Not being able to identify a definitive cost to the potential lives saved from a build option or an immediate cost effect, Alternative A would have a negative effect. The estimated cost for construction and engineering of Build Alternative A – Vertical Railing would be $3.4 million. The Build Alternative A – Vertical Railing was valued as Negative Effect.

The cost with the Build Alternative B – Horizontal Net would include the labor, equipment and materials for the horizontal net and the strengthening of the existing bridge members. As discussed in the Bridge Analysis section, a significant number of existing bridge members are inadequate for the net alternative loadings. The number of inadequate members is so large that the scope of developing strengthening concept would be similar to that of designing a new bridge structure and would be beyond the scope of this Study. Due to the extensive cost associated with strengthening or replacing the existing bridge structure, the Build Alternative B – Horizontal Net was valued as Very Negative Effect. The Cost Analysis is summarized in Table 8.

Table 8. Summary of Estimated Cost Analysis

<table>
<thead>
<tr>
<th>Alternative</th>
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</thead>
<tbody>
<tr>
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<tr>
<td></td>
<td>$0.00 + Recovery Costs</td>
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<tr>
<td>Build Alternative A</td>
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</tr>
<tr>
<td></td>
<td>$3,400,000</td>
</tr>
<tr>
<td>Build Alternative B</td>
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</tr>
</tbody>
</table>
C. Engineering Factors and Analysis

1. Constructability

There would be no construction with the No-Build Alternative, so the Factor is valued as Negligible or No Effect.

Build Alternative A – Vertical Railing would have an impact on traffic during construction. Construction operations would be stationed from the bridge deck. The construction operations would close one lane of bridge with the remaining lane used for both directions. The flow of traffic would be controlled by a signal placed at each end of the bridge. Build Alternative A – Vertical Railing would have a traffic impact and require pre-construction signal efforts, so the Factor was valued as Negative Effect.

Constructability of Build Alternative B – Horizontal Net would be more extensive and difficult than Build Alternative A. Depending on the design approach, the traffic could be removed from the bridge for a time during construction while new bridge members are replaced. Constructability of Build Alternative B – Horizontal Net was valued as Very Negative Effect. Table 9 summarizes the constructability analysis.

Table 9. Summary of Constructability

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Factor</th>
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</thead>
<tbody>
<tr>
<td>No-Build</td>
<td>0</td>
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<tr>
<td>Build Alternative A</td>
<td>-</td>
</tr>
<tr>
<td>Build Alternative B</td>
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</tbody>
</table>

2. Future Maintenance

The future maintenance on the bridge structure would not be increased with the No-Build Alternative, so the Factor was valued as Negligible or No Effect.

The build alternatives would increase the expected future maintenance efforts. Build Alternative A – Vertical Railing would increase the surface area of railing that would need to be maintained with coatings and repair. Build Alternative A – Vertical Railing was valued as Negative Effect.

Build Alternative B – Horizontal Net would require a significant amount of future maintenance. The netting would catch debris that is dropped from the bridge deck and would require maintenance efforts to remove the debris. The netting could become a target of abuse from pranksters, who dump debris from the bridge to see the effect on the netting. The debris would have to be removed by NMDOT staff and would put their safety at risk. Alternative B – Horizontal Netting was valued as Very Negative Effect. Table 10 summarizes the future maintenance analysis.
Table 10. Summary of Future Maintenance

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Factor</th>
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</thead>
<tbody>
<tr>
<td>No-Build</td>
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<tr>
<td>Build Alternative A</td>
<td>-</td>
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<tr>
<td>Build Alternative B</td>
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</tbody>
</table>

3. **Inspection Access Impacts**

The inspection access would not be impacted by the No-Build Alternative, so it was valued as *Negligible* or *No Effect*.

Build Alternative A – Vertical Railing would not impact the inspection access. The inspection vehicle/snooper truck would reach over the railing. The information sheet provided by the NMDOT indicates an 11-ft clearance from the roadway surface to the bottom of the snooper arm. The top of the vertical railing is expected to be about 9-ft-3-inches above the deck surface. The alternative is valued as *Negligible* or *No Effect*.

Build Alternative B – Horizontal Net would require alterations to the net system for inspection access. Depending on the design details, each panel of the net system would have to be pulled or folded up against the bridge structure to allow the inspection truck’s arm and bucket to lower down to the lower parts of the bridge. The net system would have to be placed back into position after the inspection was completed. Inspection access would be possible with Build Alternative B – Horizontal Net, but would require effort and significant maintenance to keep the mechanical elements of the net functioning properly during and after each inspection. The alternative was valued as *Negative Effect*. Table 11 summarizes the Inspection Access Impacts analysis.

Table 11. Summary of Inspection Access Impacts Analysis

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Factor</th>
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<tbody>
<tr>
<td>No-Build</td>
<td>0</td>
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<tr>
<td>Build Alternative A</td>
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<tr>
<td>Build Alternative B</td>
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</table>

4. **Required Bridge Capacity**

The bridge structure would not be impacted by the No-Build Alternative, so it was valued as *Negligible* or *No Effect*.

Build Alternative A – Vertical Railing would have an impact on the existing structure. The existing sidewalk would be removed and recast to ensure proper anchorage of the supporting rail connection. The additional weight of the railing and wind load would overstress 16 truss
members and 8 gusset plates. See figure 28 for failing members. The deficient members would need strengthening or replacement. Possible methods of strengthening could include the addition of a cover plate to add thickness to the member. The proposed improvements to the structure would provide adequate strength capacity to the structure for the addition of the railing so the impact would be negligible. The alternative was valued as **Negligible or No Effect** for the bridge.

![Figure 28. Failing Members (Alternative A)](image)

Build Alternative B – Horizontal Net would have an impact on the existing structure. The addition of the net-supporting structure and the weight of the snow/ice would have a significant impact on the existing structure. A total of 342 truss members and 36 gusset plates would require replacement or strengthening. See figure 29 for failing members. Due to the significant impact to the existing structure, the possible remedies were not contemplated. It is possible that a complete new bridge structure would be needed to carry the additional load. The alternative was valued as **Very Negative** for the bridge. Table 12 summarizes the bridge analysis.
D. Environmental Factors and Analysis

No construction activities would occur with the No-Build Alternative and therefore, impacts to environmental resources are valued as *No Effect*, except as noted below.

1. Geology and Soils

Geologic impacts would depend on the area land disturbance. No geologic disturbance would occur due to the actual bridge modifications. It is expected that land disturbance would be limited to staging areas at the ends of the bridge. There is no difference between the alternatives for Geologic impacts and all alternatives would be *Negligible or No Effect*.

As with the geologic impacts, soil impacts would depend on the area of land disturbance. No soil disturbance would occur due to the actual bridge modifications. It is expected that land disturbance would be limited to staging areas at the ends of the bridge. A Storm Water Pollution Prevention Plan would be prepared and would specify best management practices to minimize soil erosion and sediment transport. There is no difference between the alternatives for Soil impacts and all alternatives would be *Negligible or No Effect*.
Table 13 summarizes the geology and soils analysis.

Table 13. Summary of Geology and Soils Analysis

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Factor</th>
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<tbody>
<tr>
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<tr>
<td>Build Alternative A</td>
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<tr>
<td>Build Alternative B</td>
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</table>

2. **Water**

Water impacts would occur during construction. Water impacts would be limited to stormwater runoff from the staging areas. Disturbed and exposed ground surfaces have the potential for sediment and contaminant transport in stormwater runoff. Construction best management practices would be developed and implemented to protect water quality. Measures would be needed to restrict construction materials and bridge debris from falling into the river. Overall water impacts would be the same for both build alternatives and would be valued as *Negligible or No Effect*.

Table 14 summarizes the Water analysis.

Table 14. Summary of Water Analysis

<table>
<thead>
<tr>
<th>Alternative</th>
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</thead>
<tbody>
<tr>
<td>No-Build</td>
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<td>Build Alternative A</td>
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<tr>
<td>Build Alternative B</td>
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</tbody>
</table>

3. **Wetland**

Wetlands occur along riparian areas in low-lying areas adjoining the Rio Grande. Construction activities for both build alternatives would occur more than 600 feet above any potential wetlands and therefore both alternatives are valued as *Negligible or No Effect*.. Table 15 summarizes the Wetland analysis.

Table 15. Summary of Wetland Analysis

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Build Alternative A</td>
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</tr>
<tr>
<td>Build Alternative B</td>
<td>0</td>
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</tbody>
</table>
4. **Vegetation**

Vegetation impacts would be limited because ground disturbance would only occur at staging areas. Vegetation impacts of the build alternatives would be the same for both alternatives as both would use the same and will categorized as *Negligible or No Effect*. Table 16 summarizes the Vegetation analysis.

**Table 16. Summary of Vegetation Analysis**

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Factor</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Build Alternative A</td>
<td>0</td>
</tr>
<tr>
<td>Build Alternative B</td>
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</table>

5. **Wildlife**

Potential wildlife impacts would primarily affect birds and possibly bats. Both build alternatives may impact birds nesting and bats roosting on the bridge during construction. After the completion of construction, bird nesting and bat roosting sites would not be affected. Build Alternative B – Horizontal Nets may have a bird collision potential. The net is an unexpected feature in the gorge environment. Birds may also find the net a desirable location for nests. The nets would need to be inspected for nests. Active nests could not be removed until after the young had fledged.

To prevent taking occupied nests during construction, surveys should be conducted to identify any nest sites on or near the bridge and construction should occur outside of the general nest season (or earlier for raptors) to ensure no take occurs.

The installation of suicide prevention measures are not likely to directly impact raptor or songbird nest sites, but if either vertical railing or horizontal netting were imperceptible to birds, the presence of the structure could result in bird collisions and injury. The final design of either alternative should be preceded by coordination with the USFWS, BLM, and NMDGF to ensure that color and size specifications allow for birds to safely avoid the structure.

Bats are likely to occur in the gorge, and netting could be undetectable to echolocation, resulting in injury if individuals became caught. Coordination should be conducted with USFWS, BLM and NMDGF regarding mesh sizes and other recommendations prior to finalizing design to ensure the structure is detectable to bats.

Alternative A – Vertical Railing was valued as *Negative Effect* – because vertical rails may be imperceptible to birds and Alternative B - Horizontal Net was valued as *Very Negative Effect* because nets may be imperceptible to birds and bats, may be an attractive nesting site for birds, and would require maintenance if birds nest on the horizontal nets. Table 17 summarizes the Wildlife analysis.
Table 17. Summary of Wildlife Analysis

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Factor</th>
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</thead>
<tbody>
<tr>
<td>No-Build</td>
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<tr>
<td>Build Alternative A</td>
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<td>Build Alternative B</td>
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</table>

6. Protected Species

The golden eagle and peregrine falcon would be the species of main concern. Since eagles and falcons are adept flyers with exceptional eyesight, it is expected that they would avoid collisions with Alternative A - Vertical Railings or Alternative B - Horizontal Nets. Prior to construction, bird surveys of the bridge and project area should be conducted to confirm that no peregrine falcons or golden eagles are nesting or roosting in the project area. Both build alternatives were valued as Negligible or No Effect.

Table 18 summarizes the Protected Species analysis.

Table 18. Summary of Protected Species Analysis

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>No-Build</td>
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<td>Build Alternative A</td>
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<tr>
<td>Build Alternative B</td>
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7. Cultural Resources

Since the Rio Grande Gorge Bridge is listed on the NRHP (July 1997), and the State Register of Cultural Properties (SRCP), it is expected that the SHPO would have special interest in any modifications to the bridge. NMDOT would need to document the bridge and conduct consultation with the SHPO regarding impacts. The SHPO likely will expect special documentation and public information measures. The main impact would be visual. The bridge’s visual appearance is key to its cultural resource integrity. Build Alternative A – Vertical Railing would be expected to have a greater deck elevation perspective visual impact than Build Alternative B – Horizontal Nets. The vertical railings are more visible than the horizontal nets. The railings would be visible to drivers on the bridge as well as pedestrians on the sidewalks and observers looking at the north and south sides of the bridge. The nets would not be visible to drivers on the bridge. The nets would be visible to pedestrians, but less visible than the railing to observers looking at the north and south sides of the bridge. Build Alternative A – Vertical Railing was valued as Very Negative Effect and Build Alternative B – Horizontal Nets was valued as Negative Effect. Table 19 summarizes the Cultural Resources analysis.
Table 19. Summary of Cultural Resources Analysis

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Factor</th>
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</thead>
<tbody>
<tr>
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<td>Build Alternative A</td>
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<tr>
<td>Build Alternative B</td>
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</tr>
</tbody>
</table>

8. Section 4(f)
The build alternatives would potentially require use of two Section 4(f) properties. As discussed under the Cultural Resources section of this report, the build alternatives would affect historic use of the Rio Grande Gorge Bridge because of visual modifications. The build alternatives would also affect recreational uses of the Rio Grande del Norte National Monument. The build alternatives would not affect access to the monument, but they would affect visual resources by modifying the view of the Rio Grande Gorge. Both build alternatives are valued as Very Negative Effect.

Table 20 summarizes the Section 4(f) analysis.

Table 20. Summary of Section 4(f) Analysis

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Factor</th>
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<td>Build Alternative A</td>
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<tr>
<td>Build Alternative B</td>
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</table>

9. Climate and Air Quality
The alternatives would not affect Taos County’s attainment status under the Clean Air Act. The alternatives would have no effect on automobile emissions. Low-level dust impact may occur occasionally during construction. Both build alternatives were valued as Negligible or No Effect.

Table 21 summarizes the Climate and Air Quality analysis.

Table 21. Summary of Climate and Air Quality Analysis

<table>
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<th>Alternative</th>
<th>Factor</th>
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</thead>
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<td>Build Alternative A</td>
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</tr>
<tr>
<td>Build Alternative B</td>
<td>0</td>
</tr>
</tbody>
</table>
10. **Noise**

The alternatives would not change noise levels. Traffic would continue at current volume, and corresponding traffic noise levels would remain the same. Temporary construction noise impact would occur. Both build alternatives are valued as *Negligible or No Effect*. Table 22 summarizes the Noise analysis.

**Table 22. Summary of Noise Analysis**

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>No-Build</td>
<td>0</td>
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<tr>
<td>Build Alternative A</td>
<td>0</td>
</tr>
<tr>
<td>Build Alternative B</td>
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</tbody>
</table>

11. **Socioeconomics**

The No-Build Alternative would be expected to allow suicides to continue at their current rate, resulting in a substantial societal impact due to continued loss of life at the bridge. The No-Build alternative was valued as *Very Negative Effect*. The build alternatives would have neutral and positive socioeconomic impacts. The build alternatives would not affect population characteristics, population growth, incomes, poverty rates, or economic development. Based on available data on the effectiveness of a build option, the build alternatives would be expected to reduce the number of suicides at the Rio Grande Gorge Bridge and would provide an important societal benefit. Both build alternatives were valued as *Very Positive Effect*. The No-Build Alternative would be expected to allow suicides to continue at their current rate, resulting in a substantial societal impact due to continued loss of life at the bridge. The No-Build alternative was valued as *Very Negative Effect*. Table 23 summarizes the Socioeconomics analysis.

**Table 23. Summary of Socioeconomics Analysis**

<table>
<thead>
<tr>
<th>Alternative</th>
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<tr>
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<td>Build Alternative A</td>
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</tr>
<tr>
<td>Build Alternative B</td>
<td>++</td>
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</table>

12. **Land Use**

The build alternatives would have no land use impacts. Current land uses under BLM control on the west side of the bridge and under Taos Pueblo control on the east side of the bridge would not change. Table 24 summarizes the Land Use analysis.
### Table 24. Summary of Land Use Analysis

<table>
<thead>
<tr>
<th>Alternative</th>
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</thead>
<tbody>
<tr>
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<td>Build Alternative A</td>
<td>0</td>
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<tr>
<td>Build Alternative B</td>
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</table>

#### 13. Visual Resources

The build alternatives would have impacts on Visual Resources. Both build alternatives would alter the views toward and away from the bridge. The suicide deterrent systems would modify the existing structure and add an element to the bridge that is not there today and was not designed in the original layout. Those elements would be visual as one looks from the Gorge canyon wall toward the bridge or as one is on the bridge looking out toward the Gorge. The railings would be visible to drivers on the bridge as well as pedestrians on the sidewalks and observers looking at the north and south sides of the bridge. The nets would not be visible to drivers on the bridge. The nets would be visible to pedestrians, but less visible than the railing to observers looking at the north and south sides of the bridge. Build Alternative A – Vertical Railing was valued as *Very Negative Effect* and Build Alternative B – Horizontal Nets was valued as *Negative Effect*. The visual impacts caused by the build alternatives were valued as *Negative Effect*. The No-Build Alternative would not impact the visual resources and was valued as *Negligible or No Effect*. Table 25 summarizes the Visual Resources analysis.

### Table 25. Summary of Visual Resources Analysis

<table>
<thead>
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<td>Build Alternative A</td>
<td>- -</td>
</tr>
<tr>
<td>Build Alternative B</td>
<td>-</td>
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</table>

#### 14. Farmland

The alternatives would have no impacts on farmland. The adjacent areas are not currently used as farmland and are not possible to cultivate. All alternatives were valued as *Negligible or No Effect*. Table 26 summarizes the farmland analysis.

### Table 26. Summary of Farmland Analysis

<table>
<thead>
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</table>
15. **Wilderness Area**

The alternatives would have no impacts on wilderness areas. There are no designated wilderness areas within or adjoining the study area. All alternatives were valued as *Negligible or No Effect*. Table 27 summarizes the wilderness area analysis.

**Table 27. Summary of Wilderness Area Analysis**

<table>
<thead>
<tr>
<th>Alternative</th>
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<tr>
<td>Build Alternative B</td>
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</table>

16. **Wild and Scenic River**

The alternatives would have no impact on the Wild and Scenic River designation or the aspects of the area to qualify this area as a Wild and Scenic River. The characteristics of the river and gorge would be maintained with any of the alternatives in the Study. All alternatives were valued as *Negligible or No Effect*. Table 28 summarizes the Wild and Scenic River analysis.

**Table 28. Summary of Wild and Scenic River Analysis**

<table>
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E. Evaluation of Alternatives

Table 29 summarizes the alternatives evaluation.

Table 29. Evaluation of Alternatives

<table>
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<tr>
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X. Recommendations

The two build alternatives are assumed to serve as a deterrent to suicides from the bridge. It is assumed that suicides will continue with the No-Build Alternative.

The results of the structural analysis effort show that Alternative B – Horizontal Net Alternative would have a significant, negative structural impact on the existing structure. The existing main load bearing members would not be adequate to carry the predicted loads from the net alternative and would require significant modifications and possible replacement of the structure. The impacts associated with Alternative B – Horizontal Net eliminated it from further consideration.

The remaining alternatives, No-Build and Alternative A – Vertical Railing, were determined to be feasible alternatives. The existing bridge structure would be adequate for both alternatives, with minor strengthening or modifications to existing elements for the Alternative A – Vertical Railing alternative.

The No-Build and Vertical Railing Alternatives are recommended for advancement into Phase C study and consultation with SHPO and local planning organizations.
XI. References


New Mexico Crisis and Access Line. 2018. Taos Rio Grande Gorge Bridge Call Box Data 2018. Final. Prepared for New Mexico Department of Transportation by Wendy Linebrink-Allison, MSW, MBA, CPSW, New Mexico Program Manager


Taos Central Dispatch, 911 Call Data at the Rio Grande Gorge Bridge prepared for New Mexico Department of Transportation by Dominic Martinez, E911 Director.


Appendices
Appendix A. 2009 NMDOT Feasibility Study
Project Number: BR-064-6(25)242

Control Number: 3973

Description: US 64 Rio Grande Gorge Bridge (RGGB) Senate Joint Memorial 18
Professional Services Contract Justification

TO: Max E. Valerio, P.E  
Deputy Secretary Programs and Infrastructure

FROM: Armando M. Armendariz P.E.  
North Region Design

DATE: February 10, 2009

ATTN: Tamara P. Haas, P.E.  
Acting Chief Engineer

Stephen M. Rodriguez P.E.  
North Region Design Manager

Attached are numerous details of the activities and events associated with Project Number: BR-064-6(25)242 CN: 3973, US 64 Rio Grande Gorge Bridge (RGGB)

Senate Joint Memorial:  
Renderings:  
Stakeholders Meeting:  
Public Meeting:  
Cultural Resource:  
Public Input:  
Right of Way:  
Studies:  
Funding:  
Estimates:

If there are questions please call.
Senate Joint Memorial 18
A JOINT MEMORIAL

REQUESTING THE DEPARTMENT OF TRANSPORTATION IN COOPERATION
WITH THE DEPARTMENT OF PUBLIC SAFETY TO CONDUCT A FEASIBILITY
STUDY TO INSTALL A BRIDGE BARRIER ON THE RIO GRANDE GORGE
BRIDGE.

WHEREAS, deaths resulting from suicide attempts or
accidental falls from the Rio Grande gorge bridge in Taos
county have increased in recent years; and

WHEREAS, the cost of rescue efforts and the danger to
emergency responders has increased commensurately with such
incidents; and

WHEREAS, the Rio Grande gorge bridge has become a
significant tourist attraction, and the increasing traffic on
the bridge also contributes to higher risks for visitors and
public safety personnel; and

WHEREAS, New Mexico currently ranks fourth in the United
States for its suicide rate, which is one and one-half to two
times the national average; and

WHEREAS, the suicide rates among all ethnicities and age
groups are four times higher among males (thirty-one and
six-tenths per one hundred thousand) than females (six and
nine-tenths per one hundred thousand); and

WHEREAS, suicide is the ninth-leading cause of death for
New Mexicans, and suicide is the second-leading cause of
death among persons fifteen to twenty-four years of age and
the fourth-leading cause of death among persons thirty-five
to fifty-four years of age; and

WHEREAS, suicide at the Rio Grande gorge bridge accounts
for over fifty percent of all suicides in the Taos county
area; and

WHEREAS, the national suicide prevention lifeline
steering committee has stated its position that the use of
bridge barriers is the most effective means of bridge suicide
prevention;

NOW, THEREFORE, BE IT RESOLVED BY THE LEGISLATURE OF THE
STATE OF NEW MEXICO that the department of transportation be
requested to conduct a feasibility study in cooperation with
the department of public safety for the construction or
installation of bridge barriers and safety enhancing
improvements to the Rio Grande gorge bridge on United States
highway 64 in Taos county; and

BE IT FURTHER RESOLVED that the department of
transportation report its findings to the appropriate
committee of the legislature by December 1, 2009; and

BE IT FURTHER RESOLVED that copies of this memorial be
transmitted to the secretary of transportation and the
secretary of public safety.
Fiscal impact reports (FIRs) are prepared by the Legislative Finance Committee (LFC) for standing finance committees of the NM Legislature. The LFC does not assume responsibility for the accuracy of these reports if they are used for other purposes.

Current FIRs (in HTML & Adobe PDF formats) are available on the NM Legislative Website (legis.state.nm.us). Adobe PDF versions include all attachments, whereas HTML versions may not. Previously issued FIRs and attachments may be obtained from the LFC in Suite 101 of the State Capitol Building North.

**FISCAL IMPACT REPORT**

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<th>ORIGINAL DATE</th>
<th>LAST UPDATED</th>
<th>HB</th>
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<td>Cisneros</td>
<td>02/08/09</td>
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**SHORT TITLE** Study Barrier on Rio Grande Gorge Bridge

**SJM 18**

**ANALYST** Moser

**ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT** (dollars in thousands)

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<th>FY11</th>
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<td>Non-Recurring</td>
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(Parenthesis () Indicate Expenditure Decreases)

**SOURCES OF INFORMATION**

LFC Files

Responses Received From

New Mexico Department of Transportation (NMDOT)
Department of Health (DOH)

**SUMMARY**

Synopsis of Bill

Senate Joint Memorial 18 requests that NMDOT, in cooperation with the department of public safety, conduct a feasibility study on installing bridge barriers and other safety features on the Rio Grande Gorge Bridge on US 64 in Taos County to prevent suicides and accidental falls. The NMDOT shall seek cooperation from the Department of Public Safety for the study and report its findings to the Legislative Appropriation Committee by December 1, 2009.

**FISCAL IMPLICATIONS**

Senate Joint Memorial 18 requests that a feasibility study be performed. No impact is expected to the operating budget since existing staff levels should be sufficient to oversee the study.

**SIGNIFICANT ISSUES**

The Rio Grande Gorge Bridge is the fifth highest bridge in the United States (650 feet above the Rio Grande River). Suicide off the Rio Grande Gorge Bridge accounts for over 50% of all suicides in Taos County. The county is requesting assistance in developing safety barriers on the bridge to prevent future suicides and unintentional injuries:

DOH indicates that according to American Foundation for Suicide Prevention (AFSP) funded research and additional studies worldwide, prevention barriers on bridges have been effective at reducing suicide. Since suicide by jumping tends to be more impulsive in nature than some other methods of suicide, barriers help prevent suicide by providing suicidal individuals the time needed to change their minds, and to seek the treatment that might save their lives. AFSP supports the building of barriers and other physical deterrents on the Golden Gate Bridge and other bridges where suicides frequently occur.
http://www.afsp.org/index.cfm?fuseaction=home.viewPage&page_id=0AB9D157-C961-E2D5-2AC9B1B1A63AEB02

With the appropriate barrier installed on the Rio Grande Gorge there could be a reduction of suicide attempts as well as accidental falls.

In conducting the feasibility study, NMDOT notes that the Rio Grande Gorge Bridge is listed on the National Register of Historic Bridges. Therefore, any changes to the bridge design or visual aspects of the bridge will have to follow federal requirements for Historic Preservation. The process is typically time-consuming and would be expected to require a year to complete. Finally, the final design of the barrier could require structural modifications to the bridge and may take up to one year to complete.

GM/mt
Renderings
Stakeholders Meeting
Update:

To All:

The Bridge Section has a conflict with the 24th at 9AM and has suggested a new date, Tuesday the 23rd at 9AM.

To All:

District Five has requested a design team meeting to discuss the study of pedestrian screening for the Rio Grande Gorge Bridge.

Some of you may recall that CN 3973 was for a painting project on the structure however the district will be using this CN to advance the study of pedestrian screening.

It has been some time since we met on this and for that reason I am copying section heads only. Please notify the appropriate team members from each section to attend.

My understanding is that the NMDOT Bridge Design Section has worked with a consultant to develop some renderings please have the consultant attend with any pertinent documents.

Also if there is a particular individual or section you think should attend please forward the invitation onto them so they can plan on attending.

If there are any questions please call.

Thank you,

Armando M. Armendariz P.E.
NMDOT Infrastructure Design – North Region
Office  505-827-5511
Cell  505-490-2740
armando.armendariz@state.nm.us
To All:

Some notes from our meeting on June 23, 2009.

Attached is the Senate Joint Memorial 18. The due date to report back is December 1, 2009.

The current version of the STIP out for public comment has the project as CN: 3973 PRN: BR-064(25)242. The funding is FY 2011 for $2.1M

HDR has been in contact with me and should have the new proposed rendering ready in the next week or so. There will be a draft version soon that I’ll distribute to everyone for any comments.

Colleen Vaughn is working on getting the environmental consultant on board to coordinate the environmental and cultural aspects as well as the public meeting.

I am working on contact individuals from Taos Co. and NMSP to see if there are budget numbers they have used for an amount per recovery. I have ordered crash and traffic data and would like to see if D5 can perform a speed study.

If Ray Trujillo or some Bridge staff member can find the reference mentioned regarding speed less than 45 MPH not requiring pedestrian railing and forward me a copy that would be great.

Finally a list of suggested stakeholders:

Town of Taos
Taos County
State Police
Taos County Sherriff
Taos County Search and Rescue
Taos Pueblo
Bureau of Land Management
Game and Fish
SHPO
Dept. of Health
Senator Bingaman
Representative Lujan

Armando M. Armendariz P.E.
NMDOT Infrastructure Design – North Region
Office 505-827-5511
Cell 505-490-2740
armando.armendariz@state.nm.us

11/3/2009
August 7, 2009

RE: Project No. BR-064-6(25)242, CN: 3973, US 64
Invitation to Attend NMDOT Stakeholder Meeting to Discuss Suicide Prevention Measures for US 64 Rio Grande Gorge Bridge

The New Mexico Department of Transportation (NMDOT) is considering improvements to the Rio Grande Gorge Bridge on US 64. Senate Joint Memorial 18 has requested that the NMDOT conduct a feasibility study related to suicide prevention and the Rio Grande Gorge Bridge in cooperation with the Department of Public Safety. The objectives of this study are to: 1) perform a detailed assessment of the transportation needs of the identified location; 2) identify existing constraints; 3) identify and evaluate alternatives to address the transportation needs; and 4) provide improvement recommendations. It is the intent of the NMDOT to implement the recommended improvements into the State Transportation Improvement Plan (STIP).

The NMDOT, in cooperation with the Federal Highway Administration (FHWA) are asking key stakeholders to participate in an agency stakeholder meeting. NMDOT representatives will present suicide prevention alternatives for the identified location and receive comments from agency stakeholders at the meeting. It is critical that the NMDOT obtain your input to ensure that all issues of varying interest in the immediate and surrounding communities are correctly characterizing.

To begin this process, we are requesting your attendance at our agency stakeholder meeting. The meeting time and location are as follows:

Date:   Wednesday, September 16, 2009  
Time:   1:00 pm – 3:00 pm  
Location:  Taos Convention Center, 120 Civic Plaza Drive, Taos

I want to personally thank you for agreeing to participate in the agency stakeholders meeting. The NMDOT is excited by the opportunity to work with you and make decisions on how to advance the right solutions.

If you have questions please feel free to contact me in Santa Fe at 827-5511 or via e-mail, my address is: armando.armendariz@state.nm.us.
Sincerely,

Armando M. Armendariz, P.E.
NMDOT Infrastructure Design – North Region.
<table>
<thead>
<tr>
<th>LastName</th>
<th>Name1</th>
<th>Name2</th>
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<tr>
<td>Mr. Beach</td>
<td>Mr. Ryan Beach</td>
<td>Federal Highway Administration</td>
<td>New Mexico Office Court Drive Drive, Suite 801</td>
<td>Santa Fe, NM 87507</td>
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<tr>
<td>Senator Bingaman</td>
<td>Mr. Jeff Bingaman</td>
<td>U.S. Senator</td>
<td>Santa Fe Office, Marcy, Suite 101</td>
<td>Santa Fe, NM 87501</td>
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</tr>
<tr>
<td>Mr. Chavez</td>
<td>Mr. Rick Chavez</td>
<td>Public Works Director</td>
<td>Taos County, Albright St., Suite M</td>
<td>Taos, NM 87571</td>
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<tr>
<td>Ms. Cain</td>
<td>Ms. Charlene Cain</td>
<td>Program Manager</td>
<td>New Mexico Department of Health</td>
<td>Taos, NM 87571</td>
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<tr>
<td>Mayor Cordova</td>
<td>Mr. Darren Cordova</td>
<td>Mayor</td>
<td>Town of Taos, Camino de la Placita</td>
<td>Taos, NM 87571</td>
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<tr>
<td>Mr. DesGeorges</td>
<td>Mr. Sam DesGeorges</td>
<td>Field Office Manager</td>
<td>BLM Field Office, Cruz Alta Road</td>
<td>Taos, NM 87571</td>
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<tr>
<td>Mr. Espinoza</td>
<td>Mr. Francisco Espinoza</td>
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<tr>
<td>Mr. Gallegos</td>
<td>Mr. Phil Gallegos</td>
<td>Assistant District Engineer</td>
<td>NMDOT District 5, P.O. Box 4127, Coronado Station</td>
<td>Santa Fe, NM 87502-4127</td>
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<tr>
<td>Mr. Gomez</td>
<td>Mr. Donavan Gomez</td>
<td>Tribal Programs Administrator</td>
<td>P.O. Box 1846</td>
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<tr>
<td>Mr. Gomez</td>
<td>Mr. Sam Gomez</td>
<td>Roads Department Manager</td>
<td>Taos Pueblo Roads Mgmt. Syst., P.O. Box 1846</td>
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<tr>
<td>Representative Gonzales</td>
<td>Mr. Roberto &quot;Bobby&quot; Gonzales</td>
<td>State Representative</td>
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<tr>
<td>Senator Griego</td>
<td>Mr. Phil A. Griego</td>
<td>State Senator</td>
<td>Senate District 39, P.O. Box 10</td>
<td>San José, NM 87565</td>
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<td>Mr. Heitmann</td>
<td>Mr. Greg Heitmann</td>
<td>Federal Highway Administration</td>
<td>New Mexico Office Court Drive, Suite 801</td>
<td>Santa Fe, NM 87507</td>
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<td>Mr. Hutchinson</td>
<td>Mr. William Hutchinson</td>
<td>Context Sensitive Solutions Bureau</td>
<td>NMDOT P.O. Box 1149</td>
<td>Santa Fe, NM 87504-1149</td>
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<tr>
<td>Mr. Kaplan</td>
<td>Mr. Harvey Kaplan</td>
<td>New Mexico Historic Preservation Division</td>
<td>Bataan Memorial Building, 470 Galisteo Street, Suite 236</td>
<td>Santa Fe, NM 87501-2000</td>
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<tr>
<td>Ms. Maes</td>
<td>Ms. Sandra Maes</td>
<td>Transportation Planner</td>
<td>N. Central NM Economic Devel. Dist., P.O. Box 5115</td>
<td>Santa Fe, NM 87502</td>
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<tr>
<td>Mr. Lopez</td>
<td>Mr. Michael A. Lopez</td>
<td>Field Representative</td>
<td>U.S. Senator Tom Udall, 120 South Federal Place,</td>
<td>Santa Fe, NM 87501</td>
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<tr>
<td>Name of Individual</td>
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<td>City, State, ZIP Code</td>
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<tr>
<td>Congressman Lujan</td>
<td>Mr. Ben Ray Lujan</td>
<td>U.S. Representative District 3 811 St. Michael's Dr., Suite 104</td>
<td>Santa Fe, NM 87505</td>
<td></td>
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<tr>
<td>Mr. Martinez</td>
<td>Mr. David Martinez</td>
<td>Technical Support Engineer NMDOT District 5 P.O. Box 4127 Coronado Station</td>
<td>Santa Fe, NM 87502-4127</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. McCracken</td>
<td>Mr. Richard McCracken</td>
<td>President Taos Search and Rescue P.O. Box 1912</td>
<td>Taos, NM 87571</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. McElroy</td>
<td>Mr. John McElroy</td>
<td>District Engineer NMDOT District 5 P.O. Box 4127 Coronado Station</td>
<td>Santa Fe, NM 87502-4127</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Miera</td>
<td>Mr. Daniel Miera</td>
<td>Town Manager Town of Taos 400 Camino de la Placita</td>
<td>Taos, NM 87571</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ms. Murphy</td>
<td>Ms. Joan Murphy</td>
<td>Bureau of Health Emergency Management New Mexico Department of Health 1301 Siler, Building F</td>
<td>Santa Fe, NM 87507</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Murphy</td>
<td>Mr. Wally Murphy</td>
<td>Field Supervisor U.S. Fish and Wildlife Service 2105 Osuna Road</td>
<td>Albuquerque, NM 87113-1001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Ortiz</td>
<td>Mr. José Ortiz</td>
<td>ADA Coordinator NMDOT Office of Equal Opportunity 1596 Pacheco Street, Suite 107</td>
<td>Santa Fe, NM 87505</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Osborn</td>
<td>Mr. Dale Osborn</td>
<td>Planning Director Taos County 105 Albright St., Suite C</td>
<td>Taos, NM 87571</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Pacheco</td>
<td>Mr. Sammy L. Pacheco</td>
<td>County Manager Taos County 105 Albright St., Suite A</td>
<td>Taos, NM 87571</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Romero</td>
<td>Mr. Miguel A. Romero</td>
<td>Sheriff Taos County 105 Albright St., Suite K</td>
<td>Taos, NM 87571</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Roxlau</td>
<td>Mr. Blake Roxlau</td>
<td>Cultural Resource Bureau NMDOT, Room 213 P.O. Box 1149</td>
<td>Santa Fe, NM 87504-1149</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ms. Slick</td>
<td>Ms. Katherine Slick</td>
<td>State Historic Preservation Officer New Mexico Historic Preservation Division 470 Galisteo Street, Suite 236</td>
<td>Santa Fe, NM 87501-2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Soto</td>
<td>Mr. Salvador Soto</td>
<td>Title VI Coordinator NMDOT Office of Equal Opportunity 1596 Pacheco St., Suite 107</td>
<td>Santa Fe, NM 87505</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Spriggs</td>
<td>Mr. Matthew Spriggs</td>
<td>Community and Economic Development Director Town of Taos 400 Camino de la Placita</td>
<td>Taos, NM 87571</td>
<td></td>
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</tr>
<tr>
<td>Chief Syiling</td>
<td>Mr. Keith D. Syiling</td>
<td>Chief of Police Town of Taos 400 Camino de la Placita</td>
<td>Taos, NM 87571</td>
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<tr>
<td>Name</td>
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<td>City, State, Zip</td>
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<tr>
<td>Ms. Suazo</td>
<td>Ms. Reva</td>
<td>Tribal Realty Officer</td>
<td>Pueblo of Taos</td>
<td>P.O. Box 1846</td>
<td>Taos, NM 87571</td>
</tr>
<tr>
<td>Mr. Valdez</td>
<td>Mr. Levi</td>
<td>Supervisory Highway Engineer</td>
<td>BIA Northern Pueblos Agency</td>
<td>P.O. Box 4269</td>
<td>Española, NM 87533</td>
</tr>
<tr>
<td>Ms. Vaughn</td>
<td>Ms. Colleen</td>
<td>Acting Environmental Program Manager</td>
<td>NMDOT Human and Natural Resources Bureau, Room 213</td>
<td>P.O. Box 1149</td>
<td>Santa Fe, NM 87504-1149</td>
</tr>
<tr>
<td>Mr. Watson</td>
<td>Mr. Mark</td>
<td>Conservation Services Division</td>
<td>New Mexico Department of Game and Fish</td>
<td>P.O. Box 25112</td>
<td>Santa Fe, NM 87504</td>
</tr>
<tr>
<td>Mr. Wunder</td>
<td>Mr. Matt</td>
<td>Chief, Conservation Services Division</td>
<td>New Mexico Department of Game and Fish</td>
<td>P.O. Box 25112</td>
<td>Santa Fe, NM 87504</td>
</tr>
</tbody>
</table>
We have scheduled a stakeholders meeting for the subject project (CN: 3973 - Rio Grande Gorge). Below is the language that we have sent out to a long list of external stakeholders that have an interest in the project. You all have been identified as stakeholders as well. Please make arrangements on your calendars to attend the planned meeting so we can start this process off in the right direction with lots of open dialog about concerns and issues.

The New Mexico Department of Transportation (NMDOT) is considering improvements to the Rio Grande Gorge Bridge on US 64. Senate Joint Memorial 18 has requested that the NMDOT conduct a feasibility study related to suicide prevention and the Rio Grande Gorge Bridge in cooperation with the Department of Public Safety. The objectives of this study are to: 1) perform a detailed assessment of the transportation needs of the identified location; 2) identify existing constraints; 3) identify and evaluate alternatives to address the transportation needs; and 4) provide improvement recommendations. It is the intent of the NMDOT to implement the recommended improvements into the State Transportation Improvement Plan (STIP).

The NMDOT, in cooperation with the Federal Highway Administration (FHWA) are asking key stakeholders to participate in an agency stakeholder meeting. NMDOT representatives will present suicide prevention alternatives for the identified location and receive comments from agency stakeholders at the meeting. It is critical that the NMDOT obtain your input to ensure that all issues of varying interest in the immediate and surrounding communities are correctly characterizing.

To begin this process, we are requesting your attendance at our agency stakeholder meeting. The meeting time and location are as follows:

Date: Wednesday, September 16, 2009
Time: 1:00 pm – 3:00 pm
Location: Taos Convention Center, 120 Civic Plaza Drive, Taos

I want to personally thank you for agreeing to participate in the agency stakeholders meeting. The NMDOT is excited by the opportunity to work with you and make decisions on how to advance the right solutions.

If you have questions please feel free to contact me in Santa Fe at 827-5511 or via e-mail, my address is: armando.armendariz@state.nm.us.

If there are internal individuals you feel should be included in this stakeholder meeting please let me know so I can provide them with the meeting invitation. If there are questions please call or e-mail.

Thank you,
Agency Meeting
Rio Grande Gorge Study
Taos Convention Center
September 15, 2009
CN 3973

Agenda
Introductions
Study Background and Purpose
Initial Alternatives Under Consideration
Next Steps
Discussion

Study Purpose
Senate Joint Memorial 18 has requested that the NMDOT conduct a feasibility study related to suicide prevention and the Rio Grande Gorge Bridge in cooperation with the Department of Public Safety. The objectives of this study are to: 1) perform a detailed assessment of the transportation needs of the identified location; 2) identify existing constraints; 3) identify and evaluate alternatives to address the transportation needs; and 4) provide improvement recommendations. It is the intent of the NMDOT to implement the recommended improvements into the State Transportation Improvement Plan (STIP).

Project Contacts
More information can be obtained from the following individuals

- Armando Armendariz, NMDOT Project Development Engineer, e-mail: armando.armendariz@state.nm.us
- Colleen Vaughn, NMDOT Human and Natural Resources Bureau, e-mail: colleen.vaughn@state.nm.us
- Eric Johnson, Marron and Associates, e-mail: eric@marroninc.com
## Rio Grande Gorge Bridge Study
**Date:** September 16, 2009  
**Location:** Taos Convention Center  
**Agency Stakeholder Meeting** 1:00 to 3:00 pm

Please print your name and address in the space provided below.  
If you are already receiving mail from us, you do not need to provide your address.

<table>
<thead>
<tr>
<th>Name</th>
<th>Mailing Address and E-mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ricardo Campos</td>
<td>Mailing address:</td>
</tr>
<tr>
<td></td>
<td>E-mail: <a href="mailto:ricardo.campos@state.nm.us">ricardo.campos@state.nm.us</a></td>
</tr>
<tr>
<td>2. Jim Fabro</td>
<td>Mailing Address: 4559 N CBW Taos, NM 87571</td>
</tr>
<tr>
<td></td>
<td>E-mail: <a href="mailto:marjim@taosnet.com">marjim@taosnet.com</a></td>
</tr>
<tr>
<td>3. Bill Hutchings</td>
<td>Mailing Address: NMDOT</td>
</tr>
<tr>
<td></td>
<td>E-mail:</td>
</tr>
<tr>
<td>4. Danton Bean</td>
<td>Mailing Address:</td>
</tr>
<tr>
<td>HDR</td>
<td>E-mail: <a href="mailto:danton.bean@hdrinc.com">danton.bean@hdrinc.com</a></td>
</tr>
<tr>
<td>5. Catherine Conran</td>
<td>Mailing Address:</td>
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<tr>
<td>HDR</td>
<td>E-mail: <a href="mailto:Catherine.Conran@hdrinc.com">Catherine.Conran@hdrinc.com</a></td>
</tr>
<tr>
<td>6. Greg Mein</td>
<td>Mailing Address: P.O.Box 1104 R.D.T. 87577</td>
</tr>
<tr>
<td>DGP</td>
<td>E-mail:</td>
</tr>
<tr>
<td>7.</td>
<td>Mailing Address:</td>
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<td>E-mail:</td>
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<td>8.</td>
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Rio Grande Gorge Bridge Study  
**Date:** September 16, 2009  **Location:** Taos Convention Center  
**Agency Stakeholder Meeting:** 1:00 to 3:00 pm  
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<th>Name</th>
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</thead>
</table>
| 1. Sabrina Strong  | Mailing address: 1111 Stanford Dr NE Abq 87106  
E-mail: sstrange@aol.com |
| 2. Phil Parker     | Mailing Address:  
E-mail: pparker69@abojouer.com |
| 3. Lauren Rowland  | Mailing Address: lauren397@aol.com  
E-mail: PO Box 3631 Alb NM 87190 |
| 4. Eddie Moore     | Mailing Address:  
E-mail: enoree @ abojouer.com |
| 5. Lesa Seldillo   | Mailing Address: P.O. Box 115 Santa Fe, NM 87502  
E-mail: l/seldillo@ncnmedd.com |
| 6. Robert J. Green | Mailing Address: 6153 NDC 13, TX 5 NM 87502  
State Rep  
E-mail: |
| 7. Leavelle Wallace| Mailing Address: NMDOT Cultural Resource Bureau, 1120 Cerrillo Rd.  
E-mail: Leavelle.Wallace@State.NM.us |
| 8. Ray Trujillo    | Mailing Address:  
E-mail: raymond_trujillo@state nm.us |

Sheet ___ of ___
<table>
<thead>
<tr>
<th>Name</th>
<th>Mailing Address and E-mail Address</th>
</tr>
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</table>
| 1. Romero Miguel | Mailing address: 105 Albright St. Suite E, Taos N.M.  
E-mail: miguel.romero@taoscounty.org |
| 2. Rick Chavez   | Mailing Address: 205 Albright St. Suite M, Taos Nm 87557  
E-mail: rick.chavez@taoscounty.org |
| 3. Jennifer      | Mailing Address: 711 St Michael, Taos, NM 87557  
E-mail: jennifer.muniz@taosgov.org |
| 4. Matt Foster    | Mailing Address: mfoster@taosgov.org  
E-mail: Matt Foster@taosgov.org |
| 5. Tara Jones      | Mailing Address: 206 Huez Alt. Dr., Taos  
E-mail: Tara.Jones@taosgov.org |
| 6.                | Mailing Address:                                  
E-mail:                                                |
| 7.                | Mailing Address:                                  
E-mail:                                                |
| 8.                | Mailing Address:                                  
E-mail:                                                |

Sheet ___ of ___
### Rio Grande Gorge Bridge Study

**Date:** September 16, 2009  
**Location:** Taos Convention Center  
**Agency Stakeholder Meeting:** 1:00 to 3:00 pm

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</table>
| 1. Jimmy Camp      | Mailing address: P.O. Box 1144, Rm 224, SF, NM 85501  
                     | E-mail: jimmy.camp@state.nm.us  
                     | **NM DOT**                  |
| 2. Abigail Adame   | Mailing Address: 400 Camino de la Placita, Taos, NM 87571  
                     | Town of Taos  
                     | E-mail: aadame@taosgov.com  
                     | Assistant Town Manager      |
| 3. Michelle Joaquen| Mailing Address: Office of U.S. Senator Tom Udall  
                     | E-mail:  
                     | **ORIIZ**                   |
| 4. Glen Baker       | Mailing Address: District 5  
                     | E-mail: glenn.baker@state.nm.us  
                     | **NM DOT**                  |
| 5. James Gallegos   | Mailing Address:  
                     | E-mail: james.gallegos@state.nm.us  
                     | **NM DOT**                  |
| 6. Richard Quintero | Mailing Address: 210 Salazar Rd, Taos, NM 87571  
                     | TUF D  
                     | E-mail: richard.quintero.2@taos.gov.com |
| 7. Eric Montoya     | Mailing Address: 459 1 NACB Rd, Taos, NM 87571  
                     | Taos Fire Dept.  
                     | E-mail: emontoya@taosgov.com |
| 8. Donovan Syring   | Mailing Address: 107 Civic Plaza Dr., Taos, NM 87571  
                     | E-mail:  
                     | **NM DOT**                  |

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Sheet ___ of ___
**Communication Record**

**Project:** US 64 Taos Bridge  
**Date/Time:** 9-16-09 11:00 AM  
**Marron Staff:** Eric Johnson  
**Location:** Taos Conv. Ctr.

**Meeting - X**  
**Telephone Call -**  
**Conference Call -**

**Names:**  
**Agency late**

**Subject:**

<table>
<thead>
<tr>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ARMANDO GAVE INTRODUCTIONS</strong></td>
</tr>
<tr>
<td><strong>REPRESENTATIVE GONZALES DISCUSSED MEMORIAL</strong></td>
</tr>
<tr>
<td>L. HE INTENDED TO SUPPORT 100. BUILT. <strong>BRIDGE</strong></td>
</tr>
<tr>
<td><strong>ARMANDO DISCUSSED JOINT MEMORIAL, IN 1994</strong></td>
</tr>
<tr>
<td><strong>ACTION ALTS. TO BUILD, ARMANDO</strong></td>
</tr>
<tr>
<td><strong>ALT. 1 - 6' PEDESTRIAN RAIL (CURRENTLY 36&quot;)</strong></td>
</tr>
<tr>
<td><strong>TOTAL OF 10' HIGH</strong></td>
</tr>
<tr>
<td><strong>WOULD NEED TO FOLD OVER FOR MAINTENANCE</strong></td>
</tr>
<tr>
<td><strong>WOULD ADD WEIGHT TO BRIDGE</strong></td>
</tr>
<tr>
<td><strong>WILL BLOCK VIEWS OF PEDESTRIANS</strong></td>
</tr>
<tr>
<td><strong>Q. WOULD FOLD DOWN - WOULD NOT BE ABLE TO REMOVE</strong></td>
</tr>
<tr>
<td><strong>Q. BRIDGE SHAKES BATHES - WOULD WORK MAKE IT WORSE</strong></td>
</tr>
<tr>
<td><strong>BRIDGE IS DESIGNED TO MOVE</strong></td>
</tr>
<tr>
<td><strong>Q. HAVE HAD PEOPLE CRAWL ON RAILINGS</strong></td>
</tr>
<tr>
<td><strong>TO CRAWL ON BRIDGE. NEEDS TO ADDRESS PEOPLE UNDERBRIDGE</strong></td>
</tr>
<tr>
<td><strong>FIRE DEPT. WOULD LIKE NO 4 ALT.</strong></td>
</tr>
</tbody>
</table>

**Notes continued:**

<table>
<thead>
<tr>
<th>Notes</th>
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<tbody>
<tr>
<td><strong>A LOT OF IT IS IMPULSIVE. ONE PERSON STOOD CAR OUT JUMP. IT IS TOO EASY NOW</strong></td>
</tr>
<tr>
<td><strong>ALT. 2 NOT APPEALING. HAD 6 RECREATION BASE JUMPERS OFF OF BRIDGE, IN JUMP</strong></td>
</tr>
<tr>
<td><strong>THEY JUMP WITH PARA CHUTE, HAD 6 BASE JUMPERS WHERE EMS RESPONDED</strong></td>
</tr>
<tr>
<td><strong>FIRE DEPT. IS REQUESTING $5,000 PER RECOVERY SYSTEMS, FIRE DEPT. WILL BE IN JUMPING A TRAINING ORG</strong></td>
</tr>
<tr>
<td><strong>ALT. 2 USES CABLE MESH, AND 20' HORIZONTAL NET TO EACH SIDE &amp; SUSPENDS 12' BELOW SPRING.</strong></td>
</tr>
<tr>
<td><strong>PROBLEMS LOCAL YOUTH USE OR SUICIDE JUMPER JUST TAKES 2ND TRY.</strong></td>
</tr>
</tbody>
</table>
Communication Record

Project: ____________________________ Date/Time: ___________ 
Marron Staff: ______________________ Location: _______________

Meeting - ___ Telephone Call - ___ Conference Call - ___

Names: ________________________________________________________________________________________

Subject: _________________________________________________________________________________________

Notes

- WOULD AFFECT VIEWS OF BRIDGE.
  Q. PEOPLE WOULD TRY TO CLIMB - ?
  WRAP FOOT THROUGH WOULD BE DONE
  SENSITIVE RECOVERY - BLEEDING YOU MAY
  A. IN HORIZONTAL NET - SOMEONE HAS NOT JUMPED.
Q. THE MOST IMPORTANT PART IS THERE IS A BARRIER.
STUDIES HAVE SHOWN BARRIERS TO IMPROVE
WILL SLOW SUICIDE RATE. WE NEED A BARRIER
TO STOP SUICIDES. IT DEPENDS, BUT BARRIERS WORK. IN SOME PLACES MUST
A 30' NET HAS SLOWED SUICIDES.
Q. GOLDEN GATE BRIDGE PICKED HORIZONTAL NET
Q. RIM OF CANYON - IS THAT AN ISSUE?
SOME OTHER WORK MAY BE NEEDED AT A 6
PARKING. NMDT COMMITTED TO CLEARING
PROJECT ENVIRONMENTALLY
Q. IF ALT 2 WAS IN PLACE, HOW DOES A
PERSON GET OFF NET?
A. FIRE DEPT. WOULD HAVE TO COME
GET THEM.
Q. THAT WOULD HAVE ALSO PREVENTED A
MURDER WHEN SOMEONE THREW PERSON ON
Q. DO PEOPLE USE FOR RECREATION
- SUICIDE RATES PELL TO 0
AT CHURCH TOWER IN ABER
Q. OVER 30 SUICIDES IN LAST DECADE
Q. HAS STUDY BEEN DONE ON HOW MUCH
SUICIDES WOULD BE REDUCED
- NO JUST 1ST ROUND OF STUDIES
ALT 3 EXTENDS IN AN MESH OR CHAINLINK
THAT ARISES 4' TO 48' HIGH
HARD TO MOUNT WOULD HAVE WIND
LOADING - WOULD NEED TO REMOVE FOR
INSPECTIONS

2
## Communication Record

**Project:** 
**Date/Time:** 
**Marron Staff:** 
**Location:**

**Meeting -** 
**Telephone Call -** 
**Conference Call -**

**Names:** 

**Subject:**

### Notes

| Act. 4 | Covered Wagon, adds chainlink or fence & covers - adds much!  
|--------|---------------------------------------------------------------
|        | Weight to bridge - would be 6'6" tall, it would need to be removed entirely for inspections.  
|        | Could be needed - could add plate, could lighten deck.  
| Q5     | Could something be suspended without attaching to bridge?  
|        | It could be a possibility.  
| Q6     | What would opposition be?  
|        | Ship in Calif. opposed changes but went to Washington but was opposed.  
|        | Will need ship concurrence.  
| Q7     | What cost is associated with each option?  
|        | Do not have costs associated.  
|        | Alt. 1. Build helipad at bottom of canyon.  
| Q8     | What is wild & scenic river affect on helipad at bottom?  
|        | Gases fish would have balance.  
|        | Taos Bridge is destination. Alt. 2 preserves view.  
|        | Presentation on nets.  
|        | Mesh has not been decided.  
|        | Mesh is low maintenance & doesn't give cde coords  
|        | Suicide prevention effectiveness - Physical deterrent, "close exit" - Short circuit plan, space for people to stop, thinking considered options.  
|        | Fence alone is not always effective.  
|        | Fence has visual impacts.  |
Communication Record

Project: ___________________________ Date/Time: __________ 1________
Marron Staff: ______________________ Location: ______________________
Meeting - ___  Telephone Call - ___  Conference Call - ___
Names: ____________________________________________________________
Subject: ___________________________________________________________

Notes

- FENCE MAY NOT STOP JUMPING
  - MESH BARRIERS DO WORK! IN GERMANY
  - AUTOBahn STOPPED PEOPLE JUMPING INTO TRAFFIC
  - HORIZONTAL MESH BARRIERS WORK, EX BERLIN SWITZERLAND, IT HAS REDUCED SUICIDES THERE HAS BEEN 28 SUICIDES
  - GOLDEN GATE BRIDGE - MESH CHOOSE AS VIABLE
    OPTION. 20 FT OUT A DEEPS 20 FT DOWN
  - CAN FOLD UP FOR BRIDGE MAINTENANCE
    - VISUAL & AESTHETIC IMPACT - MESH & RELATIVELY TRANSPARENT AT A DISTANCE
    - CAN SEE UP CLOSE, BUT NOT A DISTANCE
  - GOLDEN GATE COMMISSION ISSUE FOSSY
  - MESH COSTS LESS THAN BUILDING A FENCE
  - NEED 3-4 MM MESH
  - NO MAINTENANCE PROBLEM

Q: WHAT IF SOMEONE JUMPS ON MESH?
  - WOULD HAVE RESCUE TO GET OFF
  - RECREATIONAL ASPECT AS CONSIDERATION
Q: WOULD NEED FOLD UP.
  - DON'T WANT TO FAR DOWN BECAUSE OF VELOCITY
Q: IS THERE ISSUE THROWING TRASH
  - MESH SHOULD HOLD HEAVY OBJECTS BUT NOT A CAR
  - COULD BE A MAINTENANCE ISSUE - WHO IS QUALIFIED - FIRE DEPT, A POSSIBILITY
Q: WHAT IS COST PER SQUARE FOOT
  - MONEY 50 MILLION PROGRAMMED A DEC
  - UPGRADE 4 ADA
Q: VEHICLES HAVE DRIVEN OFF PARKING LOTS AND CONVEY
  - COULD PUT UP WALL BARRIERS
Communication Record

Project: ____________________________ Date/Time: ____________________________
Marron Staff: _________________________ Location: ____________________________
Meeting - ___ Telephone Call - ___ Conference Call - ___

Names: ____________________________________________

Subject: ___________________________________________

Notes

- NEED TO IMPROVE STEP ISSUE FOR DEDESIGN.
- COULD HAVE A COMBINATION OF SOLUTIONS.
- THESE ARE CRITICAL FOR MANY OF THE ALTS.
- HISTORIC PRESERVATION IS VITAL.
- NEED TO VISIT HISTORIC PRESERVATION DIVISION.

1. Alt. 4 - PEOPLE COULD CLIMB ACROSS TOP.
- ALT. 4 COULD HAVE MESH.
- ALT. 1 COULD HAVE NET THAT YOU CAN'T CLIMB.

2. DO YOU KNOW HOW MUCH WEIGHT CAN PUT ON BRIDGE.
- NETTING ISirable but CHAINLINK WOULD REQUIRE STRUCTURAL MODIFICATION & HIGH COST.

3. HAVE PEOPLE DRIVEN FROM WASH. STATE, 1 MINNESOTA TO JUMP OFF BRIDGE.

4. I AM LEANING TOWARDS 2. WHAT IS NEXT STEP. WHO DECIDES?
- NMDOT IS DECIDER BUT NEED CONCURRENCE FROM SHPO & FHWA.
- NARROW DOWN TO A PREFERRED ALT.
- HAVE A PUBLIC HEARING.

5. HOW LONG WILL THIS TAKE?
- IT DEPENDS.

6. NEPA PROCESS DRIVES WHO DECIDES. MOST 5.
- NOT ONE PERSON DECIDES.

- COULD BECOME SECTION 4(e)
- COULD GO TO WASHINGTON FHWA
- NEVER DONE BY NEW MEXICO.
Communication Record

Project: ___________________________ Date/Time: __________/__________
Marron Staff: ___________________________ Location: ___________________________

Meeting - ___ Telephone Call - ___ Conference Call - ___

Names: __________________________________________

Subject: __________________________________________

Notes

GOLDEN GATE 1-2 YR TO APPROVE DESIGN ALTERNATIVE
A. FUNDING A PUBLIC OUTCRY IS AN ISSUE.
B. NEPA PROCESS WILL COVERAGE THE SCHEDULE
Q. ARE PEOPLE DROPPING FROM DECK OR SUBSTRUCTURE
   - IT IS BOTH.
C. IS FUNDING PLANNED
   - IT IS IN STIP IN FY 2013.
   - THE PROJECT WILL INCLUDE SUICIDE BARRIER
   - ADA UPGRADE DECK IMPROVEMENT
Q. PHONE SYSTEM
   - NOT MUCH SUPPORT BECAUSE ALONE
   - IT DOESN'T WORK. WHO WOULD ANSWER PHONE IN TACO COUNTY.
Q. ACCESS TO BOTTOM - COULD DECK FENCE
   - ANY OF ALTERNATIVES
   - COULD HIDE BY BOTTOM.

BRAD HICDON, BCM NEPA COORDINATOR
**Communication Record**

<table>
<thead>
<tr>
<th>Project:</th>
<th>Rio Grande George Bridge</th>
<th>Date/Time:</th>
<th>9/16/09 1:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marron Staff:</td>
<td>Edo &amp; Jacqui</td>
<td>Location:</td>
<td>Trans Convention Center</td>
</tr>
<tr>
<td>Meeting:</td>
<td>A</td>
<td>Telephone Call:</td>
<td>____</td>
</tr>
<tr>
<td>Conference Call:</td>
<td>____</td>
<td>Names:</td>
<td></td>
</tr>
</tbody>
</table>

**Subject:** Stakeholder's Meeting

<table>
<thead>
<tr>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Representative Gonzales helped w/Joint Memorial 18</td>
</tr>
<tr>
<td>Bridge built 1904</td>
</tr>
<tr>
<td>Alt. 1 will need to be designed to accommodate inspectors</td>
</tr>
<tr>
<td>Fold over, fold down, removable</td>
</tr>
<tr>
<td>National &amp; State Historic Register</td>
</tr>
<tr>
<td>People crawl across guarders underneath - Taos Fire needs to be addressed</td>
</tr>
<tr>
<td>People park on bridge to get over railing</td>
</tr>
<tr>
<td>Taos Fire strongly supports Alt. 4</td>
</tr>
<tr>
<td>2 BASE jumpers seriously injured</td>
</tr>
<tr>
<td>Could be spending $5000 on recovery/safety equipment</td>
</tr>
<tr>
<td>Alt. 2 likely to draw kids + teens</td>
</tr>
<tr>
<td>Injury concern w/netting - get out in the way of inspections</td>
</tr>
<tr>
<td>In other applications, horizontal stopped jumps in some cases not used decreased</td>
</tr>
<tr>
<td>Suicide is impulsive action - need a barrier</td>
</tr>
<tr>
<td>Other cases w/success w/much smaller width of horizontal barrier</td>
</tr>
<tr>
<td>Someone was thrown over alive + killed - could have prevented murder</td>
</tr>
<tr>
<td>George Bridge - over 30 suicides in last 10 years</td>
</tr>
<tr>
<td>Notes</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td><strong>Alt 3</strong> - how mount 48' pole?</td>
</tr>
<tr>
<td>- wind loading</td>
</tr>
<tr>
<td>- probably would have to remove for inspections</td>
</tr>
<tr>
<td>- visual changes</td>
</tr>
<tr>
<td><strong>Alt 4</strong> - &quot;covered wagon&quot;</td>
</tr>
<tr>
<td>- netting or fence covers bridge</td>
</tr>
<tr>
<td>- add a lot of weight</td>
</tr>
<tr>
<td>- minimum 14' - tall</td>
</tr>
<tr>
<td>- probably have to remove for inspections</td>
</tr>
<tr>
<td>- may be able to conceal on from end</td>
</tr>
<tr>
<td>- visual changes</td>
</tr>
</tbody>
</table>

| **self-suspended barrier not attached to the bridge?** |
| **will need Federal Funding** |
| **if no build - might put helipad at bottom** |
| view from bridge? Alt 2 only one w/no obstruction |
| stainless steel mesh |
| **Golden Gate - similar to Alt 2 did EIS** |
| mesh relatively transparent |
| - costs less than fence |
| - repairs easy |
| - need serious bolt cutters to cut it |

| horizontal lower than 30' - injuries |
| maintenance issues with mesh |
Communication Record

Project: Ruidoso Gorge Bridge
Marron Staff: ——
Date/Time: 9/16/09 11:00
Location: ———

Meeting - X Telephone Call - Conference Call -

Names:

Subject: Stakeholder's meeting

Notes:

Mail in STIP for deck improvements and ADA, bearings. Already light weight concrete, money in 2010.

People drive off parking lots, big step onto sidewalks.

Alt 1: wire mesh instead of railings, previous designs to make climbing difficult.

Ladder truck + rescue truck, add 11,000 lbs.

People drive from all over the country to jump.

Phones don't work alone for suicide prevention.
To All:

Attached are the meeting notes.

If there are questions please call.

Armando M. Armendariz P.E.  
NMDOT Infrastructure Design – North Region  
Office  505-827-5511  
Cell  505-490-2740  
armando.armendariz@state.nm.us

11/3/2009
1. Meeting Agenda

Introductions
Study Background and Purpose
Initial Alternatives Under Consideration
Next Steps
Discussion

2. Attendees

See attached sign in sheet.

3. Senate Joint Memorial 18

See attached.

4. Alternatives

See attached sheet for visual reference.

Descriptions

- Alternative 1 – The existing pedestrian barrier railing extends 4'-0" vertically from the sidewalk / deck. This alternative adds or extends vertically 6'-0" of pedestrian barrier railing for a total barrier of 10'-0".
  - Issues – This addition would have to be designed to accommodate maintenance / inspection activities and possible future rescue / recovery efforts. There is the possibility of individuals climbing the additional railing to jump from a higher elevation. The additional railing has to be analyzed for the additional weight contributed to the overall bridge structure. This alternative does not address access to the lower chord of the bridge structure for jumping. This alternative does affect the view shed from the bridge and from the rim of the gorge.

- Alternative 2 – This alternative places a “net” 12'-0" below the deck that extends 20'-0" horizontally away from the structure.
• Issues – This addition would have to be designed to accommodate maintenance / inspection activities and possible future rescue / recovery efforts. There is the possibility of individuals jumping onto the “net” then jumping again. There is also the possibility of individuals jumping into the “net” for recreational purposes. There is a possibility of the “net” becoming a trash collector for items being thrown from the bridge creating a maintenance issue. The “net” has to be analyzed for the additional weight contributed to the overall bridge structure. This alternative in the current proposed location does not address access to the lower chord of the bridge structure for jumping. This alternative does affect the view shed from the bridge looking directly down into the gorge and minimally looking from the rim of the gorge towards the bridge.

• Alternative 3 – This alternative adds a vertical “net” system from the bridge deck. The “net” system would mirror the lower chord and arch of the existing structure from 8'-0" to 48'-0".
  o Issues – This addition would have to be designed to accommodate maintenance / inspection activities and possible future rescue / recovery efforts. There is the possibility of individuals climbing the “net” system to jump from a higher elevation. The additional “net” system has to be analyzed for the additional weight contributed to the overall bridge structure. This alternative does not address access to the lower chord of the bridge structure for jumping. This alternative does affect the view shed from the bridge and from the rim of the gorge.

• Alternative 4 – This alternative creates a “covered wagon” effect for the bridge. A chain link or “net” system would be installed to enclose the bridge from one end to end. The minimum vertical clearance of the “covered wagon” would be 16’-6” to comply with design standards and large vehicles.
  o Issues – This addition would have to be designed to accommodate maintenance / inspection activities and possible future rescue / recovery efforts. There is the possibility of individuals accessing the top of the “covered wagon” to jump from a greater height. The chain link or “net” system would have to be analyzed for the additional weight contributed to the overall bridge structure. This alternative does not address access to the lower chord of the bridge structure for jumping. This alternative does affect the view shed from the bridge and from the rim of the gorge.

• No Build Alternative – This alternative would not implement any changes to the existing structure.
  o Issues – This alternative does not affect existing practices for maintenance / inspection activities and possible future rescue / recovery efforts. The possibility of individuals jumping remains including jumping from the lower chord. This alternative does not affect the view shed for the structure.

5. Next Step – Public Meeting (September 29, 2009)

See attached flyer for public meeting information.

6. Discussion / Comments / Questions

• Representative Bobby Gonzales provided comments and expressed full support for Senate Joint Memorial 18 and the design team efforts.
• In any alternative coordination with EMS is needed for future activities removal or partial removal of barrier for possible rescue / recovery.
• Individuals have accessed lower chord of structure to jump.
• Bridge moves when large vehicles cross.
• Recreational jumpers have used the structure (base jumping).
• FD will not be able to attend public meeting due to training.
• Spacing in “net” could create secondary injury.
• Most important aspect in suicide is barrier.
• Golden Gate Bridge has preferred alternative similar to Alternative 2.
• Any concern with addressing access to rim of canyon for suicide attempts.
• ADA issues with bridge.
• Parking issues with bridge.
• Vending issues with bridge.
• Estimate of over 30 suicides in last decade.
• Alternative 2 could have prevented murder / suicide in recent years.
• How does individual get rescued / recovered in Alternative 2?
• Discussion of “net” system utilized in European countries.
• Discussion of process with regard to historical register.
• Discussion of process with regard to additional weight for all alternatives.
• Placement of “net” key, due to velocity of jumper and secondary injury.
• Vehicles have driven from rims edge.
• Bridge placed on National and State register of historically significant places in 1997.
• Funding, $2M in Fiscal Year (FY) 2012. See attached.
• Phone system is passive vs. barrier system.
• If no build provide helipad at gorge bottom.
• Helipad would affect wild and scenic river designation.
More letters...

The attached agency letters are for the BLM, Taos Pueblo, and BIA. These letters are formally inviting these agencies to participate in the study and eventually a NEPA document. Since these agencies have authority on each side of the bridge, I want to make sure that we have contacted them in writing. The BLM attended the stakeholder meeting, but the pueblo and BIA have not attended any meetings so far.

Please advise.

Thank you,

Eric

---

This inbound email has been scanned for malicious software and transmitted safely to you using Webroot Email Security.
October 14, 2009

Mr. Sam DesGeorges  
Field Manager  
Bureau of Land Management  
226 Cruz Alta Road  
Santa Fe, NM 87571

RE: Agency Participation in the Rio Grande Gorge Bridge Study  
Project No. BR-064-6(25)242, CN: 3973, US 64

Dear Mr. DesGeorges:

The New Mexico Department of Transportation (NMDOT) is considering improvements to the Rio Grande Gorge Bridge on US 64. Senate Joint Memorial 18 has requested that the NMDOT conduct a feasibility study related to suicide prevention and the Rio Grande Gorge Bridge in cooperation with the Department of Public Safety. The objectives of this study are to: 1) perform a detailed assessment of the transportation needs of the identified location; 2) identify existing constraints; 3) identify and evaluate alternatives to address the transportation needs; and 4) provide improvement recommendations. It is the intent of the NMDOT to implement the recommended improvements into the State Transportation Improvement Program (STIP).

Since the Bureau of Land Management (BLM) controls lands on the west side of the Rio Grande, the BLM may have a direct interest in this study. At present, the Rio Grande Gorge Bridge Study only addresses the objectives described in Senate Joint Memorial 18, but a project may be recommended. Such a project would require the preparation of an environmental document to comply with the National Environmental Policy Act (NEPA). Since NEPA requires early agency coordination, we would like to determine what role the BLM would like to have in the Rio Grande Bridge Study and the eventual preparation of a NEPA document. Please inform us of any coordination, environmental evaluation, or resource management needs of your agency for this study. We would also appreciate receiving any relevant information or documents on the Rio Grande Gorge area.

If you have questions please feel free to contact me in Santa Fe at (505) 827-3234 or via e-mail, my address is: colleen.vaughn@state.nm.us. Thank you for your assistance.

Sincerely,

Colleen Vaughn  
Environmental Program Manager
October 14, 2009

Governor Ruben A. Romero
Pueblo of Taos
P.O. Box 1846
Taos, NM 87571

RE: Agency Participation in the Rio Grande Gorge Bridge Study
Project No. BR-064-6(25)242, CN: 3973, US 64

Dear Governor Romero:

The New Mexico Department of Transportation (NMDOT) is considering improvements to the Rio Grande Gorge Bridge on US 64. Senate Joint Memorial 18 has requested that the NMDOT conduct a feasibility study related to suicide prevention and the Rio Grande Gorge Bridge in cooperation with the Department of Public Safety. The objectives of this study are to: 1) perform a detailed assessment of the transportation needs of the identified location; 2) identify existing constraints; 3) identify and evaluate alternatives to address the transportation needs; and 4) provide improvement recommendations. It is the intent of the NMDOT to implement the recommended improvements into the State Transportation Improvement Program (STIP).

Since the Pueblo of Taos controls lands on the east side of the Rio Grande, the Pueblo of Taos may have a direct interest in this study. At present, the Rio Grande Gorge Bridge Study only addresses the objectives described in Senate Joint Memorial 18, but a project may be recommended. Such a project would require the preparation of an environmental document to comply with the National Environmental Policy Act (NEPA). Since NEPA requires early agency coordination, we would like to determine what role the Pueblo of Taos would like to have in the Rio Grande Bridge Study and the eventual preparation of a NEPA document. Please inform us of any coordination, environmental evaluation, or resource management needs of the pueblo for this study. We would also appreciate receiving any relevant information or documents on the Rio Grande Gorge area.

If you have questions please feel free to contact me in Santa Fe at (505) 827-3234 or via e-mail, my address is: colleen.vaughn@state.nm.us. Thank you for your assistance.

Sincerely,

Colleen Vaughn
Environmental Program Manager
October 14, 2009

Ms. Florine L. Gutierrez
Superintendent
Northern Pueblos Agency
Bureau of Indian Affairs
P.O. Box 4269
Española, NM 87533

RE: Agency Participation in the Rio Grande Gorge Bridge Study
Project No. BR-064-6(25)242, CN: 3973, US 64

Dear Ms. Gutierrez:

The New Mexico Department of Transportation (NMDOT) is considering improvements to the Rio Grande Gorge Bridge on US 64. Senate Joint Memorial 18 has requested that the NMDOT conduct a feasibility study related to suicide prevention and the Rio Grande Gorge Bridge in cooperation with the Department of Public Safety. The objectives of this study are to: 1) perform a detailed assessment of the transportation needs of the identified location; 2) identify existing constraints; 3) identify and evaluate alternatives to address the transportation needs; and 4) provide improvement recommendations. It is the intent of the NMDOT to implement the recommended improvements into the State Transportation Improvement Program (STIP).

Since the Pueblo of Taos controls lands on the east side of the Rio Grande, the Pueblo of Taos and the Bureau of Indian Affairs (BIA) may have a direct interest in this study. At present, the Rio Grande Gorge Bridge Study only addresses the objectives described in Senate Joint Memorial 18, but a project may be recommended. Such a project would require the preparation of an environmental document to comply with the National Environment Policy Act (NEPA). Since NEPA requires early agency coordination, we would like to determine what role the BIA would like to have in the Rio Grande Bridge Study and the eventual preparation of a NEPA document. We have also sent a letter to the Pueblo of Taos Governor. Please inform us of any coordination, environmental evaluation, or resource management needs of the BIA for this study. We would also appreciate receiving any relevant information or documents on the Rio Grande Gorge area.

If you have questions please feel free to contact me in Santa Fe at (505) 827-3234 or via e-mail, my address is: colleen.vaughn@state.nm.us. Thank you for your assistance.

Sincerely,

Colleen Vaughn
Environmental Program Manager
Public Meeting
From: Armendariz, Armando M., NMDOT  
Sent: Tuesday, September 08, 2009 12:45 PM  
To: Rodriguez, Stephen M., NMDOT; Camp, Jimmy D., NMDOT; Trujillo, Raymond M., NMDOT; 'Beach, Ryan (FHWA)'; 'greg.heitmann@fhwa.dot.gov'; Hutchinson, William S., NMDOT; Martinez, David J., NMDOT; McElroy, John E., NMDOT; Ortiz, Jose M., NMDOT; Roxlau, Blake R., NMDOT; Soto, Salvador, NMDOT; Vaughn, Colleen E., NMDOT; Gallegos, James M., NMDOT; Gabaldon, Miguel B., NMDOT; Byars, Rochelle, NMDOT; Haas, Tamara P., NMDOT; Garcia, Joe S., NMDOT; Martinez, Sixto J., NMDOT; 'Eric Johnson'; 'Bean, Danton'; Campos, Ricardo R., NMDOT; Brock, Bryan E., NMDOT; 'Conran, Catherine'; Wallace, Laurel T., NMDOT; Gallegos, Phillip A., NMDOT

Subject: Public Meeting CN: 3973  
Attachments: 09 09-29 Gorge PIM Notic v2.doc

To All:

Please mark your calendars for the public meeting. Attached is the advertisement.

I will leave it to D5 personnel to place message boards in appropriate locations as few days prior to the event.

We will discuss the public meeting on the 16th at the stakeholders meeting.

If there are any questions please call.

Armando M. Armendariz P.E.  
NMDOT Infrastructure Design – North Region  
Office 505-827-5511  
Cell 505-490-2749  
armando.armendariz@state.nm.us

11/3/2009
***Public Information Meeting ***

NMDOT invites you to discuss the proposed

*Rio Grande Gorge Bridge Study*

US 64, Taos County

Project BR-064(25)242, CN 3973

**Meeting Date:** Tuesday, September 29, 2009  
**Meeting Time:** 6:00 pm open house and 6:15 pm presentation  
**Location:** Taos High School, Band Room, 134 Cervantes Road  
(west of Paseo del Pueblo del Sur near Albertson’s)

**Project Purpose:** In accordance with Senate Joint Memorial 18, the New Mexico Department of Transportation (NMDOT) is conducting a feasibility study in cooperation with the New Mexico Department of Public Safety for the construction or installation of bridge barriers and safety enhancing improvements to the Rio Grande Gorge bridge.

**Meeting Purpose:** To introduce the Rio Grande Gorge Bridge Study to the public and discuss alternatives being considered.

- NMDOT representatives will discuss the Rio Grande Gorge Bridge Study, history of suicides at the bridge, and provide information on suicide prevention alternatives.
- The public is encouraged to ask questions, provide comments, and identify issues.
- Comments will also be received on bicycle, pedestrian, and equestrian issues as well as natural and cultural resources.

**ADA:** To request Americans with Disabilities Act (ADA)-related accommodations for this meeting, contact Yvonne Garcia at (505) 898-8848 at least two days before the meeting.

**Comments:** Written comments will be accepted at the meeting, or they may be mailed or faxed to Eric Johnson, Marron and Associates, 7511 Fourth Street NW, Albuquerque, NM 87107, phone (505) 898-8848, and e-mail eric@marroninc.com.
Information Packet
Rio Grande Gorge Bridge Project
Public Information Meeting
Taos High School Band Room
September 29, 2009
CN 3973

Agenda
Open House 6:00 – 6:15 pm
Presentation: 6:15 – 7:00 pm
  • Introductions
  • Study Background
  • Alternatives Under Consideration
  • Environmental and Cultural Resource Processes
Question and Comments Session: 7:00 pm

Meeting Purpose
To introduce the Rio Grande Gorge Bridge Project to the public and discuss the proposed improvements.
  • New Mexico Department of Transportation (NMDOT) representatives will discuss the Rio Grande Gorge Bridge Study, provide information on the proposed improvements, and answer questions.
  • The public is encouraged to provide comments and identify issues.
  • Comments will also be received on bicycle, pedestrian, and equestrian issues as well as natural and cultural resources.

Project Purpose
In accordance with Senate Joint Memorial 18, the New Mexico Department of Transportation (NMDOT) is conducting a feasibility study in cooperation with the New Mexico Department of Public Safety for the construction or installation of bridge barriers and safety enhancing improvements to the Rio Grande Gorge Bridge.

EA
An environmental assessment (EA) will be prepared to evaluate the environmental effects of the bridge modification.

Written Comments
A Comment Form is attached to this information packet. Comments will be accepted throughout the study. To provide comments on the Rio Grande Gorge Bridge Study, please:
  • Complete a Comment Form.
  • Leave the form in the comment box or mail it to the address shown at the bottom of the form. E-mail messages (sent to eric@marroninc.com) and letters will also be accepted.
Alternatives

Four barrier alternatives have been proposed. Illustrations of the proposed alternatives are included in this packet:

- **Alternative 1** would add 6 feet of railing to the already 4-foot high railing for a total of 10 feet. The rails would be close-set, vertical rails that are difficult to climb.
- **Alternative 2** would include the installation of a horizontal mesh net 12 feet below the deck of the bridge. This net would be made of metal mesh and extend 20-feet out from the bridge on either side.
- **Alternative 3** would add a vertical net system from the bridge of the deck. The net would arch from 8 feet to 48 feet high, mirroring the lower chord of the bridge.
- **Alternative 4** would create a "covered wagon" effect for the bridge. A chain link or mesh net would enclose the bridge from one end to the other.
- **No Build Alternative** would also be considered as required by the NMDOT Location Study Procedures and National Environmental Policy Act.

Bridge Facts

Dedicated in 1965, the Rio Grande Gorge Bridge is the fifth highest bridge in the country at 650 feet above the Rio Grande. It spans 1,280 feet with Bureau of Land Management land on the west side and Pueblo of Taos land on the east side of the river. The Rio Grande Gorge Bridge is listed on the National Register of Historic Places and the New Mexico State Register of Cultural Properties. It is a popular tourist destination drawing visitors from around the world due to the scenic views from the bridge.

Environment

The Rio Grande Gorge is a deep, incised canyon that cuts across the rolling sagebrush grasslands northwest of Taos. The Rio Grande is designated a Wild and Scenic River beginning at the Colorado/New Mexico state line and continuing approximately 68 miles downstream. This section of river is popular for hiking, fishing, camping and whitewater rafting on the Class III and IV rapids. In 1968, the Rio Grande was among the first eight rivers Congress designated into the National Wild and Scenic River System to protect outstanding resources values. The bridge provides outstanding views of the Rio Grande Gorge.
Comment Form
New Mexico Department of Transportation (NMDOT)
Rio Grande Gorge Bridge Project
CN 3973

- Please provide comments on this form – letters and e-mail messages also accepted.
- Place this form in the comment box or send comments to the address listed below.

Name:

Address:

City/State/Zip Code:

E-mail:

Date:

Send form and comments to:
Marron and Associates, Inc.
7511 4th Street NW
Albuquerque, NM 87107
Attn: Eric Johnson
Phone: (505) 898-8848
Fax: (505) 897-7847
E-mail: eric@marroninc.com
Meeting Attendees:

Twenty-five stakeholders attended the meeting:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Address</th>
<th>E-Mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mark Anderson</td>
<td>261 Morada Lane, Taos, NM 87571</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Susanna Anderson</td>
<td>216 Morada Lane, Taos, NM 87571</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Glen Baker</td>
<td>P.O. Box 1140 El Prado, NM 87529</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Rick H. Chavez</td>
<td>105 Albright Street, Suite M, Taos, NM 87571</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Joseph Ferrara</td>
<td>P.O. Box 3088, Taos, NM 87571</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Nick Gomez</td>
<td>P.O. Box 225, Tres Piedras, NM 87577</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Pablo Gonzales</td>
<td>P.O. Box 23, Ranchos De Taos, NM 87557</td>
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<tr>
<td>8</td>
<td>David Henry</td>
<td>P.O. Box 488, Taos, NM 87571</td>
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<tr>
<td>9</td>
<td>Barbara Ireland</td>
<td>P.O. Box 1347, El Prado 87529</td>
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<tr>
<td>10</td>
<td>Michele Jacquez-Ortiz</td>
<td>Office of Senator Tom Udall, Santa Fe, NM 87505</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Nicklos Jaramillo</td>
<td>105 Albright Street, Taos, NM 87571</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Dawn Kohorst</td>
<td>P.O. Box 1593, Rancho De Taos – Unit 9 Tres Piedras Estates</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Erica Lehman</td>
<td>P.O. Box 257, Arroyo Hondo, NM 87513</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Brian Levine</td>
<td>323 Camino De La Placitas, Taos, NM 87571</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Jennifer Monzanares – Office of Congressman Ben Ray Luján</td>
<td>811 St. Michaels, Santa Fe, 87506</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>John Painter</td>
<td>P.O. Box 155, El Prado, El Prado, NM 87529</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Richard Quintana</td>
<td>210 Salazar Rd, Taos, NM 87571</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Don Reeve</td>
<td>P.O. Box 257, Arroyo Hondo 87513</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Laura Rowland</td>
<td>P.O. Box 3631, Albuquerque, NM 87190</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Sonya Silvia-Baca</td>
<td>P.O. Box 1966, El Prado, NM 87529</td>
<td><a href="mailto:sonyamsw@yahoo.com">sonyamsw@yahoo.com</a></td>
</tr>
<tr>
<td>21</td>
<td>Sabrina Strong</td>
<td>1111 Stanford Dr. NE, Albuquerque, NM 87106</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Daron Syling</td>
<td>107 Civic Plaza, Taos, NM 87521</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Mike Tilly</td>
<td></td>
<td><a href="mailto:emrsy@cull-ralenergy.org">emrsy@cull-ralenergy.org</a></td>
</tr>
<tr>
<td>24</td>
<td>Richard Tipton</td>
<td>P.O. Box 1407, Taos, NM 87571</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Lisa Tringub</td>
<td>P.O. Box 184, Taos, NM 87571</td>
<td></td>
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</table>

Project team representatives at the meeting included the following individuals:

- Richard Campos, NMDOT
- Armando Armendariz, NMDOT
- Rochelle Byars, NMDOT
- Jimmy Camp, NMDOT
- Phillip Gallegos, NMDOT
- Laurel Wallace, NMDOT
- Ray Trujillo, NMDOT
- Karyn Lujan, NMDOT
- David J. Martinez, NMDOT
- Eric Johnson, Marron and Associates
- Jessica Sebring, Marron and Associates
Presentation

Armando Armendariz introduced the project and project team. Eric Johnson described the NMDOT Location Studies Procedures and NEPA process, and Armando Armendariz followed with a discussion of the alternatives under consideration.

Public Comments and Questions

The following comments were received at the meeting. NMDOT responses are shown in italics.

Don’t you have a problem with all of the Alternatives except 2 with snow melt. You are shading pavement. You need to get the bridge melted off as quickly as possible. You don’t want to use salt on a bridge. Have you looked at it?

*The mesh is one material we could look at.*

Can you cut that [mesh]?

*It can be cut but you need large cutters. It’s the same with chain link fence. Even on Option 1, posts could be put up and mesh installed between the posts. We are looking at options for going under the bridge and enclosing it.*

You have all these tourists. The unobstructed view is fantastic. An awful lot of people visit the bridge. Artists go out there and paint. Alternative 2 is the least obtrusive.

I would like to present something from a different aspect. I work in energy. When you have a repeating occurrence, it creates a vortex, which creates a magnet for repetition. You can reverse the vortex to create love. You can use roses. It is a special flower. Each has its special spirit. You can use roses to bless the land. That is just one idea. I am teaching rose healing. I promised to get names of those who committed suicide on bridge. I have not done it yet. Each person who jumped deserves acknowledgement and forgiveness from the physical realm. Do you know what a rock cairn is? You take rocks that you bless, and put them in a round hole, and this would be a rock cairn for healing emotional trauma. A person could put a rock in the cairn and ask for help, and they will be answered. Your physical approach would not reverse the problem.

How many people visit the gorge bridge each year?

*We don’t have number. It is very difficult to get a number. The number of jumpers that has been provided to us is 30 in the last decade.*

I was wondering what percentage of the total visitors you are dealing with?

*We could look at the number of vehicles on US 64 but that doesn’t tell number of visitors.*

Could you lower the speed limit on the bridge?

*We could do a speed study. The department is not the enforcing agency. It is up to law enforcement to give tickets.*
How do these alternatives affect rescue operations? The rescue people work on the bridge and drop off over the side of the bridge.

*It would have to work off of maintenance – need a crane, to be able to hinge down, or be able to remove a section. For the 2nd alternative, the DOT is not equipped to go out and rescue or remove trash. We would have to have an agreement with Taos Rescue to do that. We only have one truck, the snooper truck, to do that, and it serves the entire state. The other alternatives have the same issues. There needs to be a mechanism to remove sections.*

In regards to the speed limit, might it be possible to post pedestrian crossing signs or signs stating that there is a large tourist element at the bridge. To let people know to slow down because people just run across the road or wander across not paying attention to traffic because of the beautiful view.

How was HDR selected for this process? Was this a competitive process?

*It is an on-call. The state has open advertisement for engineering services that is open to everyone – any engineering firm that meets the State’s qualifications. A panel of State employees reviews the proposals. HDR was one of the firms awarded a bridge contract. HDR has not provided any engineering for this project, just renderings.*

Is one percent of the bridge budget dedicated to art?

*No, 100 percent of this is federal bridge money.*

What is the cost of each of these?

*We have not put a cost to these options yet. There are a lot of factors to take into account when figuring out the cost. That will happen later. We just start out with every idea. We come to the public to see if you have any ideas we have not thought of.*

If you do nothing, there is a possibility you could engineer a cable system to get people or things. If you had a mechanism that you could go up and down-in so it isn’t so dangerous for rescue. You have thousands and thousands of people visiting the bridge each year, but one or two go off of it each year. I knew someone who went off bridge, but they would have gone somewhere else if not this bridge.

Is there any study about how many people will come to bridge for sport because they see the barriers as challenges? It became a challenge for snowboarders at the Taos Ski Hill because of the deterrent. People will see bridge as a challenge because of the deterrent. The people who are dedicated to jump for whatever reason will jump. It seems it just adds more appeal to it. I go over to the bridge all the time. It would bring up an issue that doesn’t enter many people’s minds. You are promoting the bridge as a tourist attraction. For the rest of thousands of people, this affects the visit.

We need to look at the issue here. The bridge was built in 1964 to connect east and west. The (state legislature) memorial was structured to come up with an attempt to stop suicides. People already come from thousands of miles to jump off of the bridge. We get calls from families in other states saying someone is missing and coming to jump off the bridge. We are putting our rescue personnel at risk. The structure of the canyon is not a secure structure. There is a potential for rockslides and injury. We are looking at funding in 2011. The human factor – if we look at Alternative 2, you have vendors on the side that help curtail suicides. When you see people out there, people don’t want to commit suicide. The vendors are off to the side. You should consider these people, and they help us in prevention and
providing information on the bridge and other tourist attractions. They provide a service. This is something to work on in the interim, but work with the vendors. On the east side, people can walk out to the bridge pretty easily. We have two years to work with this. How are we going to curtail suicides today and tomorrow? When the bridge was constructed, we didn't think about suicides, but now we have to address that issue. We have to focus on that. The vendors are one thing that can help us out there. They are not doing any harm. I would ask NMDOT to look at that. Look at the human factor that is out there. Most suicides happen late at night or early in the morning because there are people are out there (the rest of the time). When someone is driving 3-4 hours to get to the bridge, their mind is made up. With local people, their mind is not made up.

There are so many issues. I will talk about a few. Look at a donation box at each end for the search and rescue people, a voluntary thing. There are so many places where someone can jump off a high place in this country. They will just go somewhere else. If you passed a regulation that said there was a $500 fine for parking on the bridge, I don't know if that would be a deterrent. It might be just enough to make someone think. The idea of a memorial is good and an X File issue. The memorial is a nice idea but that might glorify suicide. I would rather see a memorial in town. Around the country, people jump off spectacular places. This prevention attempt is rare. I know the Empire State has some barrier at the popular place to look out. The Golden Gate and other bridges don't have a barrier. Are you aware of any barriers like these?

*These two ladies with Suicide Prevention of New Mexico have information that a physical barrier will stop a person, not just when they try, but stop the attempt. The Golden Gate is opportunistic for this. The Golden Gate Bridge is looking at something like Option 2. The design has already approved, it just hasn't been built yet. These are the types of things we are looking at.*

Have you seen the cables at Cañon City. There are a bunch of cables anchored to cement. There are 12 cables, 2-feet apart, they go up one side and do the opposite on the other side. They would not put weight on the bridge because they are anchored to the canyon on the sides, but mesh could be attached to them.

*The NMDOT is not here to be for or against the project. We are just here to present the study. These are good comments. It is important to write your comments on paper. We are not here to tell you what will happen.*

I want to support Commissioner Jaramillo. Have people there 24 hours like a campground host. People could stay there several months. I did save someone by being there early. I saw someone 2 weeks before she jumped. I wished I had had the training.

*Please do submit your comments. Submit them in writing, by e-mail, or mail them in. All your comments are valued.*

I want to thank the highway department. You have had a lot of projects up here, and you have helped the community. The projects have improved the whole situation.

Aren't there 4 or 5 people who jump off the bridge every year?

*It is 30 over a decade.*
Written Comments

Comment 1: Jimmy Camp, NMDOT, P.O. Box 1149, Room 224, Santa Fe, NM 87504, jimmy.camp@state.nm.us

All protective systems will have to allow for bridge inspection. The protective system will have to be removable to allow access for bridge inspection. With that said, the higher vertical rail extension or horizontal netting seem best to be able to be removable or retracted for bridge inspection work. Maybe a combination of a vertical rail extension and horizontal barrier could be incorporated into the final solution.

Bridge preservation work is also needed on this bridge. This work will be needed to add longevity to this bridge.

Comment 2: Joseph Ferrara, P.O. Box 3088, Taos, NM 87571, Cricilliam@gmail.com

I firmly and only approve of view #2, the one with mesh netting out to the sides. Or alternatively the NO BUILD alternative.

My name is Joseph. I live on a ranch only 3 miles from the bridge. Have had many opportunities to walk across it. Semi-trucks make it shake like an earthquake. I cannot see the bridge lasting without collapsing on the alternatives which add metal fencing or railings. Also, 3 out of 4 visitors or tourists as we call them, have cameras and want very much to take unobstructed videos from on the bridge.
Armendariz, Armando M., NMDOT

Subject: CN: 3973 - Rio Grande Gorge Bridge Team Mtg.
Location: NMDOT GO RM 209

Start: Wed 10/21/2009 10:00 AM
End: Wed 10/21/2009 12:00 PM
Show Time As: Out of Office

Recurrence: (none)
Meeting Status: Meeting organizer

Required Attendees: McElroy, John E., NMDOT; Gallegos, Phillip A., NMDOT; Martinez, David J., NMDOT; Camp, Jimmy D., NMDOT; Trujillo, Raymond M., NMDOT; Byars, Rochelle, NMDOT; Vaughn, Colleen E., NMDOT; Roxlau, Blake R., NMDOT; Wallace, Laurel T., NMDOT; Rodriguez, Stephen M., NMDOT

To All:

I have attached all the comments I could find and all the comments Eric Johnson documented for the first public meeting related to the Rio Grande Gorge Bridge. I think we need to get together to discuss how we proceed and what issues we face.

I have scheduled a meeting to discuss this at the GO RM 209 on Wednesday October 21, 2009 at 10:00 AM.

If there are questions or I have failed to invite any individual that needs to attend please call or forward the invitation.

Thank you,

Armando M. Armendariz P.E.
NMDOT Infrastructure Design – North Region
Office 505-827-5511
Cell 505-490-2740
armando.armendariz@state.nm.us

rao gorge bridge  Rio Grande Gorge - Comment Rec...  Rio Grande Gorge - Public Meet...  Santa Fe New Mexican Article w...
Cultural Resource
October 26, 2009

Colleen Vaughn  
Acting Environmental Program Manager  
New Mexico Department of Transportation  
P.O. Box 1149  
Santa Fe, NM  87504-1149

Re:  Agency Participation in the Rio Grande Gorge Bridge Study, Taos County  
Project No. BR-064-6(25)242, CN: 3973, US 64

Dear Ms. Vaughn:

Thank you for your letter concerning the feasibility study related to suicide prevention and the Rio Grande Gorge Bridge. In addition to your letter, which we received on October 15, 2009, NMDOT presented the current proposed alternatives for installing a barrier on the bridge at a meeting at our office on October 13, 2009. State Historic Preservation Office (SHPO) staff present appreciated the thoughtfulness and professional effort that NMDOT and its consultants have put into the feasibility study. As Mr. Armando Armendariz commented, any solution has challenges and complications.

The Rio Grande Gorge Bridge was listed on the State Register of Cultural Properties on 5/9/1997 and was included in the National Register of Historic Places on 7/15/1997. Although the bridge was less than 50 years old at the time of its listing, it was recognized for its “exceptional importance as a bridge whose history is closely associated with a critical chapter of transportation history in New Mexico and because of the uniqueness of its design sub-type in the state.” Because of the significance of this bridge, the State Historic Preservation Office requests to be a stakeholder in the Rio Grande Bridge Study.

While researching the construction of physical barriers to prevent or reduce the numbers of suicides on bridges in other states, we found three studies that are good sources of information, one from one from California, one from Washington state, and one from New York state. These studies may be found on-line and we have listed the links to these sources in Appendix 1.

The study from the New York State Bridge Authority is particularly worth studying as NMDOT moves forward in their feasibility study. The New York State Bridge Authority found that
"human barriers" (or "passive barriers" as we prefer to think of them), reduces the number of suicides overall, not just the number of suicides off bridges, because it addresses the causes of suicides and offers informed intervention. The key elements of such a plan are implementation of a suicide prevention hotline service on every bridge, improved education and awareness campaigns for the community and emergency call training for personnel. The New York Bridge Authority reported positive results with their suicide prevention plan and we hope that NMDOT will consider the use of "passive barriers" as part of the "No Build" alternative as the feasibility study moves forward.

Based on the New York Bridge Authority model, we offer the following ideas for the use of "passive barriers" on the Rio Grande Gorge Bridge:

- a "suicide prevention patrol" on the bridge
- training for interveners
- increased accessibility for rescue/recovery personnel
- CCTV cameras
- a suicide-prevention call boxes at each end of the bridge
- signage and lights

Ways to protect the rescue/recovery personnel also should be an essential element of the feasibility plan and an effective investment of public funds. Mr. Armendariz’s suggestion in our meeting of establishing an annual contract with a large crane company that could provide a crane “on call” to lower rescue personnel into the gorge for rescue/recovery would benefit the safety of the rescue/recovery personnel.

If a proposal for a physical barrier is carried forward in the feasibility study, SHPO will apply the Secretary of the Interior’s Standards for Treatment of Historic Properties and the Standards for Rehabilitation as the treatment approach in our review of any proposed design. The Standards for Rehabilitation are listed in Appendix 2 to this letter. At a minimum any of the currently proposed alternatives will conflict with Standards #1, #2, #5, #9 and #10.

SHPO will also assess how the integrity of the bridge will be affected by installation of a physical barrier following the National Park Service’s “Seven Aspects of Integrity” outlined in the NPS Bulletin, How to Apply the National Register Criteria for Evaluation. Installation of a physical barrier has the potential to introduce structural and visual changes that will affect the integrity of the bridge. From a review of the alternatives, it appears that five aspects of integrity, listed below, would be adversely affected by any of the currently proposed alternatives.

1. **Design.** Each alternative would constitute a significant change to the design of the bridge in appearance and in engineering performance because of the introduction of new elements, either railing or netting.
2. **Setting.** Views from the bridge and views to the bridge will be altered. As presented, all four Alternatives will have an adverse effect on the views of the bridge from the Taos or Tres Piedras sides. Views from the bridge will also be altered as a person on the bridge looks over or through any of the higher railing, or horizontal or vertical netting.
3. **Materials.** New materials will be introduced and, as currently designed, they will not be visually compatible with the design of the bridge. The new materials may accelerate deterioration of the bridge because of the additional weight, movement, technology of installation, and impediments to maintenance.

4. **Workmanship.** The methods of welding and fabrication of the existing bridge may be obscured by the additions.

5. **Feeling.** The visitor experience will be very different approaching the bridge and traversing the bridge whether on foot or in a vehicle.

Below are preliminary comments on each proposed alternative for installation of a bridge barrier that were presented to our office on October 13, 2009. We have drawn in part from the three studies mentioned above in forming our comments.

**Alternative 1** will have a visual and physical impact on the Rio Grande Gorge Bridge. The installation of new railing would need to be distinguishable from the old railing and it would need to be removable in order to retain some of its visibility as part of the historic design. In addition, when seen obliquely, as this bridge usually is viewed by the public, closer pickets will appear as a solid wall. We recommend exploring screen or mesh alternatives, or a grid of wire. In California, a fine mesh held by uprights was chosen for the Cold Spring Canyon Bridge because of the concern with the oblique view. In Seattle, frames with thin verticals of cable (or steel rods) were chosen for the Aurora Bridge. Another concern with this alternative is whether additional structural elements, greater than shown in the illustration, will be needed to resist wind and other loads.

**Alternative 2** will have an adverse effect on the views of the bridge structure and the canyon from the public viewing areas at both ends of the bridge, as well as from the projecting observation platforms. We are also concerned that this alternative may pose a maintenance problem, as the “net” will collect trash and objects that might be blown or thrown into it. We were initially concerned about the view of the bridge from a distance; however, preliminary information from Mr. Milford Wayne Donaldson, California SHPO, indicates that the visual effects are not great and that the net is effective for preventing suicides because once an individual is caught in the net, they cannot get out without assistance.

**Alternative 3** will have an adverse effect on the views of the bridge structure and the canyon from the public viewing areas at both ends of the bridge, as well as from the projecting observation platforms and when the bridge is viewed from a distance. We are concerned with the introduction of the gratuitous curved or catenary elements above the railing and what appears to be heavy chain-link fencing. Either the California solution of using a finer wire grid approximately 1” x 2”, or the Seattle solution of using thin vertical cables/rods, would be much less visible. However, there would also be a concern with people climbing the chain-link fence.

**Alternative 4.** We have the same concerns for this alternative as we have with Alternative 3. For all of the proposed alternatives there is a potential for additional structural changes to the bridge and bridge abutments in order to secure and support the extensions of railing and/or the horizontal netting. The installation of any physical barrier has the potential to adversely affect the structure of the bridge as well as the potential to adversely affect the views to and from the
bridge. For these reasons, we strongly encourage the consideration of “passive barriers” as an alternative to construction of a physical barrier. Based on our review of national studies, such an alternative can have a significant impact on reducing suicides overall and increasing public safety for rescue/recovery personnel.

If you have any questions on these comments, please contact Michelle Ensey at (505) 827-4064 or Harvey Kaplan at (505) 827-3971.

Sincerely,

Jan V. Biella
Interim Historic Preservation Officer

Log: 87931
Cc: Laurel Wallace, NMDOT
Appendix 1
Additional sources

California

- Cold Spring Canyon Bridge public meeting display panels:
  http://www.dot.ca.gov/dist05/projects/sb_cold_springs/08jun_pub_mtg.pdf

Washington
- Aurora Bridge (George Washington Memorial Bridge), Seattle, Washington
  SR 99 Aurora Bridge, Suicide Prevention Fence.

New York

- Important read (see page 9):
  http://www.nysba.state.ny.us/Documents/Suicide%20Prevention%20Plan%20in%20PDF.pdf
Appendix 2
Secretary's Standards for Historic Preservation

1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.

2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
Rio Grande Gorge Bridge

Evaluation for Potential Suicide-Prevention Apparatus Installation

Prepared for

New Mexico Department of Transportation

Prepared by

SWCA Environmental Consultants

and

Van Citters Historic Preservation LLC

October 2009
Table of Contents

[Auto-arrange from the heads and subheads following]

Appendices

[Attach the following:]

“Suicide Barriers for Golden Gate Bridge,” ACHP Case Study, Section 106 in Action

“SR 99 Aurora Avenue Bridge,” Washington State DOT slideshow p. 29

[Bridge Suicides study]

[Eakin’s New Mexico Suicides study]

[Van Citters Study of Bridge suicide solutions]
Introduction.

Study Summary

This evaluation follows the format of the Historic Structure Report as developed by the National Park Service, Technical Preservation Services (TPS 2009). The historic resource—Rio Grande Gorge Bridge on US Highway 64 in New Mexico—is thoroughly described here in terms of historic significance, character-defining features, and general condition.

The purpose of this evaluation is to investigate the potential for installation of suicide-prevention apparatus on the bridge in a manner sensitive to the character-defining features that make it eligible for its listing in the National Register of Historic Places (NRHP) and New Mexico State Register of Cultural Properties.

The report’s authors found that 1) the Bridge is in excellent as-built condition with all its 1965 features, details, and functions remarkably intact, 2) suicide attempts and successes from the Bridge have been documented with some detail, but additional details (see Work Recommendations and Alternatives below) should be investigated during NMDoT’s decision process for installing apparatus on the Bridge, and 3) suicides from bridges in general, including historically designated structures, has been well studied and a number of reports are mentioned in and appended to this report.

A key issue discussed in studies of suicides from bridges is the distinction between prevention and intervention. Prevention is defined for this topic as diminishing or reducing the risk of suicide, and includes for examples mental health counseling and treatment. Warning signs and call boxes on the Bridge would be prevention measures. Intervention is the specific effort to stop individuals who are contemplating or attempting suicide. Physical barriers would be intervention measures at high-risk sites such as the Rio Grande Gorge Bridge.

As noted in the State Legislature’s Senate Joint Memorial 18, New Mexico currently ranks fourth among the states in suicide rate, and half of all suicides in the Taos County area occurred at the Rio Grande Gorge Bridge (Cisneros 2009). The New Mexico Suicide Prevention Coalition is investigating possible suicide-prevention/intervention ideas for the Rio Grande Bridge. The NMSPC provides education, support, and advocacy to reduce the suicide rate in New Mexico. And the National Suicide Prevention Lifeline issued a general statement calling bridge barriers the most effective means of preventing bridge suicides — more than bridge signs or telephone hot lines. The statement is presented in its entirety in Appendix X, “Suicides at the Rio Grande Gorge Bridge” (Draper, 2008).

This report’s authors reviewed a number of historic bridges with similar problems, presented in Appendix X. San Francisco, California’s Golden Gate Bridge (NRHP listed 1984) is perhaps the most recognized of these structures as well as this problem. More
than 1300 people have committed suicide by jumping off the Golden Gate Bridge since it opened in 1937; 23 jumped to their deaths in 2005. Caltrans has thoroughly examined alternatives for installation of suicide-intervention barriers, as shown in their report. The State of Washington’s Department of Transportation reviewed barrier alternatives for its Aurora Avenue Bridge (NRHP listed 1982), the scene of 230 suicides since 1932, thought to be second in number to the Golden Gate Bridge. Installation is pending on both these examples, and their plans are presented in the Appendices, with some illustrations from Aurora Avenue in the Intervention Alternatives section below. Completed barrier examples such as on the Bloor Viaduct in Toronto, Canada, the Memorial Bridge in Augusta, Maine, and others are presented in the Appendix.

Generally, and pending further study of suicide profiles at the Rio Grande Gorge Bridge, SWCA recommends the solution methodology applied to the Aurora Avenue Bridge in Seattle, Washington. See CONCLUSION for REQUIREMENTS for WORK below and Appendix X for detailed recommendations with illustrations.

Project Data

LOCATION

The Rio Grande Gorge Bridge is on US Highway 64, 8 miles west of the junction of New Mexico State Route 522. It crosses the Rio Grande Gorge in Taos County, New Mexico, about 36 air miles south of the Colorado border, and about 11 miles by highways northwest of Taos.

36°28′36″N, 105°43′54″W; UTM: 13/434455/4037068, Los Cordovas USGS Quad

OWNERSHIP

New Mexico Department of Transportation

LANDMARK STATUS

"Most Beautiful Steel Bridge, Long Span," designation by American Institute of Steel Construction, 1966

New Mexico State Register of Cultural Properties, 5/9/1997

National Register of Historic Places, 7/15/1997

METHODOLOGY

I. Report on Character Defining Features of the NRHP-listed structure
   1. Assemble documentation on the bridge, historical and technical;
   2. Visit site to compare condition to latest reports, and to create the profile of character-defining features;

SWCA Environmental Consultants / Van Citters Historic Preservation LLC, August 2009
3. Develop comparison of this bridge’s listing criteria, aspects of integrity and areas of significance, to similar bridges (steel arch signature bridges; Royal Gorge, e.g.).

II. Assemble Recent Data on Suicide Statistics and their Pertinence for This Bridge, in New Mexico, and in Broader Context

1. Consult with and retrieve information from Governor’s Youth Suicide Prevention Task Force, the Suicide Prevention Resource Center, and other public health information sources;
2. Research suicide-prevention statistics and solutions at historic sites nationally and internationally and specifically historic bridges (Golden Gate Bridge, e.g.);
3. Assemble documentation on the sociological aspects of this place, this bridge, its public, and its suicide history.

