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Detectable Warning. A standardized surface feature built in or applied to walking surfaces or other *elements* to warn of hazards on a *circulation path*.

Element. An architectural or mechanical component of a *building, facility, space, or site*.

Elevated Play Component. A *play component* that is approached above or below grade and that is part of a composite play structure consisting of two or more *play components* attached or functionally linked to create an integrated unit providing more than one play activity.

Employee Work Area. All or any portion of a *space* used only by employees and used only for work. Corridors, toilet rooms, kitchenettes and break rooms are not *employee work areas*.

Entrance. Any access point to a *building* or portion of a *building* or *facility* used for the purpose of entering. An *entrance* includes the approach *walk*, the vertical access leading to the *entrance* platform, the *entrance* platform itself, vestibule if provided, the entry door or gate, and the hardware of the entry door or gate.

Facility. All or any portion of *buildings, structures, site improvements, sidewalks, and parking areas* or *vehicular ways* located on a *site*.

Gangway. A variable-sloped pedestrian walkway that links a fixed structure or land with a floating structure. *Gangways* that connect to vessels are not addressed by this document.

Golf Car Passage. A continuous passage on which a motorized golf car can operate.

Ground Level Play Component. A *play component* that is approached and exited at the ground level.

Key Station. Rapid and light rail stations, and commuter rail stations, as defined under criteria established by the Department of Transportation in 49 CFR 37.47 and 49 CFR 37.51, respectively.

Mail Boxes. Receptacles for the receipt of documents, packages, or other deliverable matter. *Mail boxes* include, but are not limited to, post office boxes and receptacles provided by commercial mail-receiving agencies, apartment *facilities*, or schools.

Marked Crossing. A crosswalk or other identified path intended for pedestrian use in crossing a *vehicular way*.

Mezzanine. An intermediate level or levels between the floor and ceiling of any *story* with an aggregate floor area of not more than one-third of the area of the room or *space* in which the level or levels are located. *Mezzanines* have sufficient elevation that *space* for human occupancy can be provided on the floor below.

Occupant Load. The number of persons for which the means of egress of a *building* or portion of a *building* is designed.

Operable Part. A component of an *element* used to insert or withdraw objects, or to activate, deactivate, or adjust the *element*.

Pictogram. A pictorial symbol that represents activities, *facilities*, or concepts.

Play Area. A portion of a *site* containing *play components* designed and constructed for children.

Play Component. An *element* intended to generate specific opportunities for play, socialization, or learning. *Play components* are manufactured or natural; and are stand-alone or part of a composite play structure.

Private Building or Facility. A place of public accommodation or a commercial *building* or *facility* subject to title III of the ADA and 28 CFR part 36 or a transportation *building* or *facility* subject to title III of the ADA and 49 CFR 37.45.

Public Building or Facility. A *building* or *facility* or portion of a *building* or *facility* designed, constructed, or *altered* by, on behalf of, or for the use of a public entity subject to title II of the ADA and 28 CFR part 35 or to title II of the ADA and 49 CFR 37.41 or 37.43.

Public Entrance. An *entrance* that is not a *service entrance* or a *restricted entrance*.

Public Use. Interior or exterior rooms, *spaces*, or *elements* that are made available to the public. *Public use* may be provided at a *building* or *facility* that is privately or publicly owned.

Public Way. Any street, alley or other parcel of land open to the outside air leading to a public street, which has been deeded, dedicated or otherwise permanently appropriated to the public for *public use* and which has a clear width and height of not less than 10 feet (3050 mm).

Qualified Historic Building or Facility. A *building* or *facility* that is listed in the National Register of Historic Places, or designated as historic under an historic preservation law.

Ramp. A walking surface that has a *running slope* steeper than 1:20.

Residential Dwelling Unit. A unit intended to be used as a residence, that is primarily long-term in nature. *Residential dwelling units* do not include *transient lodging*, inpatient medical care, licensed long-term care, and detention or correctional *facilities*.

Restricted Entrance. An *entrance* that is made available for *common use* on a controlled basis but not *public use* and that is not a *service entrance*.

Running Slope. The slope that is parallel to the direction of travel (see *cross slope*).

Self-Service Storage. *Building* or *facility* designed and used for the purpose of renting or leasing individual storage *spaces* to customers for the purpose of storing and removing personal property on a self-service basis.

Service Entrance. An *entrance* intended primarily for delivery of goods or services.

Site. A parcel of land bounded by a property line or a designated portion of a public right-of-way.

Advisory 202.4 Alterations Affecting Primary Function Areas (Continued). Also, mixed use facilities may include numerous primary function areas for each use. Areas containing a primary function do not include: mechanical rooms, boiler rooms, supply storage rooms, employee lounges or locker rooms, janitorial closets, entrances, corridors, or restrooms.

202.5 Alterations to Qualified Historic Buildings and Facilities. *Alterations to a qualified historic building or facility shall comply with 202.3 and 202.4.*

EXCEPTION: Where the State Historic Preservation Officer or Advisory Council on Historic Preservation determines that compliance with the requirements for *accessible routes, entrances, or toilet facilities* would threaten or destroy the historic significance of the *building or facility*, the exceptions for *alterations to qualified historic buildings or facilities* for that *element* shall be permitted to apply.

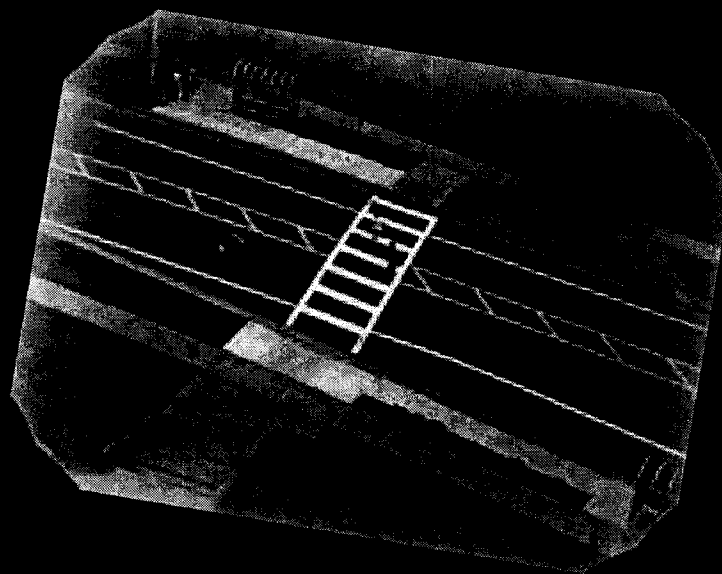
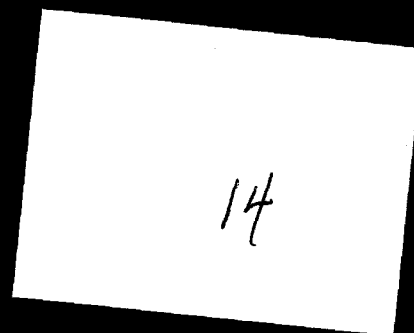
Advisory 202.5 Alterations to Qualified Historic Buildings and Facilities Exception. State Historic Preservation Officers are State appointed officials who carry out certain responsibilities under the National Historic Preservation Act. State Historic Preservation Officers consult with Federal and State agencies, local governments, and private entities on providing access and protecting significant elements of qualified historic buildings and facilities. There are exceptions for alterations to qualified historic buildings and facilities for accessible routes (206.2.1 Exception 1 and 206.2.3 Exception 7); entrances (206.4 Exception 2); and toilet facilities (213.2 Exception 2). When an entity believes that compliance with the requirements for any of these elements would threaten or destroy the historic significance of the building or facility, the entity should consult with the State Historic Preservation Officer. If the State Historic Preservation Officer agrees that compliance with the requirements for a specific element would threaten or destroy the historic significance of the building or facility, use of the exception is permitted. Public entities have an additional obligation to achieve program accessibility under the Department of Justice ADA regulations. See 28 CFR 35.150. These regulations require public entities that operate historic preservation programs to give priority to methods that provide physical access to individuals with disabilities. If alterations to a qualified historic building or facility to achieve program accessibility would threaten or destroy the historic significance of the building or facility, fundamentally alter the program, or result in undue financial or administrative burdens, the Department of Justice ADA regulations allow alternative methods to be used to achieve program accessibility. In the case of historic preservation programs, such as an historic house museum, alternative methods include using audio-visual materials to depict portions of the house that cannot otherwise be made accessible. In the case of other qualified historic properties, such as an historic government office building, alternative methods include relocating programs and services to accessible locations. The Department of Justice ADA regulations also allow public entities to use alternative methods when altering qualified historic buildings or facilities in the rare situations where the State Historic Preservation Officer determines that it is not feasible to provide physical access using the exceptions permitted in Section 202.5 without threatening or destroying the historic significance of the building or facility. See 28 CFR 35.151(d).

Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations

Final Report and Recommended Guidelines

FHWA PUBLICATION NUMBER: HRT-04-100

SEPTEMBER 2005



U.S. Department of Transportation
Federal Highway Administration

Research, Development, and Technology
Turner-Fairbank Highway Research Center
6300 Georgetown Pike
McLean, VA 22101-2296



Pedestrian and Bicycle Safety

Exhibit "14"

1. Report No. FHWA-HRT-04-100	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Safety Effects of Marked versus Unmarked Crosswalks at Uncontrolled Locations: Final Report and Recommended Guidelines		5. Report Date August 2005	
		6. Performing Organization Code	
7. Author(s): Charles V. Zegeer, J. Richard Stewart, Herman H. Huang, Peter A. Lagerwey, John Feaganes, and B.J. Campbell		8. Performing Organization Report No.	
9. Performing Organization Name and Address University of North Carolina Highway Safety Research Center 730 Airport Rd., CB # 3430 Chapel Hill, NC 27599-3430		10. Work Unit No. (TRAIS)	
		11. Contract or Grant No. DTFH61-92-C-00138	
12. Sponsoring Agency Name and Address Office of Safety Research and Development Federal Highway Administration 6300 Georgetown Pike McLean, VA 22101-2296		13. Type of Report and Period Covered Final Report: October 1996-March 2001	
		14. Sponsoring Agency Code	
15. Supplementary Notes This report is part of a larger study for FHWA entitled "Evaluation of Pedestrian Facilities." FHWA Contracting Officer's Technical Representatives (COTRs): Carol Tan and Ann Do, HRDS.			
16. Abstract Pedestrians are legitimate users of the transportation system, and they should, therefore, be able to use this system safely. Pedestrian needs in crossing streets should be identified, and appropriate solutions should be selected to improve pedestrian safety and access. Deciding where to mark crosswalks is only one consideration in meeting that objective. The purpose of this study was to determine whether marked crosswalks at uncontrolled locations are safer than unmarked crosswalks under various traffic and roadway conditions. Another objective was to provide recommendations on how to provide safer crossings for pedestrians. This study involved an analysis of 5 years of pedestrian crashes at 1,000 marked crosswalks and 1,000 matched unmarked comparison sites. All sites in this study had no traffic signal or stop sign on the approaches. Detailed data were collected on traffic volume, pedestrian exposure, number of lanes, median type, speed limit, and other site variables. Poisson and negative binomial regressive models were used. The study results revealed that on two-lane roads, the presence of a marked crosswalk alone at an uncontrolled location was associated with no difference in pedestrian crash rate, compared to an unmarked crosswalk. Further, on multilane roads with traffic volumes above about 12,000 vehicles per day, having a marked crosswalk alone (without other substantial improvements) was associated with a higher pedestrian crash rate (after controlling for other site factors) compared to an unmarked crosswalk. Raised medians provided significantly lower pedestrian crash rates on multilane roads, compared to roads with no raised median. Older pedestrians had crash rates that were high relative to their crossing exposure. More substantial improvements were recommended to provide for safer pedestrian crossings on certain roads, such as adding traffic signals with pedestrian signals when warranted, providing raised medians, speed-reducing measures, and others.			
17. Key Words Marked crosswalk, safety, pedestrian crashes		18. Distribution Statement No restrictions. This document is available to the public through the National Technical Information Service, Springfield, VA 22161.	
19. Security Classification (of this report) Unclassified	20. Security Classification (of this page) Unclassified	21. No. of Pages 112	22. Price



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REPORT

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[Federal Highway Administration](#) > [Publications](#) > [Research Publications](#) > [Safety](#) > [04100](#) > Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations Final Report and Recommended Guidelines

Publication Number: FHWA-HRT-04-100

Date: September 2005

Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations Final Report and Recommended Guidelines