III. Summary Draft Report

1. Develop a draft list of alternative solutions and their characteristics derived from national and international sources;
2. Apply the FHWA/AASHTO Historic Bridge Rehabilitation Guidelines to the alternative solutions;
3. Work with NMDOT to finalize the list of alternatives;
4. Present NMDOT with a draft technical report;
5. Present NMDOT with a draft public-consumption report on the bridge’s historic significance, local flavor.
6. Prepare final documents as directed by NMDOT.

PROJECT PARTICIPANTS

Joanne Eakin, Project Research and Manager (through 14 August 2009), SWCA Albuquerque

Cherie Walth, Project Manger (from 17 August 2009), SWCA Albuquerque

James Steely, Project Engineering Historian, SWCA Phoenix

Karen Van Citters, Project Research, Van Citters Historic Preservation LLC, Albuquerque
Part 1 Developmental History.

Historic Background and Context

The Rio Grande Gorge Bridge and US Highway 64 are both recent developments in the modern highway system of New Mexico and the United States. With economic, political, and engineering influences of the early 1960s, the bridge allowed extension, upon the Bridge’s completion in 1965, of US 64 from Taos and points farther east to connect with northwest New Mexico and southwestern Colorado (NRHP 1997).

The continuous steel deck truss design of the 1965 Rio Grande Gorge Bridge is credited to the then-New Mexico State Highway Department’s Bridge Design Section, headed by Charles E. Reed as state bridge engineer and Peter H. Bray as project engineer. Contractor J.H. Ryan & Son, Inc., directed by Rudy Martinez, PE, built the bridge following the contract letting on 28 June 1963.

The Bridge was evaluated for historic significance in 1996 as part of the fully developed Historic Context “Highway Bridge Construction in New Mexico, 1850–1965” (NRHP 1997). It was placed on the New Mexico State Register of Cultural Resources in 1997 and successfully nominated to the National Register of Historic Places in 1997 as part of the Multiple Property Submission “The Historic Highway Bridges of New Mexico” (MPDF 1996).

Chronology of Development and Use

The bridge was 32 years old when listed in the National Register in 1997, very unusual for any <50-year-old property, but scarcely explained in the supporting Historic Context, “Highway Bridge Construction in New Mexico, 1850–1965” (MPDF 1996) and the individual registration form “Rio Grande Gorge Bridge, NMSHTD # 6462” (NRHP 1997).

The Bridge carried a daily average of 1,545 vehicles in 2007 (bridgehunter.com 2009). Pedestrian visitation figures are not available, although the adjacent state park rest area and BLM trail head might provide partial bridge-visitation statistics.

Physical Description

The Bureau of Land Management’s visitor center at Pilar, New Mexico, provides excellent geological and historical overviews of the Rio Grande Gorge, including general information on the US 64 Bridge. A 3-D map and geological notes show how the gorge is part of the Rio Grande Rift, flanked by broad valles that stretch from the Taos Mountains on the east to Comanche Rim on the west.

From the 1997 NRHP registration form’s text, “character-defining features” (a term not widely used in 1996, so the form does not specifically call out such features) are:
- Two concrete abutments, east and west
- Two 80-foot tall reinforced concrete main piers, and two smaller concrete piers supporting "the outside ends of the approach spans."
- Continuous steel truss, three spans (300'/600'/300'), and two steel "I-beam" approach spans (each 36' in length), for 1,272' in length and 36' wide.
- Truss members [chords], which are box steel beams.
- Deck of "lightweight concrete-filled steel grid floor," configured as a 28-foot 2-lane roadway flanked by concrete curbs and integral 4'-wide sidewalks on each side.
- Six observation decks, three on each side measuring 4'x15'.
- Steel balustrades lining the sidewalks.

Additional "character-defining features" observed during this project, combined with the NRHP aspects of integrity are:

- **Location:** The route of U.S. 64 connecting Taos (at SR 150 north of the town) with Tierra Amarilla (and the intersection of U.S. 84) is as young as the Bridge, and was chosen for particular geographic opportunities for the Gorge crossing at this location.
- **Design:** The Bridge engineers were Charles E. Reed and Peter H. Bray; more research on their backgrounds and works would inform this aspect of integrity.
- **Materials:** The Bridge utilizes a proven design but with relatively new materials perhaps first available in the early 1960s, such as lightweight concrete for the deck, and the lightweight steel box beams configuring its top and bottom chords.
- **Workmanship:** Concrete work on the piers and welding work on the truss appear to be exceptional. The complex balustrades exhibit many difficult welds, probably in jigs for multiple unit production, with evident skill. Additional research on the contractor and skilled workers would further inform this aspect.
- **Association:** The geographic connection between the Bridge and the Gorge is the strongest association, very much intact; the association with the highway—on its original alignments to the east and the west—is also intact.
- **Setting:** Probably in 1964 the Bridge stood a remote 10 miles from the nearest driveway and intersection on the Taos (east) side; subsequent changes in setting are a result of homes built on large lots nearby in recent years. However, large tracts of adjacent land controlled by Taos Pueblo and the BLM help the Bridge maintain its rural and remote setting.
- **Feeling:** Since the bridge has undergone few if any changes, upgrades, or major repairs since opening in 1965, its features are very much evocative of its construction period and feeling of the 1960s. This is a significant aspect of integrity to monitor during decisions and installation of suicide prevention/intervention apparatus.
Evaluation of Significance

The Rio Grande Gorge Bridge is listed in the National Register of Historic Places (NRHP 1997) under Criteria A and C at the statewide level of significance in the areas of engineering and transportation.

In the NRHP Registration Form text, the historic significance of the bridge is cited as:
- "an indispensable link in the region’s transportation system"
- "the largest steel deck truss bridge in New Mexico"
- "embodying the design, materials and methods of construction associated with the continuous steel deck bridge sub-type" as classified in the Multiple Property Listing “The Historic Highway Bridge of New Mexico” (MPDF 1996).

Condition Assessment

The Bridge is apparently in excellent condition structurally and adequate in function. Its engineering conditions and resulting ratings will be provided and considered by NMDOT during evaluation of alternatives to install suicide prevention/intervention apparatus.

The bridge offers a generous 4’ concrete sidewalk on both sides of the highway, and three cantilevered overlooks on each side. The continuous steel balustrades, also protecting the overlooks, are of sufficient height and baluster widths to prevent accidental falls. The concrete road deck’s curb, combined with the strength of the balustrade, also prevents automobiles from easily careening over the edge. However, several tire marks on the curb and adjacent damage to the balustrade indicate that occasionally vehicles lose control, jump the curb, and contact the balustrade.

SWCA’s engineering historian (Steely) visited the Bridge for this project during the afternoon and evening of 10 June (approaching from the west) and during the morning through noon of 11 June (approaching from the east).

As observed during this visit, the bridge attracts steady and sometimes large numbers of visitors who park mainly along the unpaved north and south shoulders of the east (Taos) side, and walk a short distance on the east-end concrete sidewalks. This pattern seems to occur because parking is an easy pull-off, pull-on at the east end, and craft-vendors set up at the east side on the north shoulder of the highway. A few visitors walk halfway to the middle from the east along the Bridge’s sidewalks.

The small roadside park (signed as part of the Rio Grande Gorge State Park) on the west side likewise attracts a steady flow of visitors; it offers restrooms, picnic tables, excellent views of the bridge and gorge, a trailhead onto BLM’s land and trails along the gorge rim to the south, and is thoroughly lighted at night. Pedestrian access to the Bridge from the west is more difficult, unless visitors park at the small US 64 pullout immediately on the northwest approach to the Bridge. From here, some visitors walk partway along the west-end concrete sidewalk; only a few venture as far as the middle.
During this visit, very few people who stopped at either the west or east sides walked all the way to the other end of the bridge, then back.

NMDot has erected numerous and very large warning signs at both ends of the bridge, in view of all trails and pedestrian approaches. Interestingly, no warning signs are posted on the bridge itself.

Part 2 Treatment and Work Recommendations.

Historic Preservation Objectives

In April 2009 the New Mexico Department of Transportation (NMDot) commissioned SWCA and Van Citters Historic Preservation to evaluate the historic qualities and examine the potential effects of installing suicide prevention apparatus on the 1965 Rio Grande Gorge Bridge. These tasks followed the issue by the New Mexico State Legislature of “Senate Joint Memorial 18” introduced by Senator Carlos R. Cisneros. The memorial requests NMDot “in cooperation with the Department of Public Safety to conduct a feasibility study to install a bridge barrier on the Rio Grande Gorge Bridge” (Cisneros 2009).

Since the Rio Grande Gorge Bridge is listed in the National Register of Historic Places and the New Mexico State Register of Historic Properties, NMDot will evaluate alternatives for such installations with consideration for the historic character-defining features that qualify the Bridge for listing in the National and State Registers.

Requirements for Work

SECRETARY of the INTERIOR’S STANDARDS for REHABILITATION:

Installation of apparatus for suicide prevention, and intervention, is a not a structural issue but primarily a pedestrian safety issue and can meet the Secretary of the Interior’s Standards for the Treatment of Historic Properties (NPS 2009), which include the Standards for Rehabilitation. Rehabilitation is defined in the Standards as acknowledging “the need to alter or add to a historic property to meet continuing or changing uses while retaining the property’s historic character” (NPS 2009). In similar application but sometimes different context, “rehabilitation” is applied specifically to bridge preservation; see “AASHTO BRIDGE REHABILITATION GUIDELINES” below for clarification and combination of the two institutional perspectives.

The Secretary of the Interior’s Standards for Rehabilitation (NPS 2009), 1 through 10, with comparisons to potential alternatives to installing apparatus for suicide prevention and intervention on the Rio Grande Gorge Bridge:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships. The proposed project meets (is in keeping with) this Standard.

SWCA Environmental Consultants / Van Citters Historic Preservation LLC, August 2009
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided. The proposed project meets (is in keeping with) this Standard, if no materials are removed, and if any new materials installed do not alter character-defining features in a carefully considered approach to increasing pedestrian safety on the bridge (see Standard 9 below).

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken. The proposed project meets (is in keeping with) this Standard.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved. The proposed project meets (is in keeping with) this Standard.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved. The proposed project meets (is in keeping with) this Standard, if the distinctive welded steel balustrades are not altered, and original concrete curbs and portals are not altered.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence. The proposed project meets (is in keeping with) this Standard; occasional repairs are already made following occasional vehicular damage to concrete curbing and steel balustrades, and should continue to meet this Standard.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used. The proposed project meets (is in keeping with) this Standard.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken. The proposed project meets (is in keeping with) this Standard.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment. The proposed project meets (is in keeping with) this Standard, if additional barriers are added following a carefully considered approach to increasing pedestrian safety on the bridge, particularly applying the original balustrade design’s materials, proportions, and massing to the suicide prevention/intervention apparatus.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired. The proposed project meets (is in keeping with) this
Standard, if barrier additions and their anchors are reversible, ideally in concert with designs that allow occasional removal for bridge inspection, maintenance, and repairs.

**AASHTO BRIDGE REHABILITATION GUIDELINES:**

The *Guidelines for Historic Bridge Rehabilitation and Replacement* (NCHRP 2007) were recently adopted by AASHTO (American Association of State Highway and Transportation Officials). The *Guidelines* define rehabilitation as “bringing historic bridges into conformance with current design and safety guidelines/standards” (NCHRP 2007: cover). A primary goal of these *Guidelines* is the considered and clear decision leading to rehabilitation or replacement of a bridge; replacement is not the goal of this Rio Grande Gorge Bridge project. However, these *Guidelines* offer substantial guidance for management of historic vehicular bridges.

The “Decision-Making Guidelines” in the document outline four steps for planning a historic-bridge rehabilitation, not mentioning (in the main text) but in effect paralleling application of the *Secretary of the Interior’s Standards* (see above):

**STEP 1: UNDERSTANDING WHAT MAKES A BRIDGE HISTORIC**

The Rio Grande Gorge Bridge is listed in the National Register of Historic Places (NRHP) under Criteria A and C at the statewide level of significance in the areas of engineering and transportation. The 1965 bridge retains integrity of workmanship, design, and materials (NCHRP 2007: A-8). The AASHTO Guidelines rank statewide significance as “high historical significance” (NCHRP 2007: A-9).

Following Step 1’s evaluation of a bridge’s “members/components that generally have historical significance,” the Rio Grande Gorge Bridge displays “technologically significant components or details” and “aesthetic railings.” For components that “generally are not vital to retain,” Step 1 includes “decks, unless they are an early or rare example of significant design” (NCHRP 2007: A-10-11).

From the 1997 NRHP registration form’s text, “character-defining features” are:

- Two concrete abutments, east and west
- Two 80-foot tall reinforced concrete main piers, and two smaller concrete piers supporting “the outside ends of the approach spans.”
- Continuous steel truss, three spans (300'/600'/300'), and two steel “I-beam” approach spans (each 36' in length), for 1,272' in length and 36' wide.
- Truss members [chords], which are box steel beams.
- Deck of “lightweight concrete-filled steel grid floor,” configured as a 28-foot 2-lane roadway flanked by concrete curbs and integral 4'-wide sidewalks on each side.
- Six observation decks, three on each side measuring 4' x 15'.
- Steel balustrades lining the sidewalks.

Additional “character-defining features” observed during this project, combined with the NRHP aspects of integrity are:
• Location: The route of U.S. 64 connecting Taos (at SR 150 north of the town) with Tierra Amarilla (and the intersection of U.S. 84) is as young as the Bridge, and was chosen for particular geographic opportunities for the Gorge crossing at this location.

• Design: The Bridge engineers were Charles E. Reed and Peter H. Bray; more research on their backgrounds and works would inform this aspect of integrity.

• Materials: The Bridge utilizes a proven design but with relatively new materials perhaps first available in the early 1960s, such as lightweight concrete for the deck, and the lightweight steel box beams configuring its top and bottom chords.

• Workmanship: Concrete work on the piers and welding work on the truss appear to be exceptional. The complex balustrades exhibit many difficult welds, probably in jigs for multiple unit production, with evident skill.

• Association: The geographic connection between the Bridge and the Gorge is the strongest association, very much intact; the association with the highway—on its original alignments to the east and the west—is also intact.

• Setting: Probably in 1964 the Bridge stood a remote 10 miles from the nearest driveway and intersection on the Taos (east) side; subsequent changes in setting are a result of homes built on large lots nearby in recent years. However, large tracts of adjacent land controlled by Taos Pueblo and the BLM help the Bridge maintain its rural and remote setting.

• Feeling: Since the bridge has undergone few if any changes, upgrades, or major repairs since opening in 1965, its features are very much evocative of its construction period and feeling of the 1960s. This is a significant aspect of integrity to monitor during decisions and installation of suicide prevention/intervention apparatus.

Importantly for this project, with the proposed installation of suicide prevention/intervention apparatus, “it important to consider the reversibility of actions” (NCHRP 2007: A-15, see Standard 10 above and CONCLUSION below).

“Public interest” is a category recommended under Step 1 in these AASHTO Guidelines. SWCA currently has no results from NMDoT’s consideration of pubic interest for the Rio Grande Gorge Bridge suicide-prevention project.

STEP 2: APPLYING STRUCTURAL AND FUNCTIONAL CONSIDERATIONS
This step helps “determine if the engineering objectives can be achieved while preserving what makes the bridge historic” (NCHRP 2007: A-16). The proposed project allows the historic bridge to be improved “to an acceptable level” while addressing “three areas [see also Step 4 below, “aspects of adequacy”] of functional and operational adequacy: superstructure and substructure condition..., load-carrying capacity, and geometry and safety measures.”

The Step 2 evaluation involves analysis of the bridge’s conditions and resulting ratings, to be provided and considered by NMDoT during evaluation of alternatives to installing suicide prevention/intervention apparatus. Otherwise, this step addresses vehicle safety
and not pedestrian safety on a historic bridge, and therefore requires minimal consideration for installation of suicide prevention/intervention apparatus.

**STEP 3: HISTORICAL AND ENVIRONMENTAL CONSIDERATIONS**

The present SWCA evaluation of the proposed project, and application of the *Secretary of the Interior’s Standards* (though they are not mentioned in the text of the AASHTO Guidelines) addresses Step 3. “It must be demonstrated that preservation and/or avoidance of an adverse effect,” the Guidelines state, “has been fairly considered as part of the scoping and preliminary engineering studies, and that all possible planning to minimize harm to historic properties was done” (NCHRP 2007: A-26).

This Rio Grande Gorge Bridge project goal can “be achieved without an adverse effect [see Standard 10 above and CONCLUSION below] to the historic property.” Also, “rehabilitation is possible using de minimis impacts or a design exception” [if the bridge were to be evaluated for Section 4(f)]. And the project goal can “be achieved using minimally acceptable or tolerable design criteria,” (NCHRP 2007: A-27) through carefully considered, reversible, suicide prevention/intervention apparatus.

Considering and addressing “views and values of the community” (NCHRP 2007: A-26-28) are tasks recommended under Step 3 in these AASHTO Guidelines. SWCA currently has no results from NMDot’s consideration of public interest for the Rio Grande Gorge Bridge suicide-prevention project.

**STEP 4: APPLYING THE DECISION-MAKING THRESHOLDS**

The concluding process of the AASHTO Guidelines “uses the aspects of adequacy” (superstructure and substructure condition, load-carrying capacity, and geometry and safety measures) “tempered with historic[al] considerations to define when rehabilitation of a historic bridge can be considered feasible and prudent[,] and when it can not” (NCHRP 2007: A-28). Interestingly for consideration in this project, the Guidelines explain that, “Rehabilitation must correct the deficient features using methods that do not require constant maintenance,” and “the prudent approach is to rehabilitate well so that the work does not need to be done again anytime soon and that maintenance costs are not abnormal” (NCHRP 2007: A-29).

The Rio Grande Gorge Bridge falls into Category I, where the three “aspects of adequacy” are “Adequate” (NCHRP 2007: A-31). Bridges in this group “are generally in... satisfactory (6) structural condition and have adequate travelway width and alignment matching or exceeding that of the approaches. All bridges in this group have rehabilitation potential” (NCHRP 2007: A-33). Since the Rio Grande Gorge Bridge under Category I can “be improved in a reasonable and prudent manner so that both the condition and the load-carrying capacity are adequate” (NCHRP 2007: A-33) through the proposed installation of suicide prevention apparatus, the AASHTO Guidelines verify the project as acceptable rehabilitation of the historic bridge if issues in Steps 1-3 are met. SWCA further recommends coordinated compliance with the *Secretary of the Interior’s Standards for Rehabilitation* to address potential funding issues raised by FHWA and potential compliance issues raised by the SHPO.
CONCLUSION for REQUIREMENTS for WORK:

As evaluated through the above processes of reviewing the Secretary of the Interior’s Standards for Rehabilitation, and the Guidelines for Historic Bridge Rehabilitation and Replacement, the proposed undertaking of installation of suicide prevention apparatus will have no adverse effect on the NRHP-listed 1965 Rio Grand Gorge Bridge. Following the Secretary’s Standards, this installation will not destroy historic fabric, will not diminish NRHP significance or integrity, and will be reversible (can be removed later).

Work Recommendations and Alternatives

PREVENTION ALTERNATIVES:

Since suicide studies (see Appendix X) on the Rio Grande Gorge Bridge do not currently cite certain details of suicide profiles, SWCA recommends that NMDoT pose the following questions leading to possible suicide-deterrence on the Bridge:

- At what time of day, and during which seasons, do suicides typically commence? If at specific times of day and year, a number of solutions can address prevention:
  - Trained uniformed officers or mental health professionals can be present at those times.
  - Remote monitoring with live or recorded speakers can address someone commencing a suicide attempt (or unsafe behavior).
  - If attempts are at night, lighting can be installed for illumination at typical times and seasons, switched off at other times.

- What types of signage have proven elsewhere to deter suicides? The bridge presently posts no safety signs on the deck or balustrade.
  - Simple warnings and offers of assistance can be added to the bridge, particularly at known locations where suicides commence.
  - A safety call box can be retrofitted to two or more of the six cantilevered overlooks along the sidewalks.
  - As noted above, remote monitoring can be labeled and presented as a real-time deterrent, with immediate connection to mental-health assistance.

INTERVENTION ALTERNATIVES:

Likewise, since suicide studies (see Appendix X) on the Bridge do not currently cite certain details of suicide profiles, SWCA recommends that NMDoT pose the following questions leading to specific “apparatus installation” alternatives for suicide intervention on the Bridge:

- Where on the bridge do suicides commence?
- If in the center of the Bridge directly over water, consideration should be
given to installation only along walkways in the central bays (see next).
Likewise for any other defined area of the bridge.
- A very tall extension of the existing balustrade would be the most effective
apparatus, but also the most visibly intrusive. The current balustrade is bolted
to the concrete deck; extensions could be bolted as well, and removable to
address historic integrity, as well as to allow below-deck inspections and
maintenance.
- A net or series of cables extending perpendicular to and beyond the existing
balustrade would provide an initial visual deterrent to visitors who consider
hopping the balustrade. However, net attachments should not inadvertently
invite suicide attempts or even daring visitors simply to hop the balustrade and
walk to the edge of the nets on their material or their frames (which will be
substantial to support their own weight plus body weights).

The Washington State Department of Transportation’s State Route 99 Aurora Avenue
Bridge Fence Design Committee report (WSDOT 2009), following considerable study of
intervention alternatives and designs, offers a solution well matched to the Rio Grande
Gorge Bridge (see pp. 29, 32-34 in the WSDOT workbook):

- Use vertical elements as the mains fence safety feature.
- Do not use mesh or wire fabric.
- The [barrier] elements should be stainless steel wire rope or rods. Small
diameters contribute to visibility from the bridge [and to the bridge from a
distance, particularly for perpendicular views from rafters inside the Gorge and
from hikers’ viewpoints on the ridge trail south of the Bridge].
- The fence may extend only slightly ‘outward’ toward the [Gorge and] water to
provide a more ‘open’ experience for pedestrians [see illustration of “Fence
Envelope”].
- The fence should have an [upper] overhang to discourage climbing. Recognize
the ‘face validity’ of such an assembly[.] Although climbable by some, the
overhang may be perceived as difficult to climb.
- The climbability of the existing rail should be taken into account [particularly if
the new high barrier is installed outside the existing rail, farther within the “Fence
Envelope”]. Designs should discourage access to the fence top from the top rail
or posts.
- Pedestrian lighting, if used, should be low wattage and essentially decorative [but
meeting the Secretary’s Standards].
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bridgehunter.com

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NPS (National Park Service, National Register Program)

NRHP (National Register of Historic Places)
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TPS (Technical Preservation Services, National Park Service)

SWCA Environmental Consultants / Van Citters Historic Preservation LLC, August 2009

WSDOT (Washington State Department of Transportation)  
2009  “SR 99 Aurora Avenue Bridge Fence, Design Committee, Work Book.”  
Appendices

(e.g., figures, tables, drawings, historic and current photographs, reference documents, materials analysis reports, etc.)
CASE DIGEST:
section 106 in action
advisory council on historic preservation
Summer 2009

Project: Case Update: Suicide Barriers for Golden Gate and Cold Spring Canyon Bridges

Agencies: Federal Highway Administration, U.S. Department of Transportation;
California Department of Transportation

Contact: Carol Legard clegard@achp.gov

Since the Cold Spring Canyon Bridge in Santa Barbara County was built in 1963, at least 44 people have committed suicide there. More than 1,300 people have committed suicide by jumping from the Golden Gate Bridge in San Francisco since its 1937 construction. In separate projects, the California Department of Transportation is working to design suicide barriers. The bridges’ historical and aesthetic importance creates significant challenges for balancing public safety and historic preservation concerns. Since the last report in the Winter 2009 Case Digest, there have been significant updates in these cases. See www.achp.gov/CaseDigestwinter2009small.pdf for background information on the cases.

Golden Gate Bridge
While the construction of suicide barriers of any kind remains controversial and of concern to historic preservation advocates (including groups concerned about the Cold Spring Canyon Bridge) the California State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (AHP) executed a Memorandum of Agreement (MOA) on March 23, 2009, with the California Department of Transportation (Caltrans) for the Cold Spring Canyon Bridge Project. The MOA required Caltrans to do the following: conduct a feasibility study on an alternative design proposed by the SHPO that would reduce obstruction of the view to persons driving over the bridge; photo-document the bridge according to the Historic American Engineering Record (HAER) standards; develop an illustrated booklet about the historic bridge; and, install a three-panel interpretive exhibit to be designed by Caltrans.

Caltrans consulted with the SHPO and completed the feasibility study, which was submitted to the SHPO and the ACHP for review in April. Although the study found that the cantilever arc net barrier design is not feasible for this particular bridge, the SHPO questioned this conclusion. In the SHPO’s view, the cantilever arc net barrier design is preferable as it greatly reduces “the visual intrusion that maintains the setting of the bridge” and preserves the view corridor from the bridge to the valley. Caltrans concluded that the cantilever arc design would require permanent alteration of the bridge’s primary character defining feature, its substructure. On the other hand, the fence type barrier minimizes physical alterations to the historic bridge and costs substantially less.

To resolve this disagreement, the SHPO invoked the dispute resolution clause of the MOA and requested that Caltrans seek the views of the ACHP. After thorough review, the ACHP agreed with Caltrans. Given the greater costs associated with the cantilever arc net design, and the fact

SWCA Environmental Consultants / Van Citters Historic Preservation LLC, August 2009
that Caltrans has examined the feasibility of the alternative design, as required in the MOA, the ACHP advised Caltrans that it did not object to its approval of a fence-type barrier. In a letter dated July 1, 2009, the ACHP informed Caltrans of this recommendation. In the same letter, however, the ACHP went on record that it agrees wholeheartedly with the SHPO’s concern that altering historic bridges for the prevention of suicides requires timely and serious consideration of alternatives—including non-barrier alternatives such as call boxes and coordination with local mental health services. Many mid-century bridges are becoming eligible for inclusion in the National Register, and the SHPO and other historic preservation advocates are rightfully concerned about the preservation of the historic character of these bridges.

As for the Golden Gate Bridge, consultation was concluded with agreement among Caltrans, the SHPO, and the ACHP that the net barrier designed by Caltrans was an acceptable means of deterring suicides on that bridge. At the SHPO’s advice, Caltrans modified the proposed barrier to minimize the visual impact for persons viewing the bridge by matching the color of the support system to the existing bridge (International Orange), and leaving the net unpainted and uncoated stainless steel. Also a vertical barrier will be attached to the outside of the existing concrete wall along a 300-foot length of the north anchorage housing. Other mitigation measures that were agreed to include the following: Caltrans will complete the yet unfinished HAER documentation for the bridge; and will submit a National Historic Landmark nomination for the Golden Gate Bridge to the National Park Service for consideration. Caltrans will also prepare educational materials for the public and an interpretive display at the gift center and Vista Point scenic view to inform the public about the undertaking for the duration of construction.

The MOA has been signed by Caltrans, the California SHPO, and, on July 13, the ACHP. The National Trust for Historic Preservation declined to sign the agreement, but all other consulting parties signed as concurring parties. These included the Golden Gate Bridge Highway and Transportation District, the Golden Gate National Recreation Area, Docomomo, and San Francisco Architectural Heritage.
SR 99 AURORA AVENUE BRIDGE FENCE 29 DESIGN COMMITTEE

Design Considerations

Qualitative
- Use vertical elements as the main fence safety feature.
- Do not use mesh or wire fabric.
- The elements should be stainless steel wire rope or rods. Small diameters contribute to visibility from the bridge.
- The fence may extend only slightly 'outward' toward the water to provide a more 'open' experience for pedestrians. However, not required beyond that of a reasonable structural installation.
- The fence should have an overhang to discourage climbing. Recognize the 'face validity' of such an assembly. Although climbable by some, the overhang may be perceived as difficult to climb.
- The climb ability of the existing rail should be taken into account. Designs should discourage access to the fence top from the top rail or posts.
- Pedestrian lighting, if used, should be low wattage and essentially decorative.

Quantitative
- The elements should be spaced no greater than 6" apart.
- The overhang is limited by inspection truck requirements. The Bridge Office is studying inspection traffic control requirements which may affect the dimension.

Fence Envelope
The fence must be contained within this space [see illustration].
Supplemental Record of Work Performed. This section documents work performed, which may include planning studies, technical studies such as laboratory studies or structural analysis, or other investigation work that was not part of the scope of the original historic structure report, and records physical work on the building (construction documents, annotated drawings, photographs). The section is usually added later to update the report, as most historic structure reports are issued prior to implementation of the recommended treatment approach and specific work. It is sometimes referred to as Part 3 of the report.

- *Completion Report* - a record of the work accomplished, physical evidence discovered during construction, and how findings affect interpretation of the building.
- *Technical Data* - a collection of field reports, material data sheets, field notes, correspondence, and construction documents.
Estimate CN 1975

Estimated Cost: $6,248,834.00
Contingency: 8.00%
Estimated Total: $6,748,740.72

NEW CONSTRUCTION WITH BRIDGE
Base Date: 12/14/07
Spec Year: 07
Unit System: E
Work Type: Bridge-New Construction
Highway Type: Four Lane
Urban/Rural Type: Rural
Season: WINTER
County: Santa Fe
Midpoint of Latitude:
Midpoint of Longitude:
District: 5

Federal/State Project Number: AC-GRIP-(NH)-1(109)182

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Wednesday, November 04, 2009
Page 3 of 5
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**Total for Group 0004: $39,180.00**

**Group 0005: BRIDGE**

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**Total for Group 0005: $1,718,859.00**

**Group 0006: CONSTRUCTION ENGINEERING**

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Total for Group 0006: $190,000.00
Public Input
'Suicide bridge' spurs feud

By William M. Welch, USA TODAY

SANTA BARBARA, Calif. — Krysta Dorr drives a different route to work these days. Six months after finding a woman’s crumpled body on an isolated road beneath the span locals call "suicide bridge." 

"I still have nightmares, dreaming someone is falling on top of me," says Dorr, 21, a waitress at the Cold Spring Tavern just a few hundred feet from where Stagecoach Road passes beneath the Cold Spring Canyon Bridge. "I will not drive down that way again."

Built in 1963, the bridge is an imposing steel arch that carries state Highway 154 across a wooded gorge in the Los Padres National Forest.

It is one of several bridges around the country known as places where people choose to end their lives in a final leap and where efforts are underway — sometimes against strong local opposition — to install fences, nets or other physical barriers to stop jumpers.

"There are certain bridges that have a certain magnetism, cache or magic about them, and they become suicide magnets," says Mel Blaustein, president of the Psychiatric Foundation of Northern California.

Among them:

* The Golden Gate Bridge in San Francisco, often called the No. 1 suicide site in the world. An average two people a month jump to their deaths, more than 1,300 since the bridge was completed in 1937. After decades of debate local authorities have agreed to install a steel net 20 feet below the 1.7 mile long span. But they haven't come up with $50 million needed to start the project.

* Aurora Avenue Bridge over the Lake Union Ship Canal in Seattle, where as many as 250 people have died since it was built in 1931. The Washington state Department of Transportation has awarded a contract to build an 8-foot barrier fence with vertical steel bars, department spokesman Greg Phillips said.

* Rio Grande Gorge Bridge outside Taos, N.M., where as many as 30 people in the past decade have taken the 860-foot plunge. State transportation officials are conducting a feasibility study for a barrier, spokeswoman Karyn Lujan said.

At least 49 people have leaped to their death from the Cold Spring bridge, five this year. The latest death was Thursday; a 59-year-old woman used two canes and a foot stool to get over the bridge.

Santa Barbara County Sheriff's Commander Dominick Palera backs a barrier at the Cold Spring bridge.

He says it will "put up a means of intervention and give people who are contemplating suicide the time to think about it."

The push for safety measures is not just about stopping jumpers.

In 2005, a female officer tried to hold on to a jumper hanging off the side and was herself lifted off the pavement, he said. Two more officers stopped both from going over the side, Palera said.

Little more than highway guard rails line the sides of the Cold Spring bridge, just 31 inches above the curb and 43 inches above the highway. California's Department of Transportation plans to build metal fences with $1.5 million in federal stimulus money.

"A suicide barrier will prevent the loss of life on this bridge," says department spokesman Jim Shivers. Not everyone agrees.

A group calling itself Friends of the Bridge filed suit in July to stop the barrier, which "threatens to deface the most beautiful long-span steel arch bridge in America," Marc McGinnis, a retired environment professor at the University of California-Santa Barbara and head of the group, said in an e-mail.

Rather than prevent suicides, he said, a barrier would "merely divert occasional suicides from the bridge to other places in the community."

Marc Chyllo, lawyer for the group, says more such disputes are inevitable as bridges built in the mid-20th century become eligible for the National Register of Historic Places and preservation collide with worries about suicide.

But Blaustein, medical director at Saint Francis Hospital near the Golden Gate Bridge, says physical barriers reduce suicides. He says suicide is often an impulsive decision and that denying access can stop the depressed, distraught or despondent.

In a study published in the October issue of the American Journal of Psychiatry, Blaustein and co-author Anne Fleming, psychiatry professor at UC-San Francisco, argue that barriers at bridges in four cities — Washington, D.C.; Augusta, Maine; Bern, Switzerland; and Bristol, England — reduced suicides without an increase at other sites.

"For me, it's a no-brainer," Blauslein said. "It's hard to believe that aesthetics should outweigh human lives."

At the Cold Spring Tavern, a rustic restaurant and bar in operation since 1880 where the menu features wild boar and antelope, general manager John Locke hates the suicides that sometimes shut down access to his business. But Locke says he and most customers he talks to don't want a fence.

"The locals don't want it... but they are resigned to it," he says.

Find this article at:

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Armendariz, Armando M., NMDOT

From: Campos, Ricardo R., NMDOT
Sent: Friday, October 09, 2009 9:41 AM
To: Hagman, Cynthia A., NMDOT
Cc: Armendariz, Armando M., NMDOT
Subject: FW: CI/ Rex Foutz/ WF 206155/ DOT (Intranet Quorum IMA00218208)
Attachments: Foutz_Rex_Incoming.doc; IQFormatFile.txt

Cindy,

Please refer to D5 for review and response. I have copied Armando due to his involvement with the project. Thanks.

Ricardo R. Campos
NMDOT
Assistant Deputy Secretary
505-827-5680

From: (mailto:nmigovima@state.nm.us)
Sent: Friday, October 09, 2009 9:31 AM
To: Campos, Ricardo R., NMDOT
Subject: CI/ Rex Foutz/ WF 206155/ DOT (Intranet Quorum IMA00218208)

Memorandum

TO: Mr. Ricardo Campos

FROM: Nicole Valdez, Constituent Service Representative, Office of the Governor

DATE: October 9, 2009

11/3/2009
RE: Mr. Rex Foutz  WF#206155

Please review the attached information regarding Mr. Rex Foutz, respond directly to the constituent, cc Governor Richardson, and forward the Governor's copy to me. (Please insert the Workflow/Casework ID number and CSR Name listed above in your response). Thank you in advance for your prompt attention to this matter.

Should you have any questions, please do not hesitate to contact me at 505-476-2246.

Nicole Valdez

Constituent Services Representative

11/3/2009
Office of the Governor
State Capitol Building - Suite 400
Santa Fe, NM 87501
(505) 476-2246
Fax: (505) 476-2226

11/3/2009
Date: 10/9/2009

Mr. Rex Foutz
4408 Driftwood, nw
Albuquerque, NM 87114
rlee1030@yahoo.com
505-898-1797

The Honorable Bill Richardson
Governor of New Mexico
Santa Fe, New Mexico 87501

Dear Governor Richardson,

I recently heard that you were considering putting some type of apparatus on the Taos bridge that would prevent people from jumping off of the bridge to kill themselves. Until such time the apparatus could be installed, I would like to suggest the State of New Mexico put up signs at each end of the bridge to possibly deter people from ending their lives in this manner.

For instance, a sign could be the size of a typical “No Parking” sign. The sign could read:

â€œNew Mexico Suicide Hotline 1-800-xxx-xxxxâ€, or:

â€œWe Care, New Mexico Suicide Hotline 1-800-xxx-xxxxâ€, or:

â€œSomebody loves you, New Mexico Suicide Hotline 1-800-xxx-xxxxâ€

The 1-800â€“xxx-xxxx calls could be routed to one or more of the suicide/crisis organizations in New Mexico. Also, on the hand rail there could be similar signs, maybe listing a number for AGORA or some other suicide/crisis organization.

Additionally, five miles away from the bridge you could have one of the signs, then one at four miles out, and so forth. That way someone driving might be encouraged to make the call.

These signs could be prepared and installed at little cost to the State of New Mexico. Thank you for taking the time to read this letter.

Sincerely,
Rex L. Foutz
4408 Driftwood NW
Albuquerque, NM 87114
505-898-1797
Armendariz, Armando M., NMDOT

From: Lopez, Larry [Larry.Lopez@ssa.gov]
Sent: Tuesday, October 06, 2009 7:58 AM
To: Armendariz, Armando M., NMDOT
Subject: taos gorge bridge

good morning,
i passed over the taos gorge bridge last weekend after a couple of years of not seeing it. my first and dominant thought was how depressing the bridge looks. the dull, peeling, graffiti ridden gray paint needs to be repainted. the cement potholes need repair, and the peeled, faded yellow striping needs restriping.
i believe that the bridge needs a makeover but not necessarily to the extreme as shown in your presentation on sept 29. i look forward to your reply.

sincerely,

larry d lopez

This inbound email has been scanned for malicious software and transmitted safely to you using Webroot Email Security.
I am against this project, any barrier is an offense to the freedom of healthy people. Voluntary donation boxes for search a rescue could be placed at both ends, a posted fine and prohibition against jumping or throwing from the bridge might deter some people. Any barrier will be circumvented by people jumping or worse. Driveway off in some less special and picturesque place. If this idea passes, an alternative is the barrier could be suspended from cables running between reinforced supports. But what of wind loads? Please fix Mill citrus Roberts Road! Note bicyclists avoiding the shoulders on Highway 64. Thanks for the rim road paving.

Nice graphics!

Name: RICHARD TIPTON
Address: P.O. BOX 1407
City/State/Zip Code: TASP, NM, 87571-1407
E-mail:
Date: SEPT 30, 2009
Mark Gibbons, visiting from Denver, takes a photo from the Rio Grande Gorge Bridge near Taos on Wednesday. Officials are discussing possible barriers to block potential suicides from jumping from the bridge.

Expert says adding barriers to bridge would prevent suicides

By Phil Parker
Journal Staff Writer

Taos Fire Chief Jim Fambro called the Rio Grande Gorge Bridge “godforsaken” and recalled attempting to talk down a woman named Alicia Lauritzen in 1996. He was 10 feet away from her, he said, when she let go. “I watched her eye-to-eye until she hit the ground,” Fambro said.

Fambro is passionate about putting an end to jumper suicides at the bridge in Taos, one of the nation’s highest. He and about 30 other people packed into a room at the Taos Convention Center on Wednesday to discuss physical alterations to the bridge that would theoretically drop the number of suicides there from about three each year to exactly zero.

Laura Rowland, executive director of the New Mexico Suicide Prevention Coalition, makes a point during a discussion Wednesday about how to prevent people from jumping off the Rio Grande Gorge Bridge.

Don’t do it

The National Suicide Prevention Lifeline is a free suicide prevention and counseling hot line that takes calls 24/7 at 1-800-273-TALK.

Taos Convention Center on Wednesday to discuss physical alterations to the bridge that would theoretically drop the number of suicides there from about three each year to exactly zero.

“The most important part

See SUICIDE on PAGE 8
Suicide Barriers Weighed for Gorge Bridge

from PAGE 1

Is that there is a barrier," said Laura Rowland of the New Mexico Suicide Prevention Coalition. "Having mesh there doesn't decrease the rate of suicides --- it stops it."

The barrier she spoke of is both figurative and literal. Preventing suicides at bridges, it turns out, requires a combination of engineering and psychology.

Suicide, Rowland said, "is a moment of impulse, an impulsive act where the person is having tunnel vision. They don't have any other plan, so putting a barrier there stops it and you won't have jumps."

As one example, the 50th Street Viaduct in Toronto was second in the world only to the Golden Gate Bridge in suicide jumps, with a total of 480 by 2003. That year a barrier called "The Luminous Veil" was put up and there hasn't been a single suicide since then.

Advocates argue barriers save lives as well. Just because a suicidal person can't jump off a bridge doesn't mean he'll go and slit his wrists. A 2007 study in Switzerland found that 62 percent of potential jumpers do not go to an alternative jumping spot if they encounter a barrier, and don't turn to any other means for suicide. Another study from 1978 by Richard Selden, Ph.D., found that of 515 people who were restrained from leaping off the Golden Gate Bridge over a period of 40 years, 94 percent did not kill themselves later.

On the physical side of the discussion were four proposed barriers to stop jumpers. Two of the alternatives are fences, one which extends the rail about six feet higher to make it 10 feet high. The other fence is drastically taller, in the sloping manner of the Golden Gate Bridge. Another proposal was described as being like a "covered wagon" and looks essentially like a fence that encloses the entire bridge.

One of the most popular methods discussed at the meeting was the same suicide prevention means adopted by the Golden Gate Bridge board of directors last year (though it still hasn't gone up): a mesh net below the bridge that extends out about 20 feet and would catch any jumpers.

But Fambro wondered whether Taos youths would start jumping into the net for fun, and said he and other firefighters don't want to keep fishing people out. Though the notion of people jumping into the net on purpose has never been studied, Rowland has advocated this alternative. "I've told her 'no,' 'hell, no,' and 'absolutely never' about 50 times," Fambro said, "and she's not backing down."

Rowland said a net would act as the psychological barrier to deter a suicidal jumper: "We need something that you'll visually see that says, 'No,'" she said.

A public information meeting on the bridge study will be held Tuesday, Sept. 29, at 6 p.m. at Taos High School, 134 Cervantes Road.

Department of Transportation designer Armando Armendariz led Wednesday's meeting and said no costs have been discussed yet, though the DOT has approved about $2 million for the project.

Fambro said it can't happen soon enough. He's had to retrieve two suicides from the gorge on the same day, he said, and people continue to jump to their deaths.

"It weighs on my mind really heavy," he said.
Another article - FYI

Sunday, September 20, 2009

Barrier the Best Idea

Should a barrier, to prevent suicides, be installed on the Rio Grande Gorge Bridge? That's the question under discussion by Taos area emergency response people and mental health advocates, including the New Mexico Suicide Prevention Coalition.

The answer would seem to be yes. The Gorge Bridge — an iconic single-arch span across the spectacular rift that forms the upper Rio Grande canyon west of Taos — is a magnet for the self-destructive, much like San Francisco's Golden Gate Bridge. In fact, the Gorge Bridge is the fourth most popular spot in the nation for suicides. Each year, roughly three people plunge to their deaths there.

At the beginning of the year, the state Department of Health suggested that the coalition look into possible deterrents. Taos Fire Chief Jim Pambro is happy about that — he's been involved personally in many a body recovery effort at the site, and he says these haunt him. Taos-area search and rescue people, along with river-rafting companies whose workers often are the ones who actually locate jumpers' remains, often inadvertently, are happy with the idea, too. Laura Rowland, of the Suicide Prevention Coalition, thinks the suicide rate at the bridge can be cut to zero, so she's on board.

Studies elsewhere, including in San Francisco, certainly indicate that barriers that prevent jumpers from simply vaulting over the side of a bridge or high building are effective not just at preventing death at the spot, but of saving lives in the long term. Well over 90 percent of those restrained from jumping off the Golden Gate, for example, did not go on to kill themselves later. That underscores what Rowland and others argue: that if it's made difficult or virtually impossible to jump off the bridge at the gorge, many lives would be saved.

So the real question is, how best to prevent jumpers? Pambro wants to see a fence — a mesh barrier — spanning the bridge. Three such designs have been proposed: one 10 feet high and one much taller, plus another that would cover the bridge like a covered wagon top.

Rowland is enamored of a fourth proposal: a safety net that would catch jumpers before they fell lethal distances. The net was the solution chosen for suicide prevention at the Golden Gate — in part because it was regarded as less obtrusive than a steel mesh or other type of barrier along the top. And that's certainly an argument in favor of a net for the Gorge Bridge, too — the gorge is spectacular, as the legions of visitors clutching cameras attest.

But Pambro, who'd be in charge of plucking hapless souls from the net and bringing them back to solid ground, is understandably opposed to the idea. What, he wonders, if jumping into the net becomes a daredevil sport among Taos youth? Good question. What, too, if the suicidally inclined simply wrestle their way out of the net to plummet the rest of the 400 feet into the gorge?

Anybody worried about the aesthetics of a topside barrier might want to visit the present-day bridge before advancing with that argument. First of all, the Gorge Bridge, like many others, is pretty only when seen from below — or from a lower angle. Pedestrians who walk out along the span to photograph the spectacular gorge don't really see the beauty of the elegant arch that supports them.

Moreover, the bridge is covered in graffiti, the metal railings are rusting and as if that weren't enough, at least one member of Taos County Commission appears to endorse a flea market set up on the Taos end of the span. The Golden Gate it isn't.
There is clearly a need to address the suicide issue: Taos is an out-of-the-way place in an out-of-the-way state (whatever New Mexico chauvinists would like to think) and if the Gorge Bridge ranks fourth in the nation for jumper suicides, we've clearly got a bigger problem than we might otherwise imagine. The net below the Golden Gate bridge hasn't been installed yet, so there's no data on whether it works or not. Barriers have proven effective. On that basis alone, a barrier — one that still leaves visitors with access to view of the gorge's incomparable scenery from this wonderful, high perch — is the better idea.

Armando M. Armendariz P.E.
NMDOT Infrastructure Design - North Region
Office 505-827-5511
Cell 505-490-2740
armando.armendariz@state.nm.us

-----Original Message-----
From: Armendariz, Armando M., NMDOT
Sent: Tuesday, September 22, 2009 11:19 AM
To: 'Bean, Danton'; Camp, Jimmy D., NMDOT; Trujillo, Raymond M., NMDOT; McElroy, John E., NMDOT; Gallegos, Phillip A., NMDOT; Byars, Rochelle, NMDOT; Vaughn, Colleen E., NMDOT; Roxlau, Blake R., NMDOT; Wallace, Laurel T., NMDOT
Subject: Rio Grande Gorge Bridge

To All:

FYI - recent article.

Armando M. Armendariz P.E.
NMDOT Infrastructure Design - North Region
Office 505-827-5511
Cell 505-490-2740
armando.armendariz@state.nm.us <mailto:armando.armendariz@state.nm.us>
Preventing suicide by design

State plans barriers to deter jumpers at Rio Grande Gorge Bridge

By Tom Sharpe | The New Mexican

9/28/2009

The Rio Grande Gorge Bridge, the graceful steel span 650 feet above the Rio Grande near Taos that has attracted both tourists and suicides, could be in for some changes.

At the request of Gov. Bill Richardson and a state Senate memorial earlier this year, the state Department of Transportation proposes to add suicide barriers to the 64-year-old structure.

The department has scheduled its first meeting to hear what the public thinks of the proposals today in Taos.

The latest designs, released this week, show four possible designs aimed at discouraging jumpers.

Option 1: A 6-foot vertical railing added to the existing 4-foot railing to create a 10-foot fence on either side of the bridge.

Option 2: A 20-foot horizontal net installed on either side 12 feet below the bridge deck.

Option 3: A vertical net installed on either side inside the existing railing that
would range from 8 to 48 feet above the bridge deck, mirroring the arches in the bridge's underside.

Option 4: A "covered wagon" chain-link cage that would enclose the bridge, with a clearance of 16 feet, 6 inches above the bridge deck to accommodate larger vehicles.

Department of Transportation spokeswoman Karyn Lujan said there are no costs estimates for the four proposals. "They decided to just go with the public-input phase first before they put a cost to these things," she said.

Suicide barriers are not infallible. People intent on killing themselves probably can get around the barriers. But psychologists say suicide is impulsive, and restraining a person even for a moment often will keep them from going through with the act.

The addition of a suicide barrier called the "Luminous Veil" on another notorious suicide magnet, the Prince Edward Viaduct in Toronto, has succeeded in stopping jumpers after it was completed in 2003. Before that, more than 450 people had jumped from it.

The Golden Gate Bridge spanning San Francisco Bay is the United States' most popular place to commit suicide, with more than 1,200 people jumping to their deaths there between 1937 and 2005. Last year, the Golden Gate Bridge Board of Directors voted to install plastic-covered, stainless steel netting on either side of the bridge. But the project has yet to be funded.

Suicides were not even a consideration when the Rio Grande Gorge Bridge opened Sept. 10, 1965. It was to provide a faster route east-west across Northern New Mexico and was expected to become a tourist attraction.

But soon, the span began to draw despondent people looking to end their lives. Some have driven from as far away as Minnesota or Washington state to jump from the bridge.

In the last decade, an average of three people a year have leapt to their deaths from the bridge. Seven people died there in 2005 alone — an all-time record. So far, 2009 has been without suicides.
The last occurred Dec. 5, when a 44-year-old Albuquerque man, described as depressed, unemployed and living off his girlfriend, parked in the middle of the bridge, put his keys on the dashboard and left his wallet, cell phone and a goodbye note on the seat, perched on the bridge railing for about five seconds, then jumped.

Contact Tom Sharpe at 986-3080 or tsharpe@sfnewmexican.com.

If you go

What: Public meeting on proposals for preventing suicides at the Rio Grande Gorge Bridge near Taos

Who: New Mexico Department of Transportation

When: 6 p.m. today

Where: Band Room, Taos High School, 134 Cervantes Road, west of Paseo del Pueblo Sur near Albertsons
Preventing suicide by design

Full story: The Santa Fe New Mexican

The Rio Grande Gorge Bridge, the graceful steel span 650 feet above the Rio Grande near Taos that has attracted both tourists and suicides, could be in for some changes.

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hastllin
Rochester, NV

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Judge it!
What a comment... If you go... to jump off the bridge?

I would oppose tall railings that obstruct the great view for the 99.9% of us that are NOT suicidal. Perhaps a net maybe 20' down that would be hard to jump over? Perhaps some pictures posted as to what a body looks like after falling 600 feet? Or more pleasantly, perhaps a sign with a suicide hotline telephone number to call?

great suggestions Mr Dan B........ tho i agree with the article....if this location happens to deter...there WILL be another site to carry out this deed.....

The most popular design so far would be stainless steel netting underneath the structure, which would both prevent suicides, and keep from obstructing the view. It would also
prevent homicides, kids who crawl under the bridge to tag, and - hopefully - base jumping, all of which have lead to fatalities. A barrier would not only save lives, but it would save taxpayer money due to search and rescue, and stop fire and rescue workers from having to see all of the horrible things they have seen over the years.

Live without a net
Denver, CO

There's no need to mar such a beautiful bridge with a cage over it. I think adding a net may actually cause some thrill seekers who are not suicidal to jump. I think the suicide hotline signs along with a phone that can dial the hotline or 911 is enough. People can find all sorts of ways to kill themselves, and prevention can be done without putting a net or a rollycage around a beautiful piece of engineering.

Ashtar the Beneficent
Algodones, NM

Look at these pictures for the Luminous Veil on the Prince Edward Viaduct in Toronto... slender steel rods spaced 5 inches apart block jumpers, preserve the view, and aren't objectionably noticeable from a distance, preserving the aesthetics of the bridge. <http://www.architecture.uwaterloo.ca/faculty...>
Why are we ruining the character of this great bridge to protect those intent on suicide? Darwin would be proud of this bridge! Let em jump!! The more, the merrier!!

Roc krov er
Join: Mar 31, 2009
Comments: 10
Los Alamos, NM

Why should our hard earned money be used to stop suicide and ultimately deface the bridge? If you want to kill yourself you’re gonna’ do it. Yes it (suicide) is the most selfish way out there is, and leaves nothing but ruin in its wake. However, aren’t there more important issues to deal with within our state than focusing on .0001% of our population?

Chaya
Join: Nov 18, 2008
Comments: 93
Santa Fe, NM

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We need to stop people from jumping from the bridge because it's horribly traumatic for the people who have to clean it up and it's very expensive as well. I don't agree that the rest of us must look at the view through netting or poles, though. Nets laid down below the bridge to catch the jumpers would make me happy. I think that's a great idea—and a lot cheaper than making our public servants clean up the messes.

gee whiz
Alamogordo, NM

Let them jump and leave them down there, the crows will love it

leave
Mentmore, NM

them for the buzzards! Poor birds need some fresh food!

Ronster
Chula Vista, CA

Research has shown that people do NOT simply find another way to kill themselves once a suicide magnet is made unavailable. Survivors nearly always say the decision to jump was an impulsive one, and that they wouldn't have attempted suicide by another method. Most jumpers are under the influence of alcohol, which as we all know impairs judgement and lowers inhibitions. I don't want the RGG Bridge, or the Golden Gate Bridge, defaced with some ugly barrier, but the "they'll just go somewhere else" argument isn't supported by facts and it doesn't contribute to the discussion. If the topic interests you, consider renting "The Bridge," a documentary about suicide on the GGB.
**SFeltizanX** wrote:

Why are we running the character of this great bridge to protect those intent on suicide? Darwin would be proud of this bridge! Let em jump! The more, the merrier!

Perhaps they could install some kind of automatic garbage disposal near the river so suicidal people could practice their marksmanship?

Or perhaps they could go to the new high bridge in France? More scenic too. Promote tourism with non-stop jumps?

---

**Chaya** wrote:

We need to stop people from jumping from the bridge because it's horribly traumatic for the people who have to clean it up and it's very expensive as well. I don't agree that the rest of us must look at the view through netting or poles though. Nets laid down below the bridge to catch the jumpers would make me happy. I think that's a great idea--and a lot cheaper than making our public servants clean up the messes.

Put a net under the bridge? Good Lord. Next thing you know everyone will be jumping off the bridge to see if the net works. Imagine the traffic jams.

---

**Zork** on 756

Reply »

Report Abuse

Judge it!

#15

**Zork** on 756

Reply »

Report Abuse

Judge it!

#16

However, jumping off buildings downtown is not very nice. You become a hazard to pedestrians. I think people that commit suicide this way should be shot.

---

**Santa Fean**

Zorkon 756 wrote:

Perhaps they could install some kind of automatic garbage disposal near the river so suicidal people could practice their marksmanship?

Or perhaps they could go to the new high bridge in France? More scenic too. Promote tourism with non-stop jumps?

If you have nothing beneficial to say but really just must see your self talking, say something idiotic.

---

**Dave**

Reply »
Perhaps a video camera monitored by the local police and a bullhorn would break their train of thought.

Add a callphone any would be jumpers could be directed to by the monitor of the camera.

Santa Fe wrote:  
*If you have nothing beneficial to say but really just must see your self talking, say something kinetic.*

Once again I think sarcasm is lost in a text comment.

I believe Zorkorn was trying to illustrate the insanity of some of the other posters, who wouldn't understand compassion or empathy until it's someone in their family that commits suicide or is depressed enough to become suicidal.

The state of mental health care in Northern New Mexico is deplorable. It's still looked at like some sort of sin or demonic possession. Maybe if there were more ways to get help other than churches and suicide hotlines that offer nothing substantive in terms of treatment solutions. Why don't you spend a night in jail because your depressed, that oughta fix you right up!
I believe Zornorn was trying to illustrate the insanity of some of the other posters, who wouldn't understand compassion or empathy until it's someone in their family that commits suicide or is depressed enough to become suicidal.

The state of mental health care in Northern New Mexico is deplorable. It's still looked at like some sort of sin or demonic possession. Maybe if there were more ways to get help other than churches and suicide hotlines that offer nothing substantive in terms of treatment solutions. Why don't you spend a night in jail because your depressed, that oughta fix you right up! You!

Thank you!

As I was completing my ablutions this morning the thought occurred to me that perhaps it would be beneficial if the democrats in congress would ramrod a bill through for the president's signature that would allow republicans to rent theaters, arenas, etc., in which they could charge admission to view their suicide. The bill would exempt them from having to pay taxes on these windfall incomes. This ought to appeal to the more prudent republicans, that is, conservatives.
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Jimmy Green
"Jimmy Tha Most"

Join: Sep 22, 2008
Comments: 331
Sangre De Cristo

Well, at least we won't have to worry about the bridge being a tourist attraction anymore. Heck, I feel that if you're suicidal, what better place to jump than the rio grande bridge. But, our overprotective do gooder parents are here to protect us from ourselves again, by spending big bucks to solve a non-problem. So, all you suicidal types planning on jumping from the bridge remember, bring your fence cutters! I'm sure those "three people per year" can find another
way to do themselves in. for which case, I propose we wrap everything in bubble wrap.

Ronster wrote:
Research has shown that people do NOT simply find another way to kill themselves once a suicide magnet is made unavailable. Survivors nearly always say the decision to jump was an impulsive one, and that they wouldn’t have attempted suicide by another method. Most jumpers are under the influence of alcohol, which as we all know impairs judgement and lowers inhibitions. I don’t want the RGG Bridge, or the Golden Gate Bridge, defaced with some ugly barrier, but the “they’ll just go somewhere else” argument isn’t supported by facts and it doesn’t contribute to the discussion. If the topic interests you, consider renting “The Bridge,” a documentary about suicide on the GG Bridge. “Research” funded and supported by manufactures of suicide prevention devices isn’t “research” it’s propaganda.

Cynic wrote:
Well at least we won’t have to worry about the bridge being a tourist attraction anymore. Heck, I feel that if you’re suicidal, what better place to jump than the Rio Grande Bridge. But our overprotective do gooder parents are here to protect us from ourselves again, by spending big bucks to solve a non-problem. So, all you suicidal types planning on jump from the bridge remember, bring your fence cutters! I’m sure those “three people per year” can find another way to do themselves in. for which case, I propose we wrap everything in bubble wrap. This is an example of a post that is NOT sarcastic. You sir, are a sorry excuse for a human being, and I sincerely hope that outside of the internet, you are not as cold and inhumane as this post would indicate.
Not too long ago in international news, in China, a guy had been perched on the edge and threatening to jump off of a bridge for several hours, attracting huge attention, police, etc. when another man rushed forward and gave the guy a push. The man later said that this guy was just wasting everybody's time and if he really wanted to kill himself, he should just do it.

I guess that's how it is in China.

Jimmy Green wrote:

Research funded and supported by manufactures of suicide prevention devices isn't “research”. It's propaganda.

Yes, we must see through the veil of government funded propaganda which encourages us not to kill ourselves.

WHAT!? Are you HIGH!??
The last time I spent more than 20 minutes in Taos, it made want to commit suicide too.

Would you like us to alert you when someone adds a comment?

Type in your comments to post to the forum

Name
(appears on your post)

Comments

Type the numbers you see in the image on the right:

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topix

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Weather

54°F
Hi: 78°F
Lo: 43°F
Feels like: 56°F
Visibility: 10 mi

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Click on an option to vote

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5 years 14,047 23%
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Read all comments | Start a discussion →
Your browser does not support frames.
Dear Karl Moffatt:

Thank you for your comment. I will forward your e-mail to the New Mexico Department of Transportation project team.

Eric Johnson, AICP CHMM
Marron and Associates
7511 4th Street NW
Albuquerque, NM 87107
Phone: (505) 898-8848
Fax: (505) 897-7847

On 9/15/09 11:05 AM, "Karl Moffatt" <karlfmoffatt@gmail.com> wrote:

Dear Sirs,
I'm writing in regards to the proposed "safety improvements" to the Rio Grande Gorge Bridge on US 64 between Tres Piedras and Taos.
As a longtime resident and journalist here in northern New Mexico I am familiar with the suicide situation at the bridge and ask that you consider my comments in the decision making process.
I am opposed to making any "safety improvements" to the bridge, such as fencing, simply to restrict a potential suicide victim's ability to jump.
If that's what they want to do, then so be it, let them die in peace in this magnificent place.
It's a small price to pay for the natural beauty, unhindered views and remarkable feeling people get when venturing out onto this wide open bridge.
And plenty of people do just that, without taking a leap.
I don't support depriving the public of access to one of New Mexico's finest scenic views just to spare the authorities the occasional hassle of dealing with a suicide victim. It's just the price we pay for having this special bridge in our state. Don't ruin it for everyone just to appease a few.
You also need to consider the potential negative economic impact to our important, tourist based, economy such a "safety improvement" project might have.
And you've got to ask yourself, during these hard economic times, does expending our much needed tax dollars on such a project really make sense? Will it even work?
I mean there's much more important things that we could be spending our transportation dollars on, like extending the Roadrunner rail line to Taos, Raton and Las Cruces, for instance.
Thank you for your time and consideration.

Sincerely
Karl F. Moffatt
PO Box 9141,  
Santa Fe. N.M. 87504

11/3/2009

This inbound email has been scanned by the MessageLabs Email Security System.
November 6, 2009

Rex L. Foutz  
4408 Driftwood NW  
Albuquerque, NM 87114  
Rlee1030@yahoo.com  

RE: Rex Foutz  

Dear Mr. Foutz,  

I am in receipt of your letter dated October 9, 2009 to Governor Bill Richardson suggesting adding signing to US 64 at the Rio Grande Gorge Bridge to deter suicides. The New Mexico Department of Transportation (NMDOT) District 5 will look into this and determine where and if this type of signing can be installed.

One issue that we must also take into consideration is that there is not any phone or cell phone service at the bridge so providing signing without also providing phone service may be another disappointment placed on an individual who may be contemplating suicide. Thank you for your interest in this study and for your suggestion.

Sincerely,

Ricardo R. Campos  
Assistant Deputy Secretary  

xc: Office of the Governor, Gov ID#206155  
   John McElroy, District 5 Engineer  
   Phil A. Gallegos, Assistant District 5 Engineer-Engineering  
   Armando Armendariz, Professional Development Engineer  

Bill Richardson  
Governor  

Gary L. J. Giron  
Cabinet Secretary Designate  

Commission  

Johnny Cope  
Chairman  
District 2  

Jim Franken  
Vice Chairman  
District 4  

Doug Peterson  
Commissioner  
District 3  

Roman Maes III  
Commissioner  
District 5  

Jackson Gibson  
Commissioner  
District 6  

John Hummer  
Commissioner  
District 1
Armendariz, Armando M., NMDOT

From: Armendariz, Armando M., NMDOT
Sent: Tuesday, October 27, 2009 8:19 AM
To: Campos, Ricardo R., NMDOT; Gonzales, Estevan M, NMDOT
Cc: Valerio, Max E., NMDOT; Haas, Tamara P, NMDOT; Rodriguez, Stephen M., NMDOT; Opperman, Daniel, NMDOT; Parry, Hugh W., NMDOT; McElroy, John E., NMDOT
Subject: Vending - Rio Grande Gorge Bridge
Attachments: 18 NMAC 20 encroachment rule.doc

Ricardo and Estevan,

Below is a summary regarding the vending situation at the Rio Grande Gorge Bridge as requested.

Attached is what was provided from the NMDOT Office of General Counsel regarding the matter. My request to that office was to simply determine the code and or law supportive of the "no vending in highway right of way". As you can see the area highlighted pertains to vending within the NMDOT Right of Way (ROW).

As it was explained to me New Mexico Administrative Code (NMAC) has the effect of law. The entity that establishes and modifies NMAC for the NMDOT is the Transportation Commission.

There are numerous engineering and safety reasons to prohibit this type of activity that can be developed into a correspondence at a later date if necessary.

One particular point of interest is that the NMDOT does not own the land associated with the Rio Grande Gorge Bridge. The ROW is an easement from two federal entities, BIA and BLM. Taos Pueblo consented to the granting of the highway easement by the BIA. The standard language in these easements is that the easement shall be for highway purposes. The entities involved would need to approve the change of use or additional use.

If there are any questions regarding this correspondence please call or e-mail.

Armando M. Armendariz P.E.
NMDOT - Infrastructure Design
(505) 827-5511
(505) 490-2740
armando.armendariz@state.nm.us

11/3/2009
This rule was filed as 18 NMAC 20.5.

TITLE 18  TRANSPORTATION AND HIGHWAYS
CHAPTER 20  TRAFFIC SAFETY
PART 5  REMOVAL OF ENCROACHMENTS, OBSTRUCTIONS, ABANDONED
MOTOR  VEHICLES AND FOR RESTRICTION OF VENDING

18.20.5.1  ISSUING AGENCY: New Mexico State Highway and Transportation Department, Post Office Box 1149, Santa Fe, New Mexico 87504-1149 (505) 827-5526. [12/31/98; Recompiled 11/16/01]

18.20.5.2  SCOPE: All state agencies and general public. [12/31/98; Recompiled 11/16/01]

18.20.5.3  STATUTORY AUTHORITY: This rule is adopted pursuant to NMSA 1978 Sections 66-1-1, 67-3-1, 67-7-1, 67-8-1, 67-12-1, 67-13-1. [12/31/98; Recompiled 11/16/01]

18.20.5.4  DURATION: Permanent. [12/31/98; Recompiled 11/16/01]

18.20.5.5  EFFECTIVE DATE: December 31, 1998, unless a later date is cited at the end of a section or paragraph. [12/31/98; Recompiled 11/16/01]

[Compiler’s note: The words or paragraph, above, are no longer applicable. Later dates are now cited only at the end of sections, in the history notes appearing in brackets.]

18.20.5.6  OBJECTIVE:

A. The main purpose of a highway system is to provide a safe and efficient means of movement for people and goods. In order to provide for such safe and efficient operation, it is necessary that certain regulations be established to control the use of the highway right-of-way consistent with the needs and rights of both the traveling public and property owners adjacent to the highway right-of-way.

B. The highway right-of-way is to be preserved for highway purposes except that certain temporary or permanent occupancies. Use of highway right-of-way for non-highway purposes may be permitted on the basis that such use and occupancy is in the public interest and does not result in impairment of the highway or operational interference with the health, safety and public welfare of road users. All other occupancies and uses of state highways for non-highway purposes are prohibited.

C. The Department recognizes that any rule which is adopted may create some unforeseen burdens, hardships or problems and for that reason reserves the right to vary the provisions of the following rule, in harmony, however, with the general purposes and intent of the rule where, in the exercise of sound and reasonable judgment, literal application of such rule would defeat the objectives hereinafter set forth. [12/31/98; Recompiled 11/16/01]

18.20.5.7  DEFINITIONS:

A. "Department" means New Mexico State Highway and Transportation Department.

B. "Encroachment" means an intrusion into, under, upon, or over highway right of way by a permanent structure or fixture. This term shall include, but not be limited to, fences, billboards, permanent signs, buildings, awnings, marquees, storage tanks, pipes, ditches, utilities, concession booths, roadside stands, mailboxes, Christmas displays and banners.

C. "Hazardous Obstruction" means any structure or object (other than a motor vehicle, whether or not an encroachment, situated into, under upon and over highway right-of-way which jeopardized public safety by either creating an unsafe condition or significantly hindering the efficient movement of traffic.

D. "Highway Right-of-way" means all roads, patrol yards, and rest areas owned, controlled, or maintained by the Department. The term "road" means the entire width of the right of way
and shall include but not be limited to: travel lanes, roadside, shoulder, median, ditches, culverts, ramps, turnouts and construction and maintenance easements.


F. "Non-Hazardous Obstructions" means an object unlawfully remaining within the boundaries of highway right-of-way which is neither an encroachment, a motor vehicle, a hazardous object, a temporary sign, a political poster or refuse.

G. "Overhanging Sign" means any sign intruding upon highway right-of-way which is affixed to a building or structure lying outside highway right-of-way.

H. "Refuse" means any article, object or substance which is commonly discarded as waste, or which, if discarded on the ground, may create or contribute to an unsanitary, offensive or unsightly condition. Refuse includes, but is not limited to, the following items or classes of items; waste food; waste paper and paper products; cans; bottles or other containers; junked household furnishings and equipment; junked parts or bodies of automobiles and other metallic junk or scrap; portions or carcasses of dead animals; and collections of ashes, dirt, yard trimmings or other rubbish.

I. "Rural Area" means areas outside urban boundaries of all cities, towns, or municipalities of over 5000 population. These boundary lines may or may not coincide with corporate limits but are established by and are on file with the Planning Division of the Department.

J. "Sign" means any readily moveable object (except a motor vehicle), or permanent structure which is placed upon the highway right-of-way and which has as its purpose or effect the conveyance of information to travelers on the highway or property used in conjunction with such purpose.

K. "Traffic Hazard Motor Vehicle" means a motor vehicle left unattended either wholly or partly within a travel lane of the highway right-of-way, or a motor vehicle left unattended within thirty-five (35) feet of the nearest travel lane on all interstate highways (urban and rural) and on all rural primary and rural secondary highways (outside city limits).

L. "Travel Lane" means that portion of the highway right-of-way, which is intended, for the free passage of motor vehicles.

M. "Vending" means the selling, dealing, trafficking, hawking or peddling of goods or services, including, but not limited to, the operation of concession booths and roadside stands.

N. "Wrecked Vehicle" means any vehicle located within the highway right-of-way which shows visible signs of damage from collision, vandalism or other causes, and appears incapable of self-propulsion.

[12/31/98; Recompiled 11/16/01]

18.20.5.8 PERMITTED ENCROACHMENTS: All encroachment under this Section are subject to review by the Department:

A. Overhanging Signs. In urban established business districts where the front of the building is the highway right-of-way line.

   (1) Sign overhang must be a minimum of one foot behind the back of the curb.
   (2) Sign must have a minimum vertical clearance of twelve (12) feet from the top of the curb.
   (3) Sign must be wholly supported from the building or wholly supported by a suitable structure positioned entirely outside of the highway right-of-way.
   (4) The minimum vertical clearance of twelve (12) feet will be adhered to unless there is a city ordinance in which the encroachment exists which would require more vertical clearance in which case the city ordinance will prevail.

B. In commercial areas where the Department utilizes existing city right-of-way and there is no additional right-of-way acquired.

   (1) Sign must be wholly supported from outside the highway right-of-way being utilized by the Department.
   (2) No portion of the sign and its supporting structure may be lower than twelve (12) feet from the top of the curb or theoretical curb line elevation.
   (3) No portion of the sign may intrude into the highway right-of-way closer than one (1) foot behind the back of the curb or the theoretical curb line.
(4) The minimum vertical clearance of twelve (12) feet will be adhered to unless there is a city ordinance in which city the encroachment exists which would require more vertical clearance in which case the city ordinance will prevail.

C. **Buildings.** A building may be allowed to encroach upon highway right-of-way provided the following conditions coexist:

1. The building was in existence prior to the commencement or construction of the highway;
2. The encroachment will not interfere with the safe and free flow of traffic as determined by the Secretary or his designee; and
3. The owner enters into an agreement with the Department whereby the building exterior will not be remodeled or rebuilt on the right-of-way without express permission of the Secretary and, if necessary, the Federal Highway Administration.
4. Where additional highway right-of-way is being acquired, no building will be allowed to encroach on the highway right-of-way.

D. **Awnings and Marquees.**

1. Awnings in urban business districts or closely spaced buildings may be allowed to encroach provided the entire awning is supported from the building and will not lower than eight (8) feet from the sidewalk, nor closer than six (6) feet from the back of the curb. Permanently constructed covers or canopies over the sidewalk shall conform with the same requirements as awnings. The only advertising to be allowed on awnings or canopies will be the name of the business.
2. The marquees in urban business districts may be allowed to encroach provided they are supported wholly from outside the highway right-of-way, area minimum height of twelve (12) feet from the top of the curb, and encroach no closer than four (4) feet from the back of the curb.

E. **Irrigation Ditches.**

1. On primary and secondary highways where it is impractical to construct irrigation ditches outside the highway right-of-way and wherever deemed necessary by the Secretary of the Department, or his designee, those ditches which are necessary may be constructed by the Department inside the right-of-way. Maintenance of such ditches shall remain the responsibility of those parties deriving benefits therefrom.
2. There shall be no irrigation ditches constructed, which are parallel to the highway inside the access control line. Where it is impractical to construct irrigation ditches outside the highway right-of-way and wherever deemed necessary by the Secretary of the Department, or his designee, those ditches that are necessary may be constructed by the Department inside the highway right-of-way but outside the access control line. This applies only to situations where the highway right-of-way line and access control line is not the same line. Where they are the same line, no ditches shall be permitted inside the highway right-of-way.
3. A permit must be obtained from the Department and, if necessary, the approval of the Federal Highway Administration, before locating irrigation ditches on highway right-of-way.

F. **Utilities.** Utilities on highway right-of-way which are outside construction zones or primary and secondary systems will not be considered as encroachments. The crossing of interstate highways by utilities will be made in such a manner that routine maintenance of the utility can be performed from outside the controlled access line. A permit must be obtained from the Department and, if necessary, the approval of the Federal Highway Administration, before the installation of utilities on highway right-of-way.

G. **Special Encroachments.**

1. Special encroachments such as Christmas decorations or banners advertising special events, erected by governmental authorities, may be allowed to encroach for a limited time on primary or secondary right-of-way provided they do not interfere in any way with traffic control devices or traffic signs. Banners so low or Christmas lights of such a color that would make the traffic control devices not immediately and easily noticeable will not be allowed.
2. Signs informing the public that a particular area, within the median or adjacent to the roadway, is planted, landscaped, or maintained by an organization or individual, may be placed within that particular area, on all state highway systems except the interstate. These signs must be located a minimum of two (2) feet from the back of the curb or the edge of the shoulder, must be a maximum of thirty-three (33) inches high from the top of the curb or existing grade, must have a sign surface no larger than eighteen (18) inches by twenty-four (24) inches, and must conform to any other standards approved by the State
Highway Commission. The orientation of the signs must be parallel to the centerline of the roadway. The only information permitted on the signs is the name of the organization or individuals responsible for the planting, landscaping, or maintenance of the area in which they are located, together with a statement that that area is so planted, landscaped, or maintained. Each such sign erected must be approved by the Secretary of the Department or his designee.
[12/31/98; Recompiled 11/16/01]

18.20.5.9 PROHIBITED ENCROACHMENTS:
A. There shall be no encroachment allowed which may interfere with traffic control devices or traffic signs. This includes not only protruding signs but neon lights of such a color that they would make the traffic control device not immediately and easily noticeable.
B. No encroachments shall be permitted to remain on highway right-of-way, which poses a danger to the health, safety, or welfare of the motoring public, or which interfere with the operations of the Department.
C. No encroachments shall be permitted to remain on highway right-of-way, which are not in substantial compliance with the requirements of Section 8 [now 18.20.5.8 NMAC].
D. Vending: See Section 10 [now 18.20.5.10 NMAC below].
[12/31/98; Recompiled 11/16/01]

18.20.5.10 VENDING:
A. No vending from or on highway right-of-way shall be permitted.
B. There shall be no vending-type business so close to the highway right-of-way that automobiles or persons would be serviced while on the highway right-of-way.
C. Concession booths or roadside stands, whether or not in operation, shall not be permitted to remain on highway right-of-way. These structures shall be treated as encroachments, hazardous obstructions or non-hazardous obstructions, as the circumstances warrant.
D. Excepted from these prohibitions are any vending-type businesses established with prior Department approval on highway right-of-way by an federal, state or public agency, organization or entity for the purpose of providing a service to the public.
E. A representative of the Department shall advise the owner, operator or other person in charge of the vending operation that the vending is not permitted in the highway right-of-way and must cease immediately. If the vending does not cease immediately, the Department representative may file a complaint of criminal trespass (NMSA 1978, Section 30-14-1) with the law enforcement authority having jurisdiction.
F. If the vending consists of the advertisement for sale of a motor vehicle, a representative of the Department will contact the nearest law enforcement officer and request enforcement of (NMSA 1978 as amended) Sections 66-3-126 and 66-3-127 as provided therein.
[12/31/98; Recompiled 11/16/01]

18.20.5.11 PROCEDURE FOR REMOVAL OF PROHIBITED ENCROACHMENTS AND NON-HAZARDOUS OBSTRUCTIONS:
A. An unlawful encroachment or non-hazardous obstruction shall be identified by the Department with reasonable particularity, and ownership shall be determined, if possible.
B. A written notice shall be sent by certified/return receipt mail to the apparent owner at his last known address. If ownership cannot be ascertained, or no address for the owner can be found after diligent search, a copy of such notice shall instead be posted in a conspicuous place on the encroachment or non-hazardous obstruction. This notice shall contain the following information:
   (1) A description of the encroachment or non-hazardous obstruction sufficient to identify it;
   (2) Notification that the encroachment or non-hazardous obstruction is in violation of 18 NMAC 20.5 [now 18.20.5 NMAC];
   (3) That the encroachment or non-hazardous obstruction must be removed within ten (10) days by the owner at his expense;
   (4) That if the encroachment or non-hazardous obstruction remains after ten (10) days, the Department will remove it and bill the owner for the actual costs incurred in its removal;
   (5) That the owner has a right to a hearing before the District Engineer or his designee(s) on whether or not the encroachment or non-hazardous obstruction must be removed;
(6) That the owner himself has the responsibility to request this hearing by mailing a written Request for Hearing to the District Engineer within ten (10) days of service of the first written notification or he will be deemed to have waived his right to a hearing.

C. If the owner has failed to remove the encroachment or non-hazardous obstruction and has failed to request a hearing before the District Engineer within ten (10) days of service of the notice, the Department may remove the encroachment or non-hazardous obstruction at the owners expense.

[12/31/98; Recompiled 11/16/01]

18.20.5.12 OBSTRUCTION AND ENCOCHAMENTS REVIEW BOARD:

A. There shall be an Obstruction and Encroachment Review Board established in each Highway District in New Mexico. Said Board shall be composed of three (3) persons: the District Engineer or his designee; the District Traffic Engineer or his designee; the District Construction Engineer or his designee; when issues regarding construction or operations of roadway segments.

B. There shall be an Obstruction and Encroachment Review Board established in each Highway District in New Mexico. Said Board shall be composed of three (3) persons: the District Engineer or his designee; the Right of Way Division Director or his designee; the Project Development Engineer; when issues regarding encroachments during the design/project development stages occur.

C. Upon receipt of a timely Request for Hearing from an owner who has received a notice to remove his encroachment or non-hazardous obstruction, the District Engineer or his designee shall assign a hearing date no later than thirty (30) days for the date of the request and send notification, in writing, to the owner, the members of the Board and the Department’s General Counsel of the time, place an date of the hearing, the nature of the matter to be heard, and the authority of the Board.

D. The proceedings before the Board shall be in conformance with the Administrative Procedures Act, Section 12-8-1, et seq., N.M.S.A. 1978. The findings of the Board shall be by a preponderance of the evidence.

E. The determination to be made by the Board shall be as follows: Encroachments: A determination as to whether or not an encroachment upon highway right-of-way in fact exists;

   (1) If an encroachment exists, whether or not it falls within one of the permitted encroachments identified in Section 8 of this rule [now 18.20.5.8 NMAC];

   (2) If the encroachment is not a permitted type, whether or not it poses a danger to the health, safety or welfare of the motoring public, interferes with the operations of the Department, or is otherwise not in conformance with 18 NMAC 20.5 [now 18.20.5 NMAC];

   (3) If the encroachment is to be permitted to remain, whether it shall be dealt with by means of an encroachment agreement or by means of a sale to the owner of the parcel upon which the encroachment rests; and

   (4) If the encroachment must be removed, a reasonable time for the accomplishment of this removal by the owner before the Department may proceed to remove the offending encroachment at the owners expense.

F. Non-Hazardous Obstructions: A determination as to whether or not the object constitutes a non-hazardous obstruction;

   (1) If it does, whether or not the owner has shown sufficient mitigating circumstances to permit the object to remain; and

   (2) If the object is required to be removed, a reasonable time for the accomplishment of this removal by the owner before the Department may proceed to remove the offending non-hazardous obstruction at the owners expense.

[12/31/98; Recompiled 11/16/01]

18.20.5.13 HAZARDOUS OBSTRUCTIONS:

A. A hazardous obstruction may summarily be removed from the highway right-of-way without notice to the owner, if any, thereof.

B. The determination of whether or not an obstruction is hazardous shall be made by the District Engineer or his designee in the District in which the obstruction is situated, who shall employ sound highway engineering practices in making this determination.

[12/31/98; Recompiled 11/16/01]

18.20.5.14 REFUSE: Refuse may be summarily removed from the highway right-of-way.
18.20.5.15  SIGNS AND POLITICAL POSTERS: Signs and political posters are not allowed on highway right-of-way and may be summarily removed from the highway right-of-way without notice to the owner, if any, thereof.

18.20.5.16  MOTOR VEHICLES:

A.  Traffic Hazard Motor Vehicles. Such vehicles may be summarily removed from the highway right-of-way by the New Mexico State Police upon verbal notification by the District Engineer or his designee(s), followed thereafter by written notification as soon as possible.

B.  Non-Hazard Motor Vehicles.

1)  Without Plates: Such vehicles may be summarily removed from the highway right-of-way by the New Mexico State Police, as provided by law, upon written notification by the District Engineer or his designee(s).

2)  With Plates: Such motor vehicles may be removed by the New Mexico State Police after the following procedure have been utilized. The Department will cause to be posted upon any such vehicle a written notice containing the following information:

   a)  A description of the non-hazard motor vehicle sufficient to identify it;

   b)  Notification that the non-hazard motor vehicle is parked in violation of 18 NMAC 20.5 [now 18.20.5 NMAC];

   c)  Advising the owner within four (4) days of the notice that the non-hazard vehicle must either be removed at his expense; and

   d)  Any vehicle, which remains in the right-of-way after the dates provided in this subsection will be summarily removed by the New Mexico State Police, as provided by law, upon written notification by the District Engineer or his designee(s).

   e)  Wrecked Vehicles. Such vehicles may be summarily removed from the highway right-of-way by the New Mexico State Police, as provided by law, upon written notification by the District Engineer.

18.20.5.17  If any county, city or other local governmental authority has concurrent jurisdiction over any matter covered in this rule and such authority has adopted more restrictive requirements, conditions, or procedures, those requirements, conditions or procedures shall apply. Nothing in this rule shall be construed to limit the right of local governmental authorities to regulate these matters as authorized by law.

HISTORY OF 18.20.5 NMAC:
Pre-NMAC Regulatory Filing History: The material in this Part was derived from that previously filed with the State Records and Archives under:
Rule No. 1, Right of Way Encroachment Standards, filed August 20, 1968.
SHC Rule 84-3, New Mexico State Highway Department Rule for Removal of Encroachments, Obstructions, Abandoned Motor Vehicles and for Regulation of Vending, filed December 6, 1984.
SHTTD Rule 88-5(L), New Mexico State Highway and Transportation Department Rule for Removal of Encroachments, Obstructions, Abandoned Motor Vehicles and for Regulation of Vending, filed April 4, 1988.

History of Repealed Material: [RESERVED]
SUBJECT  SP-S-1539(200), (201) & (202), Rio Grande Bridge & Approaches North of Taos

DATE  June 11, 1963

FILE REFERENCE:  SP-S_1539(200) etc., R/W

TO  Robert W. De La Rue,
Administrative Engineer

FROM  T. B. WHITE,
Chief Highway Engineer

Due to some of the unusual circumstances surrounding the acquisition of right of way and material pits on subject projects, it is suggested that you write complete reports on all transactions for our files. As you are aware, this was a rush job and we had a deadline to meet. Our negotiations with the Indians were not satisfactory. The Commission was advised on various occasions of the type negotiations necessary if we were to meet the deadline.

I would prefer to discuss this matter further with you at your early convenience.

T. B. WHITE
Chief Highway Engineer

TWH: cba
Mr. T. B. White
Chief Highway Engineer
New Mexico State Highway Commission
P.O. Box 1149
Santa Fe, New Mexico 87501

Dear Mr. White:

The Taos Pueblo Council met on June 15 for the purpose of discussing your application for right of way dated March 29, 1965. The application covered 0.687 acre needed for a picnic and rest area near the new Rio Grande Bridge north of Taos, New Mexico.

The Pueblo is having a land use study made and is not ready to make a decision at the present time on your request for right of way. We will notify your office as soon as the Taos Council is ready to meet and discuss your application.

Sincerely yours,

[Signature]

Acting General Superintendent
December 12, 1963

Mr. Guy C. Williams,
General Superintendent
United Pueblos Agency
1000 Indian School Road, N.W.
Albuquerque, New Mexico

Dear Mr. Williams:

SUBJECT: SP-5-1539(20), Rio Grande Bridge-East, Parcel 3-1

In accordance with the request contained in your letter dated November 29, 1963, the enclosure is returned to you for further consideration.

It should be noted that photographs of recent land are not required in our appraisal reports unless some unusual feature needs to be portrayed.

Very truly yours,

T. E. Wink
Chief Highway Engineer

By

R. G. Montgomery
Right of Way Manager

Enclosure
of lawful money of the United States of America, and other good and valuable situations
in hand paid by said party of the second part, the receipt whereof is hereby confirmed and acknowledged, has granted, bargained, sold and conveyed by these presents, for the sum of $100.00 DOLLARS.

and parcel of land and real estate lying, situate and being in the County of Taos, State of New Mexico, to wit:

(5-1) A certain tract or parcel of land, lying and being situated in the NW 1/4 of Section 14 and in the NW 1/4 of Section 23, T.26 N., R.11 E., NW1/4, Section 23, Taos County, State of New Mexico, being more particularly bounded and described as follows, to wit:

Beginning at a point on the westerly line of Section 14, point 66.66 feet northerly from the southwesterly corner of said Section 14, point on the right of way line of NM SP-1539(202), County of Taos, State of New Mexico, and point on curve; thence southwesterly along said right line of way line on a 1.998° curve (radius = 337.4 feet) thru an arc of 55.68° to the left a distance of 327.93 feet to a point on the meridional 1/2 line of Section 23; thence northerly along said meridional 1/2 line a distance of 200.68 feet to a point on the left right of way line of SP-1539(202), point on curve; thence westerly along said right of way line on a 1.998° curve (radius = 337.4 feet) thru an arc of 65.31° to the right a distance of 3930.23 feet to a point on the westerly line of Section 14; thence westerly along said westerly line of Section 14 a distance of 464.81 feet to the point of beginning. Containing 15.92 acres, more or less.

STATE OF NEW MEXICO
COUNTY OF TAOS

This Instrument was filed for record on the 16th day of April, 1963, at 3:15 o'clock P.M. and duly recorded in book 16, page 8, of the Deeds, in the Office of the County Clerk & Recorder,

Juan E. Torres and Claudia R. Torres being the parties of the first part, and the undersigned Notary Public having administered the oath prescribed by law, and having been duly sworn, do offer the following instrument for record in the office of the County Clerk & Recorder of the County of Taos, State of New Mexico: To wit:

TO HAVE AND TO HOLD the said right and interest in and to the lands and premises described in the foregoing instrument, in fee simple, forever, and to have and hold the same to and for the use and purpose aforesaid, unto the said party of the second part, his successors and assigns, for as long as said right of way shall not be abandoned for highway purposes.

IN WITNESS WHEREOF, the said party of the first part has hereunto set their hand and seal, on the day and year hereof written.

Juan E. Torres and Claudia R. Torres

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 2nd day of April, 1963, before me personally appeared

Juan E. Torres and Claudia R. Torres

known to me to be the persons described in and who executed the foregoing instrument and acknowledged the same to be their free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 2nd day of April, 1963, before me personally appeared

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HOUSE JOINT MEMORIAL 16

44TH LEGISLATURE - STATE OF NEW MEXICO - FIRST SESSION, 1999

INTRODUCED BY

Art Hawkins

A JOINT MEMORIAL.

REQUESTING THE STATE HIGHWAY AND TRANSPORTATION DEPARTMENT TO CONDUCT A STUDY OF THE COMMERCIAL FEASIBILITY OF BUNGEE JUMPING FROM THE RIO GRANDE GORGE BRIDGE.

WHEREAS, adventure tourism is a growing business and New Mexico attracts rock climbers, wilderness enthusiasts, mountain climbers, sky divers and other enthusiasts of adventure travel; and

WHEREAS, the Royal Gorge bridge near Pueblo, Colorado and other promontories are ideal for adventure enthusiasts who use bungee cords; and

WHEREAS, the Rio Grande Gorge bridge on highway 64 attracts many tourists and is an ideal promontory for bungee enthusiasts;

NOW, THEREFORE, BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF NEW MEXICO that the state highway and transportation department be requested to conduct a study of the commercial feasibility of bungee jumping from the Rio Grande Gorge bridge; and

BE IT FURTHER RESOLVED that copies of this memorial be transmitted to the secretary of highway and transportation.
March 11, 1963

Projects S-1539 (3 )
S-1539 (4 )

Mr. T. J. White
Chief Highway Engineer.

Dear Mr. White:

We the County Commissioners of Taos County feel very grateful for these wonderful projects to be built in our County, and will give our utmost cooperation to enable you to get these project to contract without delay.

However, we are worse than broke having compromised this county way into the future on the Red River right of way, to enable the Bureau of Public Roads to build their million dollar project.

We understand the legislature has passed a bill to have the State pay for secondary roads right of way which will be in effect later this year.

We do not want to drag our feet and delay the letting of this project.

We are signing the resolutions to allow condemnation without delay, but we feel that it can be arranged in such a manner that the State can pay it when the law becomes effective.

We feel it would not be the best way for us to ask the State for a loan which would have to be paid out of our non-existent road fund, but rather if we do have to pay for the right of way to do it through condemnation with stipulated judgement so we can levy on the whole County to pay for it.

We request that you put your agent George Stevens to do the negotiations for us, as we have had fine cooperation from him in all the jobs he has worked for us in the past.

We hope this meets with your approval and that it can be worked out, that the right of way can be paid by the State. We feel that it should not be too expensive with a tasteful agent in charge, as the people along the road want it as much as we do.

Yours sincerely,

[Signature]
Taos County Board
of County Commissioners

[Stamp]
RESOLUTION ADOPTED BY THE BOARD OF COUNTY COMMISSIONERS
OF ___________ COUNTY

BE IT RESOLVED, that certain real estate located in the county of ___________
State of New Mexico, the property of certain owners, the names of whom are more particularly set forth
and the property more particularly described in the schedule hereto attached and made a part herof, is
needed for a right of way for a State Highway designated as HRN 8-1532(4)*
to be constructed under the supervision of the State Highway Commission of the State of New Mexico,
but that the Board of County Commissioners of ___________ County, New Mexico,
and the said named owners of said real estate cannot agree upon a proper compensation to be paid for the
same. *Project number changed to "82-8-1532(322)"

THEREFORE BE IT RESOLVED that said real estate be and the same hereby is appropriated for
said public use and that proceedings be instituted at once for the acquiring of said real estate for said
purpose in accordance with law; and

BE IT FURTHER RESOLVED, that if proceedings in Eminent Domain are necessary for the acquisi-
tion of such real estate and it shall be required that a surety bond be filed by this Board of County Com-
missioners therein, the Chairmen of this Board of County Commissioners is hereby authorized to make
application for such bond and to do any other necessary acts in connection therewith.

Dated this ___________ day of ___________, A.D. 19__

[Signatures]

Chairmen, Board of County Commissioners

ATTEST:

[Signatures]

County Clerk

[Signature]
RESOLUTION

At a duly called meeting of the Toa Pueblo Council on the 2nd day of May, 1963, the application of the New Mexico State Highway Commission for right of way over and through Tract A of the Toa Pueblo lands in Taos County, New Mexico, as further described by the attached map was discussed at length by the Council and representatives of the Bureau of Indian Affairs and, after careful consideration, the following resolution was adopted:

BE IT RESOLVED that the Toa Pueblo, by and through its Governor and Council, does hereby consent to the granting by the Bureau of Indian Affairs of right of way to the New Mexico State Highway Commission for a public highway across the lands of the Pueblo of Toa in Taos County in accordance with the State Highway Commission's letter and application of March 26, 1963, of which a copy is attached, being an application for New Mexico Project No. 38 5-1539 (2011), the lands being further described by the attached New Mexico Highway Commission right of way map, subject to the following conditions:

(a) Damages shall be paid to the United Pueblo Agency, Bureau of Indian Affairs, Albuquerque, New Mexico, for the benefit of the Toa Pueblo in the amount of $150.00 per acre.

The New Mexico State Highway Commission has represented that there will be the taking of approximately 35,790 acres.

(b) That, as additional consideration for the granting of the right of way, the New Mexico State Highway Commission will file with the Pueblo of Toa a written statement agreeing that in the event it is hereafter decided to relocate the existing U.S. Highway 64 through the City of Taos, the same will not be relocated without first obtaining the written consent of the Toa Pueblo if said proposed change in the existing highway would cross in any manner any portion of its original grant confirmed by Act of Congress December 27, 1864 and patented November 1, 1864, which has not been extinguished by the Court of Private Land Claims.

(c) The New Mexico State Highway Commission will fence both sides of said right of way and will build underpasses or other means to allow Indian traffic to move across.
WHEREAS, the easements will be recorded with the Taos County Clerk's Office, New Mexico and be subject to the regulations of the Department of Transportation of the State of New Mexico for land use in accordance with such regulations.

NOW, THEREFORE, the Taos Pueblo Council, by virtue of its authority as the governing body of the Taos Pueblo, hereby authorize the Taos Pueblo to accept payment of said sum of money representing the right of way upon satisfaction of the conditions of said agreement.

CERTIFICATION

I, the undersigned, as Governor of the Taos Pueblo, hereby certify that the Taos Pueblo Council, at a duly called meeting, has been convened and held on May 23rd, 1960, at Taos, New Mexico, has approved the resolution in substance as hereto presented, and that 51 voted for, and none against.

ATTEST:

Aspropaqua S. Sevacho
TO: G. Carroll Chalk Room 209
DATE: June 24, 1964

RE: EF-8-1539(201) E. of Taos-W. to Rio Grande

Be advised that subject project was completed 6/12/64.
Approved "Taos Pueblo" right of way print in in file;
however, I believe you still have to file an Affidavit of completion. Right?

SIGNED

PLEASE REPLY HERE

TO

DATE

SIGNED

NOTE: INDIVIDUAL REPLICATING CONFIRMATION RETAINS YELLOW COPY, FORWARDING FIRST AND DUPPLICATE IN-TACT TO CARBONS; CARBONIZED RETAINS DUPLICATE, RETURNING FIRST PART TO ORIGINATOR OF CONFIRMATION.
Mr. T. B. White  
Chief Highway Engineer  
New Mexico State Highway Department  
P.O. Box 1641  
Santa Fe, New Mexico

Dear Mr. White:

Reference is made to your application dated March 26, 1963 for a right of way over and through the Taos Pueblo lands at location shown on the map which accompanied your application. Your right of way map refers to New Mexico Project SP-3-1539(201).

Permission is hereby granted to the New Mexico State Highway Department to proceed with construction of this project prior to the formal approval of the requested right of way, subject to the following conditions:

1. Provided the New Mexico State Highway Department complies with all of the requirements of Title 25, Code of Federal Regulations, Part 161;

2. Advance deposit against damages in an amount based upon $150 per acre for all land included within the requested right of way;

3. Full compliance with the attached resolution adopted by the Taos tribal Council on May 23, 1963;

4. Provided further that as an additional consideration for granting of this right of way, the New Mexico State Highway Commission shall file with the Pueblo of Taos, with copy for this office, a written statement agreeing that in the event it is hereafter decided to reroute the existing U.S. Highway 64 through the City of Taos, the same will not be reconned without first obtaining the written consent of the Taos Pueblo Council if said proposed change in the existing highway should cross any of the land within the original Taos Pueblo Grant on which the Taos Indians' title has not been extinguished;
5. Standard stock fences to be constructed on both sides of right of way. Construct underpass in order that Indian cattle may move under the proposed highway.

Sincerely yours,

[Signature]

General Superintendent

Attachment
EXCERPT FROM THE MINUTES OF THE
STATE HIGHWAY COMMISSION MEETING OF
MAY 24, 1963

WHEREAS, the New Mexico State Highway Commission has had numerous
conferences with the Taos Pueblo as to the right of way to be
obtained from the Taos Pueblo for the Rio Grande high level bridge
over the Rio Grande River; and

WHEREAS, the Taos Pueblo Council has passed a resolution containing
certain conditions to be complied with on behalf of the New Mexico
State Highway Commission before the Taos Pueblo will grant to the
New Mexico State Highway Commission right of way across Tract A
to connect with the Rio Grande high level bridge over the Rio
Grande River;

NOW, THEREFORE, BE IT RESOLVED:

1. That as part of the consideration for the right of way
across Tract A is that the New Mexico State Highway Commission will
not by-pass the Town of Taos, New Mexico, with U.S. Highway 56 if
said by-pass, alteration or change of route will cross the original
grant confirmed by Act of Congress December 22, 1856, and patented
November 1, 1866, which has not been extinguished by the Court of
Private Land Claims.

2. That the New Mexico State Highway Commission shall
fence on both sides of the right of way the entire highway through
Tract A and build an underpass or structures to allow Indian cattle
to move across or under the proposed highway, and to build a cattle
guard on the northeast line of Tract A.

3. That the New Mexico State Highway Commission shall pay
to Taos Pueblo just compensation for land taken at $150.00 per
acre and just compensation for construction of drainage ditches
and drainage grades outside of the right of way.

This Resolution shall be binding upon the present New Mexico State
Highway Commission and, unless determined by a court of competent
jurisdiction to be contrary to law, binding upon subsequent high-
way commissions.
INTER-DEPARTMENTAL CORRESPONDENCE

SUBJECT: LSS-153(1), Rio Grande Gorge Bridge (S. side Overlook and Rest Areas)

TO: G. De Vargas, Project Control Manager

FROM: Gordon A. Switzer, Right of Way Manager

DATE: April 12, 1967

FILE REFERENCE: LSS-153(1) R/W

ATTENTION OF:

This is to certify that the rights of way to construct New Mexico Project LSS-153(1), Rio Grande Gorge Bridge (S. side Overlook & Rest Areas), situated on Government lands, has been acquired for my approval.

Gordon A. Switzer
Right of Way Manager

2/5 in
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
DIVISION OF LANDS & MINERALS
PROGRAM MANAGEMENT & LAND OFFICE
P. O. Box 1449
Santa Fe, New Mexico 87501

March 20, 1967

DECISION

RIGHT-OF-WAY GRANTED

Details of Grant:

Serial Number of Grant:

New Mexico 1534 (New Mexico Project No. 133-1539(1), Taos County, New Mexico)

Name of Grantee:

New Mexico State Highway Commission
P. O. Box 1149
Santa Fe, New Mexico 87501

Map showing the location and dimensions of grant:

Map filed

Permitted use by grantee:

Ref. No. R.A. 1

Date:

February 18, 1967

Permitted use by grantee:

West Area (Federal Aid Secondary Highway)

Authority for grant:

Section 317 of the act of August 27, 1958 (72 Stat. 985; 23 USC 317)

Date of grant:

March 20, 1967

Expiration date of grant:

None

Rental:

None
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
DIVISION OF LANDS & MINERALS
PROGRAM MANAGEMENT & LAND OFFICE
P. O. Box 1499
Santa Fe, New Mexico 87501

Certified Mail
Return Receipt Requested

DECISION
New Mexico State Highway Commission
P. O. Box 1142
Santa Fe, New Mexico 87501

Right-of-Way

Reference is made to right-of-way application New Mexico 1584 of the New Mexico State Highway Commission for a right of way in lot 2, Section 23, T. 26 N., R. 33 E., U. S. Mex. Prin. Dist., New Mexico (Project No. 150 - 159511), Taos County, New Mexico; M.A.I.D.

Before further consideration can be given the above mentioned application, it will be necessary that the applicant execute and return the attached stipulation.

Thirty days from receipt of notice hereof are allowed within which to comply with the foregoing requirement, failing which the right-of-way application will be rejected and the case closed without further notice.

The New Mexico State Highway Commission is allowed the right of appeal to the Director, Bureau of Land Management, in accordance with the regulations in 36 CFR 2122.28 (formerly Part 221), as amended. See enclosed Form 1842-1 and Circular 2137. If an appeal is taken, it must be filed in the Division of Lands & Minerals Program Management & Land Office at Santa Fe, New Mexico, and the amount of the filing fee will be $5.00. In taking an appeal, there must be strict compliance with the regulations. If an appeal is filed the appellant will have the burden of proving by presenting positive and substantial evidence wherein the decision appealed from is in error.

Enclosures
cert Bureau of Public Roads (w/copy of stipulation)

Stipulation (Fence) (7)
Form 1842-1 and Circular 2137

March 9, 1967

Certified by

Chief, Branch of Lands
The Honorable
The Secretary of the Interior
Washington, D.C.

RE: Right of Way for New Mexico
Proj. No. LSS-1539(1),
Taos County, New Mexico

Sir:
The New Mexico State Highway Commission hereby applies for a right of way over public lands located as hereinafter more particularly described, and states:

1. This application is made under and pursuant to Section 317, Title 23, U.S. Code (Public Law 85-767). The right of way sought to be acquired is necessary in order to construct a Federal Aid Secondary Highway connecting the town of Taos Pueblo and Taos in the State of New Mexico.

2. The New Mexico State Highway Commission hereby agrees that it will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352) and all requirements imposed by or pursuant to the Department of the Interior Regulation (43 CFR 17) issued pursuant to that title, to the end that, in accordance with Title VI of that Act and the Regulations, no person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant-Recipient receives financial assistance from the Bureau of Land Management and hereby gives assurance that it will immediately take any measures to effectuate this agreement.
4. If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the Applicant-Recipient by the Bureau of Land Management, this assurance obligates the Applicant-Recipient, or in the case of any transfer of such property, any transferee for the period during which the real property or structure is used for a purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance obligates the Applicant-Recipient for the period during which it retains ownership or possession of the property. In all other cases, this assurance obligates the Applicant-Recipient for the period during which the Federal financial assistance is extended to it by the Bureau of Land Management.

5. This assurance is given in consideration of and for the purpose of obtaining any and all federal grants, loans, contracts, property, discounts or other Federal financial assistance extended after the date hereof to the Applicant-Recipient by the bureau or office, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Applicant-Recipient recognizes and agrees that such Federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall reserve the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant-Recipient, its successors, transferees, and assignees, and the person, or persons, whose signature appears below is authorized to sign this assurance on behalf of the Applicant-Recipient.

6. That the desired right of way will occupy a total of 19,950 acres.

7. That the total centerline length of the desired right of way is 0.322 miles.

8. That the lands for which the New Mexico State Highway Commission is now making application for right of way are as follows:

(W.A. No. 1) A certain tract or parcel of land, lying and being situated in the SW 1/4 NE 1/4 and in lot 7 of section 21, T. 36 N., R. 12 E., M.D.M., County of Cibola, State of New Mexico, being more particularly bounded and described as follows, to wit:

Beginning at a point for Angle Point 10° 50' on the Antoina Leaosa Grant, thence northerly along said Grant...
line a distance of 324.68 feet to a point on the southerly right of way line of SW SP. 1539 (362), County of Taos, State of New Mexico; thence 5.89° 23' N., along said right of way line a distance of 1,330.75 feet to a point of curve; thence northerly on a 1.998° curve (radius = 1,374.3 feet) thru an arc of 6° 25' 33" to the point a distance of 378.41 feet to a point on the meridional 1/4 line of Section 23; thence southerly along said meridional 1/4 line a distance of 529.16 feet; thence 4.69° 23' W., a distance of 1,701.26 feet to a point on the Antoine Loreux Grant; thence northerly along said Grant Line a distance of 175.25 feet to Angle Point No. 5 the point and place of beginning.

Containing 10.150 acres, more or less.

In support of this application and in compliance with the rules and regulations of the Department of the Interior governing right of way, the following map is hereto attached and made a part hereof:

One (1) map submitted, showing the locations of the land to be acquired. The field notes are attached for the reason that all angles and dimensions constituting the field notes are shown thereon.

WHEREFORE, the applicant requests that the map, application and right of way herein applied for, be approved.

NEW MEXICO STATE HIGHWAY COMMISSION

[Signature]
Chief Highway Engineer

/tg
NEW MEXICO STATE HIGHWAY COMMISSION

MAP

SHOWING REST AREA REQUIRED
FOR NMP No. LSS 1839 (1)
WITHIN SECTION 23 T 26 N., R 11 E., RMP M., T. AOS,
TAOS COUNTY, NEW MEXICO.

SCALE: 1" = 1000'
AREA: 19.950 ACRES

Note:
Shaded area to be secured by this application.

Unappropriated and Unreserved Lands
are affected by this Rest Area.

Date: 1-30-47
File No.: R. A. 1

GOVERNMENT
Sheet: 1 of 1
May 28, 1961

The Honorable Jack M. Campbell
Governor of New Mexico
Santa Fe, New Mexico

Dear Governor Campbell:

Mr. John W. Kelly, Assistant Secretary of the Interior, requested that we write and inform you that the application, No. 0370884, filed by the New Mexico State Highway Commission for right-of-way across public lands in sec. 23, T. 26 N., R. 12 E., has been approved by the Geological Survey and the Federal Power Commission.

Approval by the Survey was transmitted to the Commission for concurrence on May 24 and we were informed today, by telephone, that that agency had acted favorably and their approval, along with that of the Survey, was mailed yesterday to the Manager of the Land Office in Santa Fe.

Sincerely yours,

[Signature]

Acting Chief, Conservation Division.
MODIFYING WATER POWER WITHDRAWALS TO PERMIT GRANT OF RIGHT-OF-WAY

By virtue of the authority vested in the President by section 1 of the act of June 25, 1910 (36 Stat. 847; 43 U.S.C. 141), and that contained in the act of June 28, 1912 (34 Stat. 777), and pursuant to Executive Order No. 10335 of May 26, 1952, it is ordered as follows:

The departmental order of August 7, 1916, granting water power designation No. 3, and the executive order of September 30, 1916, establishing water power reserve No. 346, are hereby modified to the extent necessary to permit the granting of a highway right-of-way under section 2477, U.S. Revised Statutes (43 U.S.C. 913), to the New Mexico State Highway Commission for construction of a highway over the following described lands, and as shown on a map on file with the Bureau of Land Management under New Mexico 0370864 as a part of the application by the Commission, identified as WP-1199(203):

New Mexico Principal Meridian

20 N., A., H., sec. 23, lots 2 and 28, NE. 1/4 NE.

Containing 50.03 acres.
Terms and Conditions of Grant

Pursuant to the authority vested in the undersigned by Bureau Order No. 706, dated July 23, 1964 (29 F.R. 10526), a right-of-way, the details of which are shown above, is hereby granted, subject to the following terms and conditions:

1. All valid rights existing on the date of the grant, and reserving right-of-way for canals and ditches constructed under authority of the United States.

2. All regulations under the act specified above.

3. Proof of construction within 7 years of date of grant.

4. The provisions of Title VI of the Civil Rights Act of 1964.

5. Stipulations agreed to by grantee, copies attached.

6. The right to the United States, its permittees or licensees, to enter upon, occupy and use any part or all of the land involved in the right-of-way for the purposes set forth in and subject to the conditions and limitations of Sec. 24 of the Federal Power Act of June 10, 1920 (41 Stat. 1075, as amended (16 U.S.C. 618).

7. Nondiscrimination in Employment. This contract (permit) is subject to the provisions of Executive Order No. 11246 of September 24, 1969, a copy of which is attached.

The right-of-way for which this grant is issued involves the following described land:

Sec. 23: Lot 2, SW\NWq.

Chief, Branch of Lands

Enclosures
Form 1110-11
Stipulation (Civil Rights)
Stipulation (fence)
Map

Orig. & Res: Bureau of Public Roads (w/ey of enclosures)
MODIFYING WATER POWER WITHDRAWALS TO PERMIT GRANT OF RIGHT-OF-WAY

By virtue of the authority vested in the President by section 1 of the act of June 25, 1910 (36 Stat. 847; 43 U.S.C. 141), and that contained in the act of June 26, 1910 (36 Stat. 557), and pursuant to Executive Order No. 13355 of May 26, 1952, it is ordered as follows:

The departmental order of August 7, 1914, creating Water Power Designation No. 1, and the Executive order of September 30, 1916, establishing Power Site Reserve No. 14, are hereby modified to the extent necessary to permit the granting of a highway right-of-way under section 2677, 1. S. Revised Statutes (43 U. S. C. 532), to the New Mexico State Highway Commission for construction of a highway over the following described lands, and as shown on a map on file with the Bureau of Land Management under New Mexico 0370884 as a part of the application by the Commission, identified as Sp-1350 (202):

New Mexico Principal Meridian,

T. 26 N., R. 11 E., sec. 23, lot 7 and SE 1/4 N.W.

containing 50.93 acres.
The lands are described in favorable determination, DA-66, 70-New Mexico, of the Federal Power Commission, issued May 27, 1963. As provided by the Commission, allowance of the right-of-way application shall be subject to the provisions of Section 24 of the Federal Power Act.

(sgd) John A. Cortez, m.

JUL 5 1965 Secretary of the Interior
INTERPRETATION NO. 125

of

Water Power Designation No. 1

and

Power Site Reserve No. 524.

It is hereby ordered that so much of the orders of August 7, 1926, creating Water Power Designation No. 1, New Mexico No. 1, and of September 30, 1926, creating Power Site Reserve No. 524, Rio Grande, New Mexico, as describes lands in T. 26 N., R. 11 E., N. M., New Mexico, be construed in conformity with the survey of said survey accepted February 12, 1927, to describe the following tracts:

New Mexico Meridian, New Mexico

T. 26 N., R. 11 E., Sec. 1, Lots 1, 2, 3, 4, 5, 6, 7.

E½ of NE¼:

Sec. 12, Lots 1, 2, 3, and 4;

Sec. 13, Lots 1 and 2;

Sec. 14, Lots 1, 2, 3, 4 of NE¼;

Sec. 15, Lots 1, 2, 3, 4 of NE¼;

Sec. 16, Lots 1, 2, 3, 4 of NE¼;

Sec. 17, Lots 1, 2, 3, 4 of NE¼;

Sec. 18, Lots 1, 2, 3, and 4;

Sec. 19, Lots 1, 2, 3, 4 of NE¼;

Sec. 20, Lots 1, 2, 3, 4 of NE¼;

Sec. 21, Lots 1, 2, 3, 4 of NE¼.

Secretary.

[Signature]

[Date: March 20, 1928]

Carbon to Federal Power Commission.

Copy carbon to General Land Office.

[signature]

[Date: September 21, 1927]

Bureau of Land Management
NMSO

I hereby certify that this reproduction is a copy of the official record of the file in this case, consists of [number of pages].

[Signature]
The Honorable,

The Secretary of the Interior.

Sir:

In pursuance of departmental order of April 25, 1922, providing for descriptions according to new surveys of lands included in withdrawals, I recommend the approval of the following order (Power Site Interpretation No. 185) which confirms the description of certain lands in T. 35 N., R. 11 E., N. W. 1/4, New Mexico, included in Upper Power Designation No. 1, and Power Site Reserve No. 363, Rio Grande, New Mexico, to the official plat. The area heretofore recorded as withdrawn in the township described is 1,309 acres, but in terms of the official survey as construed herein is found to be 1,158 acres.

Respectfully,

[Signature]

Acting Director.

[Stamp: COMMISSIONER, General Land Office.]
INTERPRETATION No. 310
of
Water-Power Designation No. 1
and
Power-Site Reserve No. 548
Rio Grande, New Mexico

So much of the order of August 7, 1915, creating
Water-Power Designation No. 1 and September 30, 1916, creating
Power-Site Reserve No. 548 as interpreted by the order of October
29, 1928, as described lands in secs. 33, 34, and 35, T. 46 N.,
R. 11 E., New Mexico meridian, to hereby described in conformity
with the survey of said sections approved October 14, 1929, to
describe the following lands:

For Sections described
T. 46 N., R. 11 E., sec. 33, lots 6, 7, and 8; and
sec. 34, lots 5, 6, 7, and 8;
T. 46 N., R. 11 E., sec. 35, lots 6, 7, and 8;

Secretary of the Interior.

21-1-59

Service to Federal Power Commission,
Exe. purpose to General Land Office.

Secretary
10/17/33

Bureau of Land Management
Date

I hereby certify that this reproduction is a
copy of the official record on file in this
office. Consists of 1000 72-line pages.

Mary S. Crowe
Attested Signature
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLICAL SURVEY
WASHINGTON

The Secretary of the Interior,

To: Secretary of the Interior.

OCT 6 1933

25, 1933. In compliance with departmental orders of April 25, 1933, providing for description according to the survey of the public domain of the United States, the described herein (240 acres in area, located in Section 2, Township 3 North, Range 20 West of the Second Principal Meridian, in the City and County of Albuquerque, New Mexico) which was surveyed and described by the Surveyor General of the United States, is described in accordance with the official survey, as follows:

Section 2, Township 3 North, Range 20 West of the Second Principal Meridian, in the City and County of Albuquerque, New Mexico.

I recommend the approval of this order. The area hereof is described as herein and described in the sections described is 776 acres, but in terms of the official survey as described herein is found to be 747 acres.

Respectfully,

W. E. Byrd

Assistant Secretary of the Interior.

Secretary to General Land Office

Director.

October 6, 1933.
Studies
Securing a Suicide Hot Spot: Effects of a Safety Net at the Bern Muenster Terrace

THOMAS REISCH, MD, AND KONRAD MICHEL, MD

The city of Bern has a high percentage of suicides by jumping (18.6%). Related to other local hotspots, the highest number of deaths (mean 2.5 per year) is found at the Muenster Terrace in the old city. In 1998, after a series of suicides, a safety net was built to prevent people from leaping from the terrace and to avoid further traumatization of people living in the street below. We analyzed the numbers of suicides by jumping before and after the installation of the net. We also assessed the number of media reports referring to this suicide method. After the installation of the net no suicides occurred from the terrace. The number of people jumping from all high places in Bern was significantly lower compared to the years before, indicating that no immediate shift to other nearby jumping sites took place. Furthermore, we found a moderate correlation between the number of media reports and the number of persons residing outside Bern committing suicide by jumping from high places in the city.

Prevention of suicidal behavior remains a complex and imperfect art (De Leo, 2002). One of the few strategies that have shown a preventive effect is reducing the availability of means (Leenars et al., 2000; Schapira, Linsley, Linsley, Kelly, & Kay, 2001). Typical examples are: gun restriction by gun licensing laws (e.g., Loeflin, McDowall, Wiersena, & Colette, 1991; Sloan, Rivara, Resy, Fertig, & Kellermann 1990; Rich, Young, Fowler, Wagner, & Black, 1990); detoxification of domestic gas (Lester, 1990b); securing railroads (Emmerson & Castor, 1993); changes of prescribing habits and reduction of package size (Hawton, 2002; Hawton et al., 2001); and limiting access to high buildings (Newess & Gunnell, 1996), bridges (Cedir, Gunay, Fincanci, & Ozdemir Kulasayin, 2001; Coman, Meyer, & Cameron 2000; Seiden, 1978), or hospitals (White, Gribble, Corr, & Large, 1993).

Suicide by jumping from high places is a method typically used when such places are easily accessible, like in Singapore or New York, where 50% (Peng & Choo, 1992; Ung, 2003) or, respectively, 30% (Fischer, Comstock, Monk, & Sencer, 1993) commit suicide with this method. Even in small countries like Belgium the percentage of jumping compared to all methods varies by region (Meens, Luyckx, & van de Voorde, 1988), implying that the use of methods depends on local availability (Hawton, Pagg, Simkin, Harris, & Malinberg, 1998). In Switzerland, 7.2% of all suicides between 1981 and 2000 were categorized as “jumping from height.”
In the agglomeration of Bern (324,000 inhabitants) the percentage of suicides by jumping is 13.8% (Swiss Federal Statistical Office), and 28.6% in the city of Bern itself (124,000 inhabitants, statistics of the Bernese Police).

A jumping site becomes a hot spot when it has gained a reputation, when it gets media attention (Blohm & Puschel, 1998; Stack, 2003); and when the access to the site is easy (Sutro, 1982; Wiedenmann & Weyerer, 1993). The Bern Muenster Terrace fulfills all these criteria. It is an elevated small park at the side of the Muenster (a medieval cathedral), overlooking the river and the lower part of the old town. On sunny days, up to 400 people may gather in this popular park. On average, two persons each year commit suicide by jumping down the height of 33 meters. In 1997 and 1998 the place received increased media attention because of a series of suicides. The newspaper articles focused on the danger for citizens living at the foot of the terrace. On one occasion a suicidal individual landed next to a child playing in the street. This case got particular media attention in several articles and letters focusing on the traumatization of the persons living at the bottom. Such effects of people witnessing suicides have been described by Gunnell and Nowers (1997).

In December 1998 a "safety net" was built to prevent people from leaping from the terrace. This barrier consists of a four meter wide metal mesh, seven meters below the top level. The general prevention factor of the barrier was questioned because people can easily jump from other elevated places in the vicinity, such as two bridges of circa 50 meters height within five minutes walking distance, one of them in direct view from the Muenster Terrace.

It has been argued that restriction of a specific method can lead to a decrease of the overall suicide rate (Sloan et al., 1990), at least in a short term perspective (Fischer et al., 1993; Gunnell & Nowers, 1997). There is some doubt whether a restriction of a certain method will have a long-term effect (Fischer et al., 1993; Gunnell & Nowers, 1997). In some investigations a shift in methods (De Leo, Dwyer, Firman, & Neulinger, 2003; Lester, 1990a) or a shift to another jumping site (Cantor & Hill, 1990) has been observed. Considering that jumping is a very lethal method, a transfer from jumping to a less lethal method would increase the chance of survival. Barriers in particular may be effective in preventing suicide (Coman et al., 2000; Goss, Peterson, Smith, Kalb, & Brodey, 2002; Prevost, Julien, & Brown, 1996), but only a few studies have actually evaluated the effect of barriers at jumping sites. Cantor and Hill (1990), O'Carroll and Silverman (1994), and Ellis (1996) reported that barriers resulted in a reduction of suicides at that site and Beaureaus (2001) found that the removal of previously installed barriers led to an increase of suicides.

In this study we investigated the effects of the safety net on the Muenster Terrace and the other local hotspots in Bern. Because increased media reporting can lead to copycat suicides (Blohm & Puschel, 1998; Marzuk et al., 1993; Stack, 2003), we also determined the number of publications in the local newspapers and relate these numbers to the suicides and the residency of persons who committed suicide by jumping in Bern.

We expected that in the years after the installation of the safety net no suicides from the Muenster Terrace occurred. Regarding the influence of the safety net on nearby jumping sites, both was considered possible: an increase of jumps on nearby sites or a general decrease mediated by less media reporting. When analyzing the changes, it seemed necessary to differentiate between different time spans in the suicide data: (1) the long-term development of suicide by jumping (before the installation of the net); (2) the time of high media attention (1997/1998); and (3) the time span after the net was installed (December 1998 to 2002). According to the investigation of O'Carroll & Silverman (1994) we expected not only the number of suicides to decrease, but also the percentage of suicides by jumping in relation to other methods. During the time of high media attention, people living outside Bern may have
been attracted and come to Bern city to kill themselves. We therefore expected that during this time individuals who jumped from the heights in the city were more often resident outside the agglomeration of Bern, in comparison to previous years. The expected effects of the safety net were formulated as four hypotheses (see result section).

**METHOD**

In our analyses we included two different data sets. The first, obtained from the Swiss Federal Office for Statistics (Bundesamt für Statistik), is based on the place of residence of individuals who committed suicide. Data were available for the period from 1969 to 2000. This data set includes the numbers of all officially confirmed suicides, specified by time (year), residence, and method used. The agglomeration of Bern and the city of Bern are listed separately. The second data set, recorded by the Bern City Police, is based on the place of death, namely the city of Bern. These data were available from the period 1981 to 2002. Both data sets are complete, as by law the police have to be involved in any violent death, and the Swiss Federal Office for Statistics has to be informed of any death of a person living in Switzerland. If a person resident in the agglomeration of Zurich jumps from the Bern Muenster Terrace, this death will appear in the Bern police record, but not in the record of the Swiss Federal Statistical Office referring to Bern. Instead, this death will appear in the statistics of the Swiss Federal Office referring to Zurich and Switzerland. We can exclude the possibility that unknown deaths occurred at the Muenster Terrace. There is a theoretical possibility that a small number of deaths from people jumping in the river have not been detected, but due to several weirs the likelihood of undetected death is extremely low and can be neglected. To investigate the media activity, we scanned all Swiss newspapers using the Swissdok System and collected all articles related to suicides at the terrace or other jumping sites in the city of Bern. Media data were available from 1988. All analyses were calculated using SPSS 11.0.

**RESULTS**

Hypothesis 1: There were no more suicides from the Muenster Terrace after the installation of the safety net. Indeed, no suicides from the Muenster Terrace occurred in the years after the safety net was installed (1999–2002).

Hypothesis 2: The reduction of suicides by jumping from the terrace was associated with a change in the number of people jumping from all sites in Bern. To test this hypothesis, several methods were applied. A numeric decrease was found for the Kirchenfeld Bridge, which is the bridge closest to the Muenster Terrace. Six persons jumped during the 4 years before the safety net installation (1995–1998), but only three during the 4 years after the installation in 1998. However, no statistical analyses can be performed on these small numbers. Using an interrupted time series analysis (Leensars, Moksony, Lester, & Wenckstern, 2003), we first tested whether a significant change between the expected and the observed numbers of suicides by jumping in Bern could be found. If a linear model was applied comparing the time of higher media attention before the installation (1995–1998) with the 4 years after the installation (1999–2002), significantly fewer people committed suicide than expected (95 expected, 44 observed; binomial-test, p < 0.001). It is questionable whether the suicide rate would have continued to increase as would be expected in a linear model. A more conservative approach is to assume that without any intervention (building barriers or other) the number of suicides would have stabilized at a higher level. A mathematical function that comes close to this assumption is the logarithmic curve. The effectiveness of the net in this case can be calculated by the difference between the observed values from 1999 to 2002 and the values of logarithmic curve estimation. If a logarithmic curve estimation was assumed (1995–1998 vs. 1999–2002), the difference between expected and observed num-
bers was still significant (73 expected, 44 observed; binomial-test: $p < 0.01$). We also performed an interrupted time series analysis of the long-term baseline from 1981 to 1997. In the interrupted time series a linear regression serves to estimate the expected numbers of suicides and thus to determine changes and trends (e.g., whether it will continue over time or fade out). When considering a long-term development (1981–1998 vs. 1999–2002), no significant difference was found (52 expected, 44 observed; binomial-test: $n$s).

Which mathematical model can best explain the phenomena? The logarithmic curve estimation and the 4-year linear time series reached a significant level of fit (adjusted $R^2 = 0.927$; $F = 39.21$, $p = 0.025$, respectively, $R^2 = 0.902$; $F = 35.59$, $p = 0.027$), whereas the long-term model did not. This result indicates that the logarithmic curve estimation is the best fitting assumption of the dynamic that took place before 1998.

Finally, we tested whether after the installation a trend between observed suicides and the long-term baseline occurred at the jumping sites of Bern city as a whole. Such a curve suggests a drop after the installation of the net and a return to the baseline a few years later. This analysis, however, failed statistical significance (see Fig. 1).

**Hypothesis 3:** The proportion of suicides by jumping in comparison to other suicide methods was higher in the year of the increased media attention (1997/1998) than before.

We found a highly significant increase of media reports related to suicide by jumping in Bern in the years before the installation of the safety net (data included 1988 to 1998; ANOVA: $F = 189.1$, $p = 0.001$). The number of media reports was particularly high in the period from 1997 to 1998. These data were, therefore, separately analyzed. In the period 1981 to 1998, on average 28.9% of all persons living in the city of Bern who committed suicide did this by jumping from a high place. In the period 1997 to 1998 (the time of the most media attention), this percentage rose to 41.4% (mean). The relation between suicide by jumping and other suicide methods was borderline significant (Chi²-test failed statistical significance, Fisher’s exact test, one-sided: $p = 0.05$). In 1998, a prominent peak was observed. During this year 59.3% of people who committed suicide in the city of Bern did so by jumping from height (see Fig. 2). These data suggest a regional increased popularity of this suicide method.

**Hypothesis 4:** Media reporting correlates with the number of suicides by persons resident outside Bern.

We found a moderate but statistically nonsignificant correlation between the number of media reports and the number of persons coming from outside Bern to kill themselves by jumping in Bern in the years 1988 to 2001 ($r = 0.41$, $p = n$s); the total number of suicides did not positively correlate with the number of media reports. This hypothesis therefore could not be confirmed.

**DISCUSSION**

In the four years after the safety net was built, no more suicides at the Bern Muenster Terrace occurred, and the number of suicides by jumping in Bern decreased. The latter finding is in concordance with Cantor and Baume (1998), Goldney (2000), and other authors who demonstrated that a reduction of accessibility leads to a reduction in method specific suicide rates. The net was mainly built to protect people at the bottom of the terrace, it does not completely surround the terrace and jumping at the west side would still be lethal. The effect of the net on the terrace is, therefore, at least partially a psychological one: and the elimination of suicides not exclusively a physical consequence due to obstruction.

We used three different methods to calculate statistical differences before and after the installation of the barrier. The results suggest that the best fitting model is the logarithmic model, which suggests a significant reduction of suicides by jumping after the installation of the net. This method indicates an increase of suicides in the years 1997/1998 rather than a decrease from the
baseline. In the years before the installation of the safety net an average of two suicides per year was observed at the terrace. Assuming that two suicides per year could be prevented, more than 30 years of data would be needed to reach statistically significant results of the influence on the total number of suicides in Bern City. The reduction of the deaths by jumping from the Muenster Terrace does not explain the decrease of suicides by jumping in Bern, but it is plausible that as a result of stopping the suicides at the terrace (e.g., through a drop in the number of suicide reports in the media), the barrier had an indirect preventive effect on other jumping sites.

When estimating the trend in all suicides by jumping after the barriers were installed, the data presented here suggest an initial reduction below the long-term baseline with a slow return. In other words, the barrier may have had an overall, but time-limited life saving effect. This result is supported by Gunnell and Nowers (1997) and Fischer et al. (1993), who pointed out the possibility of short-term effects. However, the nature of this effect must be examined. We believe that it is more than the Hawthorne effect where any intervention leads to the targeted goal for a short time. As we indicated above, an installation of a physical bar-
rier has an effect which reaches beyond physical obstruction. It may influence the dynamics of suicide actions or suicide plans, or it may be perceived as a sign of care.

In the years before 1998 the Muenster Terrace and "jumping as a method to commit suicide" received increased public attention. From all suicides in the city of Bern, the percentage of those who committed suicide by jumping from height rose from 24% to 59% during the years 1997–1998, a figure that is as high as in Singapore (Ung, 2003). In this period the number of suicides by jumping was accompanied by a higher number of media reports focusing on this topic. Therefore, the most likely factor responsible for this rise appears to be the increased reporting on suicides by jumping at Muenster Terrace. This is consistent with the findings of several authors (e.g. Blohm & Puschel, 1998; Marzuk et al., 1993; Stack, 2003) who investigated the influence of media reporting on suicidal behavior. The increased media attention to the terrace suicides most probably had an influence not only on terrace suicides but on the total number of suicides by jumping. Reports about suicide by jumping may have activated the specific suicide ideation "ending one's life by leaping off the Muenster Terrace" (Werther effect, e.g., Frei et al., 2003)

![Graph showing suicide by jumping and media reporting](image_url)

*Figure 2. Suicide by jumping and media reporting.*
or the less specific ideation "jumping is a possible way to kill oneself." This appears above all to have been the case for persons living outside the city of Bern. The most plausible explanation for this finding is that media reports increase the knowledge of the existence of a hotspot in this population, whereas people living in Bern already know about it.

Our study has several limitations. The overall small numbers of suicides limit the power of the statistical analyses. We cannot exclude that the increase of suicide by jumping during the time of high media attention (1997–1998) is related to extreme but unrelated fluctuations with a random synchronicity. We only covered the first 4 years of observation after the net was installed. We included the full 1998 data in the pre-installation time span although the barriers were in place in mid-December. Time series based on a 4-year period are sensitive to small fluctuations. Therefore, our results have to be interpreted with caution. No Bonferroni correction for multiple testing was applied. The power of the data did not allow us to test for transfer effects to other suicide methods; however, this should not be a reason for not installing further barriers at suicide sites. Furthermore, other aspects that were not investigated in this study, like protecting bystanders from the massive traumatization, are also worth all our efforts to reduce the accessibility of suicide hot spots.

REFERENCES


Manuscript Received: May 18, 2004
Revision Accepted: December 20, 2004
Suicide From the Golden Gate Bridge

Mel Blaustein, M.D.
Anne Fleming, M.D., M.S.

The Golden Gate Bridge is the number one suicide site in the world. In this clinical case conference, the authors begin by presenting vignettes to capture the diversity of bridge suicide. They then examine the demographic characteristics of those who commit suicide from the bridge as well as the fatal attraction of the Golden Gate Bridge. Interviews with jump survivors and potential jumpers are presented, and the authors examine the evidence for the efficacy of suicide barriers.

(The Journal of Psychiatry 2009; 166:1111–1116)

“The Golden Gate Bridge is practically suicide proof. Suicide from the bridge is neither possible nor probable.”

—Chief Engineer Joseph Strauss, 1936

The Golden Gate Bridge is a magnificent architectural accomplishment. At its completion in 1937 it was the longest suspension bridge in the world. On May 27, the day before the bridge opened to traffic, a weeklong Golden Gate Fiesta began. Al Jolson sang, fireworks went off nightly, caravans came from the western states and from Mexico and Guatemala. Canadian Mounties, Alaskan dogsleds, and even a Chilean naval vessel took part in the festivities. By the end of that first day, as many as 200,000 people had crossed the bridge. On May 28, President Franklin Delano Roosevelt pressed a telegraph key in Washington announcing to the world the opening of the Golden Gate Bridge (1).

The bridge is 1.7 miles long and 90 feet wide. The roadway sits 220 feet above the water, and the towers rise another 500 feet above that. Two main cables containing 80,000 miles of wire pass over the towers. The bridge is painted international orange, blending with the sea and land. Driving or walking across the bridge offers vistas of San Francisco, Oakland, Berkeley, Alcatraz, and the San Francisco-Oakland Bay Bridge to the east and the Pacific Ocean to the west. More than 100,000 cars cross the bridge daily, or about 40 million annually. It is reportedly the most photographed man-made structure in the world.

But this colossal edifice has another, darker, side. Arguably the most beautiful bridge in the world, it is also the most lethal. The Golden Gate Bridge is the number one suicide site in the world. Bridge suicide counts are based on bodies recovered, which by 2008 was over 1,300. Bodies washed out to sea, jumpers witnessed but not found, and unclaimed cars in the parking lot are not counted. The actual number of deaths is probably closer to 2,000.

Three Vignettes

Billy

Billy was an 18-year-old high school student whose father was a physician and whose mother was an artist. His mother had a remote history of depression prior to Billy’s birth, and his paternal grandmother had a psychotic depression that was responsive to ECT. At age 13, Billy told his father that he had thoughts of jumping off something high. The family persuaded him to enter therapy, which he did from ages 13 to 15. He never took medication. He attended a private school, where he was doing well, although his homework was frequently late. He scored 1400 on the SAT and received early college acceptance. He did not smoke, drink, or take drugs.

His parents did not see him as depressed. He was well liked and had a girlfriend. As he once told his mother, “I’m not the most popular kid, but there’s no one who doesn’t like me.” The week of his suicide he was behind on a school paper and could not push himself to complete it. After arguing with his mother, he told her, “All I can think about is death.” Since the late paper was about the Space Shuttle Challenger disaster, she did not appreciate any suicidal intent.

The following day, Billy did not show up at school. He was seen jumping from the bridge later that afternoon wearing a backpack. At his funeral, the entire student body turned out.

Melissa

Melissa was a 49-year-old single woman with schizophrenia who lived at a board-and-care home in San Francisco, where one of the authors (M.B.) was the house doctor. She was raised in Kansas, the youngest of four children; her father, who may have been mentally ill, left the family when she was 6 years old. Melissa completed high school and some college in San Francisco and held various jobs, including with the telephone company, secretarial agencies, and the Department of Social Services. Her first psychotic break occurred at age 27. She had approximately 10 hospitalizations over the next 12 years. She made five suicide attempts by overdose during this time, plus two trips to the Golden Gate Bridge.
At age 34, she had a daughter, who was adopted by her sister. She entered the board-and-care home at age 39 and did well for 10 years. She had periodic exacerbations of her auditory hallucinations but no hospitalizations. After this period of stability, she had three hospitalizations within a year and a half. After her third hospitalization, she said, "I’m sick and tired of everything. I wish I could throw myself in front of the BART train." After her discharge, she began a trial of clozapine, at that time the newest and most promising of the antipsychotic medications. She experienced many side effects, and she talked of being "over the hill" and feeling hopeless about her continuing hallucinations.

One month shy of her 50th birthday, she took a bus to the Golden Gate Bridge and jumped. She left her Social Security check and a note for her daughter.

**Steve**

Steve committed suicide at age 46, leaving behind his wife of 10 years and two young children. Three years before his death, he earned $1 billion for his investors and was recognized in financial publications.

Steve was raised in an affluent area north of the Golden Gate Bridge. His father was a corporate attorney with depression, and his mother was described as rejecting and critical. His parents divorced when he was 17, and his father's career went downhill from there, with financial losses, alcoholism, and depression. Steve put himself through college, graduating magna cum laude, and completed graduate school in engineering at a top university.

He met his wife at college. They dated for 6 years and married when he was 33 and she 29. Six years later, the first of their two children was born. Steve did well in the financial industry. He was outgoing and social and very successful—"the last guy to have depression," according to his wife. During the dot-com crash his investments did not do well, and he was fired. He had many offers in the subsequent years, but nothing seemed to fit.

Steve was seeing a psychiatrist on a regular basis during the last 3 years of his life. He was being treated for anxiety, depression, and alcoholism. His drinking had escalated after his job loss. There were periods of alcohol abuse and inappropriate use of prescribed medications.

In the last year of his life his psychiatric sessions were permeated with depressive themes—"blown opportunities," "washed up," "so much pressure," "don’t think there’s a place for me." During the 2 days before his death, he did not sleep and was described by his wife as anxious, tearful, and restless. He saw his psychiatrist the day before his death and denied being suicidal, saying he could never do that to his children.

Steve left the house late that night and drove to the Golden Gate Bridge, crossing over the northern side and returning to stop mid-bridge. He jumped at 2 a.m., facing away from the city, toward the Pacific Ocean.

He left a note to his wife telling her how much he loved her and the children and saying, "I wish I had been stronger and better able to handle life’s pressures."

**Why the Golden Gate Bridge?**

What attracted these three individuals to the Golden Gate Bridge? In the case of Billy, his mother reports that he was always fascinated by heights. Melissa had made several trips to the bridge. Steve’s wife said that her husband loved the bay and loved to sail. She believed the bridge was a logical choice to give him "freedom from his pain."

The Golden Gate Bridge is an iconic suicide magnet. For some, the bridge is an easily accessible site—pedestrian access, a 4-foot railing, a bus stop, and a parking lot. For others, the bridge is a romantic final exit. Some believe bridge suicide is a painless death. One jumper reportedly left a note on the bridge reading, "Why do you make it so easy?"

The first author is the medical director at one of the hospitals closest to the bridge. From 2005 to 2008, he interviewed 63 individuals who had threatened to go to the bridge to commit suicide (49 of them were male; their mean age was 38 years, with a range from 18 to 72). The reasons they gave for selecting the bridge included "accessible/easy" (N=36), "romantic" (N=15), "painless" (N=6), and other reasons listed as "not categorized" (N=16). Representative of the "accessible/easy" category were comments such as "didn’t have a gun," "close to my house," and "a quick way to go." Responses in the "romantic" category included "looks so majestic," "the only golden way of getting into heaven," and "you’re with all those people who jumped before." Responses in the "painless" category included "they claim you don’t feel nothing" and "it would be over in a matter of seconds." The "not categorized" responses included "don’t make no difference," "tired of life," and "isn’t that what most people do?"

There is a misconception that jumping from one’s death from a bridge into a body of water is painless. Jumpers from the Golden Gate Bridge fall over 200 feet and hit the water in 4 seconds at 75 mph. They die from massive cardiothoracic and CNS injuries or by drowning.

The fatality rate is about 99%. The first author interviewed three of the 28 known survivors. One survivor wrote that he had previously tried pills and alcohol but wanted something definitive. "I had to do something that was going to work. The statistics were pretty good that I would die and never be found. That’s really what I wanted, to be lost and never found." Another survivor also had tried pills previously and went to the bridge because it was "for sure."

A third male jump survivor said, "It’s the easiest way to die.... It’s beautiful, the only bridge I could get to from my
house.... My disease was driving me nuts ... voices were saying you must die.... I'm just tired of fighting this ... I'm tired of being sick.... I figured if I jumped I'd just die."

A 22-year-old depressed man who was taken twice from the Golden Gate Bridge in 2009 and hospitalized but did go on to commit suicide from the bridge told the first author that it was "scenic ... a place to commit suicide."

Rosen (2) interviewed six bridge survivors. All of them said their suicide plans involved only the Golden Gate Bridge. In explaining their choice of the bridge, their comments included "an affinity between me, the Golden Gate Bridge, and death," "entering the golden doors," "certain death in a painless way," and "notorious fame."

Demographic Characteristics of Bridge Suicides

The Golden Gate Bridge is the most popular suicide site in the world. Table 1 presents data from the Marin County Coroner's office on bridge suicides for the past 14 years. The toll is about two deaths per month, over 20 annually. The highest number in recent years was in 2007, with 35 deaths, but in actuality there were four more deaths based on witnessed jumps and surveillance camera records.

A report on data from the Centers for Disease Control and Prevention through 2005 (3) lists suicide as the 11th leading cause of death in the United States. Of the 32,637 deaths by suicide in 2005, 683 were by falls—2.1% or 0.2 per 100,000 population. The report does not distinguish bridge suicides from other falls from heights.

We reviewed data from the Marin County Coroner's office (unpublished 2006 data) to examine demographic characteristics of bridge jumpers from 1995 through 2005. In that 11-year period, 225 bodies were recovered. The majority were male (74%) and white (82%). Ages ranged from 14 to 85 with a median of 40. Overall, 55% had never married, 23% were divorced, and 21% were married.

Those who commit suicide from the Golden Gate Bridge do not appear to be a more mentally ill population than suicides in general. The Marin County Coroner's data from 1995 to 2005 indicate that approximately 40% were under psychiatric care at the time of their deaths. Twenty-two percent had made prior attempts, and one-quarter left suicide notes. The majority were believed to be employed, but we do not have firm data on employment.

Bridge suicides are committed by local residents. The Coroner's data for "last known hometown" indicate that 87% lived in the nine counties adjacent to the bridge, with San Francisco County representing 30% of the sample. It is commonly believed that people come from all over to jump from the Golden Gate Bridge. In fact, only 5% of jumpers in the 1995–2005 period were non-Californians. This local phenomenon is mirrored at Niagara Falls, another tourist attraction and suicide magnet. A study of the period between 1978 and 1988 found that the 141 individuals who committed suicide at Niagara Falls lived within a 10-mile radius, in the United States (N=60) or Canada (N=81) (4).

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*Data from the Marin County Coroner's office.

Discussion of Cases

Golden Gate Bridge jumpers come from all walks of life. While depression is the most common cause of suicide, many jumpers act impulsively as a consequence of acute stress, shame, humiliation, rejection, or other trauma. Jumpers have included a county medical society president, a pastor of a Lutheran church, a president of the Oakland Real Estate Board, the founder of Victoria's Secret, and the son of President Kennedy's press secretary.

Our cases include an 18-year-old male adolescent, a 49-year-old mentally ill woman, and a 46-year-old married man. They all chose to end their lives at the Golden Gate Bridge.

Billy

Suicide by young people is especially tragic. Suicide is the third leading cause of death among 15- to 24-year-olds in the United States. In the Coroner's 1995–2005 survey, suicide among those under age 24 accounted for 34 of 225 deaths (15%).

Billy's profile does not include many of the predictive factors for adolescent suicide (5), such as prior attempts, mood disorder, substance abuse, chaotic family life, recent loss of family or friends, hopelessness, and social isolation. In fact, the only areas where he does fit is male sex, Caucasian race, family history of depression, and experience of a recent stressor.

No one expected Billy to go to the bridge that day. As his best friend later wrote to one of the city papers as well as the mayor and the Golden Gate Bridge Board of Directors, Billy's life provided more reasons for him to be happy than to be suicidal. "Why, then, did he jump?" asked Billy's friend. "The only explanation I can find is that he never stopped to think it through. He didn't tell anyone and he didn't leave a note." His friend's comments underline the impulsive nature of Billy's suicide. We should add that adolescents are especially prone to suggestion and copycat behavior, but we are unaware of any recent deaths among Billy's peers.
**Melissa**

The prevalence of suicide among patients with schizophrenia is estimated to be as high as 10% (6). Melissa had been ill for more than 20 years, but her death was a surprise. She had many protective factors. She was living in a supportive setting. Her mother and sister lived in the neighborhood. She was able to visit her daughter, who was in her sister’s custody. She did not abuse alcohol or drugs. She was attending a day care center and was being seen regularly by the house psychiatrist, who led groups and monitored medications. The home was a lovely Victorian mansion where Melissa lived for over 10 years with 25 other residents as well as the owners and their children.

Melissa was also in good health. She was on the newest antipsychotic, clozapine, which has been shown to reduce the risk of suicide (7). However, she had been hospitalized three times in the last year and a half of her life. The most recent admission preceded her death by 5 months. She was depressed and felt hopeless, discouraged that the new “miracle drug” had not stopped the voices, which repeated “Hosanna” to her. Another resident had committed suicide that year. Melissa’s relationship with her boyfriend was rocky. She told him her plans; he told no one.

**Steve**

Depression and substance abuse are significant risk factors for suicide. Steve is the most typical of those who commit suicide from the bridge: male, white, middle-aged, depressed, drinking—all factors associated with an increased risk of suicide (8).

Steve’s wife reports that when they met in college, he did not drink. With the loss of his job, drinking and anxiety medications became problematic. At the end of his life he was attempting to withdraw from alcohol and benzodiazepines, but on the night of his death he was drinking. His ongoing therapy indicated a depressive disorder with themes of failure, low self-esteem, and shame.

He was unable to find work after a 4-year period of unemployment. One could conjecture that he had a narcissistic character style, not allowing him to accept a position below his self-image. Steve’s death was a product of many currents—depression, substance abuse, and possible character pathology and impulsivity.

Steve left his car and jumped from the west side facing the ocean, unlike the more than 80% of people who jump facing the city, perhaps taking a last look at civilization. The sidewalk on the east side has longer hours and both pedestrian and bicycle access, while the sidewalk on the west side has limited hours and only bicycle access.

**Prevention**

The cases of Billy, Melissa, and Steve highlight the tragedy of the many lives lost at the Golden Gate Bridge, and this tragedy raises the question of whether suicides from the bridge are preventable. There is little debate that barriers are effective in reducing suicides at a given location. Deterrents at other monuments, such as the Eiffel Tower, the Empire State Building, and the Harbor Bridge in Sydney, Australia, have virtually eliminated suicides at these sites. However, it is not as clear whether barriers would prevent suicides or instead divert individuals to other locations or methods, leaving the total number of suicides unchanged. Below we examine the evidence as to whether a barrier on the Golden Gate Bridge would likely be effective.

It is difficult to evaluate the efficacy of suicide barriers. All studies of barriers are necessarily observational. Also, in all published studies, suicides at the studied site have constituted a low proportion of total suicides in the surrounding area, making it difficult to determine whether a barrier reduced the overall suicide rate. However, there is an extensive literature on suicide prevention through the reduction of access to lethal means, and this literature can provide insight into the potential efficacy of suicide prevention barriers.

Many observational studies suggest that reducing access to lethal means is an effective strategy in reducing suicide. For example, Kreitman (9) examined the effect of a change in the gas supplied to homes on the suicide rate in England. When lethal coal gas was used, one-third of suicides in England were due to asphyxiation by this gas. After nonlethal natural gas was substituted, the suicide rate in England fell by over 25%. Kreitman concluded that this drop in the national suicide rate was a direct result of the change in the lethality of the gas. Gunnell et al. (10) found a 50% reduction over 10 years in the suicide rate in Sri Lanka after several highly lethal pesticides were banned. In a 2006 systematic review of suicide prevention strategies conducted by experts from 15 countries (11), the authors found that reducing access to lethal means was an effective way to prevent suicide. The overall efficacy of means reduction supports the hypothesis that a suicide barrier would also be effective in reducing suicide.

In addition to the data on means reduction, there are some data specifically about suicide barriers. In 1985, a suicide prevention barrier was built on the Duke Ellington Memorial Bridge in Washington, D.C. In the 7 years before the barrier was built, 24 people committed suicide at the site, whereas only one person died by suicide in the 5 years after. Although the nearby Taft Bridge is visible from the Ellington Bridge, has no barrier, and is a short walk away, there was no increase in suicides from the Taft Bridge following the construction of the Ellington barrier. In addition, there was a significant decrease in the suicide rate in Washington, D.C. (12). However, this decrease (from an average of 76.5 to 71 people a year) was greater than the annual number of people who jumped from the Ellington Bridge. It is possible that the Ellington Bridge barrier contributed to the decrease in total suicides, but it is also possible that other factors contributed to or accounted for the decrease.

Another set of data comes from a barrier built in 1983 on the Augusta River Bridge in Maine, where 14 people had previously jumped to their deaths. The barrier eliminated suicides from the bridge. A study of suicides in the area during the two decades before and after installation of the barrier (13) found no increase in jumping from nearby
high structures, and the city of Augusta had a greater re-
duction in its suicide rate than the reduction seen in the
surrounding area during the same period. Another ex-
ample is the safety net installed in 1998 at Muenster Terrace
in Bern, Switzerland, a former suicide “hot spot” in that
country. There were no further suicides from the site even
though the net did not completely cover the terrace and it
was still possible, although more difficult, to jump from
the site. There are two other high bridges within a 5-
minute walk of Muenster Terrace, but there was no in-
crease in jumps off other high structures in the city. After
the installation of the net, there was a significant reduc-
tion in jumping fatalities in Bern (14). Similar to the partial
net in Bern, a barrier was installed in 1998 on the Clifton
Suspension Bridge in Bristol, England. Even though the
barrier does not cover the entire bridge, it halved the num-
ber of suicides at that site (from 8.2 to 4 a year), and no in-
crease was seen in jumps from surrounding structures
(15). These four examples suggest that constructing a bar-
rier does not divert suicidal individuals to jump off other
high structures and possibly also reduces total suicides.

As opposed to the previous examples in which a barrier
was newly constructed, Beautrais (16) looked at an exam-
ple of a bridge at which a suicide barrier was removed.
Comparing the 3 years before and after the removal of the
barrier, the author found that suicides increased from
three with the barrier in place to 15 after it was removed—
a statistically significant result. However, the overall rate of
suicide by jumping in the city did not change, as jumping
deaths from other structures decreased—although this
decrease was not statistically significant.

Reisch et al. (17) examined the association between ac-
cess to jumping sites and suicide rate. They conducted an
analysis of suicide rates throughout Switzerland, compar-
ing areas with and without high bridges. They found lower
suicide rates in areas without high bridges. The authors
concluded that two-thirds of suicides from high bridges
would be prevented if no bridge were available and that
only one-third of people who died by jumping would be
expected to substitute a different method.

Overall, the data on barriers at jumping sites show that
they are effective in reducing suicides from the site itself.
In addition, no study has found an increase in suicides
from other nearby structures after a barrier is built. Finally,
some studies have found a reduction in the local suicide
rate after the construction of a barrier, although no study
has found a statistically significant reduction.

There are some data specifically about the Golden Gate
Bridge. In 1978, Seiden (18) studied people who had been
physically restrained from jumping off the bridge by the
California Highway Patrol or workers on the bridge. He
traced 515 people who had attempted to jump off the
bridge between 1937 and 1971. As of 1978, he found that
94% either were still alive or had died of natural causes,
and only 6% had committed suicide or died in accidents
suggestive of suicide. His study supports the idea that sui-
cide from the Golden Gate Bridge is preventable; that is, if
someone is prevented from jumping off the Golden Gate
Bridge, they are not likely to go on to commit suicide else-
where or in the future.

We have several hypotheses for how a suicide barrier at
the Golden Gate Bridge might work to prevent suicide. The
first is that a barrier would reduce access to lethal means,
and this is an effective method of suicide prevention. The
second is that given the high lethality of jumping from the
Golden Gate Bridge, even if some people are diverted to
another method, the attempt is less likely to be lethal, and
they are more likely to survive. A third, proposed by Reisch
and Michel (14) is that a barrier may be interpreted by sui-
cidal individuals as “a sign of care” and possibly reduce
their despair. Finally, and most speculatively, there is the
hypothesis that certain sites become “suicide magnets”
and may even catalyze or amplify suicidal feelings in vul-
nerable individuals. Glenn (19) has written about suicide
magnets: easily accessible, romanticized places that be-
come associated with suicide in the public mind.

Evidence that the Golden Gate Bridge serves as a suicide
magnet is provided by Seiden and Spence’s study (20) of
individuals who jumped from either the Golden Gate
Bridge or the Bay Bridge, both of which connect to San
Francisco. The bridges were built within 1 year of each
other, have similar heights, and are similarly lethal to
jumpers. Seiden and Spence looked at individuals who
drove onto either bridge to kill themselves. (They excluded
suicides in which the person walked onto either bridge, as
the Golden Gate Bridge has pedestrian access while the
Bay Bridge does not.) They found that between 1937 and
1979, 58 people drove across the Bay Bridge to commit sui-
cide from the Golden Gate Bridge. However, no one drove
across the Golden Gate Bridge to commit suicide from the
Bay Bridge. This suggests that the Golden Gate Bridge has
a powerful association with suicide in the minds of some
individuals, to the extent that they would drive over one
potentially lethal bridge to die at another.

Given the suggestive nature of suicide (19) and the
powerful association of the Golden Gate Bridge and sui-
cide, it is possible that the Golden Gate Bridge and other
suicide “icons” not only function as easily accessible,
highly lethal spots for suicide but also may trigger or am-
plify suicidal feelings in vulnerable individuals. If so, a bar-
rier at such a site could be particularly effective in reduc-
ing suicide.

While it is impossible to make a conclusive statement
about the potential efficacy of a suicide barrier on the
Golden Gate Bridge, the strong evidence that reducing ac-
cess to lethal means prevents suicide supports the hy-
pothesis that a suicide barrier would be effective. In ad-
dition, the limited data specifically regarding barriers also
support the hypothesis that a barrier would be effective.

Concluding Comments

A suicide barrier might have saved the lives of Billy, Mel-
issa, and Steve. Here is what one survivor had to say about
his walk to the middle of the span:
I just looked out over the water to the city and it was
beautiful. I felt that this was the right time and place to kill
myself. The last thing I saw leave the bridge was my hands. It was at that time that I realized what a stupid thing I was doing. And there was nothing I could do but fall. The next thing I knew I was in the water hoping that someone would save me, saying, "Please God save me, somebody save me." It was incredible how quickly I had decided that I wanted to live once I realized everything that I was going to lose, my wife, my daughter, the rest of my family.

He is currently in his thirtieth year of marriage. He is a high school teacher and part-time coach. His daughter is an elementary school teacher.

Postscript

After years of effort on the part of multiple organizations, the Psychiatric Foundation of Northern California, with the support of its task force, family members of suicide victims, mental health advocates, the press, and others, persuaded the 19-member Golden Gate Bridge Board of Directors to approve a barrier. The public was divided because of aesthetic issues, financial concerns, and ignorance about suicide. On October 10, 2008, the Board voted 14 to 1 to build a flexible water steel net below the bridge. This approval is an important first step. Construction of the net is pending, however, until further environmental studies are completed and a funding plan developed and approved. No start date for construction has been established.

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References


How Does a Bridge Suicide Net Work?

by John M. Grohol, PsyD
October 13, 2008

As we noted a few days ago, the Golden Gate Bridge is finally getting a suicide barrier. However, it's not so much a barrier as it is a net. A steel net, to be specific.

The net will be suspended from either side of the iconic span, and reach out about 20 feet. Out of the five barrier proposals considered, this is the only suicide barrier that will not interfere with tourists' view from the bridge. It will also allow the 16 painters employed on the bridge to continue their current work routines (the other four barriers would've required additional effort and risk for the painters to do their work).

When people jump from the bridge into the net, it will hold them there, suspended some 740 feet over the entrance to the San Francisco Bay.

Denis Mulligan, the chief engineer of the bridge, recently explained to the San Francisco Chronicle how the net works — it envelops the suicide jumper, making it difficult, but not impossible, to get out:

"It wouldn't be like a trampoline, that once you jump onto, it would be easy to jump off," Mulligan said. But, he added, "If you're very agile, very strong and focused, you may be able to climb out."

The net will be angled and constructed in such a way as to make climbing out of it difficult. The 20 foot drop a person takes into the net will also likely be painful. The paper also described how the process would work in retrieving a person from the net:

During a rescue operation from the net, authorities would shut down a lane of traffic. A specialized vehicle, called a "snapper" truck, would be brought in. Equipped with a mechanical arm similar to a cherry picker used by utility crews, two specially trained rescue workers would be lowered down to the net in a bucket to pull the person out.

A similar net was installed in Bern, Switzerland. According to the paper, "Researchers found that just the presence of the net stopped people from even trying to jump off the Munster Terrace, a medieval cathedral located in the old section of Bern, from which two or three people had been leaping to their deaths every year. They also found that the net did not shift suicides to other locations."

Will it work on the Golden Gate Bridge? Prior research suggests that it will at least cut down on the number of successful attempts from the bridge.

After installation of suicide barriers on the Clifton suspension bridge in Bristol, England, researchers found a significant decline in the number of successful suicides from the bridge. Importantly — and contrary to conventional wisdom — the researchers did not find an increase in jumps from other buildings or bridges in the area. In other words, people didn't just go find another bridge to jump from.

A net is likely a less effective suicide barrier than a properly designed fence would be. It is hypothesized, however, that the net will work to take away the impulsiveness of the suicidal act. If you know ahead of time that the net is there, and will make it extremely painful and difficult (and in some cases, impossible) to actually complete the act, it's likely most people will simply not bother trying.

Reference:

Steel net preferred for halting bridge jumpers. San Francisco Chronicle

Dr. John Grohol is the CEO and founder of Psych Central. He has been writing about online behavior, mental health and psychology issues, and the intersection of technology and psychology since 1992.
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A Comprehensive Plan for Suicide Prevention, Education and Awareness
A Comprehensive Plan for Suicide Prevention
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Principal Author & Senior Advisor, NYS Suicide Prevention Strategy & Plan
Member, NYS Suicide Prevention Council (2002-2006)

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Executive Summary

Of all the challenges posed by suicide, one of the most difficult is the widely-held belief that we can do little to prevent or control such destructive behavior.

Depression is a primary cause of suicidal behavior. Depression is treatable in 80% of cases which means most suicides are preventable. Educating the public to this truth is critical to the efforts at making our communities safe from suicidal behavior.

The Golden Gate Bridge is the most studied bridge in the world as it relates to suicide risk management. Many years of study at the Golden Gate conclude that if a suicidal person can be helped through his/her crises, one at a time, chances are extremely good that he/she won’t die by suicide later. The difference between entertaining suicidal thoughts and acting on them can be as basic as having a casual encounter with a person - anyone - who exhibits concern and empathy.

The ambivalence of bridge jumpers and survivors points to a key strategy for saving lives:

*Maintaining a human connection with a suicidal individual is the best way to ensure that person’s survival.*

These findings underscore the need for a universal hotline service able to reach individuals in remote locations, including the walkways on bridges, and provide emotional support and advice to those in danger of harming themselves.

Constructing a ‘Human Barrier’ against Suicide

Preventing suicides on NYSBA’s bridges will most likely occur if we recognize the situation for what it is: a mental health problem that won’t be solved by a technical ‘quick fix’ in the form of a ‘curtain of steel’ twenty miles long (the approximately length of all the spans of the five bridges).

Rather, it will only be solved by addressing the needs of the people who are drawn to these bridges out of desperation by partnering with mental health professionals who know how to assess, refer and treat those in danger of self-harm.

NYSBA can instead construct a ‘human barrier’ that will outperform any physical barrier and save more lives. Moreover, it will do so without posing dangers to the motoring public as a physical barrier on the bridges could do.
A System-Wide Solution

Based on the advice of mental health professionals, the most appropriate approach for the NYSBA is to implement a comprehensive package that utilizes technology, awareness and informed intervention.

It is neither appropriate nor sufficient to deny access to the bridges by pedestrians. These spans are historic and integral components of the federally designated Hudson River Heritage Area. Previous discussions about limiting access have resulted in strong opposition from historic, environmental and cultural institutions.

The NYSBA also must keep its primary function, the efficient and safe passage of vehicles across the Hudson River, in mind. Certain barriers will significantly impact regular inspection and maintenance operations, cause extensive delays and costs in implementation, and divert the Authority from its primary task.

In addition, limiting access might temporarily defer a potential suicide attempt, but does nothing towards the desired outcome of long-term suicide prevention. Getting appropriate help to those who need it is the best approach.

Every feasible effort to prevent a potential suicide should be made. To this end and after extensive review of suicide mitigation efforts by bridge and transportation agencies both nationally and internationally, the following summarizes the results of the investigation.

In addition, this solution may serve as a prototype for other entities in similar situations. Results of our study have been requested by the International Bridge, Tunnel & Turnpike Association (IBTTA) and several individual facility operators around the nation.

This analysis keeps in focus two primary points:

- Incidents of suicide (attempts and completions) are low,

- However, the Authority recognizes the emotional and public impact of this type of suicide and desires to take all reasonable actions available to uphold its public stewardship and responsibility.

The NYSBA Plan for Suicide Prevention & Saving Lives

- Implementing A Suicide Prevention Hotline Service On Every Bridge
- Conduct Education & Awareness Campaigns For The Community
- Emergency Call Training For Personnel
- Re-Emphasize Random Patrols
- CCTV Cameras Will Continue To Be Added To Bridges
Suicide Prevention Hotline Services

Professionals in the field of mental health overwhelmingly agree that qualified intervention is the best way to try to stop a potential suicide and establish a process for long-term prevention of suicide.

Getting the potential victim to make the call or seek help is an ongoing challenge. Awareness of the option and the ability to make the call are additional factors.

The most significant change since the last time this issue was examined by the NYSBA is that a centralized, nation-wide suicide prevention hotline now exists. Lifeline will provide a connection/referral service to a qualified suicide prevention counselor from anywhere in the country via a 1-800 phone number. The issue of where to send the call for locations other than the MHB has been solved.

NYSBA will implement a direct communication system to Lifeline on the Bear Mountain Bridge (BMB), Newburgh-Beacon Bridge (NBB), Kingston-Rhinecliff Bridge (KRB) and Rip Van Winkle (RVW) Bridge as soon as possible, starting with the KRB. The successful system on the Mid-Hudson Bridge (MHB) will be maintained.

Education & Awareness

While not detracting from our primary mission, the Authority, as a public entity with extensive contact with the community, will also play a role in education and awareness by making use of its facilities and resources to inform the public that suicide is a serious, and largely preventable, act.

NYSBA will also partner with the Hudson River Coalition for the Prevention of Suicide to increase awareness and assist their efforts to address this serious issue.

A combination of signage, access to Lifeline and assistance in promotion of the help available to potential suicide victims are all aspects that the NYSBA will implement.

Media coverage of potential suicide on bridges can have a significant impact. The "copycat" syndrome is well documented. Media awareness of their impact on suicide prevention is important.

In addition, the media can serve a vital role in making the public aware of the real issues involving suicide and the alternatives available.

With the assistance of the Hudson Valley Suicide Prevention Coalition and St. Francis Hospital, the NYSBA will sponsor an educational seminar, hopefully in partnership with media outlets throughout the Hudson Valley, to increase public awareness that suicide is largely preventable and that preventative help for those in mental distress is available.
Emergency Call training for personnel

Whether it's a potential suicide, security threat, bomb threat, traumatic accident or any other emergency situation, how our personnel respond is important. Whether it is by motorist aid call box, cell phone call or physical encounter – our personnel will receive additional training in procedures for receiving an emergency call.

The New York State Police have an effective training program for their civilian dispatchers. They are given the primary do's and don'ts, a protocol to be followed and some basic techniques that allow the call to be taken and fully trained emergency services to be dispatched in the most professional and expeditious manner possible.

In addition, basic protocol exists should any person encounter a potentially suicidal individual. Mental health professionals will assist NYSBA in developing this protocol specifically for the type of situations a bridge employee might face.

NYSBA will make it clear that our employees are not crisis intervention specialists and will not be tasked with a role more appropriately accomplished by trained emergency response personnel.

Our personnel will be given the same level of emergency call response training and guidelines should they personally encounter a situation on one of our structures.

Patrols

Patrols are regularly conducted by law enforcement agencies and bridge personnel. These patrols are random. Patrols will be re-emphasized and additional training will be sought for bridge personnel (see above).

CCTV

Monitoring by remote cameras is already available on a number of the spans. These cameras are used primarily for internal traffic information. They may also be used as an emergency response and security tool.

The multi-year project to add security cameras will continue.
Key Points

NYS Bridge Authority Action

Because suicide from a Bridge Authority facility has a public impact beyond the individual tragedy, the Authority will act to try to prevent even these very low incidences.

We have conducted extensive research and sought the best advice from mental health professionals on how to address the issue. We have also worked to solve technical issues that prevented the system used at the Mid-Hudson Bridge from being used at other facilities.

The Comprehensive Plan is the culmination of the 'best practices' conclusions of our technology department and advice and direction of state and national experts in the field of suicide prevention.

The objective is to implement a plan to construct a 'Human Barrier' by providing immediate mental health services to anyone in crisis at an Authority facility.

Incidents of Suicide at NYS Bridge Authority Facilities

Incidents are few and rare. For the last year in which suicide statistics are available (2004), suicides at Authority facilities comprise less than 1/20th of 1% of suicides in NYS, and NYS has one the lowest suicide rate of any state in the nation.

Until the two recent incidents at the one facility in late 2006, there had been no suicide at any Authority facility in more than 2 years. (The NYS Bridge Authority has not kept specific statistics regarding suicide incidents; the following data is compiled from a variety of news reports):

2006  Kingston-Rhinecliff Bridge (2)  2004  Bear Mountain Bridge (1)
2003  Rip Van Winkle Bridge (1)  2003  Kingston-Rhinecliff Bridge (1)
2002  Mid-Hudson Bridge (1)

Beginning with the installation of the Lifeline Network, the Bridge Authority will keep data on bridge incidents that we are made aware of.

Public Comment & Discussion of Suicide

Long-standing written policy of the NYS Bridge Authority is to not comment on specific instances of suicide in concurrence with the advice of mental health professional that such discussion could lead to further tragedy and the well documented “copycat syndrome”.

The Bridge Authority has been advised to and will continue to follow this sound advice in any discussion of suicide prevention measures. We will discuss these measures at an appropriate time and place with the focus on preventative action. The Bridge Authority will not indulge any effort to sensationalize the issue or otherwise jeopardize the lives of vulnerable individuals.
A COMPREHENSIVE PLAN TO PREVENT SUICIDES
AND SAVE LIVES ON NYSBA BRIDGES

Gary L. Spielmann, MA, MS
Former Director of Suicide Prevention, New York State Office of Mental Health
Principal Author & Senior Advisor, New York State Suicide Prevention Strategy and Plan
Member, New York State Suicide Prevention Council (2002-2006)

New York residents complete suicide by jumping from heights more than those of any other state besides California, and they do it at nearly three times the national rate. (CDC: 2004) Many of these jumping deaths occur in New York City, mostly Manhattan, from the rooftops and parapets of high-rise buildings, and especially among the elderly, from the windows of their homes. (Abrams et al.: 2005)

The Dutchess County Mental Health Commissioner has characterized jumps from area bridges as “a low frequency method” of a “low frequency occurrence” (suicide) (1/31/07). The statistics on suicide at the Mid-Hudson Bridge indicate seven people exited this way from 1984 to 2006, an average of one death every three years. At the same time, 74 people were potentially saved; 60 were transported to St. Francis Hospital. 38 required in-patient care and 7 others out-patient care as a result of using the crisis phones installed on the bridge for that purpose. Of the 8 individuals who jumped from 1984-2006, only 1 had used the phone previously.

Suicide statistics are often considered suspect, because there are powerful cultural and personal reasons for under-counting suicides to spare the family the stigma that attaches to suicide. Even so, more people kill themselves than each other by a wide margin in New York: 1,187 vs. 860. (CDC: 2004) Most people find that statistic surprising; however, most mental health professionals do not. There is a powerful association of mental illness and suicide. For every completed suicide, there are 25 attempts. Each attempt makes a succeeding one more likely.

Although suicides are a “low frequency occurrence”, numbers alone do not convey the impact on the community created by a leap from a structure as imposing as a bridge spanning the Hudson River, where thousands of vehicles pass each day. A personal tragedy in such a setting can become a public spectacle. Such an act can and often does create copycat suicides, or “suicide contagion”. A single suicide can prey on the vulnerability the public senses when they view the site on the bridge where the suicide originated. Some people memorialize the location with flowers; others look the other way. Either way, it has an impact on people.

The recent fatal jumps from the Kingston-Rhinecliff Bridge and the near-attempt on the Newburgh-Beacon Bridge have raised concerns regarding the safety and security of the bridges operated by the New York State Bridge Authority. The following plan addresses these concerns and sets forth a comprehensive strategy designed to reassure the public while saving lives. The Bridge Authority cannot solve a human problem - suicide - by blind reliance on technology alone. The strategy that follows is comprehensive, prevention-oriented and emphasizes “human factors” combined with the latest communication tools.
The approach advocated takes full advantage of recent advances in suicide prevention; developments that didn’t exist before 2005. In that year, the state completed drafting of its comprehensive statewide prevention plan, based on a three-year study by some of the leading experts on the subject. The report confirmed that suicide and mental illness are closely linked, especially mood disorders that go undiagnosed and untreated. It established that suicide is preventable and that several evidence-based practices exist and are available. Based on this plan, last year, for the very first time, the Governor and Legislature, allocated $1.5 million to fight suicide. Governor Spitzer has continued this funding in the 2007-08 Executive Budget.

Also, in 2005, Lifeline came into existence with the full support of the federal and state government, suicide prevention advocates, experts, and survivors. Lifeline makes possible an integrated, state of the art communications system to reach suicidal individuals on NYSBA bridges and maximize the chances of their safe rescue. Without these three key advances: a written statewide plan, supported by real state dollars, and featuring Lifeline, we would be addressing the challenges of bridge safety alone. Now, NYSBA has partners and we want this partnership to flourish. The end result will be safer bridges and fewer lives lost.

Suicide Prevalence

Each year nearly 1,200 New Yorkers lose their lives to suicide, a number that is 38 percent higher than the number of lives claimed by homicide. Between 25,000 and 30,000 individuals require medical treatment in emergency rooms and even more are seen in doctors’ offices and clinics for self-inflicted injuries. Thousands of family members, friends, co-workers and neighbors are left behind to grieve their loss, in an atmosphere of stigma, shame and frequently guilt. Even when suicide acts are not completed, the injuries inflicted can be long-lasting and permanently disfiguring.

While the rate of suicide in New York is below the national average, New York ranks fifth among the states in the numbers of lives lost to suicide each year. Suicide claims victims as young as eight years old and as old as 85, and few communities are completely spared its pain. The typical New York suicide victim is a white male who is 35 years or older who lives alone, upstate, suffers from depression and ends his life by means of a firearm. Men comprise nearly 80% of suicide victims, while women make more attempts by a ratio of 3:2. A major reason for this difference is that men tend to use more violent and lethal means to end their lives. A psychiatric disorder is involved in approximately 90% of suicide cases, especially mood disorders (major depression, bipolar disorder, dysthria) that remain untreated in 80% of cases.

Ethnically, the suicide rate of is significantly higher for white New Yorkers than for persons of color (Native Americans, Hispanics, African Americans and Asian Americans). For all race and ethnic groups, the suicide rate rises with age and Asian women over 65 are at elevated risk. However, the numbers of suicide attempts peak in the 15-24 age group, with females typically using self-inflicted poisons, usually over-the-counter drugs or by cutting themselves. While these attempts are rarely fatal, once an individual has attempted suicide, he/she is much more likely to attempt it again. Still, 70% of those who die from suicide do it on the very first attempt. This epidemiological finding underscores the need for preventing every suicide attempt. We may get only one chance to save that person’s life.
Suicide Methods

Of all the ways people use to end their lives, firearms and suffocation are the most common in New York (33.3% for each), followed by poisoning (12%), falls/jumps (10.2%), cut/pierce (3.3%), drowning (1.9%), and burns from fire (2%). Although suicide from a bridge structure comprises a small percentage of the total, it is significant for the New York State Bridge Authority that suicide by falls, including jumps from heights, occurs much more frequently in New York than the rest of the country. In 2004, 121 New Yorkers - or 10.2% of all suicides - died this way, a rate that is three times the national average and nearly three times the average in California, the state best known for bridge-jumping.

In fact, according to the Centers for Disease Control and Prevention, fully one in six Americans (17.8%) who took their life in 2004 by falls/jumps was a New York resident. This figure stands out because New Yorkers comprise just 4% of all Americans who will die by suicide this year. (1,200/31,000). This means death from intentional jumping from heights is involved in a disproportionate number of suicides by a factor greater than 4.

While bridge jumping is not specified on most coroners’ reports as a cause of death, it is reasonable to infer that such structures pose an elevated risk as do residential skyscrapers in New York City, NYU dormitories and the gorges near the Cornell University campus in Ithaca. (Abrams et al.: 2005; Arneson: 2005; Blum: 2005) All of these locations have been the scene of multiple suicides in recent years.

Figure 1. Suicide by falls/jumps in New York also varies by age:
(Both Sexes, All Ages, 2004)

<table>
<thead>
<tr>
<th>Age-Group</th>
<th># of Deaths by falls/jumps</th>
<th>% of all Suicides/age-group</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-24</td>
<td>20</td>
<td>11.9</td>
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<tr>
<td>25-34</td>
<td>11</td>
<td>6.0</td>
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<tr>
<td>35-44</td>
<td>28</td>
<td>12.1</td>
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<tr>
<td>45-54</td>
<td>17</td>
<td>7.1</td>
</tr>
<tr>
<td>55-64</td>
<td>14</td>
<td>8.9</td>
</tr>
<tr>
<td>65-85+</td>
<td>31</td>
<td>15.7</td>
</tr>
<tr>
<td>All Age-Groups TOTAL</td>
<td>121</td>
<td>10.2</td>
</tr>
</tbody>
</table>

Source: Centers for Disease Control and Prevention, WISQARS, retrieved January 29, 2007

One explanation for the higher rate of falls/jumps among the elderly is that they tend to use more lethal means of suicide, they are less likely to be revived from an attempt, and it requires less manual dexterity to open a window in a high-rise residence than to concoct a lethal cocktail or obtain a handgun and ammunition in the City of New York.
Location

When it comes to the prevalence of suicide, geography matters. Across New York, there are significant regional differences in completed and attempted suicides, irrespective of ethnicity, religion, age, culture or gender. Specific places also matter. Locations of suicidal acts can evolve into 'magnets' for future acts of self-destruction as the 'fatal attraction' of the Golden Gate Bridge in San Francisco demonstrates. (Friend: 2003)

Geographically, the Hudson River region ranks in the middle of the state's regions with respect to the numbers of adolescent and general population suicides and self-inflicted injuries. As the *Saving Lives in New York* report on suicide (2005) documented, across the state Central and Northeastern New York experience the most completed and attempted suicides, and New York City and Long Island the least. This follows a national and worldwide trend which links suicidal behavior with rural life. In effect, the sparser the population in a given geographic area, the greater the prevalence of suicidal behavior.

Following is a breakdown of completed suicides for the past five years (2000-04) for which data is available in the eleven counties comprising the mid-and lower- Hudson River region, arranged in alphabetical order, and containing (1) the number of suicides and (2) the annual rate expressed in # per 100,000.

**Figure 2. Suicide deaths and rates per 100,000 in mid- and lower Hudson River counties, 2000-2004.**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Albany</td>
<td>18 (6.0)</td>
<td>19 (6.4)</td>
<td>30 (10.1)</td>
<td>17 (5.8)</td>
<td>19 (6.5)</td>
</tr>
<tr>
<td>Columbia</td>
<td>4 (6.3)</td>
<td>7 (11.0)</td>
<td>6 (9.4)</td>
<td>7 (11.1)</td>
<td>6 (9.5)</td>
</tr>
<tr>
<td>Dutchess</td>
<td>16 (5.5)</td>
<td>12 (4.1)</td>
<td>15 (5.2)</td>
<td>16 (5.6)</td>
<td>23 (8.2)</td>
</tr>
<tr>
<td>Greene</td>
<td>3 (6.1)</td>
<td>6 (12.3)</td>
<td>5 (10.3)</td>
<td>4 (8.3)</td>
<td>5 (10.4)</td>
</tr>
<tr>
<td>Orange</td>
<td>28 (7.6)</td>
<td>14 (3.9)</td>
<td>25 (7.0)</td>
<td>27 (7.7)</td>
<td>28 (8.2)</td>
</tr>
<tr>
<td>Putnam</td>
<td>8 (8.0)</td>
<td>6 (6.0)</td>
<td>5 (5.1)</td>
<td>7 (7.2)</td>
<td>4 (4.2)</td>
</tr>
<tr>
<td>Rensselaer</td>
<td>19 (12.3)</td>
<td>13 (8.4)</td>
<td>14 (9.1)</td>
<td>11 (7.2)</td>
<td>10 (6.6)</td>
</tr>
<tr>
<td>Rockland</td>
<td>6 (2.0)</td>
<td>9 (3.1)</td>
<td>14 (4.8)</td>
<td>18 (6.2)</td>
<td>10 (3.5)</td>
</tr>
<tr>
<td>Sullivan</td>
<td>8 (10.5)</td>
<td>4 (5.3)</td>
<td>13 (17.5)</td>
<td>9 (12.2)</td>
<td>12 (16.2)</td>
</tr>
<tr>
<td>Ulster</td>
<td>8 (4.4)</td>
<td>9 (5.0)</td>
<td>14 (7.8)</td>
<td>19 (10.7)</td>
<td>18 (10.1)</td>
</tr>
<tr>
<td>Westchester</td>
<td>38 (4.0)</td>
<td>38 (4.0)</td>
<td>49 (5.2)</td>
<td>62 (6.6)</td>
<td>52 (5.6)</td>
</tr>
</tbody>
</table>

**TOTALS** | 156 (6.6) | 137 (6.3) | 190 (8.3) | 197 (8.1) | 187 (8.1)

Source: NYSDOH: New York State County Health Indicator Profiles, 2000-04 (Revised: July 2006)

The data shows there has been an overall decline in suicides region-wide over the past five years and the smaller the county population, the higher the suicide rate: the average rate for the three most populous counties (Westchester, Orange, Albany) in the Hudson Valley over this period is 6.3 deaths per 100,000; for the three least populated counties (Greene, Columbia, and Sullivan) it is 10.4 deaths per 100,000.
Fatalism

Of all the challenges posed by suicide, one of the most difficult is the widely-held belief that little can be done to prevent or control such destructive behavior. So long as this belief is widely held in the public mind, the task of focusing attention and resources on the problem is much more difficult. The stigma in our culture attached to both mental illness and suicide provides a “rationale” for ignoring both. Silence, reinforced by stigma and shame, and suicide go hand-in-hand.

Efforts at the state and federal level in the past ten years, combined with a citizens’ movement and enlightened individuals, have contributed much to countering the belief that we are powerless to prevent suicides and other life-threatening behaviors. Suicide was once regarded as an individual/family tragedy that occurred unpredictably and could not be prevented. This view has been challenged by developments in neurobiology, psychopharmacology and psychotherapy. The link between mental illness, especially mood disorders and suicide, is well-established. Reductions in the rate of suicide are partially attributable to the development and use of antidepressant medications and cognitive-behavioral and other “talk therapies.” Depression is treatable in 80% of cases, which means most suicides are preventable.

Educating the public to this truth is critical to the state’s efforts at making our communities safe from suicidal behavior. To this end, the Office of Mental Health launched a statewide campaign, Suicide Prevention Education and Awareness Kit (SPEAK), in 2004 to counter the myths around suicide, help people recognize the danger signs that portend self-destructive behavior in family and acquaintances and instruct them how and when to take action to save a life.

Differences between men and women and sociality are real. Women are more likely to be “early adopters” of healthy behaviors than men. One reason why fewer women die by suicide, compared to men, despite more of them being diagnosed with depression, is that women are much more likely to see their health care providers more regularly, accept the diagnosis they receive and follow the prescribed therapies that have proven to be effective. Men are much more likely to be ignorant of the symptoms of depression, or regard them as a sign of weakness or a failure of will. (Saving Lives in New York, vol. 2: 2005)

Instead of consulting a health care provider, men are more likely to “tough it out” and endure the misery of untreated depression or self-medicate with alcohol or recreational drugs in the search for relief. Far too often they spiral down into a desperate state and seek relief from a pain so unbearable that death itself is seen as the only means of relief. To address the problem, the Surgeon General of the United States has launched a public education campaign (Real Men, Real Depression). Its goal is to encourage men to recognize depressive symptoms and seek treatment.
Lessons from the Golden Gate Bridge

The Golden Gate Bridge is the most studied bridge in the world as it relates to suicide risk management. One of its lessons is powerful evidence that some suicides are impulsive. A classic study of 515 persons prevented from jumping from the Golden Gate Bridge found that 94% of those had died from natural causes or were still alive 25 years later. The belief that Golden Gate bridge attempters will simply go elsewhere to kill themselves was clearly unsupported by the data. The 1978 study, Where Are They Now? confirmed previous observations that suicidal behavior is crisis-oriented and acute in nature. It concluded that if a suicidal person can be helped through his/her crises, one at a time, chances are extremely good that he/she won’t die by suicide later.” (Friend: 2003) Accordingly, “The justification for prevention and intervention...is warranted and the prognosis for suicide attempters is...on balance, relatively hopeful.” (Seiden: 1978)

Research has shown that many suicide attempters are deeply conflicted about ending their life, even when they despair. The will to live is a powerful force that is hard to extinguish even among individuals faced with the most dire circumstances. (Gonzales: 2003) Survival is imprinted in our genes and reinforced by human culture and religion. Family and community support, support from ongoing medical and mental health care relationships, access to a variety of clinical interventions and support for help-seeking behavior can dissuade a would-be suicide.

Every suicidal act requires a means of self-harm. Limiting access to means of self-harm, therefore, can be an effective way to prevent self-destructive behavior. The name of this strategy is ‘means restriction’. The goal is to separate, in time and space, the individual experiencing an acute suicidal crisis from easy access to lethal means of self-injury and personal harm. By making it harder for someone intent on self-harm to act on that impulse by denying them access to the means to accomplish it, buys time for the crisis to pass and for healing and recovery to occur. Alcohol, which lowers inhibitions, is frequently implicated in suicidal behavior, especially when it involves someone who is impulsive. Alcohol is also a depressant and can intensify the despair that emanates from a mood disorder, making recovery more difficult.

Human Factors

The difference between entertaining suicidal thoughts and acting on them can be as basic as having a casual encounter with a person - anyone - who exhibits concern and empathy.

Interviews with people who were talked out of jumping from the Golden Gate Bridge found that many people were deeply ambivalent about making the jump, even after they stepped over the railing and stood on the chord. Some realized they made a mistake in jumping during the four seconds it takes to reach the water. Only 2% of Golden Gate jumpers survive the 220 foot fall, but among those was one individual who recalled feeling that “everything in my life that I’d thought was unfixable was totally fixable - except for having just jumped.” (Friend: 2003)
Ambivalence

The ambivalence of bridge jumpers and survivors points to a key strategy for saving lives. Maintaining a human connection with a suicidal individual is the best way to ensure that person’s survival.

“The system in use on the Golden Gate Bridge is the “non-physical barrier”’. Its components include numerous security cameras and thirteen telephones, which potential suicides or alarmed passersby can use to reach the bridge’s control tower. The most important element is randomly scheduled patrols by California Highway patrolmen and Golden Gate Bridge personnel in squad cars and on foot, bicycle and motorcycle.” (Friend: 2003) These findings underscore the need for a universal hotline service able to reach individuals in remote locations, including the walkways on bridges, and provide emotional support and advice to those in danger of harming themselves.

Suicide Prevention Strategies

Designing and implementing a plan to curb suicides by bridge-jumping requires an overview of what is involved in the decision to end one’s own life. A definitive study of all suicide prevention strategies devised worldwide was published in the Journal of the American Medical Association on October 26, 2005. Its lead author was Dr. J. John Mann, MD of Columbia University and the New York State Psychiatric Institute. Dr. Mann is also very familiar with the suicide problem in New York, as a member of the New York State Suicide Prevention Council. The purpose of the article was to determine which prevention strategies have been proven to work, and actually save lives, and those that have promise.
Figure 3 shows the elements of the decision process, and ways that have been devised to modify the outcome and save lives. Circled letters refer to relevant prevention interventions listed on right.

**Figure 3. Targets of Suicide Prevention Interventions**

**Suicidal Behavior**

- **Stressful Life Event**
- **Mood or Other Psychiatric Disorder**
- **Suicidal Ideation**

**Factors Involved in Suicidal Behavior**

- **Impulsivity**
- **Hopelessness and/or Pessimism**
- **Access to Lethal Means**
- **Imitation**

**Preventive Interventions**

- **A** Education and Awareness Programs
  - Primary Care Physicians
  - General Public
  - Community or Organizational Gatekeepers

- **B** Screening for individuals at High Risk

**Treatment**

- **C** Pharmacotherapy
  - Antidepressants, incl. SSRI's
  - Antipsychotics

- **D** Psychotherapy
  - Alcoholism Programs
  - Cognitive Behavioral Therapy

- **E** Follow-up Care for Suicide Attempts

- **F** Restriction of Access to Lethal Means

- **G** Media Reporting Guidelines for Suicide


The Mann task force found that two strategies stood out in preventing suicide:

(A) education and awareness programs for primary care physicians aimed at improving their skills at identifying and treating depression in their patients; and

(F) restriction of access to lethal means for the reasons cited above (pg. 6) Among the specific restrictions found effective are: firearm control legislation; restrictions on pesticides; detoxification of domestic gas; restrictions on barbiturates; blister packaging of analgesics, catalytic converter use on motor vehicles, and use of new lower toxicity anti-depressants (SSRI's).
Other strategies: (B) screening, (C) pharmacotherapy, (D) psychotherapy, (E) follow-up care for suicide attempts, and (G) media reporting guidelines for suicide, could be helpful components of a comprehensive strategy, but further evaluation is required to certify them as effective deterrents to suicide on a stand-alone basis. The New York State prevention plan endorses their use in combination with (A) and (F).

Lessons from the Mid-Hudson Bridge

While the Golden Gate Bridge has lessons for prevention, so does the Mid-Hudson Bridge. In 1984, two emergency call boxes were placed on the Bridge to offer people considering suicide a chance to seek help. The phones are accompanied by signs urging people considering suicide to call and assuring them that help is available 24 hours a day. It is believed to be the first such arrangement in the country in which crisis intervention phones were placed at the likely sites of suicides.

Jumper Ambivalence
The Mid-Hudson Project was a collaborative effort between the Authority, the Dutchess County Mental Health Department, and St. Francis Hospital in Poughkeepsie. Its premise was the same as that voiced by officials at the Golden Gate Bridge Authority: "It is generally accepted clinically and has been found to be true by the numerous telephone hot-line services that sprung up in the early 70's, that most people who attempt are ambivalent right up to the last...there is part of them that wants to live and some that wants to die...We are offering them a last-resort type of alternative to killing themselves." (Dr. David Sherwood, clinical psychologist at the Dutchess County Mental Health Department, 1984)

Personal Connection
Dr. Kenneth Glatt, then, as now, the Dutchess County Commissioner of Mental Hygiene, found it significant that the very first question posed by the first user of the system was: "am I talking to a real person, or is this just a recorded message?" (Personal interview, January 31, 2007). A live voice is a connection - a spark of human life - that cannot be replicated or substituted for by an inanimate physical barrier.

This is a major reason why the system on the Mid-Hudson Bridge has been successful: it provides instantaneous communication to a trained mental-health professional, who knows exactly how to engage that individual and keep them talking and listening until help arrives on the scene. The premise of the bridge phone system is shared by operators of suicide 'hot lines' and mental health 'warm lines' everywhere: keep the caller engaged and move the conversation to a different place that despite their despair, there is meaning and value in life, and that their death would diminish us all, especially their friends and family.
Effectiveness
The number of lives saved by the MHB call box system is impressive: since 1984, 60 people were transported from the MH Bridge to St. Francis Hospital, of whom 38 required hospitalization, and 7 required out-patient care. Of the 7 who jumped to their death, only 1 had used the phone prior to jumping. Of the 526 Dutchess County residents who completed suicide from 1981-2005, only 30, or just 5.7% chose jumping, (from buildings, bridges, or cliffs) as the means to their end. In Dr. Glatt’s words: jumping or falling from heights is a low-frequency method to achieve a low-frequency occurrence (suicide). (Personal interview, January 31, 2007).

The success of the MH Bridge phone system is reflected in the steady decline in suicides of Dutchess County residents through the years: 1981-85 (141), 1986-90 (126), 1991-95 (98), 1996-2000 (86), and 2001-2005 (75). These numbers track the slow, but steady decline in suicides statewide following the peak year of 1994. (Saving Lives in New York, vol.3)

Constructing a ‘Human Barrier’ against Suicide

Preventing suicides on NYSBA’s bridges will most likely occur if we recognize the situation for what it is: a mental health problem that won’t be solved by a technical ‘quick fix’ in the form of a ‘curtain of steel’ twenty miles long (the approximately length of all the spans of the five bridges). Rather, it will only be solved by addressing the needs of the people who are drawn to these bridges out of desperation by partnering with mental health professionals who know how to assess, refer and treat those in danger of self-harm.

New York State’s suicide prevention plan calls for an integrated strategy of identifying people at risk, and intervening with ‘evidence-based’ programs that reduce suicidality across the life span. (Saving Lives in New York: 2005)

Building on the work of Dr. Ken Glatt and his staff, the crisis counselors at St. Francis Hospital, and the 22 years experience of the hotline, the Lifeline program, and new communication technologies, NYSBA can instead construct a ‘human barrier’ that will outperform any physical barrier and save more lives. Moreover, it will do so without posing dangers to the motoring public as a physical barrier on the bridges could do, as will be explained below.

The central lesson of the Golden Gate Bridge experience since 1937 and of the Mid-Hudson Bridge since 1984 is that a safety system built around human activity, detection and two-way communication technologies can prevent suicides and save lives. The Golden Gate is a magnet for would-be suicides, with people traveling long distances to the GG Bridge where they end their lives. As explained by Dr. Lanny Berman, Executive Director of the American Association of Suicidology, “Suicidal people have transformation fantasies and are prone to magical thinking, like children and psychotics. Jumpers are drawn to the Golden Gate because they believe it’s a gateway to another place.” (2003) Despite all the countermeasures in place, the ‘fatal allure’ of the GG Bridge claims, on average, one death every other week. (Friend: 2003)
None of the 5 spans operated by NYSBA come close to achieving a ‘magnet-status’ in terms of attracting suicide attempters. Quite the opposite is true.

The most active span for suicidal behavior is the Mid-Hudson due to its twin walkways and proximity to the urban population in the City of Poughkeepsie. Even so, the incidence of suicide attempts, much less completions, by bridge-jumping is low (60 individuals referred to St. Francis Hospital over a 22 year period averages out to 2-3 serious incidents a year and a completed suicide once every 3 years).

As discussed earlier, the call box system has prevented an overwhelming percentage of suicide attempts, despite the fact that the railings on the MH Bridge are sufficiently low that most ambulatory people could climb over them unaided.

Like the persistent minority in the Bay area who have pushed for installation of a physical barrier on the Golden Gate Bridge, there have been calls locally for a structural barrier (fencing, netting, extended railing, etc.) on the Kingston-Rhinecliff Bridge which has been the scene of two suicides in December. The logic behind the request for a barrier is that a suicidal individual would have to go to extraordinary lengths to go up and over or around and over a fixed (fence) or flexible (net) barrier to complete the act. Faced with a barrier, it is said most people would give up trying to jump and leave. Other proponents point to the fact that once installed, a barrier is always “on duty” regardless of weather conditions, time of day, etc. Finally, a physical barrier doesn't require the presence of a human being to do its job. It's engineered to perform its function for many years if properly maintained.

**Physical Barriers: Pros and Cons**

Physical barriers are effective deterrents in certain situations, such as preventing access to balconies or rooftops on buildings over three stories (Abrams et al.: 2005). However, retrofitting them on the NYSBA bridges poses real concerns:

--- They are expensive to construct and maintain, especially given the size of the spans across the Hudson River (the Kingston-Rhinecliff Bridge alone would require approximately three miles of fencing). Given limited funds, money saved by not installing a barrier could instead be used to fund other safety features on the bridges, e.g. reduce icing conditions, painting, signage, maintenance, etc., benefiting many more bridge users every day of the year.

--- Barriers create major safety problems for the motoring public by obstructing equipment (e.g. cherry pickers) used in safety inspections of a bridge's physical condition. A six, eight, or ten foot ‘safety fence’ could render the equipment purchased by NYSBA for inspecting the bridge deck and supports useless and a total waste of taxpayers’ dollars.

--- Barriers can create additional safety problems as a result of creating wind resistance. Retrofitting modifications to the bridge design to mitigate this risk can be expensive. This would apply especially to the Kingston-Rhinecliff Bridge which is the tallest of the five bridges, the most wind-whipped, and the crossing most often mentioned as a candidate for a barrier by its advocates.
--- Snow-plowing and removal could be affected by the presence of a high barrier, by reducing
the area available for plowed snow to accumulate and melt. This could lead to icing conditions on
the roadway and create a hazard to the driving public.

--- Issues of aesthetics and historic character are involved in any consideration of installing
barriers, especially on the three oldest bridges spanning the Hudson (Rip Van Winkle, Mid-
Hudson and Bear Mountain). Given the proximity of these structures to other landmarks, e.g.
Olana (RVW) and West Point (Bear Mountain), and the invaluable viewsheds involved, these
barriers are a visual blight. They are clearly incompatible with any notion of a 'scenic Hudson'.

--- A physical barrier does nothing to address the suicidal condition of the person who might be
tempted to jump from the bridge. Unlike the live voice at the receiving end of a callbox on the
Mid-Hudson Bridge, a physical barrier does not give a desperate person a reason to live or serve
as a listening post for the real or imagined motives for being on the bridge at that point in time.
Rather, it provides society with a false sense of security that we have somehow addressed the
needs of would-be suicides, so we can continue to ignore the root problem - their likely mental
illness, which is probably treatable.

--- Barriers can pose an irresistible challenge to certain vulnerable people bent on jumping. It
would not take much effort for such an individual to carry an extension ladder in a pickup truck,
drive to the middle of the Kingston-Rhinecliff Bridge, unload the ladder in a pull-off area and use
it to climb over the highest possible fence that could be erected. It could be done in a matter of a
few minutes and well before help could be summoned. Some people don't even need a ladder:
one man scaled the 10 foot high curved metal barrier on the Empire State Building Observation
Deck, (New York Times: 12/1/04) and another climbed over the high curved fencing along a
“suicide bridge” in Schenectady. (Albany Times Union, 11/8/04) Despite valiant rescue
attempts, both men died from their falls. In the Schenectady incident, the metal barrier prevented
the responders from reaching the jumper in time to save him.

--- Steve Miccio, the Executive Director of PEOPLE, Inc., an advocacy group for the
psychiatrically labeled, has concluded after the latest suicides in December 2006: "We need to
understand the bridge (KRB) is not the problem. The problem...is the stigma, shame, and fear
behind mental illness and the thoughts that surround suicide. It is a subject many are afraid to
discuss, and it is a subject often misunderstood and undertreated or untreated...The solution is to
stop making headline news and becoming proactive in preventing suicide through talking about it,
writing about it and infusing awareness and prevention into the schools and communities.''
(Poughkeepsie Journal, 1/17/07)
RECOMMENDATIONS

1. Install and Operate Call Boxes on all NYSBA Bridges

While NYSBA crossings (Bear Mountain, Newburgh Beacon, and Rip Van Winkle) have motorist aid call boxes that connect by short-distance radio to the bridge office or maintenance personnel, the Mid-Hudson Bridge is unique in its phone hookup via microwave transmission to the Dutchess County Office of Mental Health Hotline in Poughkeepsie. The success of suicide prevention on the Mid Hudson Bridge over more than two decades is clear evidence that the system works. Recent innovations now make it possible to provide the same service for all bridges. All other bridges should install and maintain the most appropriate communication link to enable a suicidal person to have virtually instantaneous contact with the live voice of a trained and certified mental health professional. This professional would be able to engage the individual, empathize with their situation, and maintain contact until an emergency responder arrives at the scene.

2. Formalize a Working Partnership with Lifeline to Serve as the Provider of Hotline Services using the Most Appropriate, Current Communication Technologies

Lifeline, a k/a, The National Suicide Prevention Lifeline, came into service on January 1, 2005. It is a national system for providing immediate assistance to people in suicidal crisis. It works by helping a person in crisis build trust, share fears, and take positive action. Callers get immediate access to local resources, referral for services, and mental health expertise by dialing (1-800-273-TALK). Callers to Lifeline will receive free and confidential suicide prevention counseling from staff at the closest certified center in their national network. In the Hudson Valley, these centers are:

Dutchess County Department of Mental Hygiene (Poughkeepsie)  
LifeNet (New York City)  
211 Lifeline (Rochester)

The Lifeline is a central component in the Substance Abuse and Mental Health Services Administration’s ongoing plan to reduce the incidence and impact of suicide. The Mental Health Association of New York City and its partners, National Association of State Mental Health Program Directors, Columbia University/Research Foundation for Mental Hygiene, and Rutgers University Graduate School of Applied and Professional Psychology, were selected to administer the Lifeline’s network of crisis centers based on their experience in providing mental health services through telephone technology and for their vision to expand the services that would be available to the American public.

“The purpose and promise of this national suicide hotline is to be there for people in their time of need,” said Lifeline Director, Dr. John Draper. “Working with our federal, state and local partners, we will be able to build on our strength and expand this national hotline to reach suffering individuals in ways that each of us could not do alone.”
This recommendation would apply to services provided to suicidal individuals on all NYSBA Bridges except for the Mid-Hudson span. MHB would continue to maintain and operate the system it has established and which serves so well. Coordinating the operations and services of the two systems will be a key objective.

3. Training of NYSBA Personnel by NYSP

While State Police are the primary first responders for suicidal situations on the NYSBA bridges, it is prudent to provide Authority staff with training should the situation arise when they become a first respondent by accident. This is not a hypothetical situation. There have been instances in which Authority personnel have suspected a pedestrian on a bridge was acting or behaving in a manner consistent with emotional anguish, desperation or where self-harm could be reasonably inferred. In those situations, there are definite "do's" and "don't's" and it is important to know what they are. The New York State Police are trained to respond to such situations, and NYSBA will seek an agreement to provide such training to its personnel.

4. Counseling of NYSBA Personnel by the American Foundation for Suicide Prevention

Witnessing a suicide attempt is a profoundly unsettling event and NYSBA employees have been exposed to such events nearly every year. The near-certainty that someone will not survive a fall from any of the bridges, due to trauma or drowning, generates a sense of horror and in some cases, guilt, that the suicide could have been prevented. Grief counseling and working with survivors has long been the specialty of Mary Jean Coleman, MSW. Ms. Coleman is the former Executive Director of the Samaritans of the Capital District. Since 2005, she has been the Upstate Area Director for the American Foundation for Suicide Prevention. Besides being an expert counselor and suicide prevention trainer, she is a founding member of the New York State Suicide Prevention Council. NYSBA will seek the advice of Ms. Colman as well as counseling services to NYSBA staff as needed.

5. Including the Media in Awareness and Education Regarding Suicides and Mental Illness

Media play a major role in influencing peoples' images and ideas about mental illness and suicide. Certain ways of describing suicide in the news contribute to what is called "suicide contagion" or "copycat suicides". This is especially potent within the adolescent population. However, media can play a real role in preventing suicide - compassionate reporting and coverage, and accurate representation can both educate and reduce stigma leading to treatment and eventually healthy people. In response to the recent suicides on the Kingston-Rhinecliff Bridge, NYSBA has distributed the document, At-A-Glance: Safe Reporting on Suicide, prepared by the Suicide Prevention Resource Center in Newton, Mass. to all in the Mid-Hudson region. The document provides guidance on "What to Avoid" and "What to Do". NYSBA, in conjunction with the St. Francis Hospital Mental Health Crisis Intervention Center, will sponsor an educational forum with invitations to all regional media to assist in the dissemination of suicide prevention information and the critical role media can play in suicide prevention. Our featured presenter will be Dr. Madelyn Gould, Professor of Psychiatry and Public Health (Epidemiology) at Columbia.
University. Dr. Gould is an expert on “suicide contagion” and the role of the media and has been honored many times for her contributions to the field of suicide prevention. She is also a founding member of the New York State Suicide Prevention Council and a Research Scientist at the New York State Psychiatric Institute, a research arm of the New York State Office of Mental Health.

6. Partnership with the Hudson River Suicide Prevention Coalition.

The New York State Office of Mental Health (OMH) and Suicide Prevention Council co-sponsored a statewide Summit on Suicide Prevention in November 2005. Many mental health specialists, advocates, and providers from the Hudson River region attended. At the Summit, a regional coalition was formed in the Valley to promote the development of local capacity to reduce the risk of suicide and promote healthy behaviors. It is administered through the OMH Field Office in Poughkeepsie. The Coalition is tasked with implementing the comprehensive suicide prevention initiative contained in the State’s budget and funded at $1.5 million, the most budgeted by any state for this purpose. This program will train ‘gatekeepers’ to better identify people in the community who exhibit signs of suicidality, educate school personnel and students ages 13-18 about clinical depression and other causes of suicide, educate primary care practitioners about depression, especially among middle age and older men, and the best ways to treat it; improve the assessment of suicidal risk in individuals seen in hospital emergency room; enable regional coalitions to plan and identify high risk populations; and continue to expand the SPEAK program to include new language groups and new subjects. (See: Appendix)

NYSBA’s commitment to support suicide prevention in the region is sincere and steadfast. We are in it for the long haul.

7. Evaluation and Continuous Improvement.

Sound management of these new initiatives requires a commitment to timely evaluation and continuous improvement. Planning, acquisition of materials and the expeditious installation of the communication technologies have already begun. Other components of the comprehensive plan will be launched within the month. As evidence-based results become available, both technical and educational, we will consider modifications and additions for adoption to ensure continuous improvement to our efforts.

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Appendix

Suicide Prevention Initiative

The $1.5 million in funding for the suicide prevention initiative can generally be divided in three main categories: 1) Regional Coalition Development ($375,000); 2) Training and Public Awareness Projects ($715,000); and 3) Administrative and Evaluation Initiatives ($410,000). The Regional Coalition Development entails providing Field Office access to funding to facilitate training, meetings, conferences, and information sharing specific to the local communities within their catchment areas. Each Field Office has developed a plan outlining how the allocated funding ($66,000 for NYC and $33,500 for each of the other regions) will be distributed. Additionally, each Field Office has received an additional $35,000 to develop suicide prevention strategies to target “high risk” populations within their regions.

The Training and Public Awareness projects include a wide variety of initiatives. We have entered into contract ($350,000) with the American Foundation of Suicide Prevention (AFSP) to develop three DVDs and companion facilitator guides that target primary care physicians, youth audiences (middle and high school), and adult middle and high school faculty audiences. A collaborative effort ($42,000) has been initiated with the New York Association of School Psychologists (NYASP) to enlist experts in many areas of suicide prevention to develop a series of podcasts that can be downloaded by adolescents from internet sites such as I-Tunes and MySpace. Three separate training endeavors are underway: 1) A contract with Livingworks, Inc. of Fayetteville, N.C. ($154,000) to facilitate the training of 48 trainers in 2007, to be able, in turn, to provide community gatekeeper training to 1600 – 1800 recipients annually. The 48 individuals will undergo intensive 5-day Train-the-Trainer trainer to develop skills to provide ASIST training to community groups; 2) staff of the New York State Psychiatric Institute are conducting a study/training ($67,000) which hopes to improve the care of Hispanic adolescents in four NYC
hospital emergency rooms following intentional self harm and the New York Coalition for Asian American Mental Health proposes to conduct a study of Chinese American Suicide ($22,000) and provide prevention services to other Asian American minorities ($26,000); and 3) The Suicide Prevention Resource Center (SPRC) has been contracted ($48,000) to provide a series of 5 one-day workshops for mental health clinicians focused upon screening, assessment, and managing high-risk clients.

The Administrative and Program Evaluation endeavors include the completion of an MOU with the Office of Temporary Disability Assistance (OTDA) to translate the office’s Suicide Prevention Education and Awareness Kit (SPEAK) material into Russian and, as appropriate, other languages; a 2-year printing contract to print SPEAK and other public education material; the hiring of temporary staff to assist in the evaluation process; and the development of an internet portal to display the suicide prevention evaluation data.
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Director of Planning and Evaluation (1997-2000)  
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Executive Deputy Commissioner (1995-1997)  
NYS Department of Environmental Conservation & Transition Team Leader  
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Chief of Staff (1998)  
Director of Policy Development (1989-1994)  
Director of Operations (1983-1988)  
Senior Program Analyst (1977-1982)  
Office of the Minority Leader  
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Staff Chair, Leadership Staff Section (1989-1990)  
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The Power of One Award (2005), presented by the founders of the national Suicide Prevention Action Network (SPAN)
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Hudson River Regional SPEAK Coalition
For Suicide Prevention, Education, and Awareness

In recognition that suicide is a public health problem, the New York State Office of Mental Health has implemented a statewide initiative to develop ‘suicide-safer’ communities and save lives.

As part of this initiative, a Suicide Prevention Education and Awareness Kit (SPEAK) was unveiled and regional coalitions were developed.

The Hudson River Regional Coalition is comprised of county mental health commissioners/directors and representatives from each of the sixteen counties within the region, survivors, family members, advocacy groups, clinicians, school personnel, providers of mental health services, representatives from other statewide agencies as well as representatives from the OMH Field Office. Membership also includes key individuals from the NYS Council on Suicide Prevention (which was formed in 1998).

The interest and expertise of many members are great assets to implementing this collaborative work.

The coalition embraces the task of dissemination of information, identification of populations at high risk for suicide, developing community based education, providing guidance to one another, and assisting the community in the implementation of evidenced based practices and awareness that suicide is preventable.

The Hudson River Regional SPEAK Coalition is coordinated through the Hudson River Field Office of the New York State Office of Mental Health:

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<tr>
<td>Clement-Buffolino, Scarlet</td>
<td>Assistant Vice President</td>
<td>Samaritan Hospital Behavioral Health Services</td>
<td><a href="mailto:emarcus@nehealth.com">emarcus@nehealth.com</a></td>
<td>(518) 271-3539</td>
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<td>Climes, Nolly</td>
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<td>Rehabilitation Support Services, Inc.</td>
<td><a href="mailto:nclimes@warwick.net">nclimes@warwick.net</a></td>
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<td>Coleman, Mary Jean</td>
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<td>American Foundation for Suicide Prevention</td>
<td><a href="mailto:mjcsolo@aol.com">mjcsolo@aol.com</a></td>
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<td></td>
<td>Upstate New York</td>
<td><a href="mailto:mjcoleman@afsp.org">mjcoleman@afsp.org</a></td>
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<tr>
<td>Coutu, Lisa</td>
<td>Program Analyst</td>
<td>Warren/Washington County Community Services</td>
<td><a href="mailto:lmcoutu@yahoo.com">lmcoutu@yahoo.com</a></td>
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<td>Daggett, Mary RN</td>
<td>Director, Community Health Services</td>
<td>Columbia Memorial Hospital</td>
<td><a href="mailto:madaggett@cmh-net.org">madaggett@cmh-net.org</a></td>
<td>(518) 828-8013</td>
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<td>Davis, Deborah</td>
<td>Budget Examiner</td>
<td>NYS Division of the Budget HMH Unit</td>
<td><a href="mailto:deborah.davis@budget.state.ny.us">deborah.davis@budget.state.ny.us</a></td>
<td>(518) 473-8052</td>
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<tr>
<td>Davis, Helena MA, LMHC</td>
<td>Deputy Director</td>
<td>Mental Health Association in New York State, Inc.</td>
<td><a href="mailto:hdavis@mhany.org">hdavis@mhany.org</a></td>
<td>(518) 434-0439</td>
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<td>Westchester</td>
<td>Erickson, Brenda, RN</td>
<td>Program Director, Independent Living</td>
<td>200 Hamilton Avenue, 2nd Floor</td>
<td>(914) 982-3926 x 118</td>
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<td>Fast, Lisa</td>
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<td>Capital District, Psychiatric Center</td>
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<td>Gayton, Cathy, LCSW</td>
<td>Director of Family Nurse Practitioner</td>
<td>47 New Scotland Avenue, Albany, NY 12208</td>
<td>(518) 262-6169</td>
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<td>Glast, Kenneth, M., Ph.D.</td>
<td>Bereavement Counselor</td>
<td>Albany Health Care Community Hospice</td>
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<td>Glidman, Sherry</td>
<td>Commissioner</td>
<td>Dutchess County Department of Mental Health</td>
<td>(845) 364-2371</td>
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<td>Handler, Rachel</td>
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<td>Rockland County Department of Mental Health</td>
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<td>Koerner, Joshua</td>
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<td>Mazeil, Katherine</td>
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<td>Greene County Mental Health Center</td>
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<td>Metakes, Jackie</td>
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<td>Murray-Tetz, Susan</td>
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Program Description

The federally-funded National Suicide Prevention Lifeline (1-800-273-TALK) is a network of crisis centers located in communities across the country that are committed to suicide prevention. Persons in emotional distress or in suicidal crisis can call anytime from anywhere in the Nation and speak to a trained worker who will listen to and assist the caller in getting the help they need. Calls are routed to the nearest available crisis center (of more than 120) in 46 states that are currently participating in the National Suicide Prevention Lifeline network.

The Federal government’s Substance Abuse and Mental Health Services Administration (SAMHSA) and Link2Health Solutions, Inc. launched the National Suicide Prevention Lifeline (1-800-273-TALK) on January 1, 2005. This national hotline network is part of the National Suicide Prevention Initiative (NSPI), an effort led by SAMHSA that incorporates best practices in suicide prevention with the goal of reducing the incidence of suicide nationwide. Link2Health Solutions, Inc., the administrator of the 3 year, $6.6 million federal grant, is joined by the National Association of State Mental Health Program Directors (NASMHPD) in a partnership to develop the network and integrate the hotline within state suicide prevention planning activities. Link2Health Solutions, Inc. as also partnered with Columbia University’s Research Foundation for Mental Hygiene and Rutgers Graduate School of Professional and Applied Psychology to conduct the evaluation component of the project.

The National Suicide Prevention Lifeline has reached out to national and international experts and stakeholders in suicide prevention who provide consultation and advisement. This is accomplished through a Steering and Subcommittee structure that facilitates their input regarding the development and implementation of the following activities to support the continued delivery of quality service to callers across the nation:

- Recruitment of the most appropriate, high quality certified centers into the network
- Provision of access to information and trainings in evidence-based or evidence-informed practices for call center services
- Facilitation of efficient connectivity of callers in crisis to the nearest available center
- Development and dissemination of public education information to raise awareness of suicide prevention and promote the hotline number nationally
- Provision of technical assistance and support to networked crisis centers as needed

For more information on the National Suicide Prevention Lifeline, please visit our Web site: [http://www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org) or call:

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Project Director
JDraper@mhaofnyc.org
212-614-6309

**Cathleen Kelly**
Director, Network Development
CKelly@mhaofnyc.org
212-614-5768

A project managed by Link2Health Solutions, Inc.
JOHN DRAPER, Ph.D

Dr. Draper is the Director of the federally-funded National Suicide Prevention Lifeline Network, administered by Link2Health Solutions, and independent subsidiary of the Mental Health Association of New York City.

As the Lifeline’s Director, Dr. Draper oversees all aspects of this service that connects 1-800-273-TALK callers to the nearest crisis center within a national network of more than 120 crisis centers across the country.

Prior to his work on the Lifeline, Dr. Draper had been the Director of Public Education and the LifeNet Multicultural Hotline Network for the Mental Health Association of New York City since July of 1996.

Dr. Draper previously served as Clinical Director of Interfaith Medical Center’s Mobile Crisis Team in Brooklyn, where for 7 years he conducted and supervised hundreds of home visits to persons in psychiatric crisis of all ages and ethnic backgrounds.

In addition to his Directorship of the national network, he has a private practice in New York City, specializing in family systems and cognitive-behavioral approaches to treatment.

Dr. Draper received his doctoral degree in Counseling Psychology from the University of Missouri-Columbia in 1996.
The **About the Lifeline Network**

The **National Suicide Prevention Lifeline** is a national, 24-hour, and toll-free suicide prevention service available to all those in suicidal crisis who are seeking help. Individuals seeking help can dial 1-800-273-TALK (8255). They will be routed to the closest possible provider of mental health and suicide prevention services.

The network is comprised of over 115 individual crisis centers across the country creating a nationwide coverage area. It is administered through Link2Health Solutions, Inc., an organization with experience in crisis, information, and referral hotline management.

The National Suicide Prevention Lifeline grant is one component of the National Suicide Prevention Initiative (NSPI), a multiproject effort to reduce suicide led by the Substance Abuse and Mental Health Services Administration’s Center for Mental Health Services.
The NYS Bridge Authority

The NYS Bridge Authority operates the Bear Mountain Bridge (BMB), Newburgh-Beacon Bridge (NBB), Mid-Hudson Bridge (MHB), Kingston-Rhinecliff Bridge (KRB) and Rip Van Winkle Bridge (RVWB) in the Hudson Valley Region of New York State.

Except for the NBB which has separate east bound and west bound spans to accommodate Interstate 84; all other bridges are single spans and are crossed by state highways of varying capacity.

The Mid-Hudson Bridge (MHB) is unique in that it currently has Suicide Prevention phones located in the middle of the span on each side. The phones are linked by direct radio (microwave) transmission to the Dutchess County Office of Mental Health Hotline, a 24/7 crisis counseling professional service, in Poughkeepsie, NY. This type of application would not work on any other span.

Since suicide by jumping or attempting to jump off a bridge is a police matter, the NYSBA does not keep a specific log or document of such incidents, however, according to published reports, between 1984 and June 2006, the Dutchess County center received 74 calls from the bridge, and only one person jumped. Of a reported 16 others who contemplated suicide and did not use the phone, six jumped. The system in place at the MHB has been considered a model for other entities and, where applicable, a similar system has been used elsewhere.

The BMB, NBB (east bound span) and RVWB all have walkways and all have motorist aid call boxes on them. These call boxes activate via open radio frequency to all bridge personnel monitoring the radio at that time.

The NBB (west bound span) and KRB do not have walkways and do not have motorist aid call boxes. Installation on the KRB is pending.

Incidents of suicide by jumping off the bridge on these spans are rare. No one span seems to be more prone to suicide deaths than others, however, it is believed that incidents are higher on the MHB due to close proximity to an urban area (City of Poughkeepsie) and sidewalks that allow pedestrian traffic to access the bridge.
## NYS Bridge Authority
**Law Enforcement Responders & Mental Health Areas**

### NYS Police

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<th>Troop</th>
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<tbody>
<tr>
<td>Troop F</td>
<td>Rockland, Orange Ulster, Greene</td>
<td>Major Raso</td>
<td>845-344-5300</td>
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<tr>
<td>Troop K</td>
<td>Westchester, Putnam Dutchess, Columbia</td>
<td>Major Carey</td>
<td>845-677-7300</td>
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<tr>
<td>Troop T - Zone 5</td>
<td>Thruway/Interstate 84</td>
<td>Capt. Hansen</td>
<td>845-564-6240</td>
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### Bridge

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<td>West - Troop F</td>
<td>Newburgh</td>
<td>845-567-1033</td>
<td>Arden Hill - Goshen</td>
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<td>Palisades Park Police</td>
<td>Bear Mountain</td>
<td>845-786-2781</td>
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<td>Mid-Hudson</td>
<td>West - Troop F</td>
<td>Highland</td>
<td>845-691-2922</td>
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<td>Kingston-Rhinecliff</td>
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<td>Rip Van Winkle</td>
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<td>Catskill</td>
<td>518-622-8600</td>
<td>Columbia Mem.- Hudson</td>
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<td></td>
<td>East - Troop K</td>
<td>Livingston</td>
<td>518-851-2001</td>
<td>Columbia Mem.- Hudson</td>
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Selected Research

IBTTA
International Bridge, Tunnel and Turnpike Association

Neil Gray, Director of Governmental Affairs (202-659-4620, ext.14) has issued a member query at our request regarding wireless and other communication options, responses pending. Neil also provided addition sources for information regarding bridge suicide prevention.

Responses to the request received from:

1/5: Forth Estuary Transportation Authority, South Queensferry, UK – they have had some success with additional CCTV monitoring and regular patrols. Also noted that vegetation, particularly trees, under their bridge discouraged people from jumping in areas where it was practical. Alastair Andrew -General Manager

1/5: Chesapeake Bay Bridge and Tunnel Authority, Chief Pruitt (757-331-8940) Asked that we advise of our suggestions, they have a similar problem with no solution.

1/5: Port Authority of NY/NJ, Bridge Manager, George Washington Bridge (212-435-4804) said they have emergency phones, some fencing (although it causes problems with maintenance), regular patrols (full-time police) and limited access.

1/9: South Africa National Road Agency, Peter Suremann Pr Eng, said they have had some success with CCTV and suicide prevention phones.

Other Transportation Agency research
Aurora Bridge, Seattle Washington - attached
Coronado Bridge, San Diego - similar to Caltran response
Cold Spring Canyon Arch Bridge, Caltran - attached
Additional contact: Cary Web, Golden Gate Bridge, 415-923-2240
November 2006 – California Department of Transportation

Safety Barrier/Fencing for Cold Spring Bridge has been conceptually approved by the Department of Transportation (Caltrans) Highway Safety Improvement Program. A team will soon develop conceptual designs and evaluate environmental and cultural resources.