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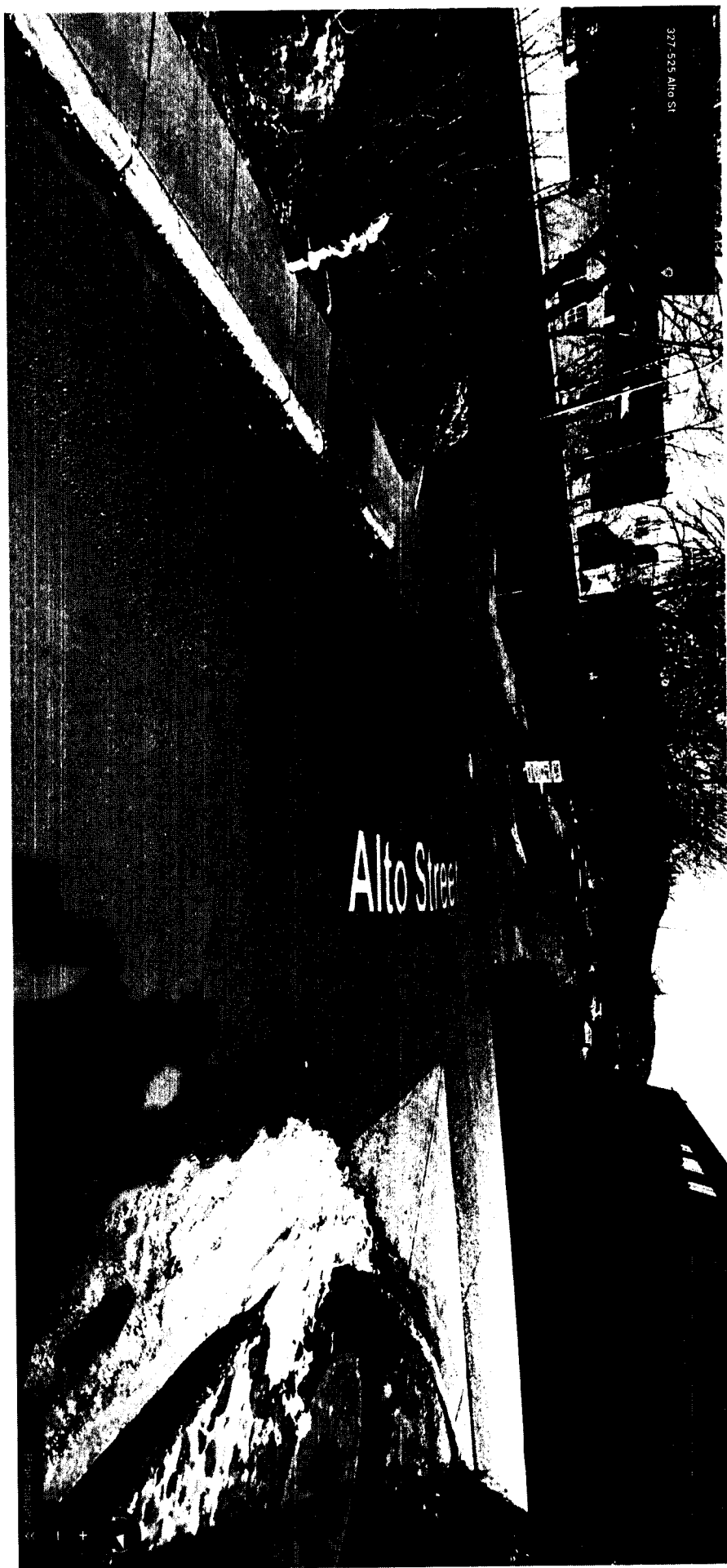
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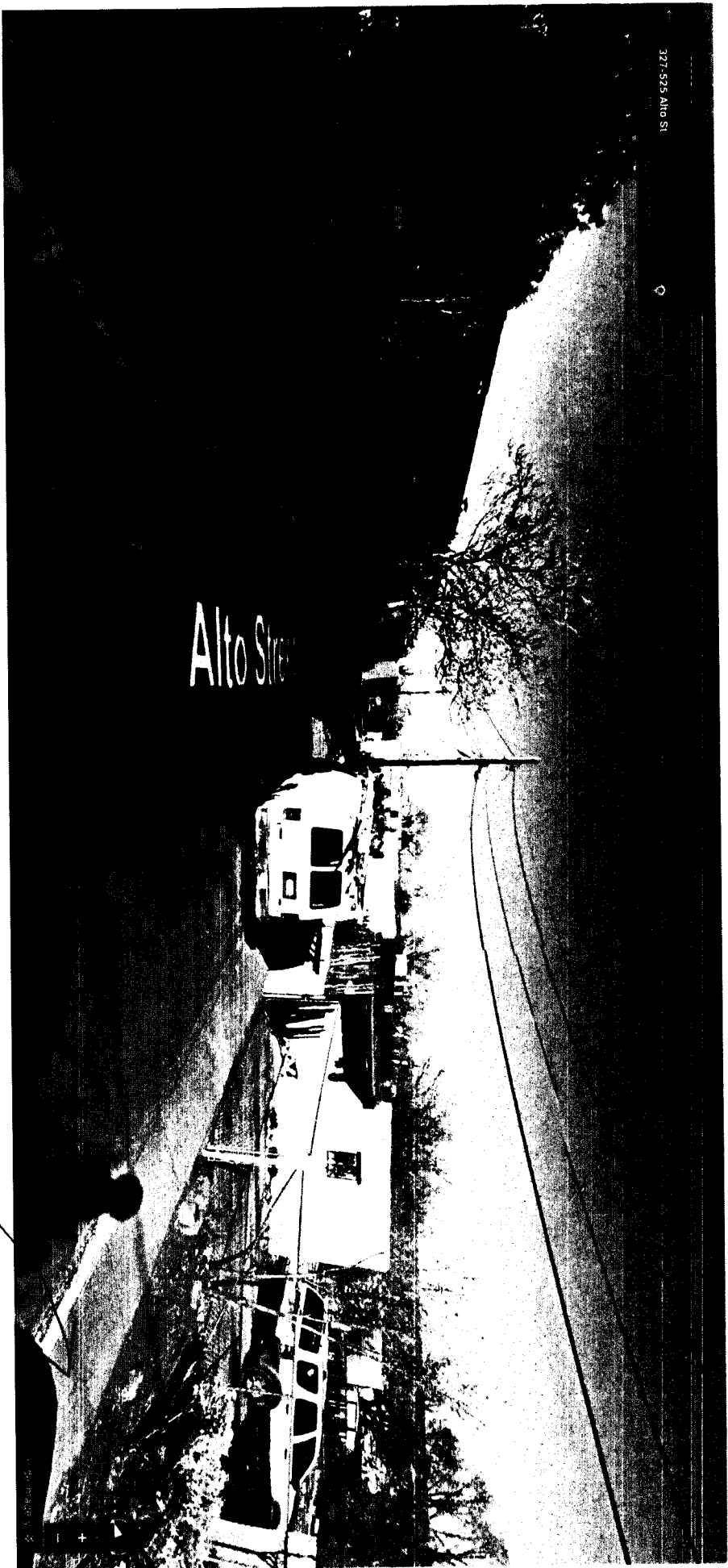
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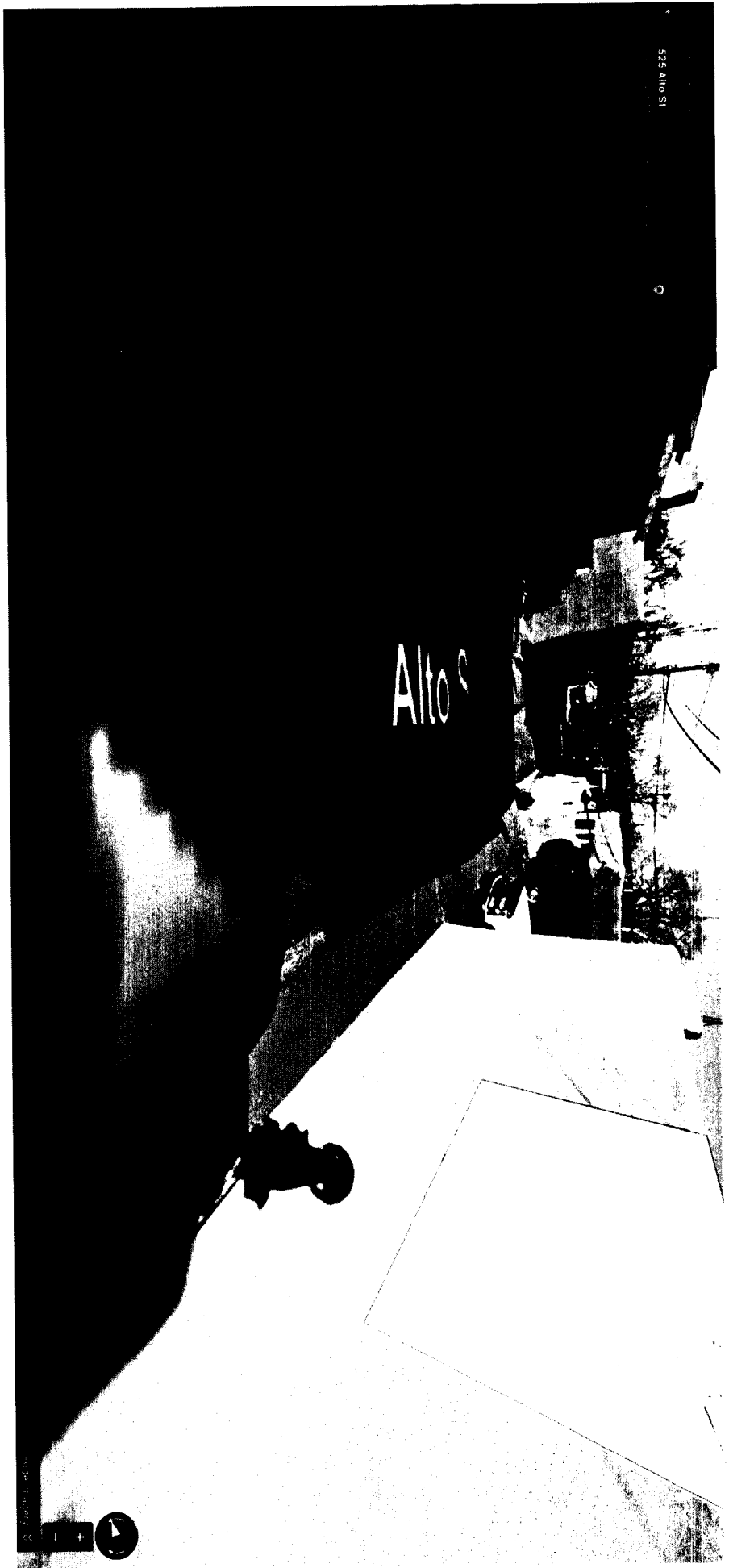


327-525 Alto St



327-523 Alto St

proposed bike bridge on
empty city lot.



525 Alto SI

Alto

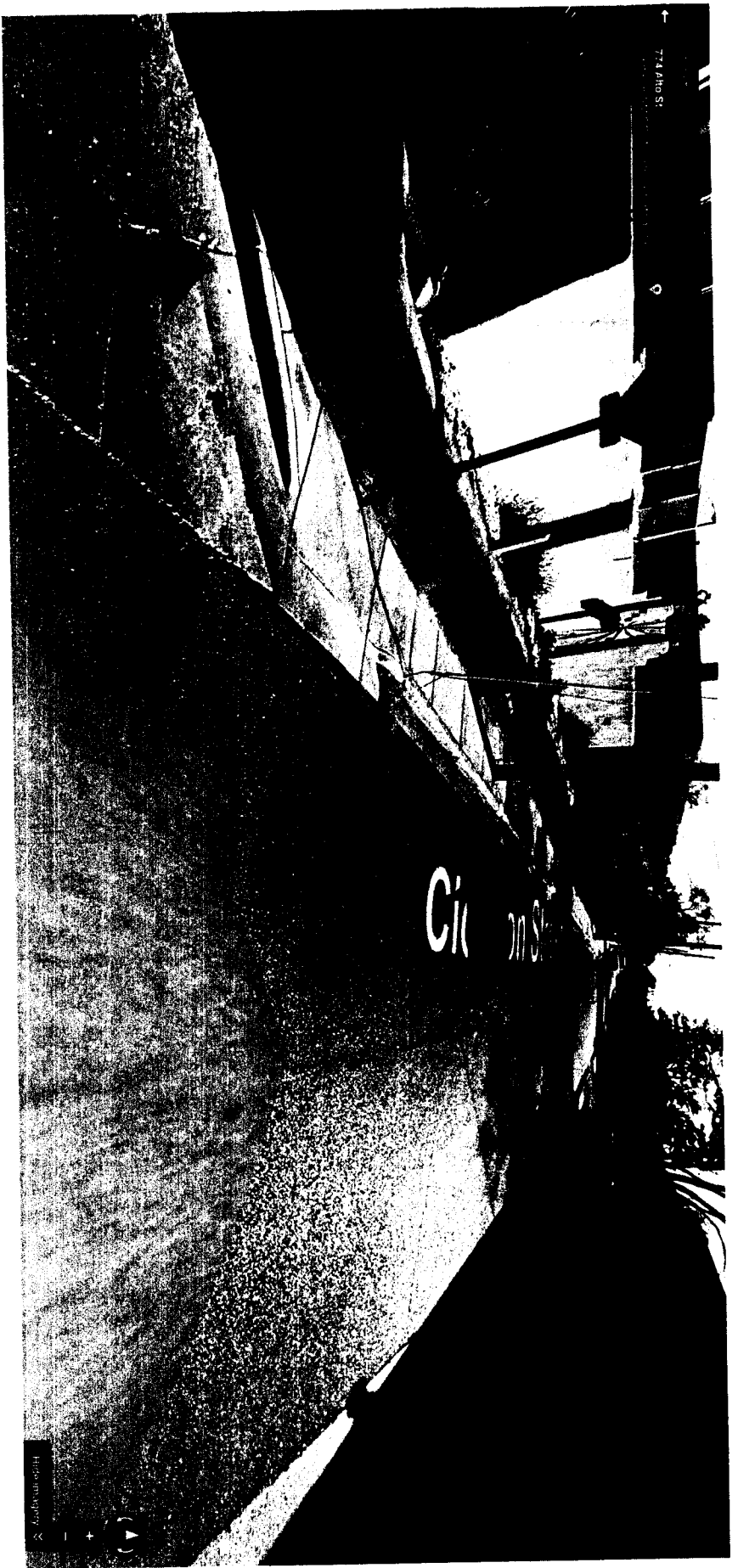
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PUBLIC INFORMATION MEETING