So far, the committee has identified the following suicide prevention strategies, and related findings, for the Cold Spring Bridge:

- **Signage** – Currently, a No Loitering sign is posted at the bridge. Other suggestions for signage include We Care About You or Distress Center — We Listen 24 Hours a Day. Both signs would include two suicide hotline numbers for assistance.
- **Call boxes** – Ideally, telephones would be located on both sides of the bridge and offer a direct 1-800 suicide hotline number as well as roadside assistance. Currently, the direct hotline service is not available in call boxes in California.
- **Video cameras** – Local law enforcement agencies do not have the resources to continually patrol the rural area or visually monitor the cameras. Either way, cameras do not prevent suicide, and may even serve as an attraction for it.
- **Lighting** – It’s not certain whether installing lights would help reduce suicides.
- **Safety Barrier/Fence** - Partial barriers can actually increase suicide incidents. An effective barrier would be continuous and at least six-feet high. Various designs/material are available. Effectiveness, bridge strength, aesthetics, historic eligibility, cost and constructability would be factors in choosing a type/style of barrier. Temporary chain-link fencing might also be considered.
- **Safety net** – A safety net installed on the bridge is an effective barrier for helping to reduce suicides.
- **Pedestrian/bicyclist access** – Restricting pedestrians and bicyclists from the bridge area would, most likely, impact local triathlon and hiking events.
- **Public parking/pull out areas** – It’s not certain whether restricting parking or closing off pull out areas would reduce suicides. The roadside locations are necessary for disabled vehicles, commuters, keeping the traffic moving and maintenance staff’s parking.
- **Surveillance** – Heightening surveillance efforts might be an effective suicide deterrent, but may require more law enforcement staffing and resources than is currently available.
- **Public education** – Educate the public on suicide prevention through the local media and community meetings and events. In addition, provide public awareness that dialing 9-1-1 is best for notifying law enforcement in emergencies.

At the May 22 town hall meeting, the Mental Health Association of Santa Barbara County and the county Search and Rescue publicly endorsed the committee’s work and strategies for preventing suicide at the Cold Spring Canyon Arch Bridge.

_Last updated: 11/27/2006_
Aurora Bridge Suicide Prevention Project, Seattle Washington

We are concerned about people committing suicide by jumping from the Aurora Bridge. However it is important that we carefully consider any suicide prevention measure to be sure that it will be effective, to avoid unintended negative consequences and to comply with regulations and laws. Any attempts to deter people from attempting suicide from the Aurora Bridge must take into consideration many interests and values:

Effectiveness
We must carefully research and consider suicide prevention measures to assure that they will be effective and won’t have unintended consequences. For example, suicide contagion is a concern. We are working with mental health and safety experts and are carefully considering options before taking action. We will also monitor the effectiveness of any action we take.

Traffic safety
Any suicide prevention measure must take into account traffic safety and must comply with safety regulations.

Neighbors
We must consider the effects of any suicide prevention measure on people who live, work and play in the Queen Anne and Fremont neighborhoods and on Lake Union and the Ship Canal.

Emergency response
Any suicide prevention measure must provide safe access for emergency responders. This includes emergency responders who are trying to dissuade someone who is on the bridge and threatening to jump and emergency responders who are trying to rescue people who have jumped into the water. Emergency dives into the murky, debris-strewn Ship Canal waters are a significant risk.

Structural integrity
If we install barriers on the bridge we must consider its structural integrity, particularly during an earthquake or windstorm.

Natural environment
We must research and consider the effects of any suicide prevention measure on the natural environment. Any solution that will significantly alter the bridge’s physical structure will require environmental analysis and documentation.

Historic significance
The Aurora Bridge is a designated National Historic Landmark. Any suicide prevention measure that will affect bridge aesthetics will require regulatory review and approval.

Bridge maintenance
Any suicide prevention measure will require funding for maintenance. In addition, this maintenance may require lane closures, which can cause traffic delays.
Safety inspections
WSDOT inspectors must examine the Aurora Bridge every other year to watch for signs of structural damage or stress. Inspectors must closely scrutinize the underside of the bridge. Because the bridge is very high above ground and water, the crews use an under bridge inspection truck to get close enough to inspect the underside of the bridge. The truck sits on the highway atop the bridge. Bridge inspectors climb into a bucket attached to an arm on the truck. They are then lifted up and over the side of the bridge to inspect the bridge from below. Fencing or netting on the bridge may make it significantly more difficult, costly and disruptive to inspect the bridge.

Cost
We must consider the short-term cost to install suicide prevention measures and must also consider the long-term costs to maintain and operate the measures. We must identify short- and long-term funding sources.
http://goldengatebridge.org/projects/Barrier_Briefing1.php

BRIEFING #1
GOLDEN GATE BRIDGE SUICIDE DETERRENT STUDY
PHASE 1 MIDPOINT BRIEFING ON PRELIMINARY FINDINGS

The scope of work for the two-phased 24-month study includes preparing preliminary designs, conducting wind tunnel testing, preparing environmental documents, and soliciting public input.

Midpoint Briefing - Phase 1 Wind Screening of Generic Deterrent Concepts
Phase 1 began in late October 2006, with wind tunnel testing beginning in November 2006. The three generic concepts being wind tested include (1) horizontal nets, (2) adding to the existing railing, and (3) replacement of the existing railing with new taller railing. Design variations of three basic generic design concepts have been developed for use in analyzing wind response on Bridge movement, stability, and integrity, assuming both the presence of a median barrier and the absence of a median barrier.

The wind analysis is being undertaken to assist in identifying general design parameters that prove workable and those that won’t work because they negatively impact the wind response of the Bridge. A report, due in May 2007, will identify general design parameters that prove to be acceptable from a wind perspective and which should be studied further in the full engineering and environmental analysis process to be undertaken in Phase 2.

Midpoint Phase 1 Preliminary Findings - Generic Design Wind Tests
- Railing heights ranging from 8 to 14 feet are being tested.
- Analysis is showing that the structure can not be very solid; early results indicate a 12% to 24% solid ratio (88% to 76% open).
- Some form of wind channeling appendage such as a “fairing” will be necessary - either on top of the railing or underneath the Bridge for any design option to prove workable; workable means that the design option doesn’t cause wind problems for the Bridge.
- It appears based on tests thus far that workable options are possible for both building a new railing and adding to the current railing.
- A workable netting option has not been identified yet, but tests continue and many ideas are still being explored. It is evident that “fairings” will be needed with net options as well.
- To date, approx. 60 design variations have undergone wind analysis.

Suicide Deterrent Study Milestones
- May 2007: Phase 1 Wind Study Report released to the Board of Directors and the public.
- May/June 2007: Begin Phase 2 (18 months) which includes the full Preliminary Engineering/Environmental and Historical Preservation studies. Phase 2 includes detailed preliminary engineering and environmental analysis, including visual analysis, historical preservation evaluation, public outreach, and preparation of cost estimates.
- Late Summer 2007: Release Draft Environmental Document (Environmental Analysis/Initial Study) for public and agency review and input.
- Spring 2008: Release Final Environmental Analysis/Initial Study for public and agency comment.
- Spring 2008: Board Action.
Additional Background

- **March 11, 2005**, the Board approved proceeding with environmental studies and preliminary design work for development of a suicide deterrent system with the understanding that the funds required to conduct the studies would come from non-District sources. These initial actions were authorized to enable the Board to ultimately determine whether to proceed with construction of a physical suicide deterrent system.

- **April 22, 2005, Suicide Deterrent System Criteria Adopted by Board**
  1. Must impede the ability of an individual to jump off the Golden Gate Bridge.
  2. Must not cause safety or nuisance hazards to sidewalk users including pedestrians, bicyclists, District staff, and District contractors/security partners.
  3. Must be able to be maintained as a routine part of the District’s on-going Bridge maintenance program and without undue risk of injury to District employees.
  4. Must not diminish ability to provide adequate security of the Golden Gate Bridge.
  5. Must continue to allow access to the underside of the Bridge for emergency response and maintenance activities.
  6. Must not have a negative impact on the wind stability of the Golden Gate Bridge.
  7. Must satisfy requirements of state and federal historic preservation laws.
  8. Must have minimal visual and aesthetic impacts on the Golden Gate Bridge.
  9. Must be cost effective to construct and maintain.
  10. Must not in and of itself create undue risk of injury to anyone who comes in contact with the suicide deterrent system.
  11. Must not prevent construction of a moveable median barrier on the Golden Gate Bridge.

- **June 28, 2006**, a Request for Proposals for the Environmental Studies and Preliminary Design for a Suicide Deterrent System was released. On **September 22, 2006**, the District Board of Directors authorized executing an agreement for Environmental Studies and Preliminary Design for a Suicide Deterrent System on the Golden Gate Bridge with DMJM Harris in an amount not to exceed $1.8 million. An additional $200,000 was allocated for contingencies and staff support costs.

- **Funding for the study** came from: The Metropolitan Transportation Commission (MTC) provided $1,850,000. The City and County of San Francisco provided $100,000, the County of Marin provided $25,000, and the public and private citizen groups have provided $28,700.

For more information on media coverage of the topic of suicide, contact American Foundation for Suicide Prevention, New York, NY, (212) 363-3500 or visit [http://www.afsp.org](http://www.afsp.org).
After the recent event at the Kingston-Rhinecliff Bridge, the NYSBA issues the following on 1/22/07.

**Subject:** Statement from the NYS Bridge Authority and Important Attachment

The NYS Bridge Authority will not have any comment on a specific incident of attempted suicide. This is a law enforcement matter and questions should be directed to the appropriate law enforcement agency.

The Authority recognizes that it has a public and moral responsibility to address the issue of suicide prevention. While safety issues are an ongoing concern of the Authority, several weeks ago we began an intensive study of what, as a public agency, we can do to aid in the prevention of suicides.

This project takes into account new technology, new education techniques and a better understanding of the prevention of suicides. Our focus is on a comprehensive, system-wide approach that includes the best recommendations of both state and national experts in the field of suicide prevention.

The Authority expects to conclude this study and announce a comprehensive program in the next three to four weeks. Premature discussion of the specifics of this study would be counter-productive to the goal of aiding in suicide prevention.

While we recognize that the media has a job to do, the way a suicide attempt is reported can have unforeseen and tragic consequences on others not involved in a specific incident.

**Please reference the attached document.** It provides clear and relevant information regarding the reporting of suicide attempts and comes with the highest recommendations of mental health professionals who are expert in the field.

Thank you.

(The document follows.)
At-a-Glance: Safe Reporting on Suicide

Research indicates that the way suicide is reported in the media can contribute to additional suicide and suicide ideations. Concerned about the issues and the need for better education, the Suicide Prevention Resource Center has developed a guide to help media professionals in reporting on suicide.

For Reporters

- Avoid graphic, violent, or lurid scenes.
- Avoid phrases like "commit suicide," "attempted suicide," or "suicide attempt.
- Avoid referring to a suicide victim by name or by any personal identifier.
- Avoid using phrases like "suicide pact" or "suicide partners.
- Avoid phrases like "suicide is contagious.
- Avoid using phrases like "suicide is a sign of weakness.
- Avoid using phrases like "suicide is a sign of strength.
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- Avoid using phrases like "suicide is a sign of strength.
- Avoid using phrases like "suicide is a sign of weakness.
- Avoid using phrases like "suicide is a sign of strength.

For Editors

- Avoid using phrases like "suicide is contagious.
- Avoid using phrases like "suicide is a sign of weakness.
- Avoid using phrases like "suicide is a sign of strength.
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- Avoid using phrases like "suicide is a sign of strength.

For More Information

For more information on suicide prevention, visit www.sprc.org.

The information in this guide is based on best practices and consensus recommendations from experts in the field. It is intended to provide guidance and support to media professionals in reporting on suicide.
Technical Summary Regarding Suicide Mitigation Efforts

The Information Technology Department has been tasked with researching solutions to reduce the number of suicides at the Kingston-Rhinecliff Bridge. These applications may also be implemented at Rip Van Winkle, Newburgh Beacon and Bear Mountain Bridges. Data was collected from entities who are responsible for operating bridges and have gone through similar studies and from suicide prevention specialists.

Options need to be measured against many factors (Note: the following are in no particular order):

I. Effectiveness – Will the option effectively reduce the number of successful suicide attempts or could it potentially lead to an increase in the number of incidents? Studies show that certain methods may actually make a despondent individual more aware of the option to use a facility to carry out their end.

II. Reliability – Is the option reliable? Will it stand up to the harsh elements associated with the bridge environment? If technology based, are we using a proven technology that is not prone to service interruptions. Does the option have lasting power or will it need to be replaced frequently?

III. Maintenance – Maintenance is a two fold consideration. What is the maintenance required to keep a solution up and running. Secondly, what impact will the solution have on our ability to properly maintain the facility? Also included in this category is the impact on the ability to perform proper bridge inspections.

IV. Impact on Mission: Does the option impede our ability to maintain and operate safe vehicle crossings over the Hudson River?

V. Aesthetics – Countless efforts have been made in the Hudson Valley to keep the river aesthetically pleasing. Are there any historic considerations or visual considerations that must be addressed?

VI. Incident Response – Does the installed measure help or hinder incident response personnel?

VII. Sensitivity – Does the solution offer an individual a path to ‘help’ or does it simply cause them to find another location to carry out their plans.

VIII. Cost – What are the short term costs associated with design and installation? What long term costs are there? Where will funding for a system come from?

The following is a list of prevention strategies that have been evaluated for the Kingston Rhinecliff Bridge. This summary has applications throughout the NYSBA System. Each strategy is followed by a brief list of benefits and/or negative factors that contribute to the final recommendation.

Fence:
1. Effectiveness – Effective at limiting access to potential jump areas. Can be scaled.
2. Reliability – Once installed, there is very little to go wrong.
3. Maintenance of Option – Easy to maintain by existing workforce (assuming chain link fence).
6. Aesthetics – History shows fencing will cause opposition from scenic and wildlife groups.
7. Incident Response – May hinder emergency personnel. An individual who has scaled the fence would be unreachable by responders. May impede efforts involving fire or other emergencies on bridge.
8. Sensitivity – While a fence may stop an individual from jumping from the bridge, it does not offer help to the person. A fence says, ‘we don’t want you jumping here’ as compared to ‘we care about you and want to help you find a non-destructive solution.’

Cellular Callbox:
1. Effectiveness – Based on statistics from the Mid-Hudson Bridge, call boxes appear to be very effective. Out the last 60 individuals to use a callbox on MHB, only one proceeded to jump.
2. Reliability – Localized installation should increase reliability.
3. Maintenance of Option – Low maintenance. Batteries would have to be replaced periodically.
   Signage or labels need replacement as they fade.
6. Aesthetics – No impact. (Note: signage or labels on box will fade over time and need to be replaced).
7. Incident Response – Allows responders to know the location of the individual.
8. Sensitivity – Can be configured to call a crisis hotline with trained individuals answering calls.
9. Cost – $6500 per callbox (rough estimate) revise + $12/month service fee.

Satellite Callbox:
1. Effectiveness – See ‘Cellular Callbox’ (Note: calls from this type of callbox may take 30 to 60 seconds for a connection to be made. The number to be called cannot be pre-programmed).
2. Reliability – Somewhat reliable. Environmental factors such as solar flares may cause service interruptions.
3. Maintenance of Option – Unknown at this time. Batteries would have to be replaced periodically.
   Signage or labels need replacement as they fade.
6. Aesthetics – No impact. (Note: signage or labels on box will fade over time and need to be replaced).
7. Incident Response – Allows responders to know the location of the individual.
8. Sensitivity – User could call crisis center to talk to a trained professional.
9. Cost – $8,000 per callbox. $50/month + $1 per minute. Cannot restrict what number is dialed.

Landline Callbox:
1. Effectiveness – Very Effective – see paragraph on MHB call boxes at end of document.
2. Reliability – Very reliable.
3. Maintenance of Option – Low Maintenance. Signage or labels need replacement as they fade.
6. Aesthetics – No impact.
7. Incident Response – Allows responders to know the location of the individual.
8. Sensitivity – Can be configured to call a crisis hotline with trained individuals answering calls.
9. Cost – $46,000 +/- for conduit and copper installation. $500 +/- per callbox. Waiting on monthly fee from Telco. Conduit costs will vary significantly by bridge. Total solution across all facilities $365,000.
Radio Callbox:
1. Effectiveness – Allows individual to reach out for help. (Note: radio calls would come in over our existing radio system and be answered by Authority personnel.)
2. Reliability – Very reliable.
3. Maintenance of Option – Low maintenance. Batteries would have to be replaced periodically. Signage or labels need replacement as they fade.
6. Aesthetics – No impact.
7. Incident Response – Allows responders to know the location of the individual.
8. Sensitivity – Allows individual to speak to a live person. Authority personnel are not trained in crisis management. Calls cannot be connected to a trained suicide prevention counselor.
9. Cost – $2,000 + $800 (if solar is needed for power).

Video Cameras:
1. Effectiveness – Will help with incident management, but in and of itself will have no effect on number or outcome of incidents. Some studies indicate that publicized surveillance may act as an attraction.
2. Reliability – Very reliable.
3. Maintenance of Option – Requires a higher level of maintenance. Malfunctioning cameras must be replaced. Preset view locations must be maintained.
5. Impact on Mission – Aids in the management of traffic flow.
6. Aesthetics – Low impact.
7. Incident Response – Allows responders to know the location of the individual.
8. Sensitivity – N/A
9. Cost – $20,000 to $500,000 – Fixed vs. Pan/tilt/zoom.

Safety Net:
1. Effectiveness – If the individual is aware of safety netting, they may choose not to use KRB but move on to another location. During the time it takes to move on, certain individuals may change their mind. Individuals that are caught by the net could still maneuver to the edge and jump.
2. Reliability – Depends on material of netting.
3. Maintenance of Option – High maintenance. Must be inspected on a regular basis.
4. Maintenance of Facility – May hinder certain maintenance operations such as painting. Could create a dangerous safety situation for maintenance personnel.
6. Aesthetics – High impact for appearance of bridge.
8. Sensitivity – Does not offer psychiatric help to the person.
9. Cost – High – Design/study will need to be completed for total cost estimate.

Lighting:
1. Effectiveness – It is not certain if installed lighting would help reduce suicides.
2. Reliability – Very reliable.
6. Aesthetics – Some environmental groups are against lighting.
7. Incident Response – May aide in search and recovery efforts.
8. Sensitivity – Does not offer psychiatric help to the person.
9. Cost – Design/study will need to be completed for actual cost estimate.

**Patrols:**

1. Effectiveness – Somewhat effective. The noticeable presence of patrols may discourage potential suicide victims.
2. Reliability – Past experience shows that outsourced, private services may not be reliable. Law enforcement patrols are not always present or available.
6. Aesthetics – No impact.
7. Incident Response – Properly trained patrols may allow for quicker response.

Regardless of the solution, it is felt that there is no way to completely prevent suicide attempts at our facilities. Based on the evaluation above, call boxes have the greatest success in reducing deaths. They have a very low maintenance cost and a reasonable cost for installation. Call boxes offer individuals help from qualified suicide prevention specialists.
Funding
### Project Information

- **CN:** 3973
- **MPO/RPO:**
- **Fed/State ID:** BR-064-6(25)242
- **NMDOT Dist.:** 5
- **County:** Taos
- **Municipality:** Rural
- **RT:** US 64
- **Terminus:** RIO GRANDE RIVER GORGE BRIDGE
- **Category:** Bridge Minor Rehab / Preventative Maint.
- **Lead Agency:** DISTRICT 5
- **Length:** 0.243
- **Est. Proj. Cost:**
- **Est. Letting:**

### Project Phases

- Environ. Document
- Prel. Engr.
- Design
- Right-of-way
- Construction
- Other

### Remarks:

- DELAYED FROM FY2007 TO FY2009. PER DS DE / IDD CE.

### Programmed Funds

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May 07, 2009
## Rio Grande Gorge Bridge Cost Estimate - Alternative #2

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**SUBTOTAL = $1,233,697.50**

20% CONTINGENCY = $246,739.50

**ESTIMATED CONSTRUCTION COST TOTAL = $1,480,437.00**

GRT (7.0%) = $103,630.59

**ESTIMATED CONSTRUCTION COST WITH GRT = $1,584,067.59**

**ESTIMATED ENGINEERING COST TOTAL (10% OF CONSTRUCTION COST) = $149,000.00**

**TOTAL ESTIMATED PROJECT COST = $1,733,067.59**

---

**Potential Design Issues**

1. A detailed wind analysis on the system may be needed to evaluate actual wind loads, deflection and vibration effects on the proposed system.
2. Additional rating of bridge main members and gusset plates will be necessary due to increase in total structure load.
3. Truss member and gusset plate sizes may need to be increased to adequately carry the additional load.
4. Additional members, such as floor beams to resist transverse wind loads, may be needed to adequately support the system.
5. Additional lateral bracing may be required for the global truss to carry the additional wind loads.
6. Additional lateral bracing may be required for the global truss to carry the additional wind loads.
**COMPUTATION SHEET**

**Subject**: Rio Grande Gorge Bridge  
Cost Estimate - Alternative #3

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**SUBTOTAL** = $2,533,758.46  
20% CONTINGENCY = $506,751.69  
**ESTIMATED CONSTRUCTION COST TOTAL** = $3,040,510.15

GRT (7.0%) = $212,835.71

**ESTIMATED CONSTRUCTION COST WITH GRT** = $3,253,345.87

**ESTIMATED ENGINEERING COST TOTAL** (10% OF CONSTRUCTION COST) = $305,000.00

**TOTAL ESTIMATED PROJECT COST** = $3,558,345.87

Weight of the Rio Grande Gorge Bridge Structure (Service) = 3545000 lbs.  
Weight of the Suicide Deterrent System (Service) = 62285 lbs.  
% Increase = 1.8%

**Potential Design Issues**

1. A detailed wind analysis on the system may be needed to evaluate actual wind loads, deflection and vibration effects on the proposed system.
2. Additional rating of bridge main members and gusset plates will be necessary due to increase in total structure load.
3. Truss member and gusset plate sizes may need to be increased to adequately carry the additional load.
4. Additional members, such as floor beams to resist transverse wind loads, may be needed to adequately support the system.
5. Additional lateral bracing may be required for the global truss to carry the additional wind loads.
6. Additional analysis may be required to evaluate the ice/snow effect with the additional dead load and design permit live load.
**COMPUTATION SHEET**

**Subject:** Rio Grande Gorge Bridge  
Cost Estimate - Alternative #4

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**SUBTOTAL** = $2,448,637.25  
20% CONTINGENCY = $489,727.45  
**ESTIMATED CONSTRUCTION COST TOTAL** = $2,938,364.70  
GRT (7.0%) = $205,685.53  
**ESTIMATED CONSTRUCTION COST WITH GRT** = $3,144,050.23  
ESTIMATED ENGINEERING COST TOTAL (10% of construction cost) = $294,000.00  
**TOTAL ESTIMATED PROJECT COST** = $3,438,050.23

**Potential Design Issues**

1. A detailed wind analysis on the system may be needed to evaluate actual wind loads, deflection and vibration effects on the proposed system.
2. Additional rating of bridge main members and gusset plates will be necessary due to increase in total structure load.
3. Deflection criteria with respect to wind induced vibrations for the vertical supports needs to be further defined, and may result in heavier section requirements than currently assumed.
4. Truss member and gusset plate sizes may need to be increased to adequately carry the additional load.
5. Additional members, such as floor beams to resist transverse wind loads, may be needed to adequately support the system.
6. Additional lateral bracing may be required for the global truss to carry the additional wind loads.

- Weight of the Rio Grande Gorge Bridge Structure (Service) = 3545000 lbs.
- Weight of the Suicide Deterrent System (Service) = 143030 lbs.
- % Increase = 4.0%
## COMPUTATION SHEET

### Subject
Rio Grande Gorge Bridge  
Cost Estimate - Alternative #5

### Design
KRS  
Date: November 6, 2009  
Checked: JSL  
Date: November 6, 2009

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ITEM DESCRIPTION</th>
<th>UNIT</th>
<th>TOTAL QUANTITY</th>
<th>PRICE</th>
<th>EXTENSION</th>
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<tr>
<td>541200</td>
<td>STRUCTURAL STEEL FOR MISC. STRUCTURES</td>
<td>LBS</td>
<td>133640</td>
<td>$4.50</td>
<td>$601,380.00</td>
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<tr>
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<td>1500</td>
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<tr>
<td>618000</td>
<td>TRAFFIC CONTROL MANAGEMENT</td>
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<td>$100,000.00</td>
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<tr>
<td>621000</td>
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<td>50160</td>
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<td>SAFETY NETTING AND PLATFORMS FOR ERECTING THE SYSTEM</td>
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<td>1</td>
<td>$100,000.00</td>
<td>$100,000.00</td>
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</tbody>
</table>

**SUBTOTAL = $3,331,166.40**  
**20% CONTINGENCY = $666,233.28**  
**ESTIMATED CONSTRUCTION COST TOTAL = $3,997,399.68**

**GRT (7.0%) = $279,817.98**  
**ESTIMATED CONSTRUCTION COST WITH GRT = $4,277,217.66**  
**ESTIMATED ENGINEERING COST TOTAL (10% OF CONSTRUCTION COST) = $400,000.00**

**TOTAL ESTIMATED PROJECT COST = $4,677,217.66**

---

Weight of the Rio Grande Gorge Bridge Structure (Service) = 3545000 lbs.  
Weight of the Suicide Deterrent System (Service) = 149672 lbs.  
\% Increase = 4.2%

---

**Potential Design Issues**

1. A detailed wind analysis on the system may be needed to evaluate actual wind loads, deflection and vibration effects on the proposed system.
2. Additional rating of bridge main members and gusset plates will be necessary due to increase in total structure load.
3. Truss member and gusset plate sizes may need to be increased to adequately carry the additional load.
4. Additional members, such as floor beams to resist transverse wind loads, may be needed to adequately support the system.
5. Additional lateral bracing may be required for the global truss to carry the additional wind loads.
Appendix B. Rio Grande Gorge Call Box Data
Taos Rio Grande Gorge Bridge

Conversations regarding the Taos Rio Grande Gorge Bridge offer opportunities to deepen the community conversations regarding the importance of community wellness. Coming together allows us to continue the conversations that address ways in which people can access crisis response, and find ways that together we can support the needs of people experiencing thoughts of suicide, and other mental health and substance use concerns.

As it relates to the Taos Rio Grande Gorge Bridge call boxes, these call boxes are only one part of the suicide prevention strategy in the community. There are many more initiatives in the community that are also in place to support people, and their loved ones, experiencing thoughts of suicide, and other mental health and substance use concerns.

Taos Rio Grande Gorge Bridge Call Box Memorandum of Understanding between Protocall Services, Inc and the New Mexico Department of Transportation

- The call boxes are the property of the New Mexico Department of Transportation.
- Maintenance and Technical Support of the call boxes is managed by the New Mexico Department of Transportation.
- The New Mexico Department of Transportation and ProtoCall Services, Inc. have a Memorandum of Understanding to support calls from the Taos Rio Grande Gorge Bridge Call Boxes as a part of the New Mexico Crisis and Access Line Statement of Work between ProtoCall Services, Inc and the New Mexico Department of Health Behavioral Health Services Division.
- The call boxes on the Taos Rio Grande Gorge Bridge have a dedicated phone number assigned to it. The number assigned is different than the New Mexico Crisis and Access Line phone number.
- Calls from the call boxes are routed to a dedicated account with call handling procedures specific for this program.
- Calls from the call boxes on the Taos Rio Grande Gorge Bridge are supported by professional counselors 24 hours a day, 7 days a week, 365 days a year.
- The professional counselors are able to support, create safety plans, and engage public safety (when needed) for people who call from the call box to report that they — or a someone else — is/was considering suicide or experiencing some other mental health and/or substance use concern.

Data

The Taos Rio Grande Gorge Bridge call boxes were installed in December 2014, and went live on January 14, 2015. Below is an overview of the calls that Protocall Services, Inc have received.

**Total Calls from January 14, 2015 – July 31, 2018**

- 2,015 calls answered
- Clinical calls: 20 Emergent (Law enforcement was dispatched on persons of concern who had intent on jumping off the bridge. We engaged with the caller until police officers arrived and their safety was confirmed)
- No Response Dispatches: 240
- Non-mental health dispatches: 1 (This was a car crash)
- The remaining were accidental calls, calls regarding other traffic incidents, non-emergent bridge issues, test calls, and other miscellaneous types of calls not having to do with needing help.

**January 14, 2015 - January 4, 2016:**

- 603 calls answered
- Clinical calls: 12 (4 Routine, 4 Urgent, 4 Emergent)
- No Response Dispatches: 36
- Non-mental health dispatches: 1 (This was a car crash)
- The remaining were accidental calls, calls regarding other traffic incidents, non-emergent bridge issues, and other miscellaneous types of calls not having to do with needing help.
January 1, 2016 – December 31, 2016

- 795 calls answered
- Clinical calls: 2 Emergent (Law enforcement was dispatched on persons of concern who had intent on jumping off the bridge. We engaged with the caller until police officers arrived and their safety was confirmed)
- No Response Dispatches: 104
- Non-mental health dispatches: 0
- The remaining were accidental calls, calls regarding other traffic incidents, non-emergent bridge issues, test calls, and other miscellaneous types of calls not having to do with needing help.

January 1, 2017 – December 31, 2017

- 473 calls answered
- Clinical calls: 3 Emergent (Law enforcement was dispatched on persons of concern who had intent on jumping off the bridge. We engaged with the caller until police officers arrived and their safety was confirmed)
- No Response Dispatches: 63
- Non-mental health dispatches: 0
- The remaining were accidental calls, calls regarding other traffic incidents, non-emergent bridge issues, test calls, and other miscellaneous types of calls not having to do with needing help.

January 1, 2018 – July 31, 2018

- 144 calls answered
- Clinical calls: 3 Emergent (Law enforcement was dispatched on persons of concern who had intent on jumping off the bridge. We engaged with the caller until police officers arrived and their safety was confirmed)
- No Response Dispatches: 37
- Non-mental health dispatches: 0
- The remaining were accidental calls, calls regarding other traffic incidents,
non-emergent bridge issues, test calls, and other miscellaneous types of calls not having to do with needing help.

This service is proving to be a positive public health investment with no identity or eligibility requirements, and no cost to consumers and families accessing this service.

**New Mexico Crisis and Access Line Program**

Established in 2013, the New Mexico Crisis and Access Line provides New Mexicans access to local assistance and resources during a mental health crisis.

The New Mexico Crisis and Access Line (NMCAL), 1-855-NMCRISIS (1-855-662-7474), is a centralized, single telephone number, answered by professional counselors 24 hours a day, 7 days a week, 365 days a year. Counselors have access to emergency workers if needed, are trained in assessing a crisis and responding with the least restrictive alternative. Additionally, callers are referred to resources local to them at the end of the call or by a follow up call by the next business day.

The calls are free and confidential.

ProtoCall Services Inc. operates the crisis lines with counselors to provide patient-centered, best practice clinical services 24 hours, seven days a week, 365 days a year.

Counselors are available to help with any personal or emotional crisis, for an individual or a loved one. All NMCAL counselors are professionally trained and hold a Masters or above, and are supervised by Licensed Mental Health Professionals. The majority of calls are related to anxiety; almost one-third of calls are related to suicidal thoughts; almost one-fourth are about drug or alcohol use.

Unique to ProtoCall Services, Inc., our crisis lines are staffed exclusively by mental health professional counselors with their Bachelors, Masters or PhD. degrees. Counselors are supervised on site by licensed clinical supervisors.

Founded in 1992. ProtoCall Services, Inc. is the nation’s largest and most experienced
provider of behavioral health call center services and has been providing crisis services to New Mexico behavioral health providers since 2002.

We use a clinical approach that offers solution-focused techniques which foster self-determination and actively engaging caller choice through identifying coping and resiliency strategies that work through the crisis, and aid callers in identifying natural supports and exploring their experience with what has and has not worked in the past.

Services are congruent with the culture, gender, race, age, sexual orientation, health literacy and communication needs of the individual being served.

Since 2013, the New Mexico Crisis and Access Line has:

- provided after-hours access coverage for providers during evenings, weekends, holidays and unexpected interruptions of service emergencies.
- launched a peer-to-peer Warmline program to provide a listening ear for people before they reach a point of crisis.
- launched a peer-to-peer Warmline texting program.
- launched a public awareness campaign promoting suicide prevention and support for people with mental health and substance use concerns.
- trained all of its staff in best practices for people who experience Opioid Use Disorders.

Funding for all NMCAL programs are provided by the State of New Mexico Department of Human Services, Behavioral Health Services Division (BHSD).

For additional information and resources, please visit [www.newmexicocrisisline.com](http://www.newmexicocrisisline.com) or contact New Mexico Program Manager, Wendy Linebrink-Allison, MSW MBA CPSW

p: 505-263-9140

e: [wendy.linebrink-allison@nmcrisisline.com](mailto:wendy.linebrink-allison@nmcrisisline.com)
Concerned about a loved one ...

- Threatening to, or talking about wanting to, hurt or kill him/herself?
- Seeking access to firearms, available pills, or other means to kill him/herself?
- Talking or writing about death, dying, or suicide, when these actions are out of the ordinary for the person?
- Expressing feelings of hopelessness?
- Displaying rage, uncontrolled anger, or seeking revenge?
- Acting reckless or engaging in risky activities, seemingly without thinking?
- Saying he or she feels trapped, like there’s no way out?
- Increasing alcohol or drug use?
- Withdrawing from friends, family and society?
- Demonstrating anxiety, agitation, and insomnia (or sleeping all the time)?

If you or a loved one is experiencing these or other emotional crises, you can find help 24 hours a day, seven days a week, by calling the New Mexico Crisis and Access Line at 1-855-NMCRISIS (1-855-662-7474).
Appendix C. 2015 Structural Feasibility Analysis – Rio Grande Gorge Bridge Suicide Deterrent System
STRUCTURAL FEASIBILITY ANALYSIS

RIO GRANDE GORGE BRIDGE
SUICIDE DETERRENT SYSTEM

NMDOT PROJECT/CONTROL NO.: U900024

prepared for:

NMDOT

prepared by:

HDR

January 2015
1. Background

The Rio Grande Gorge Bridge Structure is located in Taos County on US64 approximately 10 miles west of the City Taos, NM. The structure is a steel deck arch truss structure with a total length of 1,280 ft. It is the seventh highest bridge in the United States at 660 ft. above the Rio Grande River.

The Rio Grande Gorge Bridge Structure has been a location of suicides and suicide attempts. The structural feasibility of adding a suicide deterrent system to the bridge is being studied due to the desire to deter future attempts.

The NMDOT recently completed a project for the installation of suicide prevention hotline phones on the Rio Grande Gorge Bridge in an effort to provide deterrence to suicides at this location. This analysis is in pursuit of possible additional features to deter suicides.
2. Alternatives

Previous efforts have been made to identify suicide deterrent system alternatives. See Appendix A for a rendering of alternatives that were previously reviewed by the Department. The Department has identified two of these suicide deterrent alternatives for further development. These include Alternative 2 – an 8’ pedestrian railing and Alternative 3 - a horizontal net system. Descriptions of the suicide deterrent systems and loading used for their conceptual designs are described below. See Appendix B for Proposed Suicide Deterrent System Plans.

2.1. Alternative No. 2 – Replace Existing Railing with an 8’ Tall Pedestrian Railing

HDR developed the conceptual design of a taller pedestrian railing that would replace the existing pedestrian railing. Per discussions with the New Mexico Department of Transportation, the new railing is 8’-3” in height. The new railing consists of vertical members spaced such that the clear opening between vertical members of approximately 4” to 2’-5” above the sidewalk height and clear opening of approximately 8” from 2’-5” height to the top of the railing. All railing members are adequately stiff to resist 0.5” deflection with the applied design load. The vertical members will frame into the horizontal support members that are near the top and bottom of the system, and at the transition in vertical member spacing. The horizontal elements will connect to the vertical posts.

The loads associated to the taller railing are:

- **Dead Load**: Dead loads are estimated from the conceptual system. (The existing pedestrian railing is approximately 35 lb/ft, and the conceptual 8’ tall pedestrian railing is approximately 57 lb/ft. Since the existing pedestrian railing would be replaced, the total appurtenance weight is 57 lb/ft for this alternative.)
- **Live Load**: The design live loads for pedestrian railings are in accordance with section 13.8.2 – Design Live Loads of the ASSHTO LRFD Bridge Design Specifications. The live load was taken as 0.050 klf., both transversely and vertically, acting simultaneously. In addition, each longitudinal element was designed for a concentrated load of 0.20 kips. The posts are designed for a concentrated live load \((0.20+0.05\times\text{Length})\) applied transversely at 5 ft. above the sidewalk.

The vertical fence was assumed to extend the entire length of the bridge, including around the overlooks. The proposed railing may be sectioned in similar lengths as the existing railing. Any break in the taller railing height would be an opportunity to negate the deterrent affects of the system.
Figure 2 – 8’ Tall Pedestrian Railing
2.2. Alternative 3 – Addition of a Horizontal Net System

A horizontal net system is also considered.

The system would be installed 15 feet below the top of rail and would extend out 15 feet from the edge of the deck. The net system may be stainless steel netting with a grid of approximately 5 to 7 inches supported by horizontal steel struts or frames.

The loads associated to the horizontal net system are:

- **Dead Load**: Dead loads are estimated from the conceptual system. (The existing pedestrian railing is approximately 35 lb/ft, and the conceptual horizontal net system is approximately 50 lb/ft. Since the existing pedestrian railing would not be replaced, the total appurtenance weight is 85 lb/ft for this alternative.)
- **Live Load**: Live load including impact associated with a single individual jumping off the bridge into the net system. Single individual weighing 250 lbs. jumping off the bridge and landing onto the net system applied over a maximum area of 8 square feet.
- **Snow and Ice Load (SI)**: Snow and Ice loading in accordance with ASCE7-10, Section 7 and 10 respectively. Snow loading shall assume the net is completely solid. The snow loading for the Rio Grande Gorge Bridge is in a “case study” area per ASCE 7-10 section 10. Natural Resources Conservation Service (NRCS) SNOTEL data was used to determine the snow water equivalent in the area to determine the max snow load anticipated at the bridge location (see Appendix C).
Figure 3 – Horizontal Net System

HORIZONTAL NET SECTION AT PANEL POINTS

HORIZONTAL NET SECTION BETWEEN PANEL POINTS
3. Feasibility Analysis

A structural feasibility analysis was conducted to determine whether the addition of suicide deterrent systems to the bridge can be supported by the existing structure, and whether additional strengthening efforts will be required to the truss. To determine this, the effect of the suicide deterrent system alternatives on the overall bridge rating was evaluated. A conceptual level cost for construction of each alternative was also estimated.

3.1. Effect on Bridge Rating

Bridge load rating calculations provide a basis for determining the safe load capacity of the bridge. The HDR team previously assisted the NMDOT in a live load rating analysis of the Rio Grande Gorge Bridge. A 2-dimensional model of the truss was developed as part of that effort. The structure’s capacity to carry the demand of the HS20 design live load vehicle was completed at that time.

For Alternative 2 of the suicide deterrent system feasibility analysis, the dead load of the proposed pedestrian railing was applied to the 2-dimensional model of the truss that was been developed by HDR for the previous analysis. The analysis noted the changes in available live load carrying capacity, or rating factors.

Analysis Assumptions (for Alternative 2 - 8’ Tall Pedestrian Railing):

- Wind load analysis was not included. The additional wind load due to the 8’ tall pedestrian railing (approximately 15% increase in total bridge wind area) is expected to be taken by the continuous deck through diaphragm action.
- The railing is not a vehicular barrier. Through discussion with the New Mexico Department of Transportation, the railing will not be crash tested.
- Details for connections were not designed or evaluated at this conceptual level.
- The Department has determined this option is viable as a suicide deterrent system.
- No study into the efficiency of this design as a suicide deterrent was performed.

The additional dead load and live loads were applied to the 2-dimensional main truss model. The analysis noted the changes in available live load carrying capacity or rating factors.

Analysis Assumptions (for Alternative 3 – Horizontal Net System):

- No horizontal wind load analysis was completed. Analysis is limited to a 2-dimensional model.
- No horizontal pre-tensioning load from the border cable was included in the analysis. Analysis is limited to a 2 dimensional model.
- Addition of required structural members due to horizontal loadings is not included in this effort.
- Details for connections were neither designed nor evaluated.
- The Department has determined this option is viable as a suicide deterrent system.
- No study into the efficiency of this design as a suicide deterrent was performed.
- The effects of the snow load on the truss members at the connection points were not analyzed.
The bridge rating factor is the ratio of the structure’s capacity to the HS20 live load demand. A rating factor greater than 1.0 indicates the structural member has greater capacity than the HS20 live load demand, and a rating factor less than 1.0 indicates the member has less capacity than the HS20 live load demand.

The results of this analysis are shown below in Table 1. The members shown below are those with As-Built ratings less than 1.10. Neither alternative had a significant affect on the bridge rating. For a summary of the member ratings for each alternative, see Appendix D.

Table 1: Bridge Rating Changes

<table>
<thead>
<tr>
<th>Member</th>
<th>As-Built Rating</th>
<th>Alternative 2 8’ Tall Pedestrian Railing</th>
<th>Alternative 3 Horizontal Net</th>
</tr>
</thead>
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<tr>
<td>Approach span stringers</td>
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<td>0.95</td>
<td>0.95</td>
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<td>Truss span stringers (P0-P3)</td>
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<td>0.85</td>
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<td>Truss span stringers (P3-P20)</td>
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<td>1.08</td>
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<tr>
<td>Gusset Plate U17</td>
<td>1.10</td>
<td>1.10</td>
<td>1.10</td>
</tr>
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</table>

* per [Rio Grande Gorge Bridge Rating, July 2004, Project No. SP-7700(302)] or [Rio Grande Gorge Bridge Gusset Plate Rating, November 2009, Control Number CF726/Project Number BR-7700(190)]

The existing bridge ratings result in a load carrying capacity of an HS17 vehicle (which is less than the standard criteria of HS20). However, the additional weight added for either of the suicide deterrent alternatives reviewed is small relative to the overall bridge weight, and is not significant enough to impact this rating. The load carrying capacity for this structure will remain an HS17 with the additional weight, and **no major structural improvements to the existing bridge will be required to maintain the present load rating.**

3.2. Cost

The cost for construction of each alternative was estimated for the conceptual level design. See cost estimates below for each alternative:

Table 2 – Cost Estimate

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Cost</th>
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</thead>
<tbody>
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<td>Alternative 2 – 8’ Tall Pedestrian Fence</td>
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<tr>
<td>Alternative 3 - Horizontal Net</td>
<td>$4,570,000</td>
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*The estimated costs are based on a traditionally let project. Changes to these estimates can be significantly effected by the use of other contracting options.

The cost of materials and the safety measures for construction operations required for Alternative 3 – a Horizontal Net System, are higher than that of Alternative 2. See Appendix E for detailed cost estimate.
4. Additional Considerations

Additional factors will need to be studied in a subsequent alternatives analysis. Brief descriptions of these factors are provided below: constructability, maintenance, inspection access impacts, view, and historical preservation. Additional structural analysis will be required in final design as well. Some of these requirements are described below.

4.1. Constructability

Construction of both suicide deterrent alternatives will span the length of the Rio Grande Gorge Bridge, which is 660 feet above the Rio Grande. At this height, scaffolding from below the structure will not be feasible. Consequently, constructability will be a key element in alternatives analysis and selection.

In Alternative 2, replacing the existing railing with an 8’ tall pedestrian railing, construction would be limited to within 1'-6" below the top of existing sidewalk. The existing railing would be unbolted in sections and removed. The new railing could be fabricated in similar section lengths to the existing as-built railing sections. Bolt patterns would match existing holes in the bridge, and the railing would bolt in the same locations to the existing railings. This is anticipated to be feasible with the use of small cranes and may or may not require snooper trucks. The majority of this work is expected to be performed from deck level but may require the use of a small bucket truck.

In Alternative 3 the horizontal net system will require construction approximately 12’ below the top of sidewalk. Horizontal cantilever arms would be bolted to the vertical truss members at panel points. Between panel points, a bracing system would be installed below the bridge deck. Temporary hanging scaffolding and small cranes are anticipated for the construction of this system.

4.2. Maintenance

Maintenance of the proposed suicide deterrent system was also considered in this feasibility analysis. Minimal maintenance is ideal to save the Department both financially, and from a safety perspective. The high profile nature of this structure creates a challenge to any maintenance efforts that may be necessary.

In Alternative 2, 8’ tall pedestrian railing, minimal maintenance is anticipated. Bent bars may need occasional straightening and repainting may be required.

In Alternative 3, the horizontal net system, repainting may also occasionally be needed. Additionally, the net system will need to be cleared from debris as needed. Strict safety precautions would need to be implemented for all maintenance personnel.

4.3. Inspection Access

The Rio Grande Gorge Bridge is on an annual inspection schedule. Inspectors need to be able to access all members of the truss structure, the pier caps, and the bearings. Snooper trucks are typically used to access portions of this structure. The NMDOT provided HDR with a schematic of the snooper truck anticipated for future inspection of this bridge (see Appendix F).

The snooper truck basket can clear 11’-0” vertical fence or railing. Therefore, access to the structure would not be limited by an 8’-3” fence.
The snooper truck’s arm can extend horizontally 13’-0” clear. The horizontal net system extends beyond this limit to 20’-0” from the edge of sidewalk. Therefore, the net system would need to be retractable for inspection access. This would require additional effort from the Department during their annual bridge inspection.

4.4. View

The proposed suicide deterrent system will have an effect on the view of the Rio Grande Gorge from the perspective of a pedestrian on the bridge. Both systems analyzed for feasibility will have a reduced perspective of the surrounding landscape.

With Alternative 2 – replacing the existing railing with an 8’ tall pedestrian railing, the new railing will obstruct the horizontal view more than the existing, shorter railing.

Alternative 3 will not see a direct horizontal view effect, but will have an impacted view at 45 degrees below the horizon.

4.5. Historic Preservation

The Rio Grande Gorge Bridge is listed in the National Register of Historic Places. Therefore, any changes to the structure subject to review from historical preservation.

The ornate nature of the existing railing may be considered a character defining feature of the Rio Grande Gorge Bridge. Changes to this feature will require review from the historic preservation divisions.

The addition of the horizontal net will also change the appearance of the structure. This will affect the view of the gorge and surrounding landscape for a pedestrian on the structure, as well as the view of the structure from a pedestrian at a bridge viewing location.

4.6. Final Design Calculations

Additional design calculations will be required for the final design of these alternatives. Some of these include the following:

- A 3-D model will be required for the refined analysis of the impacts of wind and ice loads on the structure, as well as deflection and vibration effect.
- Additional lateral bracing may be required for the global truss to carry the additional wind load.
- Additional members to resist transverse wind loads may be needed to adequately support the horizontal net system alternative.
Appendix A – Proposed Suicide Deterrent Renderings
THE ALTERNATIVES

ALTERNATIVE 1: THERE ARE NO GEOMETRICAL MODIFICATIONS PROPOSED UNDER THE NO-BUILD ALTERNATIVE.

ALTERNATIVE 2: ADDS 6'-0" TALL VERTICAL SYSTEM TO EXISTING 4'-0" TALL OUTSIDE RAIL, FOR A TOTAL HEIGHT 10'-0".

ALTERNATIVE 3: ADDS HORIZONTAL NET SYSTEM 12'-0" BELOW THE SIDEWALK, EXTENDING 20'-0" OUT FROM THE BRIDGE HORIZONTALLY.

ALTERNATIVE 4: ADDS VERTICAL NET SYSTEM, MINICING THE MOUNTAIN RANGE IN THE BACKGROUND, SUPPORTED BY COMPRESSION STRUTS AT THE PIER AND TENSION CABLES ELSEWHERE. THIS UN-OBTRUSIVE SCREEN VARIES IN HEIGHT FROM 8'-0" TO 48'-0".

ALTERNATIVE 5: ADDS A CHAIN LINK/MESH COVER OVER THE RIO GRANDE GORGE BRIDGE WITH INTERMEDIATE SUPPORTS.

RIO GRANDE GORGE BRIDGE PHYSICAL SUICIDE DETERRENT SYSTEM
Appendix B – Proposed Suicide Deterrent Plans
Appendix C – SNOTEL Data
SNOTEL Site: Palo
Elevation: 9350 ft.

### Snow Water Equivalents

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Max = 5.8 inches
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Appendix D – Truss Member Ratings
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### Truss Member Capacities and HS20 Truck Ratings:

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**HS20 Truck Rating:**

- **Limit State:** Tension

---

**Load Factors:**

- **Live Load:** 49.53
- **Impact:** 57.38
- **Live + Impact:** 53.63

---

**Capacity:**

- **Max. Fy, Fu:**
  - Tension: 52.25 / 62.90
  - Compression: 49.51 / 60.63

---

**Inventory:**

- **Capacity:**
  - Tension: 3291.587
  - Compression: 2633.331

---

**Spacing:**

- **Capacity:**
  - Tension: 3291.587
  - Compression: 2633.331
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**Notes:**
- Results are calculated for the given parameters.
- The calculations assume standard conditions and may require adjustments for specific project requirements.
- The table provides a comprehensive view of the structural analysis for the given members and sections.
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This table contains the capacities and ratings for various truss members and sections along the HS20 Lane of the Rio Grande Gorge Bridge. Each row represents a different truss member, with columns detailing the member's impact on the structure, its section properties, and the associated load factors and capacities. The table is structured to reflect the design criteria and safety margins for the bridge's structural integrity.
### Truss Member Capacities and HS20 Lane Ratings:

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*Note: Rio Grande Gorge Truss Rating Alt 2, Horizontal Net.xls 1 of 4 HS20 Truck*
Truss Member Capacities and HS20 Truck Ratings:
K
0.75
Member
Truss
SAP Length,
Member Frame
Lx
No.
No.
(ft)

Bottom Chord

L0 - L1

43

30.18

Ly

Fy

Fu

(ft)

(ksi)

(ksi)

30.18

50

70

L1 - L2

44

30.18

30.18

50

70

L2 - L3

45

30.18

30.18

50

70

L3 - L4

46

30.26

30.26

46

67

L4 - L5

47

30.47

30.47

100

115

L5 - L6

48

30.78

30.78

100

115

L6 - L7

49

31.26

31.26

100

115

L7 - L8

50

32.08

32.08

100

115

L8 - L9

51

33.67

33.67

100

115

L9 - L10

52

38.11

38.11

100

115

L10 - L11

53

38.11

38.11

100

115

L11 - L12

54

33.67

33.67

100

115

L12 - L13

55

32.08

32.08

100

115

L13 - L14

56

31.26

31.26

100

115

L14 - L15

57

30.78

30.78

100

115

L15 - L16

58

30.47

30.47

50

70

L16 - L17

59

30.26

30.26

50

70

L17 - L18

60

30.13

30.13

50

70

L18 - L19

61

30.04

30.04

100

115

L19 - L20

62

30.00

30.00

100

115

Rio Grande Gorge Truss Rating_Alt 2_Horizontal Net.xls

Dead
Load,
D
(kip)
70
70
0
0
-156
-156
-359
-359
-565
-565
-754
-754
-915
-915
-1046
-1046
-1156
-1156
-1283
-1283
-1283
-1283
-1131
-1131
-986
-986
-806
-806
-580
-580
-304
-304
10
10
342
342
647
647
870
870

Live
Load,
L
(kip)
117
-51
167
-87
180
-113
169
-130
142
-138
109
-139
76
-136
45
-130
21
-123
20
-118
20
-118
20
-111
21
-103
30
-90
51
-73
77
-52
110
-47
146
-46
183
-42
212
-35

Impact
Length,
LIM
I
(ft)
300
11.8%
600
6.9%
300
11.8%
600
6.9%
300
11.8%
600
6.9%
300
11.8%
600
6.9%
300
11.8%
600
6.9%
300
11.8%
600
6.9%
300
11.8%
600
6.9%
240
13.7%
600
6.9%
300
11.8%
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600
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300
11.8%
600
6.9%
300
11.8%
425
9.1%
300
11.8%
410
9.3%
300
11.8%
390
9.7%
230
14.1%
365
10.2%
255
13.2%
345
10.6%
270
12.7%
305
11.6%
360
10.3%
300
11.8%
480
8.3%
300
11.8%
600
6.9%
300
11.8%

L+I
(kip)
130
-55
186
-93
201
-120
189
-139
159
-148
122
-149
85
-145
51
-139
24
-131
23
-126
23
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23
-121
23
-112
34
-99
58
-80
87
-57
124
-53
162
-51
198
-47
226
-39

T = 0.77 *
D+L+I
T
(kip)
200
15
186
-93
45
-277
-169
-497
-406
-713
-632
-903
-830
-1060
-995
-1185
-1133
-1288
-1260
-1409
-1260
-1409
-1108
-1252
-963
-1098
-772
-905
-522
-660
-217
-362
134
-43
504
291
845
600
1096
831

(kip)
154
12
144
-71
34
-213
-130
-383
-313
-549
-487
-695
-639
-816
-766
-913
-872
-991
-970
-1085
-970
-1085
-853
-964
-741
-845
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-697
-402
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-167
-279
103
-33
388
224
650
462
844
640

Load Factors
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Normal Section

End Section

A2

A2

Age

rx

ry

Agmod

(Inv.)

(Oper.)

(in2)

(in)

(in)

(in2)

2.17
1.50
2.17
2.17
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35.00 6.20



An

An`

(in2)

(in2)

Max.
KLc/r

Fcr
(ksi)

5.48 30.31 0.15 29.70 25.16 49.5 44.64 1485 1328

35.00 6.20

5.48 34.06 0.15 32.98 27.88 49.5 44.64 1649 1328

40.38 6.14

5.54 35.22 0.15 34.31 29.03 49.0 44.75 1716 1536

51.63 5.79

5.94 46.47 0.15 44.16 37.19 47.0 41.92 2031 1839

38.75 6.04

5.61 34.06 0.00 27.88 27.88 48.9 79.10 2788 2605

45.75 6.10

5.63 40.13 0.00 32.91 32.91 49.2 78.86 3291 3067

49.50 5.98

5.76 43.88 0.00 35.63 35.63 48.8 79.18 3563 3331

53.63 6.19

5.84 47.06 0.00 38.81 38.81 49.4 78.68 3881 3586

60.25 6.22

5.78 52.75 0.00 43.47 43.47 52.4 76.02 4347 3893

65.81 6.43

6.06 57.38 0.00 48.09 48.09 56.6 71.98 4809 4027

65.81 6.43

6.06 57.38 0.00 48.09 48.09 56.6 71.98 4809 4027

60.25 6.22

5.78 52.75 0.00 43.47 43.47 52.4 76.02 4347 3893

49.50 5.98

5.76 43.88 0.00 35.63 35.63 50.1 78.08 3563 3285

42.81 5.93

5.84 38.13 0.00 30.91 30.91 48.1 79.75 3091 2902

39.38 6.07

5.79 34.69 0.00 28.50 28.50 47.8 80.02 2850 2678

36.25 6.26

5.81 31.56 0.15 31.14 26.41 47.2 45.13 1557 1391

36.25 6.26

5.81 31.56 0.15 31.14 26.41 46.9 45.19 1557 1393

25.50 5.95

6.01 26.44 0.15 25.25 21.28 45.6 45.46 1262

25.13 5.92

5.77 29.81 0.00 23.63 23.63 46.8 80.84 2363 1726

32.25 5.56

985

5.91 36.94 0.00 28.69 28.69 48.5 79.42 2869 2177

2 of 4

Inventory

Capacity
Ten. Comp
(kip) (kip)

Pu
(kip)
374
23
405
-201
233
-464
-254
-768
-609
-1069
-948
-1355
-1245
-1590
-1493
-1778
-1699
-1931
-1890
-2114
-1890
-2114
-1662
-1877
-1444
-1647
-1158
-1357
-783
-989
-326
-543
282
-102
795
436
1270
900
1644
1247

RF

Rating

Operating
Limit
State

4.93

(Tons)
177.36 Tension

4.08
6.60
4.40
5.10

146.84
237.71
158.42
183.61

4.56

164.04 Comp.

7.94

285.78 Comp.

Tension
Comp.
Tension
Comp.

8.66

311.80 Comp.

8.99

323.49 Comp.

9.68

348.64 Comp.

10.97 394.92 Comp.
11.11 399.85 Comp.
11.11 399.85 Comp.
12.14 436.88 Comp.
10.73 386.27 Comp.
11.43 411.39 Comp.
15.08 542.86 Comp.
10.87 391.37 Comp.
5.74 206.73 Tension
12.28 442.12 Comp.
2.33 83.96 Tension
3.55

127.73 Tension

4.61

165.92 Tension

Pu
(kip)
261
50
242
-120
58
-360
-349
-647
-689
-995
-1009
-1280
-1287
-1517
-1518
-1708
-1711
-1866
-1902
-2050
-1902
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-1673
-1817
-1456
-1591
-1175
-1307
-812
-949
-369
-514
174
-56
655
462
1098
924
1531
1266

Rating

8.22

Limit
State
(Tons)
296.05 Tension

6.81
11.02
7.35
8.51

245.11
396.79
264.45
306.48

7.61

273.82 Comp.

RF

Tension
Comp.
Tension
Comp.

11.91 428.66 Comp.
12.99 467.69 Comp.
13.48 485.24 Comp.
14.53 522.96 Comp.
16.45 592.38 Comp.
16.66 599.77 Comp.
16.66 599.78 Comp.
18.20 655.31 Comp.
16.09 579.40 Comp.
17.14 617.08 Comp.
22.62 814.30 Comp.
16.31
9.59
20.50
3.89

587.06
345.07
738.00
140.15

Comp.
Tension
Comp.
Tension

5.92

213.21 Tension

6.91

248.88 Tension

HS20 Truck


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**Verticals**

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**Truss Member Capacities and HS20 Truck Ratings:**

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<th>L3 - U4</th>
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**Rio Grande Gorge Truss Rating, All 2 Horizontal Net.xls HS20 Truck**
### Truss Member Capacities and HS20 Lane Ratings:

| Truss Member No. | SAP Frame No. | Member Length | Lx | Ly | Fy | Fu | Dead Load, D | Live Load, L | Impact | Length, L | E | I | T | D + L + I | Load Factors | Normal Section | End Section | Capacity | Inventory | Operating |
|------------------|---------------|---------------|----|----|----|----|-------------|--------------|--------|-----------|-----|---|----|-----------|-------------|---------------|-------------|-----------|----------|-----------|----------|
| U0 - U1 2        | 300 30.00     | 50 70         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U1 - U2 3        | 300 30.00     | 50 70         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U2 - U3 4        | 300 30.00     | 50 70         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U3 - U4 5        | 300 30.00     | 50 70         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U4 - U5 6        | 300 30.00     | 50 70         | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U5 - U6 7        | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U6 - U7 8        | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U7 - U8 9        | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U8 - U9 10       | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U9 - U10 11      | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U10 - U11 12     | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U11 - U12 13     | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U12 - U13 14     | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U13 - U14 15     | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U14 - U15 16     | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U15 - U16 17     | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U16 - U17 18     | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U17 - U18 19     | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U18 - U19 20     | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
| U19 - U20 21     | 300 30.00     | 100 115       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 30.00 | 0.15  | 23.95  | 19.95  | 50.0  | 44.55  | 1198 1169 |
### Truss Member Capacities and HS20 Lane Ratings:

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Rio Grande Gorge Truss Rating Alt 2 Horiz Net.xls 3 of 4 HS20 Lane
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<td>84.21</td>
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<td>L11 - U12</td>
<td>135</td>
<td>86.17</td>
<td>86.17</td>
<td>86.17</td>
<td>135</td>
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<td>L17 - U18</td>
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<tr>
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<td>141.63</td>
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<td>141.63</td>
<td>141.63</td>
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</table>

**Notes:**

- The ratings are based on the HS20 lane standard.
- The table includes columns for Member No., Frame, Length, Live Load, Dead Load, Impact, Load Factors, Capacity, and Operating.
- The data is used for structural analysis and design purposes.

---

**Additional Information:**

- The file references are in the attachment metadata.
- The computations are performed using specific criteria and standards.
- The document is part of a larger report or project on structural engineering.

---

**References:**

- HDR One Company
- Many Solutions
- Project: Rio Grande Gorge Bridge
- Computed: T.I.B.
- Date: [Specific date not visible]

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**Footer Information:**

- Page: 4 of 4
- HS20 Lane Rating.
Appendix E – Cost Estimates
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<th>ITEM NO.</th>
<th>ITEM DESCRIPTION</th>
<th>UNIT</th>
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<th>UNIT PRICE</th>
<th>EXTENSION</th>
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<td>$200,000.00</td>
<td>$200,000.00</td>
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<td>SAFETY NETTING AND PLATFORMS FOR ERECTING THE SYSTEM</td>
<td>L.S.</td>
<td>1</td>
<td>$100,000.00</td>
<td>$100,000.00</td>
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**SUBTOTAL =** $1,138,050.00  
30% CONTINGENCY = $341,415.00  
**ESTIMATED CONSTRUCTION COST TOTAL =** $1,479,465.00

GRT (7.0%) = $103,562.55  
**ESTIMATED CONSTRUCTION COST WITH GRT =** $1,583,027.55

**ESTIMATED ENGINEERING COST TOTAL (10% OF CONSTRUCTION COST) =** $148,000.00

**TOTAL ESTIMATED PROJECT COST =** $1,731,027.55
## Horizontal Net System

<table>
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<th>TOTAL QUANTITY</th>
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<td>621000</td>
<td>MOBILIZATION</td>
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<td></td>
<td>3mm x 120mm MESH (0.20 #/sq.ft.) (5% increase for cables and fittings)</td>
<td>SQ.FT.</td>
<td>58400</td>
<td>$28.67</td>
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<tr>
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<td>ANCHOR SYSTEM FOR SURROUNDING TENSION CABLE</td>
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<td>SAFETY NETTING AND PLATFORMS FOR ERECTING THE SYSTEM</td>
<td>LS</td>
<td>1</td>
<td>$300,000.00</td>
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</table>

**SUBTOTAL = $3,003,236.00**

30% CONTINGENCY = $900,970.80

**ESTIMATED CONSTRUCTION COST TOTAL = $3,904,206.80**

GRT (7.0%) = $273,294.48

**ESTIMATED CONSTRUCTION COST WITH GRT = $4,177,501.28**

**ESTIMATED ENGINEERING COST TOTAL (10% OF CONSTRUCTION COST) = $391,000.00**

**TOTAL ESTIMATED PROJECT COST = $4,568,501.28**
Appendix F – Inspection Vehicle/Snooper Truck
Appendix D. Gorge Bridge Safety Network Data
Data Supporting Need for Suicide Prevention Barrier

The following pages show three charts of (1) the numbers of deaths at the RGGB, (2) success rates of barriers at several well-known U.S. bridges, and (3) rate comparisons of deaths at the Gorge Bridge compared with other high-fatality U.S. bridges that have planned suicide barriers. The data support the urgent need for suicide barriers at the bridge.

Support Data Summary

Chart 1. Rio Grande Gorge Bridge Deaths—Newspaper Reports (sources in Appendix A)

- State and local newspapers have reported at least 47 deaths at the RGGB since it opened in 1965. More than a third of those deaths occurred in 2011 to 2016.
- Reports of deaths at the bridge have increased in number and frequency in the last decade, occurring annually since 2010.
- Since 2011, newspapers reported 18 deaths at the RGGB—an average of about 3 deaths per year from 2011 to 2016.

Chart 2. Bridge Barriers: Success Rates

- Six bridges at various locations throughout the U.S. had suicide rates of 0.6 to 5/year.
- Permanent suicide barriers of various types constructed between 1983 to 2012.
- All show significant reduction in suicides, with rates of 0 to 0.5 per year.

Chart 3. Incidence for Bridges with Barrier Plans

Table 1. Incidence per 100,000—Comparison of Bridges with Planned Barriers

- RGGB incidence data compared with 7 other high-fatality bridges planning barriers.
- Comparison per 100,000 population shows RGGB highest in comparison.
Chart 2. Bridge Barriers: Success Rates

<table>
<thead>
<tr>
<th>Location</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aurora, Seattle</td>
<td>4, 0.5</td>
<td></td>
</tr>
<tr>
<td>Cold Spring Canyon, CA</td>
<td>3.2, 0</td>
<td></td>
</tr>
<tr>
<td>Duke Ellington, Ithaca Gorges, DC</td>
<td>4, 0.2</td>
<td></td>
</tr>
<tr>
<td>New York City, NY</td>
<td>2.45, 0.25</td>
<td></td>
</tr>
<tr>
<td>Memorial Bridge, ME</td>
<td>0.6, 0</td>
<td></td>
</tr>
<tr>
<td>Vista Bridge, Portland, OR</td>
<td>5, 0</td>
<td></td>
</tr>
</tbody>
</table>
Data Notes for Chart 2. Bridge Barriers: Success Rates

Aurora Bridge, Seattle: 8-foot fence with framed panels of vertical wires with spiked top installed 2011;
phones installed December 2006.
before 4/yr 1995–2011 vs. after 0.5/yr 2011–2014

Cold Spring Canyon Arch Bridge, CA: 9 1/2-foot fence with fine-grid mesh and inward tilt installed 2012.
"highest concentration of fatalities in the district [District 5]" (California Department of Transportation, District 5, 2008)


before 2.45/yr 1990–2010 (spike in 2010 of 3 within a few weeks), 1.5/yr overall vs. after 0.25/yr 2012–2016

Memorial Bridge, Augusta, ME: 10-foot fence installed 1983.
before 0.6/yr 1960–1983 vs. after 0 1984–2005

Vista Bridge, Portland, OR: Temporary 9-foot curved fence installed August 2013
Designed to last 5 years. Permanent barriers planned.
before 5/yr Jan.–Aug. 2013 vs. after 0 Sept. 2013 to Dec. 2015
Sources for Chart 2. Bridge Barriers: Success Rates

**Aurora Bridge, Seattle:**

Key stats. seattlefriends.org

**Cold Spring Canyon Arch Bridge, CA:**
Etling, W. (n.d.). William Etling's News from Santa Ynez, Fatal Attraction, - Cold Spring Toll Hits 51. (citing Sheriff's records), edhat.com (Etling source is an individual's blog—not a credentialed source.)


**Duke Ellington Bridge, Washington, DC:**

**Ithaca Gorges (6 bridges), Ithaca, NY:**

**Memorial Bridge, ME:**

**Vista Bridge, Portland, OR:**
Rio Grande Gorge Bridge Incidence Rate Highest in U.S.?

12 to 18 Times Higher than Golden Gate Bridge per 100,000 Persons?

Chart 3. Incidence for Bridges with Barrier Plans

- Incidence per 100K
Rio Grande Gorge Bridge Incidence Rate Highest in U.S.?

Sources for Chart 3. Incidence for Bridges with Barrier Plans

**Coronado Bridge:**

**George Washington Bridge:**
Gonzalez, S. (2015, Jan 29). Every 3.5 days, someone attempts suicide off the George Washington Bridge. wnycre.org
New York Metropolitan Area. wikipedia.org
Population and geography: New York City and greater metropolitan area population. baruch.cuny.edu/nycdata

**Golden Gate Bridge:**

Golden Gate Bridge Suicide barrier construction to start in 2017. Retrieved from mercurynews.com

**Quechee Gorge Bridge:**

**Rio Grande Gorge Bridge:**

**Sunshine Skyway Bridge:**


**Tappan Zee Bridge:**
Rio Grande Gorge Bridge Incidence Rate Highest in U.S.?

12 to 18 Times Higher than Golden Gate Bridge per 100,000 Persons?

<table>
<thead>
<tr>
<th>Bridge</th>
<th>Location</th>
<th>Population Greater Metro Area 2013 (or County as noted)</th>
<th>Current Rate (or Overall as noted)</th>
<th>Incidence per 100K population</th>
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</thead>
<tbody>
<tr>
<td>Coronado Bridge (CB)</td>
<td>San Diego, CA</td>
<td>3.3 million</td>
<td>6.38/yr (overall)</td>
<td>0.19</td>
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<tr>
<td>George Washington Bridge (GWB)</td>
<td>Manhattan, NY</td>
<td>8.5 million NYC, 2015</td>
<td>18 in 2015 (current; 1 attempt every 3 days)</td>
<td>0.21 NYC</td>
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<tr>
<td>Golden Gate Bridge (GGB)</td>
<td>San Francisco, CA</td>
<td>4.6 million Metro 7 million Bay</td>
<td>35/yr</td>
<td>0.76 Metro 0.5 Bay</td>
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<tr>
<td>Quechee Gorge Bridge (QGB)</td>
<td>Hartford, VT</td>
<td>55,500 (county)</td>
<td>2/yr</td>
<td>3.6</td>
</tr>
<tr>
<td>Rio Grande Gorge Bridge (RGGB)</td>
<td>Taos, NM</td>
<td>33,000 (county)</td>
<td>3/yr</td>
<td>9.09</td>
</tr>
<tr>
<td>Sunshine Skyway Bridge (SSB)</td>
<td>Tampa-St. (369K) Petersburg (257K) Clearwater (113K), FL</td>
<td>3 million</td>
<td>8/yr</td>
<td>0.27</td>
</tr>
<tr>
<td>Tappan Zee Bridge (TZB)</td>
<td>Rockland &amp; Westchester Counties, NY</td>
<td>1.3 million (counties)</td>
<td>3/yr (overall)</td>
<td>0.23</td>
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</table>

Population data sources: CB, census.gov; GWB, baruch.cuny.edu/nycdata; GGB, factfinder.census.gov, www.bayareacensus.ca.gov; QGB, census.gov; RGGB, census.gov; SSB, factfinder.census.gov; TZB, census.gov.

Current rate sources as noted in attached source list.

Incidence calculation: (current number of deaths per year/metro or county population) x 100,000.
Means Restriction Research Summary

A large and growing body of research demonstrates the effectiveness of barriers in preventing suicides at bridges and buildings worldwide. Formal studies of barriers installed at suicide sites show barriers are effective in reducing suicides with no increase in suicides at nearby sites: Ellington Street Bridge, Washington, DC (O'Carroll & Silverman, 1994); Clifton Suspension Bridge, Bristol, UK (Bennewith et al., 2007); Bern Muenster Terrace, Switzerland (Reisch & Michel, 2005); Memorial Bridge, Augusta, ME (Pelletier, 2007); and the Grafton Bridge, New Zealand (Beautrais et al., 2009).

Despite the growing evidence, myths about suicide persist. Here are the three most common myths, debunked:

**Myth 1: Preventing suicide in one location will raise suicides at another spot, because those people are intent on dying.**

- Installation of barriers does not increase suicides at nearby bridges (Beautrais et al., 2009; Bennewith et al., 2007; O'Carroll & Silverman, 1994; Pelletier, 2007; Reich & Michel, 2005).
- Persons prevented from using their chosen method of suicide typically do not seek other approaches to suicide (Kreitman, 1976).

**Myth 2: It isn’t hurting anybody. It’s their life, so let them jump.**

- It is hurting people. Families, friends, and entire communities. The emotional costs are deep and incalculable.
- And there are dollar costs: The USDOT calculates the Value of Statistical Life at $9.4 million, with a range of $5.2 to $13 million (Vermont, 2017, p. 123).
- The Taos Sheriff’s Office estimates retrieval costs at approximately $3,000 per death. And first-responders risk their lives with each retrieval.

**Myth 3: They will kill themselves no matter what.**

- 94% of surviving jumpers at the Golden Gate Bridge did not commit suicide later (Seiden, 1978).
Means Restriction Research Summary Sources:


Seiden, R. H. (1978). Where are they now? A follow-up study of suicide attempters from the Golden Gate Bridge. Suicide and Life-Threatening Behavior, 8(4).

Appendix A

Sources: Rio Grande Gorge Bridge


Table 2. Injuries and Deaths in Bridge Vicinity (and 1 BASE Jumper from Bridge)

<table>
<thead>
<tr>
<th>Year</th>
<th>Age, Gender</th>
<th>Residence</th>
<th>Incident</th>
<th>Location</th>
<th>Outcome</th>
<th>Source</th>
</tr>
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<td>2000</td>
<td>28, female</td>
<td>Sunfish, MN</td>
<td>Believed accidental. Hiking then fell 300 ft.</td>
<td>Near bridge</td>
<td>Death</td>
<td>Staff &amp; Wire Reports, 2000</td>
</tr>
<tr>
<td>2007</td>
<td>24 male</td>
<td>San Jose, CA</td>
<td>Injured while parachuting from bridge.</td>
<td>On bridge</td>
<td>Broken thigh and ankle</td>
<td>Johnson, 2007; Taos News, 2007</td>
</tr>
</tbody>
</table>

Sources:
Appendix E. Rio Grande Gorge Stakeholder Meeting Notes
Meeting Minutes

**Project:** Rio Grande Gorge Bridge Structural Feasibility Study

**Subject:** Stakeholders Meeting

**Date:** Tuesday, August 14, 2018

**Location:** Taos County Commission Chambers
105 Albright Street
Taos, NM

**Attendees:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Phone</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ramon F. Pacheco</td>
<td>Taos County Public Works</td>
<td>575-776-4112</td>
<td><a href="mailto:Ramon.f.pacheco@taoscounty.org">Ramon.f.pacheco@taoscounty.org</a></td>
</tr>
<tr>
<td>Brent Jaramillo</td>
<td>Taos County</td>
<td>575-737-6304</td>
<td><a href="mailto:Brent.jaramillo@taoscounty.org">Brent.jaramillo@taoscounty.org</a></td>
</tr>
<tr>
<td>Paul Brasher</td>
<td>NMDOT District 5</td>
<td>505-469-2194</td>
<td><a href="mailto:Paul.brasher@state.nm.us">Paul.brasher@state.nm.us</a></td>
</tr>
<tr>
<td>Jerry Hogrefe</td>
<td>TCSO</td>
<td>575-737-6480</td>
<td></td>
</tr>
<tr>
<td>Vernon Lujan</td>
<td>Taos Pueblo</td>
<td>575-779-8356</td>
<td><a href="mailto:vlujan@taospueblo.com">vlujan@taospueblo.com</a></td>
</tr>
<tr>
<td>Pascual Maestas</td>
<td>Town of Taos</td>
<td></td>
<td><a href="mailto:pmaestas@taosgov.com">pmaestas@taosgov.com</a></td>
</tr>
<tr>
<td>Leandro Cordova</td>
<td>Taos County</td>
<td>575-770-3740</td>
<td><a href="mailto:Leandro.cordova@taoscounty.org">Leandro.cordova@taoscounty.org</a></td>
</tr>
<tr>
<td>Candyce O’Donnell</td>
<td>Taos County</td>
<td>575-779-0319</td>
<td><a href="mailto:Candyce.odonnel@taoscounty.org">Candyce.odonnel@taoscounty.org</a></td>
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<tr>
<td>Dominic Martinez</td>
<td>Taos County E911</td>
<td>575-779-3020</td>
<td><a href="mailto:Dominicmartinez@taoscounty.org">Dominicmartinez@taoscounty.org</a></td>
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<tr>
<td>Bobby Lucero</td>
<td>Taos County OEM</td>
<td>575-779-9381</td>
<td><a href="mailto:Bobby.lucero@taoscounty.org">Bobby.lucero@taoscounty.org</a></td>
</tr>
<tr>
<td>Jim Fambro</td>
<td>Taos County</td>
<td>575-779-2554</td>
<td><a href="mailto:Jim.fambro@taoscounty.org">Jim.fambro@taoscounty.org</a></td>
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<tr>
<td>John Bailey</td>
<td>BLM – Taos</td>
<td>575-751-4703</td>
<td><a href="mailto:jbailey@blm.gov">jbailey@blm.gov</a></td>
</tr>
<tr>
<td>Jennifer Mullins</td>
<td>NMDOT Environmental Bureau</td>
<td>827-9684</td>
<td><a href="mailto:Jennifer.mullins@state.nm.us">Jennifer.mullins@state.nm.us</a></td>
</tr>
<tr>
<td>Mark Gallegos</td>
<td>Taos County</td>
<td>575-779-4203</td>
<td><a href="mailto:markgallegos@taoscounty.org">markgallegos@taoscounty.org</a></td>
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<tr>
<td>Rick Bellis</td>
<td>Town of Taos Town Manager</td>
<td>575-751-2002</td>
<td><a href="mailto:rbellis@taosgov.com">rbellis@taosgov.com</a></td>
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<tr>
<td>Danton Bean</td>
<td>HDR Engineering</td>
<td>505-830-5412</td>
<td><a href="mailto:Danton.bean@hdrinc.com">Danton.bean@hdrinc.com</a></td>
</tr>
<tr>
<td>Lawrence Lopez</td>
<td>NMDOT</td>
<td></td>
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</tr>
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</table>

Manuel Maestas: Opening statement and introduction of the project team. We wanted to get the stakeholders together and let everyone know about the Rio Grande Gorge Structural Feasibility Study we have been doing and give you an update before the public meeting on Thursday.

Manuel Maestas: Agenda Review – During the meeting today, we will give you a description of the project, show the video that will be presented at the public meeting and then open for questions. The statistics in the video go to 2017. No information is included 2017 or 2018. The Office of the Medical Investigator provided the number 44 suicides.

Manuel Maestas: Please be aware that the subject can be sensitive to individuals and to be mindful of others if you have questions or comments.

Jim Fambro: Question regarding where the NMDOT got the number of suicides (44 according to the fact sheet)

Manuel Maestas: From the Office of the medical investigator.
Jim Fambro: That is what they term “suicides”? How many unattended deaths have they attributed to under the bridge? There have been 60 fire department reports during the same period of bridge operations recoveries.

Manuel Maestas: Today we want to talk about the Feasibility Study that we did for the alternatives that were brought forward from a previous phase. There have been previous studies that have looked at specific alternatives. In order to move forward, we needed to look at the alternatives to see if they were structurally feasible, that the existing bridge is able to hold the alternatives. The two alternatives that were brought forward from previous project are the vertical railing and horizontal net. We also have the no build alternatives which is one we always move forward.

Danton Bean: We wanted to give you an introduction to the project and describe what we plan to do at the public meeting on Thursday. It will be an open house setting from 5:30 to 7:30 pm, the public can come anytime during that period. In one area of the room we will be showing the video and the other part of the room will be set up for the public to speak with the study team about the findings and to provide their comments. The purpose of the public meeting is to get their comments.

Video shown

Manuel Maestas: The video will be playing throughout the public meeting. The public can meet with staff members to answer questions.

Danton Bean: Please give your name when giving comments or asking questions.

Jim Fambro: If this is based on statistics, and the numbers you have are incorrect, and probably incorrect as to percentage of residents and non-residents. If you had accurate numbers of the actual suicides including murders that have occurred out there, then your percentages would all increase showing more of a need. So why the push by the State of New Mexico to show lower number, just to keep the numbers at smaller levels so it shows that there is not as much need for this?

Manuel Maestas: No, the information came from the OMI

Jim Fambro: So you took only their word for it?

Unidentified Speaker: The number is higher because the Rio Grande Gorge Group did work before and their numbers are a lot higher than the number of deaths and to the Commissioner’s point, there are more out of state jumpers than New Mexico jumpers. I don’t know those numbers off the top of my head.

Jim Fambro: You have two people sitting side by side that have been down there at least 40 times combined and we haven’t gone on all of them. So I’m sorry I’m harping on this point, but if we have been there that many times, there are more than 4 that we have missed.
Lawrence Lopez: These are very valid points and I appreciate you bringing it up. If we haven’t done right, we are happy to work with whoever we need to in order to get the numbers accurate, because your point is very valid.

Jim Fambro: It is very valid because if this is a fact sheet and we don’t have the facts right, the rest is hard to believe. But I know there is more of a need than what you are showing here. I have witnessed a person jump, I was 8 feet away from her, face to face, as she let go. It is so offensive to hear that that Historic Preservation could rule out the logical alternative. And as for other statistics, we received a New York Post or NY Times article that showed they took two bridges in Washington and NY, the Verrazzano Bridge and I believe the George Washington Bridge. They put railing on one, not the other. The one with the railing, numbers went to 0, the other bridge did not increase. It is an act of passion and the railings are the only deterrent that you should be considering. I have heard this study three times now and I hear the same thing, same low statistics. There is a conspiracy behind the low statistics and I know what it is and it angers me.

Danton Bean: Who do you propose we get the numbers from? I need some help going forward.

Jim Fambro: Taos Fire recently did a study back to 2005 and they have more than 44 run reports to the bridge since 2005.

Jennifer Mullins: We need some sort of documentation showing the numbers.

Jim Fambro: I asked for a list of names because unfortunately I remembered most of the names and I gave them, they were listed as unattended. They weren’t with, so it becomes unattended death and that is semantics. What is the reason for the semantics?

Dominic Martinez: Prior to being Director, I was a Deputy Sherriff, and I went on many calls out to the bridge with Bobby and Jim, Jerry, and nobody ever contacted me from dispatch on how many run reports to the bridge for this study. I have been the Director for last 4 years, never contacted. Prior to that, computer aided dispatch system that no one contacted me on. Back to 1986, the system has been operational and has access to those, actually the Taos IT department has access to calls. None of us were contacted from Taos County about the study.

Jim Fambro: That is to keep the numbers low. Base jumpers have jumped with serious injuries that cause the same kind of recovery effort. You eliminate those numbers as well.

Jennifer Mullins: There is no negative intention behind any of it. I apologize if we didn’t reach out to you and you have resources that benefit and are helpful and useful.

Jim Fambro: Lower numbers show the State doesn’t have responsibility.

Jennifer Mullins: We would love to incorporate that information in our report. We will coordinate with you to get that information. I have been part of this study there hasn’t been any intention to hide or change the numbers.
Unidentified Speaker: Numbers from dispatch make sense. Includes that they have 2-3 saves that should be accounted for as well, also dispatch calls would be helpful because dispatch and sheriff’s office has 2-3 saves in the last two years.

Dominic Martinez: Like Jim said, those kind of calls aren’t part of this study, which we believe is not fair. Any call out at the bridge is extremely important and we give it the utmost priority and sometimes sent the whole world out there and resources that are spent out there gets crazy. It is disheartening that the State didn’t reach out to the County that has the data (besides the OMI) that could help the study.

Danton Bean: So I can contact you Dominic?

Dominic Martinez: Email information is on the sign in sheet.

Paul Brasher: Apparently everyone in the room knows where the information should come from and would like to come to a consensus here. If 44 is not the number, maybe 65, who has the number?

Candyce O’Donnell: Gorge Bridge Safety Network has four more, at 47 now with the three in July and we have four more in addition to it.

Paul Brasher: The number of people who jump is not going to affect the design that they have analyzed. We are not judging merits of prevention. We are saying if there is a need, apparently there is, these are the structural alternatives and they analyzed the net and raising the rail. So whether there is 30 or 65 events, it is not going to change what he is analyzing for this bridge. Analysis shows the net entails the strengthening or replacement of 378 elements (practically whole bridge), rail entails strengthening 12-16 elements down by the piers. The point is that we are not basing any of this analysis today as based on how many events there are. There will be a time for the exact number (it’s not too late to know the exact number).

Jim Fambro: Back to me having the floor originally. Wanted to list the other events. There have been at least five rescues of people that have tried crawling across the bottom railing to impress girlfriend or whatever the situation was. That is an additional 5 operations at the bridge that we are not counting because there wasn’t a death because of what we did to save those people. Add in the base jumpers. What works is raising the rail, and it is your moral obligation, DOT, to the citizens and fire fighters, and law enforcement in Taos County to extend the railing and curve them like on any overhead bridge that is constructed within the State now.

Paul Brasher: It’s not too late to know numbers, and they are pretty high. People are misbehaving. They are getting out there, working their way up the arch. We are not denying there were events. As far as the net goes, besides being expensive to strengthen the bridge, the net would offer maintenance difficulties too for us. The net is going to catch ATMs, cash registers, dead animals, tree trunks, live animals, etc., but our guys are going to have to get those things off. As soon as they clean off the bridge, they will go on to the next project. As soon as it is cleaned up, someone is going to dump something on it and some visitor from Delaware is going to see it and say you guys aren’t taking care of your bridges. There’s garbage accumulating. From a maintenance standpoint, a net has its own disadvantages. The
design, the structural analysis, live loads, etc., isn’t based on how many people may jump. The issue is whether the bridge will accommodate the rail, within the $3,000,000.00 budget, so whether it is 30 or 50 events, it doesn’t matter. When it will become important is when the decision comes to doing this or not. That decision is going to originate at the regional Transportation Planning Organization. The North region will get the project into TIP for new work and then STIP. It isn’t a case of NMDOT not caring, there is a process and this is a good step in the process.

Jim Fambro: We went through this process before the Martinez administration came in, we did this at the end of the Richardson administration and the new administration comes in and appoints new people in NMDOT and we are right back where we started. Don’t tell me that didn’t happen because this is going to be the third time.

Paul Brasher: I’m not sure it went as far as the structural analysis of alternatives, maybe it did. But I don’t know.

Dominic Martinez: With what we are telling you right now and what you are telling us that the numbers don’t matter, why do the analysis? Because it should matter, because the numbers we are giving you, it should be why you would change whatever your engineer’s report is going to be, what the analysis is. You said it then and you even said the numbers don’t matter.

Paul Brasher: For the structural analysis the numbers don’t matter. For the sake of the analysis, it doesn’t make the rail be any higher, the bridge any stronger.

Dominic Martinez: For the analysis, it should matter. That’s how many there are.

Jennifer Mullins: I agree, the numbers do matter and we will incorporate them. I understand that Paul is trying to communicate the purpose of the study is to look at whether or not the bridge could handle the deterrent. You are right, it would be ideal to know how many people have not jumped due to rescue. We took a source and sited the source, because we knew there was a potential that we didn’t have all the numbers. We would like to incorporate as much information as we can into the document. I would like to briefly go back to the Historic Preservation piece of this. As long as this is a transportation facility and depending on where funding might come from, if it comes from federal dollars, as much as you may not think Historic Preservation is critical, it is part of our process. Therefore, we wanted to communicate to everybody that there is a bigger process, and it is not as easy as selecting an option and it will go up next year. Even if money were to come to the table this year, we would have to go through design process, consultation process, and what I have learned by working at the NMDOT, nothing happens as fast as we would like it. We wanted to make it as transparent as possible.

Mark Gallegos: The feeling in the room and the community is that the numbers matter so that this could be expedited quicker than the process you have. When you see the numbers increase every year, we expect it can be expedited to be done with emergency funding, if that is the word, as opposed to analysis, case study, all this stuff. We can agree, putting the vertical rail is the best option probably and do it within the next six months and the numbers should show it should be done immediately.
Paul Brasher: I appreciate that, and the numbers matter that way, but if there is one person or 100 people, that bridge is going to be this big, it’s going to weigh so many tons, and it’s going to cost that bridge to need to be strengthened.

Mark Gallegos: I agree with you on that.

Paul Brasher: Doing it, moving ahead question is where the numbers come in to play

Jennifer Mullins: Information informing you on the study.

Jim Fambro: So, the sink hole on pillar #2 that was discovered at the last throwing of $3.1m dollars to paint the bridge, what is the status of the sink hole and that pillar being unsafe?

Danton Bean: The last effort was more than painting, actually replacing the bearings, what the structure rests on. The hole that was found during that process was filled with lean concrete and since that effort, there has not been any issues. The bridge went through inspection last year in July. The inspectors went hands-on on all parts of the bridge and there was no concern at that time.

Jim Fambro: My understanding is that the concrete that was poured in there never surfaced, so it’s still there. So, the stability of the bridge itself remains in question. So, I think we should look at the total events of things that have happened there. State Historic Preservation and the cost and the bridge isn’t that stable, why are we having hay trucks and logging trucks go over it. Who from NMDOT is going to tell Brian Levine’s mom that he died during a recovery? Because the odds are going against us as to when a fatality can occur. Even through, as safe as they do it, there’s no help from the State whatsoever when Taos Fire and Taos Sherriff Departments go perform the recoveries down there because it is a recovery, not a live person. Well, there are live people, on average of 4, that go down every time to deal with that so what happens when the worst of the worst happens? Where does that go in the factors of the railing, the net, and the no build? I don’t see that in any of the factors for the railing, net, no build. I didn’t see that factor in there. You heard that at NMDOT since the late 1980s, so here we set again.

Jennifer Mullins: Danton can speak to the condition of the bridge.

Jim Fambro: Talk about the human side.

Manuel Maestas: Thank you for your comments. The numbers you have brought up, we will be contacting you and incorporating them into the report and make sure the numbers are reflected appropriately.

Manuel Maestas: The studies before were looking at different areas. When we got to a certain point, the alternatives that were brought up, we weren’t sure the existing bridge could handle the load of the alternatives. So the DOT said we need to ensure the alternatives we are moving forward can actually be built, that the existing bridge can handle the additional weight. We need to come up with a structural feasibility study. That is what we are presenting today.
Jim Fambro: You need to understand the passion behind it. Since you haven’t had eye to eye contact with a person, you haven’t heard the crack when they hit the ground, you don’t understand the passion.

Danton Bean: Your passion, your emotion from being involved is really helpful. We are trying to record what you said. You can provide comments on the form. That will be in the documentation, you could also go to the web site, provide your comments there. You can also send us an email. Those are all the methods you can provide us with comments. The more of those comments that come in, the more information that will be part of the study. If you don’t give us these comments, then we don’t have anything to be part of the human element. This is exactly what we are trying to do and our purpose on Thursday is to get these comments.

Bobby Lucero: Maybe for your fact sheet you should reach out to the agencies and see all the resources involved, costs, everything time we have to do to retrieve a body, the costs and the emotional impact to the individuals who have to hike down an back up, a lot of wear and tear on them. Reach out to agencies for costs, resources, etc.

Bobby Lucero: Add to that, we did retrieve a body with a state police helicopter that the propeller got caught on the rock, so it was stuck down there for 5 days until a crane helicopter could pull it out. Now, State Police refuse to let helicopter go down to retrieve bodies. Like what Bobby was saying, with the costs. There could be continued expenditures by agencies who send out their staff. You should have those numbers.

We remember because we have been part of it so long. Agree with Jim because we have been part of it so long. If we take off our engineering hats for a while, and think about the human aspect, it would help with the decision making. That is just additional cost.

Paul: We don’t lose site of the human aspect of anything. What we design and what is being maintained is used by humans. We cannot make people not litter or drive drunk. You try to make the system safe for those that use it.

Paul: we are not arguing not to do this, just saying if we do this, this is what it will look like. What is the affect?

Jim Fambro: Suicides won’t go to 0, but studies show that if a person has to give it a 2nd thought, if you make it difficult, statistics show that they may have a change of heart. Maybe they will do it another way, but that person is least is deterred. Maybe there is a chance we save them, right now it is too easy. Individuals can think that I accidently fell over, and lean over the railing and let gravity take over. That was told to me by someone who was pulled off there. I wasn’t killing myself, gravity was. They justify it in their mind because it is so easy. We have had those who get out of the vehicle, put it in park and just hurdle it, hurdled it, and the people just saw them go over like hurdles. What we have right now makes it too easy.

Paul Brasher: I have read up on this and agree with you that everything I have read says that anyone who is given a second chance, a chance to rethink it. I read a story of a guy who jumped off the Golden Gate Bridge and survived. He said if someone just stopped, somebody
just waved at him, he wouldn’t have done it. He was looking for some deterrent to stop him. Something to make him think twice.

Paul Brasher: No one has said anything about the phones. I have heard them criticized. I think I have heard the phones have been used properly on a couple of occasions. I have someone Taos from the project office get on the bridge once a week checking the phones. Sometimes the electrical service needs to be fixed. They have never all been out of service, but has anyone have a feel on the effectiveness of the phones?

Dispatch gets calls, 80% are crank calls, hogwash, or they just picked it up, leave it hanging.

Danton Bean: Can you help me with that information as well?

Candyce Odonnell: It is a group run by the State and they don’t itemize the calls that come from the bridge so we can’t get correct record data because they don’t separate the data out.

Paul Brasher: Complement those who answer the phones. I push the button and it dials and someone comes on and says hi this is Amanda I am a councilor may I help you. Ten phones out there, 9 different people, I don’t know how they do that. 9 people standing by.

Dominic Martinez: Calls are sent to the Crises Center out of Albuquerque. Think about it time wise for us. For the time for it takes to get to us, the individual talks to a counselor who puts the person on hold (which you are not supposed to) to transfer to us and we get the resources out there. It is a lot of time between the initial call and getting resources to the bridge. It is a drive out to the bridge as well. Did want to mention that the study on the Golden Gate bridge which was the #1 bridge in the nation if not world for people to commit suicide. Then they did the netting. If you look at that netting, it is lower where it is more of a deterrent. If you put it here it will be easy for people to jump on the net and jump over. I don’t know the studies, I am not an engineer, but that’s what I know about reading about the Golden Gate Bridge. The Crises Center calls us and we get as much info as we can before sending resources out.

Paul Brasher: I talked to the Golden Gate Engineer and asked about ATMs cash registers, dogs, tree trunks and junk. He said the situation with the Golden Gate is such that you couldn’t get an ATM down to the edge. They spent $500,000,000.

Candyce O’Donnell: I am disappointed you eliminated the net because Swiss studies show they have higher effective rate in suicides than extending the rails. I wonder if in you study if you ran numbers if you took all the concrete on the sidewalks out if that would increase the structural integrity. If you didn’t, because those are not ADA compliant, they are 18 inches, so my question is did you do a calculation to see the extra weight that could be added if you took concrete sidewalks off and replaced with metal walkways. Did you do that calculation? That would take a substantial amount of weight off the bridge by removing the ADA noncompliance sidewalk.

Danton Bean: Structural analysis is done with current structure, with the addition of the deterrent system.
Candyce O'Connell: That is a weakness in the study because if you took the concrete out we would have more weight we could allow. I realize the net is a problem, but if you didn’t do the calculations to change the sidewalks, then I say it is a weak link in your study.

Candyce O'Connell: So here is the other thing I have problems with. I was under the impression the net was not eliminated, now it is. I have been told by Secretary Church that there was money for these recoveries then I hear that was backtracked when the Sherriff called and we are still waiting for things like a traffic study to lower the speed limit. The information is very confusing to me.

Paul Brasher: US64 is a national route as you may know. It originates in Atlanta goes all the way across and ends in Arizona, 2300 miles long, posted at 45 mph right now. Some people blast through the 45. We are taking steps to lower speed limit to 35 mph. Also itemizing, detailing more signage to make pedestrians aware of drivers and drive aware of pedestrians. We got the vendors on the side of the road and we encouraged them to relocate off the road. Again we cannot make people obey the speed limit, we cannot make them not litter, we cannot make them not drink. We don’t have any other plans to make modifications to the bridge other than the outcome of the study or the action the RTPO takes to put it in the TIP and eventually to the STIP.

Paul Brasher: I have been out there at different times, 2 am, midnight, all kinds of weather and used spotlight down there. You don’t see it during the day, you can see car parts, stop signs, etc. What you see at night is the broken glass. It sparkles. It would be good if the NMDOT did a volunteer basis, the district rounded up volunteer employees hike down to pick up litter. It is a shame that there is a lot of debris down there.

Candyce O'Connell: We think we should put a toll on the bridge and charge people to walk across it. Again, I am shocked you didn’t consider the concrete there and maybe make a one-way walkway on one side of the bridge. Surprised you didn’t analyze that. It should be a no brainer to calculate the weight of the concrete and how much weight could be eliminated by those concrete sidewalks.

Jennifer Mullins: Candyce mentioned the netting alternative elimination. I’m sure when you were communicating with Secretary Church, this study was taking place. Ultimately the netting was being carried forward, but due to the impacts to the bridge overall, it didn’t seem reasonable or feasible to carry it forward because it would comprise the structure. Not that the railing was better, it was whether the bridge can handle it.

Candyce O'Connell: My conversation with Secretary Church was just about giving money for the recovery operations which he told me he could and he backtracked. The other issue is that you have a rather ugly design on the railing. We had presented to NPR TPO on the bridge list number 1 and the process died. Don’t know what happened. It is there on the first stage of we made a presentation, put on the list, and when we made the second presentation, we never knew what happened. It didn’t get on STIP, TIP, whatever you are call it. Why didn’t you take a look? We had given Mr. Brasher netting, lighter weight, that could be used to raise the railings that may not be as ugly and used on various bridges. We gave him a sample. Why wasn’t that
considered as a possible alternative besides your ugly, generic raising the railing. What became of this clear netting?

Paul Brasher: The netting would have needed structure to hold it up, cables, somewhat limited structural alternatives to consider. Railing was obvious. It was highly recommended, urged by people going back by proponents of preventative measures going back several years and analyzed. The net sounded obvious because it is used on bridges. They were given instructions to analyze that. They were not given instructions on how to figure to dismantle the bridge to make the network. They didn’t analyze taking the sidewalk off. Sidewalks are not ADA standard. Offers a curb barrier for 14-16 inches high. It does keep someone from sideswiping and mounting it and hitting the rail, damaging the rail, heaven forbid they get through the rail and find themselves at the bottom.

Jim Fambro: Thank you Commissioner O-Donnell for addressing the sidewalks. Another thing that wasn’t mentioned was the no build, the Chairman of the House Transportation Committee said their answer is to put someone on the bridge, three shifts, 8 hours a day to serve as deterrent. Of the number of people who jumped, to my knowledge, half have done it in the middle of day. The murder/suicide of the San Francisco couple was noon. The lawyer for the PCR jumped at 7:08 am after people are there and its daylight. Having a person there as a deterrent, as recommended in the legislative no build, people jump (Alicia at 3:17) in the afternoon. A person there isn’t a deterrent. Just going back to the statistics, this will prove a point, of the 44 you are showing, that would mean only 8 were out of state. This is a suicide destination from around the county and we have people from overseas show up. I can tell you a man from Oregon drove nonstop, parked his truck, and jumped over the railing. Michigan, Wisconsin, Texas, Colorado, numerous from Colorado, showing your statistics are not high enough because I can name more than 8 states where people got in their cars, told their family they were leaving, we got notified by dispatch, State Police, Sheriff and they get there too late. That shows the numbers and need is more. A person is willing to get into their vehicle from the State of Washington, gets off works and drives here 18 hours later after driving straight through, parks his truck in the middle of a crowded bridge at 10 something in the morning and hurtles the railing, they know it is easy, they know it is for sure. Shooting, hanging, taking pills, there is an out. Once you are over the railing, there is no out. That is something you need to hear. That is why people drive from Oregon, Idaho, Michigan, Wisconsin, Texas, Colorado, Louisiana, and California, New Zealand. We have people come that far so it blows the statistics out. So, having someone there did not stop several jumpers, murder/suicide, with the bridge full of people. They do it in front of people so they know they will be found, because they don’t want their family to go through what we just went through. Having a person there 8 hours a day, 3 shifts, is the recommendation from the house committee for the no build, doesn’t work. As a part of the no build alternative. Ask that you please use that in your determination of the no build that putting a person on the bridge.

Mr. Vernon Lujan: Good morning. I agree that it is a waste of resources, salary and everyone time. They just finished the nets on the Golden Gate Bridge. It is a beautiful bridge, beautiful spot to jump. So is ours. I don’t know if the Royal Gorge has done for their bridge. I don’t think our bridge is isolated with regard to people looking for places to commit suicide. People in New
York do it all the time in Brooklyn and other bridges there. For us, the pueblo, this landscape is sacred and of course somebody feels there is no hope in the world and take their own life and take it at this place is kind of desecrating our land not to mention that if they jump on our side of the river, we are responsible for retrieving that body and our police have had to do that on several occasions and they have to go through cleansing ceremony afterwards. For many of them, it is PTSD. Some have served in armed forces and have seen action and combat, it is the same thing, seeing a body mangled beyond recognition haunts a person. To not do anything is out of the question, but to push something like the nets or extending the railing, I think, even though it is cost prohibitive, you would spend as much putting someone on the bridge 24 hours a day. They are going to find ways to get around it. There is the whole walking area on the west side, they will find places to jump over there. We have high fence to keep mountain sheep from going onto the roadway, but fences don’t keep people out. It is a deterrent. The more deterrents we can put in their way, that will may slow them down, make them think a little longer so that police or someone can get there. That’s how the pueblo is concerned, because our police have to deal with it and it is a bad place to be now that there people and souls are out there and despite the fact that a lot of people come to New Mexico to see our landscape knowing that the place is used by people to take their own lives is not a good reputation for the bridge. I hope you can find money and alternative ways to take care of it. I’m glad Councilor O’Donnel was reelected so she can keep pushing.

Pascual Maestas: Disappointed that they are calling the no build alternative an alternative. I feel like doing nothing should not be an option. Results of last month, no build should be gone and rails or net should be looked at. Speak to the timeline to get through the various committees and construction. This should be expedited. If this is going to be two years, how many more people are we going to see jump in two years.

Paul Brasher: there is a process that dot projects go through. It is unfortunately lengthy. This would begin as resolution from the RTPO, shown in the TIP, eventually occur in the STIP, and currently it would be a few years out. What you do is job costs would have to displace some project that is programmed now. We have cable, guard rail projects, pavement rehab projects in the STIP and bridges. In terms of maintenance, we are chasing a target. It is not easy to stop a project. We are faced with a transportation system that was built in the 1940-1970’s by different standards than a lot of routes in this state. A project like this would in the normal course of events be 2022, 2023 once it displaces some other project and change places. We are a flat budget, we get the same money every year for maintenance and construction. It starts with the TIP (Transportation Improvement Plan) for the region and would work its way into the STIP (Statewide Transportation Improvement Plan) in competition with many other safety projects. Safety needs for bridges. The bridge itself isn’t dangerous, it may not qualify for a safety project. It is an enhancement for people not to use it for its bridge purpose of getting across the river. It would work its way into our STIP and advanced forward. It would be designed. This is a structural analysis. It will need to be designed, and there is a process for that.

Jennifer Mullins: I know the no build doesn’t seem like it should be an option on the table but because of the process, we have to go through it, we have to consider a no-build. Depending
on funding, because of the road, we have to consult with Historic Preservation and ultimately USDOT. As long as the department is involved, although it might not be part that people understand, it is something we have to deal with. If there were private funds that came from elsewhere, I don't know if would work.

Jim Fambro: Our records show four suicides a year is normal. 16 more people will die.

Paul: We have some intersections we are modifying right now that are the same high mortality, statistically are going to occur, wrong way drivers, drunk drivers. We are faced with making enhancements to improve those numbers all over the state. Consequence of the times we are in, we only have so much money, and so much need. It is started here, we have structural analysis, and a good head start.

Lawrence: There is no way we can experience what you have experienced, or I can understand what you are talking about. Living in Albuquerque for myself, they are numbers and so the validity of the numbers I see what you are saying about a miss-count when someone like me is far away, a higher number shows higher incidence and I understand what you are saying. I am moved by the passion. It is easy when you are moved from something, I speak for myself since I don't live here, not to consider impacts are outside of the my experience from what you are describing, the pain and suffering and addressing the way you said it with the spiritual side, the impact on the community. Voice that we are with D5, the team that is hear is speaking for us. We are on your side. I'm asking for my personal ignorance. That doesn't mean that being here and listening will not impact it can’t not impact how we go back as a group and a team how we look at this so, to speak what Paul is saying, there is a process and we are bound by that process, but it doesn't mean we cannot be advocates within the process. Because we understand the process, we can delve into the nooks and crannies that we work with. With that said, speaking for myself, I believe for the team here, I think it is safe to say we will step back from this meeting with a new perspective. For the parts we can include in the study with the purpose of it, we will include it. We have commonality at the beginning of the meeting before understanding that the structure has limitations and limitations are finite. They are what they are. What we are dealing with is a combination of engineering problem and human problem. Somewhere in the middle, for some of us, the statistics are numbers that you look at a certain way, but for you, these are humans, people you know. I cannot imagine what it would be to stand 8 feet from someone jumping off a bridge. Given that and try to be less concrete with numbers, more looking at it from people point of view, those of us who are here are really trying. We cannot speak to this, I’m frustrating knowing this is such a long process, frustrated and painful. I can see your point that the no build looks bad. I can assure you that within the process, every study has no build option. It is an option, not necessarily a good option. I see where you are coming from. I am going to ask that if we can understand Manuel, Paul, Jennifer, Danton, myself, we want to work with you and we will listen to what you have to say. We will continue to show you where we are. We cannot change the system, but will do what we can within the system. I think that a unified voice can help with bigger picture. I think that we will reach out to get what data we can get from you, not just increase the numbers, but to get the bigger picture. It is easy to say x number of suicides, but you don’t take into account the amount of energy and the hit the community takes. We can implement that. It still take all our
part to raise the priority to make it something that is more than what is said. I’m saying I’m I
speak for myself. I’m sorry I hadn’t looked at it beyond the numbers. To the best of our ability
to put what we can in the report, but it will take a unified effort to channel the passion and teach
people to make this happen. As for the timeline, I respect where Paul is coming from. We will
talk into another meeting where someone else’s family member may have been hurt due to the
lack of a guard rail and it is a high priority in that community. We are doing the best we can and
with that said, where we are today, gathering information including what we are discussing, so
that may we can make this report better and we can accomplish that with more communication.

Danton Bean: We are on your team, we are the means for your voice to be heard. So, on the
back of the fact sheet there are three methods to give us your comments. One is web address,
the email address, or mail comment form directly to us. View us like that we are a means of
getting your voice out to the decision makers, the people who will decide. The whole purpose of
today was to give you a pre-presentation for the public meeting on Thursday. Please leave this
meeting today and spread the word about the public meeting on Thursday, invite people. We
want as much input from the public as we can get. Please spread the word.

John Bailey, I have been dealing with the highway department for 29 years. One thing that I
would mention is that whenever you do an Environmental Policy Act Document, you are
required to do a no action alternative. The highway dept. has no alternative but to have a no-
build. I embrace the need for it. On the other hand, this area is one of the key attractions in
northern NM my agency has estimated a minimum of 250,000 per year. Between the bridge
and Taos Pueblo, a major visitor destination, this accounts for a major reason people come to
this area. At the Rio Grande Gorge Visitor’s Center main question is how to get to the bridge.
By the way, you will get some derision on Thursday if you continue to call the river the Rio
Grande Gorge Bridge River. It is the Rio Grande, not the Rio Grande River. Unfortunately
members of his staff have called it Rio Grande River. Second, I appreciate Commissioner
O’Donnell has been emphasizing this as well. Because this is one of the primary attractors to
the area, there are safety considerations beyond nearly people jumping off the bridge. Safely
accessing rest area and bridge is important. This is premier tourist destination, but doesn’t look
that way. It would be wonderful to fund a comprehensive plan to address safety issues and
human access and use issues. I would love to be a part of some sort of get together to figure
out what an element of the plan might be. I think that is cleaner than halting us from doing the
right thing. We haven’t taken a look at everything and would love to be evolved of anything that
comes from that. This is the heart of it, giving the human dimension to the fact out there. Our
staff have been involved in recoveries and have talked to several who have had counseling
because of this. Devastating, even if you are seasoned law enforcement ranger because if
happens over and over again. One thing I would like to mention is that whenever we are doing
a NEPA document, if we don’t get the Purpose and Need right, it will stall the process. A lot of
the comments from the commission today reflect the importance to get the Purpose and Need
right.

Rick Bellis: This project is an emotional issue. There is an expectation in the community that
you will see your neighbors involved in horrible things. It was suggested that the NMDOT, along
with any other organizations involved in prioritizing this project, come to the bridge, drop a pig
carcass over, and perform recovery to see what it is like. It is tough enough to find first responders. I don't want to lose the guys we have, they born here, they grew up here. This is where it shows and in their family lives. The cost is between $5,000 and $10,000 depending on where the body is for recovery efforts. The NMDOT should keep in mind that there are times that the emotional, human factor should help make the decision. This is not the first time the study has been performed. I have sat through four of these, and they always seems to be near the end of the governor's term. They don't know what the prior administration has completed and why. Take it serious this time.

Unidentified Speaker: I won't be going to the pig thing because I have heard the noise twice. We were recovering a body and heard a thud, crack, that I described. We took the body up and started driving up. Dispatch questioned why we hadn't recovered. They said we had to go back. When we were recovering, a person watching us jumped while we were down there. I don't need to see a pig. I can tell you how they land. The body is intact if they land on their front or on their back. If they land on their feet, there is about 16 ft. splatter radius. That's the reality.

Danton Bean: If individuals are unable to attend the public meeting on Thursday, they are asked to provide comments on the web site, via email, or on the comment form.
<table>
<thead>
<tr>
<th>NAME</th>
<th>ORGANIZATION</th>
<th>PHONE</th>
<th>E-MAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ramon F. Padilla</td>
<td>Taos County Public Works</td>
<td>575-736-4112</td>
<td><a href="mailto:Ramon.F.Padilla@taoscount.org">Ramon.F.Padilla@taoscount.org</a></td>
</tr>
<tr>
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</tr>
<tr>
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</tr>
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<td>Jerry Hagreffe</td>
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<td>575-737-6480</td>
<td></td>
</tr>
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<td>Vernon Hujuan</td>
<td>Taos Pueblo</td>
<td>779-8356</td>
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<tr>
<td>Basqyal Maestas</td>
<td>Town of Taos</td>
<td></td>
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<tr>
<td>Leandro Cordova</td>
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<td>575-730-3740</td>
<td><a href="mailto:leandro.cordova@taoscount.org">leandro.cordova@taoscount.org</a></td>
</tr>
<tr>
<td>NAME</td>
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<td>PHONE</td>
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<td>-------------------------------</td>
</tr>
<tr>
<td>Candice O'Donnell</td>
<td>Taos Co.</td>
<td>779-0319</td>
<td>candice.o'<a href="mailto:donnell@taoscounty.org">donnell@taoscounty.org</a></td>
</tr>
<tr>
<td>Dominic Martinez</td>
<td>Taos CTY E911</td>
<td>779-3020</td>
<td><a href="mailto:dominic.martinez@taoscounty.org">dominic.martinez@taoscounty.org</a></td>
</tr>
<tr>
<td>Bobby Lucero</td>
<td>Taos County OEM</td>
<td>779-9381</td>
<td><a href="mailto:bobby.lucero@taoscounty.org">bobby.lucero@taoscounty.org</a></td>
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<tr>
<td>Jim Fambro</td>
<td>Taos County</td>
<td>779-2554</td>
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</tr>
<tr>
<td>John Bailey</td>
<td>BLM - 7905</td>
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<tr>
<td>Jennifer Mullins</td>
<td>NMDOE Enr Bureau</td>
<td>827-9684</td>
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<tr>
<td>Mark Gallegos</td>
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<td>779-4203</td>
<td><a href="mailto:mark.gallegos@taos.gov">mark.gallegos@taos.gov</a></td>
</tr>
<tr>
<td>Rick Bellis</td>
<td>Town of Taos</td>
<td>575-2002</td>
<td><a href="mailto:rbellis@taosgov.com">rbellis@taosgov.com</a></td>
</tr>
</tbody>
</table>
Appendix F. Public Meeting Summary Report
Public Meeting Summary

Rio Grande Gorge Bridge:
Structural Feasibility Study for
Suicide Deterrent Systems

CN 5101020
New Mexico Department of Transportation
October 3, 2018
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Study Background
New Mexico Department of Transportation (NMDOT) is conducting a study to evaluate the structural impacts of alternatives for a potential physical suicide deterrent system for the Rio Grande Gorge Bridge in Taos County, New Mexico. The Rio Grande Gorge Bridge is located on United States Highway 64 (US 64) west of Taos in Taos County, New Mexico. US 64 crosses over the Rio Grande Gorge at approximately mile post 242.7. The project location is shown in Figure 1.

![Figure 1. Study Area Map](image)

Public Meeting Purpose
Public involvement and consideration for the project setting and context are fundamental elements of the project development process outlined in NMDOT’s Location Study Procedures. NMDOT hosted a public meeting to provide an opportunity for community members and other interested parties to learn about the study goals, process, results, and next steps. Attendees were also able to talk with the study team member, ask questions, and encouraged to provide comments.

Public Meeting Overview
The public meeting was held on Thursday, August 16, 2018 from 5:30 p.m. to 7:30 p.m. at the Sage Brush Inn in Taos, New Mexico. The location was selected based on NMDOT guidelines and standard practices for public meetings, which include:
- Location within the project area
- Americans with Disabilities Act (ADA) accessibility
- Accessibility by public transit
- Free and ample parking availability
- Ability to accommodate anticipated capacity
- Ability to accommodate technical and audio/visual needs

The meeting was an open house format and no formal presentation was given. Attendees could view a variety of study materials and study team members were available to discuss study details and answer questions. Comment cards were available during the meeting and attendees were encouraged to provide their input. A total of 76 people signed in at the meeting.
Public Meeting Notification
The study team utilized several methods to notify the public about the meeting, as described below.

E-Blast
NMDOT Public Information staff distributed a public meeting notification to stakeholders the week prior to the public meeting. The e-blast included information about the meeting purpose, overview, and agenda. Information regarding where to submit comments was provided for anyone unable to attend the meeting. A copy of the e-blast can be found in Appendix A.

Website
The website (riograndegorgebridgestudy.com) included information about the meeting, including date, location, purpose, overview, and agenda. Information about the study and opportunity to provide feedback were also available.

Print Advertisement
Paid print advertisements were placed in two study area newspapers, The Taos News and Journal North. The ads included information about the meeting purpose, overview, and agenda. Information regarding where to submit comments was provided for anyone unable to attend the meeting. Both ads ran in the weekly publications during the week of August 2, 2018. A copy of the tear sheets can be found in Appendix A.

Public Meeting Materials
The public information meeting was arranged to include different areas of information/activity:

- Sign-in
- Video
- Display Boards

Each of these areas is described in more detail below.

Sign-in
At the sign-in table, meeting attendees were greeted by members of the study team, asked to sign-in and were provided a study fact sheet and comment card. Attendees were encouraged to view the study video, visit each of the activity areas, and ask questions of study team members. A copy of the sign-in sheet can be found in Appendix B.

Video
A video was produced to provide a more in-depth understanding of the study, its purpose and goals, the alternatives under consideration, and a timeline of the overall project. The video was looped and played for the duration of the meeting. The video can be found at hdr.wistia.com/medias/xw353s648g and a copy of the full video script is in Appendix B.

Boards
Two sets of three display boards were developed and displayed at the public meeting. These boards were positioned around the meeting room and staffed by study team members who were available to
discuss study details and answer questions. The boards provided information about the study, including proposed alternatives, analysis, and results. Copies of the boards are located in Appendix B.

Fact Sheet
A one-page fact sheet was developed and given to attendees as they entered the meeting. The fact sheet provided information including suicide statistics, the study purpose and need, evaluation considerations, a description of the alternatives evaluated, results of the evaluation, and next steps. A copy of the fact sheet is located in Appendix B.

Website
The website (riograndegorgebridgestudy.com) was developed and made available in early 2018. The website provided the information that was available at the meeting, including the display boards and fact sheet, and allowed the public to submit comments. The website site was maintained for at least five weeks after the public meeting during the comment period.

Comment Cards
A comment card was developed to provide everyone an equal opportunity to be heard during the public meeting. A copy of the comment card is located in Appendix B.

Public Comments
The public could submit comments through the following options:

- Comment form provided at public information meetings (or mailed after meeting)
- Online on the study website
- Email
- Mail

Copies of all the comments received are available in Appendix C.

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<td>Comment card In-person</td>
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<td>Mailed through postal service</td>
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<tr>
<td><strong>TOTAL</strong></td>
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Table 1. Summary of Public Comments Received

Public Input Summary
The comments received were organized by the alternatives presented in the public meeting and are located in Table 2.
Those people who indicated support for the Horizontal Net option noted it was eliminated by the study but felt that the vertical rail option obstructed the view from the bridge.

The people who supported the Vertical Railing option overall supported this and/or any other deterrents that would help prevent suicides and accidents. Many of their comments were supported by personal stories of experiences related to suicide in the community.

The people who preferred the No Build Alternative option expressed opinions that suicides will not be prevented overall and that a deterrent would negatively impact the view from the bridge.

The “Other” category comments were those that did not include an opinion or comment about the deterrent options, but rather, were related to general information on health and welfare of the community, personal stories, or historic character of the bridge.

Three respondents expressed support for more than one option.

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<tr>
<td>Vertical Railing</td>
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<td>Horizontal Net</td>
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<tr>
<td>Other</td>
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</tr>
<tr>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>73</strong></td>
</tr>
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</table>
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Appendix A
E Blast
Hello,

On behalf of the NMDOT, I would like to extend an invitation to join us at the Open House regarding the Rio Grande Gorge Bridge Suicide Deterrent System Study.
Please Join Us On
Thursday, August 16, 2018

Open House from 5:30 PM- 7:30 PM

Sagebrush Inn
1508 Paseo del Pueblo Sur
Taos, NM 87571

New Mexico Department of Transportation

Rio Grande Gorge Bride Suicide Deterrent System Study

Purpose of Open House: New Mexico Department of Transportation (NMDOT), in cooperation with the Federal Highway Administration, is sponsoring an open house to present the results of a study to evaluate the structural feasibility of suicide deterrent systems for the Rio Grande Gorge Bridge. Residents, businesses, and all interested parties are encouraged to attend and provide comments regarding the study.

Meeting Overview and Agenda: Exhibits illustrating the proposed alternatives, including video and display boards, will be available at the open house. The meeting is open house format (no formal presentation) and NMDOT representatives and project team members will be available to answer questions. If you are unable to attend, comments can be sent to Danton Bean, HDR Engineering, Inc. 2155 Louisiana Blvd. NE, Suite 9500, Albuquerque, NM 87110 or email: riograndegorgebridge@hdrinc.com All written comments should be submitted by August 31, 2018.

To request Americans with Disabilities Act (ADA)-related accommodations for the meeting, contact Victoria Bray, HDR Engineering, Inc., at (602) 245-7885 at least two days before the meeting.

Thank You

Manuel Maestas, P.E.
Project Development Engineer
NMDOT, North Region Design
505-629-7251
Print Advertisement
Artists’ manager quits over claims

BY ANNE MIDGETTE
AND PEGGY MILLER

Río Arriba County activist and former congressional candidate is appealing to the New Mexico Supreme Court after a state district court judge rejected her effort to get on the ballot for county office without submitting signatures.

In June, Carol Miller of Ojo Sarco filed an independent candidacy with the County Commission’s District 4 seat, but was disqualified for not submitting the 99 signatures required.

According to state law, independent candidates must submit signatures from at least 3 percent of a district’s registered voters. Major party candidates, however, pay a $60 filing fee instead of submitting petitions.

Miller used County Clerk Linda Paullin in July and requested the District Court allow her to be placed on the Nov. 4 general election ballot and drop the signature requirement for independent candidates void for violating state constitutional provisions guaranteeing equal protection under the law.

First Judicial District Court Judge David Thomson denied Miller’s request on July 28, saying Miller is not currently “similarly situated” with major party candidates, who go through party primaries, to assert an equal protection claim.

Miller’s attorney, A. Blair Dunn, filed his brief to the state Supreme Court Monday.

“Simply, the New Mexico Constitution’s requirement that there are ‘two major political parties’ that all persons are entitled to ‘equal protection’ requires that the State of New Mexico before the State adopts First Amendment rights…” with respect to persons running for County office, the filing states.

Miller has run for the State’s 3rd Congressional District seat three times. She ran as a Green Party candidate in a 1997 special election and again in a regular election the following year. In both cases, she ran as an independent.

Democrat James Marra is the Democratic nominee for the District 3 commission position that Miller wants to run with his daughter, Vanessa. There is no Republican candidate.

Carol Miller wants signature rule waved

BY MELINDA BENDIT

Río Arriba County activist and former congressional candidate is appealing to the New Mexico Supreme Court after a state district court judge rejected her effort to get on the ballot for county office without submitting signatures.

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Democrat James Marra is the Democratic nominee for the District 3 commission position that Miller wants to run with his daughter, Vanessa. There is no Republican candidate.

Bernard Uzan apologizes in letter

BY ANNE MIDGETTE AND PEGGY MILLER

In another response to The Washington Post’s report about sexual harassment in classical music, Bernard Uzan, 73, the stage director and artistic manager, announced he is stepping down.

“I come from a different culture. I am of the vieille école school of music generation, which is not an excuse, but simply a fact, and I have made my mistakes throughout my life,” Uzan wrote in a letter that he sent to the Post on Tuesday and then issued as a release via his company.

“I have offended any of you, I deeply apologize. The world has changed tremendously and continues to change every day at a fast pace. While I still deny the recent allegations, I am realizing that it is very difficult, practically impossible, for me to adapt to the new rules of behavior and human relations. I will now concentrate and concentrate my life by any other means of writing.”

In The Washington Post story, four women accused Uzan of sexually harassing them in the article, including inappropriate language, propositions and sexual propositions.

Uzan was one of three men alleged to have sexually harassed women in the story, which posted online Thursday and ran in print Sunday. Since it appeared, there have been a number of consequences.

William Preucil, a co-concertmaster of the Cleveland Orchestra, accused of assisting a young violinist in his hotel room during a tour stop in Miami, has been placed on paid leave by the orchestra and has resigned his position at the Cleveland Institute of Music, as well as being removed from the programs of several scheduled concerts around the country.

He was performing at this summer’s Santa Fe Chamber Music Festival when The Post’s story broke last week. A spokesperson for the festival said Preucil had been “replaced” for those remaining concerts.

Uzan and his wife, Diana Gatti, its chief conductor, who was accused in the article of dressing rooms, one in Chicago and one in Bologna, Italy. The Cleveland Orchestra offices were operating on limited summer hours though and some staff members are on vacation. Gatti has, however, retained a public relations firm, the Reputation Doctor, through which he issued a blanket apology “to all the women I have met in my entire life.”

Uzan International Arts, the agency Uzan founded and has run with his daughter, Vanessa, represents more than 100 artists, including conductors, artistic directors and stage designers. Several singers and musicians who had left the agency in the wake of The Post’s revelations in its story. In his letter, Uzan said that he is “to Vanessa, who has already effectively been doing the heavy work of running it for some time.

Uzan was also scheduled to direct Massenet’s opera “Werther” at the Florida Grand Opera in March. The opera has since been removed from the website. “I had a long life full of obstacles and tragedies,” Uzan said in his statement. “The past few years I had to deal with many health problems and it is imperative that I take care of my life. I have the quality of a blanket of wonderful moments and I will continue operating on limited summer hours through and some staff members are on vacation. Gatti has, however, retained a public relations firm, the Reputation Doctor, through which he issued a blanket apology “to all the women I have met in my entire life.”

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By Rebecca Moss
rmoss@fresno Fresno.com
The Trump administration is moving to neuter nuclear safety board.

The Trump administration is moving to neuter the Nuclear Regulatory Commission, an independent federal agency that may inhibit independent oversight of the nuclear facilities, including some 1000 high-risk nuclear reactors operated independently and overseen by its most high-risk nuclear weapons complexes at the Department of Energy, including pre-existing, “old” programs, said an email in which the board’s chairman pro-tem reported. The safety board voted last spring to rescind one of its long-pend- ing safety regulations, saying the new rules would not hinder cooperation and decrease costs. “This order requests for comment but said it did not respond to multiple requests for comment, and it was done in a presentation that the board was no longer prepared to accept and decrease costs.”

This order is integral to New Mexico’s defense board is going to “move forward” with its review of the board’s “critical role as an independent and autonomous made safety recommendations,” the presentation said.

We have seen too many serious safety and security lapses at DOE nuclear sites to accept any attempts to weaken the board. — Sen. Tom Udall, D-N.M.

The safety board’s very existence, the chairman pro-tem reported. The safety board is going to “move forward” with its review of the board’s “critical role as an independent and autonomous made safety recommendations,” the presentation said.

We have seen too many serious safety and security lapses at DOE nuclear sites to accept any attempts to weaken the board. — Sen. Tom Udall, D-N.M.

We should have to wait for something to blow up or catch fire in order to pay attention to a safety problem.” — Robert Alvarez

The New Mexico Department of Transportation and the Federal Highway Administration announce an OPEN HOUSE regarding the RIO GRANDE GORGE BRIDGE SUICIDE PREVENTION SYSTEMS

PURPOSE OF OPEN HOUSE: New Mexico Department of Transportation (NMDOT), in cooperation with the Federal Highway Administration, is sponsoring an open house to present the results, but also to discuss the proposed alternative systems for the Rio Grande Gorge Bridge. Residents, businesses, and all interested parties are encouraged to attend and provide comments regarding the study.

METHODOLOGY AND NAVIGATION: The open house is designed to provide information and gather public input on the proposed alternatives, including video display and board displays, will be available at the open house. The meeting is open house format (no formal presentation) and MDOT representatives and plans will be available to answer questions. Attendees are encouraged to attend, comments can be sent to Danton Bean, HDR Engineering, Inc., 2115 Louisiana Blvd NE, Suite 9500, Albuquerque, NM 87110 or email: RioGrandeBridge@hdrinc.com. All comments will be considered by NMDOT.

To request Americans with Disabilities Act (ADA)-related accommodations for the meeting, contact Victoria Bray, HDR Engineering, Inc., at (602) 245-7885 at least two days last on the meeting.

For breaking news, sports or entertainment, visit taosnews.com.

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Pue Blvd. NE, Suite 9500, Albuquerque, NM 87110 or email: RioGrandeBridge@hdrinc.com. All comments will be considered by NMDOT.

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Appendix B
Video Script
An iconic vista in Taos County New Mexico, the Rio Grande Gorge Bridge, located on US 64, was designed and built by the State’s Highway Department in the early 1960s. At 1,272 feet long and 650 feet above the Rio Grande Gorge River, this historic structure is the 7th tallest bridge in the United States. It is attractively positioned across the gorge and compliments its surroundings.

Within a year of opening, the bridge was awarded first place for “Beauty in Steel Bridges” by the American Institute of Steel Bridges and by the late 1990s was listed on the State Register of Cultural Properties and included in the National Register of Historic Places. While the historic bridge holds beauty, recognition, and significance, 44 suicides between 1991 and 2017 have occurred at the bridge with 80% involving New Mexico residents according to the New Mexico Office of Medical Investigators.

To provide a broader view of the suicide rates in New Mexico, the suicide rate statewide is consistently 1% higher than the national suicide rate. In the last decade, statewide suicides have totaled 4,235, of which 113 occurred in Taos County and 22 at the bridge.

Safety of the public remains a top priority for New Mexico Department of Transportation. Balancing the need to improve bridge safety, while preserving an important piece of history as well the structural integrity of the bridge, has driven the need to conduct a feasibility study that identifies bridge enhancement options to deter future suicide attempts. Initial studies from 2009 and 2015 identified several alternatives consisting of netting systems and different types of railings.

Further analysis of the alternatives identified those which most significantly impacted the bridge’s structural integrity, visual resources, safety, and/or historic integrity, which were eliminated from further study. Other considerations included community input, engineering feasibility, constructability, maintenance, inspection access, and cost. Three feasible alternatives were carried forward into the current study: the vertical railing alternative, the horizontal net alternative, and the no-build alternative.

The current study evaluates the structural feasibility of adding a rail or net system to the existing structure, as well as future improvements to maintain the existing bridge associated with the no build alternative. The 8 foot 3 inch high vertical railing alternative would replace the existing pedestrian rail. The horizontal net alternative would be installed approximately 15 feet below the existing railing and extend out 15 feet from the edge of the bridge. Specific details such as type of railing or netting, colors, and type of material will be determined at a later time should an alternative move forward into design.

To determine impacts, the study analyzed existing bridge conditions and evaluated each alternative for constructability, maintenance, inspection access, structural feasibility, and cost. Environmental factors such as impacts to historic resources, visual impacts, cultural resources, and community values were also taken into consideration.

The No-Build Alternative would not make changes to the existing suicide deterrent system, such as the suicide hotline, and it would be anticipated that the existing occurrence of incident response and recovery would not change. The construction funding associated with this alternative would consist of continued preservation of the structural and historic integrity of the bridge, along with improvements to the bridge members that require repair or replacement. Coating of the bridge may also be necessary to extend the life of the existing structure.

The vertical railing system alternative would require strengthening 16 elements of the existing bridge with an estimated cost of approximately $3.5 million for construction. It is assumed that the cost for
incident response and recovery could be reduced. However, costs to maintain the existing structure, new railing, and strengthened bridge members would increase. The addition of a vertical railing on the historically significant property may adversely affect the integrity and qualities of the bridge that qualify it to be listed in the National Register of Historic Properties including the viewshed that provides a wide-open perspective of the surrounding landscape and Rio Grande Gorge. This option would also require consultation with the State Historic Preservation Officer and the Federal Highway Administration if selected to move forward.

The horizontal net system alternative would require strengthening 378 elements of the existing bridge, an effort comparable to constructing a new bridge. A construction cost estimate will not be estimated at this time because of the extensive effort that would be required for this alternative. Due to the location of the deterrent system, inspection access will be impacted, requiring the net to be raised, lowered or pulled aside and then re-secured for each inspection effort. It is assumed that the cost for incident response and recovery could be reduced. Costs to maintain the existing structure and new horizontal netting on the historically significant bridge may adversely affect the historic integrity and the current viewshed looking down at the Rio Grande Gorge. This option would also require consultation with the State Historic Preservation Officer and the Federal Highway Administration if selected to move forward.

A comparison of all three alternatives resulted in both the vertical railing alternative and horizontal net alternative introducing greater impacts to the existing bridge and future maintenance cost than the No-Build alternative. Of the build alternatives, the horizontal net would require more significant and costly modifications to the bridge than the Vertical Railing alternative, therefore it was eliminated from consideration. As such, the No-Build alternative and Vertical Railing alternative will continue to be viable options under consideration. Ultimately, historic preservation, environmental affects and public input will continue to play a major role in the decision making process.

Given the overlapping considerations of historic significance, environmental impacts, structural functionality, and community values, the DOT encourages ongoing public engagement and input into the study. Your comments will be taken at this meeting or through the website. Once complete, the study will be available to inform further discussions within the regional planning process, and for potential inclusion in the State Transportation Improvement Plan for funding next steps.

To stay engaged and sign up for email updates, please visit riograndegorgebridgestudy.com.
Meeting Boards
A range of reasonable project alternatives was developed and analyzed based on previous studies conducted in 2009 and 2015.

The no-build alternative would leave the structure in its existing condition.

The vertical railing alternative, 8 feet and 3 inches tall, would replace the existing pedestrian rail.

The horizontal net alternative would be installed approximately 15 feet below the existing railing and would extend out 15 feet from the edge of the bridge.

Note: All the alternatives will require preservation efforts to maintain structural integrity of the bridge.
RIO GRANDE GORGE BRIDGE
STRUCTURAL FEASIBILITY STUDY FOR SUICIDE DETERRENT SYSTEMS

PROPOSED ALTERNATIVES

NO-BUILD ALTERNATIVE

VERTICAL RAILING ALTERNATIVE

HORIZONTAL NET ALTERNATIVE

PHOTO SIMULATIONS

Looking towards the existing bridge.

Looking from the existing bridge.

Proposed alternative looking towards the bridge.

Proposed alternative looking from the bridge.
ANALYSIS

Evaluation Criteria

- **NO-BUILD ALTERNATIVE**
  - No changes to existing suicide deterrent system
  - No changes anticipated to existing occurrence of incident response and recovery
  - Construction cost: $3.5 million
    (Bridge Preservation Cost [Painting]: $15.5 million)

- **VERTICAL RAILING ALTERNATIVE**
  - Requires strengthening 16 structural elements
  - Construction cost: $3.5 million
    (Bridge Preservation Cost [Painting]: $15.5 million)
  - Anticipated to reduce incidence response and recovery
  - Increased maintenance cost
  - May adversely affect the integrity and qualities that qualify it to be listed in the National Register of Historic Places, including viewshed
  - Requires consultation with the State Historic Preservation Officer and the Federal Highway Administration

- **HORIZONTAL NET ALTERNATIVE**
  - Requires strengthening 378 structural elements (effort comparable to constructing a new bridge)
  - Construction cost will be a new bridge structure and is not determined at this time due to magnitude of the scope for a replacement structure
  - Inspection access will be impacted
  - Anticipated to reduce incidence response and recovery
  - Significantly increased maintenance cost
  - May adversely affect the integrity and qualities that qualify it to be listed in the National Register of Historic Places, including viewshed
  - Requires consultation with the State Historic Preservation Officer and the Federal Highway Administration
RESULTS

- **NO-BUILD ALTERNATIVE**
- **VERTICAL RAILING ALTERNATIVE**

Both alternatives were determined to be viable options for continued consideration.

- **HORIZONTAL NET ALTERNATIVE** ELIMINATED

Would require more significant and costly modifications to the bridge; therefore, it was eliminated from consideration.

**KEY FACTORS**

- **Historic Resources**
- **Environmental Effects**
- **Public Input**

Will continue to play a major role in the decision making process.

**NEXT STEPS**

Once complete, the study will be available to inform further discussions within the regional planning process, and for potential inclusion in the State Transportation Improvement Plan for funding next steps.

To stay engaged and sign up for email updates, please visit riograndegorgebridgestudy.com
Fact Sheet
PURPOSE AND NEED

The New Mexico Department of Transportation is conducting a study to evaluate alternatives for a potential physical suicide deterrent system for the Rio Grande Gorge Bridge in Taos County, New Mexico, the goal being to improve bridge safety while preserving its history and structural integrity. The purpose of the study is to understand the structural feasibility of adding a suicide deterrent system to the bridge.

ALTERNATIVES EVALUATED

NO-BUILD ALTERNATIVE – The no-build alternative would leave the structure in its existing condition.

VERTICAL RAILING ALTERNATIVE – The vertical railing alternative, 8 feet and 3 inches tall, would replace the existing pedestrian rail.

HORIZONTAL NET ALTERNATIVE – The horizontal net alternative would be installed approximately 15 feet below the existing railing and would extend out 15 feet from the edge of the bridge.

RESULTS OF EVALUATION

- Evaluation of the alternatives showed that the HORIZONTAL NET ALTERNATIVE would require more significant and costly modifications to the bridge; therefore, it was eliminated from consideration.
- The no-build alternative would not make changes to the existing suicide deterrent system, such as the suicide hotline, and the existing occurrence of incident response and recovery would not change.
- The no-build alternative would require improvements to bridge members that either require repair or replacement and painting to extend the life of the existing structure.
- The NO-BUILD ALTERNATIVE and the VERTICAL NET ALTERNATIVE will continue to be viable options under consideration.
Once complete, the study will be available to inform further discussions within the regional planning process, and for potential inclusion in the State Transportation Improvement Plan for funding next steps.
Sign-In Sheets
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<td>Benjamin Leeson</td>
<td></td>
<td>P.O. Box 98, Arroyo Seco, NM 87514</td>
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<tr>
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</thead>
<tbody>
<tr>
<td>Julie First</td>
<td></td>
<td>PO Box 3580 Taos, NM 87571</td>
<td><a href="mailto:julieone@gmail.com">julieone@gmail.com</a></td>
</tr>
<tr>
<td>Rachel Davis</td>
<td>Trust Help Co</td>
<td>101 Mariposa, PO Box Taos, NM 87571</td>
<td><a href="mailto:raevelcausa593@gmail.com">raevelcausa593@gmail.com</a></td>
</tr>
<tr>
<td>Connie White</td>
<td>Teacher EGES</td>
<td>PO Box 175 Taos, NM</td>
<td><a href="mailto:connwhite@taos.k12.nm.gov">connwhite@taos.k12.nm.gov</a></td>
</tr>
<tr>
<td>Ted D'Ambrosio</td>
<td>Golden Willow Clinic</td>
<td>1000 Pojoaque Taos, NM 87571</td>
<td><a href="mailto:Ted.DAmbrosio@Gmail.com">Ted.DAmbrosio@Gmail.com</a></td>
</tr>
<tr>
<td>Samy Peacock</td>
<td></td>
<td>87526</td>
<td><a href="mailto:Samy@peacockmedical.com">Samy@peacockmedical.com</a></td>
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<tr>
<td>Michael Cox</td>
<td></td>
<td>87526</td>
<td></td>
</tr>
<tr>
<td>Karen Kenwood</td>
<td>Knight Financial</td>
<td>87514, PO Box 314</td>
<td><a href="mailto:karen.kenwood@gmail.com">karen.kenwood@gmail.com</a></td>
</tr>
<tr>
<td>Roxanne Rane</td>
<td></td>
<td>PO Box 84 Taos, NM 87529</td>
<td><a href="mailto:Roxanne.Rane@gmail.com">Roxanne.Rane@gmail.com</a></td>
</tr>
<tr>
<td>Howard Roemer</td>
<td></td>
<td>220 Acrewright, Taos, NM 87571</td>
<td><a href="mailto:howard@brannewx.com">howard@brannewx.com</a></td>
</tr>
<tr>
<td>Yvonne Pesquera</td>
<td>The Taos News</td>
<td>220 Acrewright, Taos, NM 87571</td>
<td><a href="mailto:socialmedia@taosnews.com">socialmedia@taosnews.com</a></td>
</tr>
<tr>
<td>Ken Eskerback</td>
<td>Eske's Paradise Balloons</td>
<td>PO Box 308 El Prado, NM 87529</td>
<td></td>
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<tr>
<td>Nakalea Cunrado</td>
<td></td>
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<tr>
<td>Rick Bellis</td>
<td>Town Of Taos</td>
<td>400 Camino de la Placita</td>
<td><a href="mailto:rbellis@taos.gov">rbellis@taos.gov</a></td>
</tr>
</tbody>
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## PUBLIC SIGN-IN SHEET

<table>
<thead>
<tr>
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<th>Address, City, ZIP Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Larry Gonzalez</td>
<td>Taos Fire Dept.</td>
<td>4591 NM 680 Taos 87571</td>
<td><a href="mailto:lgonzalez@taos.gov.com">lgonzalez@taos.gov.com</a></td>
</tr>
<tr>
<td>2</td>
<td>Terry McClymond</td>
<td></td>
<td>PO Box 1334 Ranchos de Taos NM 87557</td>
<td><a href="mailto:temp@mcclaymond.org">temp@mcclaymond.org</a></td>
</tr>
<tr>
<td>3</td>
<td>Annette Munoz</td>
<td>Taos Bridge Safety Network</td>
<td>PO Box 749 Arroyo Seco, NM</td>
<td><a href="mailto:anesthuber@me.com">anesthuber@me.com</a></td>
</tr>
<tr>
<td>4</td>
<td>Candice O'Donnell</td>
<td>Taos County</td>
<td></td>
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<tr>
<td>5</td>
<td>Vernon Lujan</td>
<td>Taos Pueblo</td>
<td>PO Box 846 Taos 87571</td>
<td><a href="mailto:vlujan@taospueblo.com">vlujan@taospueblo.com</a></td>
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<tr>
<td>6</td>
<td>Kim Tracebrer</td>
<td>Taos Pueblo</td>
<td>PO Box 2895 Taos</td>
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<tr>
<td>7</td>
<td>Lawrence Lopez</td>
<td>Taos Pueblo</td>
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<td>8</td>
<td>Francisco Guereana</td>
<td>Los Rios River Runners</td>
<td>PO Box 2734 Taos</td>
<td><a href="mailto:office@losriosriverrunners.com">office@losriosriverrunners.com</a></td>
</tr>
<tr>
<td>9</td>
<td>Bob Estes</td>
<td>NM Historic Preservation Division</td>
<td>407 Galisteo St 87501</td>
<td><a href="mailto:bob.estes@state.nm.us">bob.estes@state.nm.us</a></td>
</tr>
<tr>
<td>10</td>
<td>Heather Groome-Carroll</td>
<td></td>
<td></td>
<td><a href="mailto:maddyjcc@gmail.com">maddyjcc@gmail.com</a></td>
</tr>
<tr>
<td>11</td>
<td>Heather Lynn Sparrow</td>
<td>sparrowphotography</td>
<td>PO Box 3921 Taos 87571</td>
<td>sparrowphotodochotmail.com</td>
</tr>
<tr>
<td>12</td>
<td>Malley MacCracken</td>
<td>Taos Pueblo</td>
<td>PO Box 224 Taos 87514</td>
<td><a href="mailto:malmacecn@hotmail.com">malmacecn@hotmail.com</a></td>
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<tbody>
<tr>
<td>Darian Fernandez</td>
<td>Taos Town Council</td>
<td>400 camino de la Placita, Taos 87571</td>
<td><a href="mailto:d.fernandez@tao.gov.com">d.fernandez@tao.gov.com</a></td>
</tr>
<tr>
<td>Rafael Garrara</td>
<td></td>
<td>611 Valverde, Taos 87571</td>
<td><a href="mailto:tsoayshjing@gmail.com">tsoayshjing@gmail.com</a></td>
</tr>
<tr>
<td>Marah Moore</td>
<td></td>
<td>1050 Pinyon, Taos 87571</td>
<td><a href="mailto:marah@121-institute.com">marah@121-institute.com</a></td>
</tr>
<tr>
<td>Molly Niemann</td>
<td></td>
<td>1208 Rio 8377, EJ Polaco 87529</td>
<td><a href="mailto:wmsean@taosnet.com">wmsean@taosnet.com</a></td>
</tr>
<tr>
<td>Elena Trujillo</td>
<td></td>
<td>28A Jan Holder Rd., RDT 87557</td>
<td><a href="mailto:elena.milinda@gmail.com">elena.milinda@gmail.com</a></td>
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<tbody>
<tr>
<td>1</td>
<td>Robert Elliott</td>
<td>14 Los Cordovas Drive</td>
<td>Ranchos de Taos</td>
<td><a href="mailto:relj0767@gmail.com">relj0767@gmail.com</a></td>
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Appendix C
Public Comments
Public comments are an important part of this study and will be included in the study analysis. **Comments returned by August 31, 2018, will be included in the summary of this public meeting.** Please comment in the space provided below. Print clearly.

I am a native Taos and have felt the impact of the many losses in our community due to suicides on the Gorge Bridge...as well as suicides in other venues. I am torn about how to feel about any changes to the bridge and the memories at the bridge I really love and value the views there. As much I would hate to see it change, however, I also think something needs to be done to help deter suicides at the bridge. Even one death is too many. It is a tragedy. However, I believe that if someone wants to kill themselves, they will find a way no matter what. (My brother shot himself, my cousin drove off the Hondo hill, my friend killed himself w/lethal meds and prescription drugs). I thank you all for your efforts and will continue to pray for the best outcome for the highest good of all.

Contact Information (optional*)

**Name:** Elena Milind

**Address:** 28 A. John Holder Rd, KRD, NM 87557

**Phone:** (575) 613-6977

**Email Address:** elena.milind@gmail.com

Thank you for your participation. Submit your completed form by August 31, 2018:

- To a project team member at tonight’s meeting
- Via email: RioGrandeGorgeBridge@hdrinc.com

Via mail: Danton Bean, HDR Engineering, Inc.
2155 Louisiana Blvd. NE, Suite 9500
Albuquerque, NM 87110
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If building during rafting season be aware of hazards to the rafting/kayaking public below.

Contact Information (optional*)
Name: FRANCISCO GUEVARA
Address: P.O. BOX 608
Phone: 575-776-8854
Email Address: CİYO E LOS RIOS RIVER RUNNERS . conduit

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  Albuquerque, NM 87110
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The netting would probably be the best despite the costs because the others don’t work. If someone truly wants to jump, they will climb the higher railings just the same. A net catches them after the impulse to jump so they will come to their senses due to fear after the emotions and hopefully will change their mind. If they are caught by the net then the chances of someone finding out are much higher so the person can get help after. Also, if they are stopped by the railing they will try to find another way of killing themselves.

Contact Information (optional*)

Name: Rafael Garvaren

Address: 611 Valley Rd.

Phone: (575) 613-0320

Email Address: tsey.shaping@gmail.com

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- Via mail: Danton Bean, HDR Engineering, Inc.
  2155 Louisiana Blvd. NE, Suite 9500
  Albuquerque, NM 87110
I am in favor of the Vertical Railing Alternative.

However:

1. The safety of our First Responders doing Recovery is paramount.
2. Additional fencing along the edge of the Gorge needs to extend along enough distance to discourage jumpers from hiking around the edge of the bridge and making access for the First Responders more dangerous and dangerous.
3. How many of the 80% of jumpers from NM are from the Taos area?

* Aesthetics and historical designation are secondary to preventing death.
* Other safety issues also need to be addressed: 8" gaps, not ADA compliant, no barriers between sidewalk & bridge, safe place for vendors - NEED speed bumps.

Contact Information (optional*)

Name: Jero Dierse
Address: 43 Lodge Rd
Phone: 575-770-1189
Email Address: jero@newmex.com

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Via mail: Danton Bean, HDR Engineering, Inc.
2155 Louisiana Blvd. NE, Suite 9500
Albuquerque, NM 87110

NMDOT Project Control Number: CN 5101020
AUGUST 2018
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A public place.
Perhaps the No Build could have cameras?
Cheap video cameras routed to EMS dispatch?
And more police surveillance at night!

But Rail improvement makes the most sense

Contact Information (optional*)

Name: **Kara Kelley**
Address: P.O. Box 375 El Prado NM 87529
Phone: 575-224-7559 425-9594
Email Address: kkusmth099@gmail.com

Thank you for your participation. Submit your completed form by August 31, 2018:

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  Albuquerque, NM 87110
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Please comment in the space provided below. Print clearly.