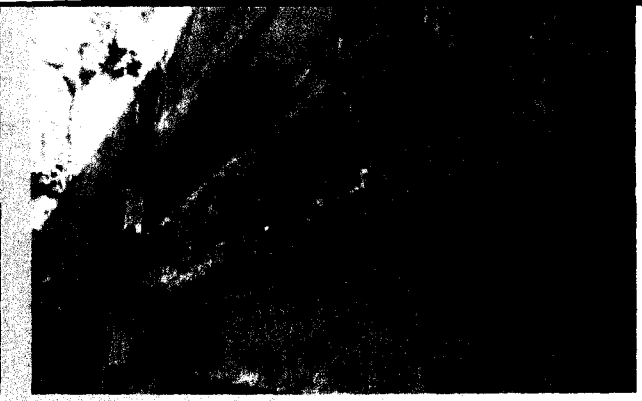
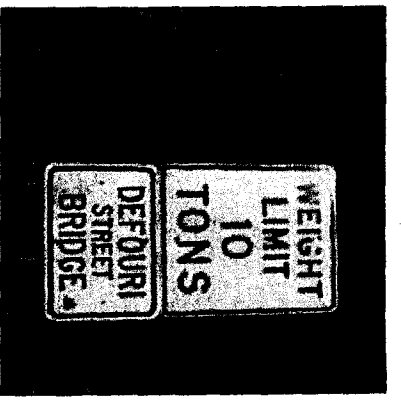
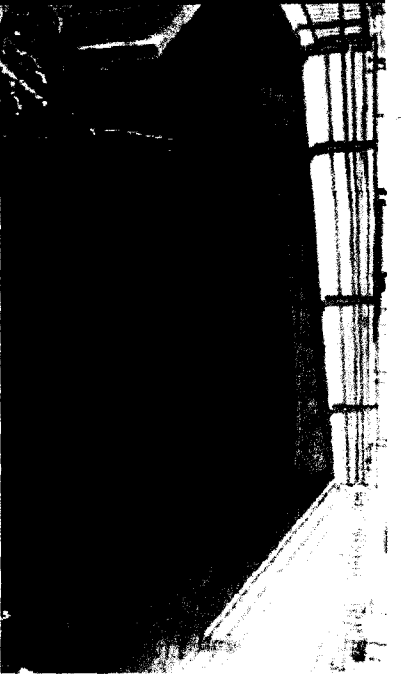
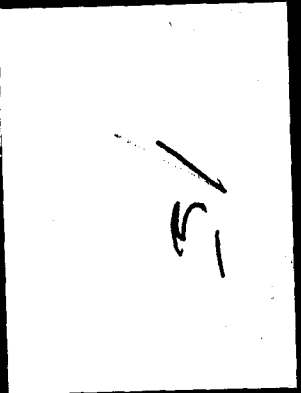
DEFOURI AND GUADALUPE STREET BRIDGES PROJECT

Project # MHP-7549 (S01)
Contract # 1560026

January 31, 2013



THE Louis Berger Group, INC.





THE Louis Berger Group, Inc.

DEFOURI ST / GUADALUPE STREET BRIDGES PROJECT

Project Team Introductions

- City of Santa Fe
Desirae Lujan
- The Louis Berger Group, Inc.
Richard Rotto, P.E.
Ivan Trujillo
- Parametrix
Devin Kennemore



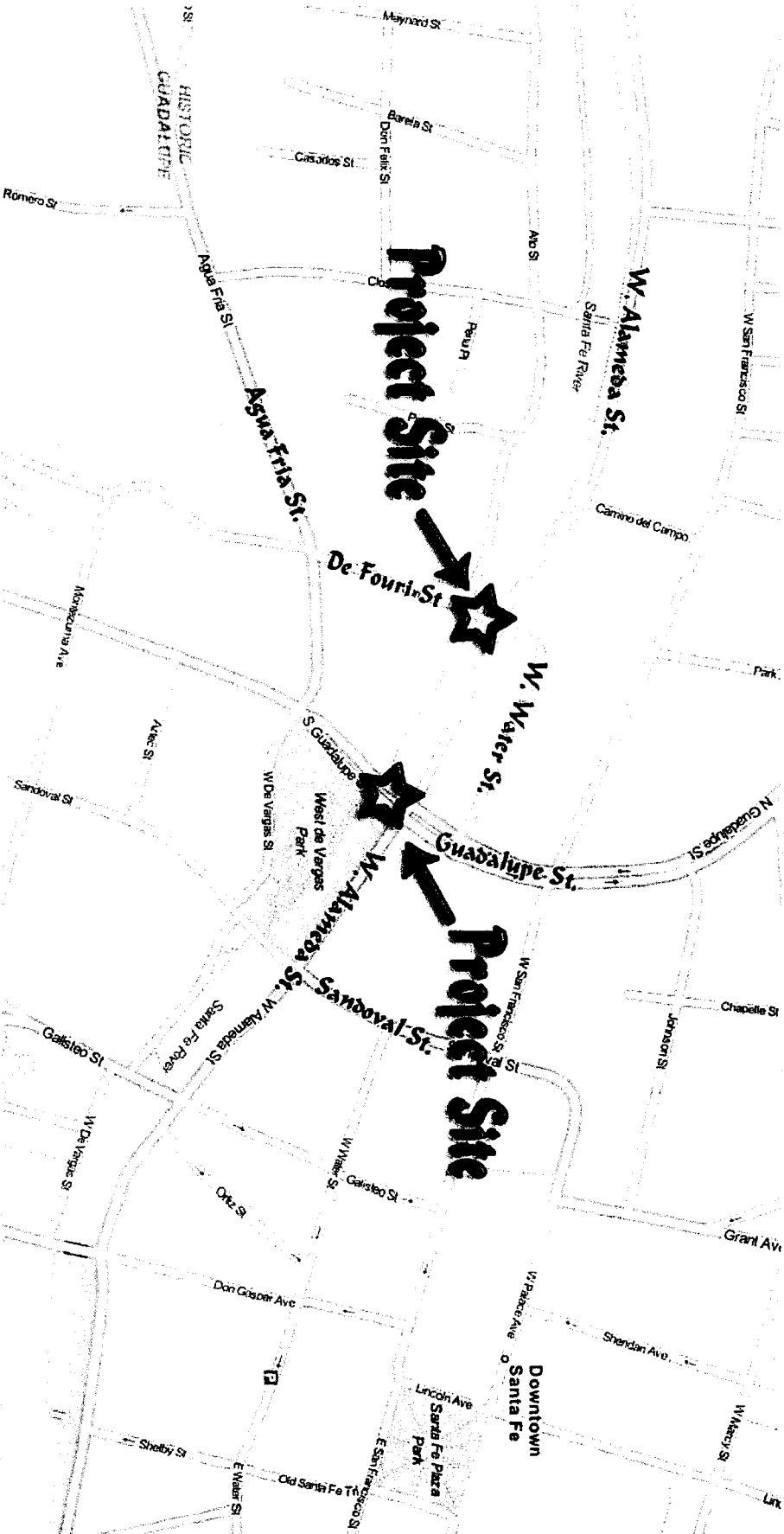
MAP 7



THE Louis Berger Group, INC.

DEFOURI ST / GUADALUPE STREET BRIDGES PROJECT

Introduction



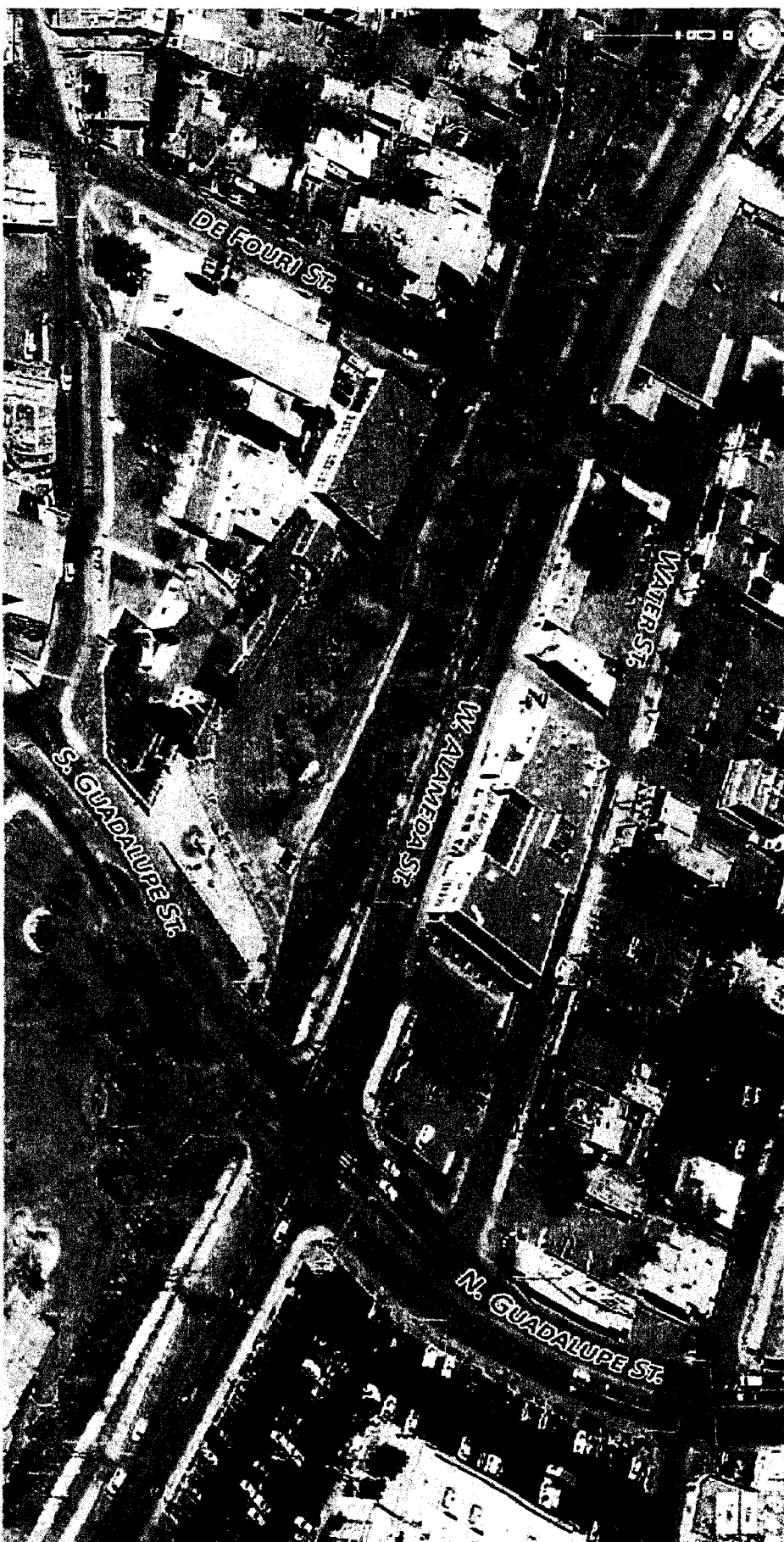
DEFOURI AND GUADALUPE STREET BRIDGES PROJECT

PROJECT # MAP-7649(901), Control No: 1500056



THE Louis Berger Group, INC.

DEFOURI ST / GUADALUPE STREET BRIDGES PROJECT



DEFOURI AND GUADALUPE STREET BRIDGES PROJECT

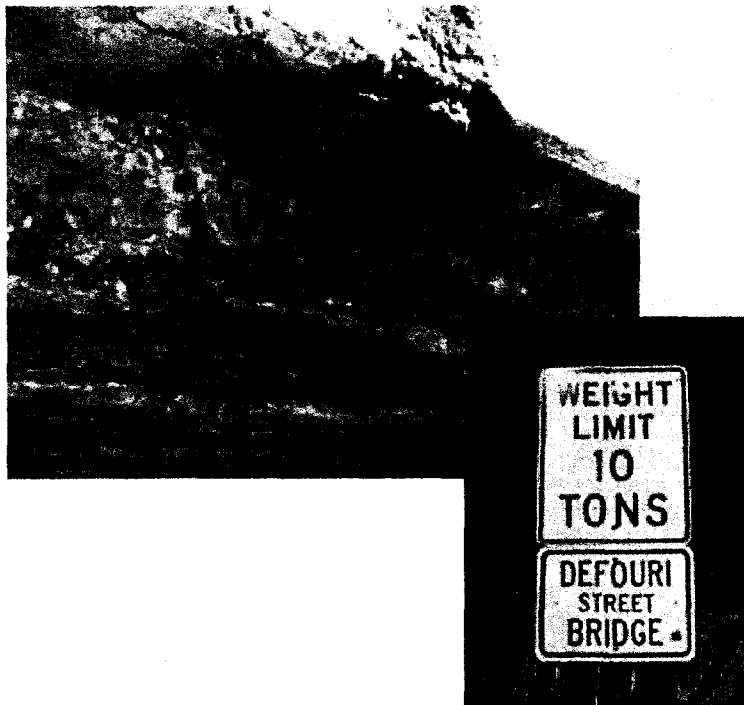
PROJECT # MAP-7649(901), Control No: L500056



THE Louis Berger Group, INC.

PURPOSE OF THE PROJECT

- City proposes improvement to the Defouri Street and Guadalupe Street Bridges to address structural deficiencies in the two bridges.

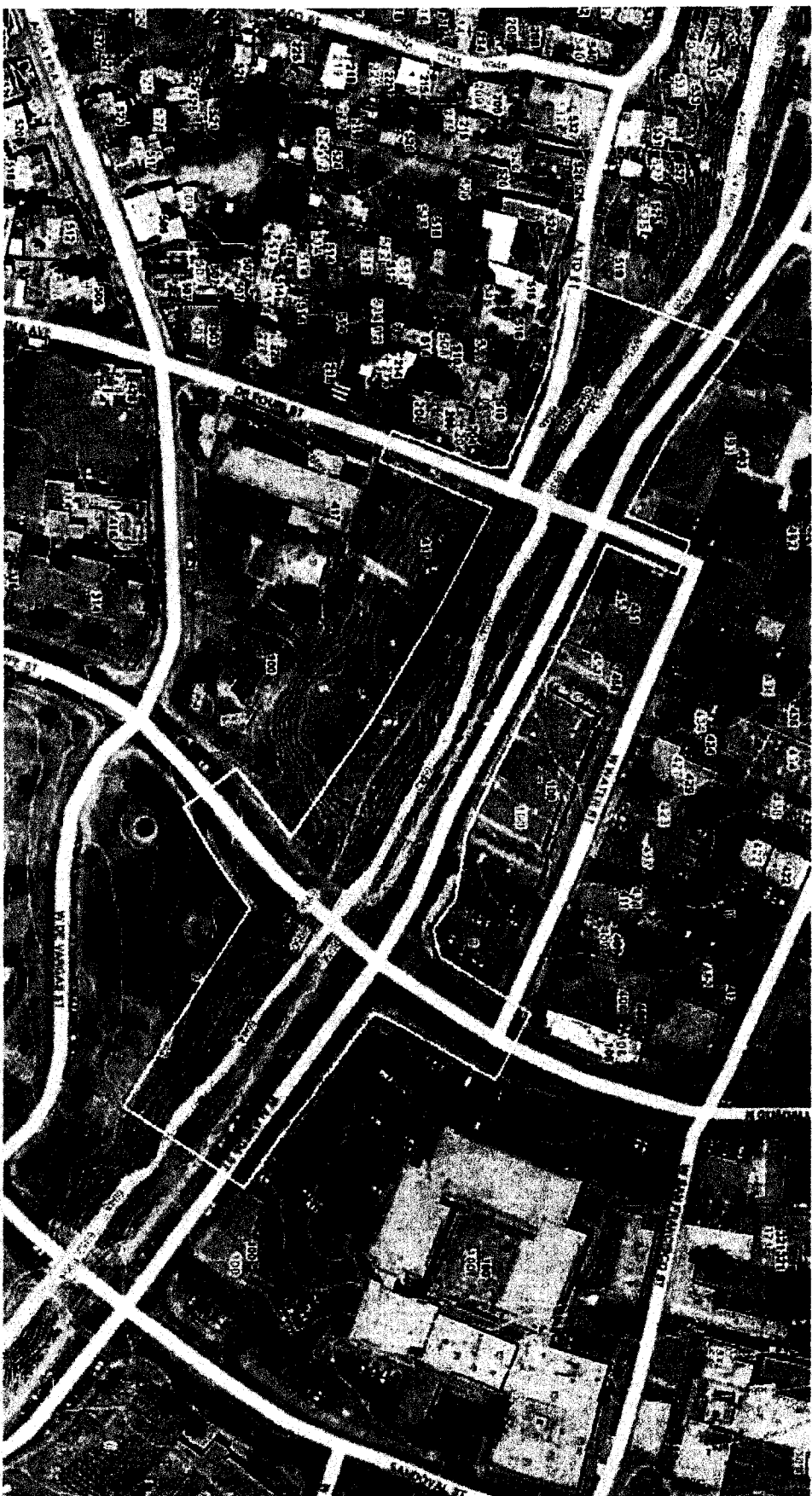




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THE LOUIS BERGER GROUP, INC.

ENVIRONMENTAL STUDY AREA



DEFOURI AND GUADALUPE STREET BRIDGES PROJECT

PROJECT #MAP-7649(901), Control No: 1500056



THE Louis Berger Group, INC.

PROJECT OBJECTIVES & PROPOSED IMPROVEMENTS

- Common objectives for both bridges
 - Conduct environmental studies and clearances
- Defouri Street Bridge objective
 - Replace bridge
 - Consider planned trail connectivity
- Guadalupe Street Bridge objective
 - Develop interim maintenance options
 - Prepare for future deck replacement
- Funding is limited; therefore, the primary focus is the Defouri Street Bridge

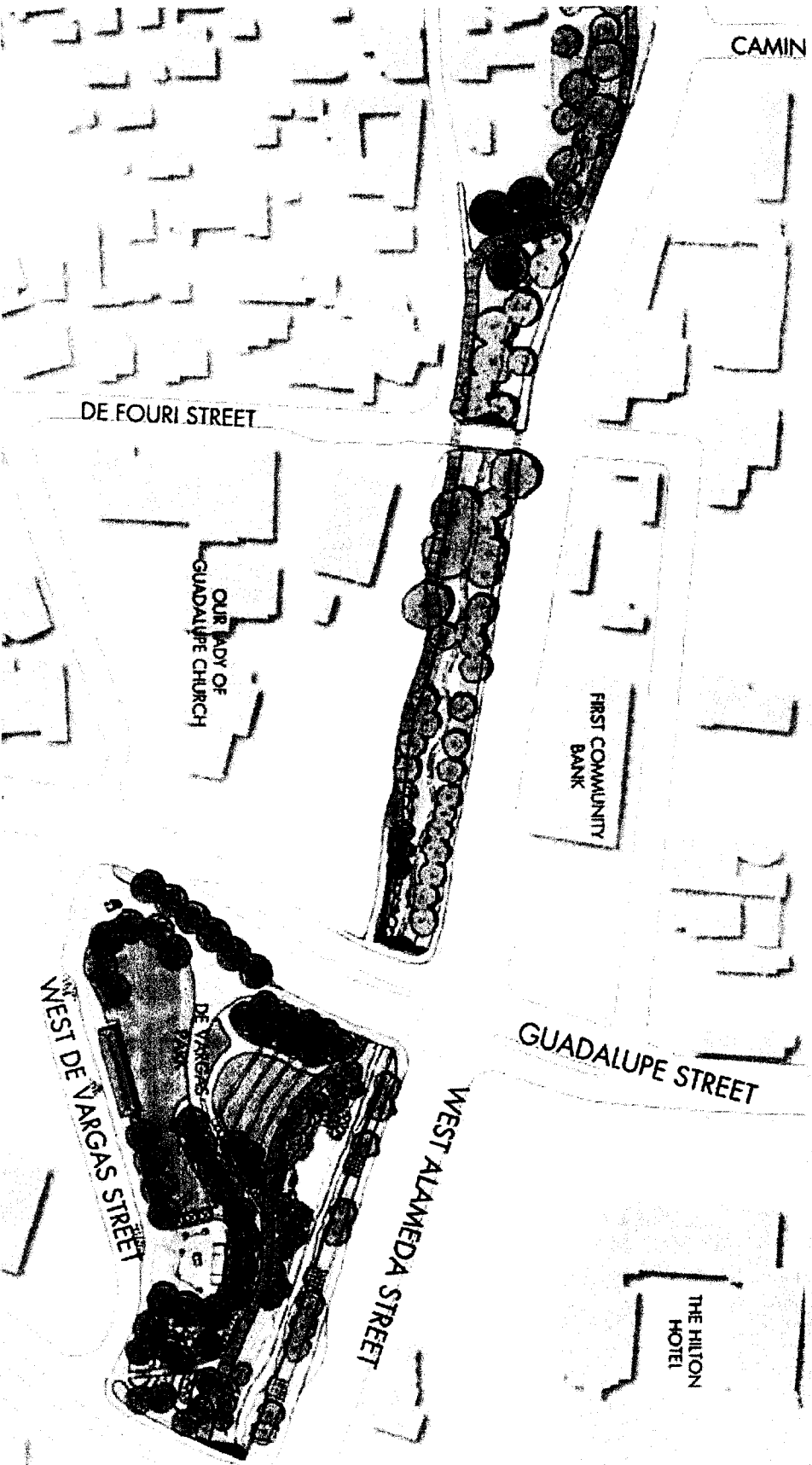


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EL PARQUE DEL RIO MASTER PLAN

Conceptual Trail Layout at Defour Street and Guadalupe Street



DEFOUR AND GUADALUPE STREET BRIDGES PROJECT

PROJECT # MAP-7649(901), Control No. L500056



THE Louis Berger Group, INC.

WORK COMPLETED TO DATE

- Topographic survey
- Subsurface utility designation
- Biological resource survey
- Cultural resource survey
- Guadalupe Street Bridge deck cores sampling & testing
- Defouri Street Bridge foundation investigations field work (partial)
- Obtained FEMA floodplain model for the Santa Fe River



BIOLOGICAL RESOURCES

Preliminary findings suggest:

- Some tree and shrub cutting or removal may be necessary
- Cottonwood and Russian olive trees, rubber rabbitbrush and coyote willow could be affected
- Small amount of habitat permanently lost is abundant along the project corridor and would have an overall negligible effects on wildlife
- Small amount of nesting habitat for some migratory birds exists. Re-growth of vegetation loss would eliminate this effect in long-term.
- No protected species were observed



CULTURAL RESOURCES

Records check of project area reflects:

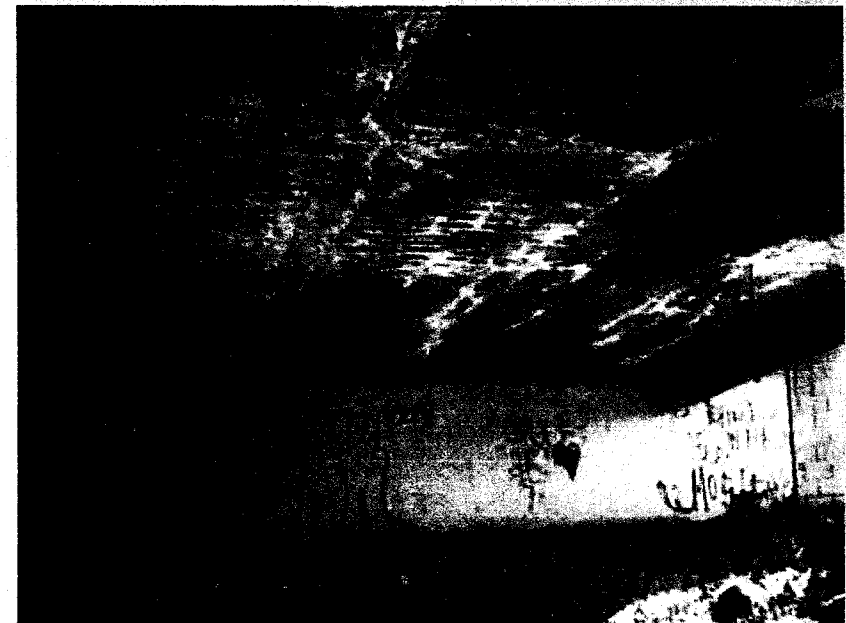
- Old Firestone Building on West Alameda
- Artifacts and wall, well and water control device features were present on north side of West Alameda and adjacent to Santa Fe River
- Recommended all subsurface ground disturbing activities be monitored, except work in the incised channel of the Santa Fe River, such as the pier at the Defouri Bridge
- No surface archaeology observed during reconnaissance
- Substructure of Defouri Bridge was constructed in 1930s; the bridge appears to lack architectural integrity since the deck was replaced in 1959



GUADALUPE STREET BRIDGE

Overview

- Built/Reconstructed in 1969
- Existing Foundations – spread footing
- Existing Deck – rigid concrete frame with parabolic arch
- 2011 NMDOT Bridge Inspection Report:
 - “Structurally Deficient”
 - Deck condition is “Poor” – 70% deterioration, severe efflorescence and leeching
 - Substructure condition is “Good”
 - Acceptable load rating – 20 ton truck inventory load rating
 - Recommendation - “Replace deck”





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GUADALUPE STREET BRIDGE

Deck Evaluation

- Concrete samples taken from the deck
- Concrete samples taken from the walls
- Evaluate concrete strength
- Evaluate concrete condition





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GUADALUPE STREET BRIDGE

Deck Evaluation

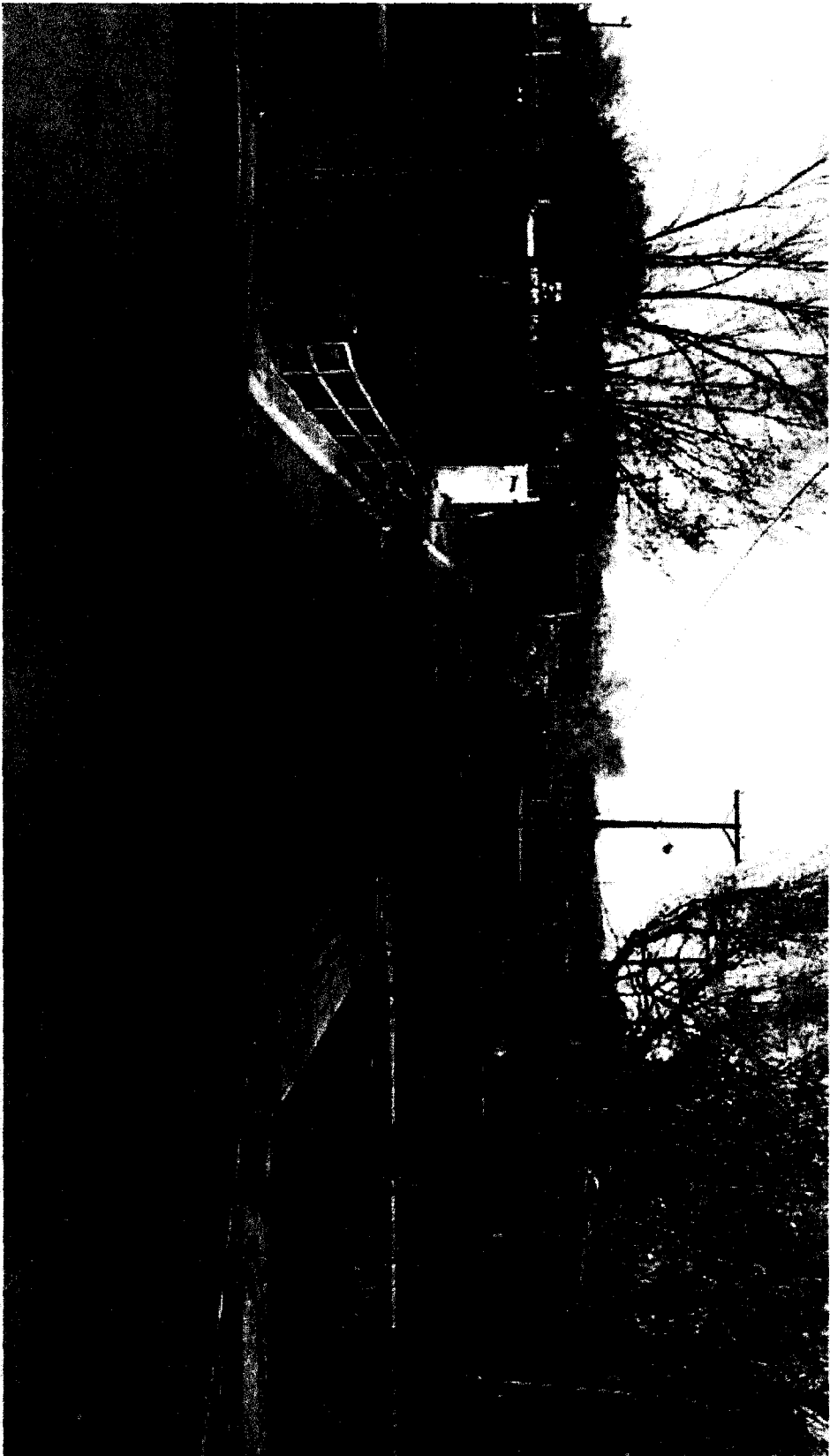
Preliminary findings suggest...