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Bridge safety is very very important. I believe that we need to be taking much more initiative to making it safe! The gorge bridge is becoming known for suicide and that is the last thing we want. There are so many ways we could make it safer putting net of a cage around it so people are unable to jump. Other things we could be is post up supportive and positive messages to maybe change the mind of the ones thinking of ending their life by jumping. Life is important and these people are important.
```

Contact Information (optional)

Name: River Joy Johnson
Address: P.O. Box 729 El Prado NM 87529
Phone: (575) - 741-8637
Email Address: riverjoy@gmail.com

Thank you for your participation. Submit your completed form by August 31, 2018:

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- Via email: RioGrandeGorgeBridge@hdrinc.com
- Via mail: Danton Bean, HDR Engineering, Inc.
  2155 Louisiana Blvd. NE, Suite 9500
  Albuquerque, NM 87110
I believe the main cause of suicide is the lack of affordable mental healthcare in Taos County. Even if the bridge is closed, people will still find ways to kill themselves. All of the mental healthcare professionals in Taos need to come together and form a coalition. If we had all professionals give a day a week to provide free counseling services to the community, more people battling mental health issues that lead to suicide could obtain the help they need at no cost. If that formed such a coalition and improve the bridge, we would probably see a drop in suicides.

Contact Information (optional*)

Name: Ellen B. Collins
Address: PO Box 193, Carson, NV, 89717
Phone: (813) - 802-6201
Email Address: Deserraven1201@gmail.com

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- Via email: RioGrandeGorgeBridge@hdrinc.com
- Via mail: Danton Bean, HDR Engineering, Inc.
  2155 Louisiana Blvd. NE, Suite 9500
  Albuquerque, NM 87110
Rio Grande Gorge Bridge Structural Feasibility Study for Suicide Deterrent Systems
Public Open House – Comment Form
THURSDAY, AUGUST 16, 2018 | 5:30–7:30 p.m.
SAGEBRUSH INN, 1508 PASEO DEL PUEBLO SUR, TAOS, NM 87571

Public comments are an important part of this study and will be included in the study analysis. Comments returned by August 31, 2018, will be included in the summary of this public meeting. Please comment in the space provided below. Print clearly.

Something needs to be done ASAP. We can come together.
Vertical filtering makes sense more.

Contact Information (optional*)

Name: ____________________________
Address: ____________________________
Phone: ____________________________
Email Address: ____________________________

Thank you for your participation. Submit your completed form by August 31, 2018:

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- Via email: RioGrandeGorgeBridge@hdrinc.com
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AUGUST 2018
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If it's a decision between monetary cost, potentially making the view not as attractive (and ill-informed) for tourists, and the slight chance of reducing income due to tourism weighed against people's lives, preventing further trauma for the community (family members, youth, recovery crews), and taking action against a recurring, horrible problem—that's a no-brainer.

At the very least, NMDOT should be in charge of body recovery from the gorge if they are unwilling to see the evidence for why this is needed.

Why not construct the full railing so that we can look past it without being able to move past it? That is a totally feasible solution for the people who value a superficial view over saving lives.

The people who believe that people will just follow-through elsewhere need to do some research. The **two people I personally know** who have jumped in the past five years would still be alive today if it had not been so easy to do in a split-second of bad (understatement) decision-making. Data from around the country shows that a railing would save lives and it by no means has to be unappealing.

Thank you for your participation. Submit your completed form by August 31, 2018:

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- Via mail: Danton Bean, HDR Engineering, Inc.
  2155 Louisiana Blvd. NE, Suite 9500
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2 of my friends have lost their sons to suicide on the Gorge Bridge. One mother was holding on to her son trying to keep him from jumping. He was too strong and the railing too easy to help. Please do something. The vertical railing is sound. No more studies of delays are needed. Is the view worth 44 lives? No.

Contact Information (optional*)
Name:
Address:
Phone:
Email Address:

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Please place barriers and provide appropriate public access for the many locals & visitors. At this point I see it as a huge liability exposure for NM and it would be irresponsible to do nothing.

I favor the stainless steel mesh solution to reduce maintenance and is transparent.

We should not play to HP restrictions. If landmarks such as the Eifel Tower, Empire State Bldg & Golden Gate, so should we.

Widen sidewalks for ADA access & provide barriers between traffic & pedestrians.

Contact Information (optional*)
Name: Elaine Bergman
Address:
Phone:
Email Address:

Thank you for your participation. Submit your completed form by August 31, 2018:
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- Via email: RioGrandeGorgeBridge@hdrinc.com
- Via mail: Danton Bean, HDR Engineering, Inc. 2155 Louisiana Blvd. NE, Suite 9500 Albuquerque, NM 87110
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[Handwritten text]

BEST option.

The railing overhead extension solution seems the best option for the Taos Bridge Gorge.

The next option looks like a tease for young people to show how tough, brave & dare devil they are

Learning things on the bridge like they are. Is not really an option - we need a solution.

Contact Information (optional)
Name: Steven Blair
Address: Taos Historic district
Phone:
Email Address: Thanks for having this open house

Thank you for your participation. Submit your completed form by August 31, 2018:

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Via email: RioGrandeGorgeBridge@hdrinc.com

Via mail: Danton Bean, HDR Engineering, Inc.
2155 Louisiana Blvd. NE, Suite 9500
Albuquerque, NM 87110

NMDOT Project Control Number: CN 5101020
AUGUST 2018
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Improvement for pedestrians & autos imperative. A vertical railing that totally enclosed walkway for pedestrians thereby discouraging errors by people on foot. Speed bumps for cars. Such a popular tourist attraction needs upkeep & improvement. A disgrace the way it appears now.

Needs to be addressed ASAP.

Contact Information (optional*)
Name: NIKKI DONNER
Address: POB 220, SAN CRISTOBAL, NM 87564
Phone: 575-796-2672
Email Address: donnernik@gmail.com

Thank you for your participation. Submit your completed form by August 31, 2018:

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Via mail: Danton Bean, HDR Engineering, Inc.
2155 Louisiana Blvd. NE, Suite 9500
Albuquerque, NM 87110

NMDOT Project Control Number: CN 5101020
AUGUST 2018
Re: Bridge Barriers: a totally enclosed fence (tunnel) would deter and also make it a bit safer for pedestrian traffic.

* It seems like the below-bridge nets would collect debris/trash & require more upkeep.

* Pedestrian crosswalks are a must! (with signage & lights)

* A visible presence of visitor information and a permitted, well-designed vendor area would be an improvement to the area - with a presence of patrols to assist visitors/humans out there.

Contact Information (optional*)

Name: ____________________________
Address: ____________________________
Phone: ____________________________
Email Address: ____________________________

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NMDOT Project Control Number: CN 5101020
AUGUST 2018
I believe the best alternative to the Rio Grande Gorge Bridge would be to install a verticle railing along the bridge to prevent any more suicides from occurring. If this verticle railing system was already in place in 2014 my best friend, Copper Beamer, would still be here today. A verticle railing would make it nearly impossible for any suicides to take place on the bridge. The costs of construction and maintenance for this to take place is insignificant compared to the value of someone's life. That goes the same for the "visual impacts" that new construction may have on the bridge. The Gorge Bridge will remain a beautiful and historic landmark regardless of the new construction that needs to take place in order for Taos to be a safer community. No more loss of best friends & family! Please!

Contact Information (optional*)

Name: Robert Forbes

Address: 960 Calle Conquistador Taos, NM 87571

Phone: 505-423-3266

Email Address: steezeninja@gmail.com

Thank you for your participation. Submit your completed form by August 31, 2018:

- To a project team member at tonight’s meeting
- Via email: RioGrandeGorgeBridge@hdrinc.com
- Via mail: Danton Bean, HDR Engineering, Inc. 2155 Louisiana Blvd. NE, Suite 9500 Albuquerque, NM 87110
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I do not believe any deterrent systems should be built at, or near, or around the Gorge Bridge. I support a NO-BUILD ALTERNATIVE for suicide prevention at the bridge. I believe the 3.5 million dollars should be spent on suicide prevention education & outreach in Taos County.

I am a 23 year resident of Taos County and have had several close friends commit suicide off of the Gorge Bridge. My friends had mental and emotional health problems, they would have committed suicide with or without the Gorge Bridge. Again, I support a NO-BUILD ALTERNATIVE for suicide deterrents at the bridge. I believe the millions of dollars could be better spent on suicide prevention education & outreach in Taos County.

_________________________________________________________

Contact Information (optional)

Name: Laura Kelch
Address: P.O. Box 2423, Taos, NM 87571
Phone: 575-224-9834
Email Address: laurajkelch@gmail.com

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Vertical Railing ASAP to prevent suicide
Also design something prior to both entrances to prevent any pedestrians from getting hurt by traffic — slow the traffic down before entrance to bridge —
Speed bumps
Most important Do Something Soon

Contact Information (optional*).
Name: Terry McClaymond
Address: PO Box 1334 Ranches de Taos NM 87557
Phone: 575 736 3219
Email Address: temp@mcclaymond.org

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Thanks Jerry
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Please construct the **VERTICAL RAILING** at the Taos Gorge Bridge.

I personally knew 3 young people that would have not died had the railing been there, the suicides were an impulse and the phone at the bridge was not an alternative for them. (I do think the phones are helpful, too)

I urge you to build this railing ASAP to save more lives in the near future and beyond.

---

Contact Information (optional*)

Name: Kim Trubek

Address: P.O.Box 2895, Taos NM 87571

Phone: 575 758-7840

Email Address: Kim@taosnet.com

---

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  Albuquerque, NM 87110
I support the vertical net option, until it is time to build a new bridge; at that time, I would support both their vertical and horizontal netting.

For the record, I could live less about losing the historic designation of the bridge. As a citizen, Taos town council member, and first responders such designation will always be secondary to the human impact in the family losing a loved one, and the rescue personnel having to recover a body.

Contact Information (optional*)

Name: Damien Fernandez
Address: 4100 Camino de la Placita, Taos, NM 87571
Phone: 575-779-6792
Email Address: cfernandez@taos.gov.com

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👤 To a project team member at tonight’s meeting
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✉️ Via mail: Danton Bean, HDR Engineering, Inc.
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No doubt is the answer we see to go but that the entire bridge area as a unit. The concrete barriers are a hazard to the pedestrians walking on the sidewalks of the road. Concrete sound panels should be placed in the area allowing people to walk off the road. The general area should be furred into a meditative area where people can consider a jump. This should be a peaceful spot. Night lighting should be studied when done. Jumps to be placed on a free standing bridge. Consider a free standing bridge attendant! A lot cheaper then 7 million spent on bridge. Spend money our way to make roadway safer (meaning). Lower 45 to 25!!

Contact Information (optional)
Name: Dale Schuette
Address: P.O. Box 1562, Taos, NM 87571
Phone: 575-779-8283
Email Address: SchuetteDale@gmail.com

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  Albuquerque, NM 87110
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at consent c 19 d d the
measures can applied to the bridge
appreciate your thought consideration of
an approach I took termed to advancing
consultation to be e along under suan 06
at National stu P que fro I aD New Mexico
Prent a d s on s and/or t e
culture reports A t.

Bob LS
427 w xxav w cc w e 87501
s &
Cem
It would appear that the situation being in the later physical option. The beam, at this shown, least two vertices
of the structural supporting the large are with vertical at the the upper part of the building, if this would be placed at an angle, the whole structure the placement would be itself.

(1)
As safe
The whole place needs attention. It appears abandoned. I think vertical ratling is a great option. Sorgohe the better.
Thank you for holding this meeting...

As someone who has lost a friend to the bridge, this is near & dear to my heart. I think we all agree that something needs to be done. I am personally in favor of the net option. Please install the net!

Also, slower speed limits & crosswalks would be good.

Also, put in a bumper jump, it’s a tourist district anyway, & the money could create jobs, tax revenue, & outside continued interest in our bridge.

Contact Information (optional*)

Name: ____________________________

Address: __________________________

Phone: ____________________________

Email Address: ____________________

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Of course, something has to be done to deter jumpers!
Upon viewing the film, my thoughts are how do you know an 8 ft fence cannot be climbed. Is it high enough?
Types of fences/barriers need to be studied. Find what works in other countries. When in Australia (Sydney), I was told that when the newspapers stopped reporting the incidents, there was a reduction of jumpers.

When walking the bridge, I felt it was quite dangerous that the rails were too close. One wrong step especially for people who might get dizzy at that height.

Bridge definitely needs reinforcing, so include studies in how to prevent suicides.

---

**Contact Information (optional*)**

Name: 
Address: 
Phone: 
Email Address: 

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NMDOT Project Control Number: CN 5101020
AUGUST 2018
No build option is not an option!
We are in agreement that higher railings should be installed for deterrent and general public safety. Historical preservation is obviously a factor, but life (as in saving one) is far more important.
People will continue to stop, walk onto and admire the incredible views both out and down from the bridge. There could be small smaller openings to allow for picture taking.

We cross the bridge at least once a month slowly & carefully to avoid pedestrians who constantly walk onto the road. Something should be done to prevent this happening also. Not to mention our first responders who do the terrible job of recovery.

Contact Information (optional)
Name:  
Address:  
Phone:  
Email Address: kenwardkns@gmail.com

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I AM FOR THE VERTICAL RAILINGS -
PUT ZIA’S IN DESIGN WITH MULTI COLORS
INSTEAD OF SILVER PAINT ON EVERYTHING.
MAKE IT NICE TO LOOK AT.

LOWER SPEED LIMIT

PUT UP SIGNS FOR SIGHTSEEERS TO
BE CAUTIOUS.

Contact Information (optional*)
Name: ________________________________
Address: ________________________________
Phone: ________________________________
Email Address: __________________________

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Please comment in the space provided below. Print clearly.

- Safety Signs for Pedestrians enjoying the view - clear crossing lanes
- Slow the speed limit to 25 mph - Flashing lights
- This seems a problem or issue that is on the rise
  will not go away until action is taken.
- Safety for stepping off the curbs - a railing
  The Vertical Railings system is appropriate, Scasable & aesthetic
- Doing Nothing is not an option

- The Bridge is one of NM Treasures - keeping everyone
  safe to enjoy it is imperative - helping those in
  trouble is also imperative.
  As many ways as we can 'interrupt' tragic & desperate
  people before they commit an act of terrorism on themselves
  is imperative - giving them alternatives & support - and offer
  them away out and pre-empting the situation is imperative.

Contact Information (optional)

Name:  
Address: 805 Southeast Circle NW ABQ NM 87104
Phone: 505-250-0455
Email Address: Krysteen@KrysteenWaszak.com

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  Albuquerque, NM 87110

- Via email: RioGrandeGorgeBridge@hdrinc.com

NMDOT Project Control Number: CN 5101020
AUGUST 2018
Rio Grande Gorge Bridge Structural Feasibility Study for Suicide Deterrent Systems
Public Open House – Comment Form
THURSDAY, AUGUST 16, 2018 | 5:30–7:30 p.m.
SAGEBRUSH INN, 1508 PASEO DEL PUEBLO SUR, TAOS, NM 87571

Public comments are an important part of this study and will be included in the study analysis. Comments returned by August 31, 2018, will be included in the summary of this public meeting. Please comment in the space provided below. Print clearly.

Dear NMDOT,

Please push to implement the heightened railing option to mitigate the outrageous suicide rate on the bridge. With the railing, an increased safety zone for pedestrians that is both ADA compliant and safe for the many visitors of all ages and heights. Please move this forward before we lose more lives.

Thank you.

Contact Information (optional*)

Name: Benjamin W. Lee

Address: P.O. Box 491, Arroyo Seco, NM 87514

Phone: 575-770-3883

Email Address: eol401@taos.com.com

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* Education about Suicide prevention is the Answer

Don’t spend the money to destroy our views from the bridge. When that is not the answer, Billboard like the DOT did for DWI campaign. That has proven to work.

Contact Information (optional*)

Name: Teresa Tomasino
Address: 21 Vista del Ocaso Ranchos de Taos, NM 87557
Phone: (575) 770-7475
Email Address: Haroshot@yahoo.com

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I truly believe that something must be done to improve safety and prevent suicides at the bridge. The tragic loss of lives is devastating to family and friends, but the danger to the EMS personnel involved in the retrieval of bodies is too dangerous.

I believe the tall railing is attractive and at 3.5 million is a very economically feasible solution to a horrible problem. The view is hardly impaired. You could go one step further and put art installations every 30-50 ft. A nice metal thing or glass. Put in put to the Taosenos and pick something. Something must be done and soon!!!

Contact Information (optional*)

Name:  Laurie Harter

Address:  346 Vegas de Taos Circle, Taos 87571

Phone:  770-1930

Email Address:  shipleyharker@msn.com

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I believe the vertical railing would be the best alternative to nothing or the netting. The aesthetics are also advisable. Also, the speed limit should be reduced with blinking lights to warn drivers of the speed reduction.

The bridge is a great place to view our New Mexico beauty. The vertical railing does not take away from that aspect. Also safer for small children and pets.
Public comments are an important part of this study and will be included in the study analysis. **Comments returned by August 31, 2018, will be included in the summary of this public meeting.** Please comment in the space provided below. Print clearly.

I feel the vertical railing is the best option. You can still see through it. The speed limit should also be reduced to 25 mph. Railings along the walkway.

---

Contact Information (optional*)

Name: Diane Greenleaf

Address:

Phone:

Email Address: digreenleaf@yahoo.com

---

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1. Vote for the Vertical Railing — I feel it would be a deterrent.
2. Reduce speed limit
3. Rail line between walkway and road

Contact Information (optional*)

Name: ________________________________
Address: ________________________________
Phone: ________________________________
Email Address: ________________________________

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Please include these studies to show that deterrents decrease overall suicide. When suicide rates go down, less money is spent on recoveries!

Contact Information (optional*)

Name: Pascualito Maestas

Address:

Phone:

Email Address: pmaestas@taosgov.com

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  2155 Louisiana Blvd. NE, Suite 9500
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Effect of barriers on the Clifton suspension bridge, England, on local patterns of suicide: implications for prevention

OLIVE BENNEWITH, MIKE NOWERS and DAVID GUNNELL

Summary We assessed the effect of the installation of barriers on the Clifton suspension bridge, Bristol, England, in 1998 on local suicides by jumping. Deaths from this bridge halved from 8.2 per year (1994–1998) to 4.0 per year (1999–2003; P=0.008). Although 90% of the suicides from the bridge were by males, there was no evidence of an increase in male suicide by jumping from other sites in the Bristol area after the erection of the barriers. This study provides evidence for the effectiveness of barriers on bridges in preventing site-specific suicides and suicides by jumping overall in the surrounding area.

Declaration of interest None.

A number of sites around the world, particularly bridges, have gained notoriety as places from which suicide by jumping is popular (Gunnell & Nowers, 1997). As many acts of self-harm are impulsive in nature (Mann, 2003), restricting access to commonly used methods can result in reductions in both method-specific and overall suicide rates.

While two studies have found barriers to be effective in the prevention of suicide by jumping from particular bridges (O’Carroll et al, 1994; Beautrais, 2001) neither study investigated thoroughly the effects on suicide by jumping from other sites nearby and overall suicides. In December 1998, two metre-high wire barriers were installed on the main span of the Clifton suspension bridge in Bristol. For architectural reasons similar protective measures were not placed on the buttress walls at either end of the bridge (a photograph of the bridge is available as a data supplement to the online version of this paper). We used local and national suicide data to assess the effectiveness of these barriers in suicide prevention.

METHOD

The Clifton suspension bridge is located at the centre of the geographic area served by the Bristol coroner (Nowers & Gunnell, 1996). The bridge is over 6 km from the nearest psychiatric hospital; it is 75 m above the river and the case fatality of jumps from the bridge is over 95%.

Coroners’ inquest files were examined to obtain information on all suicides occurring in the Bristol area, 5 years before (1994–1998) and 5 years after (1999–2003) the installation of the barriers. All deaths with an inquest verdict of suicide were included in the study. Records of deaths given an open, accidental or misadventure verdict by the coroner were also examined, as previous research suggests that some deaths that are likely to be suicide are given such verdicts for legal reasons (O’Donnell & Farmer, 1993). For cases given these verdicts, vignettes describing the events leading up to the death were written (O.B.). The likelihood (high, medium, low or unclear) that these deaths were suicide was rated independently by D.G. and M.N., masked to the year of death. Only cases rated as medium or high likelihood were included in the study. Where the raters disagreed in their initial coding, consensus was reached through discussion. Of the 451 cases given a verdict other than suicide (open, n=189; accidental or misadventure, n=260; no verdict, n=2), independent ratings by D.G. and M.N. resulted in agreement on inclusion or exclusion in 383 (84.9%) cases. After discussion a consensus on inclusion or exclusion was reached in the remaining 68 cases. We did not examine the coroner’s files for accidental acute alcohol poisonings or deaths from illegal drug use or methadone poisoning, as determining the possibility of suicide in such deaths is particularly problematic.

For all cases of suicide information was obtained on the person’s date of death, age and gender. To compute local and national rates of suicide, relevant population and mortality data were obtained from the Office for National Statistics on: (a) the number of suicides by jumping in England and Wales: ICD–10 codes X80 and Y30 (World Health Organization, 1992); (b) the overall number of suicides in England and Wales: ICD–10 codes X60–X84, Y10–Y34 excluding Y33.9 (where verdict pending); (c) population figures for the years 1994 to 2003.

Statistical analyses were carried out using Stata version 8.2 for Windows. Poison regression was used to compare the number of deaths by jumping in the years before and after the construction of the barriers.

RESULTS

There were 987 suicides in the Bristol area over the 10-year study period. Of these deaths, 134 (13.6%) were suicides by jumping, 61 from the Clifton suspension bridge. There were a further 4 deaths where both the location of the body or skeletal remains and indications of trauma suggested that the person might have fallen from the bridge (n=3) or from nearby cliffs (n=1). All these deaths occurred before the barriers were erected, were given open verdicts and the remains were never identified; none of these deaths was included in subsequent analyses.

The number of deaths by jumping from the Clifton suspension bridge halved (from 41 to 20; P=0.008) in the 5 years after the construction of the barriers compared with the previous 5 years (Table 1). Ninety percent (55 of 61) of the people who died in this way were male, and the decline in deaths was seen in men only.

Before the barriers were erected (1994–1998) 30 of the 31 suicides (97%) for which the site of the jump was recorded were from the span of the bridge and only one (3%) from the buttresses. In the subsequent 5 years nearly half (8/17) of the jumps for which the site was recorded were from the buttresses where no fencing was in place. In the 5 years after the construction of the barriers there was a non-significant increase compared with the previous 5 years in the number of deaths by jumping from sites other than the suspension bridge: from 6.2 deaths per year to 8.4 deaths per year (P=0.2). This increase was entirely due to a rise in female deaths by jumping – in keeping with national trends in female suicide by jumping (see Table 1).
There was a non-significant fall in the mean number of deaths per year (14.4 to 12.4; \(P=0.4\)) by jumping from all sites in the area across the two study periods. This fall was due to a reduction in male (\(P=0.017\)) suicides by jumping. There was an increase in suicides by jumping among women (\(P=0.001\)). There was no change in the overall rate of suicide among those resident in the area during the periods before and after the placement of the barriers on the bridge: mean annual rate 11.2 per 100,000 v. 10.5 per 100,000, difference -0.7 (95% CI -1.9 to 0.9), \(P=0.39\). This was the case for both men (difference -1.8 per 100,000, 95% CI -1.7 to 0.9) and women (difference 0.4 per 100,000, 95% CI -0.9 to 2.1).

**DISCUSSION**

The number of deaths by jumping from the Clifton suspension bridge halved following the installation of the preventive barriers.

Although there was a decrease overall in the number of deaths by jumping in the area among men, this was not the case for women. However, any impact on female suicide rates would be expected to be minimal, as only one woman jumped from the bridge in the 5 years prior to the installation of the barriers and national data suggest that suicide by jumping among females is increasing, although the proportional increase across the two study periods was higher in the Bristol area.

This study provides evidence for the preventive role of barriers on bridges. There was some evidence that the presence of the barriers did not lead to an increase in deaths by jumping from other sites. The case-fatality rate among those jumping from the Clifton bridge is greater than 95%. Therefore, any displacement of people deterred from jumping to other methods of suicidal behaviour is likely to have a beneficial effect on levels of suicide, because no other method is associated with such a high case fatality. In view of continued suicides from some parts of the Clifton suspension bridge structure, further work to improve the safety of the site is warranted.

**ACKNOWLEDGEMENTS**

We thank Mr Paul Forrest, HM Coroner for Avon, staff employed at the coroner's office, and Ms Alison Brown and search room staff at the Bristol Record Office, for their help in accessing suicide data. Local and national population data and national suicide data were provided by the Office for National Statistics for England and Wales. The study was funded by the American Foundation for Suicide Prevention.

**REFERENCES**


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**Table 1**: Suicides by jumping before (1994–98) and after (1999–2003) the installation of preventive barriers on the Clifton suspension bridge

<table>
<thead>
<tr>
<th>Site of suicide by jumping</th>
<th>1994–1998</th>
<th>1999–2003</th>
<th>Difference in means (95% CI)</th>
<th>(P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clifton suspension bridge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All suicides</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deaths/year, mean</td>
<td>8.2</td>
<td>4.0</td>
<td>-4.2 (-5.9 to -1.4)</td>
<td>0.008</td>
</tr>
<tr>
<td>Total deaths</td>
<td>41</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deaths/year, mean</td>
<td>8.0</td>
<td>3.0</td>
<td>-5.0 (-2.6 to -6.3)</td>
<td>0.001</td>
</tr>
<tr>
<td>Total deaths</td>
<td>40</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Deaths/year, mean</td>
<td>0.2</td>
<td>1.0</td>
<td>0.8 (-0.08 to 8.4)</td>
<td>0.1</td>
</tr>
<tr>
<td>Total deaths</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
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<tr>
<td>Sites in Bristol other than the suspension bridge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All suicides</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deaths/year, mean</td>
<td>6.2</td>
<td>8.4</td>
<td>2.2 (-0.9 to 7.2)</td>
<td>0.2</td>
</tr>
<tr>
<td>Total deaths</td>
<td>31</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deaths/year, mean</td>
<td>5.2</td>
<td>5.2</td>
<td>0 (2.2 to -3.8)</td>
<td>1.0</td>
</tr>
<tr>
<td>Total deaths</td>
<td>26</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deaths/year, mean</td>
<td>1.0</td>
<td>3.2</td>
<td>2.2 (0.2 to 7.7)</td>
<td>0.023</td>
</tr>
<tr>
<td>Total deaths</td>
<td>5</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All sites in England and Wales (rates per 100,000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All suicides</td>
<td>0.34</td>
<td>0.36</td>
<td>0.02 (0.01 to 0.06)</td>
<td>0.2</td>
</tr>
<tr>
<td>Male</td>
<td>0.54</td>
<td>0.53</td>
<td>-0.01 (-0.07 to 0.06)</td>
<td>0.8</td>
</tr>
<tr>
<td>Female</td>
<td>0.15</td>
<td>0.20</td>
<td>0.05 (0.01 to 0.10)</td>
<td>0.005</td>
</tr>
</tbody>
</table>

1. Poisson regression analyses.
Suicide prevention through means restriction: Assessing the risk of substitution
A critical review and synthesis

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Abstract

The effectiveness of restricting access to certain means of committing suicide has been demonstrated, at least as regards toxic domestic gas, firearms, drugs and bridges. At the individual level, studies tend to indicate that many persons have a preference for a given means, which would limit the possibility of substitution or displacement towards another method. Similarly, the fact that suicidal crisis are very often short-lived (and, what is more, influenced by ambivalence or impulsiveness) suggests that an individual with restricted access to a given means would not put off his plans to later or turn to alternative methods. This has been more difficult to demonstrate scientifically in population studies. Nevertheless, it appears that, should such a shift occur towards other means, it would be put into effect only in part and over a longer term.

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Keywords: Suicide; Means; Restriction; Substitution; Displacement

1. Introduction

The field of suicide prevention was marked early on by such characters as the Reverend Chad Varah in the United Kingdom and Dr. Edwin Shneidman in the United States. However, these often cited men, as well as all the volunteers from Samaritans and Suicide Prevention Centres after them and all the professionals of the mental health field, contributed to give an essentially clinical or individual character to interventions in this domain. As early as in 1968, Bagley (1968) turned his focus to measuring the effect of hotline services on suicide rates even though, contemporaneously, other factors such as the detoxification (reduction of the carbon monoxide content) of domestic gas could be at play (Kreitman, 1976). Clinicians have thus tended to overlook broad sections of suicide prevention, namely those centered on environmental approaches even if it could be the most promising strategy for the future (Johansson et al., 2005). Among these, means restriction has been drawing more and more attention, as evidenced by the fact that nine of the presentations at the 2003 congress of the International Association for Suicide Prevention referred to this measure, compared with none at the 1988 congress. The effectiveness of restricting access to certain means has been demonstrated (Leenaars et al., 2000), at least as regards toxic domestic gas (Kreitman, 1976), firearms (Bridges and Kunselman, 2004; Conwell et al., 2002; Hemenway and Miller, 2002), drugs (Hawton et al., 2001; Wilkinson et al., 2002) and bridges (Beautrais, 2001; Berman et al., 1994). However, there remains the question of substitution or displacement, that is, the possibility that suicidal individuals, once deprived of their preferred means of committing suicide, shift their consideration towards alternative methods. The purpose of this article is to examine the issue of means substitution from the point of view of individuals and populations.

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2. Methods

Printed documentation, in English or French, was searched in the following electronic databases: MedLine and PsychInfo. Two specialized documentation centers, both located in Canada, were also consulted: the Centre for Research and Intervention on Suicide and Euthanasia (Montreal) and the Suicide Information and Education Center (Calgary). The keywords “displacement” or “substitution” not being very productive, the following search strategy was also used: suicide AND (epidemiology OR rate OR rates OR trends OR “statistics & numerical data” OR incidence) AND (“cause of death” OR “prevention & control” OR mortality OR method OR methods).

3. At the Individual level

In this regard, two types of studies can be distinguished, namely those that have focused on a preference for a particular method of committing suicide and those that have examined the fact that suicide crises tend to be short-lived.

3.1. Preference for a particular means of committing suicide

Suicide is not a homogeneous category of behaviour. For instance, regarding suicide from domestic gas intoxication, a method once widely used in England, suicidal persons probably considered this a highly lethal, painless, clean and easy to use method that required little “courage” and planning. Probably, no other means of suicide shares these characteristics (Clarke and Lester, 1989). Individuals who jump off bridges, for their part, often suffer from severe mental illness (see many studies in the summary list of Table 1). In such cases, auditory hallucinations, for example, can influence the decision to commit suicide in a specific manner. It should be pointed out that among the suicides by all other means put together, the percentage of psychotic individuals is usually no way as high as in this group (Cantor et al., 1989). However, at least one study by Nowers and Gumnell (1996) found that those jumping from the Clifton Suspension Bridge in England were no more likely to have psychiatric histories and have been psychiatric inpatients than matched controls using other suicide methods.

In response to a questionnaire, female college students indicated their preference for methods deemed quick and painless and entailing no risk of disfigurement. However, both women and men would use a firearm as they were more concerned with getting it over with quickly than with the danger of disfigurement (Lester, 1988). This type of study tends to show that, notwithstanding gender differences in this regard, individuals have a preference for a specific means and that they would not easily resolve to change method. More specifically, in a study that sought to understand why more people committed suicide by jumping off the Golden Gate Bridge than from the nearby San Francisco-Oakland Bay Bridge (Seiden and Spence, 1983), the factors mentioned included, in particular, the more or less morbid and contagious publicity that surrounded cases at the Golden Gate. The symbolism (“suicide shrine”) and romanticism associated with the site would also explain why many suicidal persons chose it, even though the other bridge was sometimes definitely closer to their homes.

A certain copycat and contagion effect has been observed in particular when the media put out information in more or less adequate fashion regarding suicides already perpetrated in a given place. It is believed that this type of coverage pushes certain individuals, especially the most vulnerable, to adopt a given method of suicide rather than another. This contagion phenomenon has been particularly well documented over the years, beginning with the example of Werther, the character created by 18th century German writer Goethe, up until more recent cases, such as those in the Vietnam subway and at Mount Mihara in Japan (Clarke and Lester, 1989; Ellis, 1996; Gunnell and Nowers, 1997).

Certain personal and cultural factors are also at play. Depending on the individuals concerned, certain forms of death seem more inculpating or exculpating for the bereaved or more terrifying, more painful or more shameful. Persons who are more ambivalent or who could eventually manipulate the people around them might also prefer a less lethal method (Clarke and Lester, 1989). To understand how people choose a particular method, these authors suggest 20 “choice structuring properties of methods of suicide”: availability; familiarity with the method; technical skills needed (hanging, gassing); planning necessary (buy a gun, save up pills); likely pain (cutting wrists); so-called “courage” needed (high building, train); consequence of failure (disability, publicity); disfigurement after death (hanging versus overdose); danger/inconvenience to others (car crash, subway leap); messiness, bloodliness (wrist cutting); discovery of body (by loved ones or strangers); contamination of nest (i.e., avoid home); scope for concealing or publicizing death—suicide insurance (car crash, drowning, subway leap); certainty of death (perceived/actual); time taken to die while conscious (poisons, wrist cutting); scope for second thoughts (swim back to shore, switch off gas); chances of intervention; symbolism (cleaning by fire); masculine/feminine (guns); dramatic impact.

Also, the methods used vary greatly across the countries and even within the countries; consequently, a means restriction approach that might work in under one set of cultural and environmental conditions might not work under another (Cantor, 2000; Cheng and Lee, 2000; Marzuk et al., 1992). Table 2 shows some comparisons between USA, Canada, Australia and England but also gender differences. One can see that data are not always reported the same way from one country to the other despite the growing use in the death certificates of the International Classification of Diseases, Ninth Revision. Nevertheless, that table shows that suicide by firearm is very common in USA for both the sexes but much less in the other countries where hanging is most common,
Table 1

Summary of included studies on risk of substitution

<table>
<thead>
<tr>
<th>Focus</th>
<th>Authors</th>
<th>Location</th>
<th>Population/sample*</th>
<th>Key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual level</td>
<td><strong>Preferences (vs. mental illness)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paredes and Lluby (1993)</td>
<td>Scotland</td>
<td>16 survivors jumping from height and 46 survivors jumping from height and 214 from drug overdose</td>
<td>All have a mental illness</td>
</tr>
<tr>
<td></td>
<td>Kostakakas et al. (1988)</td>
<td>Greece</td>
<td>48 survivors jumping from height and 47 suicides from bridge and 906 from drug overdose</td>
<td>More psychiatric history in first group</td>
</tr>
<tr>
<td></td>
<td>Carter et al. (1989)</td>
<td>Australia</td>
<td>110 survivors jumping from height and 906 from drug overdose</td>
<td>Most suffer from severe mental illness</td>
</tr>
<tr>
<td></td>
<td>Pommereux et al. (1989)</td>
<td>France</td>
<td>127 suicides from bridge and 127 other suicides</td>
<td>More psychiatric history in first group</td>
</tr>
<tr>
<td></td>
<td>Newens and Cusack (1996)</td>
<td>England</td>
<td>31 survivors jumping from height and 51 from using firearms</td>
<td>Same number of individuals with mental illness</td>
</tr>
<tr>
<td></td>
<td>De Moore and Robertson (1999)</td>
<td>Australia</td>
<td>7 survivors and 55 suicides from bridge</td>
<td>More psychiatric history in first group</td>
</tr>
<tr>
<td></td>
<td>Corbin et al. (2000)</td>
<td>Australia</td>
<td>15 suicides from bridge</td>
<td>Most suffer from severe mental illness</td>
</tr>
<tr>
<td></td>
<td>Benauris (2001)</td>
<td>Sweden</td>
<td>50 suicides from bridge</td>
<td>Most suffer from severe mental illness</td>
</tr>
<tr>
<td></td>
<td>Lindeqvist et al. (2004)</td>
<td>USA, England</td>
<td>7 survivors from 2 bridges</td>
<td>Most bad psychiatric problems</td>
</tr>
<tr>
<td></td>
<td>Rosen (1975)</td>
<td>USA</td>
<td>555 suicides from one bridge and 112 from the nearby other</td>
<td>Preference for one out of two available bridges</td>
</tr>
<tr>
<td></td>
<td>Seldon and Seacord (1983)</td>
<td>USA</td>
<td>429 college students</td>
<td>Publicity, symbols, romanticism influence the choice of the bridge</td>
</tr>
<tr>
<td></td>
<td>Latter (1983)</td>
<td>USA</td>
<td>73 suicides from 2 bridges</td>
<td>Men and women choose different methods</td>
</tr>
<tr>
<td></td>
<td>Kemper and Gelb (1999)</td>
<td>Australia</td>
<td>Total population</td>
<td>Regional cultural factors influence choice</td>
</tr>
<tr>
<td></td>
<td>Cheng and Lee (2000)</td>
<td>USA</td>
<td>Total populations</td>
<td>Methods vary across and within countries and across genders</td>
</tr>
<tr>
<td></td>
<td>Hawthorn et al. (2004a,b)</td>
<td>UK</td>
<td>428 survivors from self-poisoning</td>
<td>More men and previous deliberate self-harm in self-poisoning</td>
</tr>
<tr>
<td></td>
<td>see Table 2</td>
<td>USA, Canada, Australia, England</td>
<td>Total populations</td>
<td>Methods vary across countries and across genders</td>
</tr>
<tr>
<td>Short-lived crisis</td>
<td>Selden (1978)</td>
<td>USA</td>
<td>515 survivors bridges and 184 survivors from other types of attempts</td>
<td>Long term follow-up shows 90% do not die later on from violent death</td>
</tr>
<tr>
<td></td>
<td>Gitt (1987)</td>
<td>USA</td>
<td>30 survivors from bridge</td>
<td>Ambiguities about death</td>
</tr>
<tr>
<td></td>
<td>Hawton et al. (2001)</td>
<td>UK</td>
<td>Total population</td>
<td>Impulsive or ambivalent people do not accumulate lethal drugs</td>
</tr>
<tr>
<td></td>
<td>Lindeqvist et al. (2004)</td>
<td>Sweden</td>
<td>50 suicides from bridges</td>
<td>Peak of alcohol-related suicides during weekends</td>
</tr>
<tr>
<td></td>
<td>Suominen et al. (2004)</td>
<td>Finland</td>
<td>100 survivors from self-poisoning</td>
<td>87% will not commit suicide after 37 years</td>
</tr>
<tr>
<td></td>
<td>Säkkinen et al. (2000)</td>
<td>Many</td>
<td>Survivors from suicide attempts</td>
<td>89% will not commit suicide on the long term</td>
</tr>
<tr>
<td></td>
<td>Owens et al. (2003) (review)</td>
<td>Many</td>
<td>Survivors from suicide attempts</td>
<td>53% will not commit suicide on the long term</td>
</tr>
<tr>
<td>Population level</td>
<td>Toxic gas</td>
<td>Krissman (1976)</td>
<td>UK</td>
<td>Total population</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Burwell (1980)</td>
<td>Australia</td>
<td>Total population</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lester and Abe (1989)</td>
<td>Japan</td>
<td>Total population</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lester (1990)</td>
<td>USA</td>
<td>Total population</td>
</tr>
<tr>
<td>Firearms</td>
<td>Canger and Wheel (1994)</td>
<td>Canada</td>
<td>Total population</td>
<td>No substitution</td>
</tr>
<tr>
<td></td>
<td>Latter (1995)</td>
<td>USA</td>
<td>Total population</td>
<td>No substitution</td>
</tr>
<tr>
<td></td>
<td>Lecanares and Lester (1996)</td>
<td>Canada</td>
<td>Total population</td>
<td>Substitution for men only</td>
</tr>
<tr>
<td></td>
<td>Kaplan and Gelb (1999)</td>
<td>USA</td>
<td>Total population</td>
<td>Substitution for men only</td>
</tr>
<tr>
<td></td>
<td>O'Connor and Zheng (2003)</td>
<td>USA</td>
<td>Total population</td>
<td>No substitution</td>
</tr>
<tr>
<td></td>
<td>De Leo et al. (2003)</td>
<td>Australia</td>
<td>Male population</td>
<td>No substitution</td>
</tr>
<tr>
<td></td>
<td>Bridges (2004)</td>
<td>Canada</td>
<td>Total population</td>
<td>Substitution</td>
</tr>
<tr>
<td></td>
<td>Caron (2004)</td>
<td>Canada</td>
<td>Total population</td>
<td>Substitution</td>
</tr>
<tr>
<td></td>
<td>Clarke and Lester (1989) (review)</td>
<td>All</td>
<td>Total populations</td>
<td>Mixed results</td>
</tr>
<tr>
<td></td>
<td>Lamborn and Slevin (1998) (review)</td>
<td>All</td>
<td>Total populations</td>
<td>No substitution</td>
</tr>
<tr>
<td>Drugs</td>
<td>Oliver and Hetzel (1972)</td>
<td>Australia</td>
<td>Total population</td>
<td>Almost no substitution</td>
</tr>
<tr>
<td></td>
<td>Whitlach (1975)</td>
<td>Australia</td>
<td>Total population</td>
<td>Almost no substitution</td>
</tr>
<tr>
<td></td>
<td>Yamazawa et al. (1980)</td>
<td>Japan</td>
<td>Total population</td>
<td>Almost no substitution</td>
</tr>
<tr>
<td></td>
<td>Wilkins et al. (2002)</td>
<td>England</td>
<td>Total population</td>
<td>Substitution</td>
</tr>
<tr>
<td></td>
<td>Hawton et al. (2004a,b)</td>
<td>UK</td>
<td>Total population</td>
<td>Some substitution</td>
</tr>
<tr>
<td></td>
<td>Nordenvang et al. (2004)</td>
<td>Denmark</td>
<td>Total population</td>
<td>No substitution</td>
</tr>
<tr>
<td>Bridges</td>
<td>Berman et al. (1994)</td>
<td>USA</td>
<td>Total population</td>
<td>No substitution</td>
</tr>
<tr>
<td></td>
<td>Beaulieu (2001)</td>
<td>Australia</td>
<td>Suicides from height</td>
<td>No substitution</td>
</tr>
</tbody>
</table>

* The survivors samples include attempted suicides and failed suicides.
Table 2
Percentage of utilization of different methods of suicide in four countries

<table>
<thead>
<tr>
<th>Method</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firearms</td>
<td>61.2</td>
<td>26.2</td>
</tr>
<tr>
<td>Hanging, strangulation, suffocation</td>
<td>20</td>
<td>46</td>
</tr>
<tr>
<td>Solid and liquid poisoning</td>
<td>7.1</td>
<td>9.6</td>
</tr>
<tr>
<td>Gas poisoning (motor vehicle exhaust and other)</td>
<td>4.8</td>
<td>12.4</td>
</tr>
<tr>
<td>Jumping from height</td>
<td>1.8</td>
<td>3.9</td>
</tr>
<tr>
<td>Cutting and piercing</td>
<td>N/R&lt;sup&gt;e&lt;/sup&gt;</td>
<td>1.6</td>
</tr>
<tr>
<td>All other methods</td>
<td>5.1</td>
<td>6.2</td>
</tr>
</tbody>
</table>

<sup>a</sup> McIntosh (2003).
<sup>b</sup> Langlois and Morrison (2002) (Population aged 10 or older).
<sup>c</sup> Steenkamp and Harrison (2000).
<sup>d</sup> National Institute for Mental Health in England (2005).
<sup>e</sup> Not reported for England. Included in "all other methods".
<sup>f</sup> Not reported for Australia. Included in "all other methods".

at least 10 men. As for applying means restriction to this last method, this represents a real challenge except in hospitalized or incarcerated populations. Dahlberg et al. (2004) also report that, in their American sample, 76.3% of all suicides occurred in the home, which is also a challenge for suicide prevention, except if intervention takes place before the suicidal crisis, in controlling the purchase or ownership of means of suicide like firearms.

Regarding more particularly the symbolism associated with suicide from bridges, there is no doubt that the spectacular aspect of the deed is a major factor. Survivors have indicated not only had they planned to commit suicide by jumping off a bridge but also off a very specific bridge. They generally referred to an association that they had made between death and the particular “beauty/grace” of the given bridge (Rosen, 1975, 1976). Moreover, all this symbolism seems to rest at least in part on a popular myth to the effect that committing suicide by jumping off a bridge is easy to do and hassle free and that the person in question gently disappears under the surface (Seiden, 1978). Be this as it may, studies as a whole indicate that many individuals prefer a particular means of suicide, if not a particular place for it (De Moore and Robertson, 1999). In Australia, researchers found major differences between the persons who committed suicide at two Australian bridges (Cantor and Hill, 1990). It ensues from this that these individuals would not readily go through with their intentions using other means or in other places.

3.2. Short-lived crises

It is recognized that suicidal crisis are usually of short duration and that, if their fatal outcome is prevented, they will not be repeated or help will be made available in the meantime. At worst, suicidal individuals deprived of their preferred means of committing suicide will fall back on another, possibly less lethal, method. In this regard, elements of transitory impulsiveness have been found to be significant in suicidal behaviour, especially among young people and even more specifically in suicides committed by jumping from high places (Pommereau et al., 1989). At the same time, it is important to acknowledge that ambivalence is typical of the suicidal process (Centers for Disease Control and Prevention, 1992), which is precisely what has been observed in suicidal persons who contact crisis lines using telephones installed on bridges (Glatt, 1987). The study by Hawton et al. (2001), showing that restricting pack sizes of drugs lower suicide rates, could also be explained by the fact that impulsive or ambivalent suicidal people do not accumulate their pills and that they change their mind in the meantime.

Immediate help is required in the risk of repetition. Studies 1 to 3 suicide forecasting have shown that people, of people who consider suicide in the future, have chosen on the he be higher, all almost higher for the major (Seiden, 1)

4. Population

If individuals have a preference for a specific means of suicide and if they essentially experience short-lived crises, restricting access to a specific method should not bring about an increase in the use of other means. By the same token, overall suicide rates should decrease, all other
things remaining the same. This is what population studies should confirm. However, it is evident that the direct effects of restricting access to means of suicide are hard to observe, as is an eventual shift towards other means, when the method targeted is already seldom used in the population (see Table 2). At the statistical level, proving a phenomenon whatever is rendered much more difficult. This is true for suicides, completed or not, committed from bridges and for an eventual displacement towards other methods (Gunnell and Novers, 1997). This is why it would be interesting also to look at what has been reported about means that are much more commonly used and relatively easier to restrict like firearms. Consequently, we will examine the issue of displacement when access is restricted to the following four means of suicide: domestic toxic gas, firearms, drugs and bridges.

4.1. Domestic toxic gas

It has been demonstrated that the detoxification of domestic gas in Great Britain brought about a considerable reduction in both the number of suicides by this method and the overall suicide rate (down by one-third) (Clarke and Lester, 1989). Kreitman (1976) was among the first to make the connection between the decline in overall suicide rates and the detoxification of domestic gas in the United Kingdom. As domestic gas poisoning had always been the preferred means of suicide in this country (49.8% in 1958), a reduction in the gas's lethality is believed to have had a direct effect on the overall suicide rates, without giving rise to displacement towards other means. The same effect has been observed in Japan (Lester and Abe, 1989) and the United States (Lester, 1990). The gradual detoxification of domestic gas did not bring about a genuine displacement towards other methods of suicide. Thousands of lives have thus been saved by simply reducing the toxicity level of domestic gas. If any displacement occurred in these studies, it was very weak and towards intoxication by motor vehicle exhaust fumes which had become much more easily available in the meantime (Clarke and Lester, 1989). In Australia, Burvill (1980) found this type of displacement towards car exhaust fumes but only for men.

4.2. Firearms

Results have been mixed regarding restricted access to firearms, at least as far as the very specific situation in the United States (Clarke and Lester, 1989) but a recent review is more optimistic (Lambert and Silva, 1998). A large Canadian study reached such conclusions in favour of firearms control (Carrington and Moyer, 1994). In this case, researchers investigated the effect of Bill C-51 which imposed certain restrictions on firearms possession as of 1978. Their interrupted time series statistical analyses revealed positive associations between restrictions on firearms and reduction of suicide rates and found no evidence of displacement regarding the means used in Canada. Other researchers, instead, have noted a certain displacement in Canada, although only with respect to men (Leenaars and Lester, 1996). However, the methodology of this study has been contested rather convincingly by the first team (Carrington and Moyer, 1994; Carrington, 1999). In fact, Leenaars (2001, p. 260) himself concluded that “people did not switch to other methods of suicide”. Two more recent Canadian studies (Bridges, 2004; Caron, 2004) analyzed the effect of another Canadian law (Bill C-17) enforced in 1992 on the safe storage of firearms. In a specific region of northern Quebec, Caron compared suicide methods 6 years prior to the enactment of the law and 5 years after. Suicide by firearms decreased for both sexes but not among men over 45 who may be the owners of the key giving access to the firearms. In his study, hanging increased among youths and suicide by poisoning doubled in the female population. Caron concludes that his findings support the substitution hypothesis despite the unexplained high rise in hanging method. Bridges (2004) reached similar conclusion for the total Canadian population. De Leo et al. (2003) were particularly interested in such an apparent displacement from firearms towards hanging in Australia. Rates of suicide by hanging were found to have begun increasing prior to the decline in firearm suicide in Australia. They concluded that individual suicide method choice may be related to independent changes in the social acceptability of each method as well as to an increasing prevalence of suicide in younger males who are more likely to use the hanging method. It seems that such a method is no more associated to shame in new generations.

4.3. Drugs and other toxic substances

Numerous studies have shown that no displacement effect occurs when access to lethal drugs is restricted (Clarke and Lester, 1989). Oliver and Herzel (1972) showed that, following control on sales of sedatives in Australia, suicides related to such a means decreased with no substitution of other methods. Whitlock (1973) did the same in the specific region of Brisbane. In this regard, a study conducted in Japan demonstrated that since 1956, the availability of certain drugs by prescription only had diminished the rate of suicide by this method without displacement towards other intoxicants such as chemical farming products or cyanide (Yamashita et al., 1980). More recently, Hawton et al. (2004a,b) showed that a legislation restricting pack sizes of drugs like paracetamol and salicylates had substantial beneficial effects on the mortality and morbidity in UK; in the mean time, ibuprofen overdoses increased, but with little or no effect on deaths. Nevertheless, looking only at hospital admissions for the same period, Wilkinson et al. (2002) found also a decrease in admissions following paracetamol overdoses but an increase in other types of admissions.

4.4. Bridges

The installation of an anti-suicide fence on the Duke Ellington Bridge in Washington, DC, where an average 3.67 suicides a year were committed, resulted in only one such
death in the following 5 years. Meanwhile, the average number of suicides remained essentially the same at a less popular bridge nearby with no such fence (1.69 before and 2 after). Over the same period of time, the overall number of suicides in Washington, DC, declined from 76.4 to 71.6, thereby indicating that no displacement had occurred towards other methods (Lester, 1993; Berman et al., 1994). This last paper being a "case consultation" between three specialists, one should otherwise note that the second author, O’Carroll, is less convinced, pointing to the fact that this was not a real controlled study. Actually, most studies reported on means restriction are ecological ones. He argues that only interrupted time series analyses, if really specific data could be made available, would give us the right answer about displacement in this case. These analyses would then take into account the overall and specific trends in suicide rates and show if real changes appear when a specific intervention is implemented.

In an Australian study examining the effects of the removal of an anti-suicide fence from an overpass often used by suicidal psychiatric patients in large part suffering from schizophrenia, the number of suicides was shown to have increased from 3 in 1992–1995 to 15 in 1997–2000, while the total number of suicides in the region from jumping off high places remained stable. At first glance, this seemed to indicate that displacement occurred towards the overpass that was once again accessible, all the more so that, over this period, fewer suicides were committed by jumping off other sites. However, a more in-depth analysis revealed that the profiles of the persons who died from suicide were very different from one site to another. Indeed, 78% of the persons who jumped from the overpass in question suffered from schizophrenia compared with just 21% of those who jumped off other high places. This would indicate, then, that there was actually no displacement, but rather an increase in suicides (by persons with schizophrenia) off the overpass and at the same time, a decrease in suicides from jumping off other high places (for other reasons) (Beautrais, 2001). As seen above, this was again the case of a very specific site holding a particular interest for certain persons. Note also that bridge barriers, like some control on firearms, may have another injury preventive effect on homicides (Berman et al., 1994) but also on traumatization of surrounding people.

On a similar topic, Reisch and Michel (2004) reported that, after the installation of a protective net at a well known terrace in Berne (Switzerland), no suicides occurred at this site. Furthermore, the number of people jumping from all high places (including from bridges) in this city was reduced compared to the years before the installation, although no safety means were installed at the other sites.

5. Conclusion

Generally speaking, then, the risk of substitution or displacement towards other methods seems small (Clarke and Lester, 1989; Gunnell and Nowers, 1997; Prévost et al., 1996). At the individual level, studies tend to demonstrate that many suicidal persons have a preference for a specific method. Similarly, the fact that suicidal crises are very often short-lived (and, what is more, influenced by ambivalence or impulsiveness) suggests that a given individual who has limited access to a given means will not put off his intentions to later or shift to another method. However, where population studies are concerned, scientific proof to this effect is sometimes harder to establish and most studies are ecological. This notwithstanding, means restriction can in the meantime save lives and buy time for interventions of a more clinical nature.

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References


Controlling Access to Suicide Means

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Abstract: Background: Restricting access to common means of suicide, such as firearms, toxic gas, pesticides and other, has been shown to be effective in reducing rates of death in suicide. In the present review we aimed to summarize the empirical and clinical literature on controlling the access to means of suicide. Methods: This review made use of both MEDLINE, ISI Web of Science and the Cochrane library databases, identifying all English articles with the keywords “suicide means”, “suicide method”, “suicide prediction” or “suicide prevention” and other relevant keywords. Results: A number of factors may influence an individual’s decision regarding method in a suicide act, but there is substantial support that easy access influences the choice of method. In many countries, restrictions of access to common means of suicide has lead to lower overall suicide rates, particularly regarding suicide by firearms in USA, detoxification of domestic and motor vehicle gas in England and other countries, toxic pesticides in rural areas, barriers at jumping sites and hanging, by introducing “safe rooms” in prisons and hospitals. Moreover, decline in prescription of barbiturates and tricyclic antidepressants (TCAs), as well as limitation of drugs pack size for paracetamol and salicylate has reduced suicides by overdose, while increased prescription of SSRIs seems to have lowered suicidal rates. Conclusions: Restriction to means of suicide may be particularly effective in contexts where the method is popular, highly lethal, widely available, and/or not easily substituted by other similar
methods. However, since there is some risk of means substitution, restriction of access should be implemented in conjunction with other suicide prevention strategies.

Keywords: suicide; means of suicide; restriction of means

1. Introduction

Suicide is a major public health problem, representing the 10th leading cause of death worldwide [1]. The incidence rate for completed suicide varies considerably between different countries, from 1.1 per 100,000 inhabitants in Azerbaijan to 51.6 per 100,000 inhabitants in Lithuania [2]. The highest suicide rates are found in Eastern European countries (Belarus, Estonia, Lithuania and Russia); low rates are found mainly in Latin America (Colombia, Paraguay) and in some countries in Asia (Philippines and Thailand), while countries in other parts of Europe, in North America, and other parts of Asia and the Pacific tend to fall somewhere in between these extremes.

Seeking effective intervention strategies for suicide prevention represents an important public health task. Restricting access to means of suicide has been shown to be effective in reducing completion [3], together with strategies aimed to identify and prevent suicidal acts in individuals at risk. In the present paper we examined the empirical and clinical literature on controlling the access to means of suicide.

A large body of literature sustains that the majority of attempters does not die by suicide. On the other hand, rates of death for suicide increase in subjects with repeated and life-threatening attempts [4]. Intensity of intent may be an important indicator. Studies employing scales to measure suicidal intent, reported intensity of intent to die as a major predictor of suicide completion in suicide attempters [5]. The problem in predicting suicide from ideation, attempts, or other risk factors is the predominance of false positives and some have concluded that, despite much research, there is no possibility to reliably predict and prevent suicide in any individual [6]. Many studies have identified risk factors associated to suicide completion, such as gender, previous attempts, suicidal ideation, a diagnosis of a depressive disorder or schizophrenia, but such predictors failed to identify the patients committing suicide [7]. On the other hand, Mann et al. [8] stated that “Suicide prevention is possible because up to 83% of suicides have had contact with a primary care physician within a year before their death and up to 66% within a month. Thus, a key prevention strategy is improved screening of depressed patients by primary care physicians and better treatment of major depression”. Many interventions such as pharmacotherapy and psychotherapy, education of professionals and gate keepers, restricting media coverage and reducing access to means, have been indicated by Mann et al. [8] as strategies to reduce the frequency of suicide attempts.

There is evidence in literature supporting suicide means reduction as an effective preventive strategy [9,10]. In the present review we aimed to summarize methods of suicide attempts and studies addressing and evaluating the possibility to restrict access to such methods as preventive strategies for suicide attempt.
2. Methods

Studies included were selected if they addressed (1) suicide means and/or (2) restriction of access to such means. Studies focused on other preventive strategies for suicidal behavior, such as educational programs and treatment intervention were not considered for the present review. A literature search by common databases (PubMed, ISI Web of Science and the Cochrane library) was performed. The following keywords were entered alone or combined with each other in order to detect relevant studies: suicide, suicide attempt, suicidal behavior, suicide method, suicide means, suicide prediction, prevention, hanging, poisoning, toxic gas, pesticides, drugs, overdose, jumping, lying, firearms, drowning, restricting access to means of suicide, suicide means reduction. Studies were also selected from reference lists of previous reviews or other relevant studies.

3. Results

3.1. Means of Suicide

Within the context of the European Alliance Against Depression (EAAD) project, an international partnership of 16 European countries, hanging was found to be the most frequent means of suicide (49.5%), followed by poisoning by drugs (12.7%), jumping (9.5%), firearms (7.6%), poisoning by other means (5.1%), jumping or lying before moving object (5.0%), drowning (4.2%). Other methods accounted for 6.3% of remaining suicides [11].

A number of factors may influence an individual’s decision regarding choice of the method in a suicide act. Gender differences may play an important role. Indeed, men more often recur to violent and highly lethal methods, and this fact has been hypothesized as the cause of higher rates of completed suicide in males than in females in all European countries [2]. According to EAAD data, men had a higher risk of using firearms and hanging, and a lower risk of poisoning by drugs, drowning and jumping, as compared to women [11]. Notwithstanding gender differences, it has been shown that individuals have a preference for a specific means. Depending on the individual, certain forms of death seem more inculpatory or exculpatory, or more terrifying, painful or shameful. Methods of suicide may also vary across world regions and cultures. According to the data derived from World Health Organization (WHO) mortality database, poisoning by pesticide is common in many Asian countries and in Latin America; poisoning by drugs is common in both Nordic countries and the United Kingdom. Hanging is the preferred method of suicide in Eastern Europe, as is firearm suicide in the US and jumping from a high place in cities and urban societies such as Hong Kong, China [12]. Media can also increase “cognitive” availability of a particular suicide method by distributing technical information about how to enact the method, sensationalizing it and by giving inaccurate portrayals that may encourage use of a specific method [13].

There is substantial support for the suggestion that ease of access influences method choice. For example, overdose survivors indicate that they chose overdose because drugs were readily available in the household; over half of suicides in rural parts of China are by pesticides or rat poison; in the USA, suicides with firearms are committed by people with access to guns. Hawton [14] has argued that means restriction may be effective for suicide methods quickly accessible, particularly in the prevention of high-lethal impulsive suicidal behaviors. An early study by Marzuk et al. [15]
investigated methods of suicide according to their accessibility in the five counties of New York City. The counties had similar suicide rates involving methods that were equally accessible in each county (e.g., hanging, laceration, suffocation, firearms); while all of the differences among counties were explained by differentially available methods in the counties, principally fall from height, overdose of prescription medications, and carbon monoxide poisoning. Thomas and Gunnell [16] also underlined that the rapid rise in gas suicide deaths in the 1920s demonstrate how quickly a new method of suicide can be established in a population when it is easily available. According to a recent review of the literature on inpatient suicides, the methods used for suicide were linked to availability of means [17]. Stark et al. 2011 [18] also emphasized the importance of availability of methods particularly in rural areas, where firearm ownership is common and a large number of country dwellers are familiar with their use, as well as pesticides are often widely available and poorly controlled, particularly in low- and middle-income countries. In the US, household firearm ownership levels are strongly associated with higher rates of suicide, consistent with the hypothesis that the availability of lethal means increases the rate of completed suicide [19]. In an Indian population, not only easy availability of pesticides was a risk factor, but it was also reported that the majority of acts of deliberate suicidal behaviors (>90%) were committed inside the home, where suicidal means may be quickly available [20]. A further study in a west coastal region of India, confirmed that availability, accessibility, popularity, and socio-acceptability seem to be the major determinants in the choice of methods [21].

3.2. Restricting Access to Means of Suicide

A potential problem for suicide prevention by limiting access to methods is the substitution hypothesis: if one suicide method is unavailable, it will be replaced with another. It is recognized that suicidal crisis are usually of short duration and that, if their fatal outcome is prevented by help available in the meanwhile, they will not be repeated. If individuals seem to have a preference for a specific means of suicide and if they essentially experience short-lived crises, restricting access to a specific method should not bring about an increase in the substitution by other means [13]. Therefore, the fundamental assumption underlying restricting access to means of suicide is that, in many cases, it may delay an attempt until the period of high-risk passes. Moreover, if access to highly lethal methods of suicide is reduced, even where substitution occurs, the proportion of people who survive suicide attempts will be increased [22].

Means reduction can occur on a population or on an individual level. Individual level approach involves limiting access to a particular means for individuals at risk of suicide. Population-level means reduction consists in restriction of means availability by trends or policy changes [10]. In some Countries, restrictions of access to common means of suicide, has lead to lower overall suicide rates. Most of the evidence comes from studies examining the association between a population-level decrease in the availability of a given lethal means of suicide and method-specific suicide rates.

TOXIC DOMESTIC GAS. One of the early demonstration of the effectiveness of limiting access to means was detoxification of gas in homes, as observed by Kreitman [23] between 1955 and 1975, when the gas in English homes was gradually changed from toxic charcoal gas to non-toxic natural gas. Detoxification of domestic gas has lead to a reduction of annual suicide rate by 19–33% [23].
An examination of suicide rates in Switzerland after domestic gas detoxification indicated a decline not only gas suicide rates, but also overall suicide rates. The same effect was observed after the detoxification of domestic gas in Australia, Japan and the USA. However, in England and Scotland, Netherland and Germany, though a marked decline in suicide due to domestic gas, a slight increase of deaths by other means was observed (see [8]).

CATALYTIC CONVERTERS IN MOTOR VEHICLES. Sometime after the reduction of suicides in England by detoxification of domestic gas, there was a gradual increase in deaths from car exhaust, suggesting some substitution. On the other hand, the number of cars per capita was concurrently increasing in North European countries [24]. In USA, after the implementation of strict controls on emissions in motor vehicle exhaust gas, rates of accidents and suicide by CO₂ decreased drastically [25]. Similarly, in Britain, between 1990 and 1997, the increasing use of catalytic converters led to a decreased rate of suicide by motor vehicle exhaust gas [26].

The methods of suicide by domestic gas and motor gas may have been relatively invulnerable to substitution because the characteristics of gas poisoning are quite unique and not easily replaced. Gas poisoning was indeed considered to be highly lethal, though painless, non-disfiguring and requiring little planning [3]. On the other hand a striking increase of suicide cases involving helium inhalation between 2005 and 2009 has been recently reported. Given the availability of helium and the recent promotion of this method of suicide, it is quite possible that this may represent a newly emerging trend in suicide deaths [27].

FIREARMS. Suicide rates are distinctly higher in countries with lax gun control [3] and the proportion of households owning firearms is highly correlated with the proportion of firearm suicides [28]. In 1976 the District of Columbia (Washington, DC, USA) adopted a law that banned the purchase, sale, transfer, or possession of handguns by civilians. The adoption of such law coincided with an abrupt decline in suicides by firearms (23%). Moreover, there were no increases in suicides by other methods. In Canada, restrictions to the use of firearms were implemented in 1977, with a decrease over time of total suicide rates and firearm suicide; though a slight indication of substitution of other methods for suicide was observed. Legal restrictions to firearms produced the same reduction in firearm suicide in Australia after 1980, in Queensland after 1992 and 32 states in the USA after 1994 [8]. A re-analysis of suicide rates in USA during the period 1981–2002, showed that the decline in household firearm ownership was associated with significant declines in rates of firearm suicide [29]. Moreover, a significant decline in suicides was seen after the introduction of the Firearms Amendment Act in England (1989) [30] and the enactment of stringent firearm laws in Finland (1997) [31]. A recent study on college and university students in US covering the years 2004–2009 reported lower suicide rates attributable to a nine-fold decrease in the availability of firearms on campuses vs. homes [32]. These data suggests that even where the use of firearms is relatively rare, restricting access can have a beneficial effect for particular groups at high risk for suicide. Also, delaying access to firearms may be a helpful, since the risk for suicide by firearms decreases exponentially after more than one week after purchase [33]. All together, these data overall suggest that a decline in firearm ownership is associated with reduced rates of firearm suicides. However, it has been recently reported that regulations that seek to prohibit high risk individuals from owning firearms were proven to have poor effects in the USA, though they have a significant deterrent effect on overall male suicide [34]. A further recent study reported that, though the rate of suicide by
firearms, as well as other methods declined markedly, the hanging/suffocation rate increased significantly from 1992 to 2006 among young in the US [35], suggesting that restriction of some means may increase the rate of means that cannot be easily restricted. Nevertheless, it has to be taken into account that there are many different types of state firearm regulations. Some seek to establish general oversight over individuals owning firearms, other laws seek to prevent gun trafficking and the use of firearms in crimes. A number of laws are designed to prevent firearm ownership by individuals considered disproportionately likely to commit gun crimes. In some states, the requirement a "cooling off" period of some specified period before the purchase is aimed to reduce the consequences of impulsive firearm purchases [34]. Therefore, their impact on suicide prevention may differ depending on the regulation adopted in a specific state.

PESTICIDES. Self-poisoning with certain commonly-used pesticides is highly lethal and is the most common means of suicide in many countries [36]. Three quarters of people who ingested pesticides for suicidal purposes used pesticides that were available within the home or nearby [37]. Limitation of access to pesticides has been implemented successfully in Sri Lanka, where the banning of several highly lethal pesticides led to a 50% reduction in suicides. Similarly, in Western Samoa, restriction laws for toxic pesticides were successfully followed by reduced rates of suicides. In Finland, suicide rate by parathion, a highly lethal pesticide and commonly used for suicide in the 1950s, decreased after its availability was restricted, though an increased suicide rate by other methods was observed (see [8]). A recent study by Vijayakumar and Satheesh-Babu [38] confirmed a significant reduction of suicides by pesticides in four villages in the state of Andhra Pradesh in India that had stopped using chemical pesticides in favor of non-pesticide management, as compared to four villages in the same region that continued to use chemical pesticides. Similarly to fire arms, pesticides are regulated by various states, federal and international agencies. Most countries, including the US, regulate the amount of pesticide residue allowed on a given crop, but the amount may differ across countries. Therefore, regulations on pesticides, when adopted, may different across countries (http://npic.orst.edu/reg/index.html).

BARBITURATES. Death from suicidal drug overdose differs from other forms of suicide in that the drugs are often prescribed by the patient’s physician. A study of suicide in Brisbane (Australia) [39] between the years 1956–1973 revealed that there was a sharp rise in the incidence of deaths from barbiturate overdosage, which reached a peak in the mid 1960s. Since then there had been a steady decline in suicide rates from drug overdose and a smaller fall in the rate of other forms of suicide. From the examination of suicide deaths and the prescribing of barbiturates, benzodiazepines and antidepressant drugs between 1962 and 1973, it was hypothesized that fall in suicide rates was due to the better recognition and treatment of depressive illnesses and to the introduction of the safer benzodiazepines in place of barbiturates. In Britain, Australia, Norway and Sweden, the limitation of barbiturate prescribing was followed by a similar fall in deaths from these drugs [8].

PARACETAMOL. In the UK in 1973, analgesic preparations containing salicylates and paracetamol caused 17% of hospital admissions for self-poisoning [40]. A study on suicide by poisoning with paracetamol and salicylates in Britain, recorded an important decreased rate of suicide by this means, after legislation limiting the size of packs of medications in 1998 [41]. On the other hand, Morgan et al. [42] suggested that decline in paracetamol deaths may part of a wider trend in decreasing drug-poisoning mortality. Indeed, after the legislation in 1998 limiting the pack size of
paracetamol sold in shops in UK, other than a decrease in paracetamol-poisoning mortality, fatal poisoning involving aspirin, antidepressants, and to a lesser degree, paracetamol compounds, also showed similar trends. Bateman et al. [43] questioned the efficacy of limiting the pack size of paracetamol. By a review of the literature, they indeed concluded that paracetamol pack size limitation, as applied in the United Kingdom, has not actually reduced paracetamol-related death. However, in Ireland, Corcoran et al. [44], reported that the withdrawal from the market of prescription-only analgesic compound of paracetamol and dextropropoxyphene (distalgesic), resulted in a significant reduction of intentional overdose (84%). Though a 44% increase in the rate of intentional drug overdoses involving other prescription compound analgesics, the magnitude of this rate increase was smaller than the magnitude of the decrease in distalgesic-related overdoses.

ANTIDEPRESSANTS. In 1987, in Britain, three of the twelve most commonly taken drugs in completed suicide were antidepressants (dothiepin, amitriptyline and imipramine). Antidepressants accounted for approximately 15% of all drug overdoses [45]. The suicide risk for TCAs and neuroleptics increased with their availability, while the risk for antidepressants other than TCAs (Selective Serotonin Reuptake Inhibitors, SSRIs) decreased despite increased availability [24]. More recent studies, demonstrated a marked decrease of suicide rates after the introduction of SSRIs, and significant associations between SSRIs and other new-generation antidepressants with lower suicide rates, while TCAs would be associated with higher suicide rates [46].

BARRIERS AT JUMPING SITES. An effort to reduce suicide rates limiting access to jump sites has also been made. Though there are many potential jump sites, certain locations tend to gain particular notoriety as suicide spots. A study by Beautrais et al. [47] investigated the effect of removal of safety barriers from a central city bridge, a known suicide site, in an Australasian metropolitan area in 1996 after having been in place for 60 years. The study clearly showed that removal of safety barriers led to an immediate and substantial increase in both the numbers and rate of suicide at the site. At the opposite, the installation of barriers on the Clifton suspension bridge, Bristol, England, in 1998 halved suicide rates in the area, from 8 to 4 per year. Further, though the number of incidents on the bridge did not decrease, bridge staff reported that the barriers ‘bought time’, making intervention possible [48]. Installation of safety barriers at known suicide sites, such as the Eiffel Tower, Sydney Harbour Bridge, the Empire State Building and the Duke Ellington Bridge in Washington D.C., has been successful in reducing suicides by jumping at these sites [49,50]. Moreover, there may be a low risk of substitution, as suicide attempters who jumped from certain sites often reported choosing this method due to symbolism associated with the specific site [51]. On the other hand, a recent study aimed to determine whether rates of suicide changed in Toronto after a barrier was erected on the Bloor Street Viaduct, reported that although the barrier prevented suicides at the viaduct, the overall rate of suicide by jumping in Toronto remained unchanged [52]. Moreover, Glasgow [53], by an extensive analysis across 3,116 US counties or county equivalents found that while exposure to local landmark bridges was associated with an increased number of suicides by jumping, no positive relationship between these bridges and the overall number of suicides was detected. Therefore, barriers at jumping sites may prevent suicides to some extent, especially when the site is a site frequently used for suicidal purposes and therefore symbolically characterized, or when they make intervention possible [48]. However, overall studies seem to demonstrate that barriers lead to a reduction in the number of suicides by jumping at the site where they are installed, but not to the overall local suicide rate [53].
“SAFE ROOMS” IN INSTITUTIONAL SETTINGS TO PREVENT HANGING. Hanging is the most common means of suicide in both males and females [54]. Restriction to access to this mean of suicide is not possible, as ligature points and ligatures commonly used are universally available. The only exception is represented by suicide in institutional settings (police custody, prisons and hospitals) where only 10% of suicide occur by hanging [55]. In prisons, cell window bars are the suspension point used in nearly half of prison suicides (48%). Other points of suspension are the bed (11%), cell fittings such as lights, pipes, cupboards, sinks or toilets (13%), or the cell door (5%) [56]. In 1989, the Atlas of Health suggested a wide range of changes to cell design and in 2002 the World Health Organization (WHO) has issued guidelines for Prison Officers regarding the prevention of suicide [57]. A description of “safer cellars” in England and Wales can be found in Gunnel et al. [55]. Hanging in psychiatric hospital account for around 3% of all deaths by suicide. Nearly one-third of ward hangings are located in the toilet or bathroom. To prevent suicide by hanging in hospital, it has been suggested that high-risk patients should be given or asked to wear clothes that do not need belts and shoes that do not have laces [58].

MEDIA REPORTS OF SUICIDE. In suicide method choice, how accessible something is may play an important role. As stated before, the media can increase cognitive availability of a particular suicide method by distributing technical information and sensationalizing. Studies suggest that reports of suicides are most likely to have an impact when the method of suicide is described in detail, the story is repeated, the suicide features are described dramatically and prominently, and the individual is someone the audience may identifies with. An impressive case is charcoal burning. In the past decades, rates of suicide by this method have increased in some regions. In Taiwan, it has been reported that charcoal burning suicide attempts were more likely to report that their choice of method was influenced by the media, particularly the portrayal of the method as a peaceful way of dying [59]. More common cases are subway suicides. Subway suicides were reported doubled in Toronto, following reports of subway suicides occurring between 1970 and 1971 [60]. However, after a six-month restriction of reporting of subway suicides, the rate of subway suicides returned to baseline levels. Similarly, after an agreement to abstain from reporting on cases of subway suicide in Vienna, a 75% reduction was observed [61]. Overall, media restriction on reporting suicide may lead to reduced suicide rates. Cognitive availability may be also increased by mental images of suicidal behaviour in people who have been suicidal in the past or exposed to suicidal behaviour in family or friends. In these cases, psychological treatment would be helpful in reducing cognitive vulnerability. A cognitive availability can be also increased by technical information on how to carry the suicidal act out through pro-suicide books and sites on the internet. A way to counteract this effect may rely on emphasizing unpleasant details of suicide (particularly pain). Challenging the false beliefs may be helpful in reducing the popularity of some methods [62].

4. Discussion and Conclusions

Suicide prevention research has several challenges, partly due to the complexity of factors involved in suicidal behaviour. In the last decades, several epidemiological studies reported changes in rates and methods of suicide and the overall observed decline in rates of suicide in most parts of the world coincides with a reduction in the availability of lethal methods [34,63,64]. Therefore, strategies aimed
to limit the access to means used in suicide is effective and should be an important part of a suicide prevention strategy [10]. Further, it can be implemented quickly and effects measured relatively easily in comparison to other suicide prevention strategies aimed to identify underlying causes of suicidal behaviour and individuals at risk [62]. To date, no consistent evidence has been provided regarding the effect of restrictions in specific subtypes of patients. Violent and high-lethal methods (fire arms and hanging) are more frequent in males while poisoning is more common in females, and quickly accessible means are common in impulsive suicide attempters. However, cultural factors, cognitive availability, symbolic connotation of the mean, its popularity and socio-acceptability, may all have an important role and of the mean. Restriction to means of suicide may be particularly effective in contexts where the method is popular, highly lethal, widely available, and/or not easily substituted by other similar methods [22]. However, restriction of means of suicide does not exclude the possibility of substitution with other more available means in severely distressed patients. Therefore restriction of access to lethal means of suicide should be implemented in conjunction with other suicide prevention strategies.

References


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Public comments are an important part of this study and will be included in the study analysis. Comments returned by August 31, 2018, will be included in the summary of this public meeting. Please comment in the space provided below. Print clearly.

Our office encourages NMDOT to seek partners in seeking to develop a comprehensive vision and shared financial responsibility for this magnificent piece of infrastructure.

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ILLUMINATED GLASS & STEEL WINDSCREEN

AT THE

RIO GRAND GORGE BRIDGE

AUGUST 10, 2018
ARGUMENT FOR ILLUMINATED GLASS & STEEL WINDSCREEN

ASSUMPTION: THE RIO GRANDE GORGE BRIDGE IS A PUBLIC ICON IN NEW MEXICO CULTURE

1. THE SUICIDE DETERRENT STRATEGY OF "CATCHING FALLING BODIES"
   IS COSTLY WITHOUT BENEFITTING THE TOURIST FUNCTION OF THE BRIDGE
   UNSIGHTLY RAILS OR NETS REDUCE THE QUALITY OF THE BRIDGE EXPERIENCE FOR VISITORS
   A SUICIDE DETERRENT SYSTEM COULD PLAY TWO ROLES:
      REDUCE / DETER SUICIDE ATTEMPTS
      STRENGTHEN THE BRIDGE EXPERIENCE FOR TOURISTS / VISITORS

2. POPULATING THE BRIDGE IS A POWERFUL FORM OF SURVEILLANCE / SUICIDE DETERRENCE
   MORE VISITORS & VENDORS = SAFER BRIDGE
   ACCOMMODATION OF VENDORS IN NEW, SAFE AREAS

3. CREATING ADDITIONAL RAILING HEIGHT COULD CONTRIBUTE TO SUICIDE DETERRENCE AND TOURIST ATTRACTION
   HIGH QUALITY STEEL AND GLASS CONSTRUCTION
   OFFERING DETERRENCE, SAFETY AND WINDSCREEN FUNCTIONS SIMULTANEOUSLY

4. LIGHTING THE BRIDGE IS AN IMPORTANT FORM OF DETERRENCE
   CURRENTLY LIGHTING IS LIMITED TO BLUE EMERGENCY PHONES THAT SEND THE WRONG MESSAGE
   LIGHTING COULD ILLUMINATE THE GLASS WALLS OF THE BRIDGE AT NIGHT
   LIGHTING COULD BE OF WARM COLOR TEMPERATURE, CREATING A SOOTHING ATMOSPHERE
   LIGHTING COULD ILLUMINATE THE STRUCTURE BELOW THE BRIDGE DECK TO GREAT EFFECT
SUICIDE DETERRENCE & TOURISM: TWO IMPORTANT CONCERNS

VISITORS

ESTIMATED DAILY WEEKEND VISITORS
500

ESTIMATED MONTHLY VISITORS
3,040

ESTIMATED ANNUAL VISITORS
36,480
1- Taos Pueblo
2- Taos Historic Plaza
3- Kit Carson Home & Museum
4- Rio Grande Gorge Bridge
5- San Francisco de Asis Church
6- High Road to Taos
7- Millicent Roger Museum

1- Taos Pueblo
2- The Millicent Rogers Museum
3- Kit Carson home & Museum
4- The Rio Grande Gorge and Bridge
5- Taos Plaza
6- Taos Art Museum
7- Hacienda de los Martinez

1- Rio Grande Gorge Bridge
2- San Francisco de Asis Church
3- Arroyo Seco
4- Earthship Community
5- Mabel Dodge Luban House

RIO GRAND GORGE BRIDGE - AN IMPORTANT TOURIST ATTRACTION
STEEL & GLASS WINDSCREEN
STEEL & GLASS WINDSCREEN
STEEL & GLASS WINDSCREEN
Glass Windscreen Option - Elevation
CONTACT:

RAIMUND MCCLAIN  AIA | NCARB | LEED AP
KRISTINA YU  AIA | NCARB | LEED GA | DBIA

2009 RIDGECREST DR. SE
ALBUQUERQUE, NM 87108
(505) 266-2142
raimund@mcclain-yu.com
kristina@mcclain-yu.com

mcclain-yu.com
SUCCESS OF BRIDGE BARRIERS IN SUICIDE PREVENTION

Research Summary

A large and growing body of research demonstrates the effectiveness of barriers in preventing suicides at bridges and buildings worldwide. Formal studies of barriers installed at suicide sites show barriers are effective in reducing suicides with no increase in suicides at nearby sites, including for example, the Ellington Street Bridge, Washington, DC (O’Carroll & Silverman, 1994); the Clifton Suspension Bridge, Bristol, UK (Bennewith et al., 2007); the Bern Muenster Terrace, Switzerland (Reisch & Michel, 2005); the Memorial Bridge, Augusta, ME (Pelletier, 2007); and the Grafton Bridge, New Zealand (Beautrais et al., 2009).

A study comparing the effectiveness of suicide prevention at multiple bridges and jump sites in Switzerland found that vertical barriers and safety nets below structures were both effective:

**Mean suicide reduction:**
- Vertical barriers, 68.7%,
- Safety nets, 77.1%

**Features of successful deterrents:**
- Barriers heights of at least 2.3 m (~7 feet)
- Safety nets fixed “significantly below pedestrian level”
- Bridgeheads secure
- Barriers angle inward
- Entire hotspot secure
- Jumps of 15 meters (~45 feet) or more prevented

(Hemmer et al., 2017)

Successful deterrents do not provide footholds (Berman, 1990, and Reisch et al., 2006, cited in Beautrais et al., 2010).

Despite the growing evidence, myths about suicide persist. Here are the three most common myths, debunked:

**Myth 1: Preventing suicide in one location will raise suicides at another spot, because those people are intent on dying.**

- Installation of barriers does not increase suicides at nearby bridges (Beautrais et al., 2009; Bennewith et al., 2007; O’Carroll & Silverman, 1994; Pelletier, 2007; Reich & Michel, 2005).
- Persons prevented from using their chosen method of suicide typically do not seek other approaches to suicide (Kreitman, 1976).
Myth 2: It isn’t hurting anybody. It’s their life, so let them jump.

- It is hurting people. Families, friends, and entire communities. The emotional costs are deep and incalculable.
- And there are dollar costs: The USDOT calculates the Value of Statistical Life at $9.4 million, with a range of $5.2 to $13 million (Vermont, 2017, p. 123).
- The Taos Sheriff’s Office estimates retrieval costs at approximately $3,000 per death. And first-responders risk their lives with each retrieval.

Myth 3: They will kill themselves no matter what.

- 94% of surviving jumpers at the Golden Gate Bridge did not commit suicide later (Seiden, 1978).
- If prevented from jumping, most will survive (Beautrais et al., 2010, pp. 24-25).

“Our summary of the scientific literature underscores that the available scientific data regarding suicide deaths and attempts related to jumping from bridges strongly suggests that most individuals who jump from iconic sites are ambivalent, act impulsively, choose a specific site, and if thwarted from an attempt at that site at a particular time, will survive.”

(Beautrais et al., 2010, pp. 24-25, emphasis in original)

Research Summary Sources:


Seiden, R. H. (1978). Where are they now? A follow-up study of suicide attempters from the Golden Gate Bridge. Suicide and Life-Threatening Behavior, 8(4).

RIO GRANDE GORGE BRIDGE FACT SHEET
by Gorge Bridge Safety Network

An Alarming Trend of Increasing Suicides

- The Rio Grande Gorge Bridge is more than 50 years old. But more than half of the total number of suicides at the bridge have occurred in the past 10 years, with NM OMI reporting 44 suicides from 1991 to 2017 and 23 from 2008 to 2017. In 2018, OMI reported 3 suicides in July.
- Newspaper reports of deaths at the RGGB—including a murder and a death not ruled either murder or suicide by OMI—total 48 from 1965 to 2017.
- Suicides at the RGGB are increasing—with spikes of 7 in 2005, 5 in 2011, and 5 in 2014—and are more frequent, occurring every year since 2010.
- The current annual average is 2.5 suicides per year at the RGGB (20 from 2010 to 2017).
- A 14-year-old leapt to his death from the bridge in 2016.

An Unsafe Environment for Pedestrians

- The RGGB has a rail height of only 47 inches. Upper section of the bridge railing has gaps exceeding 8-inch openings, effectively reducing height of the protected section of the guardrail to less than 40 inches.
- The phone call boxes have setbacks that unintentionally provide “steps” to climb over the rail.
- A tourist’s leg was nearly severed by a hit-and-run driver on the bridge in 2017.
- No area lighting on the bridge or walkways.
- No designated pedestrian crosswalks. Pedestrians just cross anywhere, which is unsafe.
- No pedestrian barrier rail between roadway and pedestrian walkway.
- No visual warnings between end of concrete walkway paving and roadway surface.

Pedestrian Areas Not ADA Compliant

- Bridge rail has openings as much as 8 inches wide, enough for a small child to pass through.
- The narrow, 4-feet wide pedestrian walkway causes difficulty turning a wheelchair.
- The 14-inch high walkway lacks ramps for wheelchair access.
- The pedestrian path from the rest area parking to the road shoulder west of the bridge is a steep, rocky dirt path inaccessible for wheelchairs.

Success in Preventing Suicides at Bridges

- Bridge barriers and nets have effectively reduced suicide rates at bridges throughout the U.S. and Europe. A Swiss survey reported reduction rates of 68.7% (barriers) to 77.1% (nets).
- Effective deterrents have been constructed across the U.S.: Aurora Bridge, Seattle; Cold Spring Canyon Bridge, CA; Duke Ellington Bridge, DC; Ithaca Gorges Bridges, NY; Memorial Bridge, ME; Vista Bridge, Portland, OR.
- Deterrents are also planned for bridges throughout the U.S.: Coronado Bridge, San Diego, CA; George Washington Bridge, NY; Golden Gate Bridge, San Francisco, CA; Quechee Gorge Bridge, Hartford, VT; Sunshine Skyway, Tampa-St. Petersburg, FL; Tappan Zee Bridge, Rockland and Westchester Counties, NY.

Fact Sheet prepared by Gorge Bridge Safety Network.
Sources: NM OMI, Taos Bridge Data 062217; newspaper reports on file with Gorge Bridge Safety Network, contact luannede@me.com; Hemmer A, Meier P, Reisch T (2017) Comparing different suicide prevention measures at bridges and buildings: Lessons we have learned from a national survey in Switzerland. PLoS ONE 12(1): e0169625. doi:10.1371/journal.

(Complete sources available on request from Gorge Bridge Safety Network volunteer: contact luannede@me.com)
Chart 2. Bridge Barriers: Success Rates

(Complete sources available on request from Gorge Bridge Safety Network volunteer: contact luannede@me.com)
Rio Grande Gorge Bridge Incidence Rate Highest in U.S.?

*Nearly 10 to 15 Times Higher than Golden Gate Bridge per 100,000 Persons?*

![Chart 3. Incidence for Bridges with Barrier Plans](image)

(Complete sources available on request from Gorge Bridge Safety Network volunteer: contact luannede@me.com)
Rio Grande Gorge Bridge Structural Feasibility Study for Suicide Deterrent Systems
Public Open House – Comment Form
THURSDAY, AUGUST 16, 2018 | 5:30–7:30 p.m.
SAGEBRUSH INN, 1508 PASEO DEL PUEBLO SUR, TAOS, NM 87571

Public comments are an important part of this study and will be included in the study analysis. **Comments returned by August 31, 2018, will be included in the summary of this public meeting.** Please comment in the space provided below. Print clearly.

---

I support suicide deterrents at the bridge.
I prefer nets in order to maintain the views which draw so many tourists. I do understand that the nets are structurally too difficult for the Rio Grande Bridge. I’d support whatever is structurally and economically possible in New Mexico provided the design is truly preventive—with no horizontal handholds.

---

We must install some kind of deterrent. My family lost a 14-year-old friend in 2016, and a friend of ours lost her son in 2014. Friends of ours from El Rito (in Rio Arriba County) lost a relative in July.

---

This is a serious public health issue that the state must address.

Contact Information (optional*)

Name: **LURIA DE REYER ELLIOTT**
Address: **14 LOS CORDOVAS DRIVE, RANCHOS DE TAOS, NM 87557**
Phone: **575-751-3143 **
Email Address: **luannedre@me.com**

---

Thank you for your participation. Submit your completed form by August 31, 2018:

- To a project team member at tonight’s meeting
- Via email: RioGrandeGorgeBridge@hdrinc.com
- Via mail: Danton Bean, HDR Engineering, Inc.
  2155 Louisiana Blvd. NE, Suite 9500
  Albuquerque, NM 87110
Public comments are an important part of this study and will be included in the study analysis. **Comments returned by August 31, 2018, will be included in the summary of this public meeting.** Please comment in the space provided below. Print clearly.

![Handwritten comment]

Please fix this bridge!
If left as it is many more lives will be lost. That should not be an option.
Our town is suffering. The NMDOT needs to solve this horrific problem ASAP.

Contact Information (optional)
Name:
Address:
Phone:
Email Address:

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I would like to see a fence barrier with an inward arch so that people can’t climb over it.

This bridge is a public nuisance, and children from our town are especially at risk.

Please DO SOMETHING to stop this tragic situation from continuing.

I have lived in this area for over 40 years.

Contact Information (optional*)

Name: **Steve Noriega**

Address: **P.O. Box 2086, El Prado, New Mexico 87529**

Phone:

Email Address:

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I found the current study too limited for such an iconic structure of local, State and National significance. I recommend that this study be the first step toward a design that includes beyond structural and financial feasibility, a broader vision coming from interest groups/organizations such as the tourism, arts/artists, mental health, National Historic Monuments sectors. Since the study eliminated the horizontal net design, we were left with 2 choices: (1) do nothing; or (2) the vertical railing of narrowly spaced posts resembling a jail cell. Depressing, hence antithetical to the design's purpose.

Let's be inspired by the design for San Francisco's Golden Gate Bridge. After years of study, they are beginning to construct the horizontal netting design that both protects precious lives AND the natural beauty of 'place'. By involving the above interest groups for a more comprehensive vision, we can access funding sources to achieve our mission: to protect LIFE and inherent BEAUTY in Taos. Uplifting!

Idea! Invite tourists visiting the Gorge Bridge to contribute/donate to this project of Compassion and Beauty.

Contact Information (optional*)

Name: Whitney M. Nieman
Address: P.O. Box 357, El Prado, NM 87529
Phone: (575) 776-8913
Email Address: wmsea@taosnet.com

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I support the "no build" alternative.

I really think the net should be done.

**DEFINITE NO on the vertical rail. NEVER - Ruin the beauty of our bridge??**

Spend the extra money you don't use on mental health facilities.

**Contact Information (optional*)**

Name: **KENNETH ESKEBACK**
Address: R.O. Box 308, El Prado, NM 87529
Phone: 575-751-6098
Email Address: Ken@TaosBalloon.com

Thank you for your participation. Submit your completed form by August 31, 2018:

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- Via mail: Danton Bean, HDR Engineering, Inc.
  2155 Louisiana Blvd. NE, Suite 9500
  Albuquerque, NM 87110

NMDOT Project Control Number: CN 5101020
AUGUST 2018
Public comments are an important part of this study and will be included in the study analysis. Comments returned by August 31, 2018, will be included in the summary of this public meeting. Please comment in the space provided below. Print clearly.

When I attended this meeting in Taos, I am pleased to have gotten informed on detouring people from taking their lives that they find the Rio Grande gorge bridge so accessible even people from other states have come to take their lives. I have found out that the Rio Grand gorge being is the 7th most historical landmark in the country. The state is addressing the safety issue by trying it on both sides of the bridge by building a vertical railing would cut down on suicide. Also, it will prevent future suicidal and bungee jumping switch the person that did it got hurt and erased about it. He was inciting other people to do it because it was a rush for him. The State Police helicopter most of the time cannot retrieve the body due to high strong winds. Search and rescue teams that respond to retrieve the bodies are at the mercy of the winds so that puts these lives at risk as well. I had explained to several people at the meeting with old and solar powered lights. Possibly solar cameras would reduce the suicidal rate.

Contact Information (optional*)

Name: Floyd Marceus
Address: Box 201, LINDA VIS TAUR, TAOS NM 87571
Phone: 575 779 4490
Email Address: NO INTERNET OR EMAIL

Thank you for your participation. Submit your completed form by August 31, 2018:

To a project team member at tonight's meeting

Via email: RioGrandeGorgeBridge@hdrinc.com

Via mail: Danton Bean, HDR Engineering, Inc.
2155 Louisiana Blvd. NE, Suite 9500
Albuquerque, NM 87110
Public comments are an important part of this study and will be included in the study analysis. **Comments returned by August 31, 2018, will be included in the summary of this public meeting.**

Please comment in the space provided below. Print clearly.

also would not disturb it directly and would be safer for all men kind. All agencies that I've spoken with have stated that there's a kick in upon retting the body it makes it harder for them to rette the body in the winter or any kind of weather for that matter. This issue has been affecting the community as well as others that have lost loved ones due to suicide on our bridge.

there are several people from somewhere in close other contacts are willing to help/each. I have ideas of a solar powered gate to rette the body. It should happen again in the fire department should have the keys for the well but with a cover over it so it can't be tampered with. Thank you very much for taking time out of you busy day on your address then fitting project one of my family members works for omni. Thank you for your time and efforts.

Sincerely, 

Mr. Floyd Mascaen

Contact Information (optional)

Name: Floyd Mascaen
Address: P.O. Box 5201, LINDA VISAL, AL NM 87571
Phone: 575-779-8490
Email Address: No email or email

Thank you for your participation. Submit your completed form by August 31, 2018:

- To a project team member at tonight's meeting
- Via email: RioGrandeGorgeBridge@hdrinc.com
- Via mail: Danton Bean, HDR Engineering, Inc. 2155 Louisiana Blvd. NE, Suite 9500 Albuquerque, NM 87110
Date: August 31, 2018

To: Manuel Maestas - NMDOT  
Danton Bean - HDR Engineers

From: Anette Meertens - Landscape Architect #NM230  
AEMstudio

RE: Rio Grande Gorge Bridge  
Structural Feasibility Study for Suicide Deterrent Systems  
Public Comment

Context
The Rio Grande Gorge Bridge is an historic steel truss bridge spanning a deep river gorge in a geographically stunning landscape. It is a significant tourist destination for the visitors to the community of Taos and provides a remarkable gateway to the State of New Mexico and the Rio Grande Wild and Scenic River corridor. This bridge provides direct economic benefits to the state, the county and the town of Taos. It provides critical transportation access to the northwestern region of the state. And it is becoming notorious for its use as a method of suicide.

While suicide by jumping from the bridge is a relatively small percentage of the cases of suicide that occur within the county, the impact on the community is arguably the most significant due to public awareness that the bridge is a site of traumatic death. At a minimum, this directly impacts the public health of our community, the well-being of our first responders, economic development and tourism.

Successful Deterrent Systems in General
As an open source for comprehensive analysis and consideration of suicide deterrent systems, the California Department of Transportation, which has several bridges with the highest rates of suicide in the country, has recently approached suicide deterrence as a high public safety priority.

- The Golden Gate Bridge has recently undergone an extensive process to evaluate options, settling on the use of a horizontal netting system.
- The Cold Springs Bridge (similar steel truss bridge) installed curved wire mesh fencing in 2012.

The California Department of Transportation has taken a proactive stance to deter suicide and is openly willing to share their findings and successes.

NMDOT Structural Feasibility Study
It is understood that the Structural Feasibility Study recently performed by the NMDOT is intended to evaluate the impact of several previously identified options on the structural integrity of the bridge and the possible upgrades (and costs) associated with three of those options. It is understood that, as such, this study was not intended as an assessment of the anticipated success rates of the alternatives, design and visual impacts, environmental impacts, historic impacts or maintenance impacts of the alternatives. Unfortunately, in order to apply loads for purposes of structural evaluations, the study drafted what appears to be design solutions (presented in video and board displays at the recent open house). And as such, these apparent solutions trigger grave concern that the designs under consideration will not be effective, will have high visual and historic impacts, will require higher levels of long term maintenance and, most importantly, will fail to do the job.

The preferred design option of adding vertical pickets to the existing railing fails to address key aspects of a successful deterrent system:

- the design has several horizontal members which may facilitate climbing over the new addition
- the additional vertical pickets add increased surface area which will require higher maintenance costs
- views are impeded by the additional vertical members
• additional weight of vertical members increases load on the bridge
• no bridge head security is proposed, which will still allow access from the sides
• the height of the proposed new railing has been shown to have low effectiveness on the historic Pasadena Bridge in California (currently being redesigned at greater height).

In addition, the proposed system fails to address aspects of general public safety on the bridge which, in my professional opinion, contribute to the sense (real and/or perceived) of isolation, instability and danger that one may experience at the bridge. These are not merely emotional experiences which can influence an already unstable individual, but are also physical aspects to the provision of a well-designed and considered public space.

Good Design
At a minimum, key components of a well-design public space include:
• adequate lighting
• protection of pedestrians from vehicular traffic
• effective guard railings for both pedestrians and vehicles at precipitous vertical drops
• ADA-compliant handicap accessibility
• adequate width of public walkways relative to number of pedestrians
• designated pedestrian crossings.

None of these components are currently present at the bridge.

The final design for a physical suicide deterrent system at the Rio Grande Gorge Bridge must include these components. Failure to do so is a failure to provide for the health, safety and welfare of the public. It is also a general failure to meet the opportunity these improvements can offer to visitors to this spectacular site.

Preferred System
It is my opinion that design of a taller vertical wire mesh system will:
• provide greater visual transparency
• will inhibit impulsive behavior such as leaping over a lower barrier
• will simplify maintenance if the material is a long life product such as stainless steel or galvanized wire
• will have minimal impact on the historic integrity of the steel structure of the bridge. (The use of steel in a long span structure is what contributes to the historic significance of the bridge, not the common style railing.)

The final design must also provide bridge head protection (see Cold Springs Bridge in California).

In addition, removal of the exceptionally high curb/sidewalk and the addition of a traffic-rated barrier between the traffic lane and the pedestrian walk can minimize the danger of pedestrians tripping over and off of the curb, reduce unexpected pedestrian crossings mid-bridge through 45 MPH vehicular traffic, and minimize danger to vehicles that can currently crash through the metal railing.

Lastly, the bridge does not have pedestrian-level lighting. As a defacto-public space, it should meet minimum foot-candle requirements to increase public safety and security at the bridge. This lighting could easily be incorporated into the railing design with motion sensitive, low voltage LED lighting. Additionally, solar in-pavement pedestrian warning lights can help alert vehicles. And use of closed circuit cameras may work to inhibit vandalism, suicides, and criminal activities at the bridge.

Conclusion
The two studies undertaken by NMDOT with regard to suicide deterrence are welcome steps toward addressing this serious public health issue at the bridge. However, further design work is needed before a single system, which is simultaneously effective, affordable, attractive and safe, can be implemented.
Response to Proposed Alternatives

TO: Manuel Maestas / NMDOT  
Danton Bean / HDR Engineers  
CC: Committee Members of Rio Grande Gorge Bridge Safety Network  
RE: Rio Grande Gorge Bridge

FROM: Jerry A. Cannon / Bridge Engineer &  
Member of Rio Grande Gorge Bridge Safety Network  
DATE: August 28, 2018

Structural Feasibility Study for Suicide Deterrent Systems  
Comments on Alternatives – Presented at Open House Event on Thursday, Aug. 16, 2018

Rio Grande Gorge Bridge is an Icon

This bridge is an iconic bridge for New Mexico in much the same way as the Golden Gate Bridge is for California. What is needed is an aggressive upgrade to the bridge to meet current safety needs. The first step would be to use the basic steel truss bridge as a starting point to develop a plan for what New Mexico citizens want in the future. The bridge would be the basic ingredient for enhancing the economic opportunity that it brings to New Mexico.

Suicide Deterrent System

In my professional opinion, using a vertical railing may be the best approach to discourage people from jumping off the bridge but the curved top portion of the rail is not needed. This curved top portion, is known as “anti missile fencing”. It does different kinds of violence to different bridges. It hardly ever looks good; it simply looks bad in different ways. The anti missile fence has been used on less important bridges that span over railroads or highways but in this case, we are trying to prevent people from committing suicide by jumping from the iconic and historic Rio Grande Gorge Bridge. What is needed is a vertical railing without horizontal members in order to discourage people from using the horizontal members as steps for climbing up and over the railing and without the curved top portion (anti missile fencing). NMDOT needs to make a greater effort to improve the appearance of the vertical railing by evaluating alternative railing designs, obtaining acceptance by the historic community, SHPO, and the public.

Traffic Barriers Needed on Bridge

The raised pedestrian walkway with the curb next to the travel lane may have met safety requirements when it was built over 50 years ago, but what happens when a vehicle jumps the curb as recently occurred? A vehicle could crash through the exterior railing that is not a crash tested traffic barrier rail and fall into the river below. This could cause damage to the bridge structure as well as hurting people on the bridge. Traffic barriers on each side of the bridge would better control pedestrian traffic on the bridge making it safer for vehicles and pedestrians. (See Photo 1.)

Photo 1. Typical day on the bridge with pedestrians crossing at random sometimes not realizing that vehicles are speeding along at 45mph.
A deterrent system would prevent impulsive suicides here.

Contact Information (optional*)

Name: Robert Elliott
Address: 14 Los Cordovas Drive, Ranchos de Taos
Phone: 575 751 7143
Email Address: relliott675@gmail.com

Thank you for your participation. Submit your completed form by August 31, 2018:

- To a project team member at tonight's meeting
- Via email: RioGrandeGorgeBridge@hdrinc.com
- Via mail: Danton Bean, HDR Engineering, 2155 Louisiana Blvd. NE, Suite 800, Albuquerque, NM 87110
August 31, 2018

Danton Bean, HDR, Inc.
2155 Louisiana Blvd. NE, Suite 9500
Albuquerque, New Mexico 87110

Dear Mr. Bean

Thank you for the opportunity to comment on the structural analysis performed by HDR for the suicide deterrent study for the Rio Grande del Norte National Monument Bridge in Taos County.

Finally, after years of debate whether this historic bridge can hold extra weight to significantly reduce suicides by those who can easily and impulsively jump over the current 47-inch tall railing, the calculations support the conclusion that the bridge can hold extra weight for raised railings.

However, the study failed to calculate the reduced weight if the ADA non-compliant concrete sidewalks were removed and replaced with metal walkways and barrier guardrails. Please see attached the calculations from the architect for the Gorge Bridge Safety Network for your review and consideration.

Consideration should also be made as to having only one side of the bridge available for pedestrians, thereby further reducing the weight, increasing the safety of moving traffic and pedestrians.

When this bridge is added to NMDOT for inclusion in the BUILD or STIP, consideration must be made as to a more attractive, creative and innovative design of the 8 foot 3 inch railing. The example of a new guard rail shown during the open house is a routine design that does not do justice to this national tourist attraction that draws over 250-thousand visitors to the site annually.

I wholeheartedly support a raised railing and appreciate that NMDOT is one step closer to addressing the issue of suicides, now at close to 50 since the bridge was built in 1966.

Sincerely,

Candyce O’Donnell, Taos County Commissioner
August 28, 2018

Candyce O’Donnell
County Commissioner District V
105 Albright Street, Suite G
Taos, New Mexico 87571

RE: Rio Grande Gorge Bridge

Dear Candyce:

Regarding the reduced weight on the bridge, if we remove the raised concrete slab and provide a 5’-0 pedestrian walkway on each side with metal grating, the reduced weight would be about 448 tons.

**Structural Calculation**

- Remove raised concrete deck - each side: 550# / linear foot
- Add back metal grating and curb with traffic barrier: + 200
  Reduced weight: 350# / linear foot

- Load on bridge: 1280’ x 350 = 448,000# (each side)
- Weight in tons: 448,000/2000 = 224 tons (each side)

If we do some on both sides, we reduce the load on the bridge by 448 tons (both sides).

See attached photo showing what the new traffic barrier and metal grating would look like. Exterior rail is only 3’6” high on this bridge. When I did the first estimate of reduced weight, I did not have the as-built plans for the bridge.

If you want more details and a copy of the calculations, let me know.

Sincerely,

Jerry A. Cannon, P.E., S.E.
Manager/Bridge Engineer
(Member of the Rio Grande Gorge Bridge Safety Network Steering Committee)

Attached: photo of Ocean-to-Ocean Highway Historic Bridge spanning the Colorado River in Yuma, AZ
Ocean-to-Ocean Highway Bridge over Colorado River – Yuma, AZ

Example of crash tested traffic barrier adjacent to the pedestrian walkway that was added to this Historic Bridge.
Hello good people,

Please know that I support the construction of suicide deterrents at the Rio Grande Gorge Bridge. One human life is valuable and important. We have tragically lost many people who if given an obstacle, such as a deterrent, might be alive today.

Thank you,
Jean-Marie Saporito
Dear Ms. Elliott,

I am sending this email in support of suicide deterrents at Rio Grande Bridge. Thank you for your consideration.

Sincerely,

Lawrence A. Medina, MBA
Executive Director
Rio Grande ATP, Inc.

Cell: (505) 470-2887
Email: lawrence@riograndeatp.org | Website: http://riograndeatp.org/

*Intensive Outpatient Treatment Centers:*
2301 7th Street, Suite A, Las Vegas, NM 87701
Office: (505) 454-9611 | Fax: (505) 454-8079

224 Cruz Alta Road, Suite J, Taos, NM 87571
Office: (575) 737-5533 | Fax: (575) 737-5534

"Una Vida Buena y Sana – A Good and Healthful Life"

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On Thu, Aug 23, 2018 at 4:10 PM, Luanne Dreyer Elliott <luannede@me.com> wrote:

Hi, Lawrence,

It was very nice to meet you at the behavioral health meeting today. Here’s a pdf of the fact sheet I distributed at the meeting.

We need all public comments by August 31.

Thanks for your great work for Northern New Mexico!
Sincerely,
Luanne
I am a 38-yr-old resident of Taos for the last four years.

I am so grateful you are holding this meeting on August 16, 2018. I wish I could attend, but as a single mother of twin 5-yr-olds and an 8 yr old, it is not possible to participate. But I would like to say that I have a great fear of living in Taos into their teenage years. I am so afraid one of my boys will decide to jump off that bridge after a day of severe disappointment, a year of bullying, a cheating girlfriend, not making the team, or just because they become depressed and hopeless and hide it from me, their therapists, teachers, friends. I read every report of the people jumping - their smiling photos, their partners, lives, employment. The reports don't say what kind of abuse they've endured, loss they have been unable to handle or desperation they live with. What if it were my own child? I can lock away guns, hover over drug use, take away keys, but I can't take away that bridge. When I swim in the river in Pilar I think of all the unfound bodies and how the water is washing over them and down to me. How can they do it? How can their pain in life be so much greater than the fear of jumping and falling all that way to such a dramatic death? I don't understand it but my helplessness in the matter is real. It baffles and scares me to tears every time I invite the hearts of those jumpers into my own.

If you put up a net, what happens? Do they jump off the bridge, land on the net and jump again from there? What if they land on the net and decide not to jump further, how will we know they are there? They might change their minds but who will know...and their humility will only add to their existing anguish?

Why don't they just go to the edge of the canyon and run and jump...do our efforts in infrastructure even matter? Can we afford to have the place on constant patrol by police, preachers, volunteers? I wish we could. I haven't told by own children about suicide yet, but soon enough they'll be reading newspapers themselves and I can only hope they will have an understanding of the pain suicide causes on our entire community through my own pleas and communication.

Thanks for listening,
Amanda

--
I am a 38-yr-old resident of Taos for the last four years.

I am so grateful you are holding this meeting on August 16, 2018. I wish I could attend, but as a single mother of twin 5-yr-olds and an 8 yr old, it is not possible to participate. But I would like to say that I have a great fear of living in Taos into their teenage years. I am so afraid one of my boys will decide to jump off that bridge after a day of severe disappointment, a year of bullying, a cheating girlfriend, not making the team, or just because they become depressed and hopeless and hide it from me, their therapists, teachers, friends. I read every report of the people jumping - their smiling photos, their partners, lives, employment. The reports don't say what kind of abuse they've endured, loss they have been unable to handle or desperation they live with. What if it were my own child? I can lock away guns, hover over drug use, take away keys, but I can't take away that bridge. When I swim in the river in Pilar I think of all the unfound bodies and how the water is washing over them and down to me. How can they do it? How can their pain in life be so much greater than the fear of jumping and falling all that way to such a dramatic death? I don't understand it but my helplessness in the matter is real. It baffles and scares me to tears every time I invite the hearts of those jumpers into my own.

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Thanks for listening,
Amanda

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Acknowledgments

The New Mexico Substance Abuse Epidemiology Profile was prepared by the New Mexico Department of Health (NMDOH) Epidemiology and Response Division (ERD) Injury and Behavioral Epidemiology Bureau (IBEB) Substance Abuse Epidemiology Section (SAES), with data provision and analytic support from the NMDOH IBEB Survey Section; and was made possible by the generous support of the New Mexico Human Services Department (NMHSD) Behavioral Health Services Division (BHSD) Office of Substance Abuse Prevention (OSAP), based on an allocation from the Partnerships for Success 2015 (PFS2015) grant received from the Substance Abuse Mental Health Services Administration Center for Substance Abuse Prevention (SAMHSA-CSAP); and by funding from the Centers for Disease Control and Prevention (CDC) Alcohol Program.

Statewide Epidemiological and Outcomes Workgroup (SEOW)

The Statewide Epidemiological and Outcomes Workgroup (SEOW) currently functions as a core component of the Partnerships for Success 2015 grant. Under the Strategic Prevention Framework State Incentive Grant from SAMHSA over a decade ago, the SEOW guided the development of the first New Mexico Substance Abuse Epidemiology Profile as part of its mission to create a focus on community-based and data-driven planning and accountability. The on-going focus of the SEOW is the development and informed use of assessment data and indicators for use in community planning, prioritization and evaluation; and, the support of evidence-based strategies, policies and practices in all community prevention activity. The current membership of New Mexico’s Prevention SEOW includes representatives from BHSD: Mika Tari. Community Members: Piper Coalson, Debra Darmada, Pamela Drake, Shelley Mann-Lev, Tiffany Martinez, Amanda Platt, Pat Serna, and John Steiner. CYFD Children’s Behavioral Health: Michael Hock. DFA DWI Program: Norma Vazquez. Evaluators: Ann DelVecchio, Loucia Jose, and Sindy Sacoman. NMDOH-ERD Injury and Behavioral Epidemiology Bureau: Jim Davis, Dan Green, Naomi Greene, Carol Moss, Luigi Garcia Saavedra, Laura Tomedi, and Chris Trujillo. NMHSD-BHSD Office of Substance Abuse Prevention: Brian Chavez, Karen Cheman, Antonette Silva-Jose, and Heather Stanton. NM Prevention Workforce Training System, Kamama Consulting: Paula Feathers. Pacific Institute for Research & Evaluation (PIRE): Liz Lilliott, Martha Waller, Kim Zamarin, and Lei Zhang; and, is coordinated and staffed by Michael Coop, Tina Ruiz, McKenzie Wannigman, and Tim Werwath of Coop Consulting, Inc.

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This report and other reports by the Substance Abuse Epidemiology Section are available electronically at: http://nmhealth.org/about/erd/ibeb/sap/
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INTRODUCTION

**New Mexico Substance Abuse Epidemiology Profile**

The New Mexico Substance Abuse Epidemiology Profile is a tool for substance abuse prevention planners at the state, county, and community level. Its primary purpose is to support efforts related to the Statewide Epidemiological and Outcomes Workgroup (SEOW). The SEOW is intended to develop resources to help communities conduct needs assessments regarding substance use and its consequences; build capacity to address those needs; and plan, implement, and evaluate evidence-based programs, policies, and practices designed to address the intervening variables related to identified substance-related problems. This document will be useful to those preparing proposals for funding and to program planners designing substance abuse prevention interventions. SEOW is funded by the New Mexico Human Services Department (NMHSD) Behavioral Health Services Division (BHSD) Office of Substance Abuse Prevention (OSAP) and the Substance Abuse and Mental Health Services Administration Center for Substance Abuse Prevention (SAMHSA-CSAP).

**Important Notes about Comparability to Previous Reports**

This report is the seventh in a series that began with the New Mexico State Epidemiology Profile published in 2005, and continued with the publication of updates in 2010, 2011, 2013, 2014, and 2016. These reports are available at: http://nmhealth.org/about/erd/ibebe.sap.

Important methodological changes have occurred during the years. As a result, these reports may not be comparable with all others in the series, in several important ways. These changes and their impact on the comparability of reports in this series are described, in more detail, in a technical note at the end of this section. The following categories cannot be compared between the reports in this series:

- Death counts and/or rates for any Alcohol-Related Death indicators cannot be compared between the 2005 report and any later reports
- Race/ethnicity reporting for indicators cannot be compared between the 2013 and subsequent reports and previous reports.
- Beginning with 2011 estimates, the Behavioral Risk Factor Surveillance System (BRFSS) updated its surveillance methods. Any shift in prevalence between 2010 and 2011 must be interpreted with caution, as it may be partially due to changes in methods necessary to keep up with changes in cell phone use in the US and take advantage of improved statistical procedures.
- Data for risk behaviors (BRFSS-based) indicators have been aggregated for years 2013-2015, except for Adult Depression and Adult Drinking and Driving, which are not asked every year. These two indicators are reported on a single-year basis.
- Reports from 2005, 2010, and 2011 reflected a special small numbers rule specific to them. This rule, devised by SEOW during the design of the original 2005 report, suppressed the reporting of death rates for table cells based on fewer than two deaths per year. This rule was replaced by the standard NMDOH small numbers rule used in other NMDOH publications. This rule establishes suppression of reporting only for table cells based on three or fewer events coming from a population of fewer than 20 people.

**How to Use this Report**

This report presents commonly used indicators of substance abuse in New Mexico. These indicators include outcome measures (e.g., alcohol-related death) reported in the Consequences section, mental health indicators associated with substance abuse (e.g., depression) in the Mental Health section, and consumption measures (e.g., self-reported substance use behavior from statewide surveys) reported in the Consumption section. The presentation of each major indicator includes a text description of the major data findings; a detailed table with results by gender, age-group, and race/ethnicity; a table detailing county results by race/ethnicity; a bar chart and a map with rates for each New Mexico county; and, additional charts illustrating other pertinent findings. There are also appendices that provide population denominators used in the calculation of death rates, substance abuse and mental health indicators from the National Survey on Drug Use and Health (NSDUH), and the International Classification of Diseases, Clinical Modification, 9th (ICD-9-CM) and 10th (ICD-10-CM) Edition codes used to produce indicators based on hospital data.

A combined five-year period is used when presenting death, emergency department visits, and hospital discharges. Combining counts over multiple years is necessary because in many of New Mexico’s counties, there may be very few events (deaths, emergency department visits, or hospital discharges) due to a given cause in any given year. Combining counts over multiple years allows the calculation of rates that are more stable and, therefore, more meaningful than those calculated based on very few cases. In this report, death, emergency department, and hospitalization rates were calculated and reported for 2011-2015, the most current available five-year period.
INTRODUCTION (continued)

Use of this Report: The Problem Statements

This report presents considerable detail in the form of numbers, proportions, rates, and other statistical summaries, many of these can be found in tables and charts. This information is synthesized in Problem Statements, which provide a brief narrative overview of the data and detailed statistics. These Problem Statements are designed to help explain and frame the epidemiological data presented in each section of the report.

Use of this Report: Tables and Charts

Each of the outcome indicators is presented with at least two tables. Table 1 for each indicator presents the number of events (deaths, emergency department visits, hospital discharges, or number of persons engaging in or experiencing a risk behavior) and their respective rates (or the weighted behavior prevalence rates) by sex, age-group (or grade, in the case of Youth Risk and Resiliency Survey [YRRS] data), and race/ethnicity. In sections that report on causes of death, these numbers include the number of deaths, on the left side of the table, and age-adjusted death rates per 100,000 population, on the right side of the table. In sections that report on emergency department visits or hospital discharges, these tables include the number of emergency department visits or hospital discharges, on the left side, and age-adjusted rates per 100,000 population, on the right side. For BRFSS-based indicators, these tables include an estimate of the number of persons engaging in or experiencing the risk behavior, on the left side, and the prevalence rate of the behavior in the population, on the right side. For the aggregated indicators, the number of people was estimated by multiplying the percentage of persons engaging in or experiencing the risk behavior by the population estimate for the corresponding group. In sections that report specifically on youth risk behaviors, Table 1 includes only prevalence rates. These tables are very useful in determining the most important risk groups at the statewide level. Table 2 for each indicator presents results for each NM county by race/ethnicity. Again, the number of events are presented on the left side of the table and the age-adjusted rates on the right side of the table. These tables are useful in determining which counties have the most severe substance use issues, and which racial/ethnic groups are at the highest risk within each county. Youth data are presented by county only.