- Concrete strengths have increased over time
- No significant rusting of steel reinforcement
- No evidence of significant internal cracking or corrosion
- No evidence of freeze-thaw damage
- Moisture is migrate through the deck, but is able to escape



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DEFOURI STREET BRIDGE



DEFOURI AND GUADALUPE STREET BRIDGES PROJECT

PROJECT # MAP-7649(901), Control No: 1500056



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DEFOURI STREET BRIDGE

Overview

- Built/Reconstructed in 1959
- Existing Foundations - Rock Masonry
- Existing Deck – Concrete Channel Beams (replaced timber deck in 1959)
- 2011 NMDOT Bridge Inspection Report:
 - “Structurally Deficient”
 - Deck, beam & foundation Condition is “Poor”
 - Rated and posted for a 9 ton weight limit
 - Substandard bridge railing & sidewalks
 - Recommendation - “City should replace bridge”

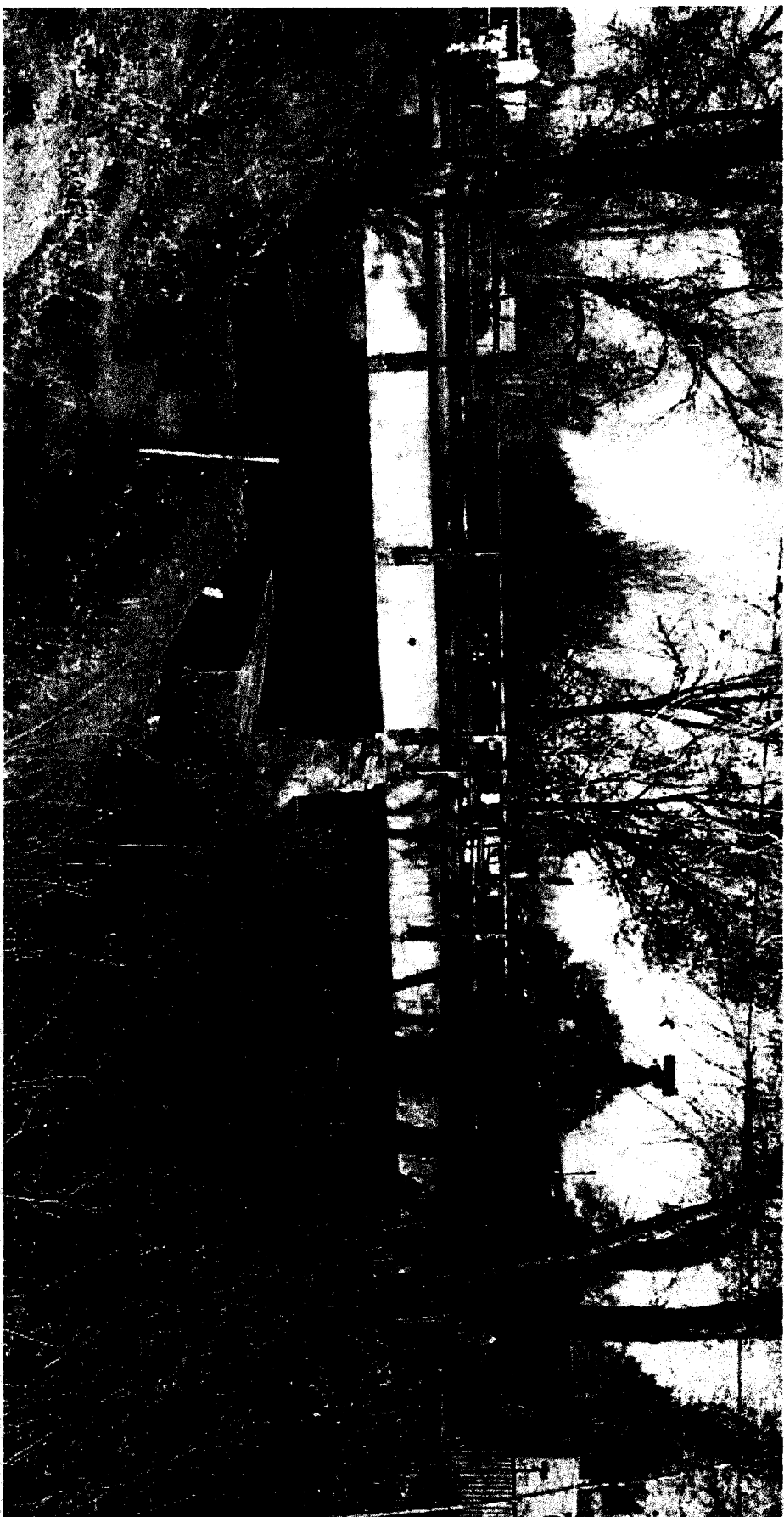




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DEFOURI STREET BRIDGE

East Face of Bridge Looking Downstream



DEFOURI AND GUADALUPE STREET BRIDGES PROJECT

PROJECT # MAP-7649(901), Control No: L500056

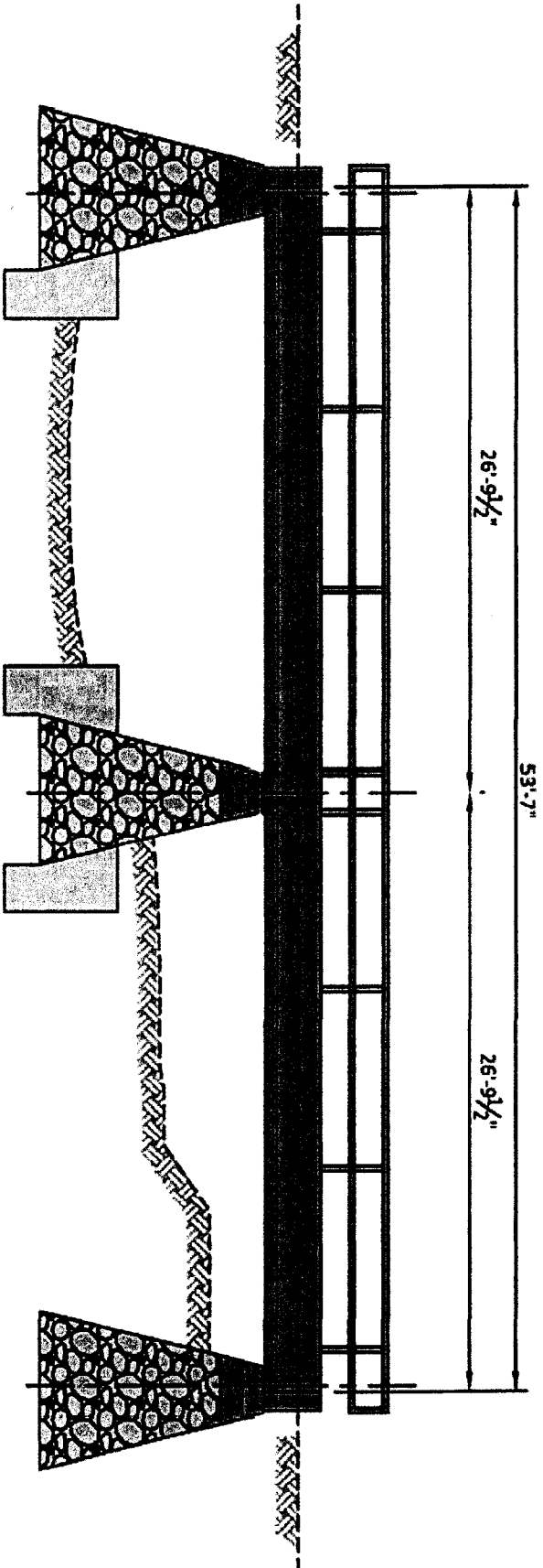


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EXISTING TWO-SPAN BRIDGE



DEFOURI AND GUADALUPE STREET BRIDGES PROJECT

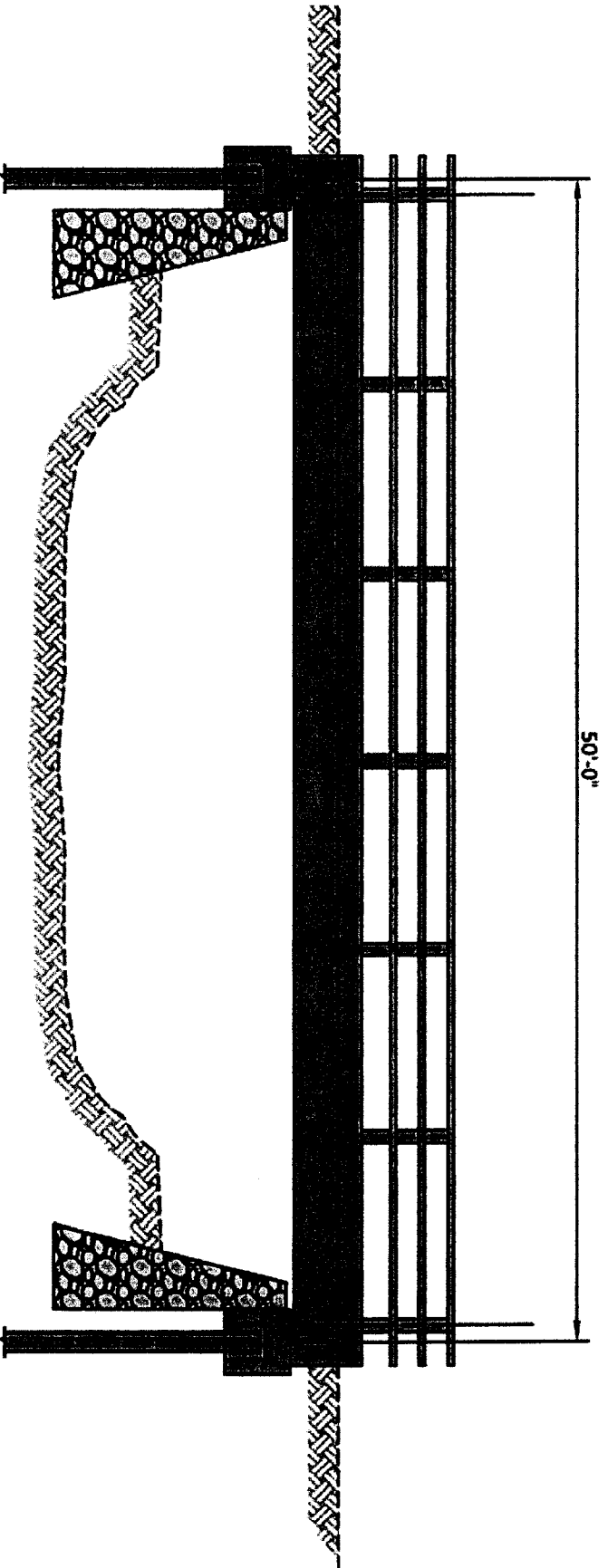
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PROPOSED SINGLE SPAN BRIDGE

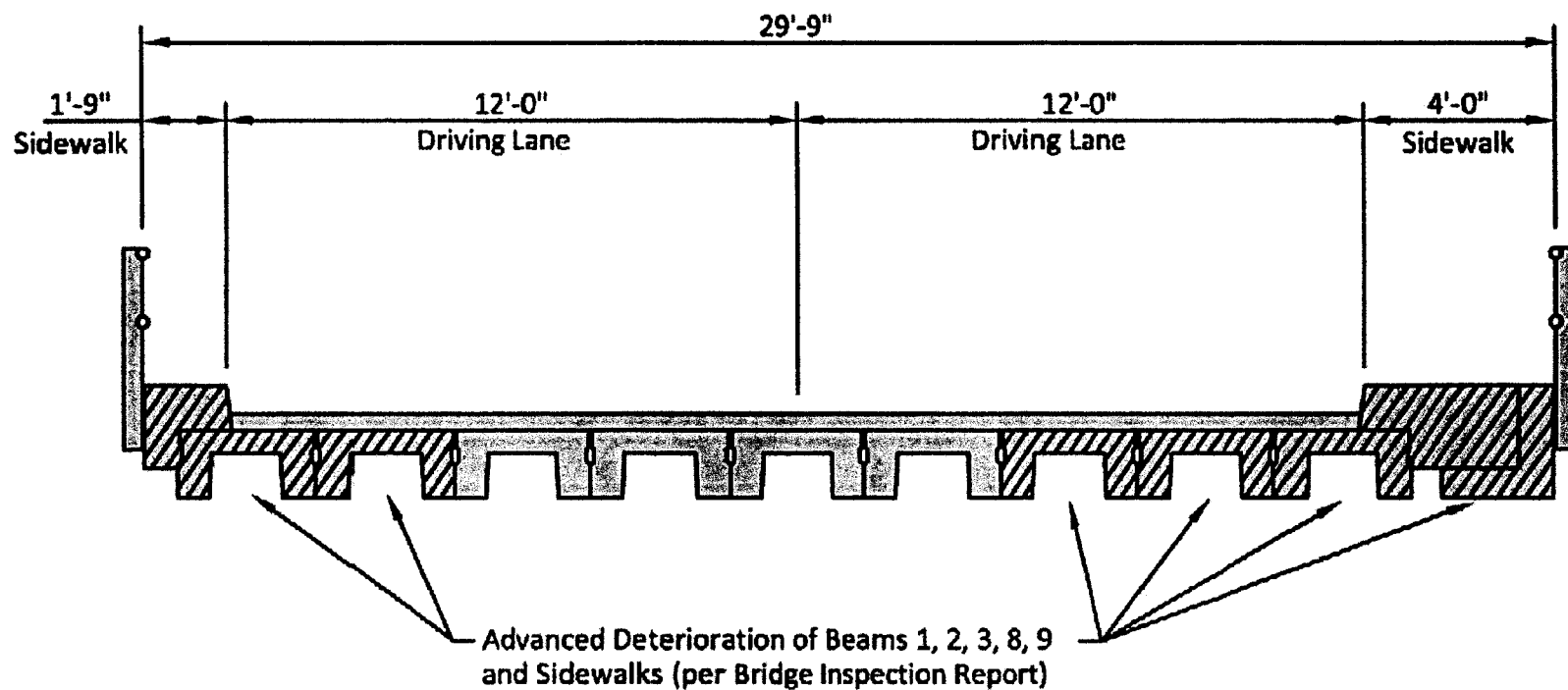
Structure Type To Be Determined





THE Louis Berger Group, INC.

EXISTING BRIDGE SECTION

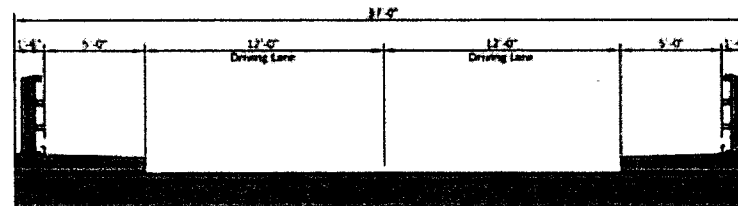




PROPOSED ALTERNATIVES

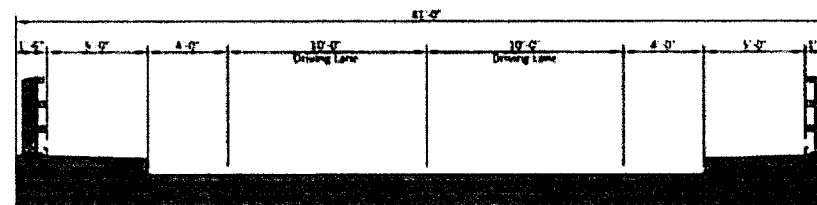
Bridge Width Considerations

- **Concept 1**
12' lanes
No shoulders
5' sidewalks



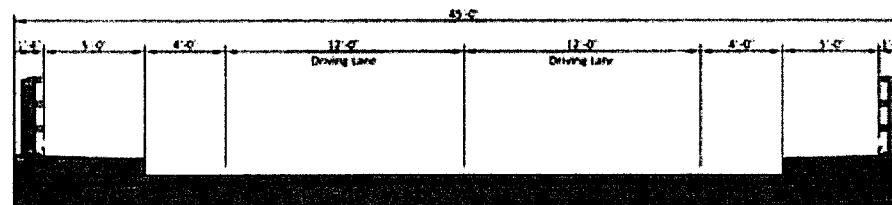
CONCEPT 1

- **Concept 2**
10' lanes
4' shoulders
5' sidewalks



CONCEPT 2

- **Concept 3**
12' lanes
4' shoulders
5' sidewalks



CONCEPT 3

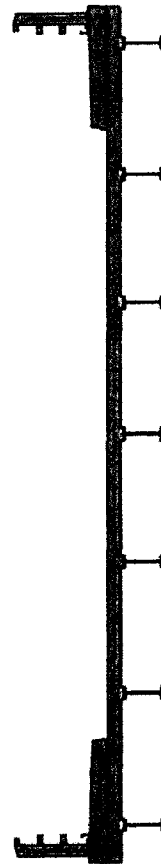


THE Louis Berger Group, INC.

PROPOSED ALTERNATIVES

Structure Type Considerations

- Sidewalk width each side ?
- Bridge railing ?
- Additional roadway width ?
- Aesthetics ?





THE Louis Berger Group, INC.

PROJECT FUNDING

MAP-7649(901), Control No: L500056

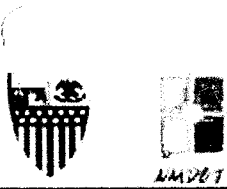
- City of Santa Fe Funding
\$500,000 in CIP Bonds
- State Funding
\$150,000 in MAP funds
- Federal Funding
None
- 2012 Cooperative Agreement executed
between NMDOT and City of Santa Fe
- Funding is limited; therefore, primary focus
is the Defouri Street Bridge



THE Louis Berger Group, INC.

NEXT STEPS

- Public comment period - 15 days
- Study phase
 - Complete the investigations
 - Finalize Guadalupe St. Bridge recommendations
 - Evaluate bridge types for the Defouri St. Bridge
- Preliminary design phase
- Second public meeting
- Final design
- Construction - begin fall of 2013



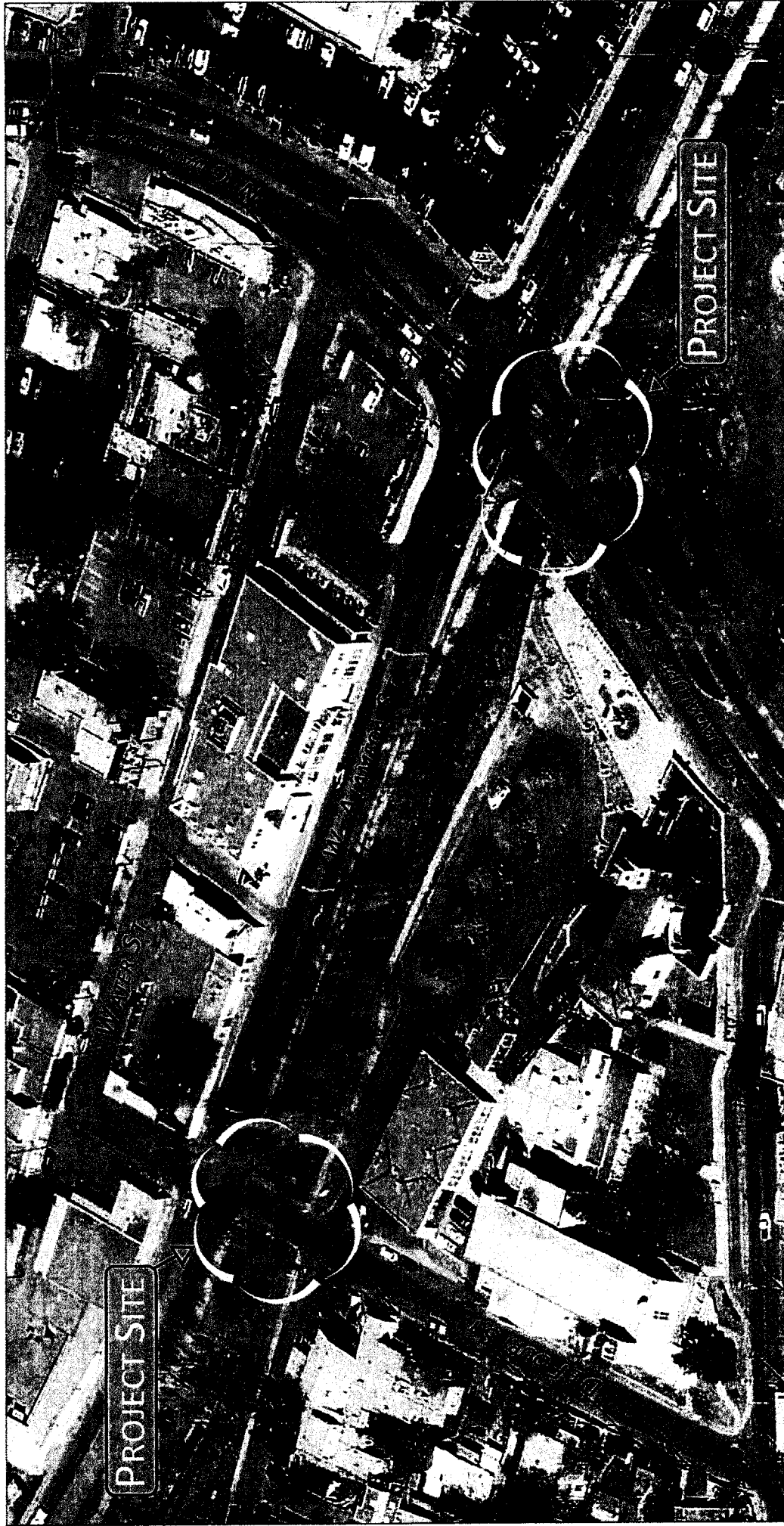
THE LOUIS BERGER GROUP, INC.

COMMENTS

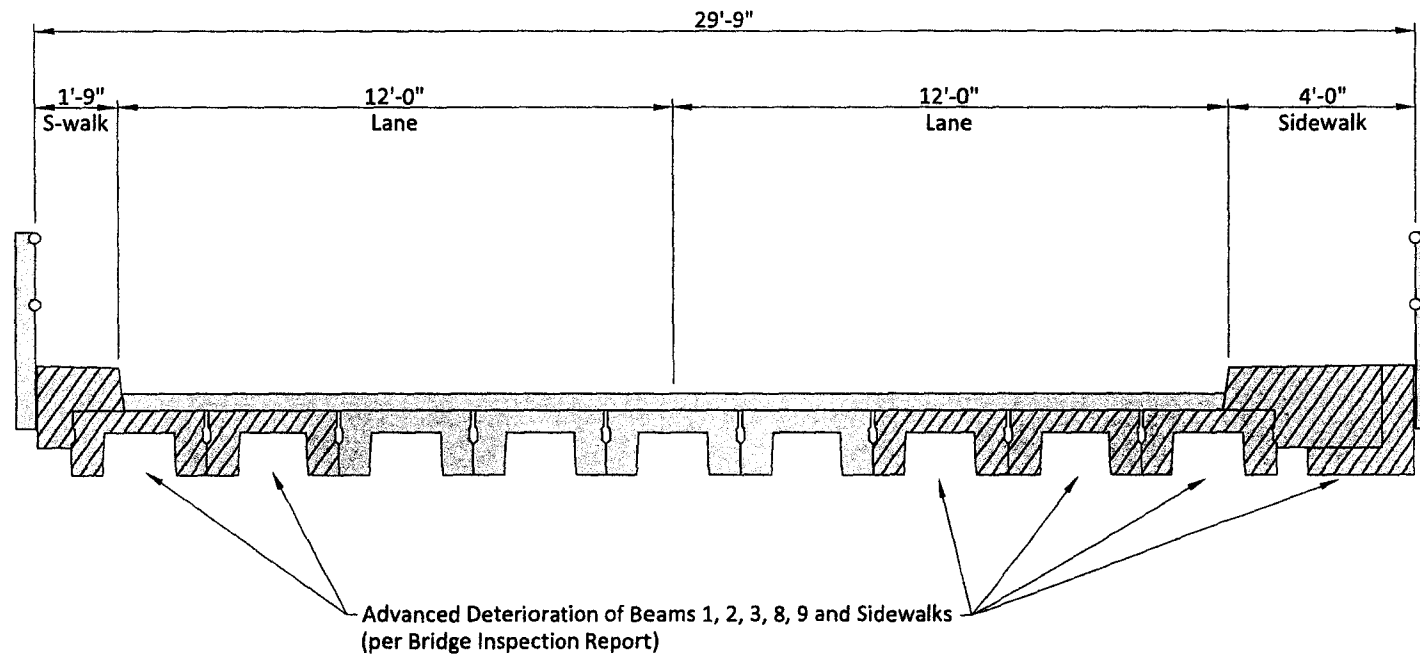
- Questions and Comments?
- Mail, fax, email comments by February 15, 2013

Devin Kennemore
Parametrix
8801 Jefferson NE, Building B
Albuquerque, NM 87113
Phone (505) 821-4700
Fax (505) 821-7131
dkennemore@parametrix.com