Discussion of each indicator also includes a county bar chart that graphically presents age-adjusted death rates (or weighted behavior prevalence rates) for each NM county, in descending order. Adjacent to each county name, on the left side of the chart, the number of events occurring (or the estimated number of persons engaging in or experiencing the behavior) in the county and the percent of NM events occurring (or the weighted percent of New Mexicans engaging in or experiencing the behavior) in each county are presented. Counties with the highest rates are easily identified at the top of the chart, while counties with low rates are at the bottom. The state rate is depicted with a darker colored bar and, for most indicators, the most recent available US rate is also included, depicted with a cross-hatched bar, making it easy to compare the county rate to the state and national rate in each instance.

Finally, maps showing rates by county have been included for each indicator. The counties have been categorized and shaded according the county rates. Map shading categories have been chosen to identify counties that have rates lower than the state rate, counties that have rates somewhat higher than the state rate, and counties that have rates substantially higher than the state rate. The latter category (corresponding to the darkest-shaded counties) represent rates that are higher than the state rate by a selected amount. For maps based either on death or hospital-related event rates, this amount corresponds to rates that are 50% or higher than the state rate; for those based on behavioral data (BRFSS or YRRS), this amount corresponds to rates that are 25% higher than the state rate.

Use of this Report: Rates and Numbers

Both rates and the numbers of events are presented in the tables and charts of this report. While the rates are very important for indicating the degree of an issue in a given county or population group, they only provide part of the picture needed for comparing the burden of a problem from one county or group to another. The number of events also needs to be considered when making planning decisions. For instance, Rio Arriba County has an alcohol-related death rate (144.5 per 100,000 population), more than twice that of Bernalillo County (53.0 per 100,000). However, the number of alcohol-related deaths in Bernalillo County (1,883) is over six times the number in Rio Arriba County (294). While problems are more severe in Rio Arriba County (reflected in higher rates), Bernalillo County bears a larger proportion of the statewide burden (30.4% of all alcohol-related deaths in the state compared to 4.7% for Rio Arriba County). When prioritizing the distribution of resources and selecting interventions, it is important to look at both the total number of deaths and the death rate. Because of its extremely high rate of alcohol-related deaths, interventions that address this problem are very important in Rio Arriba County. At the same time, Bernalillo County is also very important when locating interventions because it bears much of the statewide burden of alcohol-related deaths.
INTRODUCTION (continued)

Use of this Report: Why are some rates missing from the tables?

For survey-based measures of risk behaviors (i.e., BRFSS and YRRS), rates based on fewer than 50 respondents for a given table cell have been removed from this report. While prevalence estimates can be calculated based on very small numbers of respondents, estimates based on fewer than 50 respondents can be unstable and are often misleading. Such estimates are of questionable value for planning purposes and have been excluded from this report.

Morbidity and mortality numbers and rates are not reported when the number of events are three or less for a denominator (population) of less than twenty, in accordance with the NMDOH small numbers rule (https://ibis.health.state.nm.us/view/docs/Standards/NMSmallNumbersRule2006.pdf).

Although not suppressed, mortality and morbidity rates calculated with less than ten events (numerator) should be considered unstable. When rates are calculated using small numbers of events, rates can vary widely, from one reporting to the next, for reasons different from actual changes in the frequency of occurrence of the events measured.

Specifically, for indicators using Emergency Department Data (EDD) or Hospital Inpatient Discharge Data (HIDD), missing rates correspond to events for which data on race-ethnicity, sex, or county of residence were missing. Although these events are included in the total count of events for NM, rates cannot be calculated and are, therefore, not reported. Footnotes on the corresponding tables for these indicators will refer to the number of events missing. EDD and HIDD indicators have been produced by searching for specific diagnostic codes on these datasets. For EDD, all diagnosis fields have been used. Thus, the inclusion of the word 'Related' in the name of the indicator. For HIDD, only the main diagnosis was used. The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and ICD-10-CM codes used are listed on Appendix 4.

Other Data Resources

The data presented here come from various sources. Other valuable publications have been written utilizing these data sources. The New Mexico Substance Abuse Epidemiology Profile should be seen as complementary to these other publications, and program planners will want to refer to these other documents for additional information. These publications include:

- Other reports produced by the Substance Abuse Epidemiology Section (SAES), Injury and Behavioral Epidemiology Bureau (IBEB), Epidemiology and Response Division (ERD), New Mexico Department of Health (NMDOH).
  Available online at: http://nmhealth.org/about/erd/ibeb/sap/

- New Mexico Behavioral Risk Factor Surveillance System (BRFSS) reports, produced by the Survey Section, IBEB-ERD-NMDOH.
  Available online at: http://archive.nmhealth.org/erd/healthdata/health_behaviors.shtml

- New Mexico Youth Risk and Resiliency Survey (YRRS) reports, produced by NMDOH, NM Public Education Department, and the UNM Prevention Research Center.
  Available online at: http://archive.nmhealth.org/erd/healthdata/yrrs.shtml

- Emergency Department Data (EDD) Annual Reports, produced by the Health Systems Epidemiology program, ERD-NMDOH
  Available online at: http://nmhealth.org/about/erd/hsep/edd/

- Hospital Inpatient Discharge Data (HIDD) Annual Reports, produced by the Health Systems Epidemiology program, ERD-NMDOH
  Available online at: http://nmhealth.org/about/erd/hsep/hidd/
Technical Note: Methodological Changes since Previous Reports

Changes to the Definition of Alcohol-Related Death

In 2013, the Centers for Disease Control and Prevention (CDC) updated the Alcohol-Related Disease Impact (ARDI) Alcohol-Attributable Fractions (AAFs), which are central to the estimation of alcohol-related deaths and alcohol-related death rates in this report (https://www.cdc.gov/alcohol/announcement.html). The updated AAFs were implemented in the 2015 and subsequent reports. The key difference between the updated CDC's ARDI AAFs used in the 2015 and subsequent reports and the AAFs used in previous reports is that the age-specific AAFs for alcohol-attributable motor-vehicle traffic crashes have been updated.

The AAFs are the proportion of a given cause of death that can be attributed to excessive alcohol use. The CDC ARDI AAFs are the standard AAFs recommended for use by the CDC. These AAFs were first reported in Midanik, L., Chaloupka, F., Saltz, R., Toomey, T., Fellows, J., Dufour, M., Landen, M., Brounstein, P., Stahre, M., Brewer, R., Naimi, T., & Miller, J. (2004). Alcohol-attributable deaths and years of potential life lost - United States, 2001. Morbidity and Mortality Weekly Report, 53[37]:866-870). The ARDI AAFs are further described on the CDC website (http://nccd.cdc.gov/DPH_ARDl/default/Default.aspx).

Changes to Race/Ethnicity Categories

The original 2005 report in this series used the National Center for Health Statistics (NCHS) standard race/ethnicity categories for reporting by race/ethnicity. These NCHS standard race/ethnicity categories break out Hispanic for each race category (e.g., White, Black, etc.); and combine the Hispanic portion of each race category (e.g., White Hispanic, Black Hispanic, etc.) when reporting the Hispanic category.

The 2010 report implemented new race/ethnicity reporting standards used by NMDOH for all indicators except those based on the YRRS. These NMDOH standard race/ethnicity categories report only the White Hispanic category as Hispanic; and report the Hispanic subset of other race groups (e.g., Black Hispanic) in the corresponding race category (e.g., Black). The 2011 report implemented the NMDOH race/ethnicity reporting categories for all YRRS-based indicators as well.

In 2012, NMDOH adopted a new standard for reporting race/ethnicity. The New Mexico reporting standard uses the estimates by bridged race and Hispanic ethnicity. Presentation of race and ethnicity will be done together in the same table. Race/ethnicity will be viewed as a single social and cultural construct. Persons designated as Hispanic ethnicity, regardless of race, will be categorized as 'Hispanic.' Persons not designated as Hispanic will be categorized by their single race ("Black or African American," 'American Indian or Alaska native,' 'Asian or Pacific Islander,' 'White,' or 'Other"). For more information, refer to the NMDOH Guidelines for Race/Ethnicity Data at https://ibis.health.state.nm.us/docs/Standards/Race_Guidelines.pdf.

These changes in the race/ethnicity categories make the 2013 and subsequent reports’ counts and rates by race/ethnicity comparable to each other but not comparable to the 2005 report.
EXECUTIVE SUMMARY

Consequences of Substance Abuse

Introduction

Eight of the ten leading causes of death in New Mexico are, at least partially, caused by the abuse of alcohol, tobacco, or other drugs. In 2015, the ten leading causes of death in New Mexico were malignant neoplasms, diseases of the heart, unintentional injuries, chronic lower respiratory diseases, cerebrovascular diseases, diabetes, chronic liver disease and cirrhosis, suicide, Alzheimer’s disease, and influenza and pneumonia. Of these, chronic liver disease, unintentional injuries, and suicide are associated with alcohol use; chronic lower respiratory diseases and influenza and pneumonia are associated with tobacco use; heart disease, malignant neoplasms, and cerebrovascular diseases are associated with both alcohol and tobacco use; and unintentional injuries and suicide are associated with the use of other drugs.

Alcohol-Related Deaths and Hospitalizations

Over the past 30 years, New Mexico has consistently had among the highest alcohol-related death rates in the United States, and it has had the highest alcohol-related death rate since 1997. The negative consequences of excessive alcohol use in NM are not limited to death, but also include domestic violence, crime, poverty, and unemployment, as well as chronic liver disease, motor vehicle crash and other injuries, mental illness, and a variety of other medical problems. In 2006, the economic cost of excessive alcohol consumption in New Mexico was more than $1.9 billion, or $960 per person (Sacks, J., Roeber, J., Bouchery, E., Gonzales, K., Chaloupka, F., & Brewer, R. (2013). State costs of excessive alcohol consumption, 2006. American Journal of Preventive Medicine, 45(4):474–485).

Death rates from alcohol-related causes increase with age. However, one in six deaths among working age adults (20-64) in NM is attributable to alcohol. Male rates are substantially higher than female rates. American Indians have higher alcohol-related death rates than other race/ethnicities. Rio Arriba and McKinley counties have extremely high alcohol-related death rates, driven by high rates in the American Indian and Hispanic male populations, respectively. The counties with the most deaths for the five-year period, of 2011-2015, were Bernalillo, San Juan, Santa Fe, Dona Ana, and McKinley. New Mexico has extremely high death rates due to both alcohol-related chronic diseases and alcohol-related injuries.

- Alcohol-Related Chronic Disease Death. NM’s rate of death due to alcohol-related chronic diseases is more than twice the national rate. Death rates increase with age. American Indians, both male and female, and Hispanic males have extremely high rates. As with total alcohol-related death, Rio Arriba and McKinley counties have the highest rates in the state.

Alcohol-related chronic liver disease (AR-CLD) is the disease that accounts for the most deaths due to alcohol-related chronic disease. AR-CLD death rates are extremely high among American Indians, both male and female, and Hispanic males. The high rates among American Indians and Hispanic males between the ages of 35 and 64 represent a tremendous burden in terms of years of potential life lost (YPLL). While Bernalillo County has the highest number of deaths due to AR-CLD (617 for the years 2011-2015), two counties that stand out for their very high rates are Rio Arriba and McKinley, which have rates that are more than five times the national rate.

Chronic liver disease hospitalizations (CLD-HIDD) can provide information on CLD risk at an earlier time point in the disease’s development then AR-CLD mortality and number of visits can be used as a measure of the impact of CLD on the medical system. Women are at lower risk than men. Women who identify as Asian or Pacific Islander have the lowest rates whereas men who identify as American Indian have the highest rates. Sierra County has the highest rate of CLD-HIDD, followed by McKinley, Socorro, and Cibola. Eddy County had the lowest rate. It is important to note that hospitalizations from federal facilities (e.g. Indian Health Services and Veterans Administration) are not included in these results.

- Alcohol-Related Injury Death. NM’s rate of alcohol-related injury death is 1.7 times the national rate. In the current reporting period (2011-2015), drug overdose surpassed alcohol-related motor vehicle traffic crashes and falls as the leading cause of alcohol-related injury death; and numerous other types of injury death are also associated with excessive alcohol use (particularly binge drinking). Deaths from drug overdose, a portion of which are partially attributable to alcohol, have increased substantially in recent years. Males are more at risk for alcohol-related injury death than females, with American Indian males at particularly elevated risk.
EXECUTIVE SUMMARY (continued)

Consequences of Substance Abuse (continued)

New Mexico’s alcohol-related motor vehicle traffic crash (AR-MVTC) death rate has decreased dramatically over the past 30 years. After substantial declines during the 1980’s and 1990’s, NM’s rate stagnated for almost ten years. However, a comprehensive program to prevent driving while intoxicated (DWI), initiated in 2004, resulted in substantial rate declines, particularly during the period 2005-2008. Nonetheless, rate disparities remain: both male and female American Indians have elevated rates, especially among middle age males (age 25-64). Catron, Harding, Mora, Sandoval, Union, and McKinley are the counties with the highest alcohol-impaired motor vehicle traffic crash (AI-MVTC) death rates. However, Catron, Harding, Mora, and Union have low number of deaths, whereas McKinley and Sandoval are second and seventh in number of deaths, respectively.

Smoking-Related Death

Historically, New Mexico has had one of the lowest smoking-related death rates in the nation. Nonetheless, New Mexico’s burden of death associated with smoking is considerably greater than the burden associated with alcohol and other drugs. Among all racial/ethnic groups, males have higher smoking-related death rates than females. Among males, Blacks have the highest rates, followed by Whites. Among females, Whites have the highest rates, followed by Blacks. The counties with the highest rates and relatively heavy burdens of smoking-related death (i.e., 20 or more deaths a year) are Sierra, Luna, Lea, Quay, Curry, Eddy, and Torrance. The high rates in most of these counties, and in the state overall, are driven by high rates among Whites.

Drug Overdose Death

In 2015, New Mexico had the eighth highest drug overdose death rate in the nation. The consequences of drug use continue to burden New Mexico communities. Drug overdose death rates remained higher for males than for females. The highest drug overdose death rate was among Hispanic males, followed by Whites. Rio Arriba County had the highest drug overdose death rate in the state. Bernalillo County continued to bear the highest burden of drug overdose death in terms of total numbers of deaths. Unintentional drug overdoses account for almost 85% of drug overdose deaths. The most common drugs causing unintentional overdose death for the period covered in this report were prescription opioids (i.e., methadone, oxycodone, morphine; 47%), heroin (37%), tranquilizers/muscle relaxants (24%), cocaine (15%), methamphetamine (20%) and antidepressants (12%) (not mutually exclusive). In New Mexico and nationally, overdose death from prescription opioids has become an issue of enormous concern as these potent drugs are widely available.

Opioid Related Overdose Emergency Department (ORO-ED) visits have increased 98.4% in the US between 2004 and 2009. In NM, between 2010 and 2015, ED visits increased 9.8%. Male rates of ORO-ED visits were higher compared to female rates. For both groups, Whites had the highest rates. Rio Arriba County had the highest rate of ORO-ED visits during 2011-2015 with 178.3 ORO-ED visits per 100,000 population.

Suicide and Mental Health

Suicide and Mental Health

Suicide is a serious and persistent public health problem in New Mexico. Over the period 1981 through 2010, New Mexico’s suicide rate has consistently been among the highest in the nation, at 1.5 to 1.9 times the US rate. Male suicide rates are around three times higher those of females, across the all racial/ethnic groups, except Asian/Pacific Islanders. For the five-year period 2011-2015, all but eight counties had suicide rates that were one and a half times higher than the most recent available US rate.

Indicators in this report also document the prevalence of frequent mental distress and current depression among New Mexico adults; persistent sadness or hopelessness, suicidal ideation, and suicide attempt among New Mexico youth; and the association between risk and resiliency factors and substance abuse and mental health indicators, among New Mexico youth.
Executive Summary (continued)

Alcohol, Tobacco, and Other Drug Consumption Behavior

Substance abuse behaviors are important to examine not only because substance abuse can lead to very negative consequences in the short-term, but also because substance abuse can have long-term negative consequences. For example, while drinking by youth is a behavior that can lead directly to alcohol-related injury or death, it can also lead to very serious consequences in adulthood, ranging from alcohol abuse or dependence to a variety of diseases associated with chronic heavy drinking.

Substance Use Indicators included in this Report

- Adult Binge Drinking. Binge drinking (defined as drinking five or more drinks on a single occasion for men, or four or more drinks on a single occasion for women) is associated with numerous types of injury death, including motor vehicle traffic crash fatalities, drug overdose, falls, suicide, and homicide. Among adults (age 18 or over) of all ethnicities, binge drinking was more commonly reported by males than females, mirroring higher rates of alcohol-related injury death among males. Among males, Hispanics were more likely to report binge drinking than other race/ethnicities. Young adults (age 18-24) were more likely than other age groups to report binge drinking.

- Youth Current Drinking. Any alcohol consumption by a person under the age of 21 is considered to be excessive drinking. Alcohol is the most commonly used drug among youth in New Mexico, more than tobacco or other drugs. However, contrary to common perception, most high school students do not drink. In 2015, 26.1% of high school students reported that they were current drinkers. This is a significant decrease from 43.3% in 2005.

- Youth Binge Drinking. Youth binge drinking has significantly decreased over the last decade. In 2015, New Mexico public high school students were less likely to report binge drinking than US high school students. Among New Mexico high school students, binge drinking was more commonly reported by upper grade students than lower grade students. There was no significant difference in the binge drinking rate between male and female high school students. Binge drinking rates were lower among American Indian youth than other racial/ethnic groups.

- Youth Having Ten or More Drinks. On average, underage drinkers consume more drinks per drinking occasion than adult drinkers and risk of harm increases as the number of drinks consumed on an occasion increases. Students in the 12th grade are more likely to drink ten or more drinks on an occasion than 9th grade students. Although boys and girls are equally likely to drink (see current drinking indicator), boys are almost twice as likely to drink ten or more drinks on an occasion than girls.

- Adult Heavy Drinking. In NM, between 2013-2015, adult heavy drinking (defined as drinking, on average, more than two drinks per day, for men; or more than one drink per day, for women) was less commonly reported (5.4%) than in the rest of the nation in 2015 (5.9%). Heavy drinking was more prevalent among middle-aged (age 25-64) adults, with 6.0% reporting past-month heavy drinking. New Mexico men were almost 1.5 times more likely to report chronic drinking than women (6.4% v. 4.5%).

- Adult Drinking and Driving. In 2014, adult past-30-day drinking and driving was reported in New Mexico by 1.2% of adults aged 18 and over. Past-30-day drinking and driving was more prevalent among young (age 18-24) and middle-age (age 25-64) adults than among older adults (age 65+). New Mexico men were almost six times more likely to report drinking and driving than women (1.9% v. 0.3%). Hispanic males (2.4%) were more likely to report drinking and driving than American Indian (1.8%) and White (1.7%) males.

- Youth Drinking and Driving. In 2015, New Mexico high school students were less likely to report driving after drinking alcohol than other US students. Driving after drinking was more common among boys than girls, and was less common among White and American Indian youth than among other racial/ethnic groups. Twelfth grade students were more likely to report drinking and driving than ninth and tenth grade students.
EXECUTIVE SUMMARY (continued)

Alcohol, Tobacco, and Other Drug Consumption Behavior (continued)

- Youth Drug Use. In 2015, past-30-day marijuana and methamphetamine use were more prevalent among New Mexico students than among US students. The use of marijuana was more commonly reported by American Indian than by students in other racial/ethnic groups. Asian or Pacific Islander students were more likely to report past-30-day use of cocaine, heroin, methamphetamine, and inhalants than students of other racial/ethnic groups.

- Adult Tobacco Use. Between 2013-2015, the prevalence of adult smoking was the same for New Mexico and the 2015 US estimates (17.5%). Smoking was most prevalent among middle-aged groups, and was more common among men than women for all age categories.

- Youth Tobacco Use. In 2015, smoking was more prevalent among New Mexico high school students (11.4%) than in the nation overall (10.8%). New Mexico boys were more likely than girls to report current smoking (12.8% vs. 9.8). American Indian high school students (17.0%) were more likely to report current cigarette smoking than Black (9.5%) and White (10.5%) students.

Data Sources


National death data: National Center for Health Statistics (NCHS). Multiple Cause-of-Death files, 1981-2010, machine readable data files and documentation. National Center for Health Statistics, Hyattsville, Maryland. Available from: http://www.cdc.gov/nchs/data_access/VitalStatsOnline.htm#Mortality_Multiple. Death rates were calculated by the New Mexico Department of Health (NMDOH), Epidemiology and Response Division (ERD), Injury and Behavioral Epidemiology Bureau (IBEB), Substance Abuse Epidemiology Section (SAES).

New Mexico death data: New Mexico Department of Health, Epidemiology and Response Division, Bureau of Vital Records and Health Statistics (BVRHS). Death rates were calculated by the New Mexico Department of Health, Epidemiology and Response Division, Injury and Behavioral Epidemiology Bureau, Substance Abuse Epidemiology Section.

National/New Mexico motor vehicle traffic crash fatality data: National Highway Traffic Safety Administration (NHTSA), Fatality Analysis Reporting System (FARS).

(1) VMT reporting: Fatalities, Fatalities in Crashes by Driver Alcohol Involvement, Vehicle Miles Traveled (VMT), and Fatality Rate per 100 Million VMT, by State, 1982-2012. Report provided by NHTSA National Center for Statistics and Analysis, Information Services Team. 2008-2012 death rates per 100 Million VMT calculated by the New Mexico Department of Health, Epidemiology and Response Division, Injury and Behavioral Epidemiology Bureau, Substance Abuse Epidemiology Section.
EXECUTIVE SUMMARY (continued)

Data Sources (continued)

(2) Per 100,00 population reporting: Persons killed, by state and Highest Driver Blood Alcohol Concentration (BAC) in Crash - State: USA, Year. Available from: https://www-fars.nhtsa.dot.gov/States/StatesAlcohol.aspx. Death rates were calculated by the New Mexico Department of Health, Epidemiology and Response Division, Injury and Behavioral Epidemiology Bureau, Substance Abuse Epidemiology Section.

New Mexico Emergency Department Visits: New Mexico Department of Health, Epidemiology and Response Division, Health Systems Epidemiology Unit. Visit rates were calculated by the New Mexico Department of Health, Epidemiology and Response Division, Injury and Behavioral Epidemiology Bureau, Substance Abuse Epidemiology Section according to methodology described in: nmhealth.org/data/view/newsletter/1729/

New Mexico Hospital Inpatient Discharges: New Mexico Department of Health, Epidemiology and Response Division, Health Systems Epidemiology Unit. Discharge rates were calculated by the New Mexico Department of Health, Epidemiology and Response Division, Injury and Behavioral Epidemiology Bureau, Substance Abuse Epidemiology Section


New Mexico youth behavioral data: New Mexico Department of Health, Epidemiology and Response Division, Injury and Behavioral Epidemiology Bureau, Survey Unit; and the New Mexico Public Education Department, School and Family Support Bureau. New Mexico Youth Risk and Resiliency Survey (YRRS). More reporting available from: www.youthrisk.org as of January 31, 2016.

Section 1

Consequences
ALCOHOL-RELATED DEATH

Problem Statement

The consequences of excessive alcohol use are severe in New Mexico. New Mexico’s total alcohol-related death rate has ranked first, second, or third in the US since 1981; and 1st for the period 1997 through 2010 (the most recent year for which state comparison data are available). The negative consequences of excessive alcohol use in New Mexico are not limited to death but also include domestic violence, crime, poverty, and unemployment, as well as chronic liver disease, motor vehicle crash and other injuries, mental illness, and a variety of other medical problems. Nationally, one in ten deaths among working age adults (age 20-64) is attributable to alcohol. In New Mexico this ratio is one in six deaths.

Chart 1 shows the two principal components of alcohol-related death: deaths due to chronic diseases (such as chronic liver disease), which are strongly associated with chronic heavy drinking; and deaths due to alcohol-related injuries, which are strongly associated with binge drinking. Each of these categories will be considered in more detail later in this report. New Mexico's total alcohol-related death rate increased 16% from 1990 through 2012, driven by a 19% increase in alcohol-related injury death rates from 2001 through 2012. By contrast, the US alcohol-related death rate decreased eight percent from 1990 through 2011. Although the alcohol-related chronic disease death rate has remained fairly stable from 1990 to 2009 in NM, from 2010 to 2012 there has been a 16% increase in the alcohol-related chronic disease death rate.

Chart 1: Alcohol-Related Death Rates*, New Mexico and United States, 1990-2015

![Chart 1: Alcohol-Related Death Rates*](image)

* Rate per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files (NM); NCHS death and population files (US); CDC ARDI; SAES

Table 1: Alcohol-Related Deaths and Rates* by Age, Sex, and Race/Ethnicity, New Mexico, 2011-2015

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<th>Race/Ethnicity</th>
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<th>Rates*</th>
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<tr>
<td></td>
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<td>Total</td>
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* Age-specific rates (e.g., Ages 0-24) are per 100,000; all-ages rate is per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC ARDI; SAES
ALCOHOL-RELATED DEATH (continued)

Problem Statement (continued)

Table 1 shows that death rates from alcohol-related causes increase with age. However, there were substantial numbers of alcohol-related deaths in the 0-24 year age category (these are mostly injury-related); and large numbers and high rates of alcohol-related death in the 25-64 year age category (due to both chronic disease and injury). Table 1 also shows extremely high alcohol-related death rates among American Indians (more than twice the state rate for both males and females); and a relatively high rate among Hispanic males relative to White non-Hispanic males. As will be shown in later sections, the rate disparities for American Indian males are driven by this group’s relatively high rates of both alcohol-related injury and alcohol-related chronic disease death; whereas the rate disparities for Hispanic males and American Indian females are driven largely by their relatively high alcohol-related chronic disease death rates.

Table 2 shows that Rio Arriba and McKinley counties had the highest rates of alcohol-related death, with rates more than twice the state rate and almost four times the national rate. Several other counties (Cibola, San Miguel, San Juan, and Taos) had a substantial burden (20 or more alcohol-related deaths per year) and rates more than twice the US rate. High rates among American Indian males and females drive the rates in McKinley, Cibola, and San Juan counties; Rio Arriba and Taos counties have high rates among American Indian males and females and Hispanic males; deaths among Hispanic males drive the high rates in San Miguel County (data by gender not shown).

Table 2: Alcohol-Related Deaths and Rates* by Race/Ethnicity and County, New Mexico, 2011-2015

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<td>Socorro</td>
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<td>48</td>
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<td>0</td>
<td>54.6</td>
<td>53.9</td>
<td>55.0</td>
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<td>0</td>
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<td>64.2</td>
<td>26.9</td>
<td>37.0</td>
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<td>121</td>
<td>81</td>
<td>217</td>
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<td>85.0</td>
<td>24.5</td>
<td>56.2</td>
<td>49.8</td>
<td>54.3</td>
</tr>
<tr>
<td>New Mexico</td>
<td>1,166</td>
<td>24</td>
<td>90</td>
<td>2,586</td>
<td>2,281</td>
<td>6,188</td>
<td>137.6</td>
<td>13.9</td>
<td>41.9</td>
<td>57.4</td>
<td>43.3</td>
<td>57.2</td>
</tr>
</tbody>
</table>

* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC ARDI; SAES
ALCOHOL-RELATED DEATH (continued)

Chart 2: Alcohol-Related Death Rates* by County, New Mexico, 2011-2015

County (# of deaths; % of statewide deaths)

<table>
<thead>
<tr>
<th>County</th>
<th># of deaths</th>
<th>% of statewide deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rio Arriba</td>
<td>294</td>
<td>4.7%</td>
</tr>
<tr>
<td>McKinley</td>
<td>415</td>
<td>6.7%</td>
</tr>
<tr>
<td>Cibola</td>
<td>120</td>
<td>1.9%</td>
</tr>
<tr>
<td>Mora</td>
<td>18</td>
<td>0.3%</td>
</tr>
<tr>
<td>San Juan</td>
<td>455</td>
<td>7.4%</td>
</tr>
<tr>
<td>San Miguel</td>
<td>114</td>
<td>1.8%</td>
</tr>
<tr>
<td>Socorro</td>
<td>62</td>
<td>1.0%</td>
</tr>
<tr>
<td>Catron</td>
<td>13</td>
<td>0.2%</td>
</tr>
<tr>
<td>Taos</td>
<td>128</td>
<td>2.1%</td>
</tr>
<tr>
<td>Sierra</td>
<td>59</td>
<td>0.9%</td>
</tr>
<tr>
<td>Quay</td>
<td>32</td>
<td>0.5%</td>
</tr>
<tr>
<td>Guadalupe</td>
<td>18</td>
<td>0.3%</td>
</tr>
<tr>
<td>Hidalgo</td>
<td>16</td>
<td>0.3%</td>
</tr>
<tr>
<td>New Mexico</td>
<td>6188</td>
<td>100.0%</td>
</tr>
<tr>
<td>Eddy</td>
<td>160</td>
<td>2.6%</td>
</tr>
<tr>
<td>Santa Fe</td>
<td>445</td>
<td>7.2%</td>
</tr>
<tr>
<td>Torrance</td>
<td>48</td>
<td>0.8%</td>
</tr>
<tr>
<td>Valencia</td>
<td>217</td>
<td>3.5%</td>
</tr>
<tr>
<td>Chaves</td>
<td>181</td>
<td>2.9%</td>
</tr>
<tr>
<td>Bernalillo</td>
<td>1883</td>
<td>30.4%</td>
</tr>
<tr>
<td>Grant</td>
<td>91</td>
<td>1.5%</td>
</tr>
<tr>
<td>Otero</td>
<td>179</td>
<td>2.9%</td>
</tr>
<tr>
<td>Sandoval</td>
<td>357</td>
<td>5.8%</td>
</tr>
<tr>
<td>Lincoln</td>
<td>61</td>
<td>1.0%</td>
</tr>
<tr>
<td>Colfax</td>
<td>38</td>
<td>0.6%</td>
</tr>
<tr>
<td>Lea</td>
<td>137</td>
<td>2.2%</td>
</tr>
<tr>
<td>Luna</td>
<td>61</td>
<td>1.0%</td>
</tr>
<tr>
<td>Dona Ana</td>
<td>420</td>
<td>6.8%</td>
</tr>
<tr>
<td>Curry</td>
<td>93</td>
<td>1.5%</td>
</tr>
<tr>
<td>De Baca</td>
<td>4</td>
<td>0.1%</td>
</tr>
<tr>
<td>Union</td>
<td>10</td>
<td>0.2%</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>29</td>
<td>0.5%</td>
</tr>
<tr>
<td>Los Alamos</td>
<td>28</td>
<td>0.5%</td>
</tr>
<tr>
<td>Harding</td>
<td>1</td>
<td>0.0%</td>
</tr>
<tr>
<td>United States, 2015</td>
<td></td>
<td>32.2%</td>
</tr>
</tbody>
</table>

* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files (NM); NCHS death and population files (US); CDC ARDI; SAES

New Mexico Substance Abuse Epidemiology Profile Page 5
ALCOHOL-RELATED DEATH (continued)

Chart 3: Alcohol-Related Death Rates* by County, New Mexico, 2011-2015

* All rates are per 100,000, age-adjusted to the 2000 US standard population
Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC ARDI; SAES

Alcohol-related Deaths

State rate = 57.2

- < 57.2
- 57.2 - < 85.8
- >= 85.8
Problem Statement

Chronic heavy drinking (defined as drinking, on average, more than two drinks per day for men, and more than one drink per day for women) often is associated with alcoholism or alcohol dependence, and can cause or contribute to a number of diseases, including alcoholic liver cirrhosis. For the past 15 years, New Mexico's death rate from alcohol-related chronic disease has consistently been first or second in the nation, and 1.5 to two times the national rate. The national death rate from alcohol-related chronic disease in 2015 (13.9) was the same as that in 1990. In contrast, New Mexico's rate increased 52 percent from 1990 to 2015.

Chart 1 shows the five leading causes of alcohol-related chronic disease death in New Mexico during 2010-2014. Alcohol-related chronic liver disease (AR-CLD) was the leading cause of alcohol-related death overall, and of alcohol-related chronic disease death during this period. This cause of death will be discussed in more detail later in this report. New Mexico also had the highest rate of alcohol dependence death in the US for the period 1999 through 2010 (the most recent year for which state comparison data is available).

Table 1 shows that death rates from alcohol-related chronic diseases increase with age. The large number of deaths in the 25-64 age category illustrates the very large burden of premature mortality associated with alcohol-related chronic disease. The high rates in this age category among American Indians (both males and females) and Hispanic males further illustrate the heavy burden of premature death due to heavy drinking in these racial/ethnic groups.

Chart 1: Leading Causes of Alcohol-Related Chronic Disease Death, New Mexico, 2011-2015

<table>
<thead>
<tr>
<th>Alcohol-related* deaths due to:</th>
<th>Deaths</th>
<th>Rate **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic liver disease</td>
<td>18.3</td>
<td></td>
</tr>
<tr>
<td>Alcohol abuse</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>Alcohol dependence</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td>Hypertension</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Liver cancer</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Stroke hemorrhagic</td>
<td>0.4</td>
<td></td>
</tr>
</tbody>
</table>

* Rates reflect only alcohol-attributable portion of deaths from cause
** Rate per 100,000, age-adjusted to the 2000 US standard population

Table 1: Alcohol-Related Chronic Disease Deaths/Rates* by Age, Sex, and Race/Ethnicity, New Mexico, 2011-2015

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>Ages 0-24</th>
<th>Ages 25-64</th>
<th>Ages 65+</th>
<th>All Ages</th>
<th>Ages 0-24</th>
<th>Ages 25-64</th>
<th>Ages 65+</th>
<th>All Ages*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>5</td>
<td>360</td>
<td>61</td>
<td>426</td>
<td>2.8</td>
<td>163.9</td>
<td>184.3</td>
<td>111.3</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>0.0</td>
<td>9.0</td>
<td>15.6</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>0</td>
<td>20</td>
<td>9</td>
<td>29</td>
<td>0.0</td>
<td>30.4</td>
<td>84.3</td>
<td>25.4</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>3</td>
<td>804</td>
<td>237</td>
<td>1,044</td>
<td>0.3</td>
<td>67.6</td>
<td>107.7</td>
<td>48.5</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>3</td>
<td>518</td>
<td>250</td>
<td>771</td>
<td>0.6</td>
<td>46.0</td>
<td>58.2</td>
<td>27.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>12</td>
<td>1,718</td>
<td>562</td>
<td>2,292</td>
<td>0.6</td>
<td>65.0</td>
<td>80.3</td>
<td>41.9</td>
</tr>
<tr>
<td>Female</td>
<td>American Indian</td>
<td>1</td>
<td>234</td>
<td>43</td>
<td>277</td>
<td>0.3</td>
<td>96.7</td>
<td>89.4</td>
<td>62.3</td>
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<td>1</td>
<td>4</td>
<td>0.0</td>
<td>6.4</td>
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<td>8</td>
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<td>10</td>
<td>0.0</td>
<td>16.6</td>
<td>16.0</td>
<td>9.6</td>
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<tr>
<td></td>
<td>Hispanic</td>
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<td>250</td>
<td>108</td>
<td>362</td>
<td>0.3</td>
<td>20.8</td>
<td>39.9</td>
<td>15.9</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>1</td>
<td>211</td>
<td>116</td>
<td>327</td>
<td>0.1</td>
<td>18.5</td>
<td>23.2</td>
<td>11.3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4</td>
<td>710</td>
<td>270</td>
<td>984</td>
<td>0.3</td>
<td>26.4</td>
<td>32.1</td>
<td>17.3</td>
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<tr>
<td>Total</td>
<td>American Indian</td>
<td>6</td>
<td>594</td>
<td>104</td>
<td>703</td>
<td>1.5</td>
<td>128.7</td>
<td>128.1</td>
<td>84.7</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>0</td>
<td>8</td>
<td>2</td>
<td>9</td>
<td>0.0</td>
<td>7.6</td>
<td>9.0</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
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<td>28</td>
<td>11</td>
<td>39</td>
<td>0.0</td>
<td>24.7</td>
<td>49.5</td>
<td>18.0</td>
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<tr>
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<td>44.0</td>
<td>70.3</td>
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<tr>
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<td>726</td>
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<td>32.1</td>
<td>39.4</td>
<td>18.9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>16</td>
<td>2,428</td>
<td>832</td>
<td>3,276</td>
<td>0.4</td>
<td>45.5</td>
<td>54.0</td>
<td>29.2</td>
</tr>
</tbody>
</table>

* Age-specific rates (e.g., Ages 0-24) are per 100,000; all-ages rate is per 100,000, age-adjusted to the 2000 US standard population
Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC ARDI; SAES
Table 2 shows Rio Arriba, McKinley, and Cibola counties have the highest death rates for diseases associated with alcohol-related chronic disease. In these counties, the rates are more than 4 times the national rate (13.3). The high rates in McKinley and Cibola counties are driven by unusually high rates in the American Indian population. In Rio Arriba County, the rate is driven by high rates in both the Hispanic and American Indian populations. It is worth noting the considerable variation across counties in American Indian alcohol-related chronic disease death rates, with substantially lower rates seen in San Juan County than in Cibola, McKinley, and Rio Arriba counties. It is also important to remember that these chronic disease deaths represent only the tip of the iceberg of health and social problems associated with chronic heavy alcohol use in New Mexico. For every alcohol-related death, there are many living persons (and their families) impaired by serious morbidity and reduced quality of life due to chronic alcohol abuse.

Table 2: Alcohol-Related Chronic Disease Deaths and Rates* by Race/Ethnicity and County, New Mexico, 2011-2015

<table>
<thead>
<tr>
<th>County</th>
<th>American Indian</th>
<th>Asian/Pacific Islander</th>
<th>Black</th>
<th>Hispanic</th>
<th>White</th>
<th>All Races</th>
<th>American Indian</th>
<th>Asian/Pacific Islander</th>
<th>Black</th>
<th>Hispanic</th>
<th>White</th>
<th>All Races</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernalillo</td>
<td>120</td>
<td>3</td>
<td>20</td>
<td>483</td>
<td>379</td>
<td>1,017</td>
<td>95.8</td>
<td>3</td>
<td>18.6</td>
<td>33.6</td>
<td>20.0</td>
<td>28.0</td>
</tr>
<tr>
<td>Catron</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>1</td>
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<td>11.5</td>
</tr>
<tr>
<td>Chaves</td>
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<td>1</td>
<td>40</td>
<td>48</td>
<td>88</td>
<td>0.0</td>
<td>0</td>
<td>10.3</td>
<td>27.8</td>
<td>23.8</td>
<td>25.2</td>
</tr>
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<td>14</td>
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<td>43.0</td>
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</tr>
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<td>0</td>
<td>12</td>
<td>4</td>
<td>17</td>
<td>0.0</td>
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<td>0</td>
<td>33.9</td>
<td>6.7</td>
<td>18.3</td>
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<td>Curry</td>
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<td>3</td>
<td>16</td>
<td>23</td>
<td>42</td>
<td>48.8</td>
<td>0</td>
<td>25.5</td>
<td>22.6</td>
<td>15.9</td>
<td>18.3</td>
</tr>
<tr>
<td>De Baca</td>
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<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0.0</td>
<td>0</td>
<td>0</td>
<td>38.5</td>
<td>7.1</td>
<td>18.9</td>
</tr>
<tr>
<td>Dona Ana</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>117</td>
<td>89</td>
<td>213</td>
<td>39.6</td>
<td>15.3</td>
<td>15.4</td>
<td>19.6</td>
<td>19.3</td>
<td>19.7</td>
</tr>
<tr>
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<td>0</td>
<td>38</td>
<td>41</td>
<td>79</td>
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<td>0</td>
<td>0</td>
<td>34.4</td>
<td>25.1</td>
<td>26.8</td>
</tr>
<tr>
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<td>0</td>
<td>1</td>
<td>22</td>
<td>25</td>
<td>51</td>
<td>220.1</td>
<td>0</td>
<td>0</td>
<td>105.6</td>
<td>27.0</td>
<td>20.8</td>
</tr>
<tr>
<td>Guadalupe</td>
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<td>11</td>
<td>0</td>
<td>11</td>
<td>0.0</td>
<td>0</td>
<td>0</td>
<td>44.5</td>
<td>4.0</td>
<td>36.2</td>
</tr>
<tr>
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<td>0</td>
<td>0</td>
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<td>7</td>
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<td>0</td>
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<td>47.9</td>
<td>6.8</td>
<td>29.5</td>
</tr>
<tr>
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<td>23</td>
<td>23</td>
<td>47</td>
<td>0.0</td>
<td>9.1</td>
<td>19.7</td>
<td>13.3</td>
<td>14.7</td>
<td>14.7</td>
</tr>
<tr>
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<td>0</td>
<td>0</td>
<td>3</td>
<td>27</td>
<td>32</td>
<td>93.8</td>
<td>0</td>
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<td>12.7</td>
<td>25.8</td>
<td>23.8</td>
</tr>
<tr>
<td>Los Alamos</td>
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<td>0</td>
<td>0</td>
<td>2</td>
<td>12</td>
<td>15</td>
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* All rates are per 100,000, age-adjusted to the 2000 US standard population
Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC ARDI; SAES
ALCOHOL-RELATED CHRONIC DISEASE DEATH (continued)

Chart 2: Alcohol-Related Chronic Disease Death Rates* by County, New Mexico, 2011-2015

<table>
<thead>
<tr>
<th>County (number of deaths)</th>
<th># of deaths</th>
<th>% of statewide deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rio Arriba</td>
<td>185</td>
<td>5.7%</td>
</tr>
<tr>
<td>McKinley</td>
<td>227</td>
<td>6.9%</td>
</tr>
<tr>
<td>Cibola</td>
<td>78</td>
<td>2.4%</td>
</tr>
<tr>
<td>San Miguel</td>
<td>65</td>
<td>2.0%</td>
</tr>
<tr>
<td>Guadalupe</td>
<td>11</td>
<td>0.3%</td>
</tr>
<tr>
<td>Quay</td>
<td>19</td>
<td>0.6%</td>
</tr>
<tr>
<td>Socorro</td>
<td>33</td>
<td>1.0%</td>
</tr>
<tr>
<td>San Juan</td>
<td>213</td>
<td>6.5%</td>
</tr>
<tr>
<td>Sierra</td>
<td>32</td>
<td>1.0%</td>
</tr>
<tr>
<td>Taos</td>
<td>66</td>
<td>2.0%</td>
</tr>
<tr>
<td>Hidalgo</td>
<td>7</td>
<td>0.2%</td>
</tr>
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</tr>
<tr>
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<td>31.0%</td>
</tr>
<tr>
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<td>Sandoval</td>
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<td>6.1%</td>
</tr>
<tr>
<td>Eddy</td>
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<td>2.4%</td>
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<td>Valencia</td>
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</tr>
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<tr>
<td>Union</td>
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<td>0.2%</td>
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<td>Dona Ana</td>
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<tr>
<td>De Baca</td>
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</tr>
<tr>
<td>Curry</td>
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</tr>
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<td>Colfax</td>
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<td>Mora</td>
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<td>Lea</td>
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<td>Los Alamos</td>
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</tr>
<tr>
<td>Roosevelt</td>
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<td>0.3%</td>
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<td>Catron</td>
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<tr>
<td>Harding</td>
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</table>

* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files (NM); NCHS death and population files (US); CDC ARDI; SAES
ALCOHOL-RELATED CHRONIC DISEASE DEATH (continued)

Chart 3: Alcohol-Related Chronic Disease Death Rates* by County, New Mexico, 2011-2015

* All rates are per 100,000, age-adjusted to the 2000 US standard population
Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC ARDI; SAES
ALCOHOL-RELATED CHRONIC LIVER DISEASE (CLD) DEATH

Problem Statement

Alcohol-related chronic liver disease (AR-CLD) is a progressive disease caused by alcohol abuse. It imposes a heavy burden of morbidity and mortality in New Mexico, and it is the principal driver of New Mexico’s consistently high alcohol-related chronic disease death rate. Over the past 30 years, New Mexico’s AR-CLD rate has trended upward, while the national rate has decreased 20%. In 1993, AR-CLD surpassed alcohol-related motor vehicle crash death as the leading cause of alcohol-related death in New Mexico. Since 1997, New Mexico’s death rate from AR-CLD has consistently been substantially higher than the death rate from alcohol-related motor vehicle crashes.

Chart 1: Alcohol-Related CLD Death Rates* by Age, Sex, and Race/Ethnicity, New Mexico, 2011-2015

Table 1: Alcohol-Related CLD Deaths and Rates* by Age, Sex, and Race/Ethnicity, New Mexico, 2011-2015

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<thead>
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<th>Race/Ethnicity</th>
<th>Deaths</th>
<th>Rates*</th>
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<td>Ages 25-64</td>
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<td>Total</td>
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<tr>
<td></td>
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<td>517</td>
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<tr>
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<td>Total</td>
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* Age-specific rates (e.g., Ages 0-24) are per 100,000; all-ages rate is per 100,000, age-adjusted to the 2000 US standard population.

Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC ARDI; SAES
ALCOHOL-RELATED CHRONIC LIVER DISEASE (CLD) DEATH (continued)

Problem Statement (continued)

As Table 1 shows, more than 75% of AR-CLD deaths occur before age 65. Chart 1 shows the demographic distribution of AR-CLD death rates and graphically illustrates the extremely high burden of premature mortality this disease places on the American Indian population (both male and female), as well as on the Hispanic male population. The high death rates among American Indians and Hispanic males in the 35-64 age range represent a tremendous burden in terms of years of potential life lost (YPLLs), which estimates the average years a person would have lived if he or she had not died prematurely.

Chart 2 shows that AR-CLD death rates in Rio Arriba and McKinley counties are more than five times the national rate. Almost half of New Mexico's counties have rates more than twice the US rate. A number of counties with rates less than twice the US rate (e.g., Chaves, Dona Ana, Santa Fe) still have high rates compared to the US, and substantial numbers of deaths. The American Indian and/or Hispanic male rates tend to drive the county rates in all counties (data not shown). It is worth noting the relatively lower rates for American Indians in San Juan County and for Hispanics in Dona Ana County (Table 2).

Table 2: Alcohol-Related CLD Deaths and Rates* by Race/Ethnicity and County, New Mexico, 2011-2015

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* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC ARDI; SAES
ALCOHOL-RELATED CHRONIC LIVER DISEASE (CLD) DEATH (continued)

Chart 2: Alcohol-Related CLD Death Rates* by County, New Mexico, 2011-2015

* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files (NM); NCHS death and population files (US); CDC ARDI; SAES

New Mexico Substance Abuse Epidemiology Profile
* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC ARDI; SAES
**Problem Statement**

Excessive alcohol use is the most common cause of CLD. Other causes (e.g., acetaminophen use) are less common. CLD can develop over many years, in some cases 20-30 years, and data on hospitalizations can provide information on CLD risk at an earlier time point in the disease’s development than AR-CLD mortality. However, CLD hospitalizations are not limited to alcohol-related conditions, and include all hospital stays where the primary diagnosis was determined to be CLD. Additionally, CLD hospitalizations measure number of hospital stays rather than individuals diagnosed with CLD (i.e., a person can be hospitalized more than once). The rate of CLD hospitalizations in 2015 (57.7 hospitalizations per 100,000) was 2.5% lower than that of 2010 (59.2 hospitalizations per 100,000). Women are at lower risk than men. Women who identify as Asian or Pacific Islander have the lowest rates whereas men who identify as American Indian have the highest rates.

**Chart 1: Chronic Liver Disease Hospital Discharge Rates*, New Mexico, 2010-2015**

![Graph showing hospital discharge rates over years](image-url)

* Rates per 100,000

Sources: NMDOH HIDD files and UNM-GPS population files; SAES

### Table 1: CLD Hospital Discharges and Rates* by Age, Sex, and Race/Ethnicity, New Mexico, 2011-2015

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<th>Rates*</th>
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* Age-specific rates (e.g., Ages 0-24) are per 100,000; all-ages rate is per 100,000, age-adjusted to the 2000 US standard population. There were 532 visits for which Race/Ethnicity or Sex was missing.

Sources: NMDOH HIDD files and UNM-GPS population files; SAES
Problem Statement (continued)

The number of hospitalizations for CLD can be used as a measure of the impact of CLD on the medical system and the need for care. From 2011 to 2015, there were 7,530 hospitalizations reported by non-federal facilities. This equates to approximately four hospitalizations for CLD every day in New Mexico.

For 2011-2015, Sierra County had the highest rate of CLD hospitalizations (121.6 hospitalizations per 100,000 population), followed by McKinley (118.3 hospitalizations per 100,000 population), Socorro (114.2 hospitalizations per 100,000 population), and Cibola (113.6 hospitalizations per 100,000 population). Eddy County had the lowest rate (13.6 hospitalizations per 100,000 population).

It is important to note that federal facilities (e.g., Indian Health Services and Veterans Administration) are not included in these results.

Table 2: Chronic Liver Disease Hospital Discharges and Rates* by County, New Mexico, 2011-2015

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* All rates are per 100,000, age-adjusted to the 2000 US standard population. There were 533 visits for which County of Residence was missing.

Sources: NMDOH HIDD files and UNM-GPS population files; SAES
CHRONIC LIVER DISEASE (CLD) HOSPITAL DISCHARGES (continued)

Chart 2: Chronic Liver Disease Hospital Discharges and Rates* by County, New Mexico, 2011-2015

* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH HIDD files and UNM-GPS population files (NM); SAES

New Mexico Substance Abuse Epidemiology Profile
CHRONIC LIVER DISEASE (CLD) HOSPITAL DISCHARGES (continued)

Chart 3: Chronic Liver Disease Hospital Discharges Rates* by County, New Mexico, 2011-2015

* All rates are per 100,000, age-adjusted to the 2000 US standard population
Sources: NMDOH HIDD files and UNM-GPS population files; SAES
ALCOHOL-RELATED INJURY DEATH

Problem Statement

Binge drinking (defined as having five drinks or more on an occasion for men, and four drinks or more on an occasion for women) is a high-risk behavior associated with numerous injury outcomes, including motor vehicle fatalities, homicide, and suicide. Since 1990, New Mexico’s death rate for alcohol-related (AR) injury has consistently been among the highest in the nation, ranging from 1.4 to 1.8 times the national rate. While NM’s alcohol-impaired motor vehicle crash fatality rates have declined almost 60% during this period, death rates from other AR injuries have increased. Chart 1 shows the substantial increase in AR fall injury and AR poisoning death rates since the early 90s; the AR fall death rate peaked in 2007-09 and has declined since, while AR poisoning has continued to rise. These increases have more than offset the decline in AR motor vehicle crash deaths, as well as a slight increase in AR suicide death rate, to drive an overall 29% increase in New Mexico’s AR injury death during the period 1990-2015. During the period 2008-2015, AR poisoning deaths replaced AR motor vehicle crash deaths as the leading cause of alcohol-related injury death in New Mexico.

Table 1 shows that total death rates from AR injuries increase with age. However, there were substantially high numbers and rates of AR injury death in the lowest age category (age 0-24), with especially high rates among American Indian and Hispanic males. Deaths in this age category represent a very large burden of premature mortality (YPLL).

Chart 1: Top 3 Leading Causes of Alcohol-Related Injury Death, New Mexico, 1981-2015

Table 1: Alcohol-Related Injury Deaths and Rates* by Age, Sex, and Race/Ethnicity, New Mexico, 2011-2015

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<th>Deaths</th>
<th>Rates</th>
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*Age-specific rates (e.g., Ages 0-24) are per 100,000; all-ages rate is per 100,000, age-adjusted to the 2000 US standard population.
ALCOHOL-RELATED INJURY DEATH (continued)

Problem Statement (continued)

Table 1 shows that males are more at risk of AR injury death than females. Male rates are two to four times higher than female rates, across race/ethnic categories. American Indian males had the highest risk, with a rate more than three times the state rate and more than twice the White male rate. Hispanic males are also at risk, with a rate of 13.6% (1.1 times) higher than the rate for White males.

Table 2 shows that AR injury is a serious issue in many New Mexico counties. Mora, Rio Arriba, Catron, and McKinley counties have rates more than three times the US rate. Nine New Mexico counties have rates more than twice the US rate (see Chart 2); and two-thirds have rates 1.5 times that of the US rate, or more. A number of counties have both high rates and a relatively heavy burden (e.g., 20 or more alcohol-related injury deaths per year). Rio Arriba County's high rate is driven by high rates in both the Hispanic and American Indian population; but most of the burden of deaths falls on the Hispanic population. In McKinley and San Juan counties, elevated rates are driven by high rates in the American Indian population. Santa Fe County's high rate is driven by elevated rates in the Hispanic population.

Table 2: Alcohol-Related Injury Deaths and Rates* by Race/Ethnicity and County, New Mexico, 2011-2015

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<td>28.0</td>
</tr>
</tbody>
</table>

* All rates are per 100,000, age-adjusted to the 2000 US standard population
**ALCOHOL-RELATED INJURY DEATH (continued)**

**Chart 2: Alcohol-Related Injury Death Rates* by County, New Mexico, 2011-2015**

<table>
<thead>
<tr>
<th>County</th>
<th>Rate*</th>
<th>(% of statewide deaths)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mora (13; 0.4%)</td>
<td>61.9</td>
<td></td>
</tr>
<tr>
<td>Rio Arriba (109; 3.7%)</td>
<td>58.2</td>
<td></td>
</tr>
<tr>
<td>Catron (9; 0.3%)</td>
<td>56.6</td>
<td></td>
</tr>
<tr>
<td>McKinley (188; 6.5%)</td>
<td>56.0</td>
<td></td>
</tr>
<tr>
<td>San Juan (242; 8.3%)</td>
<td>39.5</td>
<td></td>
</tr>
<tr>
<td>Taos (62; 2.1%)</td>
<td>38.3</td>
<td></td>
</tr>
<tr>
<td>Sierra (26; 0.9%)</td>
<td>37.1</td>
<td></td>
</tr>
<tr>
<td>Hidalgo (8; 0.3%)</td>
<td>35.4</td>
<td></td>
</tr>
<tr>
<td>Socorro (29; 1.0%)</td>
<td>34.5</td>
<td></td>
</tr>
<tr>
<td>San Miguel (49; 1.7%)</td>
<td>33.1</td>
<td></td>
</tr>
<tr>
<td>Torrance (26; 0.9%)</td>
<td>33.0</td>
<td></td>
</tr>
<tr>
<td>Cibola (42; 1.4%)</td>
<td>30.8</td>
<td></td>
</tr>
<tr>
<td>Colfax (21; 0.7%)</td>
<td>30.8</td>
<td></td>
</tr>
<tr>
<td>Eddy (81; 2.8%)</td>
<td>30.1</td>
<td></td>
</tr>
<tr>
<td>Quay (13; 0.4%)</td>
<td>29.8</td>
<td></td>
</tr>
<tr>
<td>Guadalupe (7; 0.2%)</td>
<td>29.4</td>
<td></td>
</tr>
<tr>
<td>Lea (89; 3.1%)</td>
<td>28.6</td>
<td></td>
</tr>
<tr>
<td>Chaves (93; 3.2%)</td>
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<td></td>
</tr>
<tr>
<td>New Mexico (2912; 100.0%)</td>
<td>28.0</td>
<td></td>
</tr>
<tr>
<td>Grant (40; 1.4%)</td>
<td>27.8</td>
<td></td>
</tr>
<tr>
<td>Santa Fe (204; 7.0%)</td>
<td>27.8</td>
<td></td>
</tr>
<tr>
<td>Valencia (104; 3.6%)</td>
<td>27.7</td>
<td></td>
</tr>
<tr>
<td>Lincoln (29; 1.0%)</td>
<td>25.7</td>
<td></td>
</tr>
<tr>
<td>Bernalillo (866; 29.7%)</td>
<td>25.0</td>
<td></td>
</tr>
<tr>
<td>Sandoval (159; 5.4%)</td>
<td>23.7</td>
<td></td>
</tr>
<tr>
<td>Otero (77; 2.7%)</td>
<td>23.2</td>
<td></td>
</tr>
<tr>
<td>Curry (51; 1.7%)</td>
<td>21.1</td>
<td></td>
</tr>
<tr>
<td>Luna (28; 0.9%)</td>
<td>20.7</td>
<td></td>
</tr>
<tr>
<td>Dona Ana (206; 7.1%)</td>
<td>20.2</td>
<td></td>
</tr>
<tr>
<td>Roosevelt (18; 0.6%)</td>
<td>19.1</td>
<td></td>
</tr>
<tr>
<td>De Baca (2; 0.1%)</td>
<td>19.0</td>
<td></td>
</tr>
<tr>
<td>Union (4; 0.1%)</td>
<td>16.3</td>
<td></td>
</tr>
<tr>
<td>Los Alamos (13; 0.5%)</td>
<td>13.4</td>
<td></td>
</tr>
<tr>
<td>Harding (0; 0.0%)</td>
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</tr>
<tr>
<td>United States, 2015</td>
<td>56.0</td>
<td></td>
</tr>
</tbody>
</table>

*All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files (NM); NCHS death and population files (US); CDC ARDI; SAES
ALCOHOL-RELATED INJURY DEATH (continued)

Chart 3: Alcohol-Related Injury Death Rates* by County, New Mexico, 2011-2015

* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC ARDI; SAES

New Mexico Substance Abuse Epidemiology Profile
Problem Statement

Alcohol-related motor vehicle traffic crash (AR-MVTC) death has historically been the leading cause of alcohol-related injury death. Nonetheless, AR-MVTC deaths provide a hopeful example of a substance-related health outcome that has been successfully reduced by using a public health approach, both nationally and in New Mexico. From 1982 through 2010, in response to a wide range of policy and preventive interventions, New Mexico's alcohol-impaired motor vehicle traffic crash (AI-MVTC) fatality rate declined more dramatically than the US rate, decreasing 83% and dropping New Mexico from first to tenth among states in AI-MVTC fatalities per 100,000 population. In terms of deaths per 100 million vehicle miles traveled (VMT), New Mexico's AI-MVTC fatality rate in 2015 (0.38) was one-sixth what it was in 1982 (2.4). Furthermore, a comprehensive AR-MVTC prevention campaign in place from 2005-2009 was successful in reinitiating rate decreases that had been stalled since the late 1990s. From 2004 to 2012 New Mexico's AI-MVTC fatality rate per 100 million VMT dropped 42%. Rates increased slightly in 2014 and dropped back in 2015.

Chart 1: Alcohol-Impaired MVTC Fatality Rates*, New Mexico and United States, 1982-2015

* Deaths in motor vehicle traffic crashes with highest driver blood alcohol content (BAC) >= 0.08; rates are crude rates per 100 million vehicle miles traveled (VMT) (NM and US); and per 100,000 population (NM)

Source: National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS); NCHS (population)

Table 1: Alcohol-Related MVTC Deaths/Rates1,2 by Age, Sex, and Race/Ethnicity, New Mexico, 2011-2015

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>Deaths</th>
<th>Rates*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Ages 0-24</td>
<td>Ages 25-64</td>
</tr>
<tr>
<td>Male</td>
<td>American Indian</td>
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<td>78</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
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<td>3</td>
</tr>
<tr>
<td></td>
<td>Black</td>
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<td>7</td>
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<tr>
<td></td>
<td>Hispanic</td>
<td>52</td>
<td>129</td>
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<tr>
<td></td>
<td>White</td>
<td>19</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>94</td>
<td>311</td>
</tr>
<tr>
<td>Female</td>
<td>American Indian</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Black</td>
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<td>1</td>
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<tr>
<td></td>
<td>Hispanic</td>
<td>19</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>34</td>
<td>83</td>
</tr>
<tr>
<td>Total</td>
<td>American Indian</td>
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<td>White</td>
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<td>112</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>129</td>
<td>393</td>
</tr>
</tbody>
</table>

* Age-specific rates (e.g., Ages 0-24) per 100,000 population; all-ages rate per 100,000 population, age-adjusted to 2000 US standard population
1 Alcohol-related motor vehicle traffic crash (AR-MVTC) deaths estimated based on CDC ARDI alcohol-attributable fractions (BAC>=0.10)
2 These death counts/rates are estimates. They do not equal the actual deaths/rates reported in Charts 1-3 based on FARS. ARDI-based deaths/rates are included here to describe the demographic distribution of AR-MVTC deaths, which is not available from FARS.

Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC ARDI; SAES
ALCOHOL-RELATED MOTOR VEHICLE TRAFFIC CRASH (MVTC) DEATH

Problem Statement (continued)

Table 1 shows the demographic distribution of AR-MVTC deaths in New Mexico. Because demographic data are not readily available from the system of record for motor vehicle crash death (the Fatality Analysis Reporting System [FARS] used for Charts 1-3), death certificate data for alcohol-related motor vehicle crash deaths were used here to provide the demographic descriptions in Tables 1 and 2. Because they are based on different data sources, the total and county-level rates reported in Tables 1 and 2 do not match the rates reported in Charts 1-3. The most pronounced feature of the demographic profile of AR-MVTC deaths is the elevated rates among both male and female American Indians. A finer breakdown by age (not shown) shows that rates are especially high - five to nine times the corresponding White rates - among American Indian males and females ages 25-44. Hispanic and White rates are highest in the age range 15-54, with a slight elevation of Hispanic rates (by a factor of 1.3) relative to White rates across all ages. Chart 2 shows that, among counties for which stable rates can be calculated, Sandoval, McKinley, and Rio Arriba counties have substantial AI-MVTC fatalities and high rates; other counties have high rates but fewer deaths. Table 2 shows that McKinley and San Juan counties rates are driven by the American Indian rates (both male and female rates are high, data not shown); and that the Rio Arriba County rate is driven by the Hispanic rate (the male rate is high, data not shown) and the American Indian rate.

Table 2: Alcohol-Related MVTC Deaths and Rates* by Race/Ethnicity and County, New Mexico, 2011-2015

<table>
<thead>
<tr>
<th>County</th>
<th>American Indian</th>
<th>Asian/Pacific Islander</th>
<th>Black</th>
<th>Hispanic</th>
<th>White</th>
<th>All Races</th>
<th>American Indian</th>
<th>Asian/Pacific Islander</th>
<th>Black</th>
<th>Hispanic</th>
<th>White</th>
<th>All Races</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernalillo</td>
<td>13</td>
<td>1</td>
<td>3</td>
<td>69</td>
<td>35</td>
<td>121</td>
<td>8.0</td>
<td>1.3</td>
<td>2.6</td>
<td>4.2</td>
<td>2.4</td>
<td>3.5</td>
</tr>
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<td>Catron</td>
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<td>2</td>
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<td>4</td>
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<tr>
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<td>11</td>
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<td>0.0</td>
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<td>6</td>
<td>34.0</td>
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<td>0.0</td>
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<td>3.9</td>
</tr>
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<td>9.5</td>
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<td>3</td>
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<td>0.0</td>
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<td>1</td>
<td>11</td>
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<td>2</td>
<td>3</td>
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<td>7.1</td>
<td>7.5</td>
</tr>
<tr>
<td>Torrance</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>6.7</td>
<td>5.8</td>
<td>6.6</td>
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<td>Union</td>
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<td>0</td>
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<td>1</td>
<td>1</td>
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<td>0.0</td>
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<td>14</td>
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<td>21</td>
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<td>0.0</td>
<td>0.0</td>
<td>6.1</td>
<td>5.3</td>
<td>5.7</td>
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<tr>
<td>New Mexico</td>
<td>137</td>
<td>3</td>
<td>10</td>
<td>242</td>
<td>151</td>
<td>546</td>
<td>14.8</td>
<td>1.7</td>
<td>4.6</td>
<td>5.0</td>
<td>3.7</td>
<td>5.4</td>
</tr>
</tbody>
</table>

* All rates are per 100,000 population, age-adjusted to the 2000 US standard population

1 Alcohol-related motor vehicle traffic crash (AR-MVTC) deaths estimated based on CDC ARDI alcohol-attributable fractions (BAC>=0.10)

2 See footnote 2 for Table 1

Sources: NMDOH BVRS death files and UNM-GPS population files; CDC ARDI; SAES
Chart 2: Alcohol-Impaired MVTC Fatality Rates* by County, New Mexico, 2011-2015

1. Alcohol-impaired MVTC deaths are from FARS (highest driver BAC >=0.08); NM population from GPS, US population from NCHS

2. Numerator (deaths) based on county of occurrence; denominator (population) based on county of residence

All rates are crude per 100,000 population

Source: National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS); NCHS (US population); GPS (NM population)
**ALCOHOL-RELATED MOTOR VEHICLE TRAFFIC CRASH (MVTC) DEATH**

**Chart 3: Alcohol-Impaired MVTC Fatality Rates\(^1,2\) by County, New Mexico, 2011-2015**

*All rates are crude per 100,000 population*

1 Alcohol-impaired MVTC deaths are from FARS (highest driver BAC >=0.08); NM population from GPS, US population from NCHS

2 Numerator (deaths) based on county of occurrence; denominator (population) based on county of residence

Source: National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS); NCHS (US population); GPS (NM population)

---

* Alcohol-impaired Motor Vehicle Traffic Crash Fatality

State rate = 4.9

- Insufficient/Missing Data
- < 4.9
- 4.9 - < 7.4
- >= 7.4

---

* All rates are crude per 100,000 population

1 Alcohol-impaired MVTC deaths are from FARS (highest driver BAC >=0.08); NM population from GPS, US population from NCHS

2 Numerator (deaths) based on county of occurrence; denominator (population) based on county of residence

Source: National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS); NCHS (US population); GPS (NM population)
Problem Statement

Smoking is a risk factor for many causes of death and a serious source of preventable death in New Mexico. Chart 1 shows the five leading causes of smoking-related death in New Mexico, and Table 1 shows the cumulative deaths and rates for all smoking-related causes. Historically, New Mexico's rates for smoking-related causes, such as lung cancer have been among the lowest in the nation. Nonetheless, a comparison of New Mexico's smoking-related death rates to its alcohol- and drug-related death rates shows that the burden of death associated with smoking is still considerably greater than the burden associated with these other substances. This speaks to the public health importance of smoking prevention efforts, even in a state with low rates relative to the rest of the nation.

Table 1 shows the demographic distribution of smoking-related death in New Mexico. Smoking-related death rates increase sharply in the oldest age group (age 65+), consistent with the fact that smoking-related causes of death are mostly chronic conditions with a long development period. This is in contrast to alcohol- and drug-related deaths, both of which show a large burden of "premature" deaths (deaths before age 65+).

Chart 1: Leading Causes of Smoking-Related Death, New Mexico, 2011-2015

Table 1: Smoking-Related Deaths and Rates* by Age, Sex, and Race/Ethnicity, New Mexico, 2011-2015

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>Deaths</th>
<th>Rates*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Ages 0-24</td>
<td>Ages 25-64</td>
</tr>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>0</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>0</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>0</td>
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</tr>
<tr>
<td></td>
<td>White</td>
<td>0</td>
<td>1,116</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>0</td>
<td>1,934</td>
</tr>
<tr>
<td>Female</td>
<td>American Indian</td>
<td>0</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>0</td>
<td>270</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>0</td>
<td>629</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>0</td>
<td>982</td>
</tr>
<tr>
<td>Total</td>
<td>American Indian</td>
<td>0</td>
<td>144</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
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<td></td>
<td>Black</td>
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<td>77</td>
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<td></td>
<td>Hispanic</td>
<td>0</td>
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<td></td>
<td>White</td>
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<td>1,745</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>0</td>
<td>2,917</td>
</tr>
</tbody>
</table>

* Age-specific rates (e.g., Ages 0-24) are per 100,000; all-ages rate is per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC SAMMEC; SAES
Table 1 also shows that male rates are roughly 2 to 3 times female rates across all race/ethnic groups. Among males, Blacks have the highest rates followed by Whites; among females, Whites have the highest rates followed by Blacks.

Table 2 and Chart 2 show that the counties with the highest rates are Sierra, Luna, Lea, Quay, and Curry. The high rates in most of these counties (and in the state overall) are driven by high rates among Whites. However, there are notably elevated rates among Hispanics in Quay, Sierra, Union, and Curry counties; and, a substantial burden of smoking-related death among Hispanics in several other counties (e.g., Bernalillo, Dona Ana, and Santa Fe). The high rates of smoking-related death among Blacks in Bernalillo, Curry, Dona Ana, Lea, Otero, and Sandoval counties are also notable. The smoking-related death rates among the American Indian and Asian/Pacific Islander populations are relatively low.

NOTE: These tables are based on the Centers for Disease Control and Prevention Smoking Attributable Mortality, Morbidity, and Economic Costs (SAMMEC) methodology. However, CDC's SAMMEC site reports age-adjusted rates based on the age 35+ population; whereas this report calculates age-adjusted rates for the entire population. As a result, the smoking-attributable mortality rates reported here are lower than those reported by the CDC's SAMMEC site.
SMOKING-RELATED DEATH (continued)

Chart 2: Smoking-Related Death Rates* by County, New Mexico, 2011-2015

<table>
<thead>
<tr>
<th>County</th>
<th>Rate*</th>
<th>Percent of Statewide Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Mexico</td>
<td>175.3</td>
<td>100.0%</td>
</tr>
<tr>
<td>Grant</td>
<td>95.6</td>
<td>5.5%</td>
</tr>
<tr>
<td>Lincoln</td>
<td>93.0</td>
<td>5.1%</td>
</tr>
<tr>
<td>San Juan</td>
<td>92.9</td>
<td>5.0%</td>
</tr>
<tr>
<td>Catron</td>
<td>92.8</td>
<td>0.5%</td>
</tr>
<tr>
<td>Bernalillo</td>
<td>92.6</td>
<td>0.5%</td>
</tr>
<tr>
<td>Guadalupe</td>
<td>92.0</td>
<td>0.5%</td>
</tr>
<tr>
<td>Dona Ana</td>
<td>89.7</td>
<td>0.5%</td>
</tr>
<tr>
<td>Rio Arriba</td>
<td>84.2</td>
<td>0.5%</td>
</tr>
<tr>
<td>Sandoval</td>
<td>82.5</td>
<td>0.5%</td>
</tr>
<tr>
<td>Santa Fe</td>
<td>71.9</td>
<td>0.5%</td>
</tr>
<tr>
<td>Mora</td>
<td>70.5</td>
<td>0.5%</td>
</tr>
<tr>
<td>Taos</td>
<td>68.9</td>
<td>0.5%</td>
</tr>
<tr>
<td>McKinley</td>
<td>62.5</td>
<td>0.5%</td>
</tr>
<tr>
<td>Harding</td>
<td>55.6</td>
<td>0.5%</td>
</tr>
<tr>
<td>Los Alamos</td>
<td>53.4</td>
<td>0.5%</td>
</tr>
<tr>
<td>United States, 2015</td>
<td>108.1</td>
<td></td>
</tr>
</tbody>
</table>

* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files (NM); NCHS death and population files (US); CDC SAMMEC; SAES
SMOKING-RELATED DEATH (continued)

Chart 3: Smoking-Related Death Rates* by County, New Mexico, 2011-2015

* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files; CDC SAMMEC; SAES

New Mexico Substance Abuse Epidemiology Profile
Problem Statement

In 2015, New Mexico had the eighth highest total drug overdose death rate in the nation. Drug use can result in overdose death and is also associated with other societal problems including crime, violence, homelessness, loss of productivity, and spread of blood-borne disease such as HIV and hepatitis. Unintentional drug overdose is the largest subset of total drug overdose death, accounting for 80-85% of drug overdose deaths in New Mexico (Chart 1). The other substantial cause of drug overdose death is suicide, or intentional self-poisoning, which accounts for the remaining 10-15%. Poisoning has been the leading cause of unintentional injury in New Mexico since 2007, surpassing motor vehicle crash deaths, largely as a result of increased unintentional drug overdose deaths associated with prescription drug use.

Unintentional drug overdoses account for almost 85% of drug overdose deaths during 2011-2015. 45% of unintentional drug overdose deaths were caused by prescription drugs, while 40% were caused by illicit drugs, and 15% involved both types. Medical examiner data indicate that the most common drugs causing unintentional overdose death, for the period covered in this report, were prescription opioids (e.g., methadone, oxycodone, morphine; 47%), heroin (37%), tranquilizers/muscle relaxants (24%), cocaine (15%), methamphetamine (20%) and antidepressants (12%) (not mutually exclusive). In New Mexico and nationally, overdose death from prescription opioids has become an issue of enormous concern. Interventions are currently being formulated, implemented, and assessed in New Mexico and in communities across the country, and may be contributing to decreases in death in the most recent data available.

Chart 1: Drug Related Death Rates* by Cause Category, New Mexico, 2001-2015

![Chart showing drug related death rates by cause category](chart1.png)

* Rate per 100,000, age-adjusted to the 2000 US standard population

**Table 1: Drug Overdose Deaths and Rates* by Age, Sex, and Race/Ethnicity, New Mexico, 2011-2015**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>Deaths</th>
<th>Rates*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ages 0-24</td>
<td>Ages 25-64</td>
<td>Ages 65+</td>
</tr>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>6</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>2</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>87</td>
<td>721</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>43</td>
<td>464</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>139</td>
<td>1,110</td>
</tr>
<tr>
<td>Female</td>
<td>American Indian</td>
<td>4</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>39</td>
<td>358</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>19</td>
<td>430</td>
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<tr>
<td></td>
<td>Total</td>
<td>64</td>
<td>852</td>
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<tr>
<td>Total</td>
<td>American Indian</td>
<td>10</td>
<td>118</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>4</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>126</td>
<td>1,079</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>62</td>
<td>894</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>203</td>
<td>2,162</td>
</tr>
</tbody>
</table>

* Age-specific rates (e.g., Ages 0-24) are per 100,000; all-ages rate is per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files; SAES
**DRUG OVERDOSE DEATH (continued)**

**Problem Statement (continued)**

Table 1 shows that Hispanic men had the highest total drug overdose death rate. Hispanic men had higher unintentional drug overdose death rates than White men across the age range (Chart 4). The rates of total drug overdose death (Table 1) and unintentional drug overdose death (Table 3) among men were roughly 1.5 times that of women. Among women, drug overdose death from prescription drugs was more common than from illicit drugs across the age range. Illicit drugs were the predominant drug type causing death among males across the age range, and the rates were highest among males aged 25-54 years.

Rio Arriba County had the highest total drug overdose death rate (85.8 deaths per 100,000) and unintentional drug overdose death rate (77.8 deaths per 100,000; Table 3) among all New Mexico counties during 2011-2015. However, the problem of drug overdose is by no means limited to Rio Arriba County. As expected, Bernalillo County had the largest number of unintentional drug overdose deaths (Table 3). According to Chart 2, close to half of New Mexico counties had total drug overdose death rates one and a half times higher than the US rate (16.3).

The death rate from prescription drugs exceeded the statewide death rate from illicit drugs in more than half (19 of 33) of the counties (Table 3).

**Table 2: Drug Overdose Deaths and Rates* by Race/Ethnicity and County, New Mexico, 2011-2015**

<table>
<thead>
<tr>
<th>County</th>
<th>American Indian</th>
<th>Asian/ Pacific Islander</th>
<th>Black</th>
<th>Hispanic</th>
<th>White</th>
<th>All Races</th>
<th>Deaths</th>
<th>Rates*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernalillo</td>
<td>31</td>
<td>8</td>
<td>22</td>
<td>483</td>
<td>381</td>
<td>937</td>
<td>20.0</td>
<td>7.4</td>
</tr>
<tr>
<td>Catron</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Chaves</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>28</td>
<td>32</td>
<td>65</td>
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<td>39.8</td>
</tr>
<tr>
<td>Cibola</td>
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<td>0</td>
<td>6</td>
<td>8</td>
<td>16</td>
<td>4.6</td>
<td>0.0</td>
</tr>
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<td>0</td>
<td>9</td>
<td>5</td>
<td>14</td>
<td>0.0</td>
<td>0.0</td>
</tr>
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<td>Curry</td>
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<td>10</td>
<td>13</td>
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<td>41.1</td>
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<td>1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
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<td>79</td>
<td>176</td>
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<td>18</td>
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<td>17</td>
<td>20</td>
<td>37</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
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<td>0</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td>0.0</td>
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</tr>
<tr>
<td>Harding</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
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<td>1</td>
<td>2</td>
<td>6</td>
<td>10</td>
<td>0.0</td>
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</tr>
<tr>
<td>Lea</td>
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<td>6</td>
<td>12</td>
<td>38</td>
<td>56</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Lincoln</td>
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<td>0</td>
<td>0</td>
<td>6</td>
<td>20</td>
<td>27</td>
<td>50.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Los Alamos</td>
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<td>0</td>
<td>0</td>
<td>1</td>
<td>12</td>
<td>13</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Luna</td>
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<td>4</td>
<td>14</td>
<td>19</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>McKinley</td>
<td>27</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>7</td>
<td>44</td>
<td>11.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Mora</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>0</td>
<td>9</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Otero</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>15</td>
<td>45</td>
<td>67</td>
<td>20.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Quay</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>6</td>
<td>13</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Rio Arriba</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>136</td>
<td>9</td>
<td>156</td>
<td>35.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>8</td>
<td>13</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Sandoval</td>
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<td>0</td>
<td>1</td>
<td>49</td>
<td>63</td>
<td>131</td>
<td>16.9</td>
<td>0.0</td>
</tr>
<tr>
<td>San Juan</td>
<td>30</td>
<td>0</td>
<td>2</td>
<td>17</td>
<td>59</td>
<td>109</td>
<td>14.0</td>
<td>0.0</td>
</tr>
<tr>
<td>San Miguel</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>45</td>
<td>51</td>
<td>109</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Santa Fe</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>142</td>
<td>73</td>
<td>222</td>
<td>8.8</td>
<td>8.3</td>
</tr>
<tr>
<td>Sierra</td>
<td>1</td>
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<td>0</td>
<td>5</td>
<td>19</td>
<td>25</td>
<td>100.6</td>
<td>0.0</td>
</tr>
<tr>
<td>Socorro</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>5</td>
<td>18</td>
<td>21.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Taos</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>28</td>
<td>22</td>
<td>51</td>
<td>9.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Torrance</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>11</td>
<td>23</td>
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<td>0.0</td>
</tr>
<tr>
<td>Valencia</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>49</td>
<td>37</td>
<td>89</td>
<td>17.6</td>
<td>0.0</td>
</tr>
<tr>
<td>New Mexico</td>
<td>129</td>
<td>10</td>
<td>43</td>
<td>1,235</td>
<td>1,043</td>
<td>2,489</td>
<td>14.8</td>
<td>5.1</td>
</tr>
</tbody>
</table>

* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files; SAES
Chart 2: Drug Overdose Death Rates* by County, New Mexico, 2011-2015

<table>
<thead>
<tr>
<th>County</th>
<th>(# of deaths; % of statewide deaths)</th>
<th>Rate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rio Arriba</td>
<td>156; 6.3%</td>
<td>85.8</td>
</tr>
<tr>
<td>Catron</td>
<td>8; 0.3%</td>
<td>75.6</td>
</tr>
<tr>
<td>Hidalgo</td>
<td>10; 0.4%</td>
<td>48.2</td>
</tr>
<tr>
<td>Mora</td>
<td>9; 0.4%</td>
<td>47.3</td>
</tr>
<tr>
<td>Sierra</td>
<td>25; 1.0%</td>
<td>42.7</td>
</tr>
<tr>
<td>San Miguel</td>
<td>51; 2.0%</td>
<td>37.2</td>
</tr>
<tr>
<td>Taos</td>
<td>51; 2.0%</td>
<td>32.5</td>
</tr>
<tr>
<td>Quay</td>
<td>13; 0.5%</td>
<td>32.4</td>
</tr>
<tr>
<td>Grant</td>
<td>37; 1.5%</td>
<td>32.0</td>
</tr>
<tr>
<td>Santa Fe</td>
<td>222; 8.9%</td>
<td>32.0</td>
</tr>
<tr>
<td>Lincoln</td>
<td>27; 1.1%</td>
<td>30.7</td>
</tr>
<tr>
<td>Torrance</td>
<td>23; 0.9%</td>
<td>28.9</td>
</tr>
<tr>
<td>Bernalillo</td>
<td>937; 37.6%</td>
<td>27.5</td>
</tr>
<tr>
<td>Guadalupe</td>
<td>6; 0.2%</td>
<td>26.2</td>
</tr>
<tr>
<td>New Mexico</td>
<td>2489; 100.0%</td>
<td>24.7</td>
</tr>
<tr>
<td>Colfax</td>
<td>14; 0.6%</td>
<td>24.5</td>
</tr>
<tr>
<td>Valencia</td>
<td>89; 3.6%</td>
<td>23.5</td>
</tr>
<tr>
<td>Eddy</td>
<td>57; 2.3%</td>
<td>22.7</td>
</tr>
<tr>
<td>Chaves</td>
<td>65; 2.6%</td>
<td>22.1</td>
</tr>
<tr>
<td>Socorro</td>
<td>18; 0.7%</td>
<td>21.9</td>
</tr>
<tr>
<td>Otero</td>
<td>67; 2.7%</td>
<td>21.4</td>
</tr>
<tr>
<td>Sandoval</td>
<td>131; 5.3%</td>
<td>19.8</td>
</tr>
<tr>
<td>Luna</td>
<td>19; 0.8%</td>
<td>18.6</td>
</tr>
<tr>
<td>Dona Ana</td>
<td>176; 7.1%</td>
<td>18.4</td>
</tr>
<tr>
<td>De Baca</td>
<td>1; 0.0%</td>
<td>8.1</td>
</tr>
<tr>
<td>Lea</td>
<td>56; 2.2%</td>
<td>17.9</td>
</tr>
<tr>
<td>San Juan</td>
<td>109; 4.4%</td>
<td>17.9</td>
</tr>
<tr>
<td>Los Alamos</td>
<td>17; 0.5%</td>
<td>15.8</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>13; 0.5%</td>
<td>14.4</td>
</tr>
<tr>
<td>McKinley</td>
<td>44; 1.8%</td>
<td>13.5</td>
</tr>
<tr>
<td>Cibola</td>
<td>16; 0.6%</td>
<td>11.2</td>
</tr>
<tr>
<td>Curry</td>
<td>25; 1.0%</td>
<td>10.7</td>
</tr>
<tr>
<td>Union</td>
<td>1; 0.0%</td>
<td>4.3</td>
</tr>
<tr>
<td>Harding</td>
<td>0; 0.0%</td>
<td></td>
</tr>
<tr>
<td>United States, 2015</td>
<td></td>
<td>16.3</td>
</tr>
</tbody>
</table>

* All rates are per 100,000, age-adjusted to the 2000 US standard population
Sources: NMDOH BVRHS death files and UNM-GPS population files (NM); NCHS death and population files (US); SAES
* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files; SAES

New Mexico Substance Abuse Epidemiology Profile
Table 3: Unintentional Drug Overdose Deaths and Rates*, New Mexico, 2011-2015

<table>
<thead>
<tr>
<th>County</th>
<th>Deaths</th>
<th>Rates*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Bernalillo</td>
<td>522</td>
<td>270</td>
</tr>
<tr>
<td>Catron</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Chaves</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>Cibola</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Colfax</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Curry</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>De Baca</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Dona Ana</td>
<td>91</td>
<td>50</td>
</tr>
<tr>
<td>Eddy</td>
<td>30</td>
<td>21</td>
</tr>
<tr>
<td>Grant</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>Guadalupe</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Harding</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hidalgo</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Lea</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>Lincoln</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Los Alamos</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Luna</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>McKinley</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Mora</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Otero</td>
<td>34</td>
<td>23</td>
</tr>
<tr>
<td>Quay</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Rio Arriba</td>
<td>108</td>
<td>31</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Sandia</td>
<td>75</td>
<td>42</td>
</tr>
<tr>
<td>San Juan</td>
<td>54</td>
<td>32</td>
</tr>
<tr>
<td>San Miguel</td>
<td>23</td>
<td>18</td>
</tr>
<tr>
<td>Santa Fe</td>
<td>131</td>
<td>57</td>
</tr>
<tr>
<td>Sierra</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Socorro</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Taos</td>
<td>23</td>
<td>13</td>
</tr>
<tr>
<td>Torrance</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Union</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Valencia</td>
<td>51</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>1,348</td>
<td>742</td>
</tr>
</tbody>
</table>

* All rates are per 100,000, age-adjusted to the 2000 US standard population; drug overdose type categories are mutually exclusive.
**Chart 5: Unintentional Drug Overdose Death Rates* by County and Drug Type, New Mexico, 2011-2015**

<table>
<thead>
<tr>
<th>County</th>
<th>(# of deaths; % of statewide deaths)</th>
<th>Illicit</th>
<th>Both</th>
<th>Prescription</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rio Arriba</td>
<td>(139; 6.7%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catron</td>
<td>(6; 0.3%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hidalgo</td>
<td>(10; 0.5%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mora</td>
<td>(9; 0.4%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sierra</td>
<td>(25; 1.2%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lincoln</td>
<td>(26; 1.2%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Miguel</td>
<td>(41; 2%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Fe</td>
<td>(188; 9%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Torrance</td>
<td>(21; 1%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grant</td>
<td>(28; 1.3%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quay</td>
<td>(11; 0.5%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bernalillo</td>
<td>(792; 37.9%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taos</td>
<td>(36; 1.7%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colfax</td>
<td>(13; 0.6%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Mexico</td>
<td>(2090; 100%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eddy</td>
<td>(51; 2.4%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chaves</td>
<td>(58; 2.8%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valencia</td>
<td>(72; 3.4%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Otero</td>
<td>(57; 2.7%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>De Baca</td>
<td>(1; 0%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sandoval</td>
<td>(117; 5.6%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socorro</td>
<td>(14; 0.7%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guadalupe</td>
<td>(4; 0.2%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lea</td>
<td>(47; 2.2%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dona Ana</td>
<td>(141; 6.7%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Juan</td>
<td>(86; 4.1%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roosevelt</td>
<td>(12; 0.6%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luna</td>
<td>(13; 0.6%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Los Alamos</td>
<td>(10; 0.5%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cibola</td>
<td>(15; 0.7%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curry</td>
<td>(22; 1.1%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>McKinley</td>
<td>(24; 1.1%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Union</td>
<td>(1; 0%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harding</td>
<td>(0; 0%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*All rates are per 100,000, age-adjusted to the 2000 US standard population

Source: OMI death files; UNM-GPS population files; SAES

New Mexico Substance Abuse Epidemiology Profile
**OPIOID OVERDOSE RELATED EMERGENCY DEPARTMENT VISITS**

**Problem Statement**

Mortality is just one, and the most extreme, of the health outcomes associated with drug abuse. In the US, between 2005 and 2014, there has been a 99.4% increase in opioid related emergency department (ED) visits (Weiss, A.J., Eixhauser, A., Barrett, M.L., Steiner, C.A., Bailey, M.K., & O’Malley, L. [2016] Opioid-related inpatient stays and emergency department visits by State, 2009–2014. HCUP Statistical Brief #219. December 2016. Agency for Healthcare Research and Quality, Rockville, MD. http://www.hcup-us.ahrq.gov/reports/statbriefs/sb219-Opioid-Hospital-Stays-ED-Visits-by-State.pdf.). In NM, the emergency department dataset (EDD) is collected in accordance with the NM Public Health Act and New Mexico Administrative Code 7.4.3.10. Chart 1 shows that between 2010 and 2015, the rate of opioid-related overdose emergency department (ORO-ED) visits increased by almost 10%.

**Chart 1: Opioid Overdose Related Emergency Department Visit Rates*, New Mexico, 2011-2015**

![Graph showing the rate of opioid-related overdose emergency department visits from 2010 to 2015.](chart1)

* Rates per 100,000

Sources: NMDOH EDD files and UNM-GPS population files; SAES

**Table 1: ORO-ED Visits and Rates* by Age, Sex, and Race/Ethnicity, New Mexico, 2011-2015**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>Emergency Department Visits</th>
<th>Rates*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Ages 0-24</td>
<td>Ages 25-64</td>
</tr>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>20</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>13</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>303</td>
<td>976</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>316</td>
<td>931</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>819</td>
<td>2,517</td>
</tr>
<tr>
<td>Female</td>
<td>American Indian</td>
<td>35</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>212</td>
<td>549</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>273</td>
<td>876</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>649</td>
<td>1,815</td>
</tr>
<tr>
<td>Total</td>
<td>American Indian</td>
<td>55</td>
<td>159</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>11</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>22</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>515</td>
<td>1,525</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>589</td>
<td>1,807</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1,468</td>
<td>4,332</td>
</tr>
</tbody>
</table>

* Age-specific rates (e.g., Ages 0-24) are per 100,000; all-ages rate is per 100,000, age-adjusted to the 2000 US standard population

**There were 1,050 visits for which Race-Ethnicity was missing**

Sources: NMDOH EDD files and UNM-GPS population files; SAES
Problem Statement (continued)

Between 2011-2015, the rates of opioid-related overdose emergency department visits, among men, were 25% higher than rates among women (Table 1). Among both men and women, Whites had the highest rates compared to all other racial/ethnic groups. Among men, Whites are followed by Hispanics. Blacks followed Whites among women. Table 1 also shows that for both sexes, those in the 25-64 age group had the highest rate (81.2 opioid-related overdose emergency department visits per 100,000 population).

Rio Arriba, San Miguel, and Santa Fe counties had the highest rates of opioid-related overdose emergency department visits during 2011-2015 (Chart 2). Table 2 shows that in Rio Arriba (178.3 per 100,000) and Santa Fe (103.5 per 100,000) counties, the rates were driven by Whites (337.0 and 114.2 opioid-related overdose emergency department visits per 100,000; respectively) whereas in San Miguel (120.9 per 100,000) it is driven by Hispanics (129.0 opioid-related overdose emergency department visits per 100,000). Bernalillo County had the biggest percentage of opioid-related overdose emergency department visits (36.3% of the state total), followed by Santa Fe County (12.2%). It is important to note that federal facilities (e.g. Indian Health Services and Veterans Administration) are not included in these results.
OPIOID OVERDOSE RELATED EMERGENCY DEPARTMENT VISITS (continued)

Chart 2: Opioid Overdose Related Emergency Department Visit Rates* by County, New Mexico, 2011-2015

* All rates are per 100,000, age-adjusted to the 2000 US standard population
** Unstable rates

Sources: NMDOH EDD files and UNM-GPS population files (NM); SAES

New Mexico Substance Abuse Epidemiology Profile
OPIOID OVERDOSE RELATED EMERGENCY DEPARTMENT VISITS (continued)

Chart 2: Opioid Overdose Related Emergency Department Visit Rates* by County, New Mexico, 2011-2015

Opioid Overdose-related Emergency Department Visits

* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH EDD files and UNM-GPS population files; SAES

New Mexico Substance Abuse Epidemiology Profile
**Problem Statement**

Suicide is a serious and persistent public health problem in New Mexico. As shown in Chart 1, over the period from 1981-2015, NM's suicide rate has consistently been 1.5 to 1.9 times the US rate. NM has ranked among the top five states for all but two of those years. While the US rate declined 15% between 1981 and 2000, it increased thereafter for an 28% increase from 2000 to 2015. The NM rate followed a similar pattern. In NM in 2015, suicide was the second leading cause of death (after unintentional injuries) for those residents under age 50 and the eighth leading cause of death overall.

Table 1 and Chart 2 show that male suicide rates were more than three times higher than female rates across all ages and race/ethnic groups. This reflects males' choice of more lethal means, i.e., firearms, when attempting suicide. American Indian males have higher suicide rates for those under age 45; White males have substantially higher rates over age 74. The vast majority (72%) of White male suicides - and an even higher proportion of Hispanic and American Indian male suicides - occur, however, before age 65. Table 2 shows that five counties (Bernalillo, Dona Ana, Santa Fe, Sandoval, and San Juan) had substantial numbers of suicides (more than 25 per year). As Charts 3 and 4 demonstrate, for the time period 2011-2015, all but eight of NM's counties had rates one and a half times higher than the comparable US rate. A number of smaller counties also had very high rates. Note that counts and rates for many counties with small numbers of suicides are unstable, suggesting wide fluctuation across time periods due to random variation (chance), and should be interpreted with caution.

**Table 1: Suicide Deaths and Rates* by Age, Sex, and Race/Ethnicity, New Mexico, 2011-2015**

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* Rate per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files (NM); CDC Wonder (US)
**Table 2: Suicide Deaths and Rates* by Race/Ethnicity and County, New Mexico, 2011-2015**

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<th>Hispanic</th>
<th>White</th>
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* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files; SAES
SUICIDE (continued)

Chart 3: Suicide Rates* by County, New Mexico, 2011-2015

* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files (NM); NCHS death and population files (US); CDC ARDI; SAES

New Mexico Substance Abuse Epidemiology Profile
* All rates are per 100,000, age-adjusted to the 2000 US standard population

Sources: NMDOH BVRHS death files and UNM-GPS population files; SAES

New Mexico Substance Abuse Epidemiology Profile
Section 2

Mental Health
ADULT MENTAL HEALTH

Problem Statement

Adult mental health issues range in a spectrum from day-to-day challenges with stress, anxiety, and "the blues"; to persistent mental health challenges arising from chronic physical conditions such as diabetes, asthma, and obesity; to chronic clinically diagnosable psychiatric morbidities such as anxiety disorders, schizophrenia, bipolar disorder, and depression; and; to serious life-threatening situations such as suicidal ideation and suicide attempt, which sometimes result from a combination of the mental and physical health challenges mentioned above. A host of measures exist for assessing the mental health status of individuals, but characterizing the mental health status of the population is a relatively new field. If such an assessment can be done using a simple and non-invasive approach with a reasonable level of sensitivity and specificity, the resulting characterization of the population's mental health can help public health and mental health professionals better understand the distribution of mental health issues in the population; and design better systems to help identify, address, and mitigate these issues before they become more serious.

Among measures that have been suggested by the CDC as potential tools for assessing population well-being and mental health is the frequency with which people experience poor mental health. This measure is based on the single question, "How many days during the past 30 days was your mental health not good?" Respondents who report that they experienced 14 or more days when their mental health was "not good" are classified as experiencing Frequent Mental Distress (FMD). Although FMD is not a clinical diagnosis, evidence suggests that it is associated with a person's mental health status. Chart 1 shows the proportion of people with selected characteristics who experienced FMD. The proportion of the total New Mexico population that experienced FMD was about 12%. As might be expected, people in good health with higher incomes and more education were significantly less likely than the general population to report FMD. People with less education, with chronic health conditions such as obesity, diabetes, or asthma, or with lower income, were significantly more likely to report FMD. Of particular relevance regarding FMD's potential usefulness as a measure of population mental health, FMD was many times more prevalent among respondents who reported more serious psychiatric morbidity, including screening positive for alcohol dependence or abuse (33% reported FMD), ever being diagnosed with an anxiety disorder (37% reported past-month FMD), or receiving a diagnosis of current depression based on the Patient Health Questionnaire (65% reported past-month FMD). Among the cohort that reported past-year suicidal ideation with no history of suicide attempt, 48% reported past-month FMD; and among the cohort at high risk for suicide that reported both past-year suicidal ideation and a prior suicide attempt, 62% reported past-month FMD. Meanwhile, almost half (46%) of FMD respondents were diagnosed with current depression (data not shown). These results suggest that this simple question, which is asked annually on the BRFSS, is a useful indicator of population mental health.

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<th>Male Percent</th>
<th>Female Number</th>
<th>Female Percent</th>
<th>Total Number</th>
<th>Total Percent</th>
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<td>7,961</td>
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<tr>
<td>Total</td>
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<td>14,215</td>
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<td>12.7</td>
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<tr>
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<td>-</td>
<td>1,612</td>
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<td>2,225</td>
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<td>Black</td>
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<td>3,017</td>
<td>523</td>
<td>3,540</td>
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<td>13.1</td>
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<td>67,573</td>
<td>9,455</td>
<td>88,504</td>
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<td>14.0</td>
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<td>12,439</td>
<td>78,686</td>
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<td>24,521</td>
<td>189,676</td>
<td>11.4</td>
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</tbody>
</table>

* Estimate of percent of people in population group who reported Frequent Mental Distress in past 30 days
- Excluded due to small number of respondents (< 50) in cell

Source: BRFSS; SAES

New Mexico Substance Abuse Epidemiology Profile Page 47
**ADULT MENTAL HEALTH (continued)**

**Chart 1: Frequent Mental Distress (past 30 days)* by Selected Characteristics, Adults Aged 18+, New Mexico, 2013-2015**

**Table 2: Frequent Mental Distress (past 30 days) by Race and County, Adults Aged 18+, New Mexico, 2013-2015**

* Frequent Mental Distress definition: respondent reported 14 or more days in past 30 days when mental health was "not good"

Source: BRFSS, SAES (NOTE: Brackets around reported rates are 95% confidence intervals)

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**New Mexico Substance Abuse Epidemiology Profile**

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Chart 2: Frequent Mental Distress (past 30 days)* by County, Adults Aged 18+, New Mexico, 2013-2015

<table>
<thead>
<tr>
<th>County</th>
<th># of adults with FMD</th>
<th>% of statewide FMD adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mora</td>
<td>694; 0.4%</td>
<td>17.9</td>
</tr>
<tr>
<td>Hidalgo</td>
<td>605; 0.3%</td>
<td>17.0</td>
</tr>
<tr>
<td>Rio Arriba</td>
<td>5061; 2.7%</td>
<td>16.7</td>
</tr>
<tr>
<td>Sierra</td>
<td>1545; 0.8%</td>
<td>15.9</td>
</tr>
<tr>
<td>San Miguel</td>
<td>3485; 1.8%</td>
<td>15.3</td>
</tr>
<tr>
<td>Luna</td>
<td>2680; 1.4%</td>
<td>14.6</td>
</tr>
<tr>
<td>Socorro</td>
<td>1932; 1.0%</td>
<td>14.4</td>
</tr>
<tr>
<td>Lincoln</td>
<td>2304; 1.2%</td>
<td>14.0</td>
</tr>
<tr>
<td>Union</td>
<td>502; 0.3%</td>
<td>13.8</td>
</tr>
<tr>
<td>McKinley</td>
<td>7042; 3.7%</td>
<td>13.6</td>
</tr>
<tr>
<td>Lea</td>
<td>6103; 3.2%</td>
<td>12.7</td>
</tr>
<tr>
<td>Otero</td>
<td>6331; 3.3%</td>
<td>12.5</td>
</tr>
<tr>
<td>San Juan</td>
<td>11458; 6.0%</td>
<td>12.4</td>
</tr>
<tr>
<td>Valencia</td>
<td>7121; 3.8%</td>
<td>12.3</td>
</tr>
<tr>
<td>Dona Ana</td>
<td>19853; 10.5%</td>
<td>12.3</td>
</tr>
<tr>
<td>Quay</td>
<td>835; 0.4%</td>
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</tr>
<tr>
<td>Chaves</td>
<td>5796; 3.1%</td>
<td>12.0</td>
</tr>
<tr>
<td>New Mexico</td>
<td>189578; 100.0%</td>
<td>11.9</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>1743; 0.9%</td>
<td>11.7</td>
</tr>
<tr>
<td>Curry</td>
<td>4306; 2.3%</td>
<td>11.6</td>
</tr>
<tr>
<td>Bernalillo</td>
<td>60328; 31.8%</td>
<td>11.5</td>
</tr>
<tr>
<td>Sandoval</td>
<td>11724; 6.2%</td>
<td>11.3</td>
</tr>
<tr>
<td>Cibola</td>
<td>2333; 1.2%</td>
<td>11.2</td>
</tr>
<tr>
<td>Santa Fe</td>
<td>13114; 6.9%</td>
<td>11.0</td>
</tr>
<tr>
<td>Colfax</td>
<td>1146; 0.6%</td>
<td>10.8</td>
</tr>
<tr>
<td>Eddy</td>
<td>4451; 2.3%</td>
<td>10.7</td>
</tr>
<tr>
<td>Taos</td>
<td>2848; 1.5%</td>
<td>10.5</td>
</tr>
<tr>
<td>Torrance</td>
<td>1277; 0.7%</td>
<td>10.4</td>
</tr>
<tr>
<td>Grant</td>
<td>2365; 1.2%</td>
<td>10.2</td>
</tr>
<tr>
<td>Los Alamos</td>
<td>1095; 0.6%</td>
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<tr>
<td>Catron</td>
<td>222; 0.1%</td>
<td>7.0</td>
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<tr>
<td>De Baca</td>
<td>50; 0.0%</td>
<td>3.3</td>
</tr>
<tr>
<td>United States</td>
<td>10.7</td>
<td></td>
</tr>
</tbody>
</table>
ADULT MENTAL HEALTH (continued)

Chart 3: Frequent Mental Distress (past 30 days)* by County, Adults Aged 18+, New Mexico, 2013-2015

Insufficient data: Rate not reported due to small number of respondents (< 50) in cell

Source: BRFSS; SAES

New Mexico Substance Abuse Epidemiology Profile
**ADULT MENTAL HEALTH - DEPRESSION**

**Problem Statement (continued)**

Depression is one of the most prevalent and treatable mental disorders. Major depression is usually associated with comorbid mental disorders, such as anxiety and substance use disorders, and impairment of a person’s ability to function in work, home, relationships, and social roles. Depression is also a risk factor for suicide and attempted suicide. In addition, depressive disorders have been associated with an increased prevalence of chronic medical conditions, such as heart disease, stroke, asthma, arthritis, cancer, diabetes, and obesity. In 2011, the BRFSS assessed current depression using Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) criteria.

Table 3 shows the prevalence of current depression was highest among the age-group 25-64 years (11.8%), slightly higher among females than males across the age range, and higher among Black (12.1%) and Hispanic adults (10.8%) than White adults (9.7%). Depression was more common among American Indian females (13.6%) and Hispanic females (13.2%) than among White females (11.1%). Chart 4 shows that current depression was associated, among both males and females, with significantly higher rates of some unhealthy behaviors including physical inactivity and current smoking. Chart 5 shows that current depression was associated with higher rates of chronic health conditions such as asthma and heart disease among males, and asthma, obesity, diabetes, and heart disease among females.

**Chart 4: Unhealthy Behaviors by Depression Status and Sex, New Mexico, 2011**

![Graph showing unhealthy behaviors by depression status and sex](image)

*Current Depression definition: scored 10 or more on Patient Health Questionnaire depression inventory (PHQ-8); this instrument can establish a provisional depressive disorder diagnosis using Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria. Source: BRFSS; SAES (NOTE: Brackets around reported rates are 95% confidence intervals)

**Table 3: Current Depression (past 2 weeks) by Age, Sex, and Race, Adults Aged 18+, New Mexico, 2011**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>Ages 18-24</th>
<th>Ages 25-64</th>
<th>Ages 65+</th>
<th>All Ages</th>
<th>Ages 18-24</th>
<th>Ages 25-64</th>
<th>Ages 65+</th>
<th>All Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>-</td>
<td>4,220</td>
<td>-</td>
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<td>9.0</td>
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<td></td>
<td>Asian/Pacific Islander</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>-</td>
<td>-</td>
<td>2,033</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>13.6</td>
</tr>
<tr>
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<td>Hispanic</td>
<td>3,211</td>
<td>15,977</td>
<td>1,355</td>
<td>20,242</td>
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<td>9.0</td>
<td>5.6</td>
<td>8.4</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>3,129</td>
<td>18,619</td>
<td>2,926</td>
<td>24,674</td>
<td>9.3</td>
<td>9.0</td>
<td>4.3</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>7,152</td>
<td>40,978</td>
<td>4,908</td>
<td>53,037</td>
<td>8.2</td>
<td>9.2</td>
<td>4.9</td>
<td>8.4</td>
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<td>2.3</td>
<td>13.6</td>
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<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>15.4</td>
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<tr>
<td></td>
<td>White</td>
<td>2,957</td>
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<td>Total</td>
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<td>6,772</td>
<td>79,700</td>
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<td>12.1</td>
</tr>
</tbody>
</table>

* Estimate of number of people in population group who reported current (past 2-week) depression based on DSM-IV criteria

**Source:** BRFSS; SAES (NOTE: Brackets around reported rates are 95% confidence intervals)
### Chart 5: Chronic Health Conditions by Depression Status and Sex, New Mexico, 2011

#### Table 4: Current Depression (past 2 weeks) by Race and County, Adults Aged 18+, New Mexico, 2011

<table>
<thead>
<tr>
<th>County</th>
<th>American Indian</th>
<th>Asian/Pacific Islander</th>
<th>Black</th>
<th>Hispanic</th>
<th>White</th>
<th>All Races</th>
<th>American Indian</th>
<th>Asian/Pacific Islander</th>
<th>Black</th>
<th>Hispanic</th>
<th>White</th>
<th>All Races</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernalillo</td>
<td>2,617</td>
<td>-</td>
<td>-</td>
<td>17,465</td>
<td>20,696</td>
<td>43,877</td>
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<td>11.2</td>
<td>9.6</td>
<td>10.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catron</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Chaves</td>
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<td>2,605</td>
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<td>5,945</td>
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<td>-</td>
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<tr>
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<td>6,492</td>
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</tr>
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</tr>
<tr>
<td>Otero</td>
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<td>-</td>
<td>3,753</td>
<td>4,928</td>
<td>-</td>
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<td>-</td>
<td>14.2</td>
<td></td>
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</tr>
<tr>
<td>Quay</td>
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</tr>
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<td>-</td>
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<td></td>
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</tr>
<tr>
<td>Roosevelt</td>
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<td>-</td>
<td>-</td>
<td>849</td>
<td>-</td>
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</tr>
<tr>
<td>Sandoval</td>
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<td>6,586</td>
<td>-</td>
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<td>-</td>
<td>8.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Juan</td>
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<tr>
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<td>-</td>
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<td>18.2</td>
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<td>9,074</td>
<td>-</td>
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<td></td>
</tr>
<tr>
<td>Sierra</td>
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</table>

* Estimate of number of people in population group who reported current (past 2-week) depression based on DSM-IV criteria

** Estimate of percent of people in population group who reported current (past 2-week) depression based on DSM-IV criteria

- Excluded due to small number of respondents (< 50) in cell

Source: BRFSS; SAES
Chart 6: Current Depression (past 2 weeks)* by County, Adults Aged 18+, New Mexico, 2011

* Estimate of percent of people in population group who reported current (past 2-week) depression based on DSM-IV criteria

The following counties were not included due to small number of respondents (< 50) in cell:
Catron, De Baca, Guadalupe, Harding, Hidalgo, Mora, Union

Source: NMBRFSS (NM); CDC BRFSS (US); SAES

New Mexico Substance Abuse Epidemiology Profile
Page 53
Chart 7: Current Depression (past 2 weeks)* by County, Adults Aged 18+, New Mexico, 2011

ADULT MENTAL HEALTH - DEPRESSION (continued)

* Estimate of percent of people in population group who reported current (past 2-week) depression based on DSM-IV criteria
Insufficient data: Rate not reported due to small number of respondents (< 50) in cell
Source: BRFSS; SAES

New Mexico Substance Abuse Epidemiology Profile
# YOUTH FEELINGS OF SADNESS OR HOPELESSNESS

## Problem Statement

Persistent feelings of sadness and hopelessness are criteria for, and predictors of, clinical depression for youth, and youth who experience depression are at a higher risk for being depressed as adults. Persistent sadness in youth has also been linked with suicidal behavior, drug and alcohol abuse, unsafe sex, and academic and social deficits. Feelings of sadness or loneliness not only affect teens, but those around them, often causing problems in relationships with peers and family members.

The prevalence of persistent feelings of sadness or hopelessness among NM high school students remained stable from 2003-2015 (Chart 1). There was no statistically significant difference between the US rate (29.9%) and the NM rate (32.5%). In 2015 in NM, girls (42.3%) were nearly twice as likely to report feelings of sadness or hopelessness than boys (23.0%), reflective of a continuing disparity (Chart 2). Boys in the 11th grade reported a significantly higher prevalence of sad or hopeless feelings (27.2%) compared to those in the 9th grade (19.5%) (Table 1). There were no other statistically significant variations by grade level or by race/ethnicity.

As Charts 3 and 4 demonstrate, in 2015, the counties with the highest prevalence of persistent feelings of sadness or hopelessness were Sierra (37.3%), Otero (36.3%), Luna (35.6%), Grant (35.2%), and Eddy (35.1%). The counties with the lowest prevalence were Hidalgo (21.8%), Curry (22.0%) and Socorro (24.3%).

## Chart 1: Feelings of Sadness or Hopelessness* by Year, Grades 9 - 12, NM and US, 2003-2015

![Graph showing feelings of sadness or hopelessness by year for NM and US, grades 9-12, 2003-2015.]

* Felt so sad or hopeless nearly every day for a period of 2 weeks that they stopped some normal activities, within the past 12 months.

Source: YRRS (NM); CDC YRBS (US); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals).

## Table 1: Feelings of Sadness or Hopelessness, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, NM, 2015

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
<th>All Grades</th>
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<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
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<td>24.5 (16.2-35.4)</td>
<td>25.0 (18.4-33.1)</td>
<td>34.1 (27.6-41.3)</td>
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<td>26.7 (18.5-36.8)</td>
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<td>24.9 (17.7-34.0)</td>
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<tr>
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<td>22.6 (19.7-25.9)</td>
<td>26.4 (22.6-30.4)</td>
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<td>White</td>
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<td>White</td>
<td>43.0 (37.2-49.0)</td>
<td>46.8 (40.0-53.8)</td>
<td>37.3 (30.5-44.7)</td>
<td>47.2 (39.5-55.1)</td>
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<td>Total</td>
<td>44.4 (41.0-47.8)</td>
<td>43.7 (39.8-47.7)</td>
<td>41.9 (37.8-46.0)</td>
<td>38.7 (35.2-42.4)</td>
<td>42.3 (39.9-44.7)</td>
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<tr>
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<td>34.5 (28.1-41.6)</td>
<td>36.6 (24.6-50.5)</td>
<td>38.9 (32.0-46.2)</td>
<td>23.3 (15.9-32.9)</td>
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<td>32.5 (26.0-39.7)</td>
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<td>31.7 (25.1-39.1)</td>
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<td>White</td>
<td>27.1 (22.8-31.8)</td>
<td>33.3 (28.6-38.3)</td>
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<td>31.1 (28.1-34.2)</td>
<td>32.5 (30.8-34.3)</td>
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</table>

Source: YRRS (NM); NMDOH Survey Section (NOTE: "95% CI" is 95% confidence interval.)
YOUTH FEELINGS OF SADNESS OR HOPELESSNESS (continued)

Chart 2: Feelings of Sadness or Hopelessness, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, NM, 2015

Chart 3: Feelings of Sadness or Hopelessness* by County, Grades 9 - 12, NM, 2015

* Estimate of percent of high school students who reported persistent feelings of sadness or hopelessness within the past 12 months

Catron and Harding County estimates not available because of small numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
* Estimate of percent of high school students who reported persistent feelings of sadness or hopelessness within the past 12 months

*No Data*: county estimates not available because of small numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES
YOUTH SERIOUSLY CONSIDERED SUICIDE

Problem Statement

Suicide is a complex behavior, with no single determining cause. Suicidal ideation refers to thoughts of suicide or wanting to take one's own life. Suicidal ideation is a risk factor for suicide attempt/death.

Among NM high school students, the rate of "Seriously considered suicide" decreased significantly from 20.7% in 2003 to 16.5% in 2015 (Chart 1). The difference between rates from 2009 to 2015 was not statistically significant. The US rate decreased from 2003 to 2009 but then increased from 2009 to 2015 (13.8% to 17.7%). There was no statistical difference between the NM and US rates for 2015.

In 2015 (Chart 2), New Mexico girls (21.4%) reported higher rates of having seriously considered suicide than boys (11.6%). This difference between girls and boys was significant across all grades except 11th (Table 1). White girls in the 12th grade seriously considered suicide at a significantly higher rate (30.4%) compared to American Indian (14.2%) and Hispanic (16.1%) 12th grade girls (Table 1).

As Charts 3 and 4 demonstrate, in 2015, the counties with the highest prevalence of youth seriously considering suicide were Otero (22.8%), Sierra (22.7%), Los Alamos (21.5%), Torrance (19.7%), and Roosevelt (19.1%). The counties with the lowest prevalence were De Baca (7.9%) and Hidalgo (9.6%).

Chart 1: Seriously Considered Suicide* by Year, Grades 9 - 12, NM and US, 2003-2015

Table 1: Seriously Considered Suicide, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, NM, 2015

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
<th>All Grades</th>
</tr>
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<tbody>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>11.2 (6.0-20.0)</td>
<td>8.9 (4.8-15.7)</td>
<td>16.5 (10.8-24.4)</td>
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<td>Asian/Pacific Islander</td>
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<td>16.8 (8.9-29.3)</td>
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<td>--</td>
<td>12.4 (7.9-19.0)</td>
</tr>
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<td></td>
<td>Hispanic</td>
<td>9.3 (7.4-11.6)</td>
<td>10.2 (7.9-13.1)</td>
<td>13.7 (10.7-17.3)</td>
<td>14.5 (11.3-18.4)</td>
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</tr>
<tr>
<td></td>
<td>White</td>
<td>8.4 (5.1-13.8)</td>
<td>10.1 (6.6-15.2)</td>
<td>14.5 (10.0-20.4)</td>
<td>12.9 (8.5-19.2)</td>
<td>11.3 (9.0-14.2)</td>
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<td>9.6 (7.8-11.8)</td>
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<td>16.3 (14.1-18.7)</td>
<td>16.5 (15.1-17.9)</td>
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</tbody>
</table>

* Estimate of percent of high school students seriously considered suicide at least once in past 12 months

Source: YRRS (NM); CDC YRBS (US); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
Chart 2: Seriously Considered Suicide, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, NM, 2015

Chart 3. Seriously Considered Suicide* by County, Grades 9 - 12, NM, 2015

* Estimate of percent of high school students seriously considered suicide at least once in past 12 months
Catron and Harding County estimates not available because of small numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
* Estimate of percent of high school students who reported persistent feelings of sadness or hopelessness within the past 12 months

"No Data": county estimates not available because of small numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES
Problem Statement

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<thead>
<tr>
<th>Race/Ethnicity</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
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<td>Percent [95% CI]</td>
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<td>16.9 (11.9-23.5)</td>
<td>11.3 (7.6-16.6)</td>
<td>6.2 (3.2-11.6)</td>
<td>14.0 (8.3-22.6)</td>
<td>12.3 (9.9-15.2)</td>
</tr>
<tr>
<td>Total</td>
<td>16.3 (13.7-19.1)</td>
<td>12.5 (10.6-14.8)</td>
<td>10.8 (8.3-14.0)</td>
<td>8.8 (6.4-12.0)</td>
<td>12.4 (11.0-13.9)</td>
</tr>
</tbody>
</table>

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
Chart 2: Attempted Suicide, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, NM, 2015

Chart 3: Attempted Suicide* by County, Grades 9 - 12, NM, 2015

* Estimate of percent of high school students seriously considered suicide at least once in past 12 months
Catron and Harding County estimates not available because of small numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
* Estimate of percent of high school students who reported persistent feelings of sadness or hopelessness within the past 12 months

"No Data": county estimates not available because of small numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES

New Mexico Substance Abuse Epidemiology Profile

Page 65
**YOUTH RISK AND RESILIENCY**

**Association Between Risk and Resiliency**

Strong relationships with parents, peers, schools, and adults in the community can be protective factors against risk behaviors that endanger the health and well-being of young people. These protective factors, or resiliency factors, are measured by several questions in the NM Youth Risk and Resiliency Survey (YRRS). Results from the 2015 YRRS demonstrate that youth with high levels of these resiliency factors were less likely than other students to engage in binge drinking, drug use, tobacco use, and suicidal ideation and attempts.

Resiliency factor results presented in the following charts are for:

- In my home, a parent or other adult is interested in my school work
- When I am not at home, one of my parents/guardians knows where I am and who I am with
- At my school, a teacher or other adult believes I will be a success
- In my school, there are clear rules about what students can and cannot do
- At school I am involved in sports, clubs, or other extra-curricular activities
- Outside my home and school, there is an adult who really cares about me
- Outside home and school, I am a part of group activities
- I plan to go to college or some other school after high school
- I have a friend about my own age who really cares about me

Students were asked how true each of these statements was for them. In each chart, results are organized by assigning one of three colored bars to those who said the statement was "Very much true", another bar to those who said the statement was "A little true" or "Pretty much true" and another to those who said "Not true at all". The length of each bar represents the percent of students who reported engaging in each risk behavior. In general, students who said "Very much true" to each resiliency factor (dark colored bars) had a lower prevalence of risk behaviors than other students, and students who said "Not true at all" (light colored bars) had higher rates of risk behaviors.

**Chart 1: Binge Drinking* by Selected Resiliency Factors, Grades 9-12, 2015**

Students were less likely to be binge drinkers if they said "Very much true" to any of the resiliency questions:

- In my home, a parent or other adult is interested in my school work
- When I am not at home, one of my parents/guardians knows where I am and who I am with
- At my school, a teacher or other adult believes I will be a success
- In my school, there are clear rules about what students can and cannot do
- At school I am involved in sports, clubs, or other extra-curricular activities
- Outside my home and school, there is an adult who really cares about me
- Outside home and school, I am a part of group activities
- I plan to go to college or some other school after high school
- I have a friend about my own age who really cares about me

* Had 5 or more drinks on a single occasion (i.e., in a row or within a couple of hours) at least once in the past 30 days
**Resiliency Factor Question**

- In my home, a parent or other adult is interested in my school work
- When I am not at home, one of my parents/guardians knows where I am and who I am with
- At my school, a teacher or other adult believes I will be a success
- In my school, there are clear rules about what students can and cannot do
- At school I am involved in sports, clubs, or other extra-curricular activities
- Outside my home and school, there is an adult who really cares about me
- Outside home and school, I am a part of group activities
- I plan to go to college or some other school after high school
- I have a friend about my own age who really cares about me

*Used marijuana in the past 30 days*

Students were less likely to be current marijuana users if they said "Very much true" to any of the resiliency questions:

- In my home, a parent or other adult is interested in my school work
- When I am not at home, one of my parents/guardians knows where I am and who I am with
- At my school, a teacher or other adult believes I will be a success
- In my school, there are clear rules about what students can and cannot do
- At school I am involved in sports, clubs, or other extra-curricular activities
- Outside my home and school, there is an adult who really cares about me
- Outside home and school, I am a part of group activities
- I plan to go to college or some other school after high school
- I have a friend about my own age who really cares about me

*Used a pain killer, like Vicodin, OxyContin, or Percocet, to get high in the past 30 days*
Students were less likely to be current cocaine users if they said "Very much true" to any of the resiliency questions:

- In my home, a parent or other adult is interested in my school work
- When I am not at home, one of my parents/guardians knows where I am and who I am with
- At my school, a teacher or other adult believes I will be a success
- In my school, there are clear rules about what students can and cannot do
- At school I am involved in sports, clubs, or other extra-curricular activities
- Outside my home and school, there is an adult who really cares about me
- Outside home and school, I am a part of group activities
- I plan to go to college or some other school after high school
- I have a friend about my own age who really cares about me

* Used any form of cocaine, including powder, crack, or freebase in the past 30 days

Students were less likely to be current cigarette smokers if they said "Very much true" to any of the resiliency questions:

- In my home, a parent or other adult is interested in my school work
- When I am not at home, one of my parents/guardians knows where I am and who I am with
- At my school, a teacher or other adult believes I will be a success
- In my school, there are clear rules about what students can and cannot do
- At school I am involved in sports, clubs, or other extra-curricular activities
- Outside my home and school, there is an adult who really cares about me
- Outside home and school, I am a part of group activities
- I plan to go to college or some other school after high school
- I have a friend about my own age who really cares about me

* Smoked cigarettes on at least one of the past 30 days
Chart 6: Feelings of Sadness or Hopelessness* by Selected Resiliency Factors, Grades 9-12, 2015

Students were less likely to have feelings of sadness and hopelessness if they said "Very much true" to any of the resiliency questions:

* Felt so sad or hopeless almost every day for at least two weeks that they stopped some normal activities, within the past 12 months

<table>
<thead>
<tr>
<th>Resiliency Factor Question</th>
<th>Percent (%) who felt feelings of sadness or hopelessness</th>
</tr>
</thead>
<tbody>
<tr>
<td>In my home, a parent or other adult is interested in my school work</td>
<td></td>
</tr>
<tr>
<td>When I am not at home, one of my parents/guardians knows where I am and who I am with</td>
<td></td>
</tr>
<tr>
<td>At my school, a teacher or other adult believes I will be a success</td>
<td></td>
</tr>
<tr>
<td>In my school, there are clear rules about what students can and cannot do</td>
<td></td>
</tr>
<tr>
<td>At school I am involved in sports, clubs, or other extra-curricular activities</td>
<td></td>
</tr>
<tr>
<td>Outside my home and school, there is an adult who really cares about me</td>
<td></td>
</tr>
<tr>
<td>Outside home and school, I am a part of group activities</td>
<td></td>
</tr>
<tr>
<td>I plan to go to college or some other school after high school</td>
<td></td>
</tr>
<tr>
<td>I have a friend about my own age who really cares about me</td>
<td></td>
</tr>
</tbody>
</table>

Chart 7: Suicide Attempts* by Selected Resiliency Factors, Grades 9-12, 2015

Students were less likely to attempt suicide if they said "Very much true" to any of the resiliency questions:

* Attempted suicide at least once in the past 12 months

<table>
<thead>
<tr>
<th>Resiliency Factor Question</th>
<th>Percent (%) who attempted suicide</th>
</tr>
</thead>
<tbody>
<tr>
<td>In my home, a parent or other adult is interested in my school work</td>
<td></td>
</tr>
<tr>
<td>When I am not at home, one of my parents/guardians knows where I am and who I am with</td>
<td></td>
</tr>
<tr>
<td>At my school, a teacher or other adult believes I will be a success</td>
<td></td>
</tr>
<tr>
<td>In my school, there are clear rules about what students can and cannot do</td>
<td></td>
</tr>
<tr>
<td>At school I am involved in sports, clubs, or other extra-curricular activities</td>
<td></td>
</tr>
<tr>
<td>Outside my home and school, there is an adult who really cares about me</td>
<td></td>
</tr>
<tr>
<td>Outside home and school, I am a part of group activities</td>
<td></td>
</tr>
<tr>
<td>I plan to go to college or some other school after high school</td>
<td></td>
</tr>
<tr>
<td>I have a friend about my own age who really cares about me</td>
<td></td>
</tr>
</tbody>
</table>
Section 2

Consumption
ADULT BINGE DRINKING

Problem Statement

Binge drinking is defined as a pattern of alcohol consumption that brings the blood alcohol concentration (BAC) level to 0.08% or above. This pattern of drinking usually corresponds to five or more drinks on a single occasion for men, or four or more drinks on a single occasion for women, generally within about two hours. According to the latest estimates from the Centers for Disease Control and Prevention, about 47% of homicides, 32% of fall injury deaths, 29% of drug overdose deaths, and 23% of suicide deaths are alcohol attributable. Likewise, alcohol consumption is the primary causal factor in roughly 45% of motor vehicle crash deaths among males aged 20-44, and in more than a third of motor vehicle crash deaths among females aged 20-44. Binge drinking is also associated with a wide range of other social problems, including domestic and sexual violence, crime, and risky sexual behavior.

Table 1 shows that binge drinking rates decrease with age and are higher among males. Chart 1 shows that binge drinking prevalence among younger adults has remained relatively stable. Chart 2 shows that adults who do binge drink continue to do so on average four to five times per month; and, drink well above the binge drinking threshold when they do. County-level results are shown in Table 2 and Charts 3-4.