DeFouri St./Guadalupe St. Bridges Project



DeFouri Street Bridge

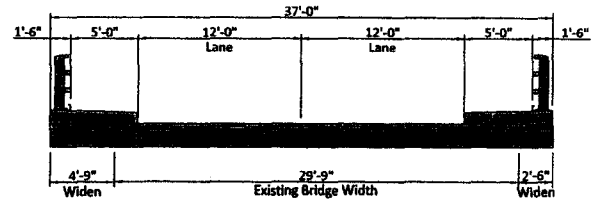


Existing Typical Section

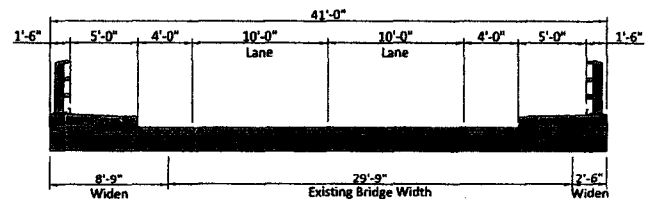
DeFouri Street Bridge



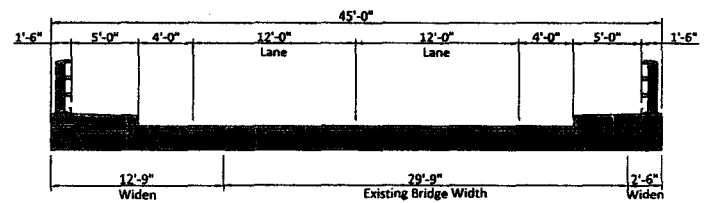
Concept #1



Concept #2



Concept #3



Fold Here

Fold Here

From:

Affix 44¢ Stamp
Here
Post Office will
not deliver
without postage

Re: Defouri and Guadalupe Street Bridges

Comments Due: February 15, 2013

Parametrix
8801 Jefferson NE, Bldg B
Albuquerque, NM 87113

Parametrix

ENGINEERING • PLANNING • ENVIRONMENTAL SCIENCES

City of Santa Fe, New Mexico

LEGISLATIVE SUMMARY

Resolution No. 2014-____
PNM Rate Case Intervention

SPONSOR(S): Councilors Ives

SUMMARY: The proposed resolution directs staff to intervene in case #13-00390-UT that is currently before the New Mexico Public Regulation Commission – in the matter of the application of the Public Service Company of New Mexico for approval to abandon San Juan Generating Station Units 2 and 3, issuance of certificates of public convenience and necessity for replacement power resources, issuances and accounting orders and determination of related rate making principles and treatment.

PREPARED BY: Rebecca Seligman, Legislative Liaison Assistant

FISCAL IMPACT: Yes

DATE: March 7, 2014

ATTACHMENTS: Resolution
FIR
Table – City of Santa Fe Electric Cost for FYE 6-30-2013

Exhibit "16"

This Is What the Utility Death Spiral Looks Like

In Germany, utility revenues are spiraling down the rabbit hole. Will American power companies follow?

Stephen Lacey Greentech Solar
March 4, 2014

The German mega-utility RWE provided another dismal reminder today of the painful transition European power companies are undergoing.

According to 2013 financial results, the utility lost more than \$3.8 billion last year as it cycled down unprofitable fossil fuel plants due to sliding wholesale prices. The yearly loss is actually quite historic; it's RWE's first since 1949 when the German Republic was formed.

This follows poor earnings news from Vattenfall, a Swedish utility with the second-biggest generation portfolio in Germany, which saw \$2.3 billion in losses in 2013 due to this same "fundamental structural change" in the electricity market.

The problem is well documented: high penetrations of renewables with legal priority over fossil fuels are driving down wholesale market prices -- sometimes causing them to go negative -- and quickly eroding the value of coal and natural gas plants. At the same time, Germany's energy consumption continues to fall while renewable energy development rises.

RWE's CEO Peter Terium called it "the worst structural crisis in the history of energy supply."

To make matters worse for utilities, their commercial and industrial customers are increasingly trying to separate themselves from the grid to avoid government fees levied to pay for renewable energy expansion. According to the *Wall Street Journal*, 16 percent of German companies are now energy self-sufficient -- a 50 percent increase from just a year ago. Another 23 percent of businesses say they plan to become energy self-sufficient in the near future.

It's a real-world example of the "death spiral" that the industry has so far only considered in theory: as grid maintenance costs go up and the capital cost of renewable energy moves down, more customers will be encouraged to leave the grid. In turn, that pushes grid costs even higher for the remainder of customers, who then have even more incentive to become self-sufficient. Meanwhile, utilities are stuck with a growing pile of stranded assets.

Supplied to the Council by Allan Sridhar, 505 780-2738
Exhibit "17"

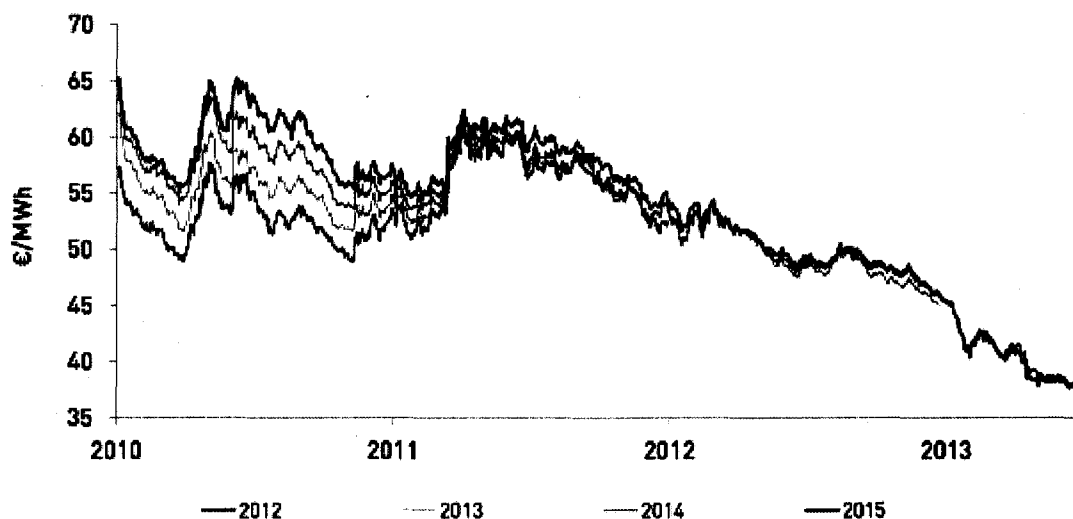
When unveiling today's dismal earnings, RWE's Terium admitted the utility had invested too heavily in fossil fuel plants at a time when it should have been thinking about renewables: "I grant we have made mistakes. We were late entering into the renewables market -- possibly too late."

As power company executives collectively gnash their teeth, green energy advocates are praising the tumultuous shift these utilities are enduring. Although both sides disagree on the ultimate value of the outcome, the underlying situation is undebatable: Germany is in the midst of a massive "structural" change that is ripping gaping holes in the traditional utility business model. And now the cash is bleeding faster than ever.

In a shareholder document from last September, the German utility EnBW illustrated how bad the bleeding has gotten. EnBW has the fourth-biggest generation pipeline in the country, and has been forced to make a serious shift in its own strategy.

The first graph shows how far forward prices for conventional power plant generation have plummeted since 2011. As the profitability of fossil fuel plants continues to fall, EnBW concluded in a strategy document that it needs to "develop new business models...without delay."

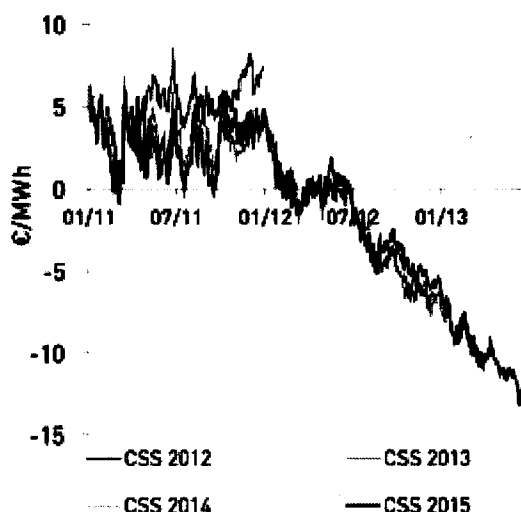
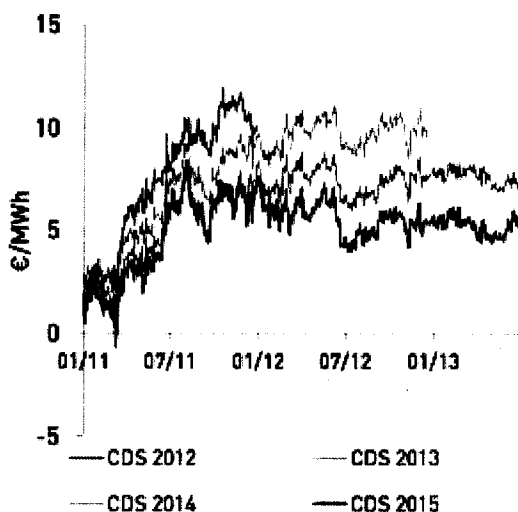
Forward price for electricity base load in Germany in €/MWh



EnBW offered another snapshot of how bad things are getting for utilities. These two graphs show the gross margins from coal plants (clean dark spread) and gas-fired plants (clean spark spread) after accounting for fuel purchasing and carbon allowances. Both have taken a serious hit, but natural gas has fared worse as fuel costs remain high and market prices for power fall.

Clean-Dark-Spread Base [€/MWh]:
Gross margin of a coal-fired power plant
(used plant efficiency: 36%)

Clean-Spark-Spread Peak [€/MWh]:
Gross margin of a gas-fired power plant
(used plant efficiency: 50%)

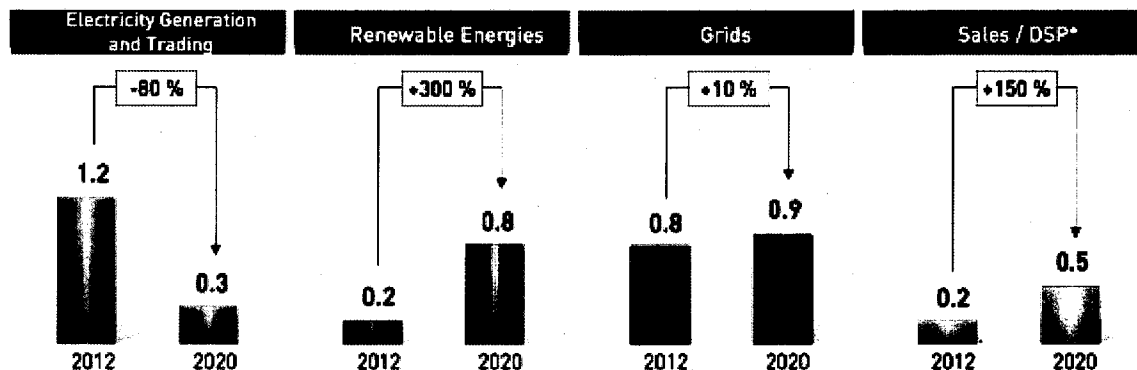


Europe's biggest utilities are falling down a rabbit hole and could soon find themselves swimming in a pool of their own tears. Many of them already are.

Over the last five years, the top twenty utilities in Europe have lost half their value. Recent poor financial results, stranded assets and mass selloffs of power plants highlight how tough things have gotten for power providers. But there are signs of change.

In its own strategy document, EnBW made a simple declaration about its future: "Conventional business models of larger power supply companies no longer work."

By 2020, the utility plans to cut its electricity generation and trading business by around 80 percent. It will try to make up for the decline by investing further in wind power, transmission and distribution projects to connect renewables, and by working on the consumer level to implement services like home automation.



Ben Kellison, GTM Research's senior grid analyst, said EnBW's approach "provides a window into one possible path in which the value of energy trading and peaker plants systematically erodes, pushing large utilities into more service-oriented work."

RWE is also headed in this direction. That utility, which is Germany's second-biggest, said last fall that it was planning to divest many of its large-scale fossil fuel plants and implement a "prosumer" business model to help integrate renewables projects. These emergency declarations are the only way some big power companies can ensure their future.

The German experience is just the beginning of a long, tumultuous shift for the broader utility sector. But it highlights the question: will American utilities soon deal with the same issues? With much lower penetrations of distributed renewables and less aggressive promotion laws, the U.S. power sector won't face the same kind of violent death spiral in the near term. But the same forces driving change in Europe are starting to raise concerns within the utility sector here.

There's a scene in *Alice's Adventures in Wonderland* when the Mock Turtle and the Gryphon ask about Alice's exploits. She replies: "It's no use going back to yesterday, because I was a different person then."

That may be how some utilities in Europe are feeling now -- finally reaching the point of no return where looking back is not an option.

American utilities have the benefit of learning from that first-mover experience. Will they use it to land safely in a wonderland of distributed generation and consumer empowerment? Or will they fall down the rabbit hole, not knowing where they're headed until it's too late?

Those are the questions we'll be asking at Greentech Media's Grid Edge Live conference this summer. Come join us.

CITY OF SANTA FE, NEW MEXICO

ITEM #H-6

RESOLUTION NO. 2014-__

INTRODUCED BY:

Councilor Chris Rivera

A RESOLUTION

RELATING TO THE REPLACEMENT POWER/ENERGY PLAN PROPOSED PUBLIC SERVICE COMPANY OF NEW MEXICO'S PLAN TO REPLACE 836 MEGAWATTS AT THE SAN JUAN GENERATING STATION; URGING THE NEW MEXICO PUBLIC REGULATION COMMISSION TO ~~MODIFY~~REJECT PNM'S REPLACEMENT PLAN AND CLAIMS FOR COST RECOVERY, AND TO INSTRUCT PNM TO INCLUDE MORE-OF STRANDED ASSETS AND SUPPORT AN ALTERNATIVE RENEWABLE-ENERGY IN THAT PLAN-BASED REPLACEMENT PLAN.

WHEREAS, on February 15, 2013, Governor Susanna Martinez, the Public Service Company of New Mexico (PNM), and the Environmental Protection Agency (EPA) announced an agreement to close San Juan Generating Station (SJGS) Units 2 & 3 (836 megawatts), install pollution controls on Units 1 & 4, and reduce state permit levels for nitrogen oxides and sulfur dioxides; and

WHEREAS, the City of Santa Fe applauds the agreement between Governor Martinez, PNM and the EPA to close SJGS Units 2 and 3, to install pollution controls, and to reduce state permit

1 levels for nitrogen oxides and sulfur dioxides as referenced in the Revised State Implementation Plan;
2 and

3 **WHEREAS**, PNM's replacement power plan submitted to the Public Regulation
4 Commission (PRC) on December 20, 2013, as part of docket # 13-00390-UT, includes the following:

- 5 (1) PNM is owner of 50% of units 2 & 3, or 418 megawatts;
- 6 (2) The purchase of 78 megawatts more coal from SJGS Unit 4 for 52.5 million dollars;
- 7 (3) A certificate of public convenience and necessity to import nuclear generation (134
8 megawatts) from Palo Verde Nuclear Generating Station (PVNGS) ~~Plant~~ Unit 3 in
9 Arizona, at a ~~for~~ rate-base valuation of \$335 million dollars;
- 10 (4) The construction of a new peaking natural gas plant (177 megawatts) cited in
11 Farmington ~~despite the fact that Farmington does not have any PNM customers for~~
12 \$189 million;
- 13 (5) ~~Possibly~~ Construct 40 megawatts of utility scale solar power;
- 14 (6) ~~Full~~ Recovery of the \$205 million dollars in un-depreciated assets for the closure of
15 SJGS Units (also known as "stranded assets"); and
- 16 (7) Pollution controls on SJGS Units 1 and 4 for 82 million dollars; and

17 **WHEREAS**, climate scientists worldwide are in near-unanimous agreement that the planet is
18 warming rapidly and to a degree that is perilous to human civilization, to numerous species and to the
19 global ecosystem and that the primary cause of that warming is human activity, especially through the
20 accelerating combustion of fossil fuels that create CO₂ as a byproduct; and

21 **WHEREAS**, according to the 2013 IPCC Report Atmospheric concentrations of CO₂,
22 methane and nitrous oxide have increased to levels unprecedented in the last 800,000 years, and CO₂
23 concentrations have increased by 40% since pre-industrial times and ~~every additional~~ the continued
24 release of greenhouse gases diminishes our chances of avoiding catastrophic climate change; and

25 **WHEREAS**, further delay in responding to this crisis increases the risk of catastrophic

1 climate change, imminently threatens low-lying coastal areas and land and sea species, threatens
2 water supplies, increases the frequency of severe weather events, reduces the time available and
3 increases the cost of undertaking adequate responses, and increases risks to the global economy; and

4 **WHEREAS**, the burning of coal is the number one contributor to global CO₂ emissions
5 worldwide and in the state of New Mexico is responsible for more than 12 million tons of CO₂
6 emissions annually; and

7 **WHEREAS**, the burning of coal releases toxic pollutants including nitrogen oxides, sulfur
8 dioxides, particulates and mercury that contaminate our air, soil and water and that are proven to
9 cause serious health conditions such as asthma, lung, and heart disease and cancer; and

10 **WHEREAS**, a 2012 analysis by a nationally recognized Environmental Medicine NYU
11 Professor, Dr. George Thurston, found that over the last five years ~~PNM's failure to comply with the~~
12 ~~necessary pollution reductions at~~from the San Juan coal plant has cost \$240 million in public health
13 care costs (asthma, lung disease, heart disease, and hospitalizations); and

14 **WHEREAS**, according to the 2013 Community Health Profile Study commissioned by Santa
15 Fe County and CHRISTUS St. Vincent Regional Medical Center, 24% of Santa Fe County high
16 school students have been diagnosed with asthma; and

17 **WHEREAS**, the combustion of coal and nuclear energy are among the most water intensive
18 ways to produce electricity; and

19 **WHEREAS**, the SJGS plant consumes 6 billion gallons of water annually, which is the
20 equivalent to 11,000 gallons a minute; and

21 ~~**WHEREAS**, after the water is used, the toxic produced water is stored in large open air pits~~
22 ~~to evaporate and contaminate our air, and has poisoned groundwater; and~~

23 **WHEREAS**, Governor Martinez has issued a formal drought declaration that encompasses
24 the entire state of New Mexico; and

25 **WHEREAS**, according to the U.S. Drought Monitor, one hundred percent of New Mexico

1 was in moderate drought at some point during 2012, with over ninety percent in severe status; and

2 **WHEREAS**, communities exist where drinking water supplies are threatened due to the
3 cumulative effects of drought; and

4 **WHEREAS**, the State of New Mexico has suffered through numerous natural disasters
5 associated with the drought, including crop production and livestock loss, severe wild fires, and
6 flooding due to severe wild fires; and

7 **WHEREAS**, “Drought conditions can create serious problems for many New Mexico
8 communities, farms, ranches, and open spaces. Fire danger is high, water reservoirs run low, and in
9 some cases, we’ve seen towns like Las Vegas take dramatic steps to reduce basic water consumption
10 in their residents’ homes and businesses,” said Governor Martinez; and

11 **WHEREAS**, ~~individuals and businesses have begun to do their part, but the energy industry~~
12 ~~has not sufficiently failed to transitioned~~ to less water consumptive forms of energy generation; and

13 **WHEREAS**, the cost of coal is expected to continue to increase due to ~~carbon~~ emissions
14 regulation ~~mandated~~ as part of President Obama’s Climate Change Action Plan and ~~Coal Ash~~
15 ~~Regulation~~ that the Environmental Protection Agency intends~~has been ordered~~ to issue; and

16 **WHEREAS**, the environmental and human health costs of nuclear energy development and
17 production are well documented; and

18 **WHEREAS**, according to the National Cancer Institute, the following diseases can be caused
19 by exposure to radon, uranium, and decay elements of uranium: bronchial and lung cancer, leukemia
20 and other blood diseases, cancer of the bone marrow, stomach, liver, intestine, gall bladder, and
21 kidney, failure of the kidney or liver, psychological disorders and birth defects; and

22 **WHEREAS**, safe nuclear waste disposal requires ~~safe storage~~ for at least one-thousand~~1000~~
23 years and permanent storage space is ~~limited~~not currently available; and

24 **WHEREAS**, U.S. nuclear plants generate about ~~2,000~~two thousand tons of spent fuel a year
25 and since the 1950s, ratepayers have contributed \$27 billion to pay for permanent disposal; and

1 **WHEREAS**, improper disposal and risk of accidents pose serious environmental and public
2 health threats; and

3 **WHEREAS**, ~~beyond these hidden costs, the price per kilowatt-hour of the nuclear energy~~
4 ~~proposed for the Replacement Power Plan is~~may be significantly more expensive than alternatives
5 that include more~~both solar and wind powered generation alternatives;~~ and

6 **WHEREAS**, the City of Santa Fe Municipal Charter charges the governing body with the
7 responsibility "to secure for ourselves and our children the continuity of our cultural values, our
8 personal freedoms, and our well-being," declares that "[t]he natural beauty of Santa Fe" is "among the
9 city's most valued and important assets," and charges the governing body of Santa Fe to "protect,
10 preserve and enhance the city's natural endowments, plan for and regulate land use and development,
11 manage the city's growth, encourage source reduction," and take such actions as are necessary to do
12 so; and

13 **WHEREAS**, the City of Santa Fe has a record of accepting these responsibilities and
14 acknowledging the reality of climate change, probable effects of climate change on our City, and our
15 ability and responsibility to reduce our contribution to the causes of climate change - as evidenced by
16 the City's endorsement of the U. S. Conference of Mayors Climate Protection Agreement; the
17 adoption of the Sustainable Santa Fe Plan (Resolution 2008-93); the establishment of the Sustainable
18 Santa Fe Commission; and the passing of Resolutions addressing these concerns (e.g., Resolutions
19 2009-45, 2011-17, 2012-12, 2013-12, and 2013-12, among others); and

20 **WHEREAS**, the closure of San Juan Units 2 & 3 presents a critical opportunity to transition
21 away from ~~New Mexico's investment in fossil fuels and nuclear energy~~ and presents an opportunity
22 to rapidly deploy renewable energy technologies to meet New Mexico's energy demands; and

23 **WHEREAS**, New Mexico has some of the best solar and wind energy potential in the
24 country ~~and areas with very strong wind potential as well~~ and the benefits of solar and wind energy
25 production will include not only CO₂ emissions reductions, but also better health and environmental

1 outcomes than fossil-fuel or nuclear energy, and can stimulate the creation of jobs in New Mexico;
2 and

3 **WHEREAS**, solar and wind are ~~both new cost-competitive energy sources, and a resource~~
4 ~~replacement alternative to PNM's proposal, that includes more of these renewable resources and does~~
5 ~~not include and an alternative replacement power plan has been modeled by New Energy Economy~~
6 ~~with 50% renewable energy and without the purchase of any additional~~ coal or nuclear generating
7 ~~capacity, may be less costly than at a lower total cost~~ than PNM's plan.

8 **NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY OF THE**
9 **CITY OF SANTA FE** that the Governing Body recognizes that:

- 10 (1) The pollution caused by humans burning fossil fuels is established by scientists as a
11 primary cause of climate change;
- 12 (2) The City of Santa Fe Municipal Charter charges the governing body with protection
13 of our city's residents and natural assets; and
- 14 (3) a necessary measure to address this problem is to replace conventional energy ~~fossil-~~
15 ~~fuel and nuclear energy resources~~ with renewables ~~that are cost competitive~~
16 ~~whenever possible.~~

17 **BE IT FURTHER RESOLVED** that the Governing body ~~is concerned that~~ opposes PNM's
18 replacement power plan, ~~as filed on the basis that it:~~

- 19 (1) ~~Will~~may not achieve~~help~~ the City's ~~government meet its~~ CO₂ reduction goals;
- 20 (2) ~~Will~~may not achieve~~help~~ the City's ~~meet its~~ energy efficiency goals;
- 21 (3) ~~Is~~may not be the lowest cost solution;
- 22 (4) ~~Is~~may not be the best environmental outcome;
- 23 (5) ~~It does~~may not provide the best employment opportunities for New Mexico;
- 24 (6) ~~Is~~may not be the healthiest option for the people of New Mexico and of Santa Fe;
- 25 (7) ~~Does~~ not take into account recognized external costs to human health and air

quality;

(8) ~~Is a continuation of risky~~continues to support investments practices in unsustainable
~~and costly energy sources that are~~may not be in the best interest of the public of New
Mexico or the ratepayers of New Mexico; and

(9) ~~Unfairly places too much the of a financial burden of on~~ PNM's ~~poor financial~~
~~planning on the rate payers of New Mexico.~~

BE IT FURTHER RESOLVED that the Governing Body ~~strongly~~ urges the New Mexico
Public Regulation Commission to require that PNM's replacement power ~~plan for SJGS include AS~~
~~MUCH as much~~ renewable energy as is technically and economically feasible.

~~**BE IT FURTHER RESOLVED** that the Governing Body urges the Public Regulation~~
~~Commission to require that PNM's replacement power include AS MUCH energy efficiency as is~~
~~technically and economically feasible.~~

BE IT FURTHER RESOLVED that the Governing Body urges the New Mexico Public
Regulation Commission to minimize the financial impact to New Mexico ratepayers ~~deny or reduce~~
~~associated with~~ PNM's claim for un-depreciated "stranded" assets.

BE IT FURTHER RESOLVED that the Governing Body urges the New Mexico Public
Regulation Commission to require that ~~deny~~ PNM reduce carbon-dioxide emissions associated with
its utility service in amounts consistent with what the vast majority of climate scientists conclude is
necessary to avoid the most severe impacts of climate change's ~~request for money for pollution~~
~~controls for Unit 1 at SJGS and instead urges the PRC to order the closure of Unit 1 to a date certain,~~
~~as soon as practicable.~~

~~**BE IT FURTHER RESOLVED** that the Governing Body urges the Public Regulation~~
~~Commission to set a date certain for the closure of Unit 4 at SJGS, and suggests that it be as soon as~~
~~practicable, but no later than 2023.~~

BE IT FURTHER RESOLVED that the Governing Body urges PNM and the NM ~~PRC~~ to

1 consider in their analyses the total environmental, health and societal real costs of coal produced
2 energy as a matter of public health.

3 **BE IT FURTHER RESOLVED** that the City Clerk is directed to forward a copy of this
4 resolution to the New Mexico Public Regulation Commissioners and General Council as official
5 public testimony on behalf of the City of Santa Fe in the case before the Public Regulation
6 Commission.

7 **BE IT FURTHER RESOLVED** that the City Clerk is directed to forward a copy of this
8 resolution to the New Mexico's Congressional Delegation.

9 PASSED, APPROVED, and ADOPTED this ____ day of _____, 2014.

11 _____
12 DAVID COSS, MAYOR

13
14 ATTEST:

15 _____
16 YOLANDA Y. VIGIL, CITY CLERK

17 APPROVED AS TO FORM:

18
19 _____
20 KELLEY A. BRENNAN, INTERIM CITY ATTORNEY

21
22
23
24
25 M/Melissa/2014 Resolutions/Replacement Power – Energy Plan (Sub_Bushee)