Chart 1: Binge Drinking (past 30 days)* by Age, Adults Aged 18+, New Mexico, 1998-2015

* Binge drinking definition: 1998-2005, drinking five or more drinks on an occasion at least once in the past 30 days; 2006-present, drinking five or more drinks (for men) or four or more drinks (for women) on an occasion at least once in the past 30 days

**In 2011, BRFSS updated its surveillance methods. Any shift in prevalence between 2010 and 2011 must be interpreted with caution, as it may be partially due to changes in methodology.

Source: BRFSS; SAES (NOTE: Brackets around reported rates are 95% confidence intervals)

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>Ages 18-24</th>
<th>Ages 25-64</th>
<th>Ages 65+</th>
<th>All Ages</th>
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<tbody>
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<td>Male</td>
<td>American Indian</td>
<td>2,677</td>
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<td>930</td>
<td>-</td>
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<td>10,511</td>
<td>42,987</td>
<td>4,846</td>
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<td>30,051</td>
<td>114,837</td>
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<td>66</td>
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<tr>
<td>Total</td>
<td></td>
<td>14,940</td>
<td>49,846</td>
<td>9,247</td>
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* Estimate of percent of people in population group who reported binge drinking at least once in past 30 days
- Excluded due to small number of respondents (< 50) in cell

Source: BRFSS; SAES
ADULT BINGE DRINKING (continued)

Chart 2: Binge Drinking Frequency and Intensity*, Adult Binge Drinkers Aged 18+, New Mexico, 1998-2015

Table 2: Binge Drinking (past 30 days) by Race and County, Adults Aged 18+, New Mexico, 2013-2015

<table>
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<tr>
<th>County</th>
<th>American Indian</th>
<th>Asian/Pacific Islander</th>
<th>Black</th>
<th>Hispanic</th>
<th>White</th>
<th>All Races</th>
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<td>11.0</td>
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<td>13.4</td>
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<tr>
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<td>1,230</td>
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<td>1,628</td>
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<td>16.3</td>
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<td>15.4</td>
<td>12.6</td>
<td>13.8</td>
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</tbody>
</table>

* Estimate of percent of people in population group who reported binge drinking at least once in past 30 days
* Excluded due to small number of respondents (< 50) in cell

Source: BRFSS; SAES

New Mexico Substance Abuse Epidemiology Profile  Page 74
Chart 3: Binge Drinking (past 30 days)* by County, Adults Aged 18+, New Mexico, 2013-2015

* Estimate of percent of people in population group who reported binge drinking at least once in past 30 days

Source: NMBRFSS (NM); CDC BRFSS (US); SAES

New Mexico Substance Abuse Epidemiology Profile  Page 75
ADULT BINGE DRINKING (continued)

Chart 4: Binge Drinking (past 30 days)* by County, Adults Aged 18+, New Mexico, 2013-2015

* Estimate of percent of people in population group who reported binge drinking at least once in past 30 days
Insufficient data: Rate not reported due to small number of respondents (< 50) in cell
Source: BRFSS; SAES

New Mexico Substance Abuse Epidemiology Profile
**Problem Statement**

Any alcohol consumption by a person under the age of 21 is considered to be excessive drinking. Alcohol is the most commonly used drug among youth in New Mexico, more than tobacco or other drugs. However, contrary to common perception, most high school students do not drink. “Current drinking” is defined as responding one or more days to the question: “During the past 30 days, on how many days did you have at least one drink of alcohol?”

In 2015, 26.1% of high school students reported that they were current drinkers. This is a significant decrease from 43.3% in 2005. Boys and girls are equally likely to be current drinkers and the percent of youth who drink increases with grade level. However, it is important to note that by ninth grade, close to one in five students are already drinking. Students who identify as Hispanic are most likely to currently drink, followed by Black and White students. American Indian students and Asian/Pacific Islander students are the least likely to drink.

Grant County has the highest prevalence of current drinking among high school students (37.6%), followed by Luna (37.1%), and Sierra (35.4%) counties. De Baca has the lowest percent (14.7%).

**Chart 1: Current Drinking* by Year, Grades 9 - 12, New Mexico and US, 2003-2015**

*“Current drinking” is defined as responding one or more days to the question: “During the past 30 days, on how many days did you have at least one drink of alcohol?”*

Source: YRRS (NM); CDC YRBS (US); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)

**Table 1: Current Drinking, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
<th>All Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>5.7 (1.8-16.4)</td>
<td>19.8 (10.8-33.4)</td>
<td>28.9 (22.7-36.1)</td>
<td>15.5 (6.5-32.6)</td>
<td>17.3 (14.3-20.8)</td>
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<tr>
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<td>Asian/Pacific Islander</td>
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<td>22.8 (14.9-33.3)</td>
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<tr>
<td></td>
<td>Black</td>
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<td>--</td>
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<td>24.0 (16.5-33.5)</td>
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<tr>
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<td>Hispanic</td>
<td>20.1 (16.6-24.1)</td>
<td>22.8 (19.5-26.4)</td>
<td>32.4 (28.2-37.0)</td>
<td>42.1 (37.3-47.0)</td>
<td>27.8 (25.6-30.1)</td>
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<tr>
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<td>White</td>
<td>14.6 (9.8-21.1)</td>
<td>15.2 (10.4-21.7)</td>
<td>20.5 (13.5-30.0)</td>
<td>41.7 (33.6-50.3)</td>
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<td>20.2 (17.3-23.4)</td>
<td>28.7 (25.2-32.5)</td>
<td>38.8 (34.4-43.3)</td>
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<td>Female</td>
<td>American Indian</td>
<td>10.9 (5.7-19.6)</td>
<td>21.5 (9.2-42.5)</td>
<td>19.8 (10.7-33.8)</td>
<td>23.3 (14.3-35.6)</td>
<td>18.8 (11.3-29.7)</td>
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<tr>
<td></td>
<td>Asian/Pacific Islander</td>
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<td>--</td>
<td>--</td>
<td>--</td>
<td>16.6 (9.3-27.8)</td>
</tr>
<tr>
<td></td>
<td>Black</td>
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<td>--</td>
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<td>--</td>
<td>26.5 (17.8-37.6)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>21.7 (18.4-25.3)</td>
<td>28.5 (23.5-34.0)</td>
<td>33.9 (29.8-38.3)</td>
<td>37.6 (31.7-43.8)</td>
<td>29.6 (26.9-32.6)</td>
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<tr>
<td></td>
<td>White</td>
<td>17.2 (12.8-22.7)</td>
<td>24.5 (18.3-32.0)</td>
<td>27.0 (20.1-35.3)</td>
<td>32.3 (23.7-42.3)</td>
<td>24.9 (21.6-28.7)</td>
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<tr>
<td></td>
<td>Total</td>
<td>19.2 (16.9-21.9)</td>
<td>26.2 (21.8-31.0)</td>
<td>30.5 (27.2-34.0)</td>
<td>34.3 (29.3-39.7)</td>
<td>27.0 (24.7-29.5)</td>
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<td>Total</td>
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<td>8.2 (3.9-16.7)</td>
<td>20.7 (15.9-26.4)</td>
<td>24.3 (18.5-31.2)</td>
<td>19.5 (11.3-31.7)</td>
<td>18.0 (13.2-24.2)</td>
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<tr>
<td></td>
<td>Asian/Pacific Islander</td>
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<td>--</td>
<td>20.1 (14.6-26.9)</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>10.9 (5.0-22.1)</td>
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<td>--</td>
<td>--</td>
<td>25.0 (19.2-32.0)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>20.9 (18.2-23.9)</td>
<td>25.7 (22.5-29.3)</td>
<td>33.2 (30.4-36.1)</td>
<td>39.7 (35.5-44.0)</td>
<td>28.8 (27.0-30.7)</td>
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<tr>
<td></td>
<td>White</td>
<td>15.9 (12.8-19.7)</td>
<td>19.4 (15.3-24.2)</td>
<td>23.6 (18.7-29.5)</td>
<td>37.3 (30.6-44.6)</td>
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<tr>
<td></td>
<td>Total</td>
<td>18.1 (16.1-20.3)</td>
<td>23.2 (20.5-26.0)</td>
<td>29.5 (27.0-32.2)</td>
<td>36.5 (32.7-40.4)</td>
<td>26.1 (24.4-27.9)</td>
</tr>
</tbody>
</table>

Source: YRRS (NM); NMDOH Survey Section (NOTE: “95% CI” is 95% confidence interval)
### Chart 2: Current Drinking, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

![Bar chart showing current drinking percentages by grade level, gender, and race/ethnicity.](chart2.png)

### Chart 3: Current Drinking* by County, Grades 9 - 12, New Mexico, 2015

![Bar chart showing current drinking percentages by county.](chart3.png)

* Estimate of percent of high school students who reported current drinking in past 30 days

Harding and Catron County estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
YOUTH CURRENT DRINKING (continued)

Chart 4: Current Drinking* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported current drinking in past 30 days
Insufficient data: county estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section: SAES

New Mexico Substance Abuse Epidemiology Profile Page 79
**Problem Statement**

Binge drinking (defined as having five or more drinks of alcohol in a row within a couple of hours) is a major risk factor for the three leading causes of death among youth (motor vehicle crashes, suicide, and homicide), as well as being associated with poor academic performance and risk behaviors such as impaired driving, riding with a drinking driver, physical fighting, increased number of sexual partners, and other substance use.

In 2015, 14.6% of New Mexico high school students reported binge drinking at least once in the past month. Binge drinking is the norm among current high school drinkers in New Mexico. In 2015, of the 26.1% of students who were current drinkers, 60.5% were binge drinkers. Chart 1 demonstrates that binge drinking prevalence has been decreasing in New Mexico since 2003, as it has been in the US since at least 2001. In 2015, the difference between the US (17.7) and New Mexico (14.6%, 95%CI [13.3-15.9]) rates for binge drinking was not statistically significant.

As shown in Chart 2, binge drinking significantly increases with increasing grade level. Hispanic boys are significantly more likely to binge drink than White, American Indian/Alaska Native, or Asian/Pacific Island boys. There are no significant differences by race/ethnicity for girls.

---

**Chart 1: Binge Drinking* by Year, Grades 9 - 12, New Mexico and US, 2003-2015**

![Chart 1: Binge Drinking by Year, Grades 9 - 12, New Mexico and US, 2003-2015](chart.png)

* Had 5 or more drinks of alcohol in a row, or within a couple of hours, in the past 30 days

Source: YRRS (NM); CDC YRBS (US); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)

**Table 1: Binge Drinking, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
<th>All Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
</tr>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>3.1 (1.0-9.8)</td>
<td>14.1 (7.1-26.2)</td>
<td>19.1 (13.0-27.1)</td>
<td>7.9 (2.5-22.1)</td>
<td>10.9 (8.4-14.0)</td>
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<td>Asian/Pacific Islander</td>
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<td>--</td>
<td>17.0 (9.9-27.6)</td>
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<td>Black</td>
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<td>--</td>
<td>12.3 (7.4-19.7)</td>
</tr>
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<td>Hispanic</td>
<td>11.0 (8.4-14.4)</td>
<td>14.0 (11.3-17.3)</td>
<td>19.1 (15.6-23.2)</td>
<td>29.3 (24.9-34.0)</td>
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<tr>
<td></td>
<td>White</td>
<td>8.6 (5.4-13.4)</td>
<td>5.8 (2.5-12.9)</td>
<td>14.0 (8.5-22.3)</td>
<td>26.1 (18.9-34.7)</td>
<td>13.3 (10.7-16.4)</td>
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<td>9.5 (7.5-11.9)</td>
<td>11.6 (9.2-14.5)</td>
<td>17.6 (14.8-20.9)</td>
<td>25.5 (21.8-29.6)</td>
<td>15.2 (13.8-16.8)</td>
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<tr>
<td>Female</td>
<td>American Indian</td>
<td>5.7 (2.7-11.5)</td>
<td>10.9 (3.7-28.1)</td>
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<td>10.8 (3.9-26.7)</td>
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<td>White</td>
<td>8.2 (3.7-10.4)</td>
<td>9.1 (5.5-14.6)</td>
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<td>11.9 (8.9-15.6)</td>
<td>15.8 (13.6-18.2)</td>
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<td>4.4 (2.0-9.4)</td>
<td>12.4 (9.6-16.0)</td>
<td>14.6 (10.2-20.3)</td>
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<td>--</td>
<td>--</td>
<td>11.7 (7.3-18.1)</td>
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<tr>
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<td>Black</td>
<td>8.0 (3.5-17.2)</td>
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<td>14.2 (10.0-20.0)</td>
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<tr>
<td></td>
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<td>11.3 (9.4-13.5)</td>
<td>13.8 (11.5-16.4)</td>
<td>18.3 (16.2-20.6)</td>
<td>25.3 (21.5-29.7)</td>
<td>16.4 (14.9-17.9)</td>
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<tr>
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<td>White</td>
<td>7.5 (5.3-10.4)</td>
<td>7.2 (4.3-11.8)</td>
<td>14.2 (10.6-18.6)</td>
<td>22.8 (17.4-29.2)</td>
<td>12.6 (10.7-14.9)</td>
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<tr>
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<td>8.6 (8.1-11.4)</td>
<td>11.7 (9.7-14.0)</td>
<td>16.7 (14.9-18.6)</td>
<td>22.5 (19.2-26.2)</td>
<td>14.6 (13.3-15.9)</td>
</tr>
</tbody>
</table>

Source: YRRS (NM); NMDOH Survey Section (NOTE: “95% CI” is 95% confidence interval)
YOUTH BINGE DRINKING (continued)

Chart 2: Binge Drinking, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)

New Mexico Substance Abuse Epidemiology Profile   Page 82

Chart 3: Binge Drinking* by County, Grades 9 - 12, New Mexico, 2015

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)

* Estimate of percent of high school students who reported binge drinking at least once in past 30 days
Harding and Catron County estimates not available because of low numbers and/or low response rates
Chart 4: Binge Drinking* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported binge drinking at least once in past 30 days

Insufficient data: county estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES

Youth Binge Drinking

State rate = 14.6
- Insufficient/Missing Data
- < 14.6
- 14.6 - < 18.3
- >= 18.3
Problem Statement

On average, underage drinkers consume more drinks per drinking occasion than adult drinkers. The risk of harm increases as the number of drinks consumed on an occasion increases.

The maximum number of drinks that a student consumed on an occasion is determined by the question: “During the past 30 days, what is the largest number of alcoholic drinks you had in a row, that is, within a couple of hours?”

Students in the 12th grade are more likely to drink 10 or more drinks on an occasion than ninth grade students. Although boys and girls are equally likely to drink (see current drinking indicator), boys are almost twice as likely to drink ten or more drinks on an occasion than girls. Asian/Pacific Islander students are least likely to consume ten or more drinks. American Indian and White students are significantly less likely to consume ten or more drinks than Hispanic students. Prevalence was fairly similar by county, ranging from 0.8% of students (Mora County) to 11.6% of students (Union County).

## Chart 1: 10 Plus Drinks, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

![Chart 1: 10 Plus Drinks, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015](chart1.png)

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)

### Table 1: 10 Plus Drinks, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

<table>
<thead>
<tr>
<th></th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
<th>All Grades</th>
</tr>
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<td><strong>Sex</strong></td>
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<td></td>
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</tr>
<tr>
<td>Male</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>American Indian</td>
<td>0.6 (0.1-4.3)</td>
<td>3.2 (1.2-8.5)</td>
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<tr>
<td>Asian/Pacific Islander</td>
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<td>--</td>
<td>6.3 (2.4-15.6)</td>
</tr>
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<td>3.6 (1.2-9.9)</td>
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<tr>
<td>Hispanic</td>
<td>2.6 (1.5-4.5)</td>
<td>4.1 (2.8-5.8)</td>
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<td>8.5 (5.7-12.5)</td>
<td>5.2 (4.1-6.5)</td>
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<tr>
<td>White</td>
<td>2.4 (0.7-7.5)</td>
<td>2.8 (1.0-7.3)</td>
<td>3.2 (1.5-6.5)</td>
<td>7.5 (4.6-11.9)</td>
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</table>
YOUTH 10 PLUS DRINKS (continued)

Chart 2: 10 Plus Drinks* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported binge drinking at least once in past 30 days
Harding and Catron County estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
* Estimate of percent of high school students who reported binge drinking at least once in past 30 days

Insufficient data: county estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES
**ADULT HEAVY DRINKING**

**Problem Statement**

Heavy drinking (defined as having more than 2 drinks/day, for males; and more than one drink/day, for females) is a pattern of excessive alcohol consumption that can lead to alcohol-related chronic disease and death. According to the latest estimates from the CDC, 100% of numerous chronic disease conditions (e.g., alcoholic liver disease, alcohol dependence syndrome), and a significant proportion of many other conditions (e.g., unspecified liver cirrhosis, pancreatitis) are alcohol-related. For each of these causes, it is chronic heavy drinking (as opposed to acute episodic or binge drinking) that is considered primarily responsible for the incidence and progression of alcohol-related chronic disease. Heavy drinking is also associated with a wide range of other social problems, including alcoholism (also known as alcohol dependence), domestic violence, and family disruption.

Chart 1 shows that adult heavy drinking prevalence has been, more or less, constant since 2005. Heavy drinking prevalence is lower among adults in New Mexico (5.4%) than in the US overall (5.9%). As shown in Table 1, heavy drinking was most prevalent among adults in the 25-64 age group, with 6.0% reporting past-month heavy drinking. New Mexico men were somewhat more likely to report chronic drinking than women (6.4% v. 4.5%); and White males had the highest reported rate of heavy drinking (6.8%) followed by American Indian males (6.3%). However, among women, Black females had the highest rate (11.6%), followed by White women (6.9%).

### Chart 1: Heavy Drinking (past 30 days)*, Adults Aged 18+, New Mexico, 1998-2015

![Graph showing heavy drinking prevalence from 1998 to 2015](image)

* *Heavy drinking definition: drinking more than 2 drinks/day on average (for men) or more than 1 drink/day (for women) in past 30 days

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<th>Percent*</th>
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* Estimate of percent of people in population group who reported heavy drinking in past 30 days
- Excluded due to small number of respondents (< 50) in cell

Source: BRFSS; SAES

New Mexico Substance Abuse Epidemiology Profile Page 89
ADULT HEAVY DRINKING (continued)

Problem Statement (continued)

White males had the highest heavy drinking rates (6.8%), followed by Hispanics (6.3) and American Indians (6.3). However, American Indian males have the highest rates of alcohol-related chronic disease death (70.2 deaths per 100,000 population), followed by Hispanics (31.4) and Whites (13.4). Among women, Black/African American had the highest rates of heavy drinking (11.6), followed by Whites (6.9). However, American Indian females have the highest rates of alcohol-related chronic disease death (47.3 deaths per 100,000 population), followed by Hispanics (12.4) and Whites (6.8).

Between 2013-2015, as shown in Table 2 and Chart 2, heavy drinking rates were highest in Hidalgo (10.9%), Mora (10.3%), and Catron (9.2%) counties; and, substantially lower in counties that have among the highest rates of alcohol-related chronic disease death rates (e.g., Rio Arriba, McKinley, Cibola). High rates in Catron County are driven by high rates in the White population. In Mora County, high rates are driven by the Hispanic population.

### Table 2: Heavy Drinking (past 30 days) by Race/Ethnicity and County, Adults Aged 18+, New Mexico, 2013-2015

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</table>

* Estimate of percent of people in population group who reported heavy drinking in past 30 days
- Excluded due to small number of respondents (< 50) in cell

Source: BRFSS; SAES

New Mexico Substance Abuse Epidemiology Profile Page 90
ADULT HEAVY DRINKING (continued)

Chart 2: Heavy Drinking (past 30 days)* by County, Adults Aged 18+, New Mexico, 2013-2015

County (# of heavy drinkers; % of statewide heavy drinkers)

United States 2015

Bernalillo (27543; 31.8%) 5.3
Sierra (502; 0.6%) 5.2
Colfax (541; 0.6%) 5.1
Taos (1369; 1.6%) 5.0
Chaves (2425; 2.8%) 5.0
San Juan (4523; 5.2%) 4.9
Roosevelt (694; 0.8%) 4.7
Quay (324; 0.4%) 4.7
Rio Arriba (1352; 1.6%) 4.5
Socorro (580; 0.7%) 4.3
Otero (2044; 2.4%) 4.1
Cibola (832; 1.0%) 4.0
Union (135; 0.2%) 3.7
San Miguel (724; 0.8%) 3.2
McKinley (1348; 1.6%) 2.6
Torrance (230; 0.3%) 1.9
De Baca (28; 0.0%) 1.8
New Mexico (86517; 100.0%) 5.4

* Estimate of percent of people in population group who reported heavy drinking in past 30 days

Source: NMBRFSS (NM); CDC BRFSS (US); SAES
Estimate of percent of people in population group who reported heavy drinking in past 30 days

Insufficient data: Rate not reported due to small number of respondents (< 50) in cell

Source: NMBRFSS (NM); CDC BRFSS (US); SAES

New Mexico Substance Abuse Epidemiology Profile

Chart 3: Heavy Drinking (past 30 days)* by County, Adults Aged 18+, New Mexico, 2013-2015

Adult Heavy Drinking

State rate = 5.4

- Insufficient/Missing Data
- < 5.4
- 5.4 - < 6.8
- >= 6.8

* Estimate of percent of people in population group who reported heavy drinking in past 30 days
Insufficient data: Rate not reported due to small number of respondents (< 50) in cell
Source: NMBRFSS (NM); CDC BRFSS (US); SAES
ADULT DRINKING AND DRIVING

Problem Statement

Adult drinking and driving is a precursor to alcohol-related motor vehicle crash injury and death. Any drinking and driving is dangerous (i.e., associated with an elevated risk of crash and injury), but driving after binge drinking (which is defined as a level of drinking likely to lead to a 0.08 BAC) is particularly risky. Unfortunately, as shown in Chart 1, binge drinkers are much more likely to report driving after drinking than non-binge drinkers. For example, in 2012, only 1.2% of the general population reported driving after drinking; but 7.2% of binge drinkers reported engaging in this risky behavior in the past 30 days, compared to only 0.7% of non-binge drinkers. On a positive note, Chart 1 shows that driving after drinking prevalence decreased significantly between 2006 and 2010 (from 2.2% to 0.9%), including a substantial decline among binge drinkers (from 14.5% to 6.2%).

As shown in Chart 2, in 2014 driving after drinking was most prevalent among young adults, with 1.7% of those aged 18-24 reporting past-month drinking and driving. Chart 2 shows a decline (although not statistically significant) in drinking and driving by young adults (age 18-24) and a fluctuating pattern among those aged 25-64. Table 1 shows that New Mexico men were six times more likely to report drinking and driving than women (1.9% v. 0.3%). Hispanic males (2.4%) were more likely to report drinking and driving than American Indian (1.8%) and White (1.7%) males. Table 2 and Chart 3 show drinking and driving rates by county.

---

**Table 1: Drinking and Driving (past 30 days) by Age, Sex, and Race, Adults Aged 18+, New Mexico, 2014**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>Ages 18-24</th>
<th>Ages 25-64</th>
<th>Ages 65+</th>
<th>All Ages</th>
<th>Ages 18-24</th>
<th>Ages 25-64</th>
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<td>White</td>
<td>477</td>
<td>4,237</td>
<td>393</td>
<td>5,107</td>
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</table>

* Estimate of number of people in population group who drove after "perhaps too much to drink" at least once in past 30 days

** Estimate of percent of people in population group who drove after "perhaps too much to drink" at least once in past 30 days

- Excluded due to small number of respondents (< 50) in cell

Source: BRFSS; SAES
**ADULT DRINKING AND DRIVING (continued)**

**Table 2**: Drinking and Driving (past 30 days) by Race/Ethnicity and County, Adults Aged 18+, New Mexico, 2014

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<th>Hispanic</th>
<th>White</th>
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<td>1.4</td>
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</tr>
</tbody>
</table>

* Estimate of number of people in population group who drove after “perhaps too much to drink” at least once in past 30 days

** Estimate of percent of people in population group who drove after “perhaps too much to drink” at least once in past 30 days

- Excluded due to small number of respondents (< 50) in cell

Source: BRFSS; SAES
ADULT DRINKING AND DRIVING (continued)

Chart 3: Drinking and Driving (past 30 days)* by County, Adults Aged 18+, New Mexico, 2014

County (# of drinking drivers; % of statewide drinking drivers)

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<th>County</th>
<th>(# of drinking drivers; % of statewide drinking drivers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincoln</td>
<td>(280; 1.8%)</td>
</tr>
<tr>
<td>Taos</td>
<td>(350; 2.2%)</td>
</tr>
<tr>
<td>Sandoval</td>
<td>(1497; 9.5%)</td>
</tr>
<tr>
<td>Chaves</td>
<td>(671; 4.3%)</td>
</tr>
<tr>
<td>Dona Ana</td>
<td>(2090; 13.3%)</td>
</tr>
<tr>
<td>Cibola</td>
<td>(269; 1.7%)</td>
</tr>
<tr>
<td>Bernalillo</td>
<td>(6169; 39.1%)</td>
</tr>
<tr>
<td>Santa Fe</td>
<td>(1368; 8.7%)</td>
</tr>
<tr>
<td>Curry</td>
<td>(377; 2.4%)</td>
</tr>
<tr>
<td>New Mexico</td>
<td>(15766; 100.0%)</td>
</tr>
<tr>
<td>Valencia</td>
<td>(578; 3.7%)</td>
</tr>
<tr>
<td>Los Alamos</td>
<td>(137; 0.9%)</td>
</tr>
<tr>
<td>Sierra</td>
<td>(86; 0.5%)</td>
</tr>
<tr>
<td>McKinley</td>
<td>(383; 2.4%)</td>
</tr>
<tr>
<td>Lea</td>
<td>(404; 2.6%)</td>
</tr>
<tr>
<td>Rio Arriba</td>
<td>(222; 1.4%)</td>
</tr>
<tr>
<td>San Juan</td>
<td>(337; 2.1%)</td>
</tr>
<tr>
<td>Otero</td>
<td>(126; 0.8%)</td>
</tr>
<tr>
<td>Grant</td>
<td>(56; 0.4%)</td>
</tr>
<tr>
<td>Socorro</td>
<td>(0; 0.0%)</td>
</tr>
<tr>
<td>San Miguel</td>
<td>(0; 0.0%)</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>(0; 0.0%)</td>
</tr>
<tr>
<td>Quay</td>
<td>(0; 0.0%)</td>
</tr>
<tr>
<td>Luna</td>
<td>(0; 0.0%)</td>
</tr>
<tr>
<td>Eddy</td>
<td>(0; 0.0%)</td>
</tr>
<tr>
<td>Colfax</td>
<td>(0; 0.0%)</td>
</tr>
</tbody>
</table>

The following counties were not included due to small number of respondents (< 50) in cell:

- Catron
- De Baca
- Guadalupe
- Harding
- Hidalgo
- Mora
- Torrance
- Union

N/A: United States rate not available

Source: BRFSS; SAES

* Estimate of percent of people in population group who drove after having "perhaps too much to drink" at least once in past 30 days
* Estimate of percent of people in population group who drove after having "perhaps too much to drink" at least once in past 30 days
Insufficient data: Rate not reported due to small number of respondents (< 50) in cell
Source: BRFSS; SAES
YOUTH DRINKING AND DRIVING

Problem Statement

Drinking and driving is a major risk factor for motor vehicle accidents. Motor vehicle crashes are the leading cause of death for youth aged 15-20 years. According to the National Highway Traffic Safety Administration (NHTSA), alcohol impaired-drivingfatalities accounted for 29% of the total motor vehicle traffic fatalities in the US in 2015.* The rate of drinking and driving among New Mexico high school students has been decreasing since 2003, and decreasing among US high school students since at least 2001. In recent years, NM had a higher rate than the US, but since 2009 there has not been a statistical difference between the two rates.

In 2015, the prevalence of past-30-day drinking and driving was 7.4% among NM high school students. Drinking and driving mostly increased in prevalence with increasing grade levels (9th = 6.1%; 10th = 4.6%; 11th = 8.6%; 12th = 9.4%). White (6.0%) and American Indian (6.7%) students had lower rates of drinking and driving than Asian/Pacific Islander (13.8%) students. The difference in rates between boys (8.2%) and girls (6.4%) was not statistically significant. In 2015, the drinking and driving rate was highest in Lea (14.2%), Colfax (13.0%), Roosevelt (12.3%), Socorro (11.7%), and Taos (11.1%) counties. The rate was lowest in Curry (2.6%), Chaves (3.2%), De Baca (3.9%), Guadalupe (5.7%), and San Juan (5.7%) counties.

*https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812318

Chart 1: Drinking and Driving* by Year, Grades 9 - 12, New Mexico and US, 2003-2015

Table 1: Drinking and Driving, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
<th>All Grades</th>
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<td></td>
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<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
</tr>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>3.1 (0.5-15.5)</td>
<td>6.3 (1.8-19.9)</td>
<td>20.4 (13.6-29.4)</td>
<td>4.9 (1.9-12.1)</td>
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<td>9.8 (7.0-13.6)</td>
<td>11.5 (8.0-16.2)</td>
<td>9.0 (7.7-10.6)</td>
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<td>3.7 (0.9-14.2)</td>
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<td>10.0 (6.2-15.6)</td>
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<td>5.4 (3.9-7.4)</td>
<td>9.8 (7.6-12.7)</td>
<td>10.6 (7.9-14.1)</td>
<td>8.2 (7.2-9.5)</td>
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<td>Female</td>
<td>American Indian</td>
<td>3.0 (0.5-15.6)</td>
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<td>4.3 (2.7-6.7)</td>
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<tr>
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<tr>
<td>Total</td>
<td>American Indian</td>
<td>3.0 (0.8-10.9)</td>
<td>5.8 (3.6-9.2)</td>
<td>14.0 (8.5-22.1)</td>
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<td>Asian/Pacific Islander</td>
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<td>13.8 (7.9-22.9)</td>
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<tr>
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<td>Black</td>
<td>6.4 (4.5-9.2)</td>
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<td>8.0 (5.9-10.8)</td>
<td>10.1 (7.4-13.7)</td>
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<tr>
<td></td>
<td>Hispanic</td>
<td>3.7 (1.3-10.0)</td>
<td>1.5 (0.5-4.0)</td>
<td>7.0 (3.9-12.2)</td>
<td>9.9 (6.4-15.0)</td>
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<tr>
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<td>White</td>
<td>6.1 (4.5-8.1)</td>
<td>4.6 (3.6-5.8)</td>
<td>8.6 (6.8-10.9)</td>
<td>9.4 (6.9-12.7)</td>
<td>7.4 (6.5-8.4)</td>
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</table>

Source: YRRS (NM); CDC YRBS (US); NMDOH Survey Section (NOTE: ‘95% CI’ is 95% confidence interval)
YOUTH DRINKING AND DRIVING (continued)

Chart 2: Drinking and Driving, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

Chart 3: Drinking and Driving* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported drinking and driving at least once in past 30 days

Harding and Catron County estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
YOUTH DRINKING AND DRIVING (continued)

Chart 4: Drinking and Driving* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported drinking and driving at least once in past 30 days

Insufficient data: county estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES

New Mexico Substance Abuse Epidemiology Profile
Problem Statement

There has been no apparent trend in the rate of current marijuana use by New Mexico high school students in recent years. While the US rate decreased from 1999 to 2007, it has increased since then. While the NM rate in 2009 (28.0%) was higher than the rate in 2007 (25.0%), the difference was not statistically significant. In 2015, the New Mexico rate (25.3%) was higher than the US rate (21.7%), as it has been consistently higher for several years.

Higher grades show higher rate of current marijuana use. There was no statistically significant variation by gender. The rate among American Indian (34.1%) students was higher than among Black (25.7%), Hispanic (26.3%), Asian/Pacific Islander (20.8%), and White (19.3%) students.

In 2015, the rate of past 30-day marijuana use was highest in Taos (36.6%), Grant (35.5%), and Cibola (34.0%) counties. The rate was lowest in Curry (14.2%), De Baca (14.2%), Eddy (14.4%), and Lea (18.1%) counties.

Chart 1: Current Marijuana Use* by Year, Grades 9 - 12, New Mexico and US, 2003-2015

There has been no apparent trend in the rate of current marijuana use by New Mexico high school students in recent years. While the US rate decreased from 1999 to 2007, it has increased since then. While the NM rate in 2009 (28.0%) was higher than the rate in 2007 (25.0%), the difference was not statistically significant. In 2015, the New Mexico rate (25.3%) was higher than the US rate (21.7%), as it has been consistently higher for several years.

Higher grades show higher rate of current marijuana use. There was no statistically significant variation by gender. The rate among American Indian (34.1%) students was higher than among Black (25.7%), Hispanic (26.3%), Asian/Pacific Islander (20.8%), and White (19.3%) students.

In 2015, the rate of past 30-day marijuana use was highest in Taos (36.6%), Grant (35.5%), and Cibola (34.0%) counties. The rate was lowest in Curry (14.2%), De Baca (14.2%), Eddy (14.4%), and Lea (18.1%) counties.
**YOUTH CURRENT MARIJUANA USE (continued)**

Chart 2: Current Marijuana Use, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

![Chart 2: Current Marijuana Use, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015](image)

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)

Chart 3: Current Marijuana Use* by County, Grades 9 - 12, New Mexico, 2015

![Chart 3: Current Marijuana Use* by County, Grades 9 - 12, New Mexico, 2015](image)

* Estimate of percent of high school students who reported marijuana use at least once in past 30 days

Harding and Catron County estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
Chart 4: Current Marijuana Use* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported marijuana use at least once in past 30 days

Insufficient data: county estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES

New Mexico Substance Abuse Epidemiology Profile Page 103
Problem Statement

The New Mexico rate of current cocaine use by youth decreased from 2003 (8.9%) to 2007 (5.4%). The US rate decreased from 4.1% in 2003 to 2.8% in 2009, and has not significantly changed from 2009 to 2011. The New Mexico rate in 2015 (4.5%) was higher than the last available US rate (3.0% in 2011), and has been consistently higher than the US rate since 2003.

The difference in the rate between males (6.3%) and females (2.6%) was statistically significant. The rate of current cocaine use increased in prevalence with increasing grade levels. Asian or Pacific Islander (11.8%) and Black (9.6%) students (11.0%) had higher rates of current cocaine use than Hispanic (5.1%), American Indian (3.4%), or White (2.5%) students. Differences between racial/ethnic groups were not statistically significant.

In 2015, the rate of past 30-day cocaine use was highest in Mora (10.5%), Socorro (10.2%), Roosevelt (8.4%), Hidalgo (8.4%), and Otero (7.9%) counties. The rate was lowest in Quay (2.2%), Union (2.2%), Los Alamos (2.3%), De Baca (3.0%), and Eddy (3.0%) counties.

Table 1: Current Cocaine Use, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
<th>All Grades</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
</tr>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>4.7 (1.7-12.2)</td>
<td>4.4 (1.3-13.6)</td>
<td>9.2 (5.4-15.2)</td>
<td>4.2 (1.5-11.2)</td>
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<td>12.3 (7.5-19.7)</td>
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<td>Hispanic</td>
<td>4.3 (3.0-6.3)</td>
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<tr>
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<td>White</td>
<td>1.9 (0.5-7.2)</td>
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<td>7.5 (4.3-12.7)</td>
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<td>4.0 (3.0-5.3)</td>
<td>5.8 (4.5-7.4)</td>
<td>7.5 (5.7-9.7)</td>
<td>9.2 (6.9-12.1)</td>
<td>6.3 (5.6-7.1)</td>
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<td>Female</td>
<td>American Indian</td>
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<td>Total</td>
<td>American Indian</td>
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<td>9.6 (5.9-15.2)</td>
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<td>6.6 (5.1-8.4)</td>
<td>4.5 (4.0-5.1)</td>
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</table>
Chart 2: Current Cocaine Use, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

Chart 3: Current Cocaine Use* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported cocaine use at least once in past 30 days

Harding and Catron County estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
* Estimate of percent of high school students who reported cocaine use at least once in past 30 days

Insufficient data: county estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES
YOUTH USED PAINKILLER TO GET HIGH

Problem Statement

The rate of current use of painkillers to get high has shown no noticeable trend since the measure was added to the YRRS survey questionnaire in 2007. Painkiller use to get high had the second highest prevalence (7.9%) of all 30-day drug use measures in the 2015 YRRS, behind marijuana (25.3%). The question about the use of painkillers to get high is not on the national YRBS, and there is no national comparison.

The rate of painkiller use to get high was higher among males (8.7%) than females (6.9%), but this difference is not statistically significant. The rate was significantly higher among 12th graders (9.7%) compared to 6th graders (6.1%). The prevalence was higher among Black (12.1%) and American Indian/Alaska Native (11.9%) than among Hispanic (8.0%) and White (5.1%) students.

In 2015, the rate of painkiller use to get high was highest in Mora (14.2%), Grant (13.2%), and McKinley (12.3%) counties. The rate was lowest in De Baca (5.6%), Chaves (5.9%), and San Juan (6.1%) counties.

Chart 1: Used Painkiller to Get High* by Year, Grades 9 - 12, New Mexico, 2007-2015

In 2015, the rate of painkiller use to get high was highest in Mora (14.2%), Grant (13.2%), and McKinley (12.3%) counties. The rate was lowest in De Baca (5.6%), Chaves (5.9%), and San Juan (6.1%) counties.

Table 1: Used Painkiller to Get High, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
<th>All Grades</th>
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<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
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<td>American Indian</td>
<td>4.9 (2.8-8.8)</td>
<td>8.6 (5.2-13.9)</td>
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<td>16.0 (8.2-28.7)</td>
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<td>16.3 (10.6-24.3)</td>
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<td>7.5 (5.8-9.5)</td>
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<td>14.2 (11.0-18.2)</td>
<td>9.6 (8.4-11.0)</td>
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<tr>
<td>White</td>
<td>3.8 (1.8-7.7)</td>
<td>3.0 (1.4-6.4)</td>
<td>3.6 (1.5-8.3)</td>
<td>9.0 (5.3-14.9)</td>
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<td>Total</td>
<td>6.4 (5.1-7.9)</td>
<td>7.8 (6.1-10.0)</td>
<td>9.3 (7.5-11.5)</td>
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<td>American Indian</td>
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<td>White</td>
<td>4.6 (2.2-9.1)</td>
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<td>5.9 (4.3-7.9)</td>
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<td>6.7 (4.7-9.5)</td>
<td>6.7 (4.7-9.5)</td>
<td>6.9 (6.0-7.9)</td>
</tr>
<tr>
<td>American Indian</td>
<td>5.8 (3.0-10.9)</td>
<td>13.7 (8.3-21.8)</td>
<td>15.0 (11.1-20.1)</td>
<td>13.8 (9.7-19.3)</td>
<td>11.9 (10.3-13.8)</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>10.4 (5.6-18.4)</td>
</tr>
<tr>
<td>Black</td>
<td>3.7 (1.2-11.2)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>12.1 (8.2-17.5)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>6.8 (5.6-8.3)</td>
<td>8.3 (6.4-10.7)</td>
<td>7.7 (6.4-9.3)</td>
<td>9.6 (7.4-12.2)</td>
<td>8.0 (7.2-8.8)</td>
</tr>
<tr>
<td>White</td>
<td>4.2 (2.3-7.5)</td>
<td>4.3 (2.6-7.1)</td>
<td>3.7 (2.1-6.3)</td>
<td>8.4 (5.1-13.3)</td>
<td>5.1 (4.3-6.2)</td>
</tr>
<tr>
<td>Total</td>
<td>6.1 (5.1-7.3)</td>
<td>8.0 (6.6-9.7)</td>
<td>8.0 (6.6-9.7)</td>
<td>9.7 (7.6-12.2)</td>
<td>7.9 (7.2-8.6)</td>
</tr>
</tbody>
</table>

Source: YRRS (NM); NMDOH Survey Section (NOTE: “95% CI” is 95% confidence interval)
Chart 2: Used Painkiller to Get High, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)

Chart 3: Used Painkiller to Get High* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported pain killer use to get high at least once in past 30 days

Harding and Catron County estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
Chart 4: Used Painkiller to Get High* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported pain killer use to get high at least once in past 30 days

Insufficient data: county estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES

New Mexico Substance Abuse Epidemiology Profile
**YOUTH HEROIN USE**

**Problem Statement**

The rate of lifetime heroin use by youth has not significantly varied in recent years, neither in New Mexico nor the US. The NM rate for lifetime heroin use has been consistently higher than the US rate. This remained true in 2015, with a rate of 3.5% for NM and 2.1% for the US. For current heroin use, there is no apparent trend in the New Mexico rate. There is no national comparison for current heroin use.

Asian or Pacific Islander (9.3%) and Black (8.9%) students were more likely to be current heroin users than Hispanic (3.0%), American Indian (2.1%), or White (1.5%) students. The prevalence of current heroin use was not associated with grade level. Males were more likely to report current heroin use (4.3%) than females (1.2%), this difference was statistically significant.

In 2015, the highest rates for lifetime heroin use were in Mora (9.3%), Roosevelt (6.8%), Luna (6.1%), and Hidalgo (5.7%) counties, and the lowest in Union (0.7%), Eddy (0.9%), and Los Alamos (0.9%) counties.

**Chart 1: Heroin Use*, Current and Lifetime, by Year, Grades 9 - 12, New Mexico and US, 2003-2015**

* Current use: Used at least once in the past 30 days; Lifetime use: Ever used in lifetime

**Table 1: Current Heroin Use, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
<th>All Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
</tr>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>1.0 (0.1-7.2)</td>
<td>4.4 (1.9-10.0)</td>
<td>5.9 (2.9-11.6)</td>
<td>4.4 (1.9-9.8)</td>
<td>3.8 (2.6-5.5)</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>13.9 (6.7-26.7)</td>
</tr>
<tr>
<td></td>
<td>Black</td>
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<td>--</td>
<td>--</td>
<td>--</td>
<td>12.4 (7.7-19.4)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>3.0 (1.9-4.7)</td>
<td>4.6 (3.2-6.6)</td>
<td>4.0 (2.7-5.9)</td>
<td>8.3 (5.6-12.1)</td>
<td>4.7 (3.7-5.9)</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>1.6 (0.5-4.7)</td>
<td>3.0 (1.2-6.9)</td>
<td>0.3 (0.0-2.1)</td>
<td>4.5 (1.8-10.6)</td>
<td>2.4 (1.4-4.0)</td>
</tr>
<tr>
<td></td>
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<td>2.7 (1.9-3.9)</td>
<td>4.6 (3.6-5.9)</td>
<td>4.1 (3.1-5.4)</td>
<td>6.5 (4.2-9.9)</td>
<td>4.3 (3.6-5.3)</td>
</tr>
<tr>
<td>Female</td>
<td>American Indian</td>
<td>0.5 (0.1-3.4)</td>
<td>0.0 (.-)</td>
<td>0.8 (0.1-5.1)</td>
<td>0.5 (0.1-3.4)</td>
<td>0.4 (0.1-1.3)</td>
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<tr>
<td></td>
<td>Asian/Pacific Islander</td>
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<td>3.5 (0.9-12.4)</td>
</tr>
<tr>
<td></td>
<td>Black</td>
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<td>--</td>
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<td>3.6 (0.6-19.3)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>0.7 (0.3-1.7)</td>
<td>1.7 (0.8-3.4)</td>
<td>1.2 (0.5-3.0)</td>
<td>1.8 (0.6-5.9)</td>
<td>1.4 (0.9-2.2)</td>
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<tr>
<td></td>
<td>White</td>
<td>0.7 (0.1-3.2)</td>
<td>0.0 (.-)</td>
<td>0.3 (0.0-1.9)</td>
<td>0.7 (0.2-2.7)</td>
<td>0.4 (0.2-1.1)</td>
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<tr>
<td></td>
<td>Total</td>
<td>0.8 (0.4-1.7)</td>
<td>1.2 (0.6-2.6)</td>
<td>1.2 (0.6-2.3)</td>
<td>1.3 (0.5-3.6)</td>
<td>1.2 (0.8-1.8)</td>
</tr>
<tr>
<td>Total</td>
<td>American Indian</td>
<td>0.8 (0.2-3.4)</td>
<td>2.1 (0.9-4.9)</td>
<td>3.3 (1.9-5.8)</td>
<td>2.3 (1.0-5.1)</td>
<td>2.1 (1.5-2.9)</td>
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<tr>
<td></td>
<td>Asian/Pacific Islander</td>
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<td>--</td>
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<td>--</td>
<td>9.3 (4.7-17.6)</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>2.3 (0.4-10.9)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>8.9 (5.4-14.3)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>1.9 (1.2-2.8)</td>
<td>3.1 (2.1-4.5)</td>
<td>2.6 (1.8-3.8)</td>
<td>4.9 (3.1-7.7)</td>
<td>3.0 (2.4-3.8)</td>
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<tr>
<td></td>
<td>White</td>
<td>1.1 (0.4-2.8)</td>
<td>1.7 (0.7-4.1)</td>
<td>0.3 (0.1-1.2)</td>
<td>2.7 (1.2-6.1)</td>
<td>1.5 (0.9-2.4)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1.8 (1.3-2.5)</td>
<td>2.9 (2.3-3.8)</td>
<td>2.6 (2.0-3.4)</td>
<td>3.9 (2.5-6.0)</td>
<td>2.8 (2.3-3.4)</td>
</tr>
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</table>

Source: YRRS (NM); NMDOH Survey Section (NOTE: 95% CI is 95% confidence interval)
* Estimate of percent of high school students who reported heroin use at least once in their lifetime

Insufficient data: county estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section: SAES

New Mexico Substance Abuse Epidemiology Profile
YOUTH METHAMPHETAMINE USE

Problem Statement

New Mexico's rate of lifetime methamphetamine use decreased from 7.7% in 2007 to 4.4% in 2015. The US rate decreased from 1999 (9.1%, not shown) to 2015 (3.0%). The New Mexico rate for lifetime methamphetamine use has been consistently higher than the US rate. This remained true in 2015. For current methamphetamine use, NM prevalence decreased from 7.3% in 2003 to 4.6% in 2005, but there has been no significant change since then. There is no national comparison for current methamphetamine use.

Asian or Pacific Islander (9.3%) and Black (8.8%) students were more likely to be current methamphetamine users than Hispanic (3.4%), American Indian (2.8%), or White (1.9%) students. Prevalence of current methamphetamine use was not associated with grade level. Males were more likely to report current methamphetamine use (4.7%) than females (1.6%).

In 2015, the highest rates of current methamphetamine use were in Mora (7.4%), Roosevelt (7.3%), Lea (6.7%), and Hidalgo (6.7%) counties, and the lowest rates were in San Miguel (1.0%), Los Alamos (1.4%), and Dona Ana (1.7%) counties.

Chart 1: Methamphetamine Use*, Current and Lifetime, by Year, Grades 9 - 12, New Mexico and US, 2003-2015

Table 1: Current Methamphetamine Use, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
<th>All Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td>Percent [95% CI]</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>1.9 (0.6-6.3)</td>
<td>4.4 (1.9-10.0)</td>
<td>9.9 (4.4-20.8)</td>
<td>4.1 (1.6-9.8)</td>
<td>5.0 (2.9-8.4)</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
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<td>--</td>
<td>--</td>
<td>--</td>
<td>13.9 (8.8-21.5)</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>3.9 (2.7-5.5)</td>
<td>4.6 (2.8-7.4)</td>
<td>4.7 (3.1-6.9)</td>
<td>7.7 (5.1-11.5)</td>
<td>5.0 (4.0-6.3)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>0.7 (0.2-2.8)</td>
<td>2.9 (1.2-6.9)</td>
<td>0.8 (0.2-3.3)</td>
<td>5.5 (2.5-11.5)</td>
<td>2.5 (1.5-4.1)</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>3.2 (2.3-4.4)</td>
<td>4.5 (3.3-6.0)</td>
<td>5.0 (3.5-7.1)</td>
<td>6.7 (4.3-10.3)</td>
<td>4.7 (3.9-5.7)</td>
</tr>
<tr>
<td>Female</td>
<td>American Indian</td>
<td>1.5 (0.3-8.0)</td>
<td>0.0 (-)</td>
<td>0.8 (0.1-5.1)</td>
<td>0.5 (0.1-3.4)</td>
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<tr>
<td></td>
<td>Asian/Pacific Islander</td>
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<td>--</td>
<td>--</td>
<td>3.5 (0.9-12.4)</td>
</tr>
<tr>
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<td>Black</td>
<td>1.8 (1.1-2.9)</td>
<td>1.9 (0.9-4.0)</td>
<td>1.2 (0.5-2.6)</td>
<td>2.2 (0.8-5.9)</td>
<td>1.8 (1.2-2.6)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>1.4 (0.5-4.3)</td>
<td>0.6 (0.1-3.7)</td>
<td>0.4 (0.1-1.8)</td>
<td>1.3 (0.4-4.3)</td>
<td>0.9 (0.5-1.8)</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>1.8 (1.2-2.7)</td>
<td>1.5 (0.7-3.1)</td>
<td>1.2 (0.7-2.1)</td>
<td>1.7 (0.7-3.8)</td>
<td>1.6 (1.1-2.2)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1.7 (0.6-4.7)</td>
<td>2.1 (0.9-4.9)</td>
<td>5.3 (2.5-10.9)</td>
<td>2.2 (0.9-5.0)</td>
<td>2.8 (1.7-4.5)</td>
</tr>
<tr>
<td>Total</td>
<td>American Indian</td>
<td>2.3 (0.5-11.0)</td>
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<td>--</td>
<td>9.3 (5.7-14.7)</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
<td>2.9 (2.1-3.9)</td>
<td>3.2 (1.9-5.2)</td>
<td>2.9 (2.1-3.9)</td>
<td>4.8 (3.2-7.3)</td>
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<tr>
<td></td>
<td>White</td>
<td>1.0 (0.4-2.4)</td>
<td>2.1 (1.0-4.5)</td>
<td>0.6 (0.2-1.8)</td>
<td>3.6 (1.8-6.9)</td>
<td>1.9 (1.3-2.7)</td>
</tr>
</tbody>
</table>

Source: YRRS (NM); CDC YRBS (US); NMDOH Survey Section (NOTE: "95% CI" is 95% confidence interval)
YOUTH METHAMPHETAMINE USE (continued)

Chart 2: Current Methamphetamine Use, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2013

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)

Chart 3: Lifetime Methamphetamine Use* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported methamphetamine use at least once in their lifetime
De Baca, Harding, and Catron County estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
* Estimate of percent of high school students who reported methamphetamine use at least once in their lifetime

Insufficient data: county estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES

New Mexico Substance Abuse Epidemiology Profile
YOUTH CURRENT INHALANT USE

Problem Statement

The rate of current use of inhalants (sniffing glue, breathing the contents of aerosol spray cans, or inhaling paints or sprays) was 4.2% in 2015, and has not varied significantly over recent years. There is no national comparison for current inhalant use.

Asian or Pacific Islander (8.9%) and Black (6.2%) students were more likely to use inhalants than Hispanic (4.7%), American Indian (4.2%), or White (2.4%) students. Prevalence of inhalant use was not associated with grade level. There was no difference in prevalence of inhalant use between males (4.6%) and females (3.8%).

In 2015, the highest rates for current inhalant use were in Mora (12.6%), Curry (8.3%), and Otero (8.2%) counties; and the lowest in Eddy (2.0%), Union (2.3%), and Chaves (2.4%) counties.

Chart 1: Current Inhalant Use* by Year, Grades 9 - 12, New Mexico and US, 2003-2015

* Used inhalants (sniffed glue, breathed contents of aerosol spray cans, or inhaled paints or sprays) at least one time in the past 30 days

Source: YRRS (NM); CDC YRBS (US); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)

Table 1: Current Inhalant Use, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
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<td></td>
<td></td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[95% CI]</td>
<td>[95% CI]</td>
<td>[95% CI]</td>
<td>[95% CI]</td>
<td>[95% CI]</td>
</tr>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>1.3 (0.3-6.3)</td>
<td>1.5 (0.2-9.7)</td>
<td>6.1 (4.9-7.6)</td>
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<td>3.2 (2.2-4.6)</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Islander</td>
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<td>--</td>
<td>--</td>
<td>--</td>
<td>11.6 (5.8-22.1)</td>
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<td>Black</td>
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<td>--</td>
<td>--</td>
<td>9.6 (5.4-16.6)</td>
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<td>Hispanic</td>
<td>4.5 (3.1-6.5)</td>
<td>5.4 (3.8-7.8)</td>
<td>3.9 (2.7-5.6)</td>
<td>9.1 (6.5-12.6)</td>
<td>5.5 (4.4-6.7)</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>1.1 (0.3-4.5)</td>
<td>3.3 (1.7-6.3)</td>
<td>1.4 (0.4-4.2)</td>
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<td>3.5 (2.4-5.0)</td>
<td>4.7 (3.5-6.2)</td>
<td>4.1 (3.2-5.2)</td>
<td>6.8 (4.7-9.8)</td>
<td>4.6 (3.8-5.5)</td>
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<tr>
<td>Female</td>
<td>American Indian</td>
<td>9.2 (4.9-16.9)</td>
<td>3.6 (1.0-12.6)</td>
<td>3.0 (0.6-14.3)</td>
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<td>5.2 (1.8-13.9)</td>
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<td>--</td>
<td>0.8 (0.1-5.7)</td>
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<td></td>
<td>Hispanic</td>
<td>4.0 (2.6-6.0)</td>
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<tr>
<td></td>
<td>White</td>
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<td>4.9 (3.7-6.4)</td>
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<td>Total</td>
<td>American Indian</td>
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<td>--</td>
<td>--</td>
<td>8.9 (5.0-15.2)</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>0.4 (0.1-3.3)</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>6.2 (3.5-10.6)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>4.3 (3.3-5.5)</td>
<td>5.2 (4.0-6.7)</td>
<td>3.4 (2.4-4.6)</td>
<td>6.0 (4.1-8.6)</td>
<td>4.7 (4.0-5.5)</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>2.7 (1.6-4.7)</td>
<td>2.7 (1.5-4.8)</td>
<td>1.3 (0.6-3.0)</td>
<td>2.6 (1.4-5.5)</td>
<td>2.4 (1.7-3.4)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4.1 (3.3-5.2)</td>
<td>4.4 (3.6-5.5)</td>
<td>3.3 (2.7-4.0)</td>
<td>4.9 (3.6-6.8)</td>
<td>4.2 (3.7-4.8)</td>
</tr>
</tbody>
</table>

Source: YRRS (NM); NMDOH Survey Section (NOTE: "95% CI" is 95% confidence interval)
YOUTH CURRENT INHALANT USE (continued)

Chart 2: Current Inhalant Use, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

Chart 3: Current Inhalant Use* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported inhalant use at least once in past 30 days

De Baca, Harding, and Catron County estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
* Estimate of percent of high school students who reported inhalant use at least once in past 30 days
Insufficient data: county estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES
ADULT CIGARETTE SMOKING

Problem Statement

Adult cigarette smoking (defined as having smoked 100 or more cigarettes in lifetime, and currently smoking) is associated with significant rates of smoking-related death and morbidity. According to the CDC's Smoking Attributable Mortality, Morbidity, and Economic Costs (SAMMEC) website, smoking is responsible for a significant proportion of the deaths from numerous types of malignant neoplasms (e.g., lung, esophageal, and laryngeal cancers); from cardiovascular diseases (e.g., ischemic heart disease, cerebrovascular disease); and from several respiratory diseases (e.g., bronchitis, emphysema, chronic airway obstruction). Combined, these smoking-related deaths make smoking the leading behavioral cause of death in the U.S.

In 2015, current smoking rates among adults in New Mexico (17.5%) were the same as in the US overall. As shown in Chart 1, New Mexico's adult smoking prevalence rate has decreased over the past 10 years, with a small increase from 2009 to 2010. In 2014, as shown in Table 1, smoking was more prevalent among adults aged 25-64 (21.3%), than among young adults aged 18-24 (18.2%) or adults aged 65 and over (10.1%). New Mexico men were more likely to smoke than women (21.3% v 16.1%). Among males, Blacks had the highest smoking prevalence (28.3%), followed by Hispanics (23.6%) and Whites (19.3%). Among females, the highest prevalence of smoking was among Blacks (24.0%), followed by Whites (18.1%).

Chart 1: Cigarette Smoking (past 30 days)*, Adults Aged 18+, New Mexico, 1998-2015

* Cigarette smoking definition: smoked >= 100 cigarettes in lifetime and smoked cigarettes in past 30 days
Source: BRFSS; SAES (NOTE: Brackets around reported rates are 95% confidence intervals)

Table 1: Cigarette Smoking (past 30 days) by Age, Sex, and Race/Ethnicity, Adults Aged 18+, New Mexico, 2013-2015

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>Ages 18-24</th>
<th>Ages 25-64</th>
<th>Ages 65+</th>
<th>All Ages</th>
<th>Ages 18-24</th>
<th>Ages 25-64</th>
<th>Ages 65+</th>
<th>All Ages†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>2,709</td>
<td>8,076</td>
<td>802</td>
<td>11,812</td>
<td>24.7</td>
<td>18.1</td>
<td>11.6</td>
<td>18.9</td>
</tr>
<tr>
<td>Male</td>
<td>Asian/Pacific Islander</td>
<td>-</td>
<td>1,544</td>
<td>-</td>
<td>1,572</td>
<td>-</td>
<td>17.0</td>
<td>-</td>
<td>12.6</td>
</tr>
<tr>
<td>Male</td>
<td>Black</td>
<td>-</td>
<td>3,753</td>
<td>-</td>
<td>5,502</td>
<td>-</td>
<td>27.8</td>
<td>-</td>
<td>28.3</td>
</tr>
<tr>
<td>Male</td>
<td>Hispanic</td>
<td>11,171</td>
<td>63,926</td>
<td>5,994</td>
<td>81,293</td>
<td>19.0</td>
<td>26.6</td>
<td>13.0</td>
<td>23.6</td>
</tr>
<tr>
<td>Male</td>
<td>White</td>
<td>8,450</td>
<td>49,784</td>
<td>8,350</td>
<td>66,215</td>
<td>24.7</td>
<td>22.6</td>
<td>9.3</td>
<td>19.3</td>
</tr>
<tr>
<td>Male</td>
<td>Total</td>
<td>23,332</td>
<td>127,271</td>
<td>15,857</td>
<td>166,526</td>
<td>21.3</td>
<td>24.1</td>
<td>10.9</td>
<td>21.3</td>
</tr>
<tr>
<td>Female</td>
<td>American Indian</td>
<td>1,127</td>
<td>3,814</td>
<td>556</td>
<td>5,546</td>
<td>10.1</td>
<td>7.8</td>
<td>5.5</td>
<td>7.9</td>
</tr>
<tr>
<td>Female</td>
<td>Asian/Pacific Islander</td>
<td>-</td>
<td>2,018</td>
<td>-</td>
<td>1,937</td>
<td>-</td>
<td>17.7</td>
<td>-</td>
<td>12.6</td>
</tr>
<tr>
<td>Female</td>
<td>Black</td>
<td>-</td>
<td>3,343</td>
<td>241</td>
<td>3,584</td>
<td>-</td>
<td>35.1</td>
<td>10.6</td>
<td>24.0</td>
</tr>
<tr>
<td>Female</td>
<td>Hispanic</td>
<td>6,664</td>
<td>42,143</td>
<td>6,129</td>
<td>55,259</td>
<td>11.8</td>
<td>17.3</td>
<td>10.8</td>
<td>15.5</td>
</tr>
<tr>
<td>Female</td>
<td>White</td>
<td>7,018</td>
<td>48,486</td>
<td>9,463</td>
<td>66,476</td>
<td>24.4</td>
<td>21.8</td>
<td>9.2</td>
<td>18.1</td>
</tr>
<tr>
<td>Female</td>
<td>Total</td>
<td>14,889</td>
<td>99,941</td>
<td>16,608</td>
<td>130,431</td>
<td>14.6</td>
<td>18.7</td>
<td>9.5</td>
<td>16.1</td>
</tr>
<tr>
<td>Total</td>
<td>American Indian</td>
<td>3,775</td>
<td>12,096</td>
<td>1,262</td>
<td>17,422</td>
<td>17.1</td>
<td>12.9</td>
<td>7.4</td>
<td>13.1</td>
</tr>
<tr>
<td>Total</td>
<td>Asian/Pacific Islander</td>
<td>-</td>
<td>3,557</td>
<td>-</td>
<td>3,509</td>
<td>-</td>
<td>17.4</td>
<td>-</td>
<td>12.6</td>
</tr>
<tr>
<td>Total</td>
<td>Black</td>
<td>-</td>
<td>7,134</td>
<td>746</td>
<td>8,854</td>
<td>-</td>
<td>31.0</td>
<td>16.7</td>
<td>26.2</td>
</tr>
<tr>
<td>Total</td>
<td>Hispanic</td>
<td>18,072</td>
<td>105,441</td>
<td>12,111</td>
<td>136,624</td>
<td>15.7</td>
<td>21.8</td>
<td>11.8</td>
<td>19.4</td>
</tr>
<tr>
<td>Total</td>
<td>White</td>
<td>15,467</td>
<td>98,267</td>
<td>17,811</td>
<td>130,565</td>
<td>24.5</td>
<td>22.2</td>
<td>9.2</td>
<td>18.7</td>
</tr>
<tr>
<td>Total</td>
<td>Total</td>
<td>38,213</td>
<td>226,928</td>
<td>32,447</td>
<td>297,070</td>
<td>18.2</td>
<td>21.3</td>
<td>10.1</td>
<td>18.6</td>
</tr>
</tbody>
</table>

* Estimate of percent of people in population group who have smoked 100 or more cigarettes in lifetime and who smoked cigarettes in past 30 days
- Excluded due to small number of respondents (< 50) in cell

Source: BRFSS; SAES
ADULT CIGARETTE SMOKING (continued)

Problem Statement (continued)

Smoking prevalence rates and smoking-related death rates were the highest among Black men (28.3% and 150.1 deaths per 100,000 population, respectively), compared to men and women of all other racial/ethnic groups. Among women, Blacks had the highest smoking prevalence rates (24.0%). However, White women had the highest smoking-related death rates (82.1%), followed by Blacks (60.7%).

As shown in Table 2 and Chart 2, the counties with the highest smoking rates were Valencia (31.9%), Socorro (28.7%), Sierra (27.6%), Curry (26.1%), and Torrance (26.0%). The counties with the lowest rates were Los Alamos (9.1%), Union (10.9%), McKinley (11.7%), Taos (15.1%), and Sandoval (15.4%).

Table 2: Cigarette Smoking (past 30 days) by Race/Ethnicity and County, Adults Aged 18+, New Mexico, 2013-2015

<table>
<thead>
<tr>
<th>County</th>
<th>Number</th>
<th>Percent*</th>
<th>County</th>
<th>Number</th>
<th>Percent*</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>Indian</td>
<td>Pacific</td>
<td>Black</td>
<td>Hispanic</td>
<td>White</td>
</tr>
<tr>
<td>Bernalillo</td>
<td>2,511</td>
<td>4,280</td>
<td>43,649</td>
<td>41,106</td>
<td>94,464</td>
</tr>
<tr>
<td>Catron</td>
<td>-</td>
<td>-</td>
<td>613</td>
<td>704</td>
<td>-</td>
</tr>
<tr>
<td>Chaves</td>
<td>-</td>
<td>-</td>
<td>4,040</td>
<td>4,785</td>
<td>9,051</td>
</tr>
<tr>
<td>Cibola</td>
<td>1,235</td>
<td>-</td>
<td>2,361</td>
<td>1,082</td>
<td>4,642</td>
</tr>
<tr>
<td>Colfax</td>
<td>-</td>
<td>-</td>
<td>1,377</td>
<td>1,029</td>
<td>2,489</td>
</tr>
<tr>
<td>Curry</td>
<td>-</td>
<td>-</td>
<td>2,862</td>
<td>5,847</td>
<td>9,670</td>
</tr>
<tr>
<td>De Baca</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>319</td>
</tr>
<tr>
<td>Dona Ana</td>
<td>-</td>
<td>-</td>
<td>17,016</td>
<td>8,729</td>
<td>26,702</td>
</tr>
<tr>
<td>Eddy</td>
<td>-</td>
<td>-</td>
<td>3,331</td>
<td>5,638</td>
<td>9,194</td>
</tr>
<tr>
<td>Grant</td>
<td>-</td>
<td>-</td>
<td>1,564</td>
<td>2,113</td>
<td>3,748</td>
</tr>
<tr>
<td>Guadalupe</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Harding</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hidalgo</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>728</td>
</tr>
<tr>
<td>Lea</td>
<td>-</td>
<td>-</td>
<td>4,186</td>
<td>5,231</td>
<td>10,146</td>
</tr>
<tr>
<td>Lincoln</td>
<td>-</td>
<td>-</td>
<td>1,384</td>
<td>2,480</td>
<td>3,952</td>
</tr>
<tr>
<td>Los Alamos</td>
<td>-</td>
<td>-</td>
<td>755</td>
<td>1,242</td>
<td>-</td>
</tr>
<tr>
<td>Luna</td>
<td>-</td>
<td>-</td>
<td>1,488</td>
<td>1,975</td>
<td>3,463</td>
</tr>
<tr>
<td>McKinley</td>
<td>3,527</td>
<td>-</td>
<td>1,151</td>
<td>2,728</td>
<td>6,022</td>
</tr>
<tr>
<td>Mora</td>
<td>-</td>
<td>-</td>
<td>635</td>
<td>-</td>
<td>689</td>
</tr>
<tr>
<td>Otero</td>
<td>693</td>
<td>-</td>
<td>2,802</td>
<td>6,160</td>
<td>10,209</td>
</tr>
<tr>
<td>Quay</td>
<td>-</td>
<td>-</td>
<td>758</td>
<td>892</td>
<td>1,649</td>
</tr>
<tr>
<td>Rio Arriba</td>
<td>535</td>
<td>-</td>
<td>4,561</td>
<td>1,005</td>
<td>5,266</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>-</td>
<td>-</td>
<td>1,309</td>
<td>1,521</td>
<td>2,973</td>
</tr>
<tr>
<td>Sandoval</td>
<td>1,787</td>
<td>-</td>
<td>4,570</td>
<td>7,958</td>
<td>16,045</td>
</tr>
<tr>
<td>San Juan</td>
<td>3,754</td>
<td>-</td>
<td>4,162</td>
<td>9,257</td>
<td>17,593</td>
</tr>
<tr>
<td>San Miguel</td>
<td>-</td>
<td>-</td>
<td>3,100</td>
<td>507</td>
<td>3,694</td>
</tr>
<tr>
<td>Santa Fe</td>
<td>-</td>
<td>-</td>
<td>10,646</td>
<td>7,252</td>
<td>19,102</td>
</tr>
<tr>
<td>Sierra</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,965</td>
<td>2,683</td>
</tr>
<tr>
<td>Socorro</td>
<td>-</td>
<td>-</td>
<td>2,111</td>
<td>1,500</td>
<td>3,851</td>
</tr>
<tr>
<td>Taos</td>
<td>-</td>
<td>-</td>
<td>2,215</td>
<td>1,686</td>
<td>4,132</td>
</tr>
<tr>
<td>Torrance</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2,036</td>
<td>3,194</td>
</tr>
<tr>
<td>Union</td>
<td>-</td>
<td>-</td>
<td>249</td>
<td>396</td>
<td>-</td>
</tr>
<tr>
<td>Valencia</td>
<td>-</td>
<td>-</td>
<td>10,552</td>
<td>6,426</td>
<td>18,378</td>
</tr>
<tr>
<td>New Mexico</td>
<td>17,422</td>
<td>3,509</td>
<td>8,864</td>
<td>136,194</td>
<td>130,365</td>
</tr>
</tbody>
</table>

* Estimate of percent of people in population group who have smoked >= 100 cigarettes in lifetime and who smoked cigarettes in past 30 days

Source: BRFSS; SAES

New Mexico Substance Abuse Epidemiology Profile Page 126
### Chart 2: Cigarette Smoking (past 30 days)* by County, Adults Aged 18+, New Mexico, 2013-2015

<table>
<thead>
<tr>
<th>County</th>
<th>(# of smokers; % of statewide smokers)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Fe (19102; 6.4%)</td>
<td></td>
<td>16.1</td>
</tr>
<tr>
<td>San Miguel (3694; 1.2%)</td>
<td></td>
<td>16.2</td>
</tr>
<tr>
<td>Grant (3748; 1.3%)</td>
<td></td>
<td>16.2</td>
</tr>
<tr>
<td>Santa Fe (19102; 6.4%)</td>
<td></td>
<td>16.1</td>
</tr>
<tr>
<td>Sandoval (16045; 5.4%)</td>
<td></td>
<td>15.4</td>
</tr>
<tr>
<td>Taos (4132; 1.4%)</td>
<td></td>
<td>15.2</td>
</tr>
<tr>
<td>McKinley (6052; 2.0%)</td>
<td></td>
<td>11.7</td>
</tr>
<tr>
<td>Union (396; 0.1%)</td>
<td></td>
<td>10.9</td>
</tr>
<tr>
<td>Los Alamos (1242; 0.4%)</td>
<td></td>
<td>9.1</td>
</tr>
<tr>
<td>United States 2013</td>
<td></td>
<td>17.5</td>
</tr>
<tr>
<td>New Mexico (297070; 100.0%)</td>
<td></td>
<td>18.6</td>
</tr>
<tr>
<td>Bernalillo (94464; 31.8%)</td>
<td></td>
<td>18.1</td>
</tr>
<tr>
<td>Mora (689; 0.2%)</td>
<td></td>
<td>17.8</td>
</tr>
<tr>
<td>Dona Ana (26702; 9.0%)</td>
<td></td>
<td>16.6</td>
</tr>
<tr>
<td>San Juan (17593; 5.9%)</td>
<td></td>
<td>19.1</td>
</tr>
<tr>
<td>Luna (3478; 1.2%)</td>
<td></td>
<td>19.0</td>
</tr>
<tr>
<td>Chaves (9051; 3.0%)</td>
<td></td>
<td>18.8</td>
</tr>
<tr>
<td>Roosevelt (2973; 1.0%)</td>
<td></td>
<td>20.0</td>
</tr>
<tr>
<td>Otero (10209; 3.4%)</td>
<td></td>
<td>20.2</td>
</tr>
<tr>
<td>San Miguel (3694; 1.2%)</td>
<td></td>
<td>22.2</td>
</tr>
<tr>
<td>Catron (704; 0.2%)</td>
<td></td>
<td>23.9</td>
</tr>
<tr>
<td>Colfax (2489; 0.8%)</td>
<td></td>
<td>23.4</td>
</tr>
<tr>
<td>Cibola (4642; 1.6%)</td>
<td></td>
<td>22.3</td>
</tr>
<tr>
<td>Quay (1649; 0.6%)</td>
<td></td>
<td>24.1</td>
</tr>
<tr>
<td>Lincoln (3952; 1.3%)</td>
<td></td>
<td>26.6</td>
</tr>
<tr>
<td>Torrance (3194; 1.1%)</td>
<td></td>
<td>26.0</td>
</tr>
<tr>
<td>Curry (9670; 3.3%)</td>
<td></td>
<td>26.1</td>
</tr>
<tr>
<td>Sierra (2683; 0.9%)</td>
<td></td>
<td>10.9</td>
</tr>
<tr>
<td>Socorro (3858; 1.3%)</td>
<td></td>
<td>28.7</td>
</tr>
<tr>
<td>Valencia (18387; 6.2%)</td>
<td></td>
<td>31.9</td>
</tr>
<tr>
<td>New Mexico (297070; 100.0%)</td>
<td></td>
<td>18.6</td>
</tr>
<tr>
<td>United States 2013</td>
<td></td>
<td>17.5</td>
</tr>
</tbody>
</table>

* Estimate of percent of people in population group who have smoked >= 100 cigarettes in lifetime and who smoked cigarettes in past 30 days

Source: NMBRFSS (NM); CDC BRFSS (US); SAES
ADULT CIGARETTE SMOKING (continued)

Chart 3: Cigarette Smoking (past 30 days)* by County, Adults Aged 18+, New Mexico, 2013-2015

* Estimate of percent of people in population group who have smoked >= 100 cigarettes in lifetime and who smoked cigarettes in past 30 days
Insufficient data: Rate not reported due to small number of respondents (< 50) in cell
Source: BRFSS; SAES

Adult Cigarette Smoking

State rate = 18.6
- Insufficient/Missing Data
- < 18.6
- 18.6 - < 23.3
- >= 23.3

New Mexico Substance Abuse Epidemiology Profile
Problem Statement*

Cigarette smoking is the leading cause of preventable death in the US. Cigarette smoking increases risk for several cancers and other chronic conditions. Smoking is initiated and established primarily during adolescence, with more than 80% of adult smokers first smoking before age 18.**

The prevalence of current cigarette smoking among NM high school students has decreased from 30.2% in 2003 to 11.4% in 2015. This coincides with a decrease in the US rate that has occurred over the past several years. The NM rate was consistently higher than the US rate until 2011. In 2011, NM and US rates were not statistically distinguishable (US=18.1%; NM=19.9%). In 2015, the NM rate (11.4%) was higher than that of the US (10.8%).

Boys (12.8%) were more likely to be current cigarette smokers than girls (9.8%). Black (9.5%), White (10.5%) and Hispanic (10.7%) students had lower rates of current cigarette smoking than American Indian (17.0%) and Asian or Pacific Islander (12.3%) students. Chart 2 shows that prevalence increased significantly with grade level. In 2015, the counties with the highest prevalence of current smoking were Socorro (20.1%), Roosevelt (19.8%), and Sierra (19.3%). The counties with the lowest prevalence of current smoking were Chaves (6.1%), Hidalgo (8.1%), and Bernalillo (8.7%).

* YRRS tobacco questions do not distinguish between ceremonial/traditional and commercial tobacco use.  
** Youth and Tobacco Use. Centers for Disease Control and Prevention.  
YOUTH CURRENT CIGARETTE SMOKING (continued)

Chart 2: Current Cigarette Smoking, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

Chart 3: Current Cigarette Smoking* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported smoking cigarettes on at least one of the past 30 days
Harding and Catron County estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
Chart 4: Current Cigarette Smoking* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported smoking cigarettes on at least one of the past 30 days

Insufficient data: county estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES
Problem Statement*

Frequent cigarette smoking means smoking cigarettes on at least 20 of the past 30 days. The prevalence of frequent cigarette smoking among New Mexico high school students has decreased from 8.5% in 2003 to 2.7% in 2015. This coincides with a decrease in the US rate of frequent smoking over the past several years. In 2015, the New Mexico prevalence of frequent smoking was not statistically different from the US rate (3.4%).

Boys (3.4%) were more likely to be frequent smokers than girls (2.0%). White (4.0%), Asian or Pacific Islander (5.1%) and Black (7.9%) students had a higher prevalence of frequent smoking than Hispanic (2.3%) or American Indian students (1.7%) students, but these differences were also not statistically significant. The prevalence of frequent smoking increased with grade level (9th=1.8%; 10th=2.2%; 11th=3.0%; 12th=4.0%), but these rates were also not statistically different.

In 2015, the highest rates for frequent cigarette smoking were in Socorro (9.0%), Torrance (7.7%), and De Baca (7.4%) counties. The lowest rates were in McKinley (1.0%), Bernalillo (1.6%), Chaves (1.7%), and Santa Fe (1.7%) counties.

* YRRS tobacco questions do not distinguish between ceremonial/traditional and commercial tobacco use.

### Table 1: Frequent Cigarette Smoking, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

<table>
<thead>
<tr>
<th>Sex</th>
<th>Race/Ethnicity</th>
<th>9th Grade [95% CI]</th>
<th>10th Grade [95% CI]</th>
<th>11th Grade [95% CI]</th>
<th>12th Grade [95% CI]</th>
<th>All Grades [95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>American Indian</td>
<td>1.0 (0.1-7.4)</td>
<td>4.5 (2.7-7.3)</td>
<td>2.5 (0.6-10.5)</td>
<td>1.4 (0.3-6.7)</td>
<td>2.3 (1.3-4.2)</td>
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<tr>
<td></td>
<td>Asian/Pacific Islander</td>
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<td>5.7 (2.2-14.2)</td>
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<tr>
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<td>Black</td>
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<td>--</td>
<td>--</td>
<td>5.5 (2.4-12.3)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>2.4 (1.3-4.4)</td>
<td>2.2 (1.3-3.7)</td>
<td>4.1 (2.8-6.0)</td>
<td>3.6 (2.0-6.6)</td>
<td>3.0 (2.3-3.8)</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>1.9 (0.6-6.2)</td>
<td>4.5 (2.0-10.2)</td>
<td>4.2 (1.9-9.4)</td>
<td>7.0 (3.8-12.5)</td>
<td>4.5 (2.9-6.8)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.1 (1.3-3.4)</td>
<td>3.2 (2.1-4.9)</td>
<td>3.8 (2.5-5.7)</td>
<td>5.0 (3.3-7.5)</td>
<td>3.4 (2.8-4.2)</td>
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<tr>
<td>Female</td>
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<td>1.8 (0.2-13.8)</td>
<td>1.8 (0.3-9.6)</td>
<td>0.0 (--.)</td>
<td>1.2 (0.4-3.6)</td>
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<td>Asian/Pacific Islander</td>
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<td>1.8 (0.2-12.5)</td>
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<td>Hispanic</td>
<td>1.6 (0.9-3.2)</td>
<td>0.8 (0.3-2.0)</td>
<td>1.4 (0.6-3.2)</td>
<td>2.5 (1.3-5.0)</td>
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<td></td>
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<td>1.6 (0.6-4.5)</td>
<td>1.7 (0.7-4.4)</td>
<td>5.2 (2.5-10.4)</td>
<td>6.1 (3.3-11.0)</td>
<td>3.6 (2.3-5.4)</td>
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<tr>
<td></td>
<td>Total</td>
<td>1.5 (0.9-2.6)</td>
<td>1.1 (0.5-2.3)</td>
<td>2.3 (1.4-3.8)</td>
<td>3.1 (2.0-4.9)</td>
<td>2.0 (1.5-2.6)</td>
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<tr>
<td>Total</td>
<td>American Indian</td>
<td>1.0 (0.3-4.0)</td>
<td>3.1 (1.7-5.8)</td>
<td>2.1 (0.6-6.7)</td>
<td>0.7 (0.1-3.1)</td>
<td>1.7 (1.1-2.9)</td>
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<td></td>
<td>Asian/Pacific Islander</td>
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<td>3.9 (1.6-9.2)</td>
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<td>0.0 (--.)</td>
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<td>3.3 (1.4-7.4)</td>
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<tr>
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<td>Hispanic</td>
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<td>2.7 (1.9-3.8)</td>
<td>3.0 (1.8-5.0)</td>
<td>2.3 (1.8-2.9)</td>
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<tr>
<td></td>
<td>White</td>
<td>1.8 (0.8-4.0)</td>
<td>3.3 (1.8-6.2)</td>
<td>4.7 (2.7-7.8)</td>
<td>6.6 (4.1-10.2)</td>
<td>4.0 (2.9-5.6)</td>
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<tr>
<td></td>
<td>Total</td>
<td>1.8 (1.2-2.7)</td>
<td>2.2 (1.6-3.0)</td>
<td>3.0 (2.2-4.1)</td>
<td>4.0 (2.8-5.7)</td>
<td>2.7 (2.3-3.2)</td>
</tr>
</tbody>
</table>

Source: YRRS (NM); NMDOH Survey Section (NOTE: "95% CI" is 95% confidence interval)
**YOUTH FREQUENT CIGARETTE SMOKING (continued)**

Chart 2: Frequent Cigarette Smoking, by Grade Level, Gender, and Race/Ethnicity, Grades 9 - 12, New Mexico, 2015

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)

* Estimate of percent of high school students who reported smoking cigarettes on at least 20 of the past 30 days

Harding and Catron County estimates not available because of low numbers and/or low response rates

* Estimate of percent of high school students who reported smoking cigarettes on at least 20 of the past 30 days

Harding and Catron County estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section (NOTE: Brackets around reported rates are 95% confidence intervals)
Chart 4: Frequent Cigarette Smoking* by County, Grades 9 - 12, New Mexico, 2015

* Estimate of percent of high school students who reported smoking cigarettes on at least 20 of the past 30 days

Insufficient data: county estimates not available because of low numbers and/or low response rates

Source: YRRS (NM); NMDOH Survey Section; SAES

New Mexico Substance Abuse Epidemiology Profile
Appendix 1

State Population by Age, Sex, Race/Ethnicity, and County
### Appendix 1: Male Population, New Mexico, 2013*

<table>
<thead>
<tr>
<th>County</th>
<th>2013 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All Race/Ethnicities</strong></td>
<td></td>
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<tr>
<td><strong>White</strong></td>
<td>37,085</td>
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<tr>
<td><strong>Black</strong></td>
<td>6,614</td>
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<td><strong>Hispanic</strong></td>
<td>5,765</td>
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<tr>
<td><strong>American Indian</strong></td>
<td>11,100</td>
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<tr>
<td><strong>Other</strong></td>
<td>8,706</td>
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<tr>
<td><strong>All Race/Ethnicities</strong></td>
<td>60,860</td>
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<tr>
<td><strong>Catron</strong></td>
<td>2,377</td>
</tr>
<tr>
<td><strong>Colfax</strong></td>
<td>6,173</td>
</tr>
<tr>
<td><strong>Curry</strong></td>
<td>4,744</td>
</tr>
<tr>
<td><strong>De Baca</strong></td>
<td>1,091</td>
</tr>
<tr>
<td><strong>Dona Ana</strong></td>
<td>9,538</td>
</tr>
<tr>
<td><strong>Eddy</strong></td>
<td>4,116</td>
</tr>
<tr>
<td><strong>Grant</strong></td>
<td>1,448</td>
</tr>
<tr>
<td><strong>Guadalupe</strong></td>
<td>79</td>
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<tr>
<td><strong>Harding</strong></td>
<td>31</td>
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<tr>
<td><strong>Hidalgo</strong></td>
<td>2,462</td>
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<tr>
<td><strong>Lea</strong></td>
<td>4,031</td>
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<tr>
<td><strong>Lincoln</strong></td>
<td>1,216</td>
</tr>
<tr>
<td><strong>Los Alamos</strong></td>
<td>1,863</td>
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<tr>
<td><strong>Luna</strong></td>
<td>782</td>
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<tr>
<td><strong>McKinley</strong></td>
<td>1,113</td>
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<tr>
<td><strong>Mora</strong></td>
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<tr>
<td><strong>Otero</strong></td>
<td>5,182</td>
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<tr>
<td><strong>Quay</strong></td>
<td>465</td>
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<tr>
<td><strong>Rio Arriba</strong></td>
<td>426</td>
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<tr>
<td><strong>Roosevelt</strong></td>
<td>2,047</td>
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<tr>
<td><strong>San Juan</strong></td>
<td>8,084</td>
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<tr>
<td><strong>San Miguel</strong></td>
<td>7,277</td>
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<tr>
<td><strong>Santa Fe</strong></td>
<td>5,301</td>
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<td><strong>Santa Fe</strong></td>
<td>12,654</td>
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<td><strong>Santo Domingo</strong></td>
<td>4,601</td>
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<td><strong>San Miguel</strong></td>
<td>2,045</td>
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<td><strong>Torrance</strong></td>
<td>1,130</td>
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<tr>
<td><strong>Union</strong></td>
<td>385</td>
</tr>
<tr>
<td><strong>Valencia</strong></td>
<td>3,950</td>
</tr>
</tbody>
</table>

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*2013 population is reported here because 2012 was the mid-point year for the 2011-2015 timeframe used in this report.

SOURCE: University of New Mexico Geospatial and Population Studies
| Race/Ethnicity | 0-24 | 25-64 | 65+ | All Ages | 0-24 | 25-64 | 65+ | All Ages | 0-24 | 25-64 | 65+ | All Ages | 0-24 | 25-64 | 65+ | All Ages | 0-24 | 25-64 | 65+ | All Ages | 0-24 | 25-64 | 65+ | All Ages |
|---------------|------|-------|-----|----------|------|-------|-----|----------|------|-------|-----|----------|------|-------|-----|----------|------|-------|-----|----------|------|-------|-----|----------|------|-------|-----|----------|------|-------|-----|----------|
| White         | 2703 | 5849  | 1235| 9565     | 746  | 1685  | 365 | 2795     | 374  | 816   | 169| 1366     | 374  | 816   | 169| 1366     | 374  | 816   | 169| 1366     | 374  | 816   | 169| 1366     |
| Black         | 419  | 1161  | 267 | 1844     | 419  | 1161  | 267 | 1844     | 419  | 1161  | 267| 1844     | 419  | 1161  | 267| 1844     | 419  | 1161  | 267| 1844     | 419  | 1161  | 267| 1844     |
| Hispanic      | 945  | 2112  | 427 | 3584     | 945  | 2112  | 427 | 3584     | 945  | 2112  | 427| 3584     | 945  | 2112  | 427| 3584     | 945  | 2112  | 427| 3584     | 945  | 2112  | 427| 3584     |
| American Indian| 245  | 551   | 118 | 914      | 245  | 551   | 118 | 914      | 245  | 551   | 118| 914      | 245  | 551   | 118| 914      | 245  | 551   | 118| 914      | 245  | 551   | 118| 914      |
| Other         | 177  | 404   | 86  | 667      | 177  | 404   | 86  | 667      | 177  | 404   | 86  | 667      | 177  | 404   | 86  | 667      | 177  | 404   | 86  | 667      | 177  | 404   | 86  | 667      |
| All Race/Ethnicities | 5803 | 12504 | 2837| 21940    | 5803 | 12504 | 2837| 21940    | 5803 | 12504 | 2837| 21940    | 5803 | 12504 | 2837| 21940    | 5803 | 12504 | 2837| 21940    | 5803 | 12504 | 2837| 21940    |

* 2013 population is reported here because 2012 was the mid-point year for the 2011-2015 timeframe used in this report

SOURCE: University of New Mexico Geospatial and Population Studies
## Appendix 1: Total Population, New Mexico, 2013

<table>
<thead>
<tr>
<th>County Name</th>
<th>Sex</th>
<th>White 0-24</th>
<th>White 25-64</th>
<th>White 65+</th>
<th>All Ages</th>
<th>Black 0-24</th>
<th>Black 25-64</th>
<th>Black 65+</th>
<th>All Ages</th>
<th>Hispanic 0-24</th>
<th>Hispanic 25-64</th>
<th>Hispanic 65+</th>
<th>All Ages</th>
<th>American Indian 0-24</th>
<th>American Indian 25-64</th>
<th>American Indian 65+</th>
<th>All Ages</th>
<th>Other 0-24</th>
<th>Other 25-64</th>
<th>Other 65+</th>
<th>All Ages</th>
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<tbody>
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<td>Bernalillo</td>
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</table>

*2013 population is reported here because 2012 was the mid-point year for the 2011-2015 timeframe used in this report.

SOURCE: New Mexico State Demographic and Population Studies

New Mexico Substance Abuse Epidemiology Profile

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Appendix 2

Substance Abuse and Mental Health by State Regions, Age 12+, 2012-2014
National Survey on Drug Use and Health (NSDUH)
## Appendix 2A. Substance Abuse and Mental Health by Region, Age 12+, 2012-2014 (NSDUH)

### Table 2A-5: Prevalence Rates of Selected Substance Use and Mental Health Indicators by Region, 2012-2014 (NSDUH)

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>Health Region</th>
<th>NW</th>
<th>NE</th>
<th>Bernalillo County</th>
<th>SE</th>
<th>SW</th>
<th>New Mexico</th>
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<tbody>
<tr>
<td><strong>ALCOHOL</strong></td>
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</tr>
<tr>
<td>Past Month Alcohol Use</td>
<td>45.68%</td>
<td>49.23%</td>
<td>56.38%</td>
<td>47.19%</td>
<td>43.62%</td>
<td>48.46%</td>
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</tr>
<tr>
<td>Past Month Binge Alcohol Use&lt;sup&gt;1&lt;/sup&gt;</td>
<td>23.19%</td>
<td>22.60%</td>
<td>25.82%</td>
<td>25.06%</td>
<td>22.49%</td>
<td>24.06%</td>
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<tr>
<td>Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week</td>
<td>45.70%</td>
<td>46.87%</td>
<td>49.19%</td>
<td>43.66%</td>
<td>45.70%</td>
<td>45.70%</td>
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<tr>
<td><strong>ILICIT DRUGS</strong></td>
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<tr>
<td>Past Month Illicit Drug Use&lt;sup&gt;2&lt;/sup&gt;</td>
<td>11.27%</td>
<td>10.48%</td>
<td>13.76%</td>
<td>9.20%</td>
<td>9.16%</td>
<td>11.29%</td>
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<tr>
<td>Past Year Marijuana Use</td>
<td>14.68%</td>
<td>14.08%</td>
<td>18.02%</td>
<td>12.98%</td>
<td>13.24%</td>
<td>15.18%</td>
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<tr>
<td>Past Month Marijuana Use</td>
<td>8.59%</td>
<td>8.76%</td>
<td>12.60%</td>
<td>7.72%</td>
<td>8.15%</td>
<td>9.61%</td>
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<tr>
<td>Past Month Use of Illicit Drugs Other Than Marijuana&lt;sup&gt;3&lt;/sup&gt;</td>
<td>3.51%</td>
<td>3.52%</td>
<td>3.79%</td>
<td>3.67%</td>
<td>3.29%</td>
<td>3.58%</td>
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<tr>
<td>Past Year Cocaine Use</td>
<td>1.79%</td>
<td>1.77%</td>
<td>2.85%</td>
<td>1.67%</td>
<td>2.21%</td>
<td>2.20%</td>
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<tr>
<td>Past Year Nonmedical Pain Reliever Use</td>
<td>4.44%</td>
<td>4.37%</td>
<td>5.07%</td>
<td>4.99%</td>
<td>5.13%</td>
<td>4.94%</td>
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<tr>
<td>Perception of Great Risk of Smoking Marijuana Once a Month</td>
<td>26.45%</td>
<td>30.41%</td>
<td>34.90%</td>
<td>30.55%</td>
<td>29.63%</td>
<td>27.36%</td>
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<tr>
<td>Average Annual Marijuana Initiation Rate&lt;sup&gt;4&lt;/sup&gt;</td>
<td>2.26%</td>
<td>2.05%</td>
<td>2.23%</td>
<td>2.04%</td>
<td>1.91%</td>
<td>2.12%</td>
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<td><strong>TOBACCO</strong></td>
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<tr>
<td>Past Month Tobacco Product Use&lt;sup&gt;5&lt;/sup&gt;</td>
<td>27.25%</td>
<td>22.85%</td>
<td>27.15%</td>
<td>30.61%</td>
<td>27.20%</td>
<td>29.99%</td>
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<tr>
<td>Past Month Cigarette Use</td>
<td>23.02%</td>
<td>18.86%</td>
<td>22.10%</td>
<td>26.11%</td>
<td>22.90%</td>
<td>24.68%</td>
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<tr>
<td>Perceptions of Great Risk from Smoking One or More Packs of Cigarettes per Day</td>
<td>67.68%</td>
<td>76.07%</td>
<td>73.54%</td>
<td>68.74%</td>
<td>71.25%</td>
<td>71.64%</td>
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<tr>
<td><strong>PAST YEAR DEPENDENCE, ABUSE, AND TREATMENT</strong></td>
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<tr>
<td>Illicit Drug Dependence&lt;sup&gt;6&lt;/sup&gt;</td>
<td>1.64%</td>
<td>1.67%</td>
<td>2.02%</td>
<td>1.86%</td>
<td>2.06%</td>
<td>1.92%</td>
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<tr>
<td>Illicit Drug Dependence or Abuse</td>
<td>3.32%</td>
<td>3.34%</td>
<td>3.73%</td>
<td>3.28%</td>
<td>3.34%</td>
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<tr>
<td>Alcohol Dependence&lt;sup&gt;7&lt;/sup&gt;</td>
<td>2.40%</td>
<td>2.45%</td>
<td>2.86%</td>
<td>2.59%</td>
<td>2.61%</td>
<td>2.42%</td>
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<tr>
<td>Alcohol or Illicit Drug Dependence or Abuse</td>
<td>6.59%</td>
<td>7.02%</td>
<td>7.97%</td>
<td>6.24%</td>
<td>7.05%</td>
<td>7.15%</td>
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<tr>
<td>Alcohol or Illicit Drug Dependence or Abuse</td>
<td>3.33%</td>
<td>8.78%</td>
<td>9.94%</td>
<td>8.33%</td>
<td>9.52%</td>
<td>9.04%</td>
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<tr>
<td>Needing But Not Receiving Treatment for Illicit Drug Use&lt;sup&gt;8&lt;/sup&gt;</td>
<td>4.62%</td>
<td>7.73%</td>
<td>6.68%</td>
<td>5.50%</td>
<td>6.41%</td>
<td>6.85%</td>
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<tr>
<td>Needing But Not Receiving Treatment for Alcohol Abuse&lt;sup&gt;9&lt;/sup&gt;</td>
<td>2.49%</td>
<td>2.05%</td>
<td>2.89%</td>
<td>2.51%</td>
<td>2.31%</td>
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<td>Among persons aged 12 or older</td>
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<tr>
<td>Any mental illness in past year&lt;sup&gt;10&lt;/sup&gt;</td>
<td>19.63%</td>
<td>18.88%</td>
<td>20.24%</td>
<td>19.52%</td>
<td>18.86%</td>
<td>19.54%</td>
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<tr>
<td>Serious mental illness in past year&lt;sup&gt;11&lt;/sup&gt;</td>
<td>4.06%</td>
<td>4.15%</td>
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<td>4.34%</td>
<td>4.34%</td>
<td>4.23%</td>
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<tr>
<td>Had at least one major depressive episode in past year&lt;sup&gt;12&lt;/sup&gt;</td>
<td>7.01%</td>
<td>6.90%</td>
<td>6.77%</td>
<td>6.79%</td>
<td>6.54%</td>
<td>6.80%</td>
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<tr>
<td>Had serious thoughts of suicide in past year</td>
<td>3.81%</td>
<td>3.61%</td>
<td>3.88%</td>
<td>3.70%</td>
<td>3.83%</td>
<td>3.80%</td>
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* All figures are percent prevalence rates; figures in parentheses are 95% confidence intervals

** Source: 2012, 2013, and 2014 National Survey on Drug Use and Health (NSDUH), Substance Abuse and Mental Health Services Administration, Office of Applied Studies

New Mexico Substance Abuse Epidemiology Profile Page 147
## Appendix 2B. Substance Abuse and Mental Health by Region, Age 12+, 2012-2014 (NSDUH)

### INDICATORS

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<tr>
<th>AGE GROUP</th>
<th>NW</th>
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<th>Bernalillo County</th>
<th>SE</th>
<th>SW</th>
<th>New Mexico</th>
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</table>

#### ALCOHOL

**Past Month Alcohol Use**

| Age 12-17 | 10.45% |
| Age 18-25 | 6.87%  |
| Age 26+   | 3.34%  |

**Past Month Binge Alcohol Use**

| Age 12-17 | 6.08%  |
| Age 18-25 | 3.52%  |
| Age 26+   | 1.49%  |

**Past Year Marijuana Use**

| Age 12-17 | 3.81%  |
| Age 18-25 | 6.56%  |
| Age 26+   | 4.45%  |

#### ILlicit DRUGS

**Past Month Illicit Drug Use**

| Age 12-17 | 11.07% |
| Age 18-25 | 22.38% |
| Age 26+   | 11.29% |

**Past Year Marijuana Use**

| Age 12-17 | 16.64% |
| Age 18-25 | 29.60% |
| Age 26+   | 14.44% |

**Past Month Marijuana Use**

| Age 12-17 | 8.42%  |
| Age 18-25 | 13.83% |
| Age 26+   | 7.44%  |

**Past Month Use of Ilicit Drugs Other Than Marijuana**

| Age 12-17 | 3.81%  |
| Age 18-25 | 6.02%  |
| Age 26+   | 1.95%  |

**Past Year Cocaine Use**

<p>| Age 12-17 | 0.76%  |
| Age 18-25 | 0.82%  |
| Age 26+   | 0.63%  |</p>
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<th>INDICATORS</th>
<th>AGE GROUP</th>
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<th>NE</th>
<th>Bernalillo County</th>
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<th>New Mexico</th>
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<tr>
<td>Past Year Nonmedical Pain Reliever Use</td>
<td>Age 12-17</td>
<td>5.59%</td>
<td>5.85%</td>
<td>5.98%</td>
<td>6.32%</td>
<td>6.16%</td>
<td>6.05%</td>
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<td>(3.98% - 7.79%)</td>
<td>(4.64% - 9.17%)</td>
<td>(4.33% - 8.22%)</td>
<td>(4.55% - 8.72%)</td>
<td>(4.45% - 8.45%)</td>
<td>(4.82% - 7.56%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age 18-25</td>
<td>6.68%</td>
<td>7.81%</td>
<td>8.81%</td>
<td>8.65%</td>
<td>8.47%</td>
<td>8.31%</td>
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<tr>
<td></td>
<td>(6.41% - 11.65%)</td>
<td>(5.66% - 10.86%)</td>
<td>(6.69% - 11.51%)</td>
<td>(6.46% - 11.49%)</td>
<td>(6.35% - 11.22%)</td>
<td>(7.05% - 10.38%)</td>
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<tr>
<td></td>
<td>Age 26+</td>
<td>4.35%</td>
<td>4.16%</td>
<td>4.09%</td>
<td>4.83%</td>
<td>5.01%</td>
<td>4.71%</td>
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<tr>
<td></td>
<td>(3.18% - 5.80%)</td>
<td>(2.96% - 5.82%)</td>
<td>(3.75% - 6.57%)</td>
<td>(3.59% - 6.48%)</td>
<td>(3.73% - 6.69%)</td>
<td>(3.81% - 5.81%)</td>
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<td>(23.10% - 31.38%)</td>
<td>(26.09% - 35.86%)</td>
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<td>(25.49% - 32.84%)</td>
<td>(28.86% - 37.54%)</td>
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<td>(25.61% - 31.95%)</td>
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<td>(29.93% - 40.43%)</td>
<td>(31.11% - 43.53%)</td>
<td>(26.46% - 38.39%)</td>
<td>(31.11% - 37.79%)</td>
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<tr>
<td></td>
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<td>(19.30% - 32.89%)</td>
<td>(16.50% - 34.58%)</td>
<td>(18.04% - 25.92%)</td>
<td>(22.27% - 31.63%)</td>
<td>(19.33% - 27.76%)</td>
<td>(19.93% - 25.14%)</td>
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<tr>
<td></td>
<td>Age 18+</td>
<td>24.96%</td>
<td>24.35%</td>
<td>22.60%</td>
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<td>(20.36% - 27.31%)</td>
<td>(24.37% - 32.71%)</td>
<td>(21.16% - 26.85%)</td>
<td>(21.96% - 26.57%)</td>
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</tr>
</tbody>
</table>

+ All figures are percent prevalence rates; figures in parantheses are 95% confidence intervals

* Low precision; no estimate reported

Source: 2012, 2013, and 2014 National Survey on Drug Use and Health (NSDUH), Substance Abuse and Mental Health Services Administration, Office of Applied Studies
## Appendix 2B. Substance Abuse and Mental Health by Region, Age 12+, 2012-2014 (NSDUH)

### Health Region

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<th>Indicator</th>
<th>Age Group</th>
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<th>City</th>
<th>SE</th>
<th>SW</th>
<th>New Mexico</th>
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<td><strong>Past Year Dependence, Abuse, and Treatment</strong></td>
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<td>Ilicit Drug Dependence</td>
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<td></td>
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<tr>
<td>Age 12-17</td>
<td>1.84%</td>
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<td>2.14%</td>
<td>1.91%</td>
<td>2.17%</td>
<td>2.06%</td>
<td>2.04%</td>
<td>(1.20% - 2.82%)</td>
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<td>4.45%</td>
<td>4.54%</td>
<td>4.58%</td>
<td>4.72%</td>
<td>4.59%</td>
<td>(3.07% - 6.91%)</td>
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<tr>
<td>Age 26*</td>
<td>1.35%</td>
<td>1.58%</td>
<td>1.58%</td>
<td>1.58%</td>
<td>1.62%</td>
<td>1.44%</td>
<td>(0.85% - 2.14%)</td>
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<td>1.73%</td>
<td>2.15%</td>
<td>2.01%</td>
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<td>1.63%</td>
<td>(1.28% - 2.63%)</td>
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<td>Age 12-17</td>
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<td>2.67%</td>
<td>2.67%</td>
<td>2.77%</td>
<td>2.77%</td>
<td>2.89%</td>
<td>(1.96% - 3.82%)</td>
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<td>3.59%</td>
<td>3.55%</td>
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<td>3.76%</td>
<td>(2.18% - 4.63%)</td>
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<td>Alcohol Dependence on Abuse</td>
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<td>7.34%</td>
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<td>7.41%</td>
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<td>(5.58% - 8.82%)</td>
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<td>6.22%</td>
<td>6.16%</td>
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<td>6.54%</td>
<td>6.53%</td>
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<td>7.34%</td>
<td>7.17%</td>
<td>7.41%</td>
<td>7.56%</td>
<td>(5.58% - 8.82%)</td>
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<td>Needing But Not Receiving Treatment for Alcohol Use</td>
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<td>3.44%</td>
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<td>3.12%</td>
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<td>13.74%</td>
<td>(8.74% - 15.44%)</td>
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<td>6.22%</td>
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<td>Age 18+</td>
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<td>6.95%</td>
<td>6.81%</td>
<td>6.87%</td>
<td>6.84%</td>
<td>(5.10% - 8.29%)</td>
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</tr>
</tbody>
</table>

* All figures are percent prevalence rates; figures in parentheses are 95% confidence intervals
* Low precision; no estimate reported

Source: 2012, 2013, and 2014 National Survey on Drug Use and Health (NSDUH), Substance Abuse and Mental Health Services Administration, Office of Applied Studies

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**New Mexico Substance Abuse Epidemiology Profile** Page 183
### MENTAL HEALTH

#### Any mental illness in past year

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<th>Bernalillo County</th>
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<td>(18.26% - 25.16%)</td>
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<td>(15.43% - 22.36%)</td>
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<td>26+</td>
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<td>(17.09% - 23.32%)</td>
<td>(16.48% - 22.93%)</td>
<td>(15.72% - 22.39%)</td>
<td>(17.28% - 21.77%)</td>
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<td>(15.90% - 22.27%)</td>
<td>(17.55% - 22.22%)</td>
<td>(16.73% - 22.64%)</td>
<td>(15.93% - 22.04%)</td>
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#### Serious mental illness in past year

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<td>(3.31% - 6.39%)</td>
<td>(2.88% - 5.80%)</td>
<td>(3.51% - 6.50%)</td>
<td>(3.12% - 6.09%)</td>
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<td>(3.16% - 6.31%)</td>
<td>(3.31% - 5.27%)</td>
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<td>(3.16% - 5.69%)</td>
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#### Had at least one major depressive episode in past year

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<td></td>
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<td>(8.17% - 13.25%)</td>
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<td>(8.45% - 14.15%)</td>
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<td>(4.91% - 8.92%)</td>
<td>(4.78% - 8.26%)</td>
<td>(4.81% - 8.42%)</td>
<td>(4.59% - 8.15%)</td>
<td>(5.27% - 7.70%)</td>
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<td>6.80%</td>
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<td></td>
<td>(5.51% - 8.88%)</td>
<td>(5.29% - 8.94%)</td>
<td>(5.38% - 8.49%)</td>
<td>(5.36% - 8.57%)</td>
<td>(5.14% - 8.30%)</td>
<td>(5.78% - 7.98%)</td>
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#### Had serious thoughts of suicide in past year

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<td>N/A</td>
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<td>18-25</td>
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<td>7.28%</td>
<td>7.04%</td>
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<td>7.05%</td>
</tr>
<tr>
<td></td>
<td>(5.18% - 9.13%)</td>
<td>(5.61% - 9.40%)</td>
<td>(5.32% - 9.26%)</td>
<td>(5.69% - 8.84%)</td>
<td>(5.14% - 8.66%)</td>
<td>(5.69% - 8.47%)</td>
</tr>
<tr>
<td>26+</td>
<td>2.12%</td>
<td>2.46%</td>
<td>2.15%</td>
<td>2.43%</td>
<td>2.32%</td>
<td>2.54%</td>
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<tr>
<td></td>
<td>(2.22% - 4.65%)</td>
<td>(2.12% - 4.69%)</td>
<td>(2.34% - 4.64%)</td>
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<td>(2.32% - 4.82%)</td>
<td>(2.54% - 4.12%)</td>
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<tr>
<td>18+</td>
<td>3.81%</td>
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<td>3.88%</td>
<td>3.70%</td>
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<tr>
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<td>(2.90% - 5.01%)</td>
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<td>(2.93% - 5.09%)</td>
<td>(3.17% - 4.56%)</td>
</tr>
</tbody>
</table>

---

* All figures are percent prevalence rates; figures in parentheses are 95% confidence intervals

* Low precision; no estimate reported

Source: 2012, 2013, and 2014 National Survey on Drug Use and Health (NSDUH), Substance Abuse and Mental Health Services Administration, Office of Applied Studies
Appendix 3

Substance Abuse and Mental Health by National Regions, Age 12+, 2012-2014
National Survey on Drug Use and Health (NSDUH)
Appendix 3A. Substance Abuse and Mental Health by Age Group, New Mexico, 2012-2014 (NSDUH)
INDICATORS
ALCOHOL

+

Past Month Alcohol Use
Past Month Binge Alcohol Use1
Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic
Beverage Once or Twice a Week

TOTAL U.S.

NORTHEAST

MIDWEST

SOUTH

WEST

NEW MEXICO

52.32%
57.75%
55.24%
48.57%
51.41%
49.46%
(51.88% - 52.76%) (56.93% - 58.55%) (54.58% - 55.89%) (47.96% - 49.18%) (50.58% - 52.24%) (46.96% - 51.96%)
22.94%
24.14%
25.57%
21.47%
21.96%
24.06%
(22.61% - 23.28%) (23.45% - 24.83%) (24.99% - 26.15%) (20.98% - 21.96%) (21.31% - 22.62%) (21.93% - 26.32%)
41.31%
39.66%
37.16%
43.41%
43.03%
45.12%
(40.91% - 41.70%) (38.85% - 40.49%) (36.50% - 37.83%) (42.79% - 44.03%) (42.21% - 43.86%) (42.59% - 47.68%)

ILLICIT DRUGS
Past Month Illicit Drug Use2
Past Year Marijuana Use
Past Month Marijuana Use
Past Month Use of Illicit Drugs Other Than Marijuana3
Past Year Cocaine Use
Past Year Nonmedical Pain Reliever Use
Perception of Great Risk of Smoking Marijuana Once a Month
Average Annual Marijuana Initiation Rate4

9.58%
(9.36% - 9.79%)
12.65%
(12.40% - 12.89%)
7.73%
(7.54% - 7.92%)
3.34%
(3.21% - 3.46%)
1.70%
(1.62% - 1.79%)
4.31%
(4.17% - 4.45%)
28.50%
(28.11% - 28.89%)
1.90%
(1.85% - 1.96%)

10.08%
(9.64% - 10.54%)
13.74%
(13.21% - 14.29%)
8.36%
(7.95% - 8.79%)
3.15%
(2.91% - 3.41%)
1.99%
(1.80% - 2.21%)
3.82%
(3.57% - 4.10%)
26.56%
(25.77% - 27.38%)
2.00%
(1.90% - 2.12%)

8.99%
(8.64% - 9.34%)
12.21%
(11.78% - 12.65%)
7.28%
(6.97% - 7.60%)
3.07%
(2.89% - 3.27%)
1.40%
(1.28% - 1.54%)
4.21%
(4.00% - 4.43%)
26.11%
(25.47% - 26.76%)
1.93%
(1.84% - 2.03%)

8.29%
(7.98% - 8.62%)
10.90%
(10.51% - 11.30%)
6.43%
(6.15% - 6.73%)
3.25%
(3.07% - 3.44%)
1.53%
(1.41% - 1.66%)
4.30%
(4.09% - 4.51%)
32.60%
(31.97% - 33.23%)
1.68%
(1.60% - 1.77%)

11.77%
(11.25% - 12.30%)
14.98%
(14.43% - 15.54%)
9.70%
(9.24% - 10.17%)
3.85%
(3.57% - 4.15%)
2.02%
(1.82% - 2.24%)
4.78%
(4.48% - 5.10%)
25.64%
(24.89% - 26.42%)
2.19%
(2.07% - 2.32%)

11.29%
(9.86% - 12.91%)
15.18%
(13.43% - 17.12%)
9.61%
(8.21% - 11.23%)
3.58%
(2.81% - 4.55%)
2.20%
(1.63% - 2.96%)
4.84%
(3.98% - 5.87%)
27.36%
(25.01% - 29.85%)
2.12%
(1.85% - 2.43%)

25.81%
(25.45% - 26.18%)
21.40%
(21.05% - 21.75%)
71.24%
(70.89% - 71.58%)

24.32%
(23.63% - 25.03%)
20.11%
(19.47% - 20.76%)
73.40%
(72.73% - 74.07%)

28.98%
(28.40% - 29.56%)
24.08%
(23.51% - 24.66%)
67.77%
(67.16% - 68.37%)

27.30%
(26.76% - 27.85%)
22.65%
(22.13% - 23.17%)
70.69%
(70.15% - 71.22%)

21.69%
(21.02% - 22.38%)
17.96%
(17.33% - 18.61%)
73.61%
(72.92% - 74.29%)

26.99%
(24.80% - 29.30%)
22.48%
(20.44% - 24.66%)
71.64%
(69.48% - 73.69%)

1.90%
(1.81% - 1.99%)
2.70%
(2.60% - 2.80%)
3.13%
(3.02% - 3.26%)
6.60%
(6.43% - 6.78%)
8.28%
(8.09% - 8.48%)
2.40%
(2.31% - 2.50%)
6.29%
(6.12% - 6.46%)

2.07%
(1.91% - 2.25%)
2.81%
(2.61% - 3.02%)
3.12%
(2.90% - 3.36%)
6.69%
(6.35% - 7.04%)
8.39%
(8.04% - 8.77%)
2.46%
(2.27% - 2.67%)
6.28%
(5.96% - 6.62%)

1.82%
(1.70% - 1.95%)
2.58%
(2.44% - 2.74%)
3.13%
(2.94% - 3.32%)
6.76%
(6.48% - 7.05%)
8.41%
(8.11% - 8.72%)
2.27%
(2.13% - 2.42%)
6.47%
(6.21% - 6.75%)

1.81%
(1.69% - 1.94%)
2.59%
(2.45% - 2.74%)
2.97%
(2.79% - 3.16%)
6.23%
(5.97% - 6.50%)
7.90%
(7.62% - 8.18%)
2.33%
(2.19% - 2.47%)
6.02%
(5.77% - 6.27%)

1.98%
(1.82% - 2.16%)
2.89%
(2.68% - 3.10%)
3.41%
(3.16% - 3.68%)
6.98%
(6.62% - 7.36%)
8.69%
(8.32% - 9.09%)
2.59%
(2.39% - 2.80%)
6.54%
(6.21% - 6.89%)

1.92%
(1.53% - 2.40%)
3.02%
(2.47% - 3.71%)
3.47%
(2.83% - 4.24%)
7.15%
(6.17% - 8.27%)
9.04%
(7.98% - 10.22%)
2.58%
(2.07% - 3.22%)
6.85%
(5.87% - 7.97%)

18.39%
(18.07% - 18.72%)
4.13%
(3.97% - 4.29%)
6.71%
(6.51% - 6.91%)
3.91%
(3.76% - 4.06%)

17.95%
(17.28% - 18.64%)
3.86%
(3.55% - 4.20%)
6.60%
(6.22% - 6.99%)
3.83%
(3.56% - 4.11%)

18.54%
(17.99% - 19.10%)
4.32%
(4.03% - 4.62%)
6.83%
(6.53% - 7.14%)
4.04%
(3.82% - 4.28%)

18.14%
(17.60% - 18.69%)
4.16%
(3.90% - 4.45%)
6.62%
(6.32% - 6.93%)
3.83%
(3.61% - 4.05%)

19.00%
(18.34% - 19.68%)
4.09%
(3.76% - 4.45%)
6.81%
(6.40% - 7.25%)
3.99%
(3.71% - 4.28%)

19.54%
(17.60% - 21.65%)
4.23%
(3.45% - 5.17%)
6.80%
(5.78% - 7.98%)
3.80%
(3.17% - 4.56%)

TOBACCO
Past Month Tobacco Product Use5
Past Month Cigarette Use
Perceptions of Great Risk from Smoking One or More Packs of Cigarettes
per Day
PAST YEAR DEPENDENCE, ABUSE, AND TREATMENT
Illicit Drug Dependence6
Illicit Drug Dependence or Abuse
Alcohol Dependence7
Alcohol Dependence or Abuse
Alcohol or Illicit Drug Dependence or Abuse
Needing But Not Receiving Treatment for Illicit Drug Use8
Needing But Not Receiving Treatment for Alcohol Use9
MENTAL HEALTH
among persons aged 12 or older
Any mental illness in past year10
Serious mental illness in past year11
Had at least one major depressive episode in past year12
Had serious thoughts of suicide in past year

+ All figures are percent prevalence rates; figures in parantheses are 95% confidence intervals
* Low precision; no estimate reported

Source: 2012, 2013, and 2014 National Survey on Drug Use and Health (NSDUH), Substance Abuse and Mental Health Services Administration, Office of Applied Studies

New Mexico Substance Abuse Epidemiology Profile

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### Appendix 3B. Substance Abuse and Mental Health by Age Group, New Mexico, 2012-2014 (NSDUH)

#### ALCOHOL

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>AGE GROUP</th>
<th>TOTAL U.S.</th>
<th>NORTH EAST</th>
<th>MIDWEST</th>
<th>SOUTH</th>
<th>WEST</th>
<th>NEW MEXICO</th>
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<tbody>
<tr>
<td><strong>Past Month Alcohol Use</strong></td>
<td>Age 12-17</td>
<td>14.82%</td>
<td>(13.10% - 14.56%)</td>
<td>11.88%</td>
<td>(10.80% - 12.93%)</td>
<td>11.35%</td>
<td>(10.19% - 12.57%)</td>
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<tr>
<td></td>
<td>Age 18-25</td>
<td>64.33%</td>
<td>(63.23% - 65.42%)</td>
<td>59.71%</td>
<td>(58.00% - 61.41%)</td>
<td>63.42%</td>
<td>(61.22% - 65.62%)</td>
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<tr>
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<td>Age 26+</td>
<td>51.79%</td>
<td>(50.54% - 52.62%)</td>
<td>59.25%</td>
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<td>Age 18+</td>
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<td>(59.12% - 60.56%)</td>
<td>52.52%</td>
<td>(51.85% - 53.19%)</td>
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<tr>
<td><strong>Past Month Binge Alcohol Use</strong></td>
<td>Age 12-17</td>
<td>4.70%</td>
<td>(6.27% - 7.68%)</td>
<td>6.47%</td>
<td>(6.07% - 6.89%)</td>
<td>6.16%</td>
<td>(5.79% - 6.52%)</td>
</tr>
<tr>
<td></td>
<td>Age 18-25</td>
<td>42.25%</td>
<td>(37.36% - 43.35%)</td>
<td>41.15%</td>
<td>(35.41% - 46.48%)</td>
<td>38.81%</td>
<td>(34.86% - 41.91%)</td>
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<tr>
<td></td>
<td>Age 26+</td>
<td>42.96%</td>
<td>(42.16% - 43.98%)</td>
<td>42.62%</td>
<td>(38.26% - 45.94%)</td>
<td>44.71%</td>
<td>(41.06% - 48.56%)</td>
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<tr>
<td></td>
<td>Age 18+</td>
<td>26.09%</td>
<td>(24.96% - 27.20%)</td>
<td>27.59%</td>
<td>(26.20% - 28.99%)</td>
<td>23.09%</td>
<td>(22.09% - 24.09%)</td>
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#### ILLICIT DRUGS

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<th>INDICATORS</th>
<th>AGE GROUP</th>
<th>TOTAL U.S.</th>
<th>NORTH EAST</th>
<th>MIDWEST</th>
<th>SOUTH</th>
<th>WEST</th>
<th>NEW MEXICO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Past Month Illicit Drug Use</strong></td>
<td>Age 12-17</td>
<td>8.64%</td>
<td>(8.74% - 9.82%)</td>
<td>8.64%</td>
<td>(8.27% - 9.13%)</td>
<td>8.65%</td>
<td>(8.97% - 11.36%)</td>
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<tr>
<td></td>
<td>Age 18-25</td>
<td>24.03%</td>
<td>(23.12% - 24.96%)</td>
<td>21.11%</td>
<td>(18.68% - 21.84%)</td>
<td>19.32%</td>
<td>(18.28% - 21.88%)</td>
</tr>
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<td></td>
<td>Age 26+</td>
<td>6.90%</td>
<td>(6.56% - 7.38%)</td>
<td>6.36%</td>
<td>(5.96% - 6.75%)</td>
<td>6.80%</td>
<td>(6.31% - 7.62%)</td>
</tr>
<tr>
<td></td>
<td>Age 18+</td>
<td>9.92%</td>
<td>(9.65% - 10.49%)</td>
<td>8.25%</td>
<td>(7.91% - 8.61%)</td>
<td>11.89%</td>
<td>(11.32% - 12.47%)</td>
</tr>
<tr>
<td><strong>Past Year Marijuana Use</strong></td>
<td>Age 12-17</td>
<td>12.72%</td>
<td>(13.00% - 13.70%)</td>
<td>12.70%</td>
<td>(11.75% - 13.72%)</td>
<td>12.24%</td>
<td>(11.25% - 13.27%)</td>
</tr>
<tr>
<td></td>
<td>Age 18-25</td>
<td>36.36%</td>
<td>(34.26% - 38.47%)</td>
<td>31.76%</td>
<td>(29.72% - 33.84%)</td>
<td>28.69%</td>
<td>(27.32% - 30.26%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>10.12%</td>
<td>(9.31% - 10.97%)</td>
<td>8.81%</td>
<td>(7.70% - 9.97%)</td>
<td>11.66%</td>
<td>(10.12% - 12.24%)</td>
</tr>
<tr>
<td></td>
<td>Age 18+</td>
<td>13.72%</td>
<td>(12.31% - 14.13%)</td>
<td>12.15%</td>
<td>(10.34% - 14.19%)</td>
<td>10.76%</td>
<td>(10.07% - 11.46%)</td>
</tr>
<tr>
<td><strong>Past Month Marijuana Use</strong></td>
<td>Age 12-17</td>
<td>7.82%</td>
<td>(7.18% - 8.42%)</td>
<td>7.87%</td>
<td>(7.00% - 8.67%)</td>
<td>8.46%</td>
<td>(8.02% - 9.18%)</td>
</tr>
<tr>
<td></td>
<td>Age 18-25</td>
<td>18.67%</td>
<td>(17.20% - 19.19%)</td>
<td>18.12%</td>
<td>(16.30% - 19.42%)</td>
<td>17.18%</td>
<td>(16.20% - 18.16%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>5.37%</td>
<td>(5.06% - 5.69%)</td>
<td>5.48%</td>
<td>(5.01% - 5.97%)</td>
<td>7.80%</td>
<td>(7.36% - 8.33%)</td>
</tr>
<tr>
<td></td>
<td>Age 18+</td>
<td>3.33%</td>
<td>(3.19% - 3.48%)</td>
<td>3.37%</td>
<td>(3.25% - 3.50%)</td>
<td>3.48%</td>
<td>(3.25% - 3.72%)</td>
</tr>
</tbody>
</table>

#### Past Month Use of Illicit Drugs Other Than Marijuana

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>AGE GROUP</th>
<th>TOTAL U.S.</th>
<th>NORTH EAST</th>
<th>MIDWEST</th>
<th>SOUTH</th>
<th>WEST</th>
<th>NEW MEXICO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Past Year Cocaine Use</strong></td>
<td>Age 12-17</td>
<td>0.56%</td>
<td>(0.47% - 0.75%)</td>
<td>0.50%</td>
<td>(0.40% - 0.62%)</td>
<td>0.66%</td>
<td>(0.50% - 0.72%)</td>
</tr>
<tr>
<td></td>
<td>Age 18-25</td>
<td>0.52%</td>
<td>(0.40% - 0.62%)</td>
<td>0.69%</td>
<td>(0.50% - 0.72%)</td>
<td>0.66%</td>
<td>(0.50% - 0.72%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>0.56%</td>
<td>(0.40% - 0.62%)</td>
<td>0.69%</td>
<td>(0.50% - 0.72%)</td>
<td>0.66%</td>
<td>(0.50% - 0.72%)</td>
</tr>
</tbody>
</table>

* All figures are percent prevalence rates; figures in parentheses are 95% confidence intervals

* Low precision; no estimate reported

Source: 2012, 2013, and 2014 National Survey on Drug Use and Health (NSDUH), Substance Abuse and Mental Health Services Administration, Office of Applied Studies
## Appendix 3B. Substance Abuse and Mental Health by Age Group, New Mexico, 2012-2014 (NSDUH)

### ILLICIT DRUGS

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>AGE GROUP</th>
<th>TOTAL U.S.</th>
<th>NORTHEAST</th>
<th>MIDWEST</th>
<th>SOUTH</th>
<th>WEST</th>
<th>NEW MEXICO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past Year Nonmedical Pain Reliever Use</td>
<td>Age 12-17</td>
<td>(4.89% - 6.12%)</td>
<td>(4.01% - 5.01%)</td>
<td>(4.64% - 5.86%)</td>
<td>(5.99% - 7.47%)</td>
<td>(5.43% - 6.07%)</td>
<td>(5.43% - 6.07%)</td>
</tr>
<tr>
<td></td>
<td>Age 15-25</td>
<td>(8.92% - 9.24%)</td>
<td>(4.0% - 4.4%)</td>
<td>(5.1% - 5.4%)</td>
<td>(8.9% - 9.4%)</td>
<td>(8.9% - 9.4%)</td>
<td>(8.9% - 9.4%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>(3.28% - 3.61%)</td>
<td>(2.75% - 3.36%)</td>
<td>(3.08% - 3.57%)</td>
<td>(3.16% - 3.65%)</td>
<td>(3.99% - 4.44%)</td>
<td>(3.99% - 4.44%)</td>
</tr>
<tr>
<td></td>
<td>Age 18+</td>
<td>(4.09% - 4.40%)</td>
<td>(3.53% - 4.10%)</td>
<td>(3.84% - 4.40%)</td>
<td>(3.99% - 4.44%)</td>
<td>(4.39% - 5.05%)</td>
<td>(4.39% - 5.05%)</td>
</tr>
<tr>
<td>Perceptions of Great Risk from Smoking One or More Times a Month</td>
<td>Age 12-17</td>
<td>(24.2% - 29.7%)</td>
<td>(23.1% - 27.8%)</td>
<td>(24.9% - 28.7%)</td>
<td>(22.2% - 24.7%)</td>
<td>(26.8% - 30.2%)</td>
<td>(27.2% - 30.2%)</td>
</tr>
<tr>
<td></td>
<td>Age 15-25</td>
<td>(15.65% - 16.14%)</td>
<td>(14.6% - 15.6%)</td>
<td>(15.6% - 16.1%)</td>
<td>(14.6% - 16.1%)</td>
<td>(15.6% - 16.1%)</td>
<td>(14.6% - 16.1%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>(31.32% - 31.81%)</td>
<td>(28.33% - 30.32%)</td>
<td>(27.71% - 29.29%)</td>
<td>(30.35% - 36.59%)</td>
<td>(27.35% - 29.26%)</td>
<td>(27.20% - 33.25%)</td>
</tr>
<tr>
<td>Frst Use of Marijuana</td>
<td>Age 12-17</td>
<td>(8.55% - 8.84%)</td>
<td>(5.94% - 6.23%)</td>
<td>(5.47% - 5.73%)</td>
<td>(5.05% - 5.53%)</td>
<td>(5.05% - 6.44%)</td>
<td>(5.05% - 6.44%)</td>
</tr>
<tr>
<td></td>
<td>Age 15-25</td>
<td>(7.95% - 8.24%)</td>
<td>(7.90% - 9.04%)</td>
<td>(7.57% - 8.45%)</td>
<td>(6.40% - 7.12%)</td>
<td>(7.68% - 8.81%)</td>
<td>(5.53% - 8.38%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>(0.23% - 0.27%)</td>
<td>(0.19% - 0.33%)</td>
<td>(0.17% - 0.26%)</td>
<td>(0.14% - 0.25%)</td>
<td>(0.24% - 0.40%)</td>
<td>(0.22% - 0.50%)</td>
</tr>
<tr>
<td>Tobacco Use</td>
<td>Age 12-17</td>
<td>(2.6% - 3.2%)</td>
<td>(1.37% - 1.48%)</td>
<td>(1.21% - 1.40%)</td>
<td>(1.01% - 1.18%)</td>
<td>(1.46% - 1.99%)</td>
<td>(1.06% - 1.46%)</td>
</tr>
<tr>
<td></td>
<td>Age 15-25</td>
<td>(7.53% - 8.11%)</td>
<td>(7.03% - 8.06%)</td>
<td>(8.52% - 9.43%)</td>
<td>(7.71% - 8.49%)</td>
<td>(6.11% - 7.98%)</td>
<td>(7.71% - 11.16%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>(36.71% - 37.29%)</td>
<td>(34.54% - 36.80%)</td>
<td>(38.48% - 42.52%)</td>
<td>(36.86% - 38.76%)</td>
<td>(30.40% - 32.75%)</td>
<td>(37.25% - 43.89%)</td>
</tr>
<tr>
<td>Past Month Cigarette Use</td>
<td>Age 12-17</td>
<td>(5.68% - 5.83%)</td>
<td>(5.02% - 5.87%)</td>
<td>(6.07% - 7.70%)</td>
<td>(5.41% - 6.10%)</td>
<td>(4.42% - 5.28%)</td>
<td>(5.47% - 8.33%)</td>
</tr>
<tr>
<td></td>
<td>Age 15-25</td>
<td>(31.36% - 32.87%)</td>
<td>(28.44% - 30.63%)</td>
<td>(32.53% - 34.58%)</td>
<td>(30.20% - 32.04%)</td>
<td>(25.51% - 27.75%)</td>
<td>(31.11% - 37.79%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>(20.81% - 21.81%)</td>
<td>(20.20% - 21.05%)</td>
<td>(24.63% - 26.38%)</td>
<td>(23.96% - 25.38%)</td>
<td>(22.62% - 24.00%)</td>
<td>(21.78% - 25.14%)</td>
</tr>
<tr>
<td>Perceptions of Great Risk from Smoking One or More Times a Month</td>
<td>Age 12-17</td>
<td>(23.05% - 23.67%)</td>
<td>(22.54% - 22.24%)</td>
<td>(25.39% - 26.56%)</td>
<td>(23.96% - 25.38%)</td>
<td>(18.60% - 20.08%)</td>
<td>(21.96% - 25.14%)</td>
</tr>
<tr>
<td></td>
<td>Age 15-25</td>
<td>(65.41% - 65.91%)</td>
<td>(65.13% - 67.22%)</td>
<td>(63.71% - 65.36%)</td>
<td>(64.63% - 66.20%)</td>
<td>(64.57% - 66.67%)</td>
<td>(68.58% - 64.93%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>(60.00% - 60.70%)</td>
<td>(67.40% - 69.35%)</td>
<td>(62.07% - 63.75%)</td>
<td>(65.31% - 68.66%)</td>
<td>(67.89% - 69.95%)</td>
<td>(82.33% - 68.32%)</td>
</tr>
<tr>
<td>Illicit Drug Dependence in the Past Year</td>
<td>Age 12-17</td>
<td>(1.92% - 2.07%)</td>
<td>(1.62% - 2.10%)</td>
<td>(1.66% - 2.04%)</td>
<td>(1.73% - 2.12%)</td>
<td>(1.80% - 2.33%)</td>
<td>(1.49% - 2.78%)</td>
</tr>
<tr>
<td></td>
<td>Age 15-25</td>
<td>(5.17% - 5.42%)</td>
<td>(5.00% - 5.20%)</td>
<td>(4.59% - 5.32%)</td>
<td>(4.37% - 5.03%)</td>
<td>(5.21% - 6.28%)</td>
<td>(4.30% - 6.10%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>(1.34% - 1.44%)</td>
<td>(1.32% - 1.71%)</td>
<td>(1.15% - 1.43%)</td>
<td>(1.17% - 1.46%)</td>
<td>(1.14% - 1.51%)</td>
<td>(1.05% - 1.96%)</td>
</tr>
<tr>
<td>Illicit Drug Dependence or Abuse in the Past Year</td>
<td>Age 12-17</td>
<td>(3.67% - 3.87%)</td>
<td>(3.06% - 3.76%)</td>
<td>(3.14% - 3.69%)</td>
<td>(3.29% - 3.86%)</td>
<td>(3.82% - 4.71%)</td>
<td>(3.27% - 5.45%)</td>
</tr>
<tr>
<td></td>
<td>Age 15-25</td>
<td>(7.27% - 7.58%)</td>
<td>(6.83% - 7.40%)</td>
<td>(6.56% - 7.44%)</td>
<td>(6.37% - 7.18%)</td>
<td>(7.33% - 8.55%)</td>
<td>(6.42% - 8.41%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>(1.68% - 1.92%)</td>
<td>(1.70% - 2.15%)</td>
<td>(1.57% - 1.91%)</td>
<td>(1.60% - 1.93%)</td>
<td>(1.60% - 2.06%)</td>
<td>(1.65% - 3.00%)</td>
</tr>
</tbody>
</table>

* All figures are percent prevalence rates; figures in parentheses are 95% confidence intervals
* Low precision; no estimate reported

Source: 2012, 2013, and 2014 National Survey on Drug Use and Health (NSDUH), Substance Abuse and Mental Health Services Administration, Office of Applied Studies

New Mexico Substance Abuse Epidemiology Profile  Page 163
### Appendix 3B. Substance Abuse and Mental Health by Age Group, New Mexico, 2012-2014 (NSDUH)

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>AGE GROUP</th>
<th>TOTAL U.S.</th>
<th>NORTHEAST</th>
<th>MIDWEST</th>
<th>SOUTH</th>
<th>WEST</th>
<th>NEW MEXICO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alcohol Dependence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 12-17</td>
<td>1.09%</td>
<td>(0.98% - 1.20%)</td>
<td>(0.96% - 1.29%)</td>
<td>(0.93% - 1.21%)</td>
<td>(0.90% - 1.18%)</td>
<td>(0.95% - 1.40%)</td>
<td>(0.90% - 1.17%)</td>
</tr>
<tr>
<td>Age 18-25</td>
<td>5.74%</td>
<td>(5.50% - 6.00%)</td>
<td>(5.31% - 6.29%)</td>
<td>(5.41% - 6.19%)</td>
<td>(4.85% - 5.56%)</td>
<td>(5.99% - 7.10%)</td>
<td>(4.87% - 7.76%)</td>
</tr>
<tr>
<td>Age 26+</td>
<td>2.39%</td>
<td>(2.79% - 3.09%)</td>
<td>(2.65% - 3.19%)</td>
<td>(2.72% - 3.16%)</td>
<td>(2.62% - 3.07%)</td>
<td>(2.84% - 3.46%)</td>
<td>(2.56% - 4.20%)</td>
</tr>
<tr>
<td><strong>Alcohol Dependence or Abuse</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 12-17</td>
<td>2.99%</td>
<td>(2.61% - 3.17%)</td>
<td>(2.61% - 3.43%)</td>
<td>(2.70% - 3.21%)</td>
<td>(2.61% - 3.07%)</td>
<td>(2.85% - 3.57%)</td>
<td>(2.60% - 4.32%)</td>
</tr>
<tr>
<td>Age 18-25</td>
<td>13.20%</td>
<td>(12.81% - 13.60%)</td>
<td>(13.12% - 14.35%)</td>
<td>(12.91% - 14.45%)</td>
<td>(11.76% - 12.85%)</td>
<td>(12.97% - 14.58%)</td>
<td>(11.70% - 16.03%)</td>
</tr>
<tr>
<td>Age 26+</td>
<td>3.92%</td>
<td>(3.57% - 4.36%)</td>
<td>(3.69% - 4.39%)</td>
<td>(3.51% - 3.99%)</td>
<td>(3.63% - 4.72%)</td>
<td>(3.53% - 5.19%)</td>
<td>(3.39% - 7.81%)</td>
</tr>
<tr>
<td><strong>Alcohol or Illicit Drug Dependence or Abuse</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 12-17</td>
<td>5.45%</td>
<td>(5.21% - 5.79%)</td>
<td>(4.91% - 5.76%)</td>
<td>(4.88% - 5.56%)</td>
<td>(5.04% - 5.72%)</td>
<td>(5.41% - 6.38%)</td>
<td>(4.97% - 7.56%)</td>
</tr>
<tr>
<td>Age 18-25</td>
<td>17.49%</td>
<td>(17.05% - 17.94%)</td>
<td>(17.59% - 19.25%)</td>
<td>(17.30% - 18.57%)</td>
<td>(15.69% - 16.90%)</td>
<td>(17.47% - 19.12%)</td>
<td>(14.96% - 19.75%)</td>
</tr>
<tr>
<td>Age 26+</td>
<td>7.06%</td>
<td>(6.83% - 7.28%)</td>
<td>(6.65% - 7.53%)</td>
<td>(6.83% - 7.56%)</td>
<td>(6.45% - 7.12%)</td>
<td>(6.89% - 7.83%)</td>
<td>(6.78% - 9.38%)</td>
</tr>
<tr>
<td><strong>Needing But Not Receiving Treatment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>for Alcohol or Illicit Drug Use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 12-17</td>
<td>3.42%</td>
<td>(3.23% - 3.63%)</td>
<td>(2.82% - 3.50%)</td>
<td>(2.86% - 3.42%)</td>
<td>(3.10% - 3.64%)</td>
<td>(3.59% - 4.44%)</td>
<td>(2.99% - 5.16%)</td>
</tr>
<tr>
<td>Age 18-25</td>
<td>6.66%</td>
<td>(6.38% - 6.94%)</td>
<td>(6.38% - 7.45%)</td>
<td>(5.94% - 6.75%)</td>
<td>(5.93% - 6.88%)</td>
<td>(6.74% - 7.95%)</td>
<td>(4.85% - 7.63%)</td>
</tr>
<tr>
<td><strong>MENTAL HEALTH among persons aged 18 or older</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Any mental illness in past year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 12-17</td>
<td>19.69%</td>
<td>(19.28% - 20.12%)</td>
<td>(19.65% - 21.25%)</td>
<td>(19.69% - 20.93%)</td>
<td>(17.55% - 18.79%)</td>
<td>(20.13% - 21.91%)</td>
<td>(17.86% - 22.82%)</td>
</tr>
<tr>
<td>Age 18-25</td>
<td>18.11%</td>
<td>(17.80% - 18.55%)</td>
<td>(16.78% - 18.33%)</td>
<td>(17.62% - 18.90%)</td>
<td>(17.52% - 18.77%)</td>
<td>(17.88% - 19.43%)</td>
<td>(17.28% - 21.77%)</td>
</tr>
<tr>
<td>Serious mental illness in past year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 12-17</td>
<td>4.38%</td>
<td>(4.18% - 4.60%)</td>
<td>(4.10% - 4.88%)</td>
<td>(4.51% - 5.18%)</td>
<td>(3.77% - 4.32%)</td>
<td>(4.07% - 4.86%)</td>
<td>(3.57% - 5.60%)</td>
</tr>
</tbody>
</table>
| Source: 2012, 2013, and 2014 National Survey on Drug Use and Health (NSDUH), Substance Abuse and Mental Health Services Administration, Office of Applied Studies

+ All figures are percent prevalence rates; figures in parantheses are 95% confidence intervals
* Low precision; no estimate reported
<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>AGE GROUP</th>
<th>TOTAL U.S.</th>
<th>NORTHEAST</th>
<th>MIDWEST</th>
<th>SOUTH</th>
<th>WEST</th>
<th>NEW MEXICO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had at least one major depressive episode in past year*</td>
<td>Age 12-17</td>
<td>10.36%</td>
<td>(10.03% - 10.70%)</td>
<td>9.77%</td>
<td>(9.21% - 10.37%)</td>
<td>10.10%</td>
<td>(9.62% - 10.59%)</td>
</tr>
<tr>
<td></td>
<td>Age 18-25</td>
<td>8.97%</td>
<td>(8.66% - 9.20%)</td>
<td>9.19%</td>
<td>(8.62% - 9.79%)</td>
<td>9.38%</td>
<td>(8.87% - 9.85%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>6.32%</td>
<td>(6.09% - 6.55%)</td>
<td>6.17%</td>
<td>(5.75% - 6.62%)</td>
<td>6.40%</td>
<td>(6.07% - 6.75%)</td>
</tr>
<tr>
<td></td>
<td>Age 18+</td>
<td>9.71%</td>
<td>(9.51% - 9.91%)</td>
<td>8.66%</td>
<td>(8.22% - 9.19%)</td>
<td>8.83%</td>
<td>(8.43% - 9.24%)</td>
</tr>
<tr>
<td>Had serious thoughts of suicide in past year</td>
<td>Age 12-17</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>Age 18-25</td>
<td>7.37%</td>
<td>(7.11% - 7.64%)</td>
<td>7.52%</td>
<td>(7.00% - 8.03%)</td>
<td>7.78%</td>
<td>(7.37% - 8.22%)</td>
</tr>
<tr>
<td></td>
<td>Age 26+</td>
<td>3.32%</td>
<td>(3.15% - 3.49%)</td>
<td>3.21%</td>
<td>(2.92% - 3.53%)</td>
<td>3.40%</td>
<td>(3.15% - 3.67%)</td>
</tr>
<tr>
<td></td>
<td>Age 18+</td>
<td>3.91%</td>
<td>(3.76% - 4.06%)</td>
<td>3.83%</td>
<td>(3.56% - 4.11%)</td>
<td>4.04%</td>
<td>(3.62% - 4.28%)</td>
</tr>
</tbody>
</table>

* All figures are percent prevalence rates; figures in parantheses are 95% confidence intervals

** Low precision; no estimate reported

Source: 2012, 2013, and 2014 National Survey on Drug Use and Health (NSDUH), Substance Abuse and Mental Health Services Administration, Office of Applied Studies

Appendix 2A, 2B, 3A, & 3B. FOOTNOTES

1. Binge Alcohol Use is defined as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days.
2. Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.
3. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.
4. Average annual marijuana initiation rate = \( 100 \times \frac{1}{2} \times \frac{X_1}{0.5 \times X_1 + X_2} \), where \( X_1 \) is the number of marijuana initiates in the past 24 months and \( X_2 \) is the number of persons who never used marijuana.
5. Tobacco Products include cigarettes, smokeless tobacco (i.e., chewing tobacco or snuff), cigars, or pipe tobacco.
6. Dependence or abuse is based on definitions found in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.
7. Dependence or abuse is based on definitions found in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).
8. Needing But Not Receiving Treatment refers to respondents classified as needing treatment for illicit drugs, but not receiving treatment for an illicit drug problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], or mental health centers). Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.
9. Needing But Not Receiving Treatment refers to respondents classified as needing treatment for alcohol, but not receiving treatment for an alcohol problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], or mental health centers).
10. Any mental illness is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a substance use disorder, that met the criteria found in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), regardless of the level of impairment in carrying out major life activities.
11. Serious mental illness is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a substance use disorder, that met the criteria found in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and resulted in serious functional impairment in carrying out major life activities.
12. Major depressive episode (MDE) is defined as in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms.

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Appendix 4

International Classification of Diseases, Clinical Modification, 9th and 10th Edition
## Appendix 4: International Classification of Diseases, Clinical Modification, 9th and 10th Edition

### Opioid Overdose/Poisoning

<table>
<thead>
<tr>
<th>Description</th>
<th>ICD-9-CM</th>
<th>ICD-10-CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poisoning by opium (alkaloids), unspecified</td>
<td>965.00</td>
<td>T400 [X1-X4]</td>
</tr>
<tr>
<td>Poisoning by other opiates and related narcotics</td>
<td>965.09</td>
<td>T402 [X1-X4]</td>
</tr>
<tr>
<td>Accidental poisoning by other opiates and related narcotics</td>
<td>E850.2</td>
<td></td>
</tr>
<tr>
<td>Poisoning by methadone</td>
<td>965.02</td>
<td>T403 [X1-X4]</td>
</tr>
<tr>
<td>Accidental poisoning by methadone</td>
<td>E850.1</td>
<td></td>
</tr>
<tr>
<td>Poisoning by heroin</td>
<td>96.50</td>
<td>T401 [X1-X4]</td>
</tr>
<tr>
<td>Accidental poisoning by heroin</td>
<td>E850.0</td>
<td>T404 [X1-X4]</td>
</tr>
</tbody>
</table>

### Chronic Liver Disease

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute and subacute necrosis of liver</td>
<td>570.xx</td>
<td>Diseases of liver</td>
</tr>
<tr>
<td>Chronic liver disease and cirrhosis</td>
<td>571.xx</td>
<td></td>
</tr>
<tr>
<td>Liver abscess and sequelae of chronic liver disease</td>
<td>572.xx</td>
<td></td>
</tr>
<tr>
<td>Other disorders of liver</td>
<td>573.xx</td>
<td></td>
</tr>
</tbody>
</table>
Please add nets to the Rio Grande Gorge Bridge or make the railing higher and curve it in. These kind of deterrents might give folks pause before they try to jump off and/or would catch them if they did jump, so they could live to get the help they need. I wonder if you could install sensors on the nets, to alert emergency services that someone needed to be retrieved. Thank you for working to improve the situation so the Bridge is no longer a mecca for suicide.

With gratitude,

Liz Calvert
575-776-3136 (H)
575-770-3718 (M)
Dear Sir or Madam,

The heartbreaking number of suicides in Taos, including the deaths of two young men who were friends of mine or my children, and one young woman who was my friend, have, for years, unravelled the social fabric and undermined the happiness of Taosenos. Please do all you can to put nets in place under the gorge bridge to prevent more suicides. Taosenos - and the families and friends of those who have committed suicide from the bridge - have suffered far too long.

With deep appreciation for your efforts,

Michael Shorr

--

Michael Shorr
+1(575)779-9449
To whom it may concern,
We are writing to implore you to implement protective barriers and netting for the Rio Grande Gorge Bridge.

It is currently simply too easy to make a life-ending leap in one bad moment. We have lost far too many of our loved ones there, and the bridge has become a suicide destination for people from all over.

The barriers can be done economically as a one-time cost. It is beyond question worth doing, compared to the ongoing cost of human life, the cost to our community's morale, and grim, heartbreaking cost of searching and retrieving bodies.

We need to immediately invest the cost of netting and barriers, which have been proven effective around the world. It is a vital investment in the future of our community, especially our young people.
Thank you,
Laura Bulkin
Please add protective railing. We’ve lost too many lives to the impulse of suicide as the end of pain.

Sherry Young, PhD, CSAT
right fit CONSULTING
c. 575-779-6062
e. sherry.youngphd@gmail.com
I support suicide prevention deterrents to be installed at the Rio Grande Gorge Bridge in Taos, NM.

Tamara M. Trujillo  
Healthcare Outreach Specialist  
Health Care Assistance Program  
Phone (575) 737-6392  
Fax (575) 737-6439  
Email: tamara.trujillo@taoscounty.org
To Mr Bean and whom it may concern -

I would like to comment on the suicide deterrent system for the bridge. I feel it is imperative that some kind of structural solution be found as soon as possible. Already too many lives have been lost.

If the Golden Gate Bridge was able to come up with a feasible solution there's no reason we can't have one also. Even if it's only a temporary solution for a few years until a permanent one can be found, something needs to be done sooner than later.

I'm sure cost is an issue but I think there would be enough public support that a fundraiser might be considered and worth doing.

Personally I'd like to see something aesthetically compatible with the lovely Bridge itself. Rather than barriers, I would be in favor of some sort of netting beneath the bridge. I believe this would be a sufficient deterrent for most potential jumpers.

Please let me know what does the lines are being considered and how I might provide additional input on the recommendations.

Thank you for this opportunity to comment.

Sincerely,

Jim McBrayer
970-846-8364

1335 Paseo Del Pueblo Sur #309
Taos, New Mexico
87571
Dear NMDOT and HDR Engineering Inc.,

For Taos County residents suicide deterrence is at the forefront of any discussion surrounding the Rio Grande Gorge Bridge. Every few months we get a Taos News update about a body being found at the bottom of the gorge— We can no longer pretend that nothing is wrong and do nothing about this catastrophe. Hundreds of grieving community members have been desperately waiting for the NMDOT to move forward with their plans for new deterrence measures on the Rio Grande Gorge Bridge.

Here’s my opinion:

The time for action is now. If we’re willing to invest $15 million in painting for the “bridge preservation cost” we should also be willing to invest another $3.5 million for the safety of our community and those visiting us. Build the vertical railing alternative and reconsider the horizontal net alternative.

NMDOT, at the very least, should implement ADA compliant walkways for wheelchairs (including from the parking lot), make the guardrail higher, close rail openings that are too big for a small child to pass through, provide visual warnings where roadway and pedestrian walkways are, implement area lighting on the bridge and walkways, and create designated pedestrian crosswalks.

From a community member who was born in Taos, raised in Taos, attended school in Taos, has visited and crossed the Taos Rio Grande Gorge Bridge dozens, if not hundreds, the no-build option is NOT a viable alternative. Even as a young child I was visibly aware of how easy it was for someone to fall and plummet to their death off of the Gorge Bridge. As an adult I am even more aware what ease a suicide bridge grants community members and visitors in crisis.

In an interview with the Santa Fe New Mexican, Jim Fambro (former Volunteer Fire Fighter chief, current County Commissioner) said “Right now, it’s too easy. It’s easier than pulling a trigger. And at the bridge, you can’t change your mind.” Our families know this, our friends know this, and our community knows this.

The truth is that it is too easy to leap from the Gorge Bridge. No amount of “natural beauty” and preservation of a steel bridge will ever amount to the community value that those in our community deserve a second chance.

After the suicides of several of our local youth, two of them being my classmates, I attended several workshops surrounding mental health and the Taos community. Many community members have since pushed for initiatives to deter suicides. Beholden to money granted by the state we plead that NMDOT will help our community with another deterrent for those contemplating suicide.

We know statistically that bridge barriers and nets have effectively reduced suicide rates at...
bridges throughout U.S. and Europe. A study done by BMJ analyzed the impact of a suicide barrier on the Bloor Viaduct in Toronto, Canada. The study found that “suicide rates at the Bloor Street Viaduct declined from 9.0 deaths/year before the barrier to 0.1 deaths/year after the barrier” (Sinyor M, Schaffer A, Redelmeier DA, et al. 2017). Many other deterrents are planned for bridges throughout the U.S. and it is time for a deterrent at the Rio Grande Gorge Bridge.

When we implement the barrier, we should make it apparent that the "barrier is a sign that society cares about people contemplating suicide and provide information about high-quality mental health- care services available nearby” (Sinyor M, Schaffer A, Redelmeier DA, et al. 2017).

In hopes that NMDOT will do what Taos so desperately needs for the reassurance of our community,
Brayan Salinas
Please construct deterrents on the Rio Grande Gorge Bridge to stop the suicides!
Mary Emery

--
Mary Emery, Associate Broker
Century 21 Success, LLC
Taos, NM
Cell: 575/770-8382
Office: 575/758-0080 X-1330
Fax: 575/758-5677

2016 REALTOR OF THE YEAR, Taos County Association of Realtors
Director since 2014

Download my MOBILE APP! It synchs across all your devices!
https://homesforsale.century21.com/app/mary.emery@CENTURY21.com

Find me on:
Facebook - MarySellsTaos
LinkedIn - Mary Emery
Check out my Website
I support suicide deterrents at Rio Grande Gorge Bridge.

Tamara Trujillo
Arroyo Hondo, NM 87513
I am strongly in favor of higher railings at the gorge bridge. Please don’t ignore this horrific problem and chose to do nothing. We know it will only get worse if it doesn’t better.

Sent from my iPhone
Please put them up.
Help protect a struggling population.

Sincerely,

Marcus Curl
Please support the suicide deterrents outlined by the Rio Grande Gorge Bridge Safety Network. This is a community health issue and lives can be saved. The incidence of suicide at this bridge is increasing. It is not acceptable to not take steps to prevent these tragedies.

Thank you for your consideration.

Gail Moran, LCSW
Taos, NM
I am also sending my support for the suicide prevention technique's that you are considering to make our beautiful bridge more of a tourist destination instead of a suicide destinations. This is a huge concern for our entire community, the state and even internationally as there have been suicides from all over the world. It is critical that something is done sooner than later.

Thank you, K Carol Franzetti

Sent from my iPad
To Whom it may concern,

I am writing in support of a barrier built on the Rio Grande Gorge Bridge to prevent suicides. Evidence shows when people are delayed in their actions, they often change their minds. This is so important especially for our youth in Taos. Please support this effort.

Thank you,

Rasa Lila, ND  
SUNPATH Coordinator| Health Sciences

Office Phone: (575) 737-3731 | Cell Phone: (505) 363-9748 | Fax: (575)37-3646
UNM-Taos 1157 County Road 110, Ranchos de Taos, NM 87557
http://taos.unm.edu/home/sunpath/

NOTICE: If you are not the intended recipient of this message, please inform the sender.

"Seek out the seed of triumph in every adversity." Og Mandino
To whom it may concern:

I am writing to advocate for erecting deterrents at the Rio Grande Gorge Bridge to save lives. Our suicide rate is appalling and we need to move forward quickly and decisively to prevent the loss of lives. I have been to many gatherings and have witnessed the testimony of firefighters who risk their lives to bring up bodies and of mothers who have lost their children.

Please have the political will to invest in ensuring that the bridge ceases to be an easy and relatively attractive way to end a life. Make Taos known for its beauty and not a way to end life destination.

Thank you.

Judy Hofer
77 Sugar Lane
El Prado, NM 87